University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 2, 1958

SPECIAL
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* For release at 1 p.m. *
* Saturday, January 4 *
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STAKMAN AWARD PRESENTED TO USDA OFFICIAL

The Elvin C. Stakman award for outstanding research in diseases of cereal crops was today presented to a U. S. Department of Agriculture official who is a former student and staff member of the University of Minnesota.

The medal and scroll award was made to H. A. Rodenhiser, assistant to the administrator of the USDA, during a luncheon meeting in the University's Coffman Memorial Union. It was presented by Stakman himself, who was head of the department of plant pathology and botany at the University from 1940 until he retired in 1953.

Rodenhiser was cited in the award for "painstaking researches in many of the obscure details of cereal diseases, especially cereal smuts and rusts," and for his long-time support of this type of research.

He has been connected with research on cereal crops diseases for the USDA since 1930. From 1952 until taking his present position last year, he was head of the USDA cereal crops section at the Beltsville, Md., research station.

Rodenhiser is a Massachusetts native, studied at the University of New Hampshire, and did his graduate work at the University of Minnesota, where he received his Ph. D. in 1928. From 1924-27, he was also in charge of cereal seed treatment and smut investigations at the University's Agricultural Experiment station and was a plant pathology department staff member from then until 1930, when he went to the USDA.

He received an Outstanding Achievement award from the University of Minnesota in 1953.

This is the second time the Stakman award has been made. It is handled through the E. C. Stakman Endowment Fund, which was established in 1953.

In 1956, the Stakman award was given to W. L. Waterhouse, retired professor at the University of Sidney, Australia.

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Immediate release

E. G. CHEYNEY MEMORIAL SCHOLARSHIP ESTABLISHED

To stimulate interest and improvement in writing and speaking skills, the Minnesota Forestry School Alumni association has established the E. G. Cheyney Scholarship.

The scholarship is announced by Stanley Ringold, president of the association, and Frank Kaufert, director of the University of Minnesota School of Forestry.

Two scholarships of $100 each will be awarded at the College Recognition assembly during the 1958 spring quarter. The basis for the award is achievement in speaking and writing.

The scholarship was named and established in honor of Professor E. G. Cheyney, a member of the School's staff from 1904 to 1947, who recognized the importance of speaking and writing skills in the education of professional foresters and emphasized it in all of his classes.

Professor Cheyney is remembered by all graduates of the 43 years he spanned because of the excellence and colorfulness of his instruction, according to Ringold and Kaufert.

Cheyney's early training in English, the fact that he taught English to St. Paul campus students during both World Wars, and the conviction that excellence in speaking and writing could be as important to success following graduation as professional training accounted for his emphasis on these skills.

Also, he was an author in his own right. He wrote the Scott Burton books for boys and a number of professional forestry texts.

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Immediate release

GRAIN ELEVATOR OPERATORS SHORT COURSE SCHEDULED

Thirty-eight persons will attend a grain elevator operators short course Jan. 27-Feb. 14 on the St. Paul campus of the University of Minnesota, according to J. O. Christianson, director of agricultural short courses.

Program chairman for the event is Harold Pederson, extension agricultural economist.

Instructors at the short course will include men from the grain elevator operator industry and staff members of the University's Institute of Agriculture.

Subjects covered at the event will include importance of the country grain elevator business, grain insects and control, grain cleaning and grading, grain storage and drying, federal and state regulations, soil testing, marketing and feeds.

The group will tour the Minneapolis grain exchange, a test kitchen, local river port, malt house, a feed mill, state laboratory and a terminal facility.

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NUTRITION EDUCATION HELPS IMPROVE AMERICAN DIETS

Americans are eating more wisely.

Better knowledge of what constitutes a good diet and how to "balance" meals has gone hand-in-hand with abundant food supplies in helping American women to improve their families' eating habits.

Periodic dietary surveys of various population groups have shown that considerable improvement in family diets has taken place in this country in the past few decades. In the 1930's a third of the families surveyed had poor diets. By 1955 diets had improved to the point that only a tenth of the families studied had poor diets.

Calcium and ascorbic acid or vitamin C are the nurtients in shortest supply among families whose diets still fall short of recommended standards. Three out of 10 families receive less than recommended amounts of calcium and one out of four families lack sufficient vitamin C or ascorbic acid. Extension nutritionists at the University of Minnesota point out that milk and dairy products are the best sources of calcium and that citrus fruits are one of the best sources of ascorbic acid.

A number of factors have contributed to the improvement in American diets in the last few decades, University nutritionists say. Food supplies are ample to meet demand, quality is high and higher incomes have made it possible for more people to have the kinds of foods they want. Enrichment of bread and other grain products has restored some of the food values previously lost in milling. Continued emphasis on research and education in human nutrition has helped family food buyers to choose the kinds of foods and the variety needed for a good diet.

B-1806-jbn

University Farm and Home News
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University of Minnesota
St. Paul 1, Minnesota
January 2, 1958 Immediate release

SPECIAL PROGRAM ON GARDENING DURING FARM AND HOME WEEK

City and rural gardeners will hear about new developments in lawn care, new varieites of fruits and vegetables for the home garden and recommended varieties for freezing at special sessions on gardening and frozen foods during the University of Minnesota's Farm and Home Week January 14-17.

Featured during the week will be three half-day programs on gardening and one on frozen foods. The fruit program, scheduled for Tues. afternoon, Jan. 14, will be devoted to new fruit varieties, raspberry production, questions and answers on fruit growing, a discussion of a century of progress in fruit growing and showing of the color film, "Fruits for the North."

Trends in ornamental horticulture and in landscaping and changes in lawn care will be covered by University horticulturists at the session on ornamentals Wed. morning, Jan. 15. "Grandma Recommends" is the title of a talk by George Luxton, garden columnist for the Minneapolis Tribune, on the same program.

The horticulture program Thurs. morning, Jan. 16, will be devoted entirely to vegetable gardening problems, including disease and insect control, chemical weeding and better vegetable varieties.

The popular frozen foods program Wed. afternoon, Jan. 15, will highlight a report on new packaging tests, varieties of fruits and vegetables recommended for freezing as a result of University experiments, yields of packaged meats from wholesale cuts and cooking time of frozen meats. A question period will be included in in the program.

Beekeeping, almost every phase of homemaking and agriculture will be covered at other sessions during the University's biggest short course.

Copies of Farm and Home Week programs are available from the Office of Agricultural Short Courses, Institute of Agriculture, University of Minnesota, St. Paul 1.

B-1807-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 2, 1958 Immediate release

BUILDING AND EQUIPMENT EXHIBITS ARE FARM AND HOME WEEK FEATURE

Farmers can look over some proven machinery and buildings and view some new ideas in farm equipment and construction during Farm and Home Week, Jan. 14-17, on the St. Paul campus of the University of Minnesota.

Agricultural engineers at the University will display, for the first time, detailed scale-models of duct and A-frame systems for drying hay in a barn mow, a full-size flat-bottom, mechanically-unloading feed bin and a scale model of an experimental type turkey barn.

Several types of field machinery will also be on display. All exhibits will be in the farm shop of the agricultural engineering building.

The model hay drying systems will include small motors and fans which will be operated to show how air moves through each unit. Both the duct and A-frame drying units are recommended for Minnesota barns. Either type, except for fan and motor, can be home-built.

The flat-bottom bin is an experimental unit which will later be used in a barn at the University's Rosemount Agricultural Experiment station. It was designed by University agricultural engineers as a labor-saving device and to avoid some of the problems in hopper-type bins. Feed often gets stuck in the narrow bottom of a hopper, but that can't happen in the flat-bottom bin.

In the model turkey barn, visitors will see a number of new building features. The building is a pole-type structure with steel bracing. For this particular building, steel members are actually cheaper than wooden ones. The ceiling of the barn is suspended by steel rods and the joists, which are spiked to the sides of poles in most similar buildings, rest on top of the poles in this structure. A full-size building of this type is now being built at the Rosemount station.

Machinery exhibits will include several types and models of new tractors, mounted, pull-type and power takeoff-operated equipment and harvesting machinery.

B-1808-pjt

University Farm and Home News
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January 2, 1958

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* For release Monday, Jan. 6 *
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DRY MILK INDUSTRY CHANGES IN MINNESOTA

Minnesota's dry milk industry has undergone some major changes in recent years, according to a pair of agricultural economists at the University of Minnesota.

E. Fred Koller and Richard J. Goodman discuss these changes in the current issue of "Minnesota Farm Business Notes," a University agricultural extension publication.

Total dry milk production in Minnesota has mushroomed from about 30 million pounds in 1936 to about 480 million in 1957. Much of this growth is due to, first, World War II demands and special prices and, more recently, the relatively favorable government support prices for nonfat dry milk.

Before 1945, most of the nonfat dry milk was produced by the roller process. Since then, the industry has shifted more and more to spray process powder production. Of the 383 million pounds of nonfat dry milk solids produced in Minnesota in 1956, all but 22.8 million were produced by spray process.

Another big change is that more manufacturers are producing more milk powders for specific customer uses. In the past, nearly all dry milk was of a rather standard "high heat" type. This was fine for bakery products and some other uses, but not for all. Recently, various "low heat" powders have been developed, for products like cottage cheese, instant milk and food mixes.

Larger volume is making dry milk plants more efficient. While wage rates, fuel prices and other costs have risen, the plants have reduced their average manufacturing costs per pound of dry milk from 3.55 cents in 1947 to 3.23 cents in 1953.

Some of the most important changes in the industry have been in size and types of drying plant organization, the economists point out. Since 1940, there has been emphasis on three general types of plants at different times--specialized drying plants, local butter-powder plants and "super" butter-powder plants.

(more)

There were about 20 specialized drying plants organized in Minnesota in the 1940s and two after 1950. They were large at the start, but they've made phenomenal growth since. Sixteen of them averaged 4.7 million pounds per plant output in 1947 and increased to an average of 9.7 million pounds in 1957.

Local butter-powder plants--generally, larger local creameries which have added a milk drying department--have been increasing in number recently. These plants usually receive whole milk direct from producers, then process the cream into butter and the skimmilk into powder, all in the same plant.

There are about 40 of these local butter-powder plants drying milk in Minnesota. In 1957, they produced about 32 percent of the total dry milk in the state and averaged 3.8 million pounds for the year.

Among the local butter-powder plants, the economists say some have lowered costs and increased returns to dairy farmers through good efficiency. Others, however, still haven't reached a volume of business that allows them to operate at the lowest possible cost per unit. Some could get better results by improving their equipment and through better management.

Plants that receive whole milk and produce butter and powder on a large scale are called "super" butter-powder plants. These, too, are on the increase. There are about 14 of them in Minnesota now and they average about 11 million pounds dry milk and 3 million pounds butter per plant annually.

The super butter-powder plants have many advantages and have the greatest promise for the future, according to Koller and Goodman. Thanks to large volume, they can reduce butter manufacturing costs per pound to the lowest possible level. They can make use of bigger equipment, more efficient techniques, automation and other labor-saving methods. They also can keep better control over their products and can reduce butterfat and milk solids losses that many smaller plants have.

B-1809-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 2, 1958

Special to Weeklies

MAT CAPTION: These four men will address noon convocations during Farm and Home Week, Jan. 14-17 on the St. Paul Campus of the University of Minnesota. They are (l. to r.) Dr. Gunnar Gundersen, A.F.Spilhaus, T.H.Fenske, J.Carroll Bottum.

KEY SPEAKERS ARE LISTED FOR FARM AND HOME WEEK

Two agricultural authorities, a scientist and a medical expert will address visitors during noon convocation sessions of Farm and Home Week, Jan. 14-17 on the St. Paul campus of the University of Minnesota.

Farm and Home Week includes some 40 special and general sessions, covering every phase of agriculture and family living.

Convocation speakers will be: Jan. 14, Dr. Gunnar Gundersen, LaCrosse, Wisc., president-elect of the American Medical association; Jan. 15, A.F. Spilhaus, dean of the University's Institute of Technology; Jan. 16, T. H. Fenske, associate dean of the Institute of Agriculture and Jan. 17, J. Carroll Bottum, agricultural economist, Purdue University.

Gundersen, whose topic will be "Medical Pioneers", operates the Gundersen Clinic at LaCrosse. He was raised in that city, studied in Norway, then received his B. S. at the University of Wisconsin in 1917 and his M. D. at Columbia University in 1920. He has been practicing medicine in LaCrosse since 1922.

Spilhaus' topic will be "Earth, Sun and Space". He grew up in the Union of South Africa, received his education there and at the Massachusetts Institute of Technology. He is an authority on research in meteorology, aeronautics, oceanography and other scientific fields. He took his present position at the University in 1949.

Fenske will speak on "Minnesota's 100 Years of Agriculture". He is a native of Bemidji and is a graduate of the University of Minnesota. He has been a staff member and superintendent of West Central School and Experiment Station at Morris and came to the St. Paul campus as associate director of field operations in 1947. He was promoted to assistant dean in 1953 and to associate dean in 1956.

continued

He is also chairman of the agriculture committee of the Minnesota Centennial Commission.

Bottum, whose topic will be "The Economic and Policy Outlook for Agriculture", is a South Dakota native and graduate of South Dakota state college and the University of Illinois. He went to Purdue in 1928, is now assistant head of the Agriculture Economics department there.

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University Farm & Home News
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January 3 1958

HELPS FOR HOME AGENTS

(These shorts are intended as fillers for your radio programs or your newspaper columns. Adapt them to fit your needs.)

In this issue:

FREEZING FOODS

Molded Salad for the Freezer

If you've tried to freeze molded salads made with gelatin and found that they are watery after freezing and thawing, there's a secret to success; use less liquid.

The New Jersey Agricultural Experiment Station suggests using about one-fourth less liquid than in the usual recipe. When using commercially packaged flavored gelatin for a freezer salad, use 1 1/2 cups of water instead of 2 cups.

When this amount of water was used in experiments on salads at the New Jersey Station, the salads were of good consistency when thawed, and the diced celery stayed crisp.

Here is a basic recipe for molded chicken salad to put into the freezer. Instead of chicken, you might use turkey, veal, ham or tuna fish.

Molded Chicken Salad: 1 can condensed cream soup, such as cream of mushroom soup; 1 tablespoon unflavored gelatin (one envelope); 1/4 cup water; 2 cups diced meat; 1 cup diced celery; 2 pimentos cut in small pieces; 1/2 cup of cooked salad dressing (not mayonnaise). Soak gelatin in cold water and add heated condensed soup. Stir to dissolve gelatin, then add other ingredients. Mix, pour into a mold and chill in the refrigerator until firm before freezing. Keep in the freezer no longer than two weeks. Thaw in the refrigerator over night.

- jbn -

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and U. S. Department of Agriculture Cooperating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

CONSUMER MARKETING

Plentiful Foods for January

Fryer chickens and dairy products are among the foods on the U. S. Department of Agriculture's plentiful list for January.

We'll have more chicken in January than we had in December and considerably more than a year ago, according to Department of Agriculture predictions. Many dairy products will be plentiful.

The foods in most generous supply this month is canned and frozen peas. On the market now are more canned and frozen peas than we've ever had, from a record crop. Potatoes, too, are still abundant.

Turkey is classed as plentiful, principally in the larger sizes.

Other foods which will help to round out good meals for the new year are apples, dried prunes, dates, almonds and filberts.

* * *

More Inspected Poultry to Be Marketed

Food shoppers can expect more "U. S. Inspected for Wholesomeness" marks on the poultry they buy in the year ahead.

All poultry and poultry products moving in interstate commerce must be inspected for wholesomeness after January 1, 1959, under terms of the Poultry Products Inspection Act passed by Congress last summer. A good share of this poultry will be inspected after May 1, 1958, the date expected that service might be available to early applicants under the new law.

You may already be buying and using inspected poultry. Processors have been able to obtain poultry inspection service for the past 30 years on a fee basis.

The inspection mark on poultry--the circle with the words "Inspected for Wholesomeness by U. S. Department of Agriculture" -- is your assurance that the poultry bearing it is clean, wholesome food.

* * *

FOOD AND NUTRITION

Confections for Children

After the Christmas holidays of indulging in too many sweets, mothers often ask about confections that are simple to make and wholesome for the children.

Dried fruit balls meet these specifications and are simple enough for the children to help make. They require no cooking. Simply grind or chop fine a misture of dried fruits -- apricots, raisins, prunes, dates or figs, as desired. Then shape the mixture into balls and roll in powdered sugar. For variety, roll in shredded cocnut, graham cracker crumbs or corn flakes. The different dried fruits offer good nutritive value as well as good flavor. Prunes and dates stuffed with nut meats are other suitable confections for children.

* * *

Rural Working Wives Feed Families Well

As more and more rural homemakers follow their city sisters in taking jobs, many people have questioned how their families would fare, nutritionwise.

Results of a survey taken in one state showed that wives with jobs apparently feed their families as well as those not employed outside the home. The survey, made by the Mississippi Agricultural Experiment Station, included 100 rural families in which the wife worked outside the home and 100 in which she was a full-time homemaker.

Working wives used somewhat more ready-prepared foods, such as lunch meat, canned fish, ice cream, canned vegetables and fruits, bakery products of all kinds and ready-prepared soups. Homemakers without jobs had more home-produced food and spent about $3 less per week for food. They served somewhat more poultry, beef, eggs and fresh and frozen vegetables, largely home-produced. Nutrition-wise, however, the diets of the two groups of families rated about the same.

* * *

HOME IMPROVEMENT

Color Affects Lighting

Color has a definite effect on light. The amount of light needed in a room will vary according to the color of the walls and furnishings.

White reflects 85 percent of the light which shines on it. That's why it's a good idea to have the inside of a lampshade as near white as possible for maximum light reflection, says Data Hochhalter, extension home improvement specialist at the University of Minnesota. A translucent white shade casts a maximum of good quality light and goes well with most furnishings.

Light cream, gray and yellow reflect 75 percent of the light. Medium colors reflect less light -- medium yellow only 65 percent, medium gray 55 percent and medium blue as low as 34 percent. Dark colors absorb even more light. Dark green reflects only 7 percent.

* * *

Location for Study Center or Desk

If you're looking for a good place to locate a desk for study and must have it against a wall, it's better to have it against a wall that is plain and light in color than one that is dark colored or covered with a distracting pattern. Avoid locating the desk in front of a window.

* * *

What is a Good Lampshade?

Planning to buy a new lampshade? To reduce eyestrain in the family, select a shade with these features:

White or near-white lining for maximum light reflection.

Translucent white covering rather than opaque.

Wide enough at the bottom to spread the light.

Deep enough to entirely enclose the bulb and diffusion bowl.

Open at the top to aid general room illumination.

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Role of Diet in Diabetes

How important is diet to the health of a diabetic? That question will be answered by Annette Gormican, assistant professor of home economics at the University of Minnesota, on Wednesday morning, January 15, at a session for homemakers during the University of Minnesota's annual Farm and Home Week. Miss Gormican will discuss the purposes of diabetic diets, explain the principles of diet planning and how to plan for variety in the diabetic diet. She'll tell you, too, how to recognize the usual symptoms of diabetes.

* * *

Tips on Better Homemaking

Every woman wants to be a good homemaker. Nowhere in four days can a woman get more information on different phases of homemaking than from the special homemakers' program planned as part of the University of Minnesota's annual Farm and Home Week on the St. Paul campus. Short cuts for more leisure, care of rugs and upholstered furniture, ABC's of meat cookery, freezing foods, consumer buying, the well dressed woman--these are only a few of the subjects that will be covered during this annual event. The dates: January 14-17. This is an opportunity for you to go back to school for as many of the stimulating, information-packed sessions as you can attend during the four days.

* * *

How's Your Gradening?

It will soon be time again to brush up on your gardening techniques. If you're an avid gardener, you'll want to be up-to-date on new varieties in vegetables and fruits, new trends in landscaping and ornamental horticulture. You'll hear about new developments in gardening and get specific helps on many of your gardening problems during the University of Minnesota's annual Farm and Home Week on the St. Paul campus. The dates are January 14-17.

- jbn -

University Farm and Home News
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January 3, 1958

SPECIAL

Immediate release

DAIRY INDUSTRY SCHOLARSHIP WINNER NAMED

Dennis S. Lucas, Browerville, University of Minnesota freshman in dairy industry, has been awarded a Minnesota Dairy Industry scholarship of $200.

Lucas will enter the University for the Winter quarter starting next week. He is a 1957 graduate of Browerville high school.

The award was based on academic and professional aptitude, character and financial need.

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University Farm and Home News
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For use before leader training meetings on PROTEIN IN EVERYDAY MEALS

Special to Farm & Co.

LEADERS TO LEARN
IMPORTANCE OF
PROTEIN FOODS

How _____ county families can improve their diets through use of a variety of protein foods will be the subject of a lesson for local leaders of extension home groups on _____ (date) at _____ (hour) in _____ (bldg) in _____ (city), announces County Agricultural Agent _____.

Grace Brill, extension nutritionist at the University of Minnesota, will conduct the lesson.

In a research on diets of older women conducted recently by University of Minnesota home economists, it was found that only a third of the women studied had as much protein as recommended. Miss Brill will emphasize the importance of including enough protein each day for good health. She will compare costs and quality of various protein foods for family meals.

Local leaders will present the lesson, "Protein in Everyday Meals," to their own groups during _____ (month).

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University Farm and Home News
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University of Minnesota
St. Paul 1, Minnesota

For use after leader training meeting but before group meetings on PROTEIN IN EVERYDAY MEALS

WOMEN TO GET
HELP ON BUYING
PROTEIN FOODS

When you buy a rib roast, are you getting better protein than in a pot roast which costs you less money?

_____ county homemakers will get the answer to that question and learn other facts about comparative costs and quality of protein foods in a special lesson to be given as part of the extension home program this month, announces County Agent _____ _____.

Local leaders in the extension home program will present the lesson, "Protein in Everyday Meals," to their own groups. Leaders were trained recently by Grace Brill, extension nutritionist at the University of Minnesota.

The importance of getting an adequate amount of protein every day will be stressed because of its importance in building and repairing bones, blood, skin and all other body tissue and for its role in helping the body resist disease. Meat, eggs, dried beans and peas, nuts, bread, cereals and milk will be compared as sources of protein for the family.

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University Farm and Home News
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For use after group meetings on PROTEIN IN EVERYDAY MEALS)

PROTEIN IMPORTANT
FOR GOOD DIET

For good health, every adult and child over years should have at least two servings of meat or other protein every day, including some protein for breakfast.

That fact was brought out in a lesson on "Protein in Everyday Meals" given by local leaders for extension home groups in the county.

Protein is important to build and repair bones, blood, skin and all other body tissue as well as to help the body to resist disease. Protein foods include fish, meat, eggs, milk, dried beans and peas, nuts, bread and cereals. Highest quality protein is found in meat, fish, eggs and milk.

A good breakfast, it was brought out, should include some protein, such as cereal and milk, or an egg or a serving of ham or sausage.

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University Farm & Home News
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January 7 1958

To all counties

For use week of

January 13 or later

FARM FILLERS

Wet litter means dirty eggs. It also means that ventilation is not adequate. But don't increase openings too abruptly in cold weather, because that can mean trouble later on. Keep some outlets open all the time and have some intakes near the ceiling, advises Cora Cooke, extension poultry specialist at the University of Minnesota. Fork over the damp spots in the litter to hasten drying. If caked material must be replaced, bring in small quantities at a time.

* * *

Cattle grubs may show up along backs of cattle any time now. The new systemic control is not available for general use in Minnesota, according to H. R. Searles, extension dairyman at the University of Minnesota. Rotenone powder at 1 1/2 percent strength will control grubs when rubbed into backs of infected animals. It can be made by mixing 1 pound of 5 percent Rotenone with 5 pounds of flour.

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Before 1945, most of the nonfat dry milk in Minnesota was produced by the roller process, according to E. Fred Koller and Richard J. Goodman, agricultural economists at the University of Minnesota. Since then, the industry has shifted more and more to spray process. Of the 383 million pounds of nonfat dry milk solids produced in 1956, all but 22.8 million were from spray process.

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The U. S. Department of Agriculture predicts 6 percent more pork next fall and winter. This is based on farmers plans for baby pigs expected early this year.

* * *

Aspen is actually becoming popular for lumber, says Parker Anderson, extension forester at the University of Minnesota. If piled and air-seasoned, it can be used for many buildings. If it is sawed in winter and properly piled, it can be used the following summer or fall.

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St. Paul 1, Minnesota
uary 7, 1958 Immediate release

PRUNE OAKS NOW, COMBAT OAK WILT

If those sturdy, majestic oak trees in your front yard or woodlot need pruning, do it between now and the end of March, or oak wilt might reduce them to leafless, lifeless skeletons.

Oak wilt is a fungus disease that attacks all species of oak in Minnesota.

Herbert Johnson, extension plant pathologist at the University of Minnesota, says that spores of the fungus may enter the fresh-cut wounds if pruning is done at other times of the year.

Oak wilt is now present in all of southeastern Minnesota, as far west as Mankato and as far north as Taylor Falls and St. Cloud. A few infection centers have also been found near Brainerd.

Red oaks are the most susceptible species and can be killed in less than a month. First symptom is a bronze or brown coloring of the tree's top leaves. As the tree dies, sprouting may occur along the main stem.

Bur or white oaks may also be killed. Scattered branches wilt. Leaves usually turn yellow or brown. Gradual dieback usually continues until the entire tree is dead.

Once an oak tree is infected, there is no known way of saving it.

After initial infection, the fungus spreads to nearby oaks--either by insect- or wind-borne spores or by natural root grafts.

Cut and burn infected oaks as soon as possible to prevent spread of spores.

Stop spread through root grafts by poisoning healthy trees around the infection center. Use ammate, or mixtures of 2,4-D and 2,4,5-T. If only a few trees are involved, dig a trench about 40 inches deep midway between infected and healthy trees.

Any control program should cover as large an area as possible. Elimination of oak wilt will probably be most successful as a community project, says Johnson.

B-1810-jrm

University Farm and Home News
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St. Paul 1, Minnesota
January 7, 1958

Immediate release

CHICKEN IS JANUARY PLENTIFUL

Fryer chickens and dairy products are among the foods that will be most plentiful and the best buys during January, reports Mrs. Eleanor Loomis, extension consumer marketing agent at the University of Minnesota.

Marketings of broilers and fryers will begin to increase seasonally this month. The January supply will be about 11 percent larger than a year ago and greater than in December, according to U. S. Department of Agriculture predictions. Turkey is still plentiful, but principally in the larger sizes.

The large numbers of dairy cattle indicate that the January output of milk will be record large for the month. Many other dairy products will be in generous supply.

On the market now is an abundance of canned and frozen peas from a record crop. Potatoes, too, are plentiful from the large crop harvested last fall for winter use.

"Eating" varieties of apples are abundant and will provide a real treat for January's cold weather. Ample supplies of dried prunes and California dates, almonds and filberts will help to round out meals for the first month of the new year.

B-1811-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 7, 1958

Immediate release

Mat caption: (left to right) Gunnar Gundersen, A. F. Spilhaus, T. H. Fenske, J. Carroll Bottum.

SPEAKERS, PROGRAM LISTED FOR FARM AND HOME WEEK

Four speakers--two agricultural authorities, a scientist and a medical man--will address noon convocation sessions during Farm and Home Week next Tuesday through Friday (Jan. 14-17) on the St. Paul campus of the University of Minnesota.

Tuesday convocation speaker will be Gunnar Gundersen, LaCrosse, Wis., head of the Gundersen clinic there and president of the American Medical association. His topic will be "Medical Pioneers."

"Earth, Sun and Space" will be discussed Tuesday by A. F. Spilhaus, dean of the University's Institute of Technology. Convocation speaker Thursday will be T. H. Fenske, associate dean of the Institute of Agriculture, whose topic will be "Minnesota's 100 Years of Agriculture."

J. Carroll Bottum, agricultural economist from Purdue university, will speak on "The Economic and Policy Outlook for Agriculture" during the Friday convocation. All convocation sessions will be in Coffey hall.

Paintings by amateur and professional artists from rural Minnesota will be on display for the Rural Art Show, one of the special attractions of the week, in the agricultural library. The show is held in conjunction with the State Centennial celebration.

New ideas in farm buildings, equipment and field machinery will be shown in exhibits in the agricultural engineering building.

Other special attractions of the event will be morning breakfast talks by J. O. Christianson, director of agricultural short courses and general chairman of Farm and Home Week, a Tuesday showing of "Agricultural Progress on Films," an evening square dance the same day, and a tea given by the Faculty Women's club Thursday.

(more)

A concert by the Minneapolis Symphony Orchestra will wind up the week Friday evening, at Northrop auditorium on the Minneapolis campus.

Sessions during the week will be as follows:

Tuesday. All-day sessions--4-H leadership program, Green hall; goose producers' program, Peters hall. Afternoon sessions--homemakers' program, home economics building; adequate electric wiring, agricultural engineering building; fruit program, horticulture building; weed program, agronomy building; beekeeping, Coffey hall; rural recreation leadership, student union.

Wednesday. Morning sessions--ornamental program, horticulture building. All-day sessions--homemakers' program, home economics building; crop improvement, Coffey hall; dairying, Haecker hall; swine production, livestock pavilion; beekeeping, Coffey hall; planning profits for tomorrow, Green hall. Afternoon sessions--agricultural farm management workshop, horticulture building; farm machinery, agricultural engineering building; frozen foods, Peters hall; veterinary medicine program, Peters hall.

Thursday. Morning sessions--vegetable garden problems, horticulture building; rural trends in Minnesota, horticulture building; sheep production, meat shop. All-day sessions--hay and silage show, dairy barn; homemakers' program, home economics building; beekeeping, Coffey hall; soils program, Green hall; Minnesota Livestock Breeders' association meeting, Coffey hall. Afternoon sessions--fire extinguisher demonstration, agricultural engineering building; farm prospects for 1958, Haecker hall; beef production, Peters hall; cow clipping contest, livestock pavilion.

Friday. Morning sessions--growing and use of wood on the farm, Green hall; conducting public meetings, student union. All-day sessions--hay and silage show, dairy barn; homemakers' program, home economics building; forages in beef and dairy production, agronomy building; beekeeping, Coffey hall. Afternoon sessions--Christmas tree farming, Green hall; farm policy issues in 1958, Coffey hall.

Complete programs will be available in Coffey hall.

B-1812-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 7, 1958 Immediate release

THREE IFYE DELEGATES CHOSEN FOR 1958

Three Minnesota young people have been selected to go to foreign countries in 1958 as International Farm Youth Exchange delegates.

Stanley Meinen, assistant state 4-H club leader at the University of Minnesota, in charge of the program for this state, announced that the three delegates are Alice Huber, 20, Manchester, Freeborn county; Larry Adams, 20, Verndale, Wadena county; and Donald Powers, 26, Granada, Martin county.

Tentative plans are that Miss Huber will go to France and Adams will go to Portugal in June. Both will return in November. Powers will spend October to April in Argentina.

The three young people will live and work on farms in the country to which they have been assigned. As IFYE delegates, they will serve as "grass roots ambassadors," helping to further international understanding, objective of the program.

Conducted by the National 4-H Club Foundation in cooperation with the Agricultural Extension Service, the IFYE program is a two-way exchange of American and foreign farm youth. Last year 15 rural youths from 11 countries lived and worked with Minnesota farm families and five young men and women from Minnesota went to foreign lands.

Miss Huber is a junior in home economics at Iowa State college, Ames. She has been a 4-H club member for five years and a Rural Youth member for three years. She has been active as a member and officer of Methodist Youth fellowship. She is the daughter of Mr. and Mrs. Ben Huber.

Adams is a junior at the University of Minnesota, majoring in soil science. During 10 years as a 4-H club member he served as president, vice president and treasurer of his local club. He is a member of the Lutheran Student association. He is the son of Mr. and Mrs. Norman Adams.

Powers is president of the State Rural Youth federation. During five years as a Rural Youth member he was district and county president, state and district vice president. He was a 4-H member for 10 years and was treasurer of the Martin county 4-H Federation. He is now in partnership with his father, Robert Powers. B-1813-jbn

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 7 1958

To all counties

ATT: 4-H CLUB AGENT
For use week of
January 13 or later

TAKE SAFETY MEASURES ON HAYRIDE

A hayride or sleighride that is a highlight of winter fun for a 4-H club or other young people's group can turn into a tragic event if proper safety precautions are not taken, warns 4-H Club (County) Agent _____ _____.

In the absence of horses, the tractor will probably be used to pull the hay rack or sleigh. Glenn Prickett, extension safety specialist at the University of Minnesota, gives some precautions to observe to avoid accidents when using the tractor:

. Have a reliable driver who has a driver's license.

. Keep extra riders off the tractor.

. Make sure the tractor is lighted with two white headlights and at least one red tail light visible from 500 feet to the rear.

. See that the rack on the trailer or sleigh has one or more red tail lights or red reflectors visible to the rear from a distance of 500 feet.

. Use a bolt and key to hitch the rack to the drawbar of the tractor.

. Equip the rack with rows of bales in the center for seats. Place a low railing across the front end of the rack to prevent falling forward between tractor and rack.

. Keep the tractor at low speed to prevent tipping.

. Avoid rough horseplay which may be responsible for pushing someone off the rack into the path of oncoming traffic. Load and unload carefully.

An extra precaution is to have a car following the tractor with flashing red turn signals.

- jbn -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 7 1958

To all counties

ATT: HOME AGENTS

3rd in series on outlook
For use week of Jan. 13 or after

AMPLE CLOTHING SUPPLIES AT REASONABLE PRICES

The clothing outlook for the consumer in 1958 is generally favorable, with reasonable prices and ample supplies from which to make selections, reports Home Agent _____ _____.

Increased labor costs may be responsible for somewhat higher prices, but any priceincreases will be modest. Prices of girls' and women's apparel are expected to remain at about the same level, but prices on men's and boys' clothing will probably be higher. Shoes will continue to go up in price.

The long-range outlook is for less low quality clothing, and more emphasis on improved quality, says Athelene Scheid, extension clothing specialist at the University of Minnesota.

Though the clothing outlook is favorable for the consumer, it is not optimistic for the clothing industry. Per capita expenditure for clothing has declined about 8 percent between 1947 and 1956. This means, Miss Scheid explains, that the clothing industry is not successfully holding onto its earlier share of the consumer dollar. Both urban and farm families are spending less of their family spending dollar for apparel because of the trend toward more casual living and because more of their money is going into home ownership. In general, families are merely replacing articles of clothing rather than increasing their wardrobes, Miss Scheid says.

Farm families spend about two-thirds as much as city families for clothing. Though they are spending more for clothing than 15 years ago, their expenditures for clothing still have not increased as much as their total expenditures for family living.

Price increases have been light during the last five years, unlike prices for other goods and services. The consumer price index for apparel rose less than .8 percent in the past year, for example, while prices for family living as a whole rose 3.4 percent. Footwear increased 11.7 percent during the past five years, but other clothing has not increased proportionately. - jbn -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 7 1958

To all counties

For use week of

January 13 or later

County Agent: This is the first in a series of research articles on importance of nitrogen in Minnesota soils.

NITRATE FORMATION AFFECTED BY LIMING

You can make more nitrogen available to crops, in many cases, by liming your soil, says County Agent _____ _____.

He points to experiments at the University of Minnesota and other experiment stations that show liming acid soils increases nitrate formation.

The nitrate form of nitrogen is one of the forms used by plants, and is produced when organic matter decays.

A. C. Caldwell, University soils scientist, says in Minnesota experiments, a group of lime plots was left uncropped. Then research workers sampled soil every 2 weeks from spring until fall and tested the soil for nitrate content.

In early May, nitrate content of the soil was low and there were only small differences between different liming rates. The organic matter was decomposing faster by June 14 and the lime was beginning to have some effect. By July 12, there was a definite increase in nitrate content in limed soil, compared to soil that had not been limed.

Samples taken on that day showed that where no lime had been used, there were 76 pounds of nitrate per million of soil, compared to 122 pounds nitrate where research workers had limed the soil at 4 tons per acre.

There were still higher nitrate levels in limed soil in August and September. By October, the high level from liming had decreased, although it was still a little higher than where no lime had been used.

Complete details on other recent research on nitrogen fertilizers will be reported at a Nitrogen Conference, February 20-22 in the Lowry Hotel in St. Paul. The conference is sponsored by the University in cooperation with the Midwest Soil Improvement association. All interested persons are invited.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 7 1958

To all counties

For use week of

January 13 or later

RULE GIVEN FOR FINDING VALUE SOFT CORN

What's the wisest way to sell wet corn -- sell it as it is, or dry it and then sell it?

Here's a way to find out, say Hal Routhe and Paul Hasbargen, extension farm management specialists and Bill Hueg, extension agronomist at the University of Minnesota.

First, find out what the going price per bushel is for wet corn. Add to this the cost for drying a bushel. Then, adjust this price to a dry corn basis by multiplying it by the appropriate "adjustment factor."

The "adjustment factor" that you use depends on the moisture content of the corn. For 20 percent moisture, the factor is 1.07. For 25 percent, it's 1.15. For 30 percent, it's 1.22 and for 35 percent moisture, it is 1.32.

Here is a sample calculation: Suppose you have 30 percent moisture corn that you can sell for 56 cents per bushel. The drying charge in your area is, say, 20 cents per bushel, based on the wet bushel. Add this charge to the price and the total is 76 cents. Then multiply this total by 1.22 (the adjustment factor for 30 percent moisture) and you have a "break-even" price of 93 cents.

That means to make drying profitable, you would need to get more than 93 cents per bushel for dry corn of the grade you expect to get by drying.

High-moisture corn will most likely dry down to grade 4 or, possibly, to grade 3.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 7 1958

To all counties

For use week of

January 13 or later

FARMER-SPORTSMAN
AWARD TO BE MADE

Nominations for _____ county's outstanding Farmer-Sportsman are due in County Agent _____'s office by February 25.

Anyone can make nominations for this honor. The county's top farmer-sportsman will compete for a special award given each year at the Northwest Sports show, April 3 in Minneapolis.

A winner and runner-up will be selected for each of four districts in the state. One of the four district winners will be selected as Minnesota's top farmer-sportsman. He will be honored at the Sports Show, April 3. He and his wife will receive an all-expense week-end vacation to the Twin Cities to attend the event.

All county winners will receive special recognition certificates.

Points considered in selecting the farmer-sportsman include reputation as a successful farmer in the community; wildlife conservation practices; forestry practices; soil conservation and land use on the farm and community activities, including those with youth, sportsmen, and farm groups.

For further details on making nominations, contact the County Extension office.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 9 1958

COUNTY AGENT -- CORRECTION

On the release mailed this week headed "Farmer-Sportsman Award to Be Made," please correct the date of the Northwest Sports Show, second paragraph, to read "April 4 - 13."

In the third paragraph, change the third sentence to read, "He will be honored at the Sports Show, Sunday, April 13."

Sincerely yours

Phillip J. Tichenor

Phillip J. Tichenor
Extension Information Specialist

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 9, 1958

Immediate Release

SIGN-UP PERIOD FOR 1958 ACREAGE RESERVE NOTED

Minnesota farmers were reminded today that they can sign up for the 1958 Soil Bank acreage reserve program between January 13 and March 7.

The reminder comes from extension agricultural economists at the University of Minnesota and the state Agricultural Stabilization and Conservation Committee.

This year, there will be no limits on the number of "allotment" acres which can be put in the Acreage Reserve--up to the established farm allotment for each eligible crop.

However, there is a limitation of $3,000 on each producer for each farm in which he has an interest.

Funds available for payments are limited, so farmers are urged to sign up promptly to make sure their agreements will be accepted.

For the first time in 1958, there will be an overall limitation on total crop production on farms in the Acreage Reserve. A Soil Bank farm base will be established for each farm taking part. This base is similar to the one already in effect for farms taking part in the Conservation Reserve. It is the average amount of land from which Soil Bank base crops were harvested on the farm during the past two years.

Participating farmers will agree to limit their harvested crops to their farm Soil Bank base, less the amount of land in the Acreage Reserve and the Conservation Reserve.

All farmers with "Old Farm" allotments for corn and wheat, if they normally produce spring wheat, are eligible to take part in 1958. Winter wheat agreements were signed up last fall.

The acreage reserve is voluntary. Farmers who take part sign a 1-year agreement with their county ASC committees. The land in the Acreage Reserve will be specifically designated and cannot include land already in the Conservation Reserve--the other part of the Soil Bank.

County committees will establish dollar-and-cents rates for each allotment crop for each farm. The rate varies according to the farm's relative productivity and farming methods. National average rates are $44.46 per acre for corn and $20.88 per acre for wheat.

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B-1814-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 9, 1958

Immediate Release

THIRTY YEARS OF RECORDS SHOW CHANGE IN MINNESOTA FARMING

The story of a technological "revolution in agriculture" is being told by the record books of 150 farmers in the 30-year-old Southeast Minnesota Farm Management association.

These records portray a pattern of change no less striking than the 18th century industrial revolution, according to George Pond, agricultural economist at the University of Minnesota who helped form the association in 1928.

Since that first year, the records show, farms in the association have grown 42 percent in size. Their fields yield 55 percent more corn per acre and the farms have 50 percent more land in cultivated crops--mostly corn and soybeans. Sod crops have increased from 28 to 34 percent of crop acreage and small grains have dropped from 42 to 21 percent.

There have been changes in livestock, too. All members of the association kept dairy herds in 1928, and most had hogs and chickens. Last year, only 81 percent had dairy herds, 76 percent had hogs and 69 percent poultry.

At the same time, the dairy herds increased by 73 percent in size, pig litters per farm doubled and poultry flocks also became twice as big. Each cow produces more than a third more butterfat, pigs per litter jumped 13 percent and egg production per hen has more than doubled since 1928.

In numbers alone, the biggest changes have been in machinery. Only two-thirds of the members used tractors 30 years ago, while now the average is more than two tractors per farm.

Investment per acre in mechanical power--tractors, trucks, electric motors and the like--went up 382 percent on 41 identical farms from 1928 to 1952.

Average sales per farm went up tremendously in the 30-year period, but so did proportion of income needed to cover expenses. In 1928, the average farm in the association sold $4,456 worth of products and spent 51 percent of it--$2,258--for cash expenses. In 1956, average sales per farm were $18,844, but 70 cents of each dollar went for operating costs. That means expenses totalled $13,233 per farm, on the average.

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B-1815-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 9, 1958

Immediate Release

LIVESTOCK BREEDERS TO HOLD MEETING DURING FARM AND HOME WEEK

The Minnesota Livestock Breeders association will hold its annual meeting Thursday, Jan. 16, during Farm and Home Week on the University of Minnesota's St. Paul campus.

The meeting will start at 1:30 p.m. in Coffey hall auditorium, according to W. E. Morris, secretary of the association.

Charles Simkins, University extension soils specialist, will discuss pasture management and fertilization.

Progress of the University's College of Veterinary Medicine will be reported to the meeting by W. T. S. Thorp, dean of the College.

During an awards session, the association will honor individuals whose portraits will be hung in the Livestock Hall of Fame in Peters Hall on the St. Paul campus.

Officers for the coming year will also be elected at the meeting.

Breed association delegates will hold an executive session preceding the association meeting, at which plans to reorganize the Livestock Breeders association into a federation of producers will be considered.

B-1816-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 9, 1958

Immediate Release

NATIONAL IFYE CONFERENCE IN MINNESOTA

Minnesota will be host to the sixth annual International Farm Youth Exchange alumni conference August 12-15, Stanley Meinen, assistant state 4-H leader at the University of Minnesota, announced today.

The meeting will be held at the American Lutheran Memorial camp near Onamia.

Some 200 young people representing 25 states are expected to attend the conference. All of them are former International Farm Youth Exchange delegates to foreign countries. IFYEs who will be in Minnesota next August from other lands will also attend.

Host state co-ordinator for the conference is Mrs. Marlene Mattila Stoehr, 2501 Lowry Ave. N. E., Minneapolis, who was an IFYE to Finland in 1953.

B-1817-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 9, 1958

Immediate Release

AN HOUR'S PAY BUYS MORE FOOD

If filling the family market basket puts a strain on the budget, it may be reassuring to know that when Dad brings home the bacon, he brings a lot more than he did in the so-called "good old days."

Wages and salaries have gone up much faster than food prices. The U. S. Department of Agriculture reports that an hour's wages will buy more bacon, more bread and more of every other kind of food than it would have back in the late twenties or the depression years of the thirties.

In 1929, for example, an hour's wage in the average factory would buy just under six and a half loaves of bread. Now it will buy 11 loaves. Or an hour's pay in 1929 would have bought 18 ounces of beefsteak. Today it buys almost twice as much--about 34 ounces.

In 1929 Dad could have bought about one and a third pounds of bacon for an hour's pay; in 1939, about two pounds. According to the latest figures, an hour's pay buys about three and a half pounds of bacon. If Dad collected his pay in butter, he would be doing almost three times as well as in 1929, or if he collected his pay in milk, he would get almost twice as much milk.

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B-1819-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minn.
Jan. 10, 1958

(with mat)

MRS. CALVIN IS
NEW HOME AGENT

Murray county will again have the services of a home agent, with the addition to the county extension staff of Mrs. Donna Lu Calvin of Worthington this month.

Headquarters will be in the county extension office in the court house in Slayton.

Since Mrs. Calvin will serve on a part-time basis, her title will be assistant home agent. She will be responsible for directing the home extension program and the home economics projects in the 4-H program.

A graduate of the University of Minnesota in 1952 with a bachelor of science degree in home economics, Mrs. Calvin was home agent in Nobles county for two years. In the fall of 1955 she taught in the adult education program in the St. Paul schools.

Mrs. Calvin was reared on a farm in Jackson county, Minnesota, She was a 4-H club member in that county for 10 years.

She is the widow of the late Paul Calvin who was field man for the Southwest Farm Management association.

-jbn-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 10, 1958

SPECIAL RELEASE
* * * * * * * * * * * * *
* For release at 2 p.m. *
* Monday, January 13 *
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IMPORTANCE OF RESEARCH IN BIOLOGICAL SCIENCES NOTED

GRAND FORKS, N. D.--High current interest in Sputnik, missiles and physical sciences in general poses a real danger to agriculture, T. H. Fenske, associate dean of the University of Minnesota's Institute of Agriculture, said today.

Speaking at the Red River Valley Barley Day here, Fenske said "there is a danger of minimizing the need for biological research which means, among other things, production research in agriculture.

"The biological sciences are just as important today as the physical sciences," he stated. "If science becomes lopsided, we can be in as much danger as we would be if we failed to keep pace with the Russians in guided missiles and other implements of war."

Fenske also pointed out that while research on ways to find new uses for farm products is important, it should not be allowed to completely crowd out production research.

"A thing that today is a mere idea in the mind of some young man working in plant or animal science may take 15 or 20 years to develop," he explained. "Certainly, we will need the information when that time comes."

Speaking on agricultural problems, Fenske said it is important to understand that industry needs markets provided by farmers and that farmers are more dependent than ever upon industry, business and professions. "We can be thankful," he said, "that we have had a high level of industry in the United States."

He suggested four main points to follow in handling agricultural problems:

"1. Continue agricultural research to reduce farm costs. This includes production, marketing and industrial research.

"2. The government must continue its efforts to reduce surplus to a manageable size.

(more)

"3. Help remove marginal farmers and marginal land from agriculture. This will not reduce surplus, but will make for a better living for a large group of people.

"4. The increasing population of this country is probably the long term solution to surpluses. In the last 10 years, 27 million people have been added to the United States, a 19 percent increase. In the next 10 years, 30 million people will be added, an increase of 18 percent over today."

Fenske concluded, however, that "increasing population is not the immediate solution to our farm problem. In the meantime, then, good farming, production of quality products, efficient marketing and a constant striving to improve agriculture's position in the economic world is essential if we are to survive."

-pjt-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 10, 1958

SPECIAL RELEASE
* * * * * * * * * * * * * *
* For release at 11 a.m. *
* Monday, January 13 *
* * * * * * * * * * * * * *

DISEASE PROBLEMS IN RED RIVER VALLEY DISCUSSED

GRAND FORKS, N. D.--Plant "disease" gardens must be established in the Red River Valley in order to make the most rapid progress in developing disease-resistant barley varieties for that area.

J. J. Christensen, head of the University of Minnesota's plant pathology department, made that statement today at the Red River Valley Barley Day at Grand Forks, N. D.

The diseases of most concern on barley in this area are Septoria leaf blotch and Helminthosporium stem and foliage blight, along with kernel blight and storage molds and certain virus diseases, Christensen said.

A "disease garden," he explained, is a plot of "sick" land on which varieties of barley are subjected to a "survival of the fittest" test. This land is deliberately infected with numerous types of disease organisms.

The barley seed is inoculated with all races or strains of common seed-borne disease and developing plants are inoculated during the growing season with disease organisms. This way, plant pathologists and plant breeders can eliminate disease-susceptible varieties before they are released to growers.

Such disease gardens have been maintained for years on the St. Paul campus of the University and elsewhere in the nation.

During the past 10 years, thousands of new varieties and hybrid lines have been eliminated because of their susceptibility to diseases, Christensen said. During the past year, more than 3,000 varieties of barley from around the world were tested this way by the University.

J. W. Lambert, University of Minnesota agronomist, told Barley Day visitors that barley breeding work is being stepped up at the University's Northwest School and Experiment station, Crookston.

This research, he said, will be aimed at developing barley varieties that are resistant, or at least tolerant, to helminthosporium spot blotch and septoria leaf blotch diseases--two of the biggest disease problems in barley.

Breeding work will also be directed at developing acceptable malting quality, plump kernels with bright color, good yielding ability, early ripening and resistance to lodging, shattering and weathering in the swath, Lambert said.

-pjt-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 13, 1958

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* For release at 2 p.m. *
* Tuesday, January 14 *
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GOSLINGS NEED HIGH-ENERGY RATION FOR MAXIMUM GROWTH-Farm and Home Week

Young geese need a high-energy ration to make maximum growth on the least amount of feed per pound of gain, according to University of Minnesota research.

Poultry Scientist Paul Waibel made this report at a Farm and Home Week goose producers session today.

He said that in one recent experiment, goslings receiving a 28 percent protein ration containing 15 percent animal fat and 28.5 percent corn--a high-energy ration--weighed 5.41 pounds at 4 weeks of age, and required only 1.37 pounds of feed per pound of bird.

Birds on a low-energy, 20-percent protein ration weighed 4.38 pounds at 4 weeks and required 1.97 pounds of feed per pound of gosling. This ration contained 30 percent ground yellow corn, 15 percent wheat standard middlings, 10 percent wheat bran and 10 percent ground oats.

However, Waibel pointed out, even this feed efficiency from low-energy rations is remarkable when compared with efficiency that can normally be expected from other forms of poultry, such as chickens or turkeys, of comparable size.

The diets also were fortified with soybean oil meal, fish meal, alfalfa meal, dried whey, distillers dried solubles, and vitamin and mineral supplements. Emden and Toulouse-Emden crossbred goslings were used in the studies and were kept on raised wire mesh floors in batteries.

These results confirm findings from earlier studies, Waibel said. The experiments were conducted by Waibel and the late T. H. Canfield.

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B-1818-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 13, 1958

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* For release at 4 p.m. *
* Tuesday, January 14 *
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NEW CHEMICAL WEED-KILLERS EXPLAINED AT FARM AND HOME WEEK

New chemical herbicides may be a big help in knocking out weeds that present-day chemicals don't kill, a Farm and Home Week audience was told today.

Not that the old weed killers, such as 2,4-D and MCPA, aren't effective. They are. But when susceptible weeds are killed by 2,4-D and MCPA, resistant kinds take their place and new or different herbicides are needed to kill them.

R. S. Dunham, University of Minnesota agronomist, said some of the promising newer chemicals include the "butyrics"--2,4-DB and MCPB--simazin, and amino triazole.

The butyrics, Dunham said, are harmless to plants until they have been converted into 2,4-D within the plant. Some plants can convert the butyrics and others can't. Fortunately, some weeds can make the change and are killed while growing in a crop that can't make the change and therefore isn't injured.

Butyrics give good control of shepherd's purse, Canada thistle, cocklebur, white cockle and other weeds, but, in general, won't hurt small grains, corn or alfalfa and clover.

Simazin will probably find more use in corn than any other crop, Dunham said. It is effective against both broad-leaved and grass weeds.

Amino triazole works well against Canada and perennial sow thistle. It has some definite advantages over sodium chlorate, ureabor, polybor chlorate and similar soil sterilants, according to Dunham. It is readily leached so that it doesn't leave a soil unproductive for long periods. It is also cheaper because of its low rate of application.

Dunham pointed out that the butyrics, simazin and amino triazole have not been cleared for use by the U. S. Food and Drug Administration, so no recommendation for their use can be made yet.

A chemical that has been cleared for pre-emergence spraying on corn, beans, onions and canning peas is Randox, Dunham added. This chemical has proven out well in Minnesota field tests and is particularly effective against grass weeds.

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B-1820-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 13, 1958

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* For release at 2:30 p.m. *
* Tuesday, January 14 *
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PAST CENTURY SHOWS REAL PROGRESS IN MINNESOTA FRUIT GROWING

The story of a century of progress in fruit growing in Minnesota is a story of the fulfillment of dreams, of the triumph of men and science in a contest with nature, W. H. Alderman, professor emeritus of horticulture at the University of Minnesota, declared today (Tues.,Jan. 14).

Three small apples grown in Minnesota by the Rev. Gideon H. Pond of Bloomington were exhibited 101 years ago - in October, 1856 - at the first Territorial Fair, Alderman told a Farm and Home Week audience on the St. Paul campus. Pond, a missionary working with the Indians, had planted apple seeds in 1844. One tree survived and produced fruit--the first apple tree in Minnesota of which there are authentic records. Several trees of this variety now produce crops regularly at the University Fruit Breeding Farm.

Most of our horticultural crops originally came to America from the Old World, Alderman said, but not until the middle of the past century did they reach the Mississippi River. After repeated plantings and repeated losses, most of the pioneers in the upper Midwest gave up trying to grow apples and other fruits. However, among a few optimists who kept bringing in and testing new varieties was Peter Gideon, who settled on Lake Minnetonka in 1853 and planted a bushel of apple seedsbrought from Illinois. After years of planting, one of his seedlings finally bore "magnificent apples." He named the variety Wealthy.

Advent of the Wealthy apple restored confidence in prairie fruit growing. Some years later the Minnesota legislature established a fruit breeding farm with Gideon as superintendent. Eventually a dozen or more state, federal, provincial and dominion experiment stations in the United States and Canada were breeding fruits adapted to the Northern Great Plains area, with Minnesota in the vanguard of the movement.

In the past century Minnesota has progressed from a state where only wild fruits were available to one where top-quality fruit varieties have been developed for growing in home orchards and gardens and for commercial marketing, Alderman said.

In a talk on new fruit varieties, A. N. Wilcox, professor of horticulture, mentioned three new fruit varieties added to the list of hardy fruits developed by the University of Minnesota for this region: the Welcome gooseberry with spines reduced in size and number, Centennial and Northland apple-crabs, larger than crab-apples and resembling apples in eating quality. Stock of the new fruits, named this year, will be available this spring.

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B-1821-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 13, 1958

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* For release at 10:30 a.m. *
* Wednesday, January 15 *
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IMPROVED VARIETIES OF ORNAMENTALS---Farm and Home Week

Minnesota gardeners today are demanding far more than hardiness in ornamental plants, Leon C. Snyder, head of the University of Minnesota department of horticulture, declared today (Wed. a.m., Jan. 15).

Speaking at a special session on ornamentals during the University's Farm and Home Week on the St. Paul campus, Snyder said today's gardeners and home owners are looking for trees and shrubs that combine several seasons of beauty, small to medium shade trees that fit the scale of their surroundings, dwarf shrubs for the foundation plantings and ground covers for steep banks and areas too steep to mow. They are also looking for improved varieties of lawn grasses and perennials and annuals with a long flowering period. The University department of horticulture, Snyder said, is playing an important role in providing these improved varieties.

Reviewing the progress of interest in ornamental horticulture in the state in the last 100 years, Snyder pointed to development by early Minnesota nurserymen of more than 100 varieties of peonies, of new varieties of garden chrysanthemums, daylilies and gladiolus. An important nursery industry has grown up in the state to supply the gardening needs of Minnesotans, he said.

At the same session, R. J. Stadtherr, instructor in horticulture, listed the following as the five biggest changes that have occurred in lawn care in the last century: 1) Realization that fertilizing and good management, as well as good seed, are necessary to produce good turf. 2) Use of chemical weed control for crabgrass and other lawn weeds. 3) Use of power equipment. 4) Use of high-analysis fertilizers. 5) Public acceptance of improved varieties of turf grasses.

Progress in turf research is indicated by the fact that 20 years ago 13 varieties of grasses had been tested at the University as compared with 26 which have been tested to date. The University horticulture department is now growing more than 50 different mixtures of lawn grasses. Stadtherr pointed out that though the old standbys in lawn grasses are seldom in the limelight, Kentucky bluegrass is still the most reliable lawn grass in this area.

B-1822-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 13, 1958

Immediate release

WINNERS NAMED IN RURAL ART SHOW

Mrs. Olga Kjell, Fergus Falls, has been named winner of a $100 award in the seventh annual Rural Art show being held during the University of Minnesota's Farm and Home Week on the St. Paul campus this week (Jan. 14-17). Her winning entry was an oil painting, "Gray and Gold."

Second prize of $50 will go to Mrs. Mary Bergstedt, International Falls, for her oil painting, "Minnesota Snow Town," and third prize of $25 to Nancy Helen Stuessy, West St. Paul, for her oil, "Girl in Red Sweater." The Minnesota State Centennial commission is providing the three prizes for the best awards in this year's exhibits.

Fifteen rural artists were given honorable mention: Arlyne Bacheider, Stillwater; Marian L. Carlson, Bayport; Kathryn Flom, Thief River Falls; Arnold Kramer, Wabasso; Edwin Nooleen, Cedar; Ted Rolling, Ivanhoe; Miriam Taylor, inter-Stillwater; Margarete Uppgren and Mrs. Clare Wagner, White Bear; Ade Toftey, Grand Marais; Betty Holmes, Mountain Iron; Winifred Netherly, Stillwater; Mrs. Molly Newman, Mounds View; Helen Sanborn, Fairmont; Susan Sharp, Pine City.

Judging the entries were Urban Couch, instructor, Minneapolis School of Art; C. A. Gayne, head, department of art education, and Mrs. Katherine Nash, director, University Gallery, University of Minnesota.

More than 200 artists have entered this year's show, with a total of 345 drawings, paintings and pieces of sculpture, according to co-chairmen Rudolph Johnson and A. Russell Barton.

A program of talks and gallery tours will feature this year's show in the agriculture library on the St. Paul campus this week.

B-1823-jbn

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 13 1958

To all counties

ATT: HOME AGENTS
For use week of
January 20 or later

TRICKS GIVEN FOR MAKING BEST FRENCH FRIES

Do you have trouble preparing good French fries for the family?

With potatoes so plentiful, you may want to add zest to January meals with some delicious French fries. To be sure of top quality in French fries, keep these tricks in mind, suggests Home Agent _____ _____:

- Be sure the potatoes are dry.
- Fry a single layer at a time.
- Fry the potatoes twice.

Too much water in any form cools the fat too much, makes the potatoes cook slowly and absorb too much fat, according to U. S. Department of Agriculture specialists. So when you've peeled the potatoes and cut them into strips about 3/8 inch thick, wash them quickly in cold water and then dry them on a towel. Have the deep fat heated to the boiling point and put in the raw potatoes a few at a time, just a single layer in the frying basket. Again, the reason is water, for potatoes contain almost 80 percent water. Putting a big basket of potatoes into a pan of hot fat is about like pouring in a glass of cold water. The result is likely to be spattered grease and soggy potatoes.

Cook the potatoes until they're done, but not browned. The first cooking, called "parfrying," can be done in advance, several hours ahead if it's more convenient. Then, just before serving, give the cooked potato strips a final frying to put on that mouth-watering golden brown finish.

For the money spent on them, potatoes give a high return in food value, _____ _____ points out. One medium-size potato can supply as much as one-fifth of the ascorbic acid (vitamin C) recommended for each day, as well as worthwhile amounts of the two B-vitamins thiamine and niacin and of the minerals iron, phosphorus and potassium.

- jbn -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 13 1958

To all counties

For use week of

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FARM FILLERS

If any of your oak trees need pruning, do it between now and the end of March, advises Herbert Johnson, extension plant pathologist at the University of Minnesota. The reason is that spores of the oak wilt fungus may enter freshly cut wounds if pruning is done at other times of the year. If that disease strikes, it can reduce oak trees to leafless, lifeless skeletons.

* * *

Make sure the lumber sawed from your logs this winter is properly piled. Parker Anderson, extension forester at the University of Minnesota, explains that lumber piled correctly will lose moisture gradually between now and the hot weather of mid-summer. Then there will be less checking, warping and twisting in the lumber.

* * *

During the past year, more than 3,000 varieties of barley were tested in the plant "disease gardens" at the University of Minnesota, according to J. J. Christensen, head of the plant pathology department. A disease garden is a plot of land which is deliberately infected with disease organisms, so that plant pathologists and plant breeders can eliminate disease-susceptible varieties.

* * *

This year, there will be no limits on the number of "allotment" acres which farmers can put in the Soil Bank Acreage Reserve--up to the established farm allotment for each eligible crop. However, there is a limitation of $3,000 on each producer for each farm in which he has an interest.

* * *

Wheat, cotton, corn and dairy products make up 80 percent of the Government's expenses in farm price supports. Out of about 250 crops and other products produced on U. S. farms, the Government owns stocks of only 13.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 13 1958

To all counties
For use week of January 20

FARMER-SPORTSMAN
NOMINEE PICKED

_____ has been selected as the outstanding Farmer-Sportsman of 1958 in _____ county, according to County Agent _____.

_____ will compete now for honors as one of Minnesota's four outstanding farmer-sportsmen for the year. There will be four nominees -- one from each of the four sections of the state.

One of the four district winners will then be named Minnesota's Farmer-Sportsman of the year and will be honored at the Northwest Sports Show in Minneapolis, Sunday, April 13.

District and statewide winners will be picked from county nominations by a committee of sportsmen, conservationists and agricultural specialists. Heading this committee is Parker Anderson, extension forester at the University of Minnesota.

The local winner was selected by a committee including county commissioners, sports clubs, game wardens and County Agent _____. (add others involved.) _____ was picked for his success in farming, wildlife conservation and forestry practices, soil management and leadership in improving farmer-sportsmen relations.

He will receive a special recognition certificate for his outstanding efforts.

(Add a paragraph or two about the man selected.)

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 13 1958

To all counties

ATT: 4-H CLUB AGENT
For use week of
January 20 or later

FARM, HOME SHOP IS PRACTICAL FOR 4-H MEMBERS

Four-H club members need only a few inexpensive tools to begin their farm and home shop project, _____ _____ club (county) agent, tells beginning members. Many tools can be made by the member at home.

A bench hook, vise, mitre box, are all very simple items that _____ county members can make, he adds. Other items are a saw horse, bench, tool box or file cabinet.

A bench hook will hold your work while sawing, planing or chiseling. If made first it will save time on later projects. It takes only three small pieces of pine or fir wood and five screws and needs no finish. A home bench vise would be made of oak or other hardwood.

Measuring, sawing, planing and screwing are some of the things a 4-H member will learn in this project.

A mitre box can help you with many more advanced projects. If made properly it will aid in making good 45° and 90° angles.

Saw horses will be used for many things. A pair is more practical than one. It is less work to make both at the same time. They may be finished or not.

The bench will be used in many ways in the workshop. Make several and use them in the yard or for extra seating in the recreation room. Before applying finish sand them very smooth.

A tool box which can be locked will help you to keep your tools in good condition. Pine or fir wood, hinges, screws and drawer pulls are needed. Glue will make a stronger box.

As you make more items you will want a place to file records, plans, receipts, or bills. A file cabinet, finished to match the desk or table on which it stands will very useful.

Directions for all these tools are in the 4-H Farm and Home Shop Woodworking bulletin available at the county extension office.

- meb -

University Farm & Home News
Institute of Agriculture
University of Minnesota
Paul 1 Minnesota
January 13 1958

To all counties
for use week of
January 20 or later

COUNTY AGENT: This is the second in a series of research articles on importance of nitrogen in Minnesota soils.

NITROGEN IS CRITICAL ELEMENT FOR OAT CROPS

On some Minnesota soils at least, nitorgen is the most important plant nutrient for increasing oat yields.

County Agent _____ says this has been brought out in recent University of Minnesota research in southern Minnesota.

For example, A. C. Caldwell, University soils scientist, says 60 and 80 pound rates of nitrogen per acre doubled oat yields on Skyberg silt loam. These treatments also nearly doubled amount of straw produced per acre.

A test on Kenyon silt loam showed that nitrogen was the most important limiting nutrient. Research workers applied nitrogen, phosphate and potash, alone and in combination, to oats. In each case, nitrogen increased yields by more than 20 bushels per acre, while increases from either phosphate or potash alone were only about 5 or 6 bushels per acre.

Even better results came from using complete fertilizer -- one containing all three plant nutrients. Complete fertilizer raised oat yields by more than 75 bushels per acre.

Caldwell adds an important note of caution on using nitrogen for oats. Nitrogen increases weed growth, and, along with increased straw growth, may make it difficult to get a good stand of legumes when they are seeded with the oats.

That means that if oats are to be used as a companion crop for a legume, it's often best to keep the nitrogen application down to about 40 pounds per acre. At the same time, there must be enough phosphate and potash added to give the legume a good boost.

Other recent research on nitrogen fertilizers will be reported at a Nitrogen Conference February 20-22 in the Lowry Hotel in St. Paul. Sponsored by the University in cooperation with the Midwest Soil Improvement committee, the conference is open to anyone interested.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 13 1958

To all counties

For use week of

January 20 or later

WINTER DYSENTERY CAN AFFECT ALL CATTLE IN HERD

If you see signs of winter dysentery in your beef or dairy cattle this winter, isolate the first animal that gets it, if possible, and attend to the rest of the herd immediately.

That advice comes from County Agent _____ and Dr. R. B. Solac, extension veterinarian at the University of Minnesota.

While it's seldom fatal, winter dysentery usually affects most older animals in a herd where it hits, and it can cut milk production by 50-95 percent for up to two weeks.

The most obvious symptoms of this condition are a loose, watery, brown, diarrhea, sometimes containing a little blood. It often strikes one or two animals first, then affects other animals in the herd three to five days later.

Animals fail to gain or produce well when they have dysentery, but they often continue eating normally and seldom have a fever. It is much less sever in calves than in older animals.

Antibiotics and sulfa drugs are of little help against winter dysentery, but it can be treated with any one of several readily available intestinal antiseptics. These products are given as individual doses.

In particularly severe cases, additional steps must be taken to relieve dehydration. In this situation, it's best to call a veterinarian.

If your herd hasn't been affected by the disease, avoid farms where it has hit. You might bring the disease home with you, Solac warns. The condition is most common between November and March.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 4 p.m. *
* Wednesday, January 15 *
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NEW GRAIN SORGHUM VARIETIES NEEDED IN MINNESOTA--Farm and Home Week

Despite its growing popularity, grain sorghum still isn't ready to take a major place in Minnesota agriculture, R. G. Robinson, University of Minnesota agronomist, said at a Farm and Home Week crop improvement session today.

Present hybrids are still either too late in maturity, too slow in drying, too tall, too susceptible to lodging or too easily smothered out by weeds, Robinson said.

These problems were brought out in field trials conducted in the state last summer, he explained. But he added that some of the difficulties may be solved in the near future by new earlier-maturing hybrids and new chemicals that may control weeds in sorghum and maybe even help the drying problem.

Results of the 1957 performance trials on grain sorghum hybrids will be published in the February issue of "Minnesota Farm and Home Science," a University agricultural experiment station publication.

B-1824-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 4 p.m. *
* Wednesday, January 15 *
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HAY CONDITIONERS CAN SHORTEN HAY DRYING TIME--Farm and Home Week

In sunny weather, a hay crusher or crimper can cut several hours off hay drying time in the field, a Farm and Home Week audience was told today.

Paul Marvin, University of Minnesota agricultural engineer, reported that in field tests last summer, hay consistently dried faster after being "conditioned" with a crusher or crimper. The tests were conducted at the Rosemount Agricultural Experiment station by Agricultural Engineers John Strait, Marvin, and Bruce Fiedler.

The weather, particularly amount of sunlight, had an important effect on how fast the hay dried after conditioning. For example, hay cut and crimped on July 10 averaged 22.3 percent moisture--about right for baling--after 26.2 hours of field drying. Unconditioned hay averaged 38.4 percent moisture after the same period. That was in clear weather.

On the other hand, second-crop hay cut and crushed August 1 in partly cloudy weather still contained 37.7 percent moisture after 30 hours of drying.

The engineers tested crushers, crimpers and a machine that uses both principles, but there was little difference between all types, on the average, in effect on drying rate.

All types of hay conditioners run hay through at least one pair of rollers. Some have smooth rollers that crush the stems, some have corrugated rollers that crimp or break the stems and some have both types of rollers. Some conditioners are individual units and some are combination mowing and conditioning machines.

The purpose of a hay conditioner is to crush the hay stem so it will dry faster. Normally, legume hay leaves dry faster than the stems. By the time stems are dry, leaves are often so brittle that many of them fall off when hay is harvested. Legume leaves are high in protein, meaning it's important to save as many as possible.

Conditioning the stem allows it to dry as fast, or nearly as fast, as the leaves, and therefore can help maintain higher hay quality. Also, getting hay dry and ready to put in the barn quicker can help a farmer take advantage of shorter periods of good drying weather during the haying season.

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B-1825-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 2 p.m. *
* Wednesday, Jan. 15 *
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MINNESOTA FARMS ARE STILL FAMILY-OPERATING UNITS---Farm and Home Week

The average Minnesota farm is more of a "family operated" unit than was true just a few years ago, a University of Minnesota agricultural economist said during a Farm and Home Week session today.

Truman Nodland pointed out that Minnesota farmers hire less labor and do more work themselves and with family help than was true before World War II.

At the same time, farmers have increased the acreage operated, or the amount of livestock they keep, or both, Nodland said. These increases have come about because of more and larger machinery and equipment on farms and because of narrower margins between prices received for products and production costs.

But while more and larger machinery have made it possible for the farmer to save on labor, the expense of this equipment means he must be an efficient manager and spread this cost over a larger volume of business, Nodland stated.

He pointed out that records from the Southeast Minnesota Farm Management Service show 50 percent of gross farm income went for operating expenses 20 years ago. Now, 70 percent goes for expenses.

Another current trend is increased specialization, according to Nodland. Practically all farmers in southeastern Minnesota kept a dairy herd, hogs and chickens and some raised sheep a few years ago. Now, more and more of the farmers are concentrating their efforts on just two enterprises or only one.

Farmers in the Southeast association have a greater range in earnings than ever before. Nodland said the difference between the average of the highest one-fifth to the lowest one-fifth is now nearly $8,000, compared to $7,775 in 1945-49 and $3,373 10 years earlier.

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B-1826-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 8 p.m. *
* Wednesday, Jan. 15 *
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SWINE HONOR ROLL MEMBERS NAMED

Twenty-nine Minnesota farmers were this evening named members of the 1957 Swine Honor Roll.

The farmers were recognized at a banquet at the University of Minnesota's Coffman Memorial Union. The banquet was sponsored by THE FARMER magazine, St. Paul.

Members of the honor roll were selected because of their general success in efficient hog production, including number of pigs farrowed per sow, number weaned and raised per sow, and average weight and age at market time.

The award winners, representing 24 farms, raised herds that averaged 10.7 pigs farrowed per sow, 9.5 pigs weaned per sow and 9.3 pigs per sow raised to market weight. Average age was 179 days and average market weight was 215 pounds, meaning pigs on all the farms averaged 1.2 pounds daily gain.

Awards were made by H. G. Zavoral, extension livestock specialist at the University of Minnesota. Zavoral is in charge of the Swine Honor Roll project, which is sponsored cooperatively by the University agricultural extension service and the Minnesota Swine Producers' association.

Swine Honor Roll members are: Carl and Calvin Block, Windom; Arthur F. Bohnsack, New Prague; Martin Dinse, Owatonna; Floyd Floto and Son, Canby; Leslie Foote, Brewster; Duane Frick, Pipestone; Lee Fullerton, Faribault; Leo Gostomczik, Medford; Norris Griffith, Owatonna; R. H. Hansen and Son, Garden City; Elmer E. Hohenstein, Madelia; Harvey J. Holst, Brownsdale; Linden King, Racine.

Henry Kriesel, Owatonna; Joe Lammers, Adams; C. G. Pfantz and Son, Pipestone; Walter and Harvey Raddatz, Redwood Falls; John Selland, Madelia; George J. Shutrop, Shakopee; Elton Sogaard, Clements; Carl Tordson, Round Lake; William Uittenbogaard, Lake Park; Vernon R. Voss, Lakefield; and Joe Wertish, Bird Island.

B-1827-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 9 a.m. *
* Wednesday, January 15 *
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DIET HAS IMPORTANT ROLE IN DIABETES--Farm and Home Week

Diabetes is such a common disease that everyone should know something about its symptoms and control, a University of Minnesota home economist told a Farm and Home Week audience of homemakers on the St. Paul campus today (Wed. a.m., Jan. 15).

In a talk on "The Role of Diet in Diabetes," Annette Gormican said that about two million Americans now have diabetes and probably another five million are potential diabetics.

Persons most likely to develop diabetes are women over 40 years of age, overweight people and people who have a family history of diabetes. More than 80 percent of adult diabetics were overweight before the condition developed, according to estimates of the American Diabetes association.

Best insurance against preventing the serious complications to which diabet may be susceptible is day-by-day control of the blood sugar level and urine sugar content through diet or diet and insulin, Miss Gormican said. A diabetic diet should also control body weight. A moderate amount of physical exercise is also helpful in regulating the quantity of sugar in the blood. Development of the exchange system of planning diabetic diets has made diet planning easier and more acceptable.

Miss Gormican urged every diabetic to learn as much as possible about diabetes, since a well informed diabetic will do a much better job of controlling his condition.

Walter Vivrett, associate professor of the University's School of Architecture, discussed housing for older people at the same session and Joris Krantz, Minneapolis, talked on care and cleaning of rugs and upholstered furniture.

Farm and Home Week continues through Friday.

B-1828-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 2 p.m. *
* Wednesday, Jan. 15 *
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SHORT CUTS FOR MORE LEISURE--Farm and Home Week

"Homemakers are always talking about easier housekeeping, but few of them do much about it."

Kathleen Jeary, assistant professor of home economics at the University of Minnesota, made this statement today (Wed. p.m.) at a Farm and Home Week program for homemakers on the University's St. Paul campus. She talked on "Short Cuts for More Leisure."

Homemakers who complain of never having any leisure time or being too tired to do anything interesting when they have time do not think of the short cuts or methods of doing work that will save their energy, Miss Jeary said.

Home economics researchers have conducted tests to show which housekeeping motions are the greatest energy burners. Among these are reaching above the level of the head, stooping, walking upstairs and downstairs, standing when working.

Miss Jeary suggested these ways of saving energy as well as time in keeping house: 1) Select proper equipment. Example: use a long-handled rather than a short-handled dust pan. 2) Watch your body mechanics. Example: use leg muscles instead of back muscles to lift. 3) Rearrange kitchen supplies and equipment to help banish housework fatigue, keeping them at the point of use. 4) Use correct working methods. Example: make use of both hands in working. 5) Get the whole family to cooperate.

Using the right cookery method with each cut of meat is the secret to preparing consistently appetizing meat dishes, Sophia Lovekamp, Chicago, assistant director of the department of home economics of the National Live Stock and Meat Board, told the Farm and Home Week audience.

The smart homemaker can save money and keep variety in her menus by learning more about selecting, cooking, preparing and serving the many different cuts of meat. When properly prepared, every cut of meat is tender as well as appetizing, Miss Lovekamp said.

She gave these pointers on cooking meat: Always use low temperatures--300 degrees for beef, veal and lamb, 350 degrees for fresh pork. Cook the tender cuts by the dry heat methods of cookery--broiling, pan-broiling and roasting. Use the moist heat methods of cookery--braising and cooking in liquid--with the less tender cuts. Use a meat thermometer to take the guesswork out of cooking meat.

Farm and Home Week sessions will continue through Friday.

B-1829-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 9:30 a.m., *
* Thursday, January 16 *
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SEED TREATMENT IMPORTANT FOR HOME GARDENER-Farm and Home Week

Chemical seed treatment is one of the best and cheapest means of disease control in the vegetable garden, H. G. Johnson, extension plant pathologist at the University of Minnesota, told home gardeners today (Thurs. a.m., Jan. 16).

Johnson spoke at a special session on vegetable garden problems during the University's annual Farm and Home Week on the St. Paul campus.

All seed should be treated before planting as insurance against possible severe loss, Johnson declared. Spraying or dusting must be used to control disease organisms that infect leaves, stems and fruits from the outside.

Protectant-type materials now in general use must be on the plants before infection occurs, Johnson pointed out. He emphasized the importance of insect control in preventing disease, since insects spread fungi, bacteria and viruses.

The ultimate in disease control is disease resistance, according to the University specialist. If complete disease resistance is available, the control is simply bought with the seed.

Chemical weeding, as far as the home garden is concerned, is still in the experimental stage, R. E. Nylund, associate professor of horticulture, reported at the vegetable gardening session. As a home gardener, you will be interested in chemical weeding, he said, if you are experimentally inclined, are willing to take a possible loss, that is, kill some of your plants and are willing to invest some money to satisfy your curiosity. Gardeners who try chemical weeding are likely to become so over-enthusiastic they increase the recommended rate of applying the chemical, with the result that they kill the garden crop, he said.

B-1830-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

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* For release at 1 p.m. *
* Wednesday, Jan. 15 *
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SIX FARMERS RECEIVE MANAGEMENT PROFICIENCY AWARDS--Farm and Home Week

Lyall Larson, farmer from Hayfield, Minn., today received a plaque award for being the top farm manager in the Minnesota Farm Management program.

The award was made during a Farm and Home Week convocation program on the St. Paul campus of the University of Minnesota, and was presented by Sherwood Berg, head of the agricultural economics department at the University.

The Farm Management program is conducted by the University's Institute of Agriculture in cooperation with vocational agriculture instructors in Minnesota and the State Department of Education.

Larson was picked from a slate of six area award winners. He operates a 180-acre livestock and turkey farm, and was credited with operating a large business on a relatively small acreage. The farm is operated by Larson with help from the rest of the family.

Also cited for being an active community worker, Larson is a member of the Hayfield Board of Education and takes part in other local activities.

The other five farm management award winners, who received certificates, were: Bob Bernhardt, Canton; Mark Kelsey, Madelia; Kenneth Larson, Cyrus; Julian Rodahl, Thief River Falls; and Walter Reyer, Staples.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 14, 1958

Special to Television Stations

SCIENTISTS TEST WAYS TO SPEED UP TOMATO GROWTH (60 seconds)

VISUAL	AUDIO
Picture of Placing tomato plant in plastic mulch	Horticulturists are finding ways to make tomatoes grow faster, so they will be more apt to get ripe in the short growing season in many parts of Minnesota. Here, a tomato plant is planted in ground covered by a pastic mulch, in an experiment conducted last summer by University of Minnesota horticulturists. The mulch kept the weeds down and resulted in faster plant growth.
Picture of plastic "tent"	A second technique the University horticulturists tried was putting tents of plastic material over the plants. The tents stayed over the rows for about two weeks and caused a further growth speed-up in the tomato plants. Shown here is Donald Nelson, Research Fellow, adjusting clothespins on hoops over the individual plants. The pins are there simply to hold a slit open in the plastic. The tents keep the plants warm and protect the plants from frosts that may occur shortly after planting. In the University tests, plants growing under tents and in plastic-mulch-covered ground matured tomatoes about two weeks sooner than plants raised the conventional way.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at 4 p.m. *
* Thursday, January 16 *
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LITTLE NEED SEEN FOR BIG CHANGES IN 1958 FARMING-Farm and Home Week

There seems to be little need, in general, for any major changes in crops or livestock on Minnesota farms in 1958.

George Pond, University of Minnesota agricultural economist, told a Farm and Home week audience this afternoon that with corn, the biggest problem will be to utilize high-moisture corn now on hand.

Although excess rainfall last fall also caused problems for potato and sugar beet growers, farmers with the land, equipment and "know-how" needed for these crops shouldn't be driven out of production, Pond said.

He advised that any shift in hay and forage production could best be in increasing yields and quality rather than acreage. This, he said, could involve better seeding mixtures, more liberal applications of lime and fertilizer, better harvesting practices and more rotational grazing.

There is a gradual trend toward more specialization in livestock farming, which seems to be a good step in many cases, according to Pond. Otherwise, there is no need to shift the general livestock pattern in the state. Beef cattle are in a favorable stage of the price cycle and are a good market for much high-moisture corn this winter.

With hogs, Pond urged farmers to put the emphasis on sanitation and economical rations rather than on expansion. Any increase in sows farrowed in 1958 will speed up the hog cycle and depress prices, he said.

Eggs and chickens are bringing better prices than they were a year ago, but any overall increase in number of layers would likely result in prices dropping to at least early 1957 levels. Pond said the real need in poultry production is fewer and larger flocks, for more efficiency.

Pond said there is a place for a small sheep flock to use otherwise waste products on many farms, but he added that general expansions in sheep are best only for relatively large flocks on farms equipped for sheep.

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B-1832-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 15 1958

HELPS FOR HOME AGENTS

(These shorts are intended as fillers for your radio programs or your newspaper columns. Adapt them to fit your needs.)

In this issue:

Did You Know That --

. More than 14 million people in the United States are 65 years and older?

. For clothing and personal care, farm families in 1955 spent about two-thirds as much as urban families?

. According to census reports, 75 percent of all rural farm young people between the ages of 5 and 24 were enrolled in school in 1956, compared to 56 percent in 1940?

. The percentage of farm youth of high school age enrolled in school increased from 69 in 1940 to 86 in 1956; the percentage of college age (18 to 24 years) from 11 percent in 1940 to 17 percent in 1956?

. Enrichment of bread and other grain products has played an important part in improving diets of Americans?

. According to a 1955 survey, three out of ten American families have diets that are low in calcium and one out of four families are low in ascorbic acid or vitamin C?

- jbn -

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and U.S. Department of Agriculture Cooperating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

CONSUMER BUYING

Combination vs the Separate Washer-Dryer

Many women are faced with the decision of whether they should buy a combination washer-dryer or the separate appliances.

Florence Ehrenkranz, professor of home economics at the University of Minnesota, says advantages of the one appliance are that it requires less room than a separate washer and dryer, and the homemaker's work is less because she does not need to transfer the wash load from washer to dryer.

However, there are limitations also. The combination appliance can handle only one load at a time. With the separate appliances one load can be washed while the other is dried.

If the combination doesn't work, the homemaker is short both the washer and the dryer. And the combination sometimes costs more than both of the separate appliances together.

Dr. Ehrenkranz did some experimental work on the efficiency of a combination washer-dryer compared to an agitator automatic washer. "The combination appliance washed cotton and Dacron swatches, soiled with oil, cleaner than the agitator automatic," she said. * * *

Quality in Bath Towels

If you plan to buy some bath towels during white sales this month, look for durability and absorbency.

To judge quality, it's a good idea to hold the terry towel to the light to check closeness and evenness of weave. Durability will depend on the number of yarns per inch in the background weave.

The ability to absorb moisture is determined mainly by the length and frequency of loops. Long loops tend to catch and flatten out.

Check also to see that hems are well turned under, on the straight of the fabric and securely fastened at each end. The selvage should be flat, firm and even. Reinforcement of the selvage with Dacron or nylon will add durability.

* * *

CONSUMER BUYING

Do You Know Thread Count?

When you buy sheets at January white sales, be sure to get the quality you want. Suzanne Davison, professor home economics at the University of Minnesota, explains that cotton sheets generally come in muslin, fine count and percale.

Check the label for the type or thread count -- which means number of threads per inch. Muslin sheets may have a thread count of 128 or 140. Type 140 is a good, heavy-weight, all-round service sheeting. Type 128 is medium weight. Fine count or utility percale sheeting is type 180 and may be either carded or combed. True percale is 200 and is made up of combed yarns. Combing produces smoother yarns than carding.

Dr. Davison says heavy-weight muslin is a firmer sheeting than percale and stays in place better. However, percale is a smoother, more luxurious fabric than muslin and is also lighter in weight.

* * *

Do You Buy Sheets Large Enough?

Many homemakers don't buy sheets that are large enough. A sheet should be long enough and wide enough to tuck under the mattress and to protect the blankets at the top.

Most satisfactory length is 108 inches, torn size, says Suzanne Davison, professor of home economics at the University of Minnesota. Be sure to check the label to see that this is the torn size before hemming. Sheets that are torn have straight hems and keep their shape better than those that are cut.

Though 108 inches is torn length, sheets are usually not more than 103 inches when purchased, because about five inches must be allowed for hems. Further allowance must also be made for slight shrinkage in laundering.

Recommended widths are 63 inches for a single bed, 72 inches for a twin or three-quarter bed and 81 or 90 inches for a double or folding sofa bed.

- jbn -

HOUSEHOLD EQUIPMENT

Vinegar Cleans a Steam Iron

The key to cleaning a plugged steam iron is use of vinegar, says Florence Ehrenkranz, professor home economics at the University of Minnesota.

Fill the plugged iron with distilled vinegar, heat until it steams for a few minutes and then turn it off and let it stand over night. In the morning empty the vinegar and rinse with distilled water.

* * *

A Clean Pot Makes the Best Coffee

Good coffee can be made only in a very clean coffee maker.

Besides cleaning the coffee maker regularly, boil water with baking soda or cream of tartar in it about once a week or follow special instructions of the manufacturer, suggests Florence Ehrenkranz, professor of home economics at the University of Minnesota.

Boil about one tablespoon of baking soda or cream of tartar to four cups of water in the coffee maker and then rinse thoroughly so you don't have coffee flavored with cleaning solution.

Cream of tartar is safe for all metals, but baking soda should not be used if the interior of the coffee maker is aluminum.

* * *

Square Electric Fry Pan is Larger

Which is bigger, a square or round electric fry pan?

Florence Ehrenkranz, professor of home economics at the University of Minnesota, says that the square pan with 8-inch sides does have a larger area than a round pan with an 8-inch diameter. Therefore, if both pans have the same wattage the square pan gives more cooking area for the same wattage.

An important point to consider in selecting an electric fry pan is its intended use. If it is to be used chiefly for frying, the sides should not be too high for convenience.

If the fry pan is to be used for baking, the lid should be vented to prevent the product from becoming too moist. - sah -

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at 8 p.m. *
* Thursday, January 16 *
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X-TRA CORN YIELD WINNERS HONORED

Winners of the 1957 X-Tra Corn Yield contest in Minnesota were honored at a banquet this evening in the University of Minnesota's Coffman Memorial Union.

Donald Hassing, Easton, Minn. farmer, received the top award for producing the highest yield--165.9 bushels per acre. Donald Eickhoff and son Emil, Fountain, received first place in the "Extra Yield" division of the contest. They increased yields by 132.5 bushels per acre in a fertilized plot, compared to an unfertilized area.

A close second place in the top yield division was taken by William Zimmerman, Paynesville, who averaged 165.3 bushels per acre--less than a bushel behind Hassing.

Second place in the X-Tra Yield division went to Clinton Moline, Isanti, who made an increase of 95.2 bushels per acre.

Awards were made by Charles Simkins and Curtis Overdahl, University extension soils specialists, and W. H. Kircher, managing editor of THE FARMER magazine. The University Agricultural Extension Service and THE FARMER were joint sponsors of the contest.

Simkins said that the contest, now in its fifth year, has conclusively shown that farmers in major corn-growing areas of Minnesota can get yields of 100 bushels per acre or more.

He said the results show that farmers who use proper field practices can well afford to invest up to $20 per acre in fertilizer for corn, if their present yields are below 80 bushels per acre.

The farmers in the contest averaged a 19.5 bushel-per-acre increase on fertilized plots, over unfertilized plots, in 1957.

The 1957 results also showed that it's mighty important to plant enough corn kernels per acre, in addition to using fertilizer, Simkins said. Farmers who planted

(more)

less than 12,000 plants per acre averaged only 64.6 bushels per acre and increased yields by only 6 bushels where they used fertilizer.

Farmers who had 16-18,000 plants per acre--the recommended population--averaged 94.3 bushels per acre on check plots and increased yields by another 26 bushels per acre on fertilized plots.

Forty-five farmers were named to a special honor roll for having increased yields by more than 40 bushels per acre in fertilized plots.

There were 276 farmers in the entire contest.

Zone winners in the top yield division of the contest were as follows:

Zone I, southern Minnesota: Hassing, first; Bert Bode, Courtland, second; Donald and Emil Eickhoff, third.

Zone II, south central and west central Minnesota: Zumbrota FFA chapter, first; Orin Peterson, Randolph, second; Dick Svobodny, New Prague, third.

Zone III, central Minnesota: William Zimmerman, first; Robert Leander, Center City, second; Clarence Beurts, Graceville, third.

Zone IV, northern Minnesota: Duane Pearson, Ogilvie, first; Ray Anderson, Detroit Lakes, second; Elmer Jensen, Hawley, third.

Winners in the X-Tra Yield division were:

Zone I: Donald and Emil Eickhoff, first; Dale and Donald Faulkner, Lake Crystal, second; Leonard Syling, Caledonia, third.

Zone II: Sidney Ronningen, Zumbrota, first; John Kruse, Hutchinson, second; David Kamen, Farmington, third.

Zone III: Clinton Moline, first; William Zimmerman, second; John Masonick, Browerville, third.

Zone IV: Marvin Falk, Ft. Ripley, first; Harley Busbey, Brainerd, second; Elmer Jensen, third.

B-1833-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at 3 p.m. *
* Thursday, Jan. 16 *
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N. K. CARNES, W. E. MORRIS PORTRAITS HUNG IN "HALL OF FAME"--Farm and Home Week

Portraits of N. K. Carnes and W. E. Morris, two well-known Minnesota livestock authorities, today were placed in the "Livestock Hall of Fame" on the St. Paul campus of the University of Minnesota.

Carnes is general manager of the Central Livestock association, South St. Paul. Morris was a University extension livestock specialist for 28 years and is now secretary of the Minnesota Livestock Breeders association.

The ceremony was held in Coffey hall during the Livestock Breeders association's annual meeting.

Carnes attended the University before World War I, served with the U.S. Army in Europe during that war and received the Silver Star for gallantry in action. He later returned to the University as an assistant professor of animal husbandry and earned his M. S. in 1923.

That same year, he was employed by the Central Livestock association, where he has remained since. He was promoted to his present position in 1930. Carnes manages activities of Central and its subsidiaries and affiliates at South St. Paul; West Fargo, N. D.; Billings, Mont.; Tracy and St. James, Minn.

In 1951, he received the University's "Outstanding Achievement Award."

Morris, a 1909 graduate of the University of Wisconsin, became Renville county agent in 1913, where he organized livestock shippers' associations at all shipping points in the county. Renville was the first Minnesota county to do this.

He was assistant state emergency demonstration leader during World War I and later was assistant county agent leader for northwestern Minnesota. He was named extension livestock specialist in 1927, a position he held until retiring in 1955. He pioneered home storage and use of livestock products on the farm, became known as livestock judge and worked with county agents and farmers on general livestock improvement.

B-1834-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at 9 a.m. *
* Thursday, Jan. 16 *
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CONSUMER AFFECTS SHEEP RAISING--Farm and Home Week

The consumer will be the chief architect of the future for lamb producers and feeders, Harold T. Sanden, of the Lamb Department of Swift and Company, said today.

Speaking at the Sheep Day program of Farm and Home Week on the St. Paul campus of the University of Minnesota, Sanden pointed to the need of a meatier lamb which is demanded today by American consumers.

Lambs must also be marketed the year around and not bunched up to create gluts of lamb on the market, Sanden said. Such conditions create wide price fluctuations on the live and wholesale markets, which in the long run is harmful to the industry.

"The consumption of lamb and mutton in the areas where it is produced is extremely light. Recent figures indicate that the states of Kansas, Nebraska, the Dakotas, Minnesota, Iowa and Missouri have 9 percent of the population, but consume only about 3.5 percent of the lamb produced in the United States.

"Because of this, the very existence of the sheep industry in Minnesota has come to depend upon the efficient marketing organization of the packing industry for the majority of lamb you produce for shipment and sale in the New England states--the major lamb consuming area," Sanden said.

"More and more people must be encouraged to eat more lamb, including people in Minnesota," he admonished.

Sanden credited Minnesota lamb feeders for producing quality lambs. Other states are improving the quality of their lamb production and operations, and Minnesota sheepmen cannot slacken their efforts for still higher quality lamb, he concluded.

B-1835-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

* * * * * * * * * * * * *
* For release at 3 p.m. *
* Thursday, Jan. 16 *
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MINNESOTA DAIRY PRICES TIED CLOSELY TO PRICE SUPPORTS--Farm and Home Week

The proposed drop in price supports from 83 percent to 75 percent of parity mean that Minnesota dairy farmers will receive, on the average, about 25 cents less per hundred pounds of milk containing 3.5 percent fat.

That statement was made today by Ermond Hartmans, extension agricultural economist at the University of Minnesota, during a Farm and Home Week outlook session.

Hartmans explained that the price Minnesota dairymen receive for milk is tied to government support programs to a greater extent than is true anywhere else in the nation.

The reason, he explained, is that 77 percent of Minnesota's milk production goes into manufacturing products, which is higher than for any other state.

Figures for individual states show that the more milk is used for manufacturing products, the more products move into government hands and the closer the price level of that state approaches the support level of dairy products, Hartmans said.

He also pointed out that the amount of surplus milk moving into government hands is highly concentrated in a few states, and that the market for fluid milk products--which pays higher prices to dairymen than do the manufacturing markets-- is almost entirely a state market rather than a national market.

Hartmans explained that in New England, where only 5 percent of the milk goes into manufactured milk, the average price paid farmers for milk was $5.43 for January-November, 1957. In the Middle Atlantic states, 17 percent went into manufacturing and average price was $4.77 per hundred.

The U. S. average was 40 percent going into manufacturing and average price for the period was $4.22 per hundred. In Minnesota, however, with the high proportion going into manufacturing, the average price per hundred for milk was only $3.23 per hundred--the lowest in the nation--for the same period.

(more)

Butter and non-fat dry milk solids are the two main products for which Minnesota milk is used. Yet, with increased production of oils and the comparitively low price of margarine, the per capita consumption of butter has decreased, Hartmans said. Also, 50 percent of all non-fat dry milk in 1956 was purchased by the government and given away or sold at a loss.

These conditions indicate that there is little possibility of improvement in price of manufacturing milk for some time to come, according to Hartmans. That means, he stated, that dairy farming in Minnesota is becoming less competitive with other livestock enterprises and that in many cases farmers need to take a careful look at their dairy operations.

To be successful, the dairy herd either has to be managed very efficiently or the farmer must select other enterprises which make higher incomes possible.

Speaking on the poultry outlook, Kenneth Thomas, extension agricultural economist, said poultry returns next year will depend to a great extent on how producers react to prices this year.

He said there will need to be some increase in numbers of chicks hatched for replacement because there were less chicks hatched in 1957 than the year before. However, he warned that if hen numbers were increased to the same level as in fall, 1956, the expected increase in number of eggs produced per layer would probably be greater than the increased demand due to population growth.

Thomas said U.S. egg consumption per capita in 1957 was the lowest in nearly 15 years and may go down even further. However, total egg consumption in the nation continues to increase, as population increases tend to more than offset the decline in egg consumption per person.

For turkeys, Thomas said that because of large storage stocks of turkeys, prices will be below 1957. Prices for the latter part of 1958 may improve if there is a sizeable cut in production.

The only solution for poultry producers, Thomas said, is to produce more eggs and more pounds of meat per ton of feed and per hour of labor and to put more emphasis on market quality so as to get premium prices.

B-1836-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at 10 a.m. *
* Friday, January 17 *
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TOMORROW'S FOODS, LAUNDRY PROCEDURES DISCUSSED--Farm and Home Week

The supermarket of tomorrow may display irradiated bread, rolls and cake that will keep indefinitely without becoming stale, a University of Minnesota home economist predicted today (Friday a.m.).

Speaking to homemakers on the closing day of Farm and Home Week on the University's St. Paul campus, Margaret Taulbee declared that irradiation and freeze-drying are two of the new methods of processing foods which will give us many of the "foods of tomorrow." Though considerable research remains to be done before these food preservation methods are perfected for use on consumer foods, they do hold great promise. Potatoes treated with a low dosage of irradiation, for example, can be stored for well over a year without sprouting.

Today's homemaker, Miss Taulbee said, can select from nearly 8,000 different grocery items for her market basket. She traced the changes that have taken place in the grocery store the last 10 years, particularly in packaging and in addition of "convenience foods" such as cake mixes. Though cake mixes appeared on the market only 10 years ago, today more than 50 percent of all cakes are made from a mix.

In a talk on home laundering and washing products, Florence Ehrenkranz, professor of home economics, said that good washing procedures and careful and restrained use of bleach in home laundering are more likely to produce brightly washed articles than good washing alone. She cautioned, however, against using chlorine bleaches on cottons that are treated with resin finish, since the chlorine interacts with the resin and makes the fiber yellow. Most drip-dry cottons have a resin finish.

Emphasizing the importance of using hot, softened water in washing cottons, Miss Ehrenkranz also pointed out that nylons would not be gray and dingy if they were washed in hot water. The consumer has a choice, she said, of washing nylon blouses and undergarments in cold water so they will have few wrinkles and perhaps need no ironing or of washing them in hot water so they will stay bright and then ironing them if necessary.

B-1837-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at noon *
* Thursday, Jan. 16 *
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PHILIP ANDERSON PORTRAIT GIVEN TO THE UNIVERSITY--Farm and Home Week

Philip A. Anderson, associate professor of animal husbandry at the University of Minnesota, was this morning honored by the Minnesota Sheep Breeders' association.

A portrait of Anderson was presented to the University by the association during a brief ceremony in the meat shop on the St. Paul campus, where Anderson has conducted classes and research for years.

Earl Cunningham, Sleepy Eye, president of the association, presented the portrait to L. E. Hanson, head of the animal husbandry department at the University. The picture will be placed in the seminar room of Peters hall, which houses the department.

Anderson has been on the University staff since 1915 and is a specialist in sheep and meats. He has worked closely with the Minnesota Sheep Breeders' association and has been secretary-treasurer of that organization for many years.

A native of St. Paul, Anderson is a University graduate and has done research on many phases of livestock production and meats.

He has been superintendent of sheep at the Minnesota State Fair since 1919 and has been a sheep judge at the International Livestock show, Chicago, and at other shows and fairs around the nation and Minnesota.

Anderson is author of a number of University publications on sheep and meats and is a member of the American Association for the Advancement of Science and the American Society of Animal Production. He is a former director and president of the American Shropshire Sheep association.

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B-1838-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 15, 1958

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* For release at 1 p.m. *
* Thursday, Jan. 16 *
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IMPORTANT FORCES IN MINNESOTA AGRICULTURAL HISTORY LISTED--Farm and Home Week

Ten major forces which have played a key role in the development of Minnesota agriculture during the past 100 years were explained today to Farm and Home Week visitors on the St. Paul campus of the University of Minnesota.

T. H. Fenske, associate dean of the University's Institute of Agriculture and chairman of the Minnesota Centennial agricultural committee, said these forces are:

1. Mechanization of most farm operations.

2. Introduction of electricity on a broad scale, through the Rural Electrification administration.

3. Development of new varieties of crops and livestock and other knowledge by agricultural experiment stations around the country.

4. Growth and development of agricultural education through colleges, schools, vocational courses in high schools and the Future Farmers of America.

5. Development of the Agricultural Extension Service and 4-H Club work.

6. The cooperative movement in agriculture.

7. Development of general farm organizations, such as the Grange, Farm Bureau and Farmer's Union.

8. Organization of the Soil Conservation Service and Soil Conservation districts.

9. Government agricultural programs.

10. War--especially World Wars I and II.

Fenske pointed out that there were only 157 farms in Minnesota territory in 1850. The 1954 census showed 165,225 farms in the state.

When Minnesota gained statehood in 1858, there was very little wealth, no established industries or railroads, no sound banks or currency and not a dime in the state treasury, Fenske said.

(more)

To top it all off, the farm harvest in 1858 was amost a complete failure.

Agriculture made some rapid growth in coming years, Fenske stated. From 1860-85, wheat and other small grain were the major products. By 1880, wheat farming was well established in the Red River Valley.

Livestock farming was on the gain in southern Minnesota between 1885 and 1905. The first cooperative creamery was started in Freeborn county in May, 1890.

From 1897-1917, Minnesota farmers in general were more prosperous than they had been up to that time. Markets were good. The population was growing.

Then after World War I, there was a big price drop and the farmer's dollar in 1921 was worth only 77 percent of its pre-war value. There was some recovery in the late 1920s, and then came the great depression of 1929, when corn on Minnesota farms brought 26 cents per bushel, hogs brought less than 4 cents per pound and potatoes sold for 28 cents per bushel.

In reviewing government agricultural programs since 1932, Fenske said that "Only war has succeeded in cutting surplus. The solution to farm surplus problems," he said, "will not be found in the next year or in the next five years no matter which political party is in power."

Pointing to recent changes in farming itself, Fenske referred to figures from the 30-year-old Southeast Minnesota Farm Management association. Farms in that organization have, since 1928, grown 42 percent in size, increased corn yields by 55 percent per acre, doubled pig litters per farm and have added 382 percent more mechanical power equipment.

On those same farms, Fenske said, 51 percent of the total sales--$4,456 per farm--went for cash expenses in 1928, leaving a $2,258 net labor income. In 1956, their total sales averaged $18,844 and 70 percent went for expenses, leaving $5,611 labor income.

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B-1839-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 16, 1958

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* For release at 1:30 p.m.*
* Friday, January 17 *
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YOUR DOLLAR'S WORTH IS FAMILY AFFAIR--Farm and Home Week

Children should be included in decision making in planning the family budget.

That recommendation was made at the closing Farm and Home Week session for homemakers on the St. Paul campus today (Friday).

When children have a part in planning the family budget, they learn the family's financial limitations and will understand why all their personal demands cannot be satisfied, a panel told homemakers.

Taking part in the panel on "Your Dollar's Worth - a Family Affair" were Mrs. Olive Zoller, 2264 Commonwealth ave., St. Paul; and University of Minnesota home economists Dorothy Simmons, Hedda Kafka and Mrs. Myra Zabel.

Establishing priorities in family needs is important to avoid going on a tangent if a little more money is available, homemakers were told.

Keeping records of family expenses will reveal the accumulated costs of some family practices or habits that might be eliminated if necessary to help the family budget, panel members pointed out. A check on the food budget may show that some luxury items may be eliminated in favor of inexpensive foods with the same nutritive value.

With the great variety of goods on the market today, consumers have difficulty in deciding what is best. Panel members suggested that consumers use these helps for wise buying:

. Read labels carefully.

. Learn to know and check grades, for example, of meat.

. Check for guarantees.

. Buy from reliable dealers and reliable manufacturers.

. Check for seals of approval, such as the U. L. seal of approval on electrical equipment.

. Shop around for large purchases to be sure you get the most value for your money.

. Shop sales wisely to be sure you are getting a good buy. And remember that a bargain is not a bargain unless it meets a real need. ### B-1840-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 16, 1958

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* For release at 10 a.m.*
* Friday, January 17 *
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GOOD FUTURE SEEN FOR CHARCOAL PRODUCERS--Farm and Home Week

Minnesota charcoal producers can look forward to reasonably good markets in the near future.

People planning to go into the charcoal-producing business in the future can expect reasonable success, too, as long as they don't hope to "get rich overnight," make careful marketing arrangements first, and are able, at any time it may be necessary in the future, to carry the equipment and inventory cost for a year or two without income from charcoal.

These statements were made at a Farm and Home Week session this morning by Ronald Beazley, forest economist at the University of Minnesota.

Beazley said the leisure-time activities of people since World War II have become a boon to charcoal producers. While use of charcoal for home heating has disappeared, outdoor cooking has produced a good demand for it as a "luxury" item.

About 30 percent of the charcoal production in the U. S. comes from small rural producers, according to Beazley. This has been possible, in part, because of the large overhead and longer shipping distances which large producers face and because many good local markets have been developed for charcoal.

Beazley warned that if firms currently producing charcoal increase their output a great deal, there could be some surplus of charcoal. However, he added that increasing consumption would probably catch up to it after a time.

A decline in consumer income might not decrease charcoal demand; in fact, such a decline could expand charcoal markets, Beazley said. He reasoned this way: Charcoal is inexpensive. If people who normally spend more time out-of-doors had to curtail their recreational activities because of reduced income, they might well turn to the inexpensive "cook-out" as an alternative.

Beazley urged people considering charcoal production to first survey all the market possibilities, both wholesale and retail, local and commercial, and have market contracts drawn up, if possible, before starting production.

B-1841-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 16, 1958

* * * * * * * * * * * * * * *
* For release at 10 a.m. *
* Friday, January 17 *
* * * * * * * * * * * * * * *

IMPROVED PASTURING SYSTEMS EXPLAINED--Farm and Home Week

Ways that Minnesota farmers can get more mileage from their pasture lands were outlined today for Farm and Home Week visitors on the St. Paul campus of the University of Minnesota.

Three systems from which farmers can choose are daily rotational grazing, "green-chopping" and storage feeding.

Walter F. Wedin, U. S. Department of Agriculture agronomist at the University, said that each farmer must decide for himself which system to use. But once pastures are improved, any one of the systems make them go a lot farther.

Daily rotational grazing, for example, may increase carrying capacity by 15-20 percent, compared to conventional rotational grazing, Wedin said. With this system, it's possible for one high-producing dairy cow to get all the summer feed she needs from a half acre of topnotch forage.

Under a daily rotational system, the herd is put on a small area of fresh pasture each day.

Green-chopping--also called "soilage" and "zero pasture"--can increase carrying capacity 25-35 percent, some experiments show. This system means keeping the cows in a dry lot in summer and hauling them fresh, chopped forage daily.

Experiments also show that feeding a dairy herd stored hay and silage all summer and keeping them off the pasture can increase carrying capacity per acre by 20-25 percent, Wedin said.

These plans have some other advantages, too, he added. They all result in higher total forage yield from the same acreage, less losses from tramping and less or no manure contamination.

B-1842-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 16, 1958

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* FOR RELEASE at 3 p.m.*
* Friday, Jan. 17 *
****

REQUIREMENTS OF EFFECTIVE SOIL BANK LISTED--Farm and Home Week

A soil bank program could be set up which would reduce farm output and increase farm income--if Congress, American people and the government will administer a program that meets certain requirements, a Purdue university economist said today.

J. Carroll Bottum made this statement during an afternoon farm policy session of Farm and Home Week on the St. Paul campus of the University of Minnesota.

But he added that "any proposal which, over the long run, raises farm prices and gross agricultural income over long-time levels tends to be self-defeating in its goal."

He said that either the increased income from such a program would tend to be capitalized into land values or it would tend to result in more people staying on the land.

"If it goes into land values, it is lost to the farm operator," Bottum said. "If more people stay in agriculture, it means dividing the income up among more people. Thus there is a limit as to how far we can raise the income per capita in farming above what the free market would give in the longer run, even though we may raise the gross income to agriculture."

Bottum said this does not mean that farm price programs cannot be of value to farmers. "They may be very beneficial during periods when agricultural incomes are depressed," he said.

He said to be effective, a soil bank program must meet these requirements:

First, if a 4 to 6 percent adjustment in supply is desired, this involves shifting 30 to 60 million acres out of the 300 million acres now in grain, cotton and tobacco into grass, fallow, idle or trees.

Second, payments must be large enough to get the necessary farm participation. An interregional study made this year, he said, "indicated that rate of payment would need to be about 25 percent higher than the 1957 rates, if we were

-more-

to get from two-thirds to three-fourths of the producers to participate. This is on the basis of starting payments at the farmer's normal level of production and not from a reduced base."

Third, a plowland base or a grain land base must be established for each farm so that other land is not shifted into production as other land is shifted out. "We should move away from an individual crop basis and let a farmer produce whatever crops he wishes within his overall base," Bottum said.

Fourth, any soil bank program, to be successful, must be announced in sufficient time so that an educational program can be carried on with producers before they make their planting commitments.

Bottum added that if in certain areas, whole farms could be put into the soil bank, the cost of the soil bank program could be reduced and more effective adjustment would be possible.

"Many farmers have expressed a desire to place their entire acreage in the soil bank," he said. "This would enable the farmer to shift not only his land resources but also his other resources. Reduction of variable cost due to partial shifting of land resources is only a small part of the farmer's total cost."

Therefore, Bottum said, a farmer "could shift for considerably less payment under a program which would allow him to put in his whole farm."

B-1843-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 16, 1958

Special to U. S.
Information Agency

STUDENT FROM GUATEMALA STUDIES PLANT BREEDING AT UNIVERSITY

Training he's receiving in plant breeding at the University of Minnesota can help increase production and raise the standard of living of Guatemala, according to Oscar Nery Sosa, student from Guatemala.

Sosa's home town is Amatitlan, about 15 miles south of Guatemala City. Approximately 90 percent of Amatitlan's 10,000 population is dependent on some phase of agriculture.

"Guatemala is mostly an agricultural country," Sosa explains. "Ten acres is the average-size farm, so many of the farmers have to work part-time on coffee plantations owned by the rich."

"If we can improve production, by breeding new varieties of crops like corn, wheat and beans, this will mean better living conditions and a higher standard of living for the whole country."

Sosa is in several University courses in plant breeding and plant pathology, among which are genetics, statistics and diseases of field crops. He is mainly interested in studying the cereal diseases of corn and wheat and is also planning to do some work in agronomy.

He says he is gaining much valuable information and experience from practical work in the University green houses, laboratories and experiment stations. Tests in the green house have given him some important facts concerning the behavior of new varieties of field crops, particularily of wheat in relation to diseases.

"Tests are done in the green house because the environmental conditions can be controlled," Sosa said. "Environmental conditions include temperature, moisture, light intensity and soil. The soil is usually sterilized and its fertility is

(more)

controlled." Sosa explained that the soil is sterilized to kill the fungi that are in the soil in these tests in order to have more accurate results.

"Control of the environmental conditions makes possible a more certain proof of the susceptability or resistance of the variety under those conditions," Sosa said.

"The techniques I learned here will help to develop new varieties especially adapted to use in Guatemala," Sosa said.

"We have many problems in plant breeding in Guatemala, because we have to breed varieties of corn for both the highlands and the lowlands. Some of the diseases are more predominant in the lowlands," he explained.

"In wheat, strip rust is the most important problem," Sosa explained. "Leaf spots is the main problem in corn."

"Because of the different environmental conditions, the varieties we have at the University of Minnesota are not well adapted to Guatemala," he said. "Durum wheat, which is popular here, can't be grown in Guatemala because of the warm climate. Raising Durum wheat in Guatemala would only result in low production and poor quality."

Sosa will be going back to Guatemala in June, 1958, when his ICA (International Cooperation Administration) scholarship ends. The scholarship gives Sosa a monthly allowance, traveling expenses and tuition fees.

Sosa first came to the United States in Sept., 1952. He studied two years, 1952 and 1953, at the University of Minnesota, returned to Brazil for a year, then came back to the United States, in May, 1957. From May to September, 1957, Sosa attended a Mississippi State College Short Course. Sosa said 23 people from 11 different countries of the world attended the seed improvement course at Mississippi. During part of the course, they traveled to agricultural colleges and seed improvement associations in Minnesota, Illinois, Nebraska, Louisiana and Mississippi, studying seed improvement methods.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 17, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate release

AIRCRAFT SPRAYERS SHORT COURSE SCHEDULED

An Aircraft Sprayers Short Course will be held next Wednesday, Jan. 22, on the St. Paul campus of the University of Minnesota, according to J. O. Christianson, director of agricultural short courses.

Speakers will include specialists and research scientists from the University and officials from state and federal government departments. J. R. Sandve, assistant state entomologist, is chairman of the program committee.

Morning topics will include field crop insects outlook and control, weed control, aerial spraying accidents and legal questions. Afternoon speakers will cover the metropolitan mosquito abatement program, legal points involved in low-level flying, the Spruse budworm problem, aerial fertilizer application, weather forecasting and aerial spraying and toxicity of chemical weed and insect killers.

For more information contact the Director of Agricultural Short Courses, Institute of Agriculture, University of Minnesota, St. Paul 1.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 17, 1958

SPECIAL

Immediate release

COW CLIPPING WINNER NAMED

Nordean Krueger, 16-year-old FFA boy from Albert Lea, Minn., was today named winner of the statewide THE FARMER-Future Farmers of America cow clipping contest during Farm and Home Week on the St. Paul campus of the University of Minnesota.

Nordean clipped the udder, underline, flanks, tail, hindquarters and along the backbone of his cow in 13 minutes, 40 seconds.

He won his $50 first prize award from seven other state finalists--all boys who had survived earlier eliminations in which some 600 Future Farmers from 70 chapters had competed.

A junior in the Albert Lea high school, he represented FFA District 5. His advisor is Don Paulson.

Runner-up in the contest was LeRoy Wagner, 16, Hastings, District 6 representative, who scored 75 points against Nordean's 84. He was awarded $30. Winning $20 for third was Keith Robinson, 16, Fosston, District 1 finalist, with a score of 70.5.

Each of the eight finalists received a plaque from THE FARMER as district representative in the state final.

The contest was the climax of a series of chapter and district eliminations in progress since last fall.

Purpose of the contest is to promote clipping of dairy cows as an aid to quality milk production. Removing the long hair from the udder and flanks makes cows easier to clean and cuts the amount of dirt which can cling to the hide, thus reducing sediment in milk.

Judges for the contest were Milo Hill, Twin City Milk Producers fieldman, Marshall Inman, Rochester Dairy company field service director and Jess Williams University dairy specialist.

-pjt-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota

Timely Tips for The Farmer, issue of January 18

With a good supply of all certified seed, there is more reason than ever for farmers to order certified seed for 1958 planting. Present indications are that there will be very little difference in price between certified and non-certified alfalfa seed, meaning you can't afford not to plant certified seed this crop.

--Bill Hueg

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Falling bales and frozen silage can be a "lurking danger" at chore time. For safety's sake, make sure there are no over-hanging or tipping bales in the rick. Also, keep the frozen ledges of silage clipped down from the edges of the silo. Otherwise, they could fall on you and suffocate you when you are in the silo later on during thawing days.

--Glenn Prickett

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When you file your income tax this year, pay special attention to how you handle your CCC loans. Be sure you don't count them as income twice--once when the money is borrowed and again the following year when the crop is sold or delivered. If you have any problems with questions such as this, it's wise to get help of a competent tax advisor.

--Ermond Hartmans and Hal Routhe

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Cold temperature may put the damper on bacteria growth, but that's still no substitute for clean milking machines. A well-scrubbed and sanitized milker makes it possible for cold temperature to preserve that delicious flavor of high quality milk.

--J. H. Gholson

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There's some real value in that barnyard manure you're hauling out this winter. Generally speaking, every ton of fresh cattle manure contains about 12 pounds of nitrogen, 3 pounds of phosphate and 9 pounds of potash. A similar load of poultry manure contains 20 pounds nitrogen, 16 pounds phosphate and 8 pounds of potash.

--Lowell Hanson

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Good management and feeding are still your best guards against scours in calves. Keep them in dry, draft-free, clean pens and make sure there is a source of Vitamin D in their ration if they don't get plenty of sunlight. Good, well-cured hay generally contains plenty of vitamin D.

--R. B. Solac

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University Farm and Home News
Institute of Agriculture
University of Minnesota
January 20, 1958
St. Paul 1, Minnesota

FORESTERS' DAY CELEBRATED AT UNIVERSITY

Beards, plaid shirts, and swinging axes will help students on the University of Minnesota St. Paul Campus celebrate their 24th annual Foresters' Day Saturday, January 25. The festivities for the day are open to the public.

The activities for the day will start off at 11:00 a.m. with the traditional "Bean-feed" in the lumber camp style at the St. Paul Campus Union. An indoor program in Green Hall will begin at 1:00 and will include a dramatic presentation by the Timber Beast Players. The outdoor events will follow with the foresters' presentation of their queen -- The Daughter of Paul. Her father is the hero of all lumberjacks and foresters -- Paul Bunyan.

The field events will have the foresters trying their woodsman skills at chopping, sawing, pole climbing, and snowshoe racing, as well as such less "he-man" games as egg-throwing.

The day's celegration will close with the Stump Jumpers' Ball in the St. Paul Campus gymnasium at 9:00.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 20, 1958

DR. PAUL BRUNS JOINS "U" FORESTRY STAFF

Dr. Paul E. Bruns has joined the University of Minnesota School of Forestry for the winter quarter as visiting professor of forest management.

A native of New York, N. Y., Bruns received an A.B. degree from New York University in 1937, a Master of Forestry degree from Yale in 1940, and Ph.D. from the University of Washington in 1956.

Bruns is a consulting forester at Missoula, Montana. Prior to becoming a consulting forester, Bruns was associate professor of forest management at the School of Forestry at the University of Montana from 1947 to 1955.

Dr. Bruns is author of the textbook, Applied Forest Management, which is now in a second printing and is widely used in the United States and Canada as well as 22 foreign countries. He is active in and has held several positions in professional forestry groups, including the Society of American Foresters.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 21, 1958

Special to Television Stations

CHEMICALS REDUCE SPROUTING IN STORED POTATOES (30 seconds)

VISUAL	AUDIO
Picture of two piles of potatoes	Sprouting potatoes in late winter is one loathsome chore that can be eliminated if the plants are treated with a chemical called "MH" during the growing season. Here are two piles of potatoes used in recent experiments at the University of Minnesota. Those on the right were treated with 2 pounds of MH per acre when the plants were in the full bloom stage. Those on the left were untreated. This picture shows the potatoes the following June. Result: no sprouts on the treated ones.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

To all counties

For use week of

January 27 or later

FARM FILLERS

There is a gradual trend toward more specialization in livestock farming in Minnesota, according to George Pond, agricultural economist at the University of Minnesota. This seems to be a good step in many cases, Pond says.

* * *

In sunny weather, a hay crusher or crimper can cut several hours off hay drying time in the field. Agricultural Engineers John Strait, Paul Marvin and Bruce Fiedler at the University of Minnesota last summer found that hay cut and crimped on July 10 averaged 22.3 percent moisture after 26.2 hours of drying in clear weather. Uncrimped hay averaged 38.4 percent moisture after the same period.

* * *

Prices received by Minnesota dairymen for milk is tied to government support programs to a greater extent than is true anywhere else in the nation. Ermond Hartmans, extension farm management specialist at the University of Minnesota, says this is becuase 77 percent of Minnesota's milk production goes into manufacturing products, which is higher than for any other state.

* * *

Records from the Southeast Minnesota Farm Management Service show that 50 percent of gross farm income went for operating expenses 20 years ago. Now, 70 percent goes for expenses.

* * *

Some experiments around the country show that green-chopping -- also called "soilage" and "zero pasture" -- can increase carrying capacity of pastures by 25-35 percent, according to W. F. Wedin, U. S. Department of Agriculture agronomist at the University of Minnesota.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 21, 1958

Special

Immediate release

FORESTERS' DAY TO BE CELEBRATED AT UNIVERSITY

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The activities for the day will start off at 11 a.m. with the traditional "Bean-feed" in the lumber camp style at the St. Paul Campus union. An indoor program in Green hall will begin at 1 p.m. and will include a dramatic presentation by the Timber Beast Players. The outdoor events will follow with the foresters' presentation of their queen--the Daughter of Paul. Her "father" is the hero of all lumberjacks and foresters--Paul Bunyan.

In field events, the foresters will compete in chopping, sawing, pole climbing, snowshoe racing, and egg-throwing.

The day's celebration will close with the Stump Jumpers' Ball in the St. Paul Campus gymnasium at 9 p.m.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 21, 1958

Special

Immediate release

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 21, 1958

Immediate Release

4-H'ERS WIN TRIPS TO WASHINGTON AND MICHIGAN

Four Minnesota 4-H club members have won trips to a national conference and two others will receive trips to a national camp as a result of their 4-H leadership and records of achievement.

Selected to attend the National 4-H conference in Washington, D. C., June 14-20 are Evelyn Johnson, 19, Blue Earth; Rose Marie Thomas, 19, Lakeville; Ward Holasek, 20, Hopkins; and August Williams, 19, Rochester.

The Minnesota Bankers' association is sponsoring the trips to the conference.

Named delegates from Minnesota to the American Youth Foundation Leadership camp at Camp Minniwanca, Shelby, Mich., in July and August are Esther Korpi, 18, Chisholm and Gerald Bratland, 19, Spring Grove.

Camp scholarships are presented annually to an outstanding 4-H boy and girl in each state by the Danforth Foundation and Ralston Purina company, St. Louis, Mo.

Announcement of the trip winners was made today by Leonard Harkness, state 4-H club leader at the University of Minnesota.

All of the award-winning 4-H'ers have been active club members from seven to 10 years and have been junior leaders from four to seven years. They have received many honors in connection with 4-H project work.

Miss Johnson and Bratland are students in the College of Agriculture, Forestry and Home Economics at the University of Minnesota; Miss Korpi is a freshman at the University of Minnesota, Duluth Branch; Miss Thomas is a sophomore at the College of St. Benedict and Williams is a sophomore at Rochester Junior college. Holasek is farming with his father.

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B-1844-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 21, 1958

Immediate Release

MINNESOTA FARM MANAGERS' ASSOCIATION MEETING JAN. 30-31

The 30th annual Minnesota Farm Managers' association meeting will be held Jan. 30-31 at the Hotel Lowry in St. Paul.

About 160 persons are expected to attend, according to Truman Nodland, University of Minnesota agricultural economist and secretary-treasurer of the association. Speakers will include staff members from the University, the U. S. Department of Agriculture, the Minnesota Department of Highways, farm management firms and other commercial organizations.

Sessions Jan. 30 will include farm management and rural appraisal, problems of professional managers and appraisers, forage preservation and storage and weed control.

Featured Jan. 31 will be a discussion of "The Appraisal of Farm Property for Trunk Highway Right of Way and Interstate Highway Program and Progress in Minnesota," by Edward R. Lorens, Minnesota Highway Department.

Afternoon sessions Jan. 31 will include topics on dairy herd size and labor requirements, marketing meat type hogs and foreign markets for soybeans.

The meeting is open to the public, according to Nodland.

B-1845-ws

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 21, 1958 Immediate release

EXTENSION FORESTRY PROGRAM AIDS FARMERS

GRAND RAPIDS--Despite his popularity in north country folklore, Paul Bunyan's way of "putting the axe" to vast stretches of timberland is rapidly being discarded in northern Minnesota's Itasca county.

Instead of cutting sections of forests wholesale, hundreds of farmers in Itasca county are giving their trees as much care as they would their finest cropland.

As a reward, they are finding that what they once thought of as almost "worthless" trees are now a steadily growing source of income.

One of the big reasons behind this better use of woodland is the Itasca county extension forestry program, led by Floyd Colburn, county forestry agent, and one of the first agents of this type anywhere in the U. S.

When he came to the county in 1946, few if any farmers were practicing "selective" cutting--removing mature, marketable trees to make room for smaller, growing trees. Since then, Colburn has:

* Helped about 150 farmers in the county draw up complete, long-range woodlot management plans.

* Aided more than 1,000 local farmers in cruising woodlots, planning cuttings, finding markets and carrying out reforestation projects.

* Visited about 200 local farms every year for individual consultation or advice on tree farming--at the request of the farmers.

* Promoted forest management to the point where about a third of Itasca farmers who own sizeable woodlands follow recommended forestry practices.

* Started an extension tree planting program in which more than a million trees have been planted.

* Acquainted local farmers with the different market possibilities for forest products.

* Helped dozens of Itasca county youngsters get started in 4-H forestry work.

(more)

add 1 Itasca county forestry program

Back in the 1940's, a number of local forest owners saw the results of good forest management at nearby Chippewa National Forest and started asking questions at the county extension office on whether such research couldn't be put to work on their own farms. So to help answer these questions, Colburn was brought in as a forestry agent.

He immediately launched a long-time campaign to let farmers know what the possibilities were with their timberlands. Through news articles, a personal news column and a radio program, Colburn kept bringing his message to the local farmers, on how to make better use of their trees.

As a follow-up, he gave individual help to every farmer who asked for it. He visited hundreds of farmers--at their request--by car, on foot and on snowshoes through swamps and thickets. He helped the farmers decide which trees to cut, what use to cut them for, and where to market the wood when it was harvested.

Scores of farmers in the county now tell how this approach to timber farming is improving their livelihood. One is Erland Lampi, Blackberry, who has found that planned wood cutting is a profitable way to "market" his off-season spare time.

Lampi has, in addition to the rest of a small dairy farm, a 40-acre tract of Norway pine and other trees that have brought him a $9,300 income in recent years, thanks to wise timber management. And he has done all the work at a time of year that is normally "slack" on a northern dairy farm.

In eight cuttings during the 1940's, he sold some $7,800 worth of lumber. Lampi was one of the first to ask Colburn for his help in working out a woodland management plan. Colburn helped Lampi set up a system which would mean a steady forestry income over the years, without completely clearing any of the timber land at any time. This is done by "selective" cutting--harvesting only the mature, "ripe" trees.

Markets are also important, Colburn explained, so Lampi made sure of a reliable outlet from the start. The first harvest he made was an "improvement cut," which meant thinning, removing poor trees and giving the young trees more growing room.

(more)

Such improvement cuts alone, sold as poles and piling timbers, have brought about $1,500 to Lampi during the past 5 years. Add the $7,800 lumber income and the total is $9,300 that Lampi has received from his woods over the years.

While Colburn is helping local farmers carefully harvest their present forest growth, he is also helping them build for the future through a tree planting program. The Blandin paper company, Grand Rapids, became so interested in county reforestation that 4 years ago they gave the county extension office two tree planters, to be used by any local farmer wanting them,under Colburn's general supervision. Then two years ago, the First National Bank of Grand Rapids provided a third planter to be used the same way.

Farmers planting trees use these planters free, except for a small maintenance charge. The farmer has to pay only for the tractor driver--who usually does the work for a penny a tree--and, of course, furnishes a man or two to work on the planter.

Under this program, Itasca county farmers have planted 1,090,000 trees on some 900 acres since 1949, are now averaging about 300,000 per year.

B-1846-pjt

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

To all counties

County Agent: This is the third in a series of articles summarizing research on use of nitrogen fertilizers.

NITROGEN AMOUNT TO APPLY TO SOIL DEPENDS ON CROPS

How much nitrogen you need to apply to your corn crop depends a good deal on what has been raised on the field before.

J. M. MacGregor, University of Minnesota soils scientist, and John Grava, in charge of the University soil testing laboratory, say this is all the more reason why soils specialists need to know all they can about a field's cropping history in making fertilizer recommendations.

Years of research show that on sandy soils, for example, you can usually make nitrogen pay even on corn planted where legumes grew the year before.

On many heavier soils, this won't always hold true. But the longer it has been since legumes have been raised on the field, the more likely nitrogen fertilizer is to bring increases in yields.

Legumes themselves, because they "fix" nitrogen from the air in the soil, are a big help to crops like corn that need large amounts of nitrogen. This point was brought out clearly in recent field tests.

On several field plots, all corn received the same fertilizer treatment--200 pounds of 5-20-20 starter fertilizer. Plots where corn was raised three years in a row averaged 42.6 bushels per acre.

Where corn was raised one year, followed the next year by oats underseeded with sweetclover, then back to corn, corn yields averaged 48.5 bushels per acre.

Yields were even better where the rotation was corn one year, oats seeded to alfalfa the second, and alfalfa the third, then back to corn. These plots averaged 87 bushels per acre.

MacGregor and Grava conclude, that, like a doctor making a prescription for his patient, the soils specialist needs to know all the "past history" of a field in recommending fertilizer treatment. The test alone is mighty important, but not always enough.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

To all counties

ATT:4-H CLUB AGENT

For release week of _____ or later

TIPS TO 4-H MEMBERS ON IMPROVING HEALTH HABITS

Health is the foundation of good looks, pleasing personality, success and happiness. Now is the time to work on improving health habits, suggests _____ _____, 4-H club (home) agent.

_____ county 4-H members who are enrolled in the health activity can check their general health against some points suggested by Evelyn Harne, assistant state 4-H leader at the University of Minnesota.

If you have good health, you do your regular amount of work and play with pleasure, are free from aches and pains, have a happy disposition and rarely miss school or social events because of sickness. You have questionable health if you are uninterested in daily tasks, tire easily, have headaches, colds, or other ailments and often miss parties, club meetings or school.

Sleep is important. You should feel like getting up if you have enough sleep. Boys and girls who are very tired say and do things that make them ashamed of themselves afterwards. A rested person enjoys his work more, is better looking and has a happier disposition.

Here are some suggestions to develop good mental and social health. Be cheerful, happy optimistic, courageous and willing to assume responsibility. Live happily with your family and work and play with other groups without quarreling. Face each day's problems squarely, think them through and make the best of them. Be friendly, appreciate friends, be worthy of friendship.

meb

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

Special to Home Agents

Use when appropriate

HOME PROGRAM LEADERS MEET

A district meeting for leaders in the extension home program and for women members of county extension committees from _____ county and adjoining counties will be held in _____ on _____ beginning at 10 a.m.

Purpose of the meeting will be to discuss home economics extension work.

The meeting in _____ is one of eight district meetings to be held in the state.

_____ _____, district supervisor, home economics extension program at the University of Minnesota, will conduct the meeting.

Included on the program will be talks by George Donohue, extension rural sociologist, University of Minnesota, on leadership and by Dorothy Simmons, state leader, extension home economics program, University of Minnesota, on program planning. There will also be group discussions of problems raised by the women.

Those attending from this county will be Home Agent _____ _____;

_____ _____, home council president, _____ (address); and _____

List other names with addresses.

- jbn -

NOTE TO AGENT: After the meeting you might write a short follow-up story, quoting statements made by speakers, giving number in attendance, etc.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

To all counties

For use week of

January 27 or later

ECONOMIST VIEWS INFLATION GUARDS IN FARM ECONOMY

What causes Inflation? What tools do farmers and others have to help prevent it?

County Agent _____ points to a recent publication from the University of Minnesota Agricultural Extension Service, "The Farmer and Inflation," which discusses these questions. Copies of this publication are available from the county extension office.

In this publication, Luther Pickrel, extension agricultural economist, explains that for one thing, inflation results when there is too much spending according to production. Price expectations on the part of individuals and groups also play a role

However, the "money supply" is not the only factor that will contribute to inflation, Pickrel says. It also depends on how fast the existing supply passes from hand to hand. If there is a big speedup in this money "turnover," the effect is the same as if the supply were increased.

There are three main ways in which money expansion is restricted:

First, each individual bank must be prepared to meet more than normal withdrawals. This means each must keep cash or other "liquid" assets totalling a certain share of its deposits.

Second, banks limit loans to what seems to be a sound level.

Third, and most important, banks belonging to the Federal Reserve System must, under law, hold reserve deposits with a Federal Reserve Bank which equal a certain proportion of their deposits. By varying that proportion within limits set by law, the Federal Reserve system can regulate the banks' ability to lend, and, therefore, the supply of money itself.

The Federal Reserve System also influences the amount of bank reserves by buying and selling government obligations, acceptances and credit instruments on the open market.

When money is restrained, interest rates go higher and the higher rates may affect farmers much the same way as other people. But while higher rates may make borrowing difficult, they may also tend to keep prices of farm equipment and other farm costs from rising.

# # #

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

To all counties

ATT: HOME AGENTS
For use week of
January 27 or later

GET MOST OUT OF YOUR DRYER

Your automatic dryer is one of the more foolproof appliances in your home if you use it correctly.

To help you get top performance from your dryer, Home Agent _____ passes on some tips from Florence Ehrenkranz, professor of home economics at the University of Minnesota.

. Don't use a dryer for articles that are wet from cleaning fluids. Only articles washed in water should be dryed in the dryer though dry articles can be fluffed in some dryers. But if you combine a cleaning bluid with the heat in a dryer a fire could result.

. Don't overload your dryer. A dryer that can handle a 14-pound load cannot necessarily handle two wash loads. Always consider the extra water taken on by washing. Eight pounds of dry clothes put into a washer will take on about six pounds of water, making a 14 pound load.

. Don't overdry your clothes. Overdrying generally will cause wrinkles that are hard to remove. Turkish or terry cloth towels are an exception to this rule. They can be dried completely so long as they are not dried to a point of losing their fluffiness.

. Remove articles that don't require ironing while they are still damp. A practical hint is to take the article out of the dryer to determine its dampness. If you put your hand into the dryer you are likely to get the wrong answer because your hand will react to the air in the dryer as well as to the moisture of the clothes.

. Don't blame your dryer for results that may be your fault. If, for example, you use too much detergent and then dry the articles in a dryer, they may yellow because a dryer is likely to yellow unrinsed detergents.

- sah -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 21 1958

To all counties

For use week of

January 27or later

ASPENS HAVE
VALUE FOR
FARM BUILDING

Those aspen, or "popple" trees, on your back forty are really a hidden dollar supply, says County Agent _____.

He points out that aspen is no longer considered a "worthless" tree. Far from it. Parker Anderson, extension forester at the University of Minnesota says home-grown aspen can save you a lot of money in building construction and improvement around the farm.

Aspen is actually becoming popular for lumber. If piled and air-seasoned, it can be used for many desirable building purposes. If it is sawed in winter and properly piled, it can be used for building the following summer or fall. Good piling is necessary to prevent warping and twisting.

Anderson says that for beams, joists and rafters, aspen is equal to white pine lumber. While it isn't durable, aspen does have good paint-holding quality...

You can use aspen lumber for girders, girder posts, studding, rafters, sheeting and roof boards, sub-floors and flooring, interior finish or as drop siding for exteriors.

Here's an important point to keep in mind with aspen, though: Since it isn't durable, it shouldn't be used without preservative treatment in places where it is subject to decay.

Also, for sills, it's better to use a white oak, northern burr oak, northern white cedar or other more durable woods.

# # #

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958

Immediate release

UNIVERSITY TO EXPAND FORESTRY WORK AT CLOQUET

The School of Forestry of the University of Minnesota has announced a reorganization of its forestry research and teaching program at Cloquet and an addition to the technical staff there.

T. Schantz-Hansen, who has been in charge of the Cloquet Experimental forest for more than 30 years, is director of the newly organized Cloquet Forest Research center.

Work of the center will include continuation of the research and demonstration work on the 3700-acre experimental forest, some expansion of the field training program for School of Forestry students, added short course and other training programs and research in northeastern Minnesota in cooperation with forest industries and other groups.

Research projects there now include genetics and improvement of jack pine, preservative treatment of lumber, fence posts and small poles, management of northern Minnesota forest types and marketing of wood on a weight basis.

These studies will be expanded to include work on forest soil, swamp drainage and more intensive work on forest regeneration.

Bruce Brown is the new staff member. He will be in charge of the training program and will develop research in the center area. Ray Jensen, staff member at the Cloquet forest, will be responsible for research on the forest and for its general operation.

The headquarters of the Cloquet Forest Research center will continue to be at the Cloquet Experimental forest. At a recent meeting with forest industry representatives, Director F. H. Kaufert of the University's School of Forestry outlined the proposed reorganization and indicated that the school hoped to expand its staff at the research center in the future as the program develops.

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B-1847-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958

Immediate Release

VEGETABLE GROWERS TO MEET

S. H. Wittwer, professor of horticulture at Michigan State university, will be the featured speaker at the annual institute and meeting of the Minnesota Vegetable Growers' association Feb. 1 in the Red Owl store, Hopkins.

The meeting will begin at 9:30 a.m. In addition to a program covering vegetable production, insect and disease control, a tour is being planned through the new produce department of the Red Owl store. Exhibits of machinery, seeds and other supplies will be on display. A business meeting is scheduled for the afternoon, according to O. C. Turnquist, secretary of the association and extension horticulturist at the University of Minnesota.

Wittwer will discuss the role of growth regulators in vegetable production and new techniques in increasing yeild and quality of vegetable crops.

University of Minnesota staff members taking part in the program include Donald P. Taylor, plant pathologist, who will talk on nematodes; L. K. Cutkomp, entomologist, on control of leafhoppers and other insects; and Philip M. Raup, agricultural economist, on changes in vegetable production areas.

Commercial vegetable and potato growers are invited to attend the meeting, whether they are members of the association or not, Turnquist said.

B-1848-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958 Immediate release

FARM CROP SEED IN GOOD SUPPLY

There is a good supply of high quality farm crop seed available for 1958 planting, according to Bill Hueg, University of Minnesota extension agronomist.

Supplies are good for corn, soybeans, forage crops and small grains, meaning farmers should have no difficulty getting all the certified seed they want.

Hueg points out that while there will be a good supply of Vernal alfalfa seed, present indications are that it will run 15-17 cents per pound higher in price than Ranger, the other recommended alfalfa variety.

However, Vernal is still the best choice for Minnesota, Hueg says. It yields about a half ton more per acre annually than Ranger, is more resistant to bacterial wilt and can stand Minnesota winters better than Ranger or any other alfalfa variety.

For the first time in many years, there is expected to be little difference in price between certified and non-certified alfalfa seed. That means that for farmers not already using certified seed, this will be a good year to start.

Among seeds of other crops, bromegrass and sweetclover are both expected to be lower in price than last year.

There is also a good supply of birdsfoot trefoil, a relative newcomer in Minnesota seed production. There were about 100,000 pounds of trefoil seed produced in northwest Minnesota and marketed through the Red River Valley Seed Growers' association in 1957. This is the highest production ever for this seed in this state.

For any seed, Hueg advises farmers to buy from established, well-known dealers and to avoid peddlers who may demand extremely high prices for non-certified and often inferior seed. One particular seed to avoid, he says, is a spring wheat variety called "Lee^{6} X Kenya Farmer." It comes from Canada and is sold in Minnesota by some peddlers. However, it isn't recommended either in Canada or here, because it has poor milling quality.

B-1849-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958

Immediate Release

STATE 4-H CORN WINNER NAMED

State winner in the 4-H corn project for 1957 is 12-year-old Lowell Bartel, Kasson.

The Dodge county boy was named champion on the basis of his yield and 4-H project record, according to Leonard Harkness, state 4-H club leader at the University of Minnesota. He had a yield of 159 bushels from his acre of corn. He has been a member of the Pleasant Corners Merry Makers 4-H club for three years.

His award is a $25 bond from Pride Hybrid company, Dassel.

Blue ribbon winners in the corn contest are Keith Thurston, Madelia; Jerry Vought, Windom; Robert E. Lee, Randolph; Garry Martin, Blue Earth; and Harlan Olson, St. Peter. They will receive cash awards from Pride Hybrid company.

B-1850-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958

* * * * * * * * * *
* A FARM AND HOME *
* RESEARCH REPORT *
* * * * * * * * * *
Immediate release

VEGETABLE YIELDS NOT INCREASED BY GIBBERELLIC ACID

Vegetable crop yields were not increased by gibberellic acid in 1957 research at the University of Minnesota.

In fact, adding gibberellic acid actually decreased yields in some cases, according to R. E. Nylund, University horticulturist.

Gibberellic acid is a material which, in some experiments around the nation, has resulted in unusually high growth and other changes in vegetables, ornamentals and other plants. Little research has been done on its effect on yields, though.

Nylund sprayed tomatoes at three rates--5, 25 and 50 ppm (parts per million). He compared spraying at transplanting and when the first flowers opened. Tomatoes in every case yielded less than those not sprayed.

All levels of treatment and different treating times also resulted in lower yields in peas and potatoes. Nylund used seed treatments on both crops and, on peas, he also sprayed some plants when they were in full bloom. In potatoes, some got a gibberellic acid treatment when the plants were 8-10 inches tall.

In greenhouse tests with celery, Nylund compared different levels of treatment and also compared one, two and three treatments during the growing season. The treatments did not affect height of the plants, but they did reduce number of leaves on celery plants.

The gibberellic acid increased plant growth in the tomatoes and peas, but for some reason, it stunted potato plants.

Nylund points out that these tests do not mean that gibberellic acid might not be useful. The material causes a number of changes in different plants. For example, it affects flowering in some cases, which might be useful with ornamentals.

Gibberellic acid at present may be most useful as a research tool, according to Nylund. Since it causes so many different kinds of changes in different plants, it may give scientists new leads as to what controls plant growth.

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B-1851-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate release

SEARS-ROEBUCK SCHOLARSHIP AWARDED TO UNIVERSITY FRESHMAN

Gordon K. Tritz, Dumont, Minnesota, freshman at the University of Minnesota, has been awarded a Sears-Roebuck Foundation Agricultural Freshman scholarship of $200 for the winter and spring quarters.

Tritz is majoring in agricultural education in the College of Agriculture, Forestry and Home Economics at the University, and is a member of the Agricultural Education club.

He was awarded the scholarship on the basis of scholastic record, leadership and financial need.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 23, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate Release

SILAGE SHOW WINNERS NAMED

Winners of the 1957-58 silage show conducted by the University of Minnesota were announced today by Rodney Briggs, agronomist.

First place winner in corn silage was John Day, Randolph. Ronald Myhre, Caledonia, had the top place grass silage sample and first place winner in pea silage was Lewis Lunck, Fairfax.

Farmers from around Minnesota entered 279 total samples of silage in the contest, compared to 238 last year. Samples were brought in last week during Farm and Home Week.

Briggs says the contest again showed the importance of proper silage-making procedures. All top quality grass silage had been made with preservatives. Also, the contest showed that preservatives were effective only when they were used in proper amounts and were well-mixed in with the silage.

-pjt-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 24, 1958

SPECIAL

WEED INSPECTOR ATTENDS U COURSE

_____ (name), _____ (address), _____ county weed and seed inspector, received a full week of instruction on modern weed control methods, legal aspects of weed and seed laws and seed inspection at a recent event held by the University of Minnesota.

_____ attended the 17th annual Weed and Seed Inspectors' short course Jan. 20-24 on the University's St. Paul campus.

At the short course, specialists from the University, other colleges, governmental agencies and commercial concerns spoke to weed and seed inspectors from around Minnesota.

Topics covered included township, county and state coordination in regulation, aerial spraying, lawn weeds, weed seed problems in commercial feeds, the state weed control program, weed and seed laws and weed control research.

Speakers at the short course also reported on the insect situation and using atomic energy in controlling weeds.

About 150 persons attended a banquet, held in connection with the short course, Jan. 22. At this event, W. H. Kircher, managing editor of THE FARMER magazine, addressed the visitors.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

SPECIAL

FOR RELEASE:
10 a.m., Monday, Jan. 27

FORAGE ACRES MUST BE INCREASED TO FIGHT SURPLUSES

CHICAGO--American farmers need to put more land into hay and pastures and raise less food crops and feed grains if they are to solve the surplus problem, a University of Minnesota agronomist said here today.

W. M. Myers said that diverting more acres to grass would mean more beef production, since forages can't be used to any great extent for pork, or as food crops. This, he said, would result in less total food from each acre eventually reaching the supermarket.

Such diversion "would be a powerful tool in bringing production and consumption back into balance," Myers stated. "Government agricultural programs could be designed that would accomplish this objective.

Myers, who is head of the University's agronomy department, spoke at a Feed and Seed Industry Research conference. He said a shift to more forages is also necessary to conserve and improve soil, to allow for changing eating habits of American people and to provide more meat at less cost.

"More forage feeding means cheaper livestock products, which also would mean more of our total agricultural production consumed in this form than as crops," said Myers.

He said that surplus food, feed grain and cotton crop acres need to be used for other crops. But he added that since there are no new industrial crops in sight with great potential use, forage crops "are the only logical possibility."

"In the corn belt, an acre of corn used to feed hogs, if converted to an acre of grass for beef, would shrink food calories per acre by 75 percent. An acre yielding 80 bushels of corn would produce about 700 pounds of pork. The same acre in grass would produce about 165 pounds of beef." This line of reasoning, Myers added, has been promoted recently by Herrell De Graff, Cornell university food economist.

(more)

Myers pointed out that total red meat consumption per person was 20 pounds higher in 1953 than in 1929, and jumped another 7 pounds per person by 1955. Most of this increase was in beef. Consumption of dairy products, potatoes and sweet potatoes and wheat went down sharply during the same period.

Therefore, Myers said, switching from food crops to forage for more beef production would decrease total amount of food produced per acre and at the same time take advantage of modern eating habits.

He questioned, however, whether the increasing rate of American agricultural production would more than offset population increases by 1975.

"At the present rate of population growth, the 1975 population will exceed that of 1951-53 by more than one third," he said. "If this happens, our projected food needs are too low.

"During the war, farmers put to use accumulated information developed but relatively unused through a half century of research. But there is great doubt whether we have an equal reservoir of unused information and materials today for farmers to use in increasing per acre production levels in the years ahead," said Myers.

Myers said the expanded production of grain and intertilled crops in recent years has increased the drain on our land. Prospects for increased population in the future, he said, mean that "we can't afford to continue losing cropland in the future, as we are at present, at the rate of a half million acres a year, through water and wind erosion."

For maximum conservation of land, he said, we must have greatly increased acreages of forages and sharp reductions in acres of food crops, feed grains and other soil-depleting crops.

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-pjt-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 27 1958

To all counties

For use week of
February 3 or later

FARM FILLERS

Different proteins in a hog ration may supplement each other, says H. G. Zavoral, extension livestock specialist at the University of Minnesota. Therefore, a mixture of two or more proteins will usually be more efficiently utilized than will either one alone.

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Heavy fertilizing on corn pays best when you have high enough plant populations. In the 1957 X-tra Corn Yield Contest, it wasn't economical to use more than starter fertilizer when there were less than 12,000 plants per acre. This note comes from Charles Simkins and Curtis Overdahl, extension soils specialists at the University of Minnesota.

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An investment in one of the different types of water heaters for the poultry house will soon pay its way in more eggs and in labor saving, says Cora Cooke, extension poultry specialist at the University of Minnesota.

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About 100,000 pounds of birdsfoot trefoil seed were produced in northwest Minnesota and marketed through the Red River Valley Seed Growers' Association in 1957. This is the highest production ever for this seed in the state, according to Bill Hueg, extension agronomist at the University of Minnesota.

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Farm records kept in Minnesota showed that during the 1930s, farmers with typical poultry flocks received $200 return for each $100 feed given to the laying flock. During the past 10 years, they received about $150 for each $100 feed, say agricultural economists at the University of Minnesota.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Earl H. Anderson, Harris, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Manager of the Independent Men's Co-op.

Anderson is a son of Mr. and Mrs. Frank O. Anderson, Harris, Minnesota.

He has taken up duties in his new position during the fall quarter at the University.

The Independent Men's Co-op is a co-operatively owned residence for men students. It maintains an educational and social program for its members.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Anderson will hold his present position in the organization until it holds its next election during the spring, 1958 quarter. He also serves as a Agriculture representative on the Agriculture Intermediary Board. This board is made up of both staff and students who combine their resources in proposing changes and assisting in the solution of administrative problems of the College of Agriculture, Forestry and Home Economics. Anderson is also active in the St. Paul Campus Union Board.

1, Rush City Post
Rush " , Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

David R. Andreasen, Owatonna, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Vice President of the Lignum Club.

Andreasen is a son of Mr. Edward H. Andreasen, Owatonna, Minnesota.

He has taken up duties in his new position during the fall quarter at the University.

The Lignum Club is an organization of forestry students who study the manufacture and distribution of wood products and building materials. The Lignum club discusses problems of wood processing and distribution, sponsors school of forestry displays at various lumber and wood products conventions. Lignum means wood in Latin.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Andreasen will hold his present position in the organization until it holds its next election during the spring, 1958 quarter. He is also active as business manager of the Gopher Peavey, the annual publication of the Forestry Club, and is active in two student musical organizations.

1. Daily Peoples
2. Photo News
Owatonna, Minn.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Donald Benning, Brownsville, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been elected President of the Dairy Science Club, and Vice President of the Newman Club.

Benning is a son of Mr. John Benning, Brownsville, Minnesota.

He has taken up duties in his new positions during the fall quarter at the University.

The Dairy Science Club promotes professional interests of its members through a program of demonstration discussions and speakers.

The Newman Club maintains a religious and social program for Catholic students attending the College of Agriculture.

These student groups are two of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Benning is also active in student government on the St. Paul Campus.

P. Brownsville Blade
" , Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Robert Benson, Eau Claire, Wisconsin, a Senior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Vice President of Xi Sigma Pi Fraternity.

Benson is a son of Mr. Earl Benson, Eau Claire, Wisconsin

He has taken up duties in his new position during the fall quarter at the University.

Xi Sigma Pi is a honorary forestry fraternity which recognises superior scholarship and encourages professional forestry interests.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Benson will hold his present position in the organization until it holds its next election during the spring, 1958 quarter. He is also a member of the Student Council which, is the highest student government board on the St. Paul Campus, and a member of the Forestry Club.

1. Leader - Telegram Publisher
Eau Claire, Wisc.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Lorne R. Dunham, Minneapolis, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Secretary of the Horticulture Club.

Dunham is a son of Mr. L. K. Dunham, Minneapolis, Minnesota.

He has taken up duties in his new position during the fall quarter at the University.

The Horticulture club discusses topics of interest to students who either study horticulture or are interested in horticulture as a vocation.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Dunham will hold his present position in the organization until it holds its next election during the spring, 1958 quarter.

1. St. Louis Park - Dispatch

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Morlin Hein, New Albin, Iowa, a Senior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Treasurer of the United Campus Christian Fellowship.

Hein is a son of Mr. and Mrs. Albert Hein, New Albin, Iowa.

He has taken up duties in his new position during the fall quarter at the University.

The United Campus Christian Fellowship is to help its members discover God's will for their lives and to help them carry out this will through a program of Christian worship, study and fellowship.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Hein is also active in the Independent Men's Co-op, and the St. Paul Campus Student Council.

1. Caledonia Journal
" , Minn
~~2. The Lacrosse, Lacrosse, Wisc.~~

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Institute of Agriculture
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St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Richard J. Harder, Red Wing, Minnesota, a Senior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named President of the Agricultural Economics and Business Club.

Harder is a son of Mr. Harry J. Harder, Red Wing, Minnesota.

He has taken up duties in his new position during the fall quarter at the University.

The Agricultural Economics and Business club provides an opportunity for discussion of professional and business topics, and as a source of employment information for members.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Harder will hold his present position in the organization until it holds its next election during the spring, 1958 quarter. He is also active in professional and honorary fraternities.

1. Daily Republican - Eagle
Red Wing Minnesota

University Farm and Home News
Institute of Agriculture
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St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

David E. Johnson, Shafer, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been elected Treasurer of the St. Paul Campus Student Council, and Secretary of the Independent Men's Co-op.

Johnson is a son of Mr. and Mrs. Arthur W. Johnson, Shafer, Minnesota.

He has taken up duties in his new positions during the fall quarter at the University.

The Student Council is the highest student government board on the St. Paul Campus. It legislates on matters of student organization, student events and some academic matters such as the honor system.

The Independent Men's Co-op is a co-operatively owned residence for men students. It maintains an educational and social program for its members.

These student groups are two of many such organisations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Johnson is also active in Plant Industry Club, and Lutheran Student Association.

1. The Standard Press
St. Croix Falls, Wisc
2. Chisago County Press
Lindstrom, Minn.

University Farm and Home News
Institute of Agriculture
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St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Margaret Lindstrom, Orleans, Minnesota, a Senior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been elected Secretary of the St. Paul Campus Student-Faculty Intermediary Board, and Secretary of the Clovia Sorority.

Miss Lindstrom is a daughter of Mr. William Lindstrom, Orleans, Minnesota.

She has taken up duties in her new positions during the fall quarter at the University.

The St. Paul Campus Student-Faculty Intermediary Board is a standing committee of the St. Paul Campus Student Council which works toward the solution of curricular problems and problems of general campus significance by facilitating the exchange of viewpoints between students and faculty.

The Clovia is a social and residential organization of girl students who are or were 4-H club members.

These student groups are two of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Miss Lindstrom is also active in the Lutheran Student Association, and the Home Economics Association.

1. Lancaster Herald
" , Minn
2. Kittson County Enterprise
Hallock, Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

George F. Mennel, Decatur, Illinois, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named President of the Forestry Club.

Mennel is a son of Mrs. Margaret Mennel, Decatur, Illinois.

He has taken up duties in his new position during the fall quarter at the University.

The Forestry Club discusses critical issues related to the profession of forestry and sponsors a number of all campus events, including Foresters Day.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Mennel will hold his present position in the organization until it holds its next election during the spring, 1958 quarter. He is also publicity chairman for the Minnesota Royal. This is a student planned annual event to be held May 9 - 11, 1958.

1. Decatur Herald + Review
" , Illinois

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Carol Pinney, Le Sueur, Minnesota, a Senior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Secretary of the United Campus Christian Fellowship.

Miss Pinney is a daughter of Mr. Carl Pinney, Le Sueur, Minnesota.

She has taken up duties in her new position during the fall quarter at the University.

The United Campus Christian Fellowship is to help its members discover God's will for their lives and to help them carry out this will through a program of Christian worship, study and fellowship.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Miss Pinney will hold her present position in the organization until it holds its next election during the spring, 1958 quarter. She is also active in professional Home Economics organizations.

1. Le Sueur News Herald
" " , Minn

University Farm and Home News
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St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

LeRoy Robertson, Max, Minnesota, a Sophomore at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Secretary of the Pre-Veterinary Medicine Club.

Robertson is a son of Mr. Lloyd O. Robertson, Max, Minnesota.

He has taken up duties in his new position during the fall quarter at the University.

The Pre-Veterinary Medicine Club encourages the discussion and exchange of information concerning the Veterinary Medicine Profession among Pre-Veterinary Medicine students.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Robertson is also active in other student organizations on the St. Paul Campus.

1. Grand Rapids Herald
" " , Minn
2. Blackduck American
" , Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 27, 1958

Special to home town papers

For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Janice Sorenson, Hallock, Minnesota, a Senior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named President of Phi Upsilon Omicron Sorority.

Miss Sorenson is a daughter of Mr. and Mrs. Paul Sorenson, Hallock, Minnesota.

She has taken up duties in her new position during the fall quarter at the University.

The Phi Upsilon Omicron is a professional home economics sorority.

This student group is one of many such organizations on the St. Paul campus which, in addition to regular course work, help students prepare for future careers in professional and vocational fields of agriculture, forestry and home economics.

Miss Sorenson will hold her presnet position in the organization until it holds its next election during the spring, 1958 quarter. She is also active in student religious organization, Home Economics organizations, and honorary organizations.

1. Kittson County Enterprise
Hallock, Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 27, 1958

To all counties

For use week of
February 3 or later

County agent: This is the fourth in a series of articles summarizing research on use of nitrogen fertilizers.

NITROGEN CAN BE APPLIED IN FALL OR SPRING

It usually won't make any difference whether you apply nitrogen fertilizer in the fall or in the spring, according to County Agent _____.

While field tests have shown some advantage from spring application in some cases, the difference usually isn't very big and doesn't hold true in all cases.

J. M. MacGregor, University of Minnesota soils scientist, says three years of tests with nitrogen before 1954 showed no yield differences at all between fall and spring treatment.

During the past two years, more tests were conducted on this question, along with comparisons between different kinds of fertilizer in different areas. Research workers compared fall and spring applications of nitrate and ammonium forms of nitrogen, at 40 and 80 pound-per-acre rates.

At the Northwest School and Experiment Station, Crookston, there was no difference between yield increases from fall or spring application or between different kinds of fertilizer.

Tests at the West Central Experiment Station, Morris, showed that spring application at both rates brought bigger increases in every case except with the 80-pound rate of nitrate fertilizer. In that case, fall application boosted yields by 15.3 bushels per acre over unfertilized plots, compared to a 12.3 bushel increase on a plot receiving a spring application.

More research in nitrogen fertilizing will be reported at the Upper Midwest Nitrogen Conference Feb. 20-22 in the Lowry Hotel in St. Paul. All interested persons are invited.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul Minnesota
January 27 1958

To all counties

For use week of
February 3 or later

ELECTRIC MOTORS ARE CHEAP WORKERS

On some jobs, a 1/4 horsepower electric motor can do the work of one man, says County Agent _____.

However, different jobs around the farm call for different sizes and types of motors. _____ points to recently issued Extension Folder 202 from the University of Minnesota, "Selecting Electric Motors for Farm Use".

In this folder, V. M. Meyer, research agricultural engineer and D. W. Bates, extension agricultural engineer, explain three general rules to follow in selecting the proper size of motor.

1. Use Manufacturers' recommendations for the piece of equipment or appliance.
2. When replacing hand work, remember that a 1/4 horsepower motor replaces a man.
3. When replacing a gasoline engine, use an electric motor of two thirds the horsepower rating of the gasoline engine.

There are three common types of single-phase AC motors. They include split-phase, capacitor and repulsion start-induction run motors. In addition, there are universal motors, for AC or DC current and three-phase induction motors.

There is little difference among different types of motors of the same power rating in the amount of work they can do or the current they require at operating speed. Single-phase motors, though, differ in the way they start and come up to running speed.

Split-phase motors have a lower starting torque (ability to start a load) than other single-phase AC motors. Of this type motor, repulsion start-induction run motors are more rugged and will handle hard-starting loads most easily.

The new extension folder contains more information on different motor types and also has a guide you can follow in selecting motors for different jobs. You can get a copy from your county agent or by writing to the Agricultural Bulletin room, Institute of Agriculture, University of Minnesota, St. Paul 1.

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University Farm & Home News
Institute of Agriculture
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January 27 1958

To all counties

ATT: HOME AGENTS

For use week of
February 3 or after

PEAS AND PORK TOP FEBRUARY PLENTIFULS

Make the most of your food dollar by planning meals to include the plentiful foods for February, Home Agent _____ _____ suggests to _____ county homemakers.

Green peas, canned or frozen, take the spotlight among foods due to be plentiful on markets the country over in February. They make good company for any meat, poultry or fish dish. Try this thrifty platter: ground hash of beef, ham or lamb encircled with piping hot green peas and edged with hot fluffy rice. Serve peas with mushrooms, chopped onion, diced carrots or turnips, or creamed in white sauce or cheese sauce.

Get those pork recipes together now because pork, fresh and cured -- all cuts - will be a plentiful food in February.

Plentiful vegetables besides peas, will be potatoes and canned and frozen corn. Among the fruits, look for supplies of apples and dried prunes. Both make wonderful snacks.

Peanuts and peanut products will continue in heavy supply for the lunch box, mid-afternoon snack or sandwiches. Last fall's record-large crop of filberts means this nut will also continue to be plentiful in most markets.

Finally, there's going to be lots of milk in February, as production rises. Hot milk soups will be one way to use this good supply. Hot spiced milk -- with a little cinnamon and sweetening -- or hot chocolate milk is worth considering for a between-meal or evening beverage.

- rlr -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
January 28 1958

To all counties

ATT: 4-H CLUB AGENTS

For use week of
February 3 or after

COUNTY WINNER TO
COMPETE IN
DISTRICT CONTEST

_____, county winner in the 4-H radio speaking contest and member of the _____4-H club, of _____ (address), will compete in the district competition to be broadcast over Station _____ at _____ (hour) _____ (day) _____ (date).

_____ won the county contest in competition with _____ (no.) other 4-H members.

Winners from _____, _____, _____, and _____ counties will compete in this district event. All contestants will broadcast original speeches of five to seven minutes on the subject, "Our Country's Most Important Problem Today -- What Can I Do About It?"

The district contest in which _____ county's representative will participate is one of 16 being held throughout the state in February. The statewide 4-H radio speaking contest is being sponsored by the University of Minnesota Agricultural Extension Service and the Minnesota Jewish Council for the 16th year.

District winners will receive cash awards and an expense-paid trip to the Twin Cities to compete in the state finals March 8. Reserve champions will also receive cash awards. All awards are being given by the Jewish Council.

- rlr -

University Farm and Home News
Institue of Agriculture
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January 28, 1958

Special to Television Stations

PLASTIC AIDS SILAGE PRESERVATION (1 minute, 10 seconds)

VISUAL	AUDIO
Picture # 1 (Briggs and square plastic bog)	Sheets of plastic may add some new wrinkles to forage preserving methods on Minnesota farms. Here is Rodney Briggs, University of Minnesota agronomist, showing a plastic-covered stack of baled grass silage. The hay was baled at about 40 percent moisture and the stack was covered with plastic in such a way that all air is kept out.
Picture # 2 (Briggs and broken bale)	Here, Briggs shows a bale of the silage several months after storage. The silage is of good quality, showing that, if the plastic bag is kept air-tight, this method is successful. This scheme is being tested thoroughly this year at the University.
Picture # 3 (Picture of round plastic silo)	A second use for the plastic silo is for corn silage. The one shown here contains 78 tons of corn silage, which keeps as well this way as it would in the finest upright silo. Again, with an airtight seal, there is no spoilage. This is a good way to store extra corn which can't be put in conventional silos. Standing by the silo is William M. Fike, agronomist.
Picture # 4 (Cover on trench silo)	Plastic covers are also a big help on trench and upright silos. Bill Hueg, extension agronomist, here shows plastic sheet over grass silage in a bunker silo. The sides are held down firmly for an airtight seal. This type of cover can eliminate top spoilage,which often runs up to 15 to 20 percent in this type of silo.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 28, 1958 Immediate release

16 DISTRICT 4-H RADIO SPEAKING CONTESTS SCHEDULED

Sixteen district contests in the statewide 4-H radio speaking competition have been scheduled for February.

County champions will compete for honors in the district contests, broadcasting their original speeches over radio stations in their local areas.

The University of Minnesota Agricultural Extension Service and the Minnesota Jewish Council are sponsoring the radio speaking competition for the 16th year. "Our Country's Most Important Problem Today--What Can I Do About It?" is the subject of this year's contest.

Evelyn Harne, assistant state 4-H club leader at the University of Minnesota, announces the following schedule of broadcasts for the district contests: Feb. 15--10:05-11 a.m., KWOA, Worthington; 11:15 a.m.-12, KOZY, Grand Rapids; 11:30 a.m.-12, WEBC, Duluth; 2:30-3:30 p.m., KYSM, Mankato; Feb. 17--12-12:15 p.m. and 12:30-1 p.m., KUOM, St. Paul; Feb. 21--4-5 p.m., KWLM, Willmar.

Feb. 22--9:30-10:30 a.m., KATE, Albert Lea; 10-11 a.m., KMHL, Marshall; 10-11 a.m., KDHL, Faribault; 11:15 a.m.-12:15, WCMP, Pine City; 1-1:30 p.m., KAGE, Winona; 4-5 p.m., WJON, St. Cloud; Feb. 24--1:45-3 p.m., KILO (Grand Forks) Crookston; Feb. 27--3:05-3:50, KVOX, Moorhead; Feb. 28--1:30-2:30, KGDE, Fergus Falls; 2:30-3:30, KWAD, Wadena.

The Jewish Council is providing more than $2,000 for awards to county, district and state winners. District winners will receive prizes of $15 and all-expense trips to the Twin Cities to compete in the state finals March 8. Reserve champions will receive cash awards of $10.

B-1852-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 28, 1958

Immediate Release

CANNERS' AND FIELDMEN'S SHORT COURSE SCHEDULED

The 11th annual Canners' and Fieldmen's Short Course will be held Feb. 5-6 at the Radisson hotel, Minneapolis.

According to J. O. Christianson, director of agricultural short courses, the event is open to the public. A variety of topics will be featured on soil management, fertilizer problems and pest control.

Program chairman for the event is A. E. Hutchins, University horticulture professor.

Topics Feb. 5 will include soil management, use of green manure, Minnesota peats and fertilizer problems, soil type influences on production potential, how to apply fertilizer, tillage and economics of fertilization.

What's new in pest control, herbicide screening for peas, weed competition in peas, weed control in sweet corn, how to get along with the grower, seed quality control, the 1958 agricultural program and the future outlook will be discussed Feb. 6.

Featured speakers will be from the University, the Metropolitan Mosquito Control District, the Minnesota Canners and Freezers association, several universities from other states, the National Canners association and several commercial concerns.

For more information, contact the Director of Agricultural Short Courses, Institute of Agriculture, University of Minnesota, St. Paul 1.

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B-1853-vms

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 28, 1958 Immediate release

MARKET LIVESTOCK PROJECT EMPHASIZES "DOLLAR AND CENTS" BENEFITS

WINDOM--Nearly 200 4-H and FFA members in southwestern Minnesota, in a beef calf project much different from the usual kind, are getting some valuable pointers on the dollars-and-cents importance of smart livestock management.

None of the animals raised in these projects ever reach the county fair or state shows. Yet, scores of past and present 4-H and FFA members in the 15 counties where the project is underway say it gives them some of the best practical training they ever had in feeding and marketing beef cattle.

It's called a "five-calf," or market livestock project, according to Herman Vossen, Cottonwood county agent who helped start the project in this area 10 years ago.

Here's how it works in Cottonwood county:

The 4-H or FFA member buys western calves averaging about 400 pounds around October or November. He feeds the animals during the coming year until they are ready for market.

He keeps accurate records on feed and gain to determine his profit. Then if he wishes, he enters a local show the following September, in which one first place prize is given to the project member who has the best overall record for the year.

"The entire program," Vossen explains, "is based on how business-like a job the project member can do with his calves. It's based on rate of gain, cost per pound of gain and, of course, on how much genuine profit he makes."

Youths in Cottonwood county alone have about 155 calves on feed in this project for the coming year and have averaged about that many or slightly more each year since 1949.

This project, of course, varies somewhat from county to county. In some areas, the project members raise three instead of five calves, but the general pattern of the program is the same.

Cottonwood county 4-H and FFA workers have made some impressive records in this project. Average daily gains for their calves were as high as 2.3 pounds per

(more)

day in 1956-57 and, among Cottonwood county boys and girls who brought their animals in to the annual show for this project at Windom, average feed cost was less than 17 cents per pound of gain.

The five-calf project just "grew naturally" in Cottonwood county, as Vossen tells it. "It was talked about for many years," he explains. "Youngsters from this area had won many show ribbons over the years, but there was much much discussion over the years about whether we couldn't substitute a commercial feeding project to some extent for the single calf project.

"The reason for this is that it was often felt a youth could learn more about practical livestock management by raising a group of calves on a straight commercial basis rather than just for the show ring."

Members of the Cottonwood County Livestock improvement played a key role in getting the program under way. In setting up the project in 1949, the committee stipulated that no "fancy" grade calves would be bought. Instead, project members would use the run of the western range, the same as a commercial feeder would. Over the 10-year period, the calves fed varied from medium to choice.

Every year since the project has started, a group of the livestock committee has traveled to one of the western markets and selected the calves for the coming year in Cottonwood county.

"We weed out the poor ones, then sell the calves to the members on a straight 'gate cut;'" Vossen explains. "This gives each member an equal start." Local banks and lenders have been ready to make loans to youths in this project.

All project members use stilbestrol, a proven synthetic growth-promoting hormone, and most of them follow other improved feeding practices.

The youths get plenty of opportunity to ask for advice. Herman Vossen and Paul Sandager, assistant agent in Cottonwood county, see each project member at least twice during the year. Also, a number of vocational agriculture instructors in the county, who help keep the project going, make the rounds locally from time to time. The livestock committee members usually set up a tour of projects during which each member can show how he is handling his calves.

(more)

When the calves are brought into the annual show and sale at Windom, members of the livestock committee supervise the weighing and then are able to figure the actual gain and cost per pound of gain from the member's record. Packer cattle buyers grade cattle and the market price is set on each animal to complete the record.

For the first time this year, an auction was held at the show for any member who wanted to sell his cattle that way; however, the members are free to sell wherever or whenever they think they can get the best price.

What do the club members themselves think of the project? Larry Goeman, 15, Jeffers, first entered the project last year, liked it so well that this year he has 10 calves in his project. "Farming has been more interesting to me since I have had a project of my own," Larry says.

Larry, son of Mr. and Mrs. Ed Goeman, had some profitable results from his first 4-H 5-calf project. His steers averaged 2.27 pounds gain per day and cost 16.1 cents per pound of gain. That brought him a net profit of $292.21 for the five calves.

A third-time member in the five-calf project in Cottonwood county is 4-H'er Eldon Wiens, 15, Delft. Since his father, Peter Wiens, has a dairy herd, Eldon says he has gained some experience in another phase of farming by being in the beef project.

The calves also pay off for Eldon. "This year, I was able to pay for calves from the profits made in previous years," he says. "Also, I intend to farm after finishing high school. That means I will make use of this experience I'm getting now."

Results from the five-calf project have been so good and the enthusiasm among project members and parents has been so great that Vossen and local adult leaders set up a similar project for swine a few years ago. This program operates on the same principle; it stresses the importance of making money from the hog business.

An added benefit from both the calf and swine projects is that they also help teach the adults better livestock farming principles, Vossen says. "Every year we notice that a number of adults who attend the annual livestock show here study the records very carefully. They're eager to find out what the youngsters have learned."

B-1854-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 29, 1958 Special to U. S. Information Agency

STUDENT FROM GREECE STUDIES PLANT BREEDING AT THE UNIVERSITY

Learning new techniques of experimenting with rust and varieties of wheat and other cereal crops can help her in future experimental work in Greece, according to Miss Elpis Athanasios Skorda, Greek foreign student.

"With further training in the United States on the genetics of cereals I shall accomplish my work in Greece with greater efficiency," she says.

According to Miss Skorda, "the increase of Greece's production in cereals and the decrease in price cost is important because this can raise the citizen's standard of living."

Miss Skorda is presently studying cereals improvement at the University of Minnesota. She is taking courses in advanced genetics, diseases of field crops and grain and oilseed. During the fall quarter she was enrolled in plant breeding, principal genetics and applied statistics.

The courses she is taking "basically involve plant breeding. The rest are very interesting and necessary for plant breeding because plant breeding is based on genetics and applied statistics."

"My job in Greece is to develop new varieties of wheat," she explains Miss Skorda. "Rust is a very serious problem in Greece and causes appreciable losses in crops. The improvement of new varieties is also a problem because of the variation in soils and climates. We have to develop good varieties and resistant varieties."

Miss Skorda came to the University in Sept., 1957. During the summer, 1958, she will work at University experiment stations as an associate for training experience in cereal investigations. Special attention will be given to wheat breeding and to varieties of wheat, oats and barley which are resistant to rust.

After her work at the University experiment stations, Miss Skorda will spend five or six days at Purdue University, Lafayette, Indiana. During that time she will confer with cereal breeders and plant pathologists on breeding for resistance to leaf rust. She will also observe research work in progress.

During the latter part of August, she will go to Washington, D. C. to discuss the research program at the Agricultural Research Center, Beltsville, Maryland.

She will then return to Greece to the Plant Breeding Institute of Salonica, the second largest city of Greece. Her home town, Kozani, about 25,000 population, is located about 65 miles southwest of Salonica, and about 40 miles west of the Aegean Sea in north central Greece.

Miss Skorda attended the University of Salonica, and received a Bachelor of Science degree in agronomy in 1947. She worked in the Plant Breeding Institute of Salonica for eight years before she came to the United States to learn new techniques of experimentation.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

SPECIAL TO WEEKLIES
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* For release: Thurs., Feb. 6 *
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LOCAL GARDEN
CLUB CONTRIBUTES
TO ARBORETUM

The _____

garden club(s) is (are) helping to make possible the development of a landscape arboretum which will play a leading role in increasing the variety of ornamental trees and shrubs for home yards in this state.

The local club(s) is (are) among the almost 450 garden clubs affiliated with the Minnesota State Horticultural society which Thursday, Feb. 6, presented to the University of Minnesota a deed to 160 acres of land for a landscape arboretum. In addition to the deed presented to the University by G. Victor Lowrie as president of the Horticultural society, was a check for $25,000 to begin development of the arboretum.

_____ (was) (were)

among the clubs throughout the state, along with numerous individuals, contributing to the fund to buy the land and to begin development of the arboretum, according to Eldred Hunt, secretary of the Minnesota State Horticultural society.

The arboretum will be devoted to research in testing and developing hardy ornamentals for landscaping home grounds in Minnesota. Purpose of this research will be to increase many times the limited number of selections that will withstand the severe climatic conditions of this area. Planted in a natural setting, the arboretum will give home owners and garden lovers an opportunity to see plant materials in natural landscape groupings, as well as the variety of plants available for landscaping.

Located on Highway 5, a mile from the University Fruit Breeding Farm near Excelsior, the landscape arboretum consists of 160 acres of woodland, lakes and open fields to be developed by University horticulturists.

(more)

add 1 Local garden club contributes to arboretum

A tract of nearly 100 acres of timberland has nearly every type of tree and shrub native to this area. Fifty acres of open, rolling land will make available immediately a section for experimental plantings.

While the existing trees, native shrubs and wild flowers will provide a beginning to the landscape arboretum program, eventually approximately 3,000 species and varieties of shrubs and trees will be planted, according to Leon C. Snyder, head of the University department of horticulture, who will be in charge. The high land, as well as the low and marsh land, will furnish the types of soils and natural habitat for a large variety of plants.

Walks and roads, flanked by plantings, will lead through and around the arboretum to facilitate observation by the public. Plans call for a headquarters building for administration purposes to be built on a hilltop with a view of Lake Minnewashta in the distance.

A new era in the development of Minnesota's ornamental horticulture may well be in its beginning as the University of Minnesota landscape arboretum becomes a reality, Snyder says.

-jbn-

From: Jo Nelson
Information Service
107 Coffey Hall
St. Paul Campus
Jan. 30, 1958

Special to MINNESOTAN

LANDSCAPE ARBORETUM IS CENTENNIAL GIFT TO MINNESOTA

A landscape arboretum that will help to create beauty for homeyards in the state is now becoming a reality. Fittingly enough, it is being presented as a Centennial gift to the people of Minnesota from the Minnesota State Horticultural Society.

At a ceremony attended by members of the administration and Board of Regents on February 6, the Minnesota State Horticultural Society turned over to the University a deed to 160 acres of woodland and meadow a mile from the University Fruit Breeding Farm for a landscape arboretum. C. Victor Lowrie, president of the Horticultural Society, also presented the University a check of $25,000 from the Society to begin development of the arboretum.

Members of the Lake Minnetonka Garden Club raised the $35,000 necessary to pay for the land on which the Society had held an option for two years. Most of the Society's 450 affiliated garden clubs, as well as many individuals throughout the state, have contributed to the fund for initial development of the arboretum.

For a long time the Society has recognized the need for an expanded research program to lengthen the list of ornamentals that can be grown successfully in Minnesota. Feeling that a landscape arboretum would be a tangible way to achieve that goal, the Society set up a committee early in 1955 to publicize the need for an arboretum, to find a suitable place for it and to solicit funds for purchase of the land. Within three years it has accomplished its initial goal.

What is a Landscape Arboretum?

Many people may wonder what purpose a landscape arboretum serves. According to Leon C. Snyder, head of the horticulture department, a landscape

-more-

arboretum is an area set aside for research and for the planting and display of ornamental trees, shrubs and woody vines that can be grown in the area and are of value in landscaping. They are planted and labeled in such a way as to demonstrate their best landscape use. This beautifully planted area will give homeowners and garden lovers in the state an opportunity to see plant materials in natural landscape groupings, as well as the variety of plants available for landscaping.

The arboretum will serve as a laboratory for testing and for breeding trees and shrubs not normally considered suitable for this region. It will be a reservoir of plants from which new and improved varieties can be developed.

Minnesota gardeners have long felt the need for a broader selection of woody ornamentals that will withstand the varied and severe climatic conditions of Minnesota and provide home owners with more beautiful and suitable landscape ornamentals. The shift to the one-story ranch-type home has also created a demand for trees and shrubs that are in scale. In Minnesota the list of available shrubs has been very limited.

The property to be developed as an arboretum by University horticulturists includes nearly 100 acres of a beautiful tract of timberland on Highway 5, with nearly every type of tree and shrub native to this area. You will see such shrubs as dogwood, buckthorn, highbush cranberry, hazel, sumac, Juneberry, nannyberry, winter berry, wild snowberry. Wild grape and bittersweet vines abound. Stately sugar maples and oaks, black cherry, ash, elm, ironwood, thornapple, hawthorn, tamarack, aspen, cottonwood, northern poplar, pin cherry, chokecherry and hickory grow in the area. Two small lakes add an additional touch of beauty.

The gently rolling land has 50 acres of open fields which will be available immediately for experimental plantings. The high land, as well as the low and marsh land, will furnish the types of soils and natural habitat for a large variety of plants.

The existing trees, varied native shrubs and wild flowers will provide an interesting beginning to the arboretum program. Eventually 2 or 3,000

varieties of shrubs and trees will be planted.

Walks and roads, flanked by plantings, will lead through and around the arboretum to facilitate observation by the public. Plans call for a headquarters building for administration purposes to be constructed on a hilltop with a view of Lake Minnewashta in the distance.

Research in testing and developing hardy ornamentals for Minnesota, an important aspect of the landscape arboretum project, is already well under way at the Fruit Breeding Farm and on the St. Paul campus. Horticulture staff members F. J. Stadtherr, E. T. Widmer, E. A. Phillips and A. G. Johnson have a part in this work. Of the 800 trees and shrubs now under trial at the Fruit Breeding Farm are 70 varieties of flowering crabs, 25 different varieties of azaleas, such trees and shrubs rare to this area as the gingko tree, forsythia, the Idaho locust, deutzia, sunburst locust and European red elder. Hardy strains of such desirable trees and shrubs as broadleaved evergreen, redbud, azalea and forsythia are in the foreseeable future as a result of the University research in ornamentals.

Development of the arboretum will assure the continuation of this research. That fact should be of importance to every Minnesotan, Snyder believes. For, he says, trees and shrubs determine to a large extent the beauty, livability and desirability of an area. They also have a definite monetary value. Proper landscaping of homes, farms and buildings adds as much as 20 percent to their real estate values, according to estimates. Beautiful homegrounds, parks and shaded streets create a sense of well being and pride in the people of the community. Moreover, the tourist industry -- big business -- is heavily dependent upon the beauty of the state for its success.

A new era in the development of Minnesota's ornamental horticulture may well be in its beginnings as the University of Minnesota landscape arboretum becomes a reality

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

SPECIAL

Immediate Release

FORMER UNIVERSITY GRADUATE STUDENT RECEIVES AWARD FOR THESIS

John D. Kelley, former graduate student in rural sociology at the University of Minnesota, has received a $100 Metzger award from the American Institute of Cooperation for a thesis he completed here.

Kelley, who hails from Belmont, Mass., wrote the thesis on "Effects of Background and Experience on Knowledge and Attitudes of Youth Concerning American Business Structure," as part of the requirements for his M. A. degree.

Since his earning the degree at the University last June, Kelley has been studying for his Ph. D. at Louisiana State university.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

Immediate Release
(with mat)

KANSAN JOINS STATE 4-H STAFF

Elizabeth Elliott, White City, Kansas, has joined the 4-H club staff at the University of Minnesota as state 4-H club agent, Leonard Harkness, state 4-H club leader, has announced.

Miss Elliott has been home economics agent in Republic county, Kansas, since January, 1956. For two years she was a staff associate with the National 4-H Club foundation, Silver Spring, Maryland.

She holds a B. S. degree in home economics and Extension from Kansas State college.

Born on a farm in east central Kansas, she was a 4-H club member for 10 years. In 1951 she was an International Farm Youth Exchange delegate to the Netherlands.

Active in professional organizations, she holds memberships in the Kansas and National Home Demonstration Agents' associations and in the Kansas and American Home Economics associations.

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B-1855-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

Immediate release

HOME ECONOMICS EXTENSION DISTRICT MEETINGS

Eight district meetings will be held throughout Minnesota in February for leaders in the extension home program and for women members of county extension committees.

Purpose of the meetings will be to discuss leadership and program planning in home economics extension work.

Meetings will be held Feb. 5 in Cambridge in the Co-op hall; Feb. 6, Grand Rapids, North Central School of Agriculture; Feb. 13, Fergus Falls, Otter Tail Power co.; Feb. 14, Crookston, Northwest School of Agriculture; Feb. 19, Rochester, 4-H building; Feb. 20, Waseca, Southern Minnesota School of Agriculture; Feb. 26, Willmar, Blue Wave room, Lakeland hotel; Feb. 27, Windom, new Catholic church.

Sessions will begin at 10 a.m. and continue until 3.

In charge of the meetings will be district leaders of the home economics extension program at the University of Minnesota, Minerva Jenson, Rosella Qualey, Margaret Jacobson and Caroline Fredrickson. Speakers will be Dorothy Simmons, state leader, home economics extension, and George Donohue, extension rural sociologist, University of Minnesota.

B-1856-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958 Immediate release

FAVORABLE CLOTHING OUTLOOK FOR CONSUMERS

Consumers should have no trouble buying clothing at reasonable prices during 1958.

The long-range outlook is for ample supplies but for less low-quality clothing and more emphasis on improved quality, reports Athelene Scheid, extension clothing specialist at the University of Minnesota.

The forecast is for an increase in shoe prices in 1958. Prices of girls' and women's apparel are expected to remain at about the same level as last year, but prices on most men's and boys' clothing will probably be higher. Increased labor costs, however, may result in fewer manufacturers producing lower-priced lines of women's coats and suits, with selling emphasis on higher-priced merchandise. Strong factors against price increases in men's coats and suits are the sagging woolen market and consumer preference for lighter-weight wool and wool mixtures.

Price increases for clothing have been light during the last five years, compared to those for other goods and services. The consumer price index for apparel rose less than .8 percent in the past year, though prices for family living as a whole rose 3.4 percent. Footwear has increased 11.7 percent in price in the last five years, but other clothing has not increased proportionately.

Though the clothing outlook is favorable for the consumer, it is not as optimistic for the clothing industry. Expenditure for clothing per person has declined about 8 percent in the last nine years. This means, Miss Scheid says, that the clothing industry is not successfully holding onto its earlier share of the consumer dollar.

Both urban and farm families are spending less of the family dollar for apparel because of the trend toward more casual living and because more of their money is going into home ownership. In general, families are merely replacing articles of clothing rather than increasing their wardrobes, according to Miss Scheid. Many consumers are making their clothing dollar stretch further by greater care and longer wear of clothing items.

B-1857-jbn

Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

SPECIAL RELEASE

special file

HOMEMAKING-TEACHER HONORED

Mrs. Ora Dreher, homemaking teacher in the Owatonna Public Schools, was honored Jan. 30 by some 30 off-campus supervising teachers of home economics for the University of Minnesota at a luncheon on the University's St. Paul campus.

At the luncheon tributes to Mrs. Dreher were given by Jean Webster, home economics instructor at University high school, and Roxana Ford, professor of home economics education and assistant director of the University's School of Home Economics. Miss Webster did her student teaching under Mrs. Dreher's supervision. Hedda Kafka, assistant professor of home economics education at the University, presented Mrs. Dreher with a gift from the supervising teachers.

Mrs. Dreher was the first off-campus supervising teacher in home economics for the University. She has served in that capacity for 11 years, during which time she has supervised 38 students teachers from the University. Each of these students has taught under her direction for a period of four or five weeks at a time.

In June Mrs. Dreher will retire from the Owatonna Public Schools after being on the staff since 1931.

As a supervising teacher, Mrs. Dreher said one of her aims has been to help young women to find real joy and enthusiasm in teaching. Her supervisory work, she said, has been a "challenge to service and to professional growth."

In November, 1957, Mrs. Dreher received special recognition when she was presented on KTCA-TV by the Minnesota Education association as its fourth "teacher portrait".

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

Immediate release

MIDWEST CONCRETE DRAIN TILE MANUFACTURERS SHORT COURSE SCHEDULED

The 3rd annual Midwest Concrete Drain Tile Manufacturers Short Course will be held Feb. 6-7 on the St. Paul campus of the University of Minnesota.

According to J. O. Christianson, director of agricultural short courses, the event will feature topics on concrete drain tile, drainage and ground waters and farm trends for 1958.

Program chairman for the event is P. W. Manson, University professor of agricultural engineering.

Topics Feb. 6 will include making concrete tile; electrical methods for gauging mixing water; facts you should know about drainage as related to precipitation, floods and droughts; ground waters and farm trends for 1958.

Proposed new tests for compressive strength of drain tile and new type machines for making concrete drain tile will be discussed Feb. 7.

The event will feature speakers from the University, the Minnesota State ASC office, the American Concrete/Pipe assocation and several commercial concerns.

For more information, contact the Director of Agricultural Short Courses, Institute of Agriculture, University of Minnesota, St. Paul 1.

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B-1858- vns

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 30, 1958

Immediate release

NITROGEN TO GET SPECIAL ATTENTION AT FEBRUARY CONFERENCE

Nitrogen--a critical plant nutrient on many farms in Minnesota--will get some careful attention at a Nitrogen conference Feb. 20-22 in the Lowry hotel in St. Paul.

According to W. P. Martin, head of the University of Minnesota soils department, about 1,000 people will attend the conference. It's the first event of this kind ever held in the Upper Midwest.

Martin says the purpose of the conference is to summarize current research on how nitrogen can be used to increase profits per acre from field crops and pastures. Soils and fertilizer experts from the University, other colleges and universities and commercial firms will report on nitrogen use.

Minnesota farmers are now using about 6 times as much nitrogen fertilizer as they did in 1950, but there is still a place for much more, Martin says.

In addition to hearing research reports, visitors to the conference will visit the new Soils building being constructed on the St. Paul campus of the University and will tour The St. Paul Ammonia products nitrogen plant.

Also at the conference will be a series of exhibits which tell the story of nitrogen and how it is changed from "raw material" to a product that farmers can apply on their fields.

The conference is sponsored jointly by the University and the Minnesota Fertilizer Industry and Soil Improvement committee. All interested persons are invited.

B-1859-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
January 31, 1958

SPECIAL TO THE GRAND FORKS HERALD

STALK LODGING IS
PROBLEM IN CORN

By C. A. Simkins, extension soils specialist, and
H. G. Johnson, extension plant pathologist

Stalk breakage and lodging of corn has become one of the most serious problems in corn production in Minnesota. A conservative estimate of losses in 1956 was 10 percent of the 330 million bushel corn crop. A large loss in yield also resulted from the dropping of corn ears from rotted shanks.

In some instances, these losses can be minimized by pasturing livestock. However, when ears are in contact with soil, molds develop rapidly and rot the ears, making them unfit for livestock feed.

The extent of stalk breakage is also reflected in many of the crops which follow corn. It is common to fields of soybeans which are almost hidden by volunteer corn; considerable labor is necessary to get soybean fields ready for harvest. When volunteer corn is not cut before harvesting soybeans, mixtures as high as 50 percent corn and 50 percent soybeans have been reported.

Research by pathologists and crops and soils workers here at the University of Minnesota has shown that there are several factors which may be responsibile for lodging and stalk breakage. Usually one single cause for breakage is not responsible in any one field. The lodging is the result of several factors or their combinations.

The following are some of the factors known to contribute to stalk breakage and lodged corn.

ROOT AND STALK ROT - Various fungi namely GIBBERELLA and DIPLODIA, have been found to be the most important cause of root and stalk rot. Actual losses are difficult to determine, because root and stalk rot can cause a reduction in yield without conspicuous disease symptoms or corn lodging.

INSECT DAMAGE - Damage by corn borer, corn root worm, wireworm, and other insects may result in a weakened stalk which ultimately breaks and drops the corn ear. In addition, the damaged corn tissue, as a result of the insects' entrance, provides an easy entrance for root and stalk rotting fungi.

NUTRIENT BALANCE - When the fertility level of a soil is out of balance - in particular when the potash status is low - stalk rot develops more readily and consequently causes more lodged plants.

It has been found that application of nitrogen alone favors the stalk rot organism. Various investigations have found that addition of potash fertilizer to soils already rich in potassium had no effect on the yield or lodging of corn. But potash applied to deficient soils decreased the incidence of lodging and stalk breakage.

PLANT POPULATION - Stalk breakage and lodging increases rather sharply when plant populations exceed 18 to 20 thousand plants per acre. Stalks are smaller, generally taller, and more susceptible to mechnaical breakage.

VARIETY- The standing ability of various hybrid corn varieties is an important factor in lodging. Researchers have found considerable difference among hybrids in this respect.

It has been demonstrated that some corn plants contain soluble substances which retard the growth of some of the stalk rotting fungi.

2,4-D TREATMENT - Corn is sometimes injured when sprayed with 2,4-D. Over-dosage or improper application can result in brittle stalks, malformation of brace roots, and lodging.

The factors named above are only some of the causes for lodged corn. Soil and weather also affect the degree to which corn will lodge. The greatest hope for a solution to the lodging problem lies in the use of resistant hybrids, insect control,

proper fertilizer application, optimum plant population, and sound crop management.

PLAN YOUR OPERATIONS
FOR 1958 FARMING

By George Pond, professor of agricultural economics

Minnesota has a relatively stable agriculture. This is especially true of livestock production - and sales of livestock and livestock products supply more than two-thirds of our cash farm income.

It takes years to build up productive herds and flocks. In our climate livestock involves a considerable investment in shelter as well as in specialized equipment, fences, and the like. Efficient use of our labor necessitates laborsaving equipment for livestock feeding and handling that has little alternative use.

These are important considerations that limit radical changes in our farm plans from year to year. In spite of this element of stability in the general pattern of our agriculture there are always opportunities for adjustments that promise to enhance income for the year or years ahead.

Then too, the prices of farm products vary from year to year in response to changes in production. Volume of production varies as the result of variations in weather and changes in farm technique. At least moderate changes in the pattern of production from year to year may help to keep the farm business adjusted to these short time changes. Certainly every farmer may well take stock at the end of the year and scan his plan of operations for possible shifts that may keep his business more nearly in line with the current outlook.

Production at a High Level in 1957

We had a bountiful harvest in 1957 - almost equal to the record breaking crop of 1956. After a long series of drouths and near drouths most of the United States had abundant to excessive rainfall. Some areas in Minnesota suffered from excess summer and fall rains. We raised a good crop but harvest was delayed by soft ground and the high moisture content of the late season crops.

Little Change in Crops Indicated for 1958

Our high moisture corn this year represnets an acute problem on many farms. In previous years soft corn has often been due to immaturity rather than to a wet fall. There seems to be no reason for adjusting our corn acreage downward in 1958. We have been steadily increasing the proportion of our cropland in corn. It has been a profitable practice. Our immediate problem is how best to use this high moisture corn we have on hand. We should not let this experience deter us from raising our usual acreage of corn in 1958.

There seems to be no reason for any material shifts in the acreage of small grain. The practice of harvesting oats as silage has greatly increased the feed nutrients utilized per acre. A further shift in this direction on livestock farms is likely to be profitable.

Potato and sugar beet growers have suffered some substantial losses as the result of excess rainfall last fall. As in the case of corn, this should not drive anyone out of production who has the land, equipment, and "know-how" needed for these crops.

Flax was the one "soft spot" in the crop picture last year. Whether "aster yellows" will again be a menace in 1958 no one knows. Undoubtedly the flax acreage will be down this year but whether a reduction is justified is an open question.

Any shift in the production of hay and forage in 1958 should be in the direction of increasing yields and quality rather than acreage. This may involve better seeding mixtures, more liberal applications of lime and fertilizer, timely harvesting, better adapted harvesting machinery, better storage facilities, and more rotation grazing.

A Gradual Increase in Livestock Specialization Seems Desirable

The only reason for any general shift in the pattern of livestock production in Minnesota in 1958 would be to increase specialization in those classes of livestock best fitted to the farm and to the operator's experience and resources.

With all the new techniques crowding their way into livestock production, it is becoming increasingly difficult to keep abreast of all of them or to provide the facilities needed to utilize them most efficiently. There is evidence in the records of the S.E. Minnesota and the S.W. Minnesota Farm Management Associations of a definite tendency to maintain fewer kinds of livestock and concentrate on increasing efficiency within the more limited field.

This is an age of specialization in agriculture. Fewer classes of livestock and more specialized attention to their breeding, feeding, and care seems to be the most promising road to profits in livestock production.

Fewer but Larger Dairy Herds

The trend toward fewer and larger dairy herds is a promising one and definitely under way. Larger herds, more labor saving and quality maintaining equipment, and a quality market seems to be the basic essentials that will determine or condition dairy profits in 1958 and the years ahead.

The cut in support prices for dairy products announced for March 1958 may discourage any expansion of dairy production. Certainly there seems to be no reason for any over-all increase. Rather we might well consider at least enough curtailment in cow numbers to stop the piling up of dairy products in government storage.

Beef Cattle a Bright Spot in the Livestock Picture

Beef cattle are definitely in a favorable stage in the price cycle. In fact the price outlook is distinctly promising for 1958 and 1959, possibly even longer. Breeding herds on the range were depleted during the drouth years. A portion of current calf crops will be needed to build up our breeding herds and hence fewer will go to market or into the feedlot.

Feeder cattle can provide a market for some of our high moisture corn this winter. Beef cattle can also use pasture and forage crops to good advantage and yet they require little labor-especially during the crop season. Some current expansion of beef production promises well for the years immediately ahead.

Avoid Expansion of Hog Production

Hog prices were surprisingly well maintained in 1957. Hogs, too, can use soft corn effectively. It may be a good policy to feed out 1957 fall pigs to heavier than normal weights in order to salvage some of this high moisture corn before thawing weather threatens.

Although these hogs may suffer price-wise as the result of heavier weights and later marketing, the farmer may have more dollars than if he had sold them earlier at lighter weights. However, if facilities for drying corn are available at moderate cost it may be better to sell his hogs as soon as they reach market weight and sell or seal the corn when dried.

To keep more gilts and increase 1958 farrowings over 1957 will certainly speed up the hog cycle and flood the market with lower priced hogs. It would appear wise to push the spring pigs for as early a market as possible. Emphasis this year should be on sanitation, economical rations, and labor saving practices - not on expansion.

Bigger and Fewer Laying Flocks

Eggs and chickens are in a better position price wise than they were a year ago. Any material over-all expansion in the number of layers will likely result in going back to or at least toward the prices of early 1957. However, the trend in poultry production is toward fewer and larger flocks. Already broiler and turkey production is rapidly adjusting to a large scale "factory" basis.

Whether this trend will be duplicated in egg production is still an open question. At least it seems that more of the laying flocks of the future will be numbered in thousands of hens rather than in hundreds. The small farm flock seems justified only where housing is available and where the labor and feed used could not be employed more profitably elsewhere.

What About Sheep?

Sheep are a relatively minor class of livestock in Minnesota. Sheep were reported on only 13 percent of the farms in the state in 1954 and nearly one-third of

these were in 10 counties. There is doubtless a place for a small flock to use what otherwise would be wast products on many farms. However, any general expansion of sheep production should be in relatively large flocks on farms where the operator has the skill and aptitude for handling them and the fences and other facilities needed.

Applying These Suggestions

Each farmer has an individual set of resources, abilities, preferences, and objectives. Obviously these suggestions cannot apply to all of them. A former teacher, the late George F. Warren, once said, "Farmers are not a class - they are a collection," A very significant fact is concentrated in these words; no two farmers have the same resources, capabilities, preferences, or objectives.

No reader of this article can use all the suggestions offered and many will find none that apply specically to their situation. The reader must depend on his individual judgment in accepting or rejecting these suggestions. At best they can only be expected to stimulate individual thinking on the individuals own problems.

ADVICE GIVEN FOR
CONTROLLING INSECTS
ON FORAGE CROPS

By L. K. Cutkomp, associate professor, A. G. Peterson, associate professor and F. G. Holdaway, professor of entomology

There are farm practices which can help reduce insect losses on some forage crops. But the greatest reliance must be placed on insecticides.

Timing of alfalfa-cutting dates, for example, can help prevent losses from grasshoppers. Late cutting of the first alfalfa crop will help prevent leafhopper injury to the second-but the benefits must be weighed against the loss in quality resulting from late cutting.

The use of adapted varieties, recommended fertilizer practices, and proper timing of cutting or grazing help to establish and maintain healthy plants which can better tolerate insect damage and recover rapidly.

Insecticides, however, provide the principal means of control. In selecting the

correct insecticide, three things must be considered:

1. EFFICIENCY in controlling the insect pest.
2. TOXICITY, in the case of alfalfa and related legumes, to honey bees and other pollinating insects. Apply only toxaphene or methoxychlor to crops in bloom, and then only at night when bees are not in the field. Keep in mind that sprays are less toxic to bees than dusts.
3. RESIDUES which may be present on the forage crop in small amounts at time of harvest or when used as food by livestock. The residue problem may need some explanation.

When livestock feed on insecticide-treated forage, there is a possibility that traces of one of the persistent insecticides, such as DDT, may appear later in the milk or meat products. Sale of milk contaminated by insecticides is not permitted by the Food and Drug Administration. Therefore, some insecticides cannot be used at all directly on dairy animals. Certain others, if used on the animals or their forage, must be used only in small enough amounts so they will not appear in the milk.

Very small residues of 7 parts per million of DDT and 3 parts per million of methoxychlor are considered to be safe in the fat of meat. But no detectable amount of any insecticide is permissible in milk.

Soil or Surface-Feeding Insects

ARMYWORMS AND CUTWORMS can be controlled with ½ pound per acre of heptachlor. Prepare the dosage by using 1 quart of the "2-lb." (2 pounds of the active ingredient per gallon) emulsifiable concentrate in sufficient water to spray 1 acre. (This is usually 5 to 30 gallons water by ground sprayer, 2 to 3 gallons by airplane.) A 10-day waiting period between time of application and harvest or pasture is necessary with the ½ pound heptachlor treatment.

Toxaphene at 1 to 1½ pounds actual toxaphene per acre is also effective, but must not be used within 40 days of grazing or harvesting the crop. Aldrin can also

be used at 1/2 to 3/4 pound actual aldrin per acre if applied at preplanting time.

Insects Attacking Foliage

Insects injuring the foliage of alfalfa and other forage legumes include grasshoppers, leafhoppers (especially the potato leafhopper), plant bugs (especially the tarnished and alfalfa plant bugs), and aphids (especially the pea aphid). The spotted alfalfa aphid is a threatening pest which occurs only on alfalfa.

GRASSHOPPERS should be controlled in the spring, as soon as they become noticeably abundant and the hatching of nymphs appears to be complete. The effective and approved insecticides include heptachlor and malathion.

Heptachlor is recommended at 2 ounces actual insecticide per acre or ½ pint of the "2-lb." emulsifiable concentrate. With malathion, 1½ pints of the "5-lb." emulsifiable concentrate is recommended. These concentrates need to be diluted with the quantities of water suggested above for armyworms and cutworms.

Doses of both insecticides need to be increased to control late-stage nymphs and adult grasshoppers. The amount of heptachlor should be increased to 3/4 or 1 pint of the "2-lb." emulsifiable concentrate, while 2 pints of the "5-lb." emulsifiable malathion is desirable for each acre.

A 7-day waiting period between aplication and harvest must be observed when either heptachlor or malathion is used.

Grasshoppers may become abundant just before a hay crop is ready for harvest. A wise procedure then is to make the cutting, remove the hay from the fields as soon as possible, and promptly treat the stand with insecticide. Chopping the crop for silage would permit an earlier application of insecticides than is possible with other methods of harvest.

THE POTATO LEAFHOPPER frequently causes severe yellowing and stunting of alfalfa in southern Minnesota and reduces yields and quality. Control on the first hay crop usually is not necesary. But the second and third crops should be treated when plants are 6 to 10 inches tall, or when leafhoppers reach an abundance of three or

more per sweep of a 12-inch insect net.

Treatment with 1 to 1½ pounds of actual methoxychlor per acre gives the best control. For ground equipment, 2 to 3 pounds of 50% wettable powder or 2 to 3 quarts of the "2-lb." emulsifiable concentrate may be used in 30 to 50 gallons of water per acre.

For airplane application, 3 quarts of the "2-lb." emulsifiable concentrate may be used in 2 to 3 gallons of water per acre. The waiting period between application and harvest or pasturing is 7 days no matter how methoxychlor is applied. While DDT is also effective, it is not recommended because of the possibility of contamination of milk.

PLANT BUGS, when numerous, stunt the plants and reduce forage yields. The blasting of flower buds by plant bugs makes them far more important pest of legumes grown for seed than of those grown for forage.

Control is justified on forages if the plant bugs reach an abundance of three per sweep of a 12-inch insect net Methoxychlor alone is erratic in ontrolling plant bugs. Therefore, a combination of it as used for leafhoppers and malathion as used for aphids is suggested.

THE PEA APHID usually does not become abundant enough on forage legumes to require control

THE SPOTTED ALFALFA APHID has spread rapidly from the southwestern United States to eastern and northern states.

It multiplies rapidly during the summer and has a habit of secreting sticky "honeydew" on the leaves and stems, which are soon invaded by a black, sooty fungus. As a result, the quality of alfalfa hay is seriously reduced, including a reduction in the proten and carotene content. Heavy infestations may result in complete loss of the crop.

According to our present information, the spotted alfalfa aphid probably will be most injurious, under Minnesota conditions, to the second or third crop of alfalfa.

Chemical control may be accomplished by prompt application of 1 pint of "5-lb." emulsifiable malathion per acre by ground sprayers or 1¼ pint by airplane. These rates are about 10 and 12 ounces actual malathion per acre. There must be a 7-day waiting period between any application and harvest.

Malathion will also give some control of leafhoppers and plant bugs. But for good control of those insects, methoxychlor or the malathion-methoxychlor combination should be used.

PREDICTION TEST HELP DETERMINE MALTING QUALITY

By Robert L. Glass, assistant professor of agricultural biochemistry

Not every barley variety has good malting qualities. When one does, it can mean a dollars-and-cents difference to the Minnesota farmer who grows it. Even on a changing market, prices for choice malting barley tend to average about one-third more a bushel than those for top feed barley.

Yet it normally takes from 8 to 11 years to determine the malting quality of a new barley variety. So it can be understood why Canadian-developed "prediction tests," which may cut that time substantially, are now being employed at the University of Minnesota.

Although baked goods, candies, and various food products make use of malt, the largest market for malting barley is the brewing industry. The production of beer is a multi-million dollar business in which important roles are played not only by the brewer but also by the malster, farmer, plant breeder, and the cereal chemist. To understand the contribution of the cereal chemist and how prediction tests are employed, it is necessary to know something of the processes involved in converting barley to beer.

From Barley to Beer

Barley as it leaves the farms is not suitable for beer manufacture. The barley must be converted to malt by steeping in water, sprouting for 5 to 6 days and drying.

add 11 Grand Forks special

Malt differs from barley rpimarily in its content of enzymes. These are substances capable of speeding up a wide variety of chemical reactions in both living and non-living systems. A common example is rennet. Rennet added to milk causes it to curdle, thereby forming cottage cheese.

In the case of malt the most important enzymes from the brewer's standpoint are the "amylases" and the "proteases." The first cause the breakdown of starch into much smaller molecules; the second do the same for protein. There are two amylases, alpha and beta-amylase. These act together to transform the large starch molecule into many molecules of maltose, the sugar which is characteristic of malt. The proteases break proteins down into amino acids.

These enzymes are either not present at all, or present only in very small amounts, in barley. They increase very rapidly during the malting process, however, so that the finished malt consists largely of starch as well as other types of polysaccharides, proteins, plus the enzymes capable of digesting these large molecules.

The enzymic digestion takes place during the mashing process. There the malt is cooked in water, together with various minor additions such as corn and rice, until as much of the insoluble starches and proteins as possible have been converted into soluble sugars and amino acids. When this has been accomplished the liquid (called "wort") is siphoned off the spent grain and is ready to be fermented by yeast to give the final product, beer.

The primary purpose of the malting and mashing process is to provide food for the yeast. The sugars provide energy and are converted to carbon dioxide and alcohol, while the amino acids are converted into protein by the growing yeast.

Testing New Varieties

To thoroughly test malting barley for quality it must be converted to malt and then to beer, a lengthy procedure which requires large amounts of material. It is possible to do this with only a relatively few of the many hundred new varieties with which the plant breeder works.

Beginning with a cross made between two parents, each of which possesses certain desired characteristics, the breeder must grow the hybrids for several generations and select those few which have the desired characteristics. It usually takes from 8 to 11 years to obtain enough barley of a new variety for experimental malting and brewing tests.

If the plant breeder can be informed at an earlier date that certain of his varieties are inferior, those may be eliminated. In this way, he may make more crosses, increasing his chances of successfully developing a superior malting variety,

It was for such purposes that "prediction tests" were developed by a group of Canadian cereal chemists. By applying the tests, a great number of barley varieties may be rapidly screened for quality after only 4 years from the time the initial crosses are made. The saving of 4 years' time is made possible because much less barley is required to perform prediction tests than would be the case for malting and brewing.

Such tests are currently being employed by the Department of Agricultural Biochemistry, working in conjunction with the barley breeding program of the Department of Agronomy and Plant Genetics.

From what has been said thus far it should be apparent that two of the most desirable qualities of malt are high enzymic activity and a large amount of material which can be converted by the enzymes into soluble material in the mashing process. These facts are the basis of the prediction tests for malting barley quality.

Barley Extract

The amount of readily convertible material present in the barley can be determined by the addition of malt enzymes to the ground barley meal. These enzymes, which are prepared by commercial companies, digest the barley starch in the same manner as a malt would be digested by its own enzymes. The mixture is heated to a

fixed temperature at a fixed rate, then cooled and filtered.

The clear liquid is then weighed and the amount of soluble material formed is determined by the weight of the liquid. If the barley-enzyme mixture results in a heavy liquid, it is a good indication that malt prepared from the barley will yield a large percentage of soluble solids upon mashing; that is, it will give a high yield of extract.

Potential Diastatic Power

The diastatic power, or ability to degrade starch to maltose, is one of the most important attributes of malt. This cannot be measured in the barley because it is too low. It has been found, however, that while alphaamylase is virtually non-existent in the barley, beta-amylase is present but mostly in an inactive form.

If a suspension of the meal is allowed to sit overnight with a protein-splitting enzyme, "papain", the inactive beta-amylase is converted to active beta-amylase which can then be readily measured by its ability to form maltose from starch. As was the case with barley extract it has been found to be generally true that a barley high in beta-amylase will result in a malt with high diastatic power-that is, with the ability to form maltose at a high rate.

It must be said that these tests are not completely reliable. Some barleys may well be discarded on the basis of prediction tests which, if actually malted, would be found to be very acceptable. These cases, however, are rather few and the great saving of time and labor resulting from the use of these tests undeniable warrant their use. It is expected that the use of prediction tests will greatly facilitate the work of malting barley improvement at the Minnesota Agricultural Experiment Station.

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OUTLOOK DISCUSSED FOR DAIRY FARMING IN MINNESOTA

by E. H. Hartmans,
Extension Agricultural
Economist

Most agricultural products have a rather uniform common market in the United States. Outlook information, therefore, is generally based on the supply and demand situation prevailing in the whole United States and only minor changes are necessary for adoption to regions or individual states. The same procedure is generally followed with the market for dairy products.

On a national basis, the dairy situation appears to be in no great trouble, and, at first glance, any difficulties should be rather easily corrected. Of the total 1957 U. S. dairy production only 4 percent did not move through commercial channels and was purchased by the government in the form of butter, cheese and non-fat dry milk. This however, is misleading since,

1) The market for fluid milk products is almost entirely a state market rather than a national market.
2) The more milk of a particular state is used for the production of manufacturing products, the more products of that state are likely to move into government hands and the closer the price level of that state for milk approaches the support level of dairy products.
3) The amount of surplus milk moving into government hands is highly concentrated in a few states.

Seventy-seven percent of Minnesota milk production moves into manufacturing products which is higher than any other state in the union resulting in the lowest average price in the whole United

States. There is a direct correlation between the percentage of milk going into manufacturing products and the average price for the state. Florida with 100 percent fluid milk products and ice cream has the highest price with $6.84.

The price for the Minnesota dairymen is and will be very closely tied to government support operations. The proposed drop in price supports from 83 percent to 75 percent of parity will mean an approximately 25 cents less per hundred pounds of milk 3.5 percent fat. Dairymen in many other states will feel little if any effect at all of this measure, depending on the percentage of milk moving into manufacturing channels.

With the increased production of oils and the comparative low price of margarine the per capita consumption of butter has decreased and that of oleomargarine increased. Consumption of butter dropped from 17 pounds percapita in 1935-39 to 8.7 pounds per capita in 1956.

In 1956, 50 percent of all non-fat dry milk was purchased by the government and given away or sold at a loss.

Butter and non-fat dry milk solids are the two main products for which Minnesota milk is used. In light of these conditions there seems little possibility of improvement in the price of manufacturing milk for some time to come.

This fact has caused the dairy enterprise in Minnesota to become less competitive with other livestock enterprises. A very serious re-evaluation of the dairy herd is necessary on many Minnesota farm operations.

Either the dairyherd has to be very efficiently managed or other enterprises might give farmers a much better income potential.

FARM MANAGEMENT
DISCUSSED BY ECONOMIST

By Truman Todland, assistant professor of agricultural economics

The goals involved in the management of a farm have not changed. The farm operator wishes to secure as high an income as possible for his labor and that of his family and for his investment in the farm business. What has changed is the amount and type of resources necessary to carry on a farm business.

Farms in Minnesota continue to be family operated units. On an average they are more of a family operated unit today than was true just a few years ago. Less labor is hired and a larger proportion of the work is performed by the farmer and his family than prior to World War II. The change in the composition of the labor force on the farm has occurred in spite of more time spent in school for the children and less time spent on actual farm work by the farm wife. It means the farm operator himself is doing more of the work.

Along with this change in the amount of labor and source of labor on farms, farmers have increased the acreage operated and/or the amount of livestock maintained. Two factors are largely responsible for the increase in volume of business: (1) more and larger machinery and equipment and (2) narrowing margins between prices received for products sold and cost of producing these products.

More and larger machinery and equipment have made it possible for an operator to do more of the work himself and thus conserve on labor. These machines are expensive and thus in order to afford the larger and more expensive equipment a good manager today will attempt to

spread this cost over a larger volume of business.

The farm records of the members of the Southeast Minnesota Farm Management Service show that 20 years ago approximately 50% of the gross farm income was used to pay operating expenses and the remaining 50% was available for family living expenses and debt servicing. Today 70% of the gross income is necessary to pay farm operating expenses leaving only 30% for family living and debt servicing. These figures are averages. Some farmers hold their expenses below this but others have higher costs. If you can retain only 30 cents out of each dollar of gross income, a larger gross income is necessary today to pay living expenses. Also the needs of the farm family have increased more education for the children, more equipment and furnishings for the home such as home freezers, dish washers, television sets, etc. These factors have brought about a need for a reappraisal of how large a farm must be.

Increased specialization is another trend taking place today. The farm records of the farm management services show farmers are maintaining fewer livestock enterprises today. A few years ago practically all farmers in southeastern Minnesota maintained a dairy herd, hogs and chickens and some raised sheep as well. At the present time more and more of the farmers are concentrating their efforts on two enterprises and some on only one enterprise.

In general, increased specialization is the result of two factors. First, farmers wish to take advantage of the newer and more specialized equipment in order to save labor and to make the work as easy as possible. To justify the cost they have expanded the size of their herds and flocks. Second, with the changes in technology is is becoming increasingly difficult to "keep up to date" with a large number of enterprises. A farmer just does not have time to keep abreast of

the new developments in all classes of livestock. Farming is no longer just a way of life but a business which must be operated in a business-like manner in order to succeed.

FOREIGN AFFAIRS AFFECT
MINNESOTA FARMERS

By Sherwood Berg, head, dept. of agricultural economics

Minnesota farmers are having a greater impact on our country's foreign relations than at any other time in the past. This is due largely to the U.S. farm surplus disposal program which affects many foreign nations, either directly or indirectly.

The export of farm products does help to maintain price levels and does provide an outlet for government-held surpluses but the domestic market is the mainstay of our farm economy. In a sense, foreign markets are a "safety valve".

The equivalent of about 20 percent of the total crop acreage harvested in 1957 went into foreign trade. U. S. agricultural exports totaled 4.7 billion dollars from July 1, 1956 to June 30, 1957. This is a record for post-war period and makes the U.S. the leading exporter of farm products. For example, in 1956-57, the U.S. exported the equivalent of about 55 percent of its reproduction and about 38 percent of the soybeans harvested. These figures help show the importance of foreign trade to Minnesota agriculture.

Minnesota farmers have a stake in increased farm exports, broadened and liberalized trade, and seeing that our surpluses are used for economic development and humanitarian purposes in lesser developed countries of the world, but the disposal of our farm products is made in such a way that it does not injure our trading partners.

The farmers' interest in international trade also has a wider application. The U.S. is the greatest trading nation in the world. What we stand for and do affects not only our own national welfare but the welfare of people of other lands. Moreover, the U.S. is the center of power of the Free Nations of the world. How wisely we use this power in international relations will influence the fate of our allies as well as our own.

NEW HERBICIDES
ARE DESCRIBED

By R. S. Dunham, professor of agronomy

New herbicides are not necessarily better herbicides. MCPA and 2,4-D, the original growth regulators for weed control, are still performing satisfactorily. And yet some of the new chemicals represent considerable progress. Not that they are always a replacement for the older kinds, but they make possible an added use or fill a more specific need.

The remarkable and general weed-killing properties of 2,4-D and MCPA made them widely used. It has become more and more apparent recently, however, that supplementary weed killers are necessary to control those species resistant to these herbicides. In fact, the use of 2,4-D has solved the original weed problem on some farms only to create another as resistant weeds have flourished. The following new chemicals are examples of added tools for the weed fighter.

Two very interesting chemicals have come from the laboratory of Dr. R. L. Wain at Wye College, England. They are commonly referred to as "the butyrics" and include 2,4-D butyric acid (2,4-DB) and MCP butyric acid (MCPB). Chemically they differ from 2,4-D and MCPA principally in the fact that they are phenoxybutyric acids instead of phenoxyacetic acids. A more practical difference is the basis for

their selective action. The phenoxybutyric acids are harmless to plants until they have been converted into the corresponding phenoxyacetic acids. This conversion occurs within the plant tissue after the chemical has been absorbed. The efficiency of this process varies among plants. If the activity of the herbicide is greater on a weed than on a crop, it is possible to kill the weed with an application that does not injure the crop. Fortunately, this situation occurs frequently enough to make the use of these compounds a practical aid in weed control. In general the small grains, corn, small-seeded legumes (alfalfa, clovers, and birdsfoot trefoil), peas, potatoes, and some horticultural crops are resistant to injury. Such weeds as shepherd's purse, lambsquarters, Canada thistle, buttercups, curled dock, common mustard, plantain, pennycress, cocklebur, dragonhead mint, red root pigweed, velvet leaf, white cockle, and wild vetch can be controlled in these crops. At present the butyrics have not been cleared for use by the Food and Drug Administration but efforts are being made to get a ruling.

Another new herbicide of foreign origin is Simazin, that comes from Switzerland, Among the field crops, corn is most tolerant, and it is for weed control in this crop that Simazin will probably find its greatest use. Other crops which appear tolerant are asparagus, tomatoes, and potatoes. Simazin is effective against both broad-leaved and grass weeds. Since it is not soluble in water, it is formulated as a wettable powder that remains in suspension if adequate agitation is provided. Because of its insolubility in water, it stays in the upper soil level for considerable periods. Whether is lasts more than one season in Minnesota is not known at present. Simazin may also be used for complete vegetation control where non-selective

weed kill is desired. It is non-corrosive and can easily be removed from spray equipment. It has not yet been cleared for selective use by the Food and Drug Administration.

Amino triazole (ATA(is a favored chemical for control of both Canada and perennial sow thistle. Although its selective use in farm crops is limited to pre-planting applications and lay-by treatment of corn, it has some distinct advantages over sodium chlorate, ureabor, polybor chlorate and similar soil sterilants, Amino triazole is readily leashed so that it does not leave a soil unproductive for considerable periods as most soil sterilants do. Furthermore, although it is expensive per pound, it is cheaper per square rod because of its low rate of application.

Amino triazole is effective on other perennial weeds such as leafy spurge, milkweed, and quackgrass, on cattails, and on certain woody weeds such as poison ivy, ash, and scrub oak. Since a toxic residue does not remain long in the soil, thistles or quackgrass can be sprayed in late spring and corn or soybeans planted from 1 to 2 weeks later. Amino triazole has also been applied successfully with drop nozzles on weeds in corn at about the lay-by stage.

At present amino triazole is not cleared for application to food crops but information on residues is being furnished by the Food and Drug Administration.

Randox (CDAA) is a selective herbicide that controls annual grass weeds. Among the farm crops in this area, it has been most successful applied pre-emergence on corn, soybeans, or sorghum or early post emergence on corn. It is also used on some vegetable crops such as beans, onions, and peas. Although Randox is not effective on most broadleaved weeds, 2,4-D can be mixed with it for

this purpose. A laboratory study plus field observations in Minnesota indicate that Randox is least effective at cool temperatures so that weed control in early-sown crops is frequently unsuccessful. The chemical is not corrosive but is very irritating and is absorbed through the skin. Extreme care must be used when handling or spraying. Band applications are used commonly to reduce cost. It has been cleared for pre-emergence spraying of corn, beans, onions, and canning peas.

Dalapon is not new but its use on flax is a new recommendation. It can be sprayed post emergence for the control of annual grasses at one lb/A. It has two advantages over TCA. First, it is less injuricus to small seeded legumes undersown with the flax and, second, it is cheaper. Dalapon can be mixed with MCPA, 2,4-D, or 2,4-DB. A mixture of 1 lb. of Dalapon and 1/2 of 2,4-DB has been the best spray for flax undersown with legumes. The Food and Drug Administration has not ruled on this use but action is expected by spring.

DISCUSSES OUTBREAK OF
ASTER YELLOWS IN FLAX

By J. J. Christensen, head, dept. of plant pathology and botany

Although aster yellows, a virus disease of flax, has been observed in Minnesota for more than 25 years it did not become prevalent and destructive in commercial flax fields in the Midwest until 1957.

In recent years, the number of diseased plants varied from 1 to 3 per cent per field. In 1957, however, infection varied from about 1 per cent to more than 30 per cent; 15 to 20 per cent was non uncommon, and total loss to crop was estimated at about 15 per cent in Minnesota and 20 per cent in North Dakota.

Aster yellows virus is transmitted primarily by the six-spotted

leafhopper (Macrosteles fascifrons). Virus infected plants are yellowish, flowers become aborted and plants seldom develop normal bolls. This virus is neither seedborne nor mechanically transmitted.

The 1957 outbread has been attributed, at least partially, to the unusually high number of the insect vector which appeared early in the flax growing area. It also is possible that a new race was introduced that is especially virulent on flax. Whether or not the disease will be prevalent in 1958 cannot be stated.

All commercial varieties grown in the Midwest are susceptible. The world collection consisting of more than 900 varieties of flax is now being tested for resistance to virus by Minnesota and Federal scientists.

TELLS TRENDS IN
MILKING PRACTICES

By W. E. Petersen, professor of dairy husbandry

Improved milking has contributed immensely to greater efficiency and increased production in dairying.

With the discovery of how milk is "let down" and the factors influencing it, together with the fact that incomplete emptying of the udder lowers milk production, it became possible to specify proper conditions for good milking.

No matter how well a cow may be fed or otherwise cared for, if not properly milked, milk production is greatly reduced.

In addition, modern developments in milking have greatly increased the number of cows that can be milked by one man and have also made milking a more attractive job.

Before the advent of the milking machine, milking 30 cows twice daily, by hand, was a full time job.

add 24 Grand Forks special

With machine milking in stall and stanchion, 60 cows, twice daily, became a full time job.

With pipeline milking in elevated stalls, a day's work in milking was stepped up to 90 cows.

With the newly developed herringbone milking parlor, the number capable of being milked by one man is greatly increase. In New Zealand, with such a set-up, it is reported a man has milked at the rate of 11 cows an hour.

Description of herringbone milking set-up.

Demonstration that cows can be milked at unequal hours with reference to night and morning such as 14 hours between evening and morning milking and 10 hours between morning and evening makes it possible for a dairyman to have more acceptable hours.

The speed with which cows can be milked varies greatly between cows and is an inherited characteristic. In the future, cows will be bred for good milking characteristics as well as high production.

HYBRID GRAIN SORGHUM
IS COMMERCIAL CROP

By R. G. Robinson, assistant professor of agronomy, J. R. Thompson, agronomist, Southern Experiment Station, Waseca, and R. L. Thompson, agronomist, West Central Experiment Station, Morris.

Grain sorghum is now a commercial crop in Minnesota. Many farmers have grown it and thousands more may try it in the next few years. Hybrids already developed have the yielding ability to make grain sorghum a strong, new crop for Minnesota. However 1957 trials show that grain sorghum is not yet ready to occupy a major place in Minnesota agriculture. Hybrids are still too late in maturity, too slow in drying, too tall, too susceptible to lodging, and too low in seedling vigor to control weeds.

add 25 Grand Forks special

Nevertheless some of these problems may be solved in the near future. Earlier-maturing hybrids are on the way and new chemicals may solve the weed problem and possibly the field drying problem. Therefore Minnesota farmers need to be informed as to what hybrids or varieties are best.

What Is Needed In A Hybrid?

Yielding ability - RS 501 and NK 3009A were outstanding grain producers in accurate, carefully conducted, replicated Minnesota Agricultural Experiment Station trials at three locations. These two hybrids are similar in many characteristics. DeKalb D-50A, NK RS 610, and NK 135 also yielded significantly more than any of the standard varieties.

Early-maturity and ability to dry rapidly - No available hybrid is satisfactory. The variety, Reliance, is much superior to the presently available hybrids. RS 501, NK 3009A, and NK 135 were the earliest maturing hybrids. An open head of the Reliance type as opposed to the compact head illustrated by Sooner Milo favors rapid drying. In this characteristic Reliance, Norghum, and the DeKalb hybrids were excellent. Heads held high above the top leaf as in Reliance make for a better job of combining and less trashy grain. All hybrids had good clearance of heads above the top leaves.

Height - Short hybrids are better than tall for combine harvesting and may tend to lodge less. The Sooner Milos were shortest, 43 inches; Reliance 48 inches; Norghum, 49 inches; Frontier 410 and De Kalb C-44A, 50 inches. Rs 501 and NK 3009A were 65 inches, Coes was 70 inches, and the rest varied from 54-61 inches.

We wondered if shortness was due to shorter spaces between leaves with leaf numbers constant among all varieties, or whether it was due

to less leaves and thus fewer spaces between leaves. (Sorghum has only one leaf at each node on the stald). Leaf counts at heading showed all hybrids and varieties had 12-14 leaves per stalk except for Reliance which had 9-10, therefore height differences were mostly due to length of internodes.

Lodging resistance - Lodging, long a problem in grain sorghum, has been accentuated by the heavy heads of the hybrids. Sorghum is a perennial plant (in the Tropics) and doesn't naturally stand and dry like corn, but instead has a natural tendency to fall to the ground and suckers produce a new crop. Since we harvested before the grain was dry enough to combine, lodging was not severe in our trials. However NK 135 was markedly inferior to all other hybrids and combine harvesting losses would have been high with this hybrid.

Seedling vigor - Needed so that sorghum will grow faster and be easily distinguishable from pigeon grass. RS 501, NK 3009A, NK 135, NK RS 590, and NK RS 610 had good seedling vigor. Large kernels are associated with greater seedling vigor and are considered better for feeding and milling. RS 501 and NK 3009A produced the largest kernels. We do not have comparable data on kernel size of planting stock sold to farmers.

Words of Caution

Sorghum is very sensitive to local conditions. Reliance, for example, is relatively later-maturing in some other states than in Minnesota. Therefore in choosing a hybrid, local trials are much more reliable than out-of-state trials.

Ask your seed dealer if the hybrid has performed well when grown by itself in a large field. This information will indicate if the pollination of the hybrid is satisfactory. It is conceivable in

small plot trials that sterile hybrids might be pollinated by other varieties, even though sorghum is normally mostly self pollinated.

Can you control the weeds? Our variety trial plots of sorghum are handweeded. At Rushmore, Reliance yielded 42.9 bu. when handweeded and tractor cultivated, but in an adjacent plot where handweeding was omitted its yield was only 27.6 bu. The yields we report are considerably higher than would have been obtained from only tractor-cultivation for weed control.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

Special to Superintendent B.E. Youngquist
Story # 1

FARM-CITY FORUM
IS A PART OF
STATE-WIDE PROGRAM

How Sputnik, trade with foreign countries and changing technology affect farm families, consumers, and business in general in the Red River Valley will come under discussion at a Farm-City Forum February 25 and 26 in Crookston.

The event will be held at _____in conjunction with the Red River Valley Winter Shows, and Northwest School of Agriculture Farmers' Week, according to B. E. Youngquist, superintendent of the School and general manager of the Shows.

Everyone interested is invited to the Forum will be one of the most extensive of about two dozen county and regional Forums of this type around the state this winter. The program is being coordinated by Luther J. Pickrel, extension agricultural economist at the University of Minnesota.

The general format of these forums was developed after consultation between Pickrel and state leaders of three general farm organizations--the Minnesota Farmers Union, the Minnesota Farm Bureau and the Minnesota Grange.

Local groups participating in planning for the Crookston Forum are (list organizations and groups taking part.)

The two-day event will feature speakers from the University of Minnesota, The U.S. Department of Agriculture, the Federal Reserve Bank of Minneapolis and from the University of Manitoba, Canada.

Pickrel explains that "The general theory of the forums is that, since public opinion is the most powerful force in a democracy, the success and durability of representative government depends on an informed citizenry.

"In our system, we believe in the advantages of sharing and exchanging knowledge and experience as a method of arriving at the system of public policies which is best for all."

The role of the Farm-City Forum is to aid in general understanding of these problems, with this four-fold purpose:

1. To stimulate an active interest in public affairs problems, in all citizens -- rural and urban -- in the local area.

2. To help these citizens better understand issues and principles involved.

3. To help people develop the ability to make judgments based on careful examination of the evidence and logical thinking.

4. To stimulate a desire to participate effectively in solving these problems.

Special to Superintendent
B. E. Youngquist
Story # 2

HOMES, MARKETS,
ARE TOPICS FOR
FARM-CITY FORUM

How does changing agricultural and industrial technology affect homes in the Red River Valley? What effect does agricultural trade with Canada and other nations have on farm and city families here?

A trio of specialists in farm and home living, world trade and foreign relations will take a close look at these questions during the Tuesday, February 25 session of the Farm-City Forum in Crookston.

The event is scheduled for February 25 and 26 in conjunction with the Red River Valley Winter Shows, according to B. E. Youngquist, general manager of the Shows and superintendent of the Northwest School and Experiment Station.

"Our Homes, Markets and Neighbors in the Sputnik Age" will be the topic for the February 25 session. The speakers will be Miss Dorothy Simmons, state leader of home economics extension at the University of Minnesota; Sherwood Berg, head of the University's agricultural economics department and Sol Sinclair, head of the agricultural economics department at the University of Manitoba, Winnipeg, Canada.

Miss Simmons will open the session with a talk on "Farm Homes in the Age of Technology". She will tell visitors about farm homes, agriculture and marketing in Korea, and how these problems compare with those in the Red River Valley, where technology has an important effect on farm life.

Miss Simmons visited Korea in 1956 as part of a special International Cooperation Administration assignment. She was part of a group which surveyed agricultural research and extension programs in Korea.

Miss Simmons has held her present position since 1948. She earlier was a specialist in home management at Iowa State college and district home economics supervisor for the Iowa Agricultural Extension Service.

"Our Foreign Agricultural Trade Policy--Where Is It Headed?" will be a topic discussed by Berg.

Berg will point out some of the differences between agricultural price policy and trade policy, and the combined effect of both on agriculture and business in general. An authority in this field, Berg was U.S. agricultural attache to Denmark and Norway and earlier, to Yugoslavia before taking his present position last July.

A native of Hendrum, Minnesota, he received his Ph.D. in agricultural economics at the University in 1951 and in 1956, received a Superior Service award from the U.S. Department of Agriculture for arranging and helping to conduct a series of meetings with Danish farm leaders to promote better understanding of U.S. farm policies.

A look at "U.S. Trade Policies, Through the Eyes of a Friendly Neighbor," will be taken by Sinclair.

Sinclair is a native of Saskatchewan province, holds a Ph.D. from the University of Minnesota and has held his present position since 1945. He is a former president of the Canadian Agricultural Economics society and director of the Agricultural Institute of Canada. He recently conducted a special study on a long-term farm mortgage credit system for western Canada.

Miss Simmons and Berg will speak in the morning and Sinclair will speak after lunch. A panel discussion will be held from 2-3:30 p.m. and will be moderated by Luther Pickrel, extension agricultural economist at the University of Minnesota.

Visitors will be encouraged to ask any questions they wish during this period.

Wednesday's program will feature the theme "Red River Valley Faces the Challenge of Change." Speakers will be Miss Barbara Stuhler, assistant director of the University of Minnesota's World Affairs Center; Frank Parsons, director of economic research for the Federal Reserve Bank, Minneapolis and Bushrod Allin, chairman of the Outlook and Situation Board, U.S. Department of Agriculture.

Special to Supertendent B. E.
Youngquist
Story # 3

FARM SITUATION
TO BE VIEWED AT
FARM-CITY FORUM

"The Red River Valley Faces the Challenge of Change" is the theme for the Wednesday, February 26 session of the Farm-City Forum to be held at _____ in Crookston in connection with the Red River Valley Winter Shows.

This session will be a follow-up of the February 25 forum session announced earlier, according to B. E. Youngquist, general manager of the Winter Shows.

The three speakers slated for the Wednesday session are recognized authorities in their fields. They are Miss Barbara Stuhler, assistant director of the University of Minnesota World Affairs Center; Frank Parsons, director of economic research for the Federal Reserve Bank of Minneapolis and Bushrod Allin, chairman of the outlook and situation board, U.S. Department of Agriculture.

In a talk titled "How Much Trade--How Much Aid?" Miss Stuhler will tie in the Wednesday program with the one from the day before on "Our Homes, Markets and Neighbors in the Sputnik Age."

She will discuss the role that trade and aid are playing in stabilizing the world in order to increase our income and give us a better position in the economic and political world of tomorrow.

Miss Stuhler is a 1952 graduate in Public administration from the University, and has worked for the Social Security Administration and Bureau of the Budget of the U.S. government. She was also an executive secretary for the League of Women Voters of Minnesota before comingto the University.

"The Farmer's Stake in Economic Stability" will be discussed by Parsons. He will define economic stability and point out how it is connected with real progress rather than with increased dollars with decreased purchasing power.

Parsons, who hails from eastern Colorado, is a former wheat farmer himself and holds an M.S. degree from Kansas State college. He has been a land bank appraiser with the Federal Land Bank at Wichita, Kansas, and was an associate professor of agricultural marketing and finance at Kansas State for 9 years.

He came to the Federal Reserve Bank in 1944 and was appointed to his present position in 1954.

The entire Forum will be summed up by Allin in a talk on "The Agricultural Situation." He will point out alternative approaches which people in rural Minnesota can take to improve their income and family living.

Allin has been in his present position since 1945, is a native of Kentucky and received his Ph.D. from the University of Wisconsin in 1927. He was a staff member at Wisconsin for two years, has been with the USDA since then.

Miss Stuhler and Parsons will speak during the morning and Allin will address the Forum immediately after lunch.

During both days of the event, the last hour and a half will be an open panel discussion, during which visitors can ask any questions they wish of panel members. Luther Pickrel, extension agricultural economist at the University of Minnesota, will moderate the discussion.

Sponsor of the Forum include (list all agencies and organizations).

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

Story No. 1. Use before open meeting on Farmhouse Planning

MEETING TO BE
HELD ON PLANNING FARM HOME

Are you planning to build a new farm home?

_____ county families who expect to build or remodel in the near future are invited to attend a meeting on "Planning Your Farm Home" to be held in _____ (town) in _____ (bldg.) on _____ (date) at _____ (hour), County (Home) Agent announces.

Data Hochhalter, extension home improvement specialist at the University of Minnesota, will discuss what makes a good floor plan, how to work out a plan on paper and some of the habits of the family that should be taken into consideration in planning a home. In addition, she will give helps on planning good storage throughout the home. Points to consider in planning convenient kitchens and workrooms will be included in the two-hour meeting.

Since housing mistakes are costly in money, time and satisfaction and are rarely corrected, the importance of house planning cannot be over-emphasized, _____ says.

The farm house is more than a shelter. It is the social center for the family, it often houses a small business and the office for the farm business, and it may be the center where farm products are graded, sorted and prepared for market. Any house which fulfills this living working function deserves careful planning, _____ points out, in urging prospective home builders to attend the meeting.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

Story No. 2. Use before open meeting on Farmhouse Planning

KITCHEN PLANNING
TO BE DISCUSSED AT MEETING

Many of to-day's house plans do not have really convenient kitchens. That's why the family should decide together what they would like in a kitchen before they start planning the new home, says Home (Agricultural) Agent _____ _____.

_____ county farm families who are planning new homes will be interested in a meeting on "Planning Your Farm Home" to be held in _____ (town) in _____ (bldg.) on _____ (date) at _____ (hour), _____ (agent) announces. Data Hochhalter, extension home improvement specialist at the University of Minnesota, will discuss how to avoid mistakes by careful house planning. She will also give helps on planning efficient kitchens and workrooms and good storage for the home. The meeting is open to the public free of charge.

To-day's trend is toward larger kitchens equipped for several different activities. Present-day needs as well as future demands must be considered in planning. Some families may want, in addition to a food preparation area, a dining area, a play or rest space, laundry or sewing room, Miss Hochhalter will discuss some of the needs to be considered in doing the planning and ways of meeting these needs.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

Story No. 3. Use after meeting on Farmhouse Planning

CONSIDER FAMILY
NEEDS IN MAKING
HOUSE PLANS

Many people build or remodel with only a hazy idea of the service the house should give the family living in it.

That comment was made by Data Hochhalter, extension home improvement specialist at the University of Minnesota, at a meeting on Farmhouse Planning held in _____ (place) on _____ (date). The meeting was arranged by _____ (or held as part of the extension home program).

Miss Hochhalter emphasized the importance of considering family needs in planning a new home or remodeling. She suggested that the husband, wife and older children have a part in the planning. The family will be concerned with convenient arrangements such as plenty of closets and other storage spaces and efficient kitchen arrangement. Other important considerations are provision for a workroom, location of doors and windows, location of bathroom in relation to other rooms and of all rooms in relation to each other for privacy and convenience.

Good home planning for a growing family, the speaker said requires convertibility and flexibility: for example, a bedroom that will convert into an office, a nursery that can grow up with the baby, living areas that can change easily with the shift in the family's pattern of living.

To be truly satisfactory, a farm home should be large enough. Rooms can be too small to be satisfactory. Many families may want to consider the "growing house" plan--the type that includes total number of rooms needed, but with some of the rooms to be added or finished later.

Remodeling the present house may be the best way for many farm families to get improved housing. Many older houses are in good structural condition and need only to be modernized, Miss Hochhalter pointed out.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota

Timely Tips for The Farmer, issue of February 1

Mold in high moisture feed grains may cause serious illness or death of livestock. All moldy feed is not necessarily poisonous, but it's a good idea to test all questionable grains. Test the grains by feeding them to one or two test animals of low value for about two weeks. Symptoms of acute mold intoxication in cattle may include depression, loss of appetite, staggers in the hind quarters and pale mucous membranes. Swine might show depression, stiff gait, poor appetite, loss of weight and a stance with head lowered, back arched and flanks tucked up.

--Raymond B. Solac

*****

Here's a tip to follow when planning your corn-growing program for 1958: Be sure you have enough plants per acre. The 1957 X-Tra Corn Yield contest showed that heavy fertilizing pays best when you have high enough populations. When plant population was below 12,000 plants per acre, it wasn't economical to use more than starter fertilizer on corn.

--C. J. Overdahl and C. A. Simkins

*****

Forty percent of the farmers selected for the 1957 Minnesota Swine Honor Roll used farrowing stalls. If you aren't using these stalls now, why not give them a trial? They can increase hog profits.

--H. C. Zavoral

*****

timely tips 2

Your barn is the main work center for most of your daily farm chores at this time of the year. It's a good idea to check all ladders and steps around the barn. Make sure they are sturdy and safe. See that chutes from the hay mow are well guarded to prevent falls. Also replace any loose or rotten boards in the hay mow floor. Keep forks and shovels out of feed alleys by hanging them up in safe places.

--Glenn Prickett

*****

A hen must drink nearly a pint of water to make an egg. That is why egg production can easily take a slump if the layers find solid ice instead of water in the fountains or troughs. An investment in one of the various types of heaters will soon pay its way in more eggs and a saving in labor.

--Cora Cooke

*****

A timber tract can be a good "farm income stretcher" for your farm. If timber tracts are properly handled, they can provide a source of seasonal labor and sizable harvest returns. What's more, you'll have a cheap source for materials for building, repair work and remodeling around the farm.

--Parker Anderson

*****

University Farm and Home News
Institute of Agriculture
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February 1 1958

HELPS FOR HOME AGENTS

(These shorts are intended as fillers for your radio programs or your newspaper columns. Adapt them to fit your needs.)

In this issue:

SAFETY IN THE HOME

Watch Your Steps and Stairs

In safety-checking your home, start with the steps and stairs. Many falls resulting in death or serious injuries occur on steps and stairs, according to Glenn Prickett, extension safety specialist at the University of Minnesota.

You may be surprised to learn that clutter on stairways and disrepair are two of the leading reasons for falls. Prickett suggests the following rules for safety on your steps:

. Have a clear walkway the full length of each tread. However handy it may be to use stairs as storage places for things to be carried up or down, accident records show how hazardous it is.

. Be sure the stairways are solid under foot--no loose boards, or nails, no shaky handrails, no worn carpets or loose rubber treads.

. Have the full length of the stairway well lighted. Both daylight and artificial light are important.

. Stairways of more than three steps should be equipped with handrails. Install handrails on both sides of open stairs--at least one rail for a closed stairway Railings should be strong and about 22 inches above the step. -rlr-

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and U. S. Department of Agriculture Cooperating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

CLOTHING

Automatic Wash and Wear

The ultimate in ease-of-care for clothing will be found in the new "automatic wash and wear" apparel. Garments labeled as "automatic wash and wear" may be worn, washed through the full cycle of the automatic washer, or by any other means, and dried in the modern home tumble dryer to a smooth, wearable condition. Little or no pressing is needed when they are laundered by this method.

All automatic wash and wear garments must contain a high percentage of Dacron, Orlon or nylon and must be carefully made with stable trimmings, thread and bindings. When automatic wash and wear apparel is tumble dried, it must be dried at a controlled temperature of 140°-160° Fahrenheit and cooled while still tumbling.

* * *

Cure for Clinging

Washable garments in the new synthetic fibers are tops in ease of care and length of wear, but they sometimes tend to cling to the body in cold, dry weather.

Now there is an effective and easy way of combating this problem. Add a small amount of liquid detergent, fabric softener, or a special liquid anti-static agent to the final rinse water. The latter can be obtained at notion counters in drug or department stores.

* * *

Keeping Nylon White

Nylons will not be gray and dingy if they are washed in hot water. According to Florence Ehrenkranz, professor of home economics at the University of Minnesota, consumers have a choice of washing nylon blouses and undergarments in cold water so they will have few wrinkles and need little or no ironing or of washing them in hot water so they will stay bright and then ironing them if necessary. Machine washing, whenever possible, is the best way to wash nylon.

Preferably, nylon apparel should be washed thoroughly after each wearing. Pretreat heavily soiled areas with a paste of heavy-duty detergent before washing.

FOODS AND NUTRITION

The Right Methods for Cooking Meats

Using the right cookery method with each cut of meat is the secret to preparing consistently appetizing meat dishes, according to the National Live Stock and Meat board.

Always use low temperatures in cooking meat--300 degrees for beef, veal and lamb, 350 degrees for fresh pork. Cook the tender cuts by the dry methods of cookery--broiling, pan-broiling and roasting. Use the moist heat methods of cookery--braising, and cooking in liquid--with the less-tender cuts. Use a meat thermometer to take the guesswork out of cooking meat.

When properly prepared, every cut of meat is tender as well as appetizing.

The Role of Diet in Diabetes

Persons most likely to develop diabetes are women over 40 years of age, overweight people and people who have a family history of diabetes, says Annette Gormican, assistnt professor of home economics at the University of Minnesota. Diabetes, a painless, non-contagious, chronic condition, can be treated successfully by diet alone, or by diet and insulin. The best insurance in preventing serious complications, says Miss Gormican, is by control of the sugar level and body weight through diet.

A Look Into the Future

Consumers have between 7,000 and 8,000 different items to choose from in today's food market. In the last 10 years great changes have occurred in the grocery store, particularly in packaging and in the addition of convenience foods such as cake mixes.

New methods of processing foods such as irradiation and freeze-drying will give you many of the foods of tomorrow. These processes hold great promise. For instance, potatoes treated with low dosage of irradiation can be stored for over a year without sprouting.

Tomorrow's market may have irradiated bread, rolls and cakes which will keep for an indefinite period without becoming stale. -rlr-

HOME MANAGEMENT

Are Your Kitchen Gadgets Efficient?

Most homes have an over-abundance of kitchen contrivances, designed for specific jobs but which only take up storage space. Evaluate each piece of equipment by answering the following questions which were formulated by workers at Purdue University.

. Is it easy to operate, requiring no extra skill?

. Does it save time, counting all the time necessary to get it out, clean it, and then put it away?

. Can it be used for more than one job?

. Does it warrant the storage space it takes up?

After evaluating you equipment, sort it into two groups. Place the efficient pieces which you use frequently in a convenient location. Store the other group in an out-of-the-way place and keep track of the number of times in the next six months you use one of that group. You may decide to discard several pieces of equipment, and you'll at least store them in a less choice spot, making room for better tools.

* * *

A Cart on Wheels

A cart on wheels is a worthwhile addition to any household. It eliminates motions in such tasks as clearing the table and can be a big help as added working surface in the kitchen. Since it is on wheels, it might be used in whichever work center the counter space is limited, by the refrigerator or at the range, depending on your kitchen.

* * *

Storage of Mixing Bowls

To save time and effort, store mixing bowls in such a manner that it isn't necessary to lift all of them to get at the one at the bottom of the stack. It's much better not to stack bowls unless they're the same size. And make certain you have sufficient space at the top of the stack so that you can remove the top one without lifting out the stack.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 3, 1958 Immediate release

EGG PRICE OUTLOOK VIEWED FOR 1958

Minnesota poultry producers can expect prices for eggs to be a little higher between now and late summer than they were during the same months of 1957.

However, prices will be somewhat lower during the fall months, according to S. A. Engene, agricultural economist at the University of Minnesota.

He points out that per capita egg production will be low until new pullets start laying about 7 months from now.

Right now, total egg production is down about 2 percent, while the population has increased. There are 5 percent less hens on American farms than a year ago, but production per hen is up 2 percent.

The "egg-feed ratio"--the amount of feed a farmer can buy with a dozen eggs--is about 50 percent greater than last year. This, Engene says, points to more pullets being saved this year.

This ratio has gone up from one year to the next 15 different times since 1930. In 13 of these times, the increase was followed by an increase in number of pullets saved. So if history repeats itself, there will be an increase of 5 to 10 percent in the number of pullets next fall, Engene says.

Number of layers won't go up as much, though, probably not more than 5 percent. Farmers this year have a higher percentage of older hens than usual in their flocks, and it will take quite a few pullets to replace them.

There will continue to be more eggs laid per hen, so total production a year from now will be higher. The American population will also increase, but per capita egg production after late summer will be above the past year, meaning egg prices by fall will be somewhat lower.

Engene says the outlook means poultry producers need to be more efficient than ever to make a profit. Margins left to pay for labor, shelter, veterinary charges and other costs besides feed have been cut about in half since the 1930s.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 3, 1958

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* For Release at noon *
* Tuesday, February 4 *
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STILBESTROL TRIALS WITH SHEEP REPORTED

MORRIS, MINN.--Stilbestrol can increase gains in wether (male) lambs, but it may actually decrease gains when fed to ewes (females).

Also, a promising way to feed stilbestrol to wethers is to mix it in their salt and self-feed it.

This was reported at the annual Sheep and Lamb Feeders Day at the West Central School and Experiment station here today by R. M. Jordan, University of Minnesota livestock scientist and H. E. Hanke, staff member at the Morris station.

They said that wethers in recent feeding trials made 15 percent greater daily gains when they were fed stilbestrol, a synthetic hormone-like material. Ewes, however, grew 13 percent slower when they received stilbestrol in soybean meal.

Stilbestrol did not affect feed consumption or carcass grade and yield as far as averages for all the groups were concerned.

In these experiments, three groups of feeder lambs, made up of equal numbers of ewe and wether lambs, were fed either no stilbestrol, 2 milligrams of stilbestrol mixed in soybean oil meal or a salt-stilbestrol mix.

At the end of the feeding trial, lambs that had received no stilbestrol had averaged .38 pounds daily gain, compared with .39 pounds for those getting stilbestrol in soybean meal and .41 pounds for lambs fed it in salt. The difference between these gains was not considered important.

But when the scientists figured the gains according to sex of the lambs, the story was different. Wethers fed stilbestrol in soybean oil meal gained .48 pounds daily, those getting stilbestrol in salt gained .44 pounds and wethers fed no stilbestrol gained only .41 pounds per day.

Ewes that received no stilbestrol gained .35 pounds per day, compared to .31 pounds for those getting it in soybean meal and .38 pounds when it was fed in salt.

These results confirm findings from research, Jordan and Hanke said. They said that using salt as a carrier for stilbestrol should be particularly advantageous when lambs are fattened on pasture.

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B-1861-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 3, 1958

* * * * * * * * * * *
* A FARM AND HOME *
* RESEARCH REPORT *
* * * * * * * * * * *

Immediate release

LARGER BUTTER-POWDER PLANTS ARE MORE EFFICIENT

In general, large local butter-powder plants in Minnesota can process milk more cheaply than can small plants.

Linley E. Juers and E. Fred Koller, agricultural economists at the University of Minnesota, base that conclusion on a recent study of three "model" butter-powder plants.

"Plant 1" averaged 129,000 pounds whole milk processed daily and costs averaged 47.6 cents per hundred pounds. "Plant 2" averaged 174,000 pounds at a cost of 42.6 cents, while "Plant 3" processed 265,000 pounds per day and had costs averaging only 38.4 cents per hundred pounds.

These are plants that receive whole milk direct from farmers and produce both butter and dry milk. There are now about 40 of them in the state.

The three model plants were ones that were operating under "ideal" conditions. All of them received milk in 10 gallon cans, direct from producers. They used similar processing techniques and equipment, except for size, had similar building construction and had uniform wage rates.

Labor was a major cost item. It was 12 cents in Plant 1, 9.6 cents in Plant 2 and 6.6 cents per hundred pounds of milk in Plant 3. It was cheaper in bigger plants because of the fuller utilization of some fixed labor time. For example, the small plant required almost the same amount of cleanup time as the largest one.

Fuel costs, on the other hand, varied little with size of plant, because heat required for processing is nearly directly proportional to quantity of milk produced.

While these costs are for model butter-powder plants operating under ideal conditions, the economists say they still represent results which well-managed plants can approach.

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B-1862-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 3, 1958 Immediate release

PEAS HEAD LIST OF PLENTIFUL FOODS

Canned and frozen peas take the spotlight among foods plentiful on markets the country over this month, Mrs. Eleanor Loomis, extension consumer marketing agent at the University of Minnesota, reports.

Most brands and grades of canned peas are selling at the lowest prices in many years, Mrs. Loomis says. Consumers can find special buys, too, in frozen peas.

Good growing weather for peas last summer was responsible for the largest crop of peas on record for canning and freezing. The pack of canned peas this year amounts to one extra can for each person in the United States. Pea packers in the nation put up about six cans of peas last year for each man, woman and child in the country, compared to their usual output of only five cans. Since last year's weather was almost perfect for peas, quality was high; consequently the top grades make up most of the supply of peas.

Other plentiful vegetables for thrifty food shoppers this month are canned and frozen corn and potatoes. The canning and freezing industries approached an all-time high in processing sweet corn.

Among fruits, look for good supplies of high-quality apples and dried prunes. Best buys in prunes will probably be in the medium sizes, Mrs. Loomis says.

Pork, fresh and cured, is the meat featured on the U. S. Department of Agriculture's plentiful list for February.

There will also be plenty of milk this month. Milk production is at record levels and the outlook is for further increases in production in 1958.

Peanuts and peanut products will continue in heavy supply for lunch box sandwiches and snacks. Last fall's large crop of filberts means that these nuts will continue to be abundant.

B-1863-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 3, 1958 Immediate release

TOP ENTRIES IN HAY SHOW LISTED

Top-placing entries in the first Minnesota Hay Show were announced today by Bill Hueg, extension agronomist at the University of Minnesota.

High exhibits in each class were:

Legume hay, field cured--John Day, Randolph; legume hay, mow cured--Bernard Wells, Goodridge; legume-grass mixed hay, field cured--Adrian Ackerman, Sauk Rapids; legume-grass mixed hay, mow cured--Lyman Wulkan, Hector; grass hay--Martin Tjephes, Hines.

Purpose of the hay show was to help exhibitors learn more about the quality of hay they are feeding, according to Hueg. Evaluation was based on stage of maturity when cut, leafiness, color, condition and amount of "foreign" material in the hay.

Each sample was evaluated against a set standard, rather than being compared with other exhibits in the hay show.

There were 68 entries entered in the show from 31 counties during Farm and Home Week held recently on the St. Paul campus.

B-1864-pjt

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 4 1958

To all counties

For use week of

February 10 or later

FARM FILLERS

More than 1,000 farmers tried wheel-track planting in Minnesota in 1957, according to Charles Simkins and Curtis Overdahl, extension soils specialists at the University of Minnesota. They say that wheel-track planting has several advantages. It helps avoid excess soil compaction and saves time and money in seed preparation costs. Also, unworked soil between the tracks absorbs more moisture -- a big help in a dry year.

* * *

It takes a good deal of hot water for the dairy barn equipped with a milk pipeline and where there's a bulk tank in the milk house, says V.M. Meyer, agricultural engineer at the University of Minnesota. He says some tests show that for each foot of pipeline to be cleaned, there must be about 1/4 to 2/3 gallons of hot water daily.

* * *

Cash receipts from hogs in Minnesota increased 13 percent in 1957 over 1956, according to E. W. Learn, agricultural economist at the University of Minnesota. Hog prices, which had shown some gains by late 1956, were still favorable through 1957 and averaged 23 percent higher than in 1956.

* * *

There's an upward trend in fertilizer use in Minnesota, according to W. P. Martin, head of the soils department at the University of Minnesota and Curtis Overdahl, extension soils specialist. They point out that Minnesota farmers used 15 percent more fertilizer in 1957 than a year earlier. Still, only about half of Minnesota's 165,000 farmers are using any commercial fertilizer at all, with most of it going on corn.

* * *

New hybrids and cheap chemical weed control may make grain sorghum a good second choice crop to corn in Southern Minnesota. But at present, soybeans are probably a better alternative, say R. G. Robinson, agronomist, and Bill Hueg, extension agronomist at the University of Minnesota.

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February 4, 1958

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* For release *
* Thurs. Feb. 6 *
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PLOWVILLE DATES ANNOUNCED

The annual state soil conservation event, "Soil Stewardship Days," will be Sept. 12-13, on the Martin Lehne farm south of Sanborn in southwestern Minnesota, according to Frank Crippen, Sanborn, chairman of the event.

The event is popularly known as "Plowville."

Crippen says it was designated as "Soil Stewardship Days" this year during the Minnesota centennial "because saving the soil isn't just for today but must continue to furnish food for many coming generations."

General manager of the event is Douglas Kirsch, Sanborn.

Members of the executive committee include Crippen; Kirsch; Roman Henkel, Fulka, vice-chairman; Layton Peters, Sanborn, secretary; Sam Franz, Mountain Lake, treasurer; and William Poulsen, Redwood Falls.

Soil Stewardship Days are sponsored by the Minnesota Association of Soil Conservation districts and WCCO radio. Many other local and state organizations cooperate in the event.

B-1865-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 4, 1958

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* For release at 12:30 p.m. *
* Thursday, February 6 *
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U OF MINN. GETS LAND FOR ARBORETUM

Minnesota gardeners and home owners have an important stake in an event which occurred today (Thurs.,Feb. 6) in Coffman Memorial union at the University of Minnesota.

The event was the presentation by the Minnesota State Horticultural society to the University of a deed to 160 acres of woodland and meadow for a landscape arboretum. G. Victor Lowrie, Minneapolis, president of the Horticultural society, presented the deed, along with a check from the society of $25,000 for initial development of the arboretum. Members of the Board of Regents and University administration and officers of the society attended the ceremony.

Garden clubs throughout the state affiliated with the Minnesota State Horticultural society, as well as numerous individuals, have contributed to the fund to buy the land and begin development of the arboretum, Eldred Hunt, secretary of the society, said.

The arboretum will be devoted to research in testing and developing hardy ornamentals for landscaping home grounds in Minnesota. Purpose of this research will be to increase many times the limited number of selections that will withstand the severe climatic conditions of this area. Planted in a natural setting, the arboretum will give home owners and garden lovers an opportunity to see plant materials in natural landscape groupings, as well as the variety of plants available for landscaping.

Located on Highway 5, a mile from the University Fruit Breeding Farm near Excelsior, the landscape arboretum consists of 160 acres of woodland, lakes and open fields to be developed by University horticulturists. A tract of nearly 100

(more)

acres of timberland has nearly every type of tree and shrub native to this area. Fifty acres of open, rolling land will make available immediately a section for experimental plantings.

While the existing trees, native shrubs and wild flowers will provide a beginning to the landscape arboretum program, eventually approximately 3,000 species and varieties of shrubs and trees will be planted, according to Leon C. Snyder, head of the University department of horticulture, who will be in charge. The high land, as well as the low and marsh land, will furnish the types of soils and natural habitat for a large variety of plants.

Walks and roads, flanked by plantings, will lead through and around the arboretum to facilitate observation by the public. Plans call for a headquarters building for administration purposes to be constructed on a hilltop with a view of Lake Minnewashta in the distance.

A new era in the development of Minnesota's ornamental horticulture may well be in its beginning as the University of Minnesota landscape arboretum becomes a reality, Snyder says.

B-1866-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 4, 1958

Immediate release

(with mat)

4-H CLUB MEMBERS WIN GRAIN MARKETING TRIP

Five Minnesota 4-H club members have been awarded all-expense trips to tour Twin Cities grain markets and plants Feb. 10-14.

The boys were selected on the basis of leadership, achievement and experience in the 4-H field crops projects. Atwood-Larson company, commission grain firm, Minneapolis, is sponsoring the trips.

The winners are (left to right) Robert McTaggert, 19, Campbell; Donald Kompelian, 17, Canby; Lowell Wagner, 17, Sabin; David Hoff, 16, Perley. At extreme right is Arnold Claassen, Lincoln county agricultural agent, who will accompany the group. Not shown is another winner, Calvin Karl, 17, Madison.

According to Leonard Harkness, state 4-H club leader at the University of Minnesota, the boys will learn how grain is graded, sold and processed into food on their visits to grain markets and plants in the Twin Cities. They will also learn how grain production and marketing fit into Minnesota agriculture.

B-1867-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 4, 1958

SPECIAL TO ST. PAUL PIONEER PRESS & DISPATCH

GRADUATE DAY AT U SCHOOL OF HOME ECONOMICS

The University of Minnesota School of Home Economics will hold a Graduate Day on the St. Paul campus Friday (Feb. 7) for young women interested in graduate study in home economics.

A full day's program will feature panel discussions by graduate home economists in various fields and talks by University home economics staff members. Purpose of the program is to tell promising college undergraduates, as well as professional home economists, about different types of graduate programs in home economics and opportunities for home economists with advanced degrees.

The program will open at 8:30 with a coffee hour in the fireplace room of the home economics building. A. A. Dowell, director of resident instruction and assistant dean, Institute of Agriculture, and Louise A. Stedman, director of the School of Home Economics, will bring greetings to the group. Highlight of the morning session will be a panel discussion on graduate training by home economists representing the areas of dietetics, home economics education, related art, textiles and foods. Mrs. Natalie Gallagher, 1391 Brompton, St. Paul, will act as moderator.

Tours of research laboratories will conclude the morning program.

Luncheon speaker will be C. H. Bailey, dean emeritus, Institute of Agriculture, who will speak on "Graduate Study as an Investment."

Among speakers at the afternoon program will be University home economics staff members Isabel Noble, Jane Leichsenring and Roxana Ford and graduate students. They will present the need for home economists with graduate degrees, explain the graduate study program at the University and discuss ways of financing graduate work. Opportunity will be given during the afternoon for meetings with the graduate faculty.

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Special to Television Stations

PEAT MAY HAVE MANY FUTURE USES IN MINNESOTA (38 seconds)

VISUAL	AUDIO
Picture of Rouse Farnham and two samples of peat	Minnesota's vast peat lands, which make up 17 percent of the state area, may some day be much more valuable than they are now. Rouse Farnham, soil scientist at the University of Minnesota, here examines two different kinds of peat that could have some important commercial uses if a market were found for them. At left is a sample of black woody peat, which could be used as a soil conditioner on home lawns and gardens. The lighter-colored material at right is a moss peat, which makes a fine mulch for rosebushes and other shrubs. Both materials can be used just as taken from the field. Future research may show even more uses for peat, Farnham says.

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SPECIAL TO TWIN CITY OUTLETS

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* For release at 10 p.m. *
* Wednesday, February 5 *
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AGRICULTURE STUDENT RECEIVES E. M. FREEMAN MEDAL

Carl H. Reidel, Oaklawn, Ill., senior in the College of Agriculture, Forestry and Home Economics, University of Minnesota, this evening received the Dean E. M. Freeman Medal for Student Leadership, during the annual leadership dinner on the St. Paul campus.

The award was presented to Reidel by A. A. Dowell, assistant dean of the College.

Reidel, a senior in forestry, has been a leader in a number of campus organizations. He has been president of the St. Paul Campus Student council, a member of the Honor Case commission, a member of the Union Board of Governors and president of the Forestry club.

He has received the Silver Pin award for student leadership from the St. Paul Campus Student council, has been elected to the Order of the Gopher by the All-University Congress and is a member of Xi Sigma Pi, honorary society.

The Freeman medal has been awarded annually since 1931 to a senior student who has made the greatest contribution to student life on the campus. The late Dean Freeman was dean of the College of Agriculture, Forestry and Home Economics from 1917-43.

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University Farm & Home News
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DOLLARD RED CLOVER SEED IS AVAILABLE

A good supply of Dollard red clover seed will be available to farmers this year, according to County Agent _____.

This variety has been recommended for some time, but only recently have substantial quantities of the seed been marketed.

Dollard is one of three red clover varieties recommended by the University of Minnesota's Agricultural Experiment station. The other two are Wegener and Midland.

Dollard, a Canadian-developed variety, has been tested by the University since 1945. It equals Wegener in forage yield and is more resistant to several diseases, such as northern anthracnose virus and root rot. In some tests, Dollard has been longer-lived. It also is adapted to a wider area than is Wegener.

As far as seed supplies of the other two red clover varieties are concerned, Carl Borgeson, University agronomist, says there is no longer any breeders seed of Midland available, meaning that variety will eventually disappear.

The University still has foundation seed of both Wegener and Midland on hand for sale to registered seed growers. Borgeson adds that with Dollard, however, the registered seed class has been eliminated.

Small allotments of foundation Dollard seed received from the National Foundation Seed Stocks project have been allotted to approved growers.

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To all counties
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CAPTION for mat: How hog diets have improved during the past 50 years is clearly shown in this University of Minnesota demonstration. The pigs are from the same litter. But after two months of being fed a modern ration, the pig at left put on 16 times as much weight as did its brother, right, on a 1908 ration.

STRIKING GAINS ARE SHOWN IN SWINE FEEDING

Four pigs on a modern hog ration gained 16 times as much during a 62-day feeding trial as did four of their brothers on a 1908 diet.

That was the striking result of a recent demonstration on "50 Years of Improvement in Swine Feeding" at the University of Minnesota.

R. J. Meade, swine nutritionist, says pigs on the 1957-58 ration required only a fourth as much feed for each pound of gain as did those on 1908 feeds.

There were four pigs on each ration. Each pig in the 1957-58 group had a littermate in the group fed the 1908 mixture. All pigs averaged 33.5 pounds when the demonstration started.

But 62 days later, pigs fed 1957-58 rations averaged 132.2 pounds. They gained 1.6 pounds daily and required only 2.82 pounds of feed for each pound of gain. The 1908 group weighed only 40.2 pounds each. Their daily gain averaged .1 pound daily and they required 13 pounds of feed for each pound of gain.

The modern ration contained ground yellow corn, tankage, soybean oil meal, fish meal, ground limestone, steamed bone meal, high zinc trace element salt and a vitamin-antibiotic premix. Ground yellow corn and a complex mineral mix made up the 1908 ration. Pigs on the old-time feed did so poorly because that mixture was low on riboflavin, niacin, pantothenic acid, vitamin B_{12} and choline as well as in both quantity and quality of protein.

There were also four pigs in each of two other groups in the demonstration. One was fed a 1930 ration of ground yellow corn, meat and bone scraps and high-zinc trace element salt, but did as poorly as the 1908 group. The other four pigs were fed a 1953 ration similar to the modern one. Results from the 1953 group were similar to those from the 1957-58 ration.

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County Agent: This is the fifth in a series of articles on research on nitrogen fertilizer use.

SIXTY POUND RATE MOST PROFITABLE FOR NITROGEN

On most Minnesota soils, it's usually most profitable to apply about 60 pounds of nitrogen per acre for corn, according to County Agent _____.

He says recent experiments at the University of Minnesota show that while rates up to 120, 180, or 300 pounds of nitrogen per acre may bring higher yields, the increase often won't pay the extra fertilizer cost.

These studies were conducted on a number of farms in southern Minnesota. J. M. MacGregor, University soils scientist, found that in some cases nitrogen didn't pay at all. However, the farmer who has his soil tested and tells the soils specialists what crops were previously grown on the field is most apt to get the most from the nitrogen fertilizer he does use.

The studies also showed that just adding nitrogen alone isn't enough. There also must be a good supply of "available" phosphate and potash in the soil before the plants can make use of the nitrogen. Again, the only way you can tell for sure about this supply of plant food in the soil is by having the soil tested first.

Another finding from the experiments was that there must be a good corn plant population to make efficient use of the nitrogen you apply. Recommended population is 16-18,000 plants per acre.

However, to get such populations in growing corn, you need to plant about 2,000 more plants per acre than your intended population. In the field tests, fertilizer did not increase corn populations and if placed in direct contact with the seed, it may decrease the population.

A complete round-up of this and other nitrogen research will be reported at the Upper Midwest Nitrogen Conference Feb. 20-22 in the Lowry Hotel, St. Paul. The event is sponsored by the University in cooperation with the Midwest Soil Improvement Committee. All interested persons are invited to attend.

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University Farm & Home News
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To all counties

ATT: 4-H CLUB AGENTS
For use week of
February 10 or later

4-H'ERS CARRY MANY SERVICE PROJECTS

Four-H service projects have made a contribution to many Minnesota communities, says _____, county 4-H club (home) agent.

Last year among ways in which _____ county 4-H clubs were of service to the community were: _____ _____

Four-H clubs planning to choose a community project to work on this year may get some ideas from projects which Minnesota clubs did last year, _____ suggests.

One club built a ball diamond. A club emphasizing work in conservation might be interested in building bird houses for a community park or planting trees in a city park as two clubs did.

One club made a map of the community for the fire department. Another club painted names on rural mail boxes. Other clubs built stop signs for club members' home driveways. Many clubs have written safety articles for newspapers.

Four-H'ers have carried on hazard hunts to make homes and farms safer in the community. Members who have carried on rat control programs have reduced loss of grain on farms and have improved community health.

Numerous clubs collected money for various charities; others have donated to health drives. One club had a March of Dimes carnival. A club sold chances on a lamb and then gave the money to the polio drive. Another club had a Valentine's party and donated the proceeds to the March of Dimes.

Four-H club members like to cheer shut-ins. Many 4-H members carol at the homes of these people each Christmas. They visited-gave gifts to residents in old people's homes and children's homes and presented programs for them during the holiday season. They gave gifts to the needy and sick. One club helped a sick neighbor with baking.

One club adopted a grandmother in an old people's home. To raise money they had a pancake supper. Another club sponsored a dinner for teachers and still another prepared a special meal for pheasant hunters.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 4 1958

To all counties

ATT: HOME AGENTS

For use week of
February 10 or after

COLD VS HOT WATER FOR WASHING

New automatic washers with optional cold-water selectors along with those for hot and warm water are bringing questions from homemakers about when, what and how to wash in cold water, reports Home Agent _____ _____.

Some women have the mistaken impression, she says, that everything can be washed satisfactorily in cold water.

For most satisfactory cold-water washing, fabrics should be only slightly soiled, according to home economics researchers. Sometimes there must be a choice between getting fabric clean with hot water or getting it less clean and avoiding wrinkles caused by hot water on the fabric or finish.

Studies of family laundry show that a big part of the average household wash still consists of cotton items which get the heavier soil. For these, heat is essential for good washing. Hot water also is necessary to remove any sort of grease or oil and many other everyday stains.

Cold water washing will become more important as detergents are developed that will wash the various fabrics as efficiently in cold water as in hot or warm water and as more soil-resistant and heat-sensitive fabrics are used in homes. But homemakers will need to know the characteristics of fabrics and finishes in deciding on the right temperature for laundering. How the fabrics are soiled and how much they are soiled also needs consideration. Oily soil on fabric needs hot water to dissolve and keep it in solution unless a pretreatment is used.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 4, 1958

SPECIAL TO WILCOX

county agent introduction

These 11 men have all been county agricultural agents in Minnesota for 25 or more years. In recognition of their long-time service to farm families, they received 25-year certificates during the annual conference of the Minnesota Agricultural Extension Service, held recently on the St. Paul campus of the University of Minnesota. From left to right, they are: Wayne Meiser, Mankato, Blue Earth county; J. I. Swedberg, Redwood Falls, Redwood county; Roland McCamus, Willmar, Kandiyohi county; Paul Kunkel, New Ulm, Brown county; E. C. Lenzmeier, St. Cloud, Stearns county; George Larson, North Branch, Chisago county; Arthur Frick, Grand Rapids, Itasca county; T. D. Grinager, Two Harbors, Lake county; Clem Chase, Pipestone, Pipestone county; Carl Ash, Crookston, West Polk county; and Frank Sveboda, Olivia, Renville county.

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UNIVERSITY OF MINNESOTA
Institute of Agriculture
Information Service
St. Paul 1, Minnesota

February 6, 1958

Dear Friend:

With the present emphasis on basic research in missiles, satellites and other phases of physical science, many people fail to realize the importance of the role that basic research in agriculture plays in our national well-being.

Actually, basic research is nothing new to agricultural scientists at the University of Minnesota. For years, they have been searching for fundamental information that often leads to findings which individual farmers can put to work on their own farms.

Enclosed is a series of 10 articles on this basic research at the University's Institute of Agriculture. The release dates are set for two 5-day periods. They are: Monday through Friday, Feb. 10-14, and Monday through Friday of the following week, Feb. 17-21.

We think this information may interest a good many of your readers.

Sincerely,

Phillip J. Tichenor

Phillip J. Tichenor
Information Specialist

PJT:jhm
Enc.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Monday, Feb. 10 *
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Editor: This is the first in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

BASIC RESEARCH MOVES FORWARD AT INSTITUTE OF AGRICULTURE

While "Explorer," Sputnik and atomic energy put the spotlight on other scientific fields, basic research in agriculture quietly moves forward on the University of Minnesota's St. Paul campus.

This fundamental research provides the "stepping stones" to applied, or practical findings that eventually give Minnesota farmers information to help improve their business and way of living.

M. F. Kernkamp, assistant director of the University's Agricultural Experiment station, explains that basic research "has no immediate objectives in terms of cash value. Yet the search for fundamental facts gains knowledge that may someday change the everyday living of every human in the world."

There are about 280 research projects being conducted by the Agricultural Experiment station and about 10 percent of them are purely "basic" research, Kernkamp says. Another 26 percent involve both basic and practical research and the rest are practical studies.

The Experiment station is the agency of the University's Institute of Agriculture which handles all agricultural research.

About a fourth of the station's research funds goes into basic research and about 125 scientists--roughly half of all agricultural researchers there--are involved in basic studies.

"This research has provided knowledge that today is being put into practice in virtually every phase of agricultural production and utilization," Kernkamp says.

"University studies on milk formation in udders of dairy cows have helped farmers do a better job at milking time. Studies on inheritance of characteristics in plants and animals have led to developing more productive plants and animals."

"Studies on chemical nature of feeds and foods have improved the diets and hence the productivity and health of farm animals and humans in Minnesota and throughout the world," Kernkamp adds. "Most of these investigations were not 'practical' when started, perhaps 10 to 20 years ago, but today they have immense practical value."

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Tuesday, Feb. 11 *
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Editor: This is the second in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

PLANT PATHOLOGISTS PROBE MYSTERIES OF PLANT LIFE

Disease-resistant crop varieties save Minnesota farmers millions of dollars each year.

Behind the development of these varieties are years of basic, or "fundamental" research on plant diseases, according to J. J. Christensen, head of the plant pathology and botany department at the University of Minnesota.

Recent scientific developments have resulted in tremendous emphasis on basic research. But Christensen points out that University scientists have been relying on their own basic research for years in their never-ending struggle to bring Minnesota farmers better crop varieties.

For every major plant disease which has struck crops in the Midwest in recent years, a crop variety with some resistance to the disease has been developed by agricultural scientists.

Behind the scenes in these developments are the plant pathologists, like those at the University, who are quietly probing the fundamental mysteries of plant diseases. Such research played a key role in the recent development of Forrest barley and Minhafer oats at the University. Forrest barley has resistance to stem rust and Minhafer has an all-around combination of disease resistance never before available in any oats variety.

Basic research in plant diseases, Christensen explains, produces information that the plant breeders can use in developing these disease-resistant varieties.

Plant diseases are caused by living organisms which are themselves extremely simple forms of plants--such as fungi and bacteria. "One of our most basic projects," Christensen says, "involves studying the way these organisms can change in their own genetic make-up."

(more)

The big problem with plant disease control is that the disease organism itself may suddenly change, either through mutation or by hybridization. The result may be a new variety or strain of the disease organism that attacks crops immune to other races of the same disease.

Forty years ago, for example, stem rust was thought of as just one disease. Today, scientists know there are at least 300 strains of this rust disease that attack wheat alone. The disease organism lives over winter on straw and in the spring infects barberry plants, where it often hybridizes and produces new strains.

University plant pathologists and plant breeders, in cooperation with the U. S. Department of Agriculture, are leading the battle against stem rust. Every year, they collect some 15-20,000 samples of stem rust-infected wheat and barberry leaves from around the nation and use these samples to locate new races of the disease. As soon as they notice a new strain, the plant pathologists test all present varieties of wheat for resistance to it. This helps scientists keep ahead of new diseases.

"To find out how serious a new disease may be," Christensen says, "we must study the 'range' of changes that may occur in the organisms." To learn this range, the pathologists deliberately cause mutations. If they can determine the complete range of changes that might naturally result from mutation and hybridization of a plant disease, the scientists can cut the time and work involved in finding resistant crop varieties.

To bring about these changes in microorganisms, University plant pathologists are using two principle methods--radiation and chemical treatment. By bombarding fungi with nuclear rays, they are producing all sorts of changes. And as a by-product of this research, they are learning more about the effect of radiation itself in producing genetic changes. Similarly, the scientists are also creating changes in disease organisms by treating them with certain antibiotics.

Another aspect of basic research in plant pathology involves using radioactive "tracers" as tools. By treating amino triazole, a chemical, with radioactive isotopes, University plant physiologists recently found that the chemical doesn't affect growth in all parts of Canada Thistle plants. They found that, apparently, sugar from unaffected parts of the plant moves into leaves that were affected by the chemical, enough so the plant may recover. Such discoveries give important background needed in developing better anti-weed chemicals.

These are only a few examples of the basic research being conducted by University plant pathologists. Other studies include corn ear and stalk rot, virus plant disease, decay in wood products, resistance to disease, grain storage and plant disease epidemics. As Christensen says "We feel that, in the long run, basic research is really mighty practical."

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Wednesday, Feb. 12 *
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Editor: This is the third in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

BIOCHEMISTS EMPHASIZE BASIC RESEARCH

Corn starch molecules are getting a close look from scientists doing basic research in the agricultural biochemistry department at the University of Minnesota.

These molecules can't actually be seen even with a microscope. But scientists do have ways of studying them, in starch as well as in a host of other agricultural products.

W. F. Geddes, head of the agricultural biochemistry department, emphasizes that such basic investigations make up the major portion of the department's research.

Right now, for example, University biochemists are studying chemical reactions which may lead to development of plastic-type products made from corn starch. To experiment with these reactions, however, the biochemists must first figure out the structure of many different types of carbohydrates. In this way, basic research gives fundamental information that may aid in practical findings later on.

Carbohydrate research is only one example of basic studies underway in the department of biochemistry. Other research subjects there include:

* Fats and oils. Biochemists are studying characteristics of fat and how they affect food shortening. They are also attempting to learn what happens to the oil molecule when oil, such as in paint, dries and hardens. This information could be of extreme value to paint manufacturers.

* Nutrition. Studies are underway to see if there are any as yet unknown growth factors in food. Vitamins were once unknown, but basic research led to their discovery. Biochemists are feeding experimental "purified" diets of known chemical composition, to study processes by which animals and man utilize food. In one phase of the nutrition work, biochemists, in cooperation with the College of Veterinary

(more)

Medicine, are looking for the reason why soybean meal extracted by the "trichloroethylene" process is toxic to certain animals. The fact that soybeans processed this way do have a poisonous effect was proven several years ago, but the actual substance that causes this toxic effect has not been isolated.

* Thyroid gland functioning. Scientists are searching for more information on how the thyroid gland produces the hormone thyroxine, which is necessary for life in all animals. A recent finding on thyroid gland activity led to a new and improved diagnostic test for thyroid gland functioning.

* Legume proteins. Biochemists are studying the "phytoagglutinins" in soybeans. Phytoagglutinins are plant proteins which cause red blood cells to group or clump together. Minnesota research in recent years has shown that heat treatment improves the nutritive value of these proteins. Studies now are aimed at finding whether there is any relationship between the "clumping characteristic" of these proteins and their nutritive value.

* Milk chemistry. In this project, biochemists are studying the characteristics of proteins and fat in milk. Theyhope to learn, for example, the effects of heat on coagulation of milk by rennet, an enzyme used in cheese making. They are also studying effects of heat on milk salts in coagulation of casein in concentrated milk products. This information may be particularly valuable for the milk industry in developing better manufactured dairy products.

* Grain storage. Much of this work has been on an "applied" or practical level, but some fundamental aspects are extremely important. Several years ago, Geddes and and his co-workers, in cooperation with plant pathologists, found that mold in stored wheat caused wheat to "respire" faster and cause heating in the grain. This finding emphasized the importance of controlling mold in stored wheat and gave background information to scientists studying storage procedures.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Thursday, Feb. 13 *
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Editor: This is the fourth in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

BASIC STUDIES IN AGRONOMY LEAD TO BETTER CROP VARIETIES

Not many years ago, plant scientists thought it would never be possible to develop an oat variety that would resist races 7 and 8 of stem rust.

In the early 1950s, that disease was ruining vast acreages of oat varieties then being grown. Farmers worried over whether it could ever be stopped.

Fortunately, basic research in the department of agronomy and plant genetics at the University of Minnesota and elsewhere in the nation brought forth developments that helped spell the answer to the dreaded stem rust.

The scientists, using basic breeding techniques, developed oat strains resistant to both races. Now, they are using these strains in breeding projects aimed at developing better oat varieties.

This is an example of basic research in agronomy. W. M. Myers, head of the department, explains that the key to this breeding research lies in plant chromosomes--rod-shaped bodies in plant cells which carry the genetic factors that determine all inherited characteristics. They are so small they must be magnified 1,000 times to be studied.

Knowledge gained from fundamental studies on these chromosomes is enabling scientists to combine superior characteristics from different varieties, Myers says. Such research made possible varieties like Minhafer oats, Forrest barley--both University-developed varieties--Vernal alfalfa and superior corn hybrids.

Basic research on plant chromosomes has been going on for many years, but there is still much to be learned. For example, since the outbreak of race 15B of wheat stem rust, plant breeders have been trying, without success, to transfer the full resistance from Kenya Farmer wheat to improved varieties. Kenya Farmer, while resistant to 15B, has other characteristics which make it unsuitable as a commercial variety.

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Fortunately, fundamental studies in recent years may open new avenues by which scientists can make use of Kenya Farmer's disease resistance. By using special genetic and microscopic techniques, scientists have found that each of several chromosomes, rather than just one, in Kenya Farmer carry an individual rust resistance "factor." That explained why it has been difficult to transfer resistance characteristics of Kenya Farmer to improved varieties by simple crossing methods.

Armed with this information, plant breeders can now proceed more intelligently to breeding Kenya Farmer resistance into improved wheat varieties, Myers says.

Some other basic studies in plant genetics are:

1. Corn breeding. Hybrid corn is based on superior inbred lines which are developed after several years of self-pollination. A new technique, called the "Oenothera" method, is being studied. Theoretically, it would allow plant breeders to produce, with only one generation of self-pollinating, inbred lines which would be even better on the average than inbreds developed now by conventional methods. Before this can be done, however, strains of corn must be produced in which all chromosomes are in a large ring instead of in pairs as is now the case. Producing such new strains will be a tedious task.

2. Irradiation. Scientists found long ago that mutations can be produced with nuclear radiation. Most of these changes have not been useful to the plant breeder, but there have been a few favorable mutations. The ultimate hope is to develop techniques which will enable scientists to produce whatever changes in hereditary characteristics they wish.

3. Cereal crop improvement. Normally, crop varieties in breeding projects are crossed only with other varieties that have the same number of chromosomes. However, some plant species related to oats have characteristics that could well be used in oats on Minnesota farms. The trouble is that the "distant cousin" plants have different chromosome numbers, meaning new basic procedures must be developed to cross them with cultivated oats.

There are also basic studies in the agronomy and plant genetics department on processes involved in silage preservation, on action of chemical herbicides and other problems in crop production and management.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Friday, Feb. 14 *
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Editor: This is the fifth in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

"LIFE OF THE SOIL" IS SUBJECT OF BASIC RESEARCH

Soil is definitely not a lifeless substance, soils scientists will tell you.

On the contrary, it contains billions of microscopic organisms that are essential to crop growth. In fact, there is often as much live plant tissue in these organisms beneath the soil surface as there is in the crop above.

This "life of the soil" is the focal point of intensive basic research in the soils department of the University of Minnesota. W. P. Martin, head of the department, points out there are many things about this mysterious subterranean realm that scientists still need to know. The information they seek could help farmers make more efficient use of their cropland and fertilizer.

Soils scientists have known for a long time that tiny bacteria, fungi and other organisms transform nitrogen in fertilizer and decayed plants into forms that growing plants can use. But many of the details of the relationships between nitrogen and microorganisms are obscure.

The scientists are studying, for example, the exact nature of organisms that cause this transformation. They are attempting to find out what is produced, in addition to available nitrogen, in the process. They hope to learn how different types of soil and soil conditions affect activity of these organisms, the availability of nitrogen produced and effect on crop production.

Already, soils scientists have identified a new fungus involved in this change which was thought to be brought about by bacteria only. They have also found that by increasing soil acidity to meet demands of certain organisms, it's possible to influence decay of cellulose, the main component of fresh organic matter in soils. This finding could eventually have extreme importance to farmers in planning crop management.

(more)

add 1 soils basic research

Other basic projects in soils research include:

1. Radioactive tracer studies. University soils researchers were among the first in the nation to use radioactive isotopes to "tag" fertilizers. This way, they can use a Geiger counter to trace the movement of fertilizer in soil and in plants themselves. This helps them learn with phosphorus, for example, how absorption varies with type of phosphorus fertilizer, location of the fertilizer in soil and other factors. This technique has already shown that different corn hybrids vary in their ability to absorb phosphate fertilizer.

2. Iron-deficiency chlorosis. This is a problem in many crops in Minnesota. It occurs in alkaline soils when the iron in the soil is in a chemical form that plants can't use. Without iron, plants cannot produce chlorophyll, the substance which makes plants green. This causes them to turn yellow, or become "chlorotic," and go down in yield. Basic research at the University has already shown that the problem can be corrected with "chelates"--compounds which hold iron in a form plants can use. So far, however, cost of the treatment has been too high to be feasible for most farmers.

3. Physical soil characteristics. This includes studies on how soil water, aeration, soil temperature and arrangement of soil particles affect soil drainage and plant growth. Scientists in this project are also studying the effects of different kinds of organic matter on soil structure, and what differences they make in plant growth and soil erosion. These findings may have an important effect on soil management practices. For example, field tests already show that farmers in many areas can get as good or better crop yields by tilling the soil less.

4. Origin of soil. These are basic studies on soil formation; on why soils vary from one place to another. The scientists say in general, soils vary according to "parent" material from which soil was formed, vegetative cover on the area in past years, kind of micro-organisms in the soil, climate and the length of time during which the soil has been developing. There are eight "great" soils groups in Minnesota, which are made up of 27 major "soil associations," which in turn are divided into about 300 different soil types.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Monday, Feb. 17 *
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Editor: This is the sixth in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

FORESTERS CONDUCT BASIC RESEARCH ON TREE GROWTH, USE

The lowly-regarded aspen or "popple" trees in northern Minnesota may someday have much higher prestige.

Scientists doing basic research in the University of Minnesota's School of Forestry are searching for fundamental facts that may provide the break-through needed to develop more uses for this tree.

There are vast areas of aspen in Minnesota. While it can be used for some types of lumber and pulp, it is generally a low-quality wood. There is not enough high quality aspen and still too little demand for low-quality aspen to make it very profitable for the timber owner.

One of the problems with aspen for pulpwood is that it has much colored wood that is inferior in making high quality paper. Foresters are conducting basic studies on this colored wood to learn more about its chemical composition and whether new processes might be developed to utilize it in high quality paper.

Another peculiarity about the aspen is that it has much better quality in some areas of Minnesota than in others. Yet, why this is so has never been determined. Basic studies on environment and growth, now being conducted by University foresters, may give some of the answers.

Such are examples of basic research in forestry at the University. As in any field, the purpose of it is to give background information for "applied" research later on. Other basic studies in forestry include:

1. Effect of chemicals on trees. Certain chemicals can be used to kill undesirable forms of brush and some can be used to make pulpwood and poles peel easier. Results from these chemicals aren't always the same, however. Basic

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researchers are studying what happens inside chemically-treated trees and brush, to learn how the chemicals move and how they affect the plants.

2. Lignin in wood. Wood contains a material called "lignin," which cements, or holds the wood fibers together. This substance is important in lumber, but it presents a problem in paper-making. In the most commonly-used pulping processes, lignin must be separated out and cast off as waste. Unfortunately, it reduces the oxygen content of water and may therefore be indirectly toxic to fish. Foresters are looking for basic clues that may help find better ways to dispose of or utilize this material.

3. Water movement. How water "infiltrates" the forest cover is a big question facing forest and soil conservationists. They need to know how fast water moves in forests compared to open fields and how this movement varies in different types of forests. Such basic information would be a big help in planning watershed management. Studies on this question are now underway in Minnesota.

4. Tree improvement. University foresters are collecting jackpine trees from around North America. The trees are used to find out how well different varieties are adapted to Minnesota and whether faster growing strains exist. Similar tests are being made on other trees, such as blue spruce and aspen.

5. Effect of tree thinning. While thinning forest stands is an "applied" practice, there are several basic aspects of it on which foresters need more information. For several years, they have been studying the effect of thinning on soil temperature, humus decomposition and changes in plants on the forest floor.

6. Tree flowering and pollination. Foresters are looking for basic reasons why certain trees won't cross in nature but can be crossed under different growing conditions. This type of study could eventually lead to production of better tree varieties.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Tuesday, Feb. 18 *
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Editor: This is the seventh in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

INSECT "LIBRARY" AIDS BASIC RESEARCH

One of the largest "libraries" of its kind is aiding University of Minnesota entomologists in their basic research projects.

There are no books in this particular library. Instead, it contains about 2½ million insect specimens. About 85 percent of them are from Minnesota and the rest are from around the nation and the rest of the world.

This collection plays a key role in basic research in entomology, says C. E. Mickel, head of the department of entomology and economic zoology. One of the big problems in insect control is identifying the pests when they first appear. With the collection they now have, University entomologists can make accurate identifications much faster.

Basic research--as well as applied studies--in the department of entomology and economic zoology is concerned with much more than just insect control, Mickel points out. Many insects are helpful and can be useful, such as honeybees and other bees that pollinate legume seed crops.

Also, as the name of the department implies, it is concerned with studies in wildlife and fish. There are basic studies underway in all of these areas. Some of them are:

1. Insect physiology. Entomologists are giving some thorough study to the cuticle, or outer shell, of insects. The cuticle plays an important role in the effect of insecticides on insects. The scientists hope to gain a much better knowledge of just what this role is. In another project on insect physiology, University entomologists are studying the importance of "symbiotes," which are minute organisms living inside the body cells of insects.

(more)

2. Insects in grain storage. Plant pathologists and entomologists at the University have already found that certain insects can increase spoilage in stored grain. Weevils can carry mold organisms on their bodies, research has shown. But there are still basic, unanswered questions which the scientists are studying. For example, it's still not entirely clear whether these insects actually need the mold organisms for their own survival.

3. Leafhoppers on potatoes and alfalfa. University of Minnesota entomologists are cooperating in a large-scale, basic study on leafhopper migration. The leafhopper is a problem both in potatoes and in alfalfa in Minnesota, yet it cannot live over winter here. Recent studies show that leafhopper migration is affected to some extent by the weather; it tends to move when favorable weather fronts appear.

4. Fish population studies. Scientists are continually searching for more basic information on how populations of all animal life grow and react in nature. In one current long-term project, economic zoologists are studying fish populations in Minnesota's Red Lake. This study has already been underway for about 9 years.

5. Animal population studies. A similar population study, but this one on external parasites on mice, is being conducted in the University's Cedar Creek Forest north of the Twin Cities. The scientists in this study are not concerned about the mice or parasites themselves. Instead, they regard these creatures as ideal "research tools." By observing these animals in a natural environment, they may learn new but basic principles of population growth. Such basic principles could very well be related to other animal life.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Wednesday, Feb. 19 *
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Editor: This is the eighth in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

BASIC DAIRY RESEARCH IS AID TO FARMERS

Basic dairy research at the University of Minnesota's Institute of Agriculture may turn some of the peculiarities of our faithful bovines into more profits for dairy farmers in years ahead.

Such research might also lead to more and bigger markets for milk and other dairy products.

C. L. Cole, head of the dairy department, points out that one such basic project involves the "complementary milk" theory. University researchers have learned in recent years that cows seldom give all their milk at milking time.

The milk which is held back is called "complementary." Dairy cattle scientists can collect it after injecting oxytocin, the milk "let-down" hormone, into cows immediately after milking.

What's the importance of this finding? Just this: The amount of complementary milk a cow has appears to be connected with the length of her lactation, or milking period. Also, this milk-holding trait seems to be inherited. If intensive studies now underway show that both things are true, dairy cattle breeders may be able to predict the future milking ability of calves according to the amount of complementary milk their mothers hold and according to whether the calves' sires have been selected for this trait.

Other basic dairy studies include:

1. Ova transplanting. Dairy cattlemen are trying to solve the basic difficulties in transplanting a fertilized "egg" from the uterus of one cow to another. If the problems can be eliminated and the process made successful, it may be possible

(more)

to transplant up to a dozen eggs from one high-producing cow to other cows in one year. This way, farmers could get more calves from their topnotch cows.

2. Artificial breeding. This process itself was developed long ago, but farmers would like to have certain aspects of it improved. One basic study at the University now is aimed at processing semen in such a way that it will keep longer without being frozen. Developing such a process calls for basic research, now being conducted, which will find ways to keep sperm cells alive for a longer period of time after a diluting material is mixed with them.

3. Dairy cattle nutrition. One current study involves learning whether the way a cow is fed during her early life has any effect on her milking ability later on. If it does, dairymen will get some important information on how growing calves and heifers should be fed. Scientists are also conducting research on growth requirements in calves.

4. Dairy cattle breeding. Dairy husbandmen are attempting to develop a basic breeding formula which might be used to improve cattle within each breed. Basic research in this case involves developing cattle families in which herdsmen can better predict the ability of their cattle to pass their characteristics on to their young.

5. Dairy industry. A current project could give valuable basic information to milk processors. Dairy industry researchers are looking for ways to put dried milk fat into suspension. This is one of the biggest "bottlenecks" preventing processors from producing a whole milk powder that when remade has the characteristics and flavor of fresh milk. When water is added to whole milk powder produced by present methods, the fat forms a scum at the top. There are other basic dairy industry projects being conducted on ice cream storage, cottage cheese and dairy bacteriology problems.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

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* For release: *
* Thursday, Feb. 20 *
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Editor: This is the ninth in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

SCIENTISTS CONDUCT BASIC RESEARCH ON POULTRY PRODUCTION, GENETICS

Basic research in poultry feeding has led to some of the most spectacular changes in farming known today.

Elton Johnson, head of the poultry husbandry department at the University of Minnesota, points out that it wasn't too many years ago when a turkey ate up to 7 pounds of feed for each pound it gained.

Today, Minnesota turkey producers routinely turn out Thanksgiving turkeys that average a pound of gain from only 4 or even 3 3/4 pounds of feed.

A good deal of the basic nutrition research behind these developments was conducted at the University of Minnesota. These fundamental studies produce facts that may not be significant by themselves, but may be valuable in feeding studies later on.

In one phase of basic nutrition work, University poultry scientists are studying basic amino acid requirements of both chickens and turkeys. They already know that it takes a certain percentage of protein in a bird's feed to get the most egg or meat production.

But protein percentage isn't the whole story. Like other farm animals and humans, too, chickens and turkeys require certain types of protein. And protein varies according to which amino acids--the "building blocks" of protein--it contains.

University poultry scientists are conducting basic research in several areas. They include:

1. Nutrition. In addition to the protein studies, poultry researchers are studying utilization of birds of basic sugar compounds, starch and fiber. They are

(more)

investigating the effect of diets and specific chemicals on "aortic rupture," a problem of excessive bleeding in turkeys. They are also studying the effect of sources of fat in poultry feed on the composition of carcass fat in laying hens.

2. Poultry products. One of the big problems in eggs is blood and meat spots. Just what causes them isn't known. But basic studies at the University are giving some important background information on them. Scientists have found, for one thing, that they apparently are two different things. It has often been thought that meat spots are simply blood spots which have darkened.

3. Egg quality. Basic studies on what goes on inside the egg during storage could eventually be a big help to producers and marketing agencies alike. Minnesota poultry researchers are closely studying storage changes, such as albumen (egg white) thinning, and deterioration of the vitelline membrane. This membrane is the one that surrounds the egg yolk. Scientists are also testing effects of different gases on the fowl, and how these gases eventually effect poultry products.

4. Poultry genetics. University poultry scientists are not developing new breeds of poultry, but they are gaining important basic information for the people who do the breeding work. These studies involve extremely complex studies of inheritance. The key to this work is in the "gene," the invisible components of the animal cells which carry inherited characteristics. The scientists are studying basic combinations of these genes which are "dominant"--and can be measured by statistical techniques and how gene interactions are affected by diets and other factors.

-pjt-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 6, 1958

* * * * * * * * * * *
* For release: *
* Friday, Feb. 21 *
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Editor: This is the last in a series of articles featuring basic research at the University of Minnesota's Institute of Agriculture.

BASIC ANIMAL HUSBANDRY RESEARCH AIMED AT BREEDING, NUTRITION

What procedures will bring the most rapid improvement in hogs raised on Minnesota farms?

To answer this question, livestock breeders need much more fundamental information in swine genetics. Getting this information is the aim of basic swine breeding studies being conducted at the University of Minnesota.

Most farmers raising market hogs follow some system of crossbreeding. This is because they can get larger litters, faster growth, and, as a result, more pork per unit of feed and labor by using crossbreds.

However, the proven worth of crossbreds--which has made them popular in market hog production--has also brought new questions. Until recently, the main concern was on breeding procedures for improving performance within the breeds themselves.

Now, the center of interest has shifted to methods that will be most effective for improving performance in crossbreds.

L. E. Hanson, head of the University's animal husbandry department, says these fundamental breeding studies involve some 3,000 or more pigs every year. The animals are raised and studied at branch experiment stations at Rosemount, Morris, Crookston, Grand Rapids, Duluth and Waseca.

Fundamental information from these studies, Hanson says, will provide the basis for developing better breeding methods; methods which will produce more rapid improvement in litter size, feed efficiency, carcass quality and other characteristics that affect profitability of hogs.

Other basic studies in animal husbandry include:

1. Genetics and environment in swine. This involves studies on whether swine from different breeds, lines or strains react differently to feed, housing and other

(more)

differences in management. Is one set of feeding and management conditions best for all breeds? Will animals developed under one environment do as well under others? These have been important questions in animal breeding for years.

2. Sheep breeding. Basic studies on "combining ability" in crossing sheep breeds are being conducted in flocks at the Waseca, Crookston, Grand Rapids, Morris and Rosemount experiment stations. Combining ability refers to how well two or more breeds complement each other when used in breed crosses. It is measured in terms of performance of the crossbred animals produced.

3. Swine nutrition. In one phase of this work, scientists are studying vitamin E needs of baby pigs and the relationship between vitamin E and selenium in preventing liver necrosis in pigs. Past research has shown that severe liver necrosis develops when pigs eat certain rations. What causes the condition isn't exactly known, but University scientists have been able to prevent it by adding either vitamin E or selenium to the diet. Vitamin E does not contain selenium; yet, either can prevent the necrosis. In basic studies, livestock nutritionists hope to learn why.

Other basic experiments in swine nutrition include studies of calcium needs of pigs 3-8 weeks old, and nitrogen "metabolism" studies--a measure of the adequacy of protein in the diet.

4. Beef nutrition. As part of the Beef-Grassland project at the Rosemount station, livestock scientists are making basic studies on forage utilization in beef cattle, and on things that affect silage utilization by steers.

5. Carcass studies. Research around the country has shown that certain feed additives can increase gains and feed efficiency in cattle. Studies at the University now are aimed at learning the effect of these additives on the chemical and physical composition of the carcasses.

6. Physiology of fetus development. In a cooperative project with the Medical School, the animal husbandry department is studying physiology of unborn lambs at different stages of development. These studies are concerned with oxygen transfer across the placenta--the physical connection between the mother and her unborn young--and the movement of antibodies between the mother and the young.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

Special to Television Stations

MINNESOTA POTATO BEETLES ARE RESISTANT TO DDT

Picture of L. K. Cutkomp and John Karamanos injecting beetle with insecticide

This is a view of the procedure used recently by University of Minnesota entomologists to determine the resistance of potato beetles to DDT. At right, Entomologist L.K. Cutkomp holds a potato beetle under a device which treats the insect with the chemical. Cutkomp found that Minnesota potato beetles are much more resistant to DDT than are beetles from Canada where DDT has never been used. This research confirms what Minnesota potato farmers have suspected recently: that insecticides other than DDT must be used to control potato beetles. The ones now recommended are toxaphene, dieldrin or heptachlor.

At left in this picture is John Karamanos, a visiting agricultural official from Greece.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate release

NEW STAFF MEMBER NAMED IN ENTOMOLOGY AND ECONOMIC ZOOLOGY

Thomas F. Waters, until recently a biologist for the Michigan Department of Conservation, has been appointed an assistant professor in the department of entomology and economic zoology at the University of Minnesota.

Waters will conduct research and instruction in fisheries biology at the University.

Originally from Hastings, Michigan, Waters has received all his collegiate training at Michigan state university, earning his Ph. D. there in 1956. From then until December, 1957, he was biologist in charge of the Pigeon River Trout Research station at Vanderbilt, Mich.

He is married and has two children.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
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February 11, 1958

SPECIAL TO TWIN CITY OUTLETS
* * * * * * * * * * * * * * *
* For release at 11 a.m. *
* Thursday, February 13 *
* * * * * * * * * * * * * * *

ECONOMIC CHALLENGES FOR AGRICULTURE SEEN BY ECONOMIST

Despite the many problems farmers face today, there is reason for a good deal of optimism for agriculture in the future, a University of Minnesota agricultural economist told the Central Livestock association annual meeting in St. Paul today.

"Looking ahead, we certainly can be optimistic rather than pessimistic," Sherwood Berg, head of the agricultural economics department at the University, said. "For the next two decades, the market for farm products will be expanded further by the growth in the population--probably 30 to 35 percent more people."

The rise in income for years ahead may well repeat increases of the last 16 years--about 50 percent in terms of constant purchasing power--according to Berg. He said that income increases are likely to be accompanied by further increases in proportions of meat, poultry, fruits and vegetables in American diets. "However," he added, "as income grows, we are not likely to eat much more per person."

Turning to other "economic challenges" in modern agriculture, Berg said the technological progress in wheat production, for example, will not result in more total wheat output. "Rather, the same amount of wheat will be produced as before with a smaller expenditure of man hours. It may well be one out of every three men previously engaged in production of wheat will be shifted to other occupations.

"Commodities which suffer from limited demand will tend to be relatively unprofitable, compared to other industries. In a progressive society, the proportion of resources in industries in which demand is limited continually undergoes a relative decline." He said the recent "drift to the cities" shows agriculture has been less profitable, broadly speaking, than industrial occupations.

Speaking on the soil bank, Berg said "This type of production control must be selective. If we are to curtail production of wheat and cotton, we must move into the heart of the area where these commodities are produced and formulate a program

(more)

which will call for withdrawal of total resources--and not merely "chasing acres" or shifting to crops which create problems in other areas.

"The problem of low income and poverty in agriculture cannot be solved by general price or income policy alone," according to Berg. "No possible price policy can solve the income problem of small, inefficient producers in the cotton South or in smaller numbers throughout the cut-over area of the Lake States."

"If any type of government program continuously calls for too large a volume of production which results in give-away programs, these programs are bound to come under increasing criticism from the public. And the public is now predominantly urban," Berg stated.

Berg observed that "on the whole, programs designed for direct control of livestock production, or support of livestock products, have not played an important part in our agricultural programs." The only exceptions, he said, were the period 1933-36 and the war years. "In the main, however, the livestock growers have tended to make their adjustments individually, in response to market influences and production costs rather than government programs. Barring the unforeseen, this is the course they are most likely to chart for the next few years."

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

SPECIAL TO TWIN CITY OUTLETS
* * * * * * * * * * * * *
* For release at 8 p.m. *
* Thursday, February 13 *
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UNIVERSITY AGRICULTURE STUDENT WINS GOLD WATCH

Dale Ripley, Winnebago, was presented a gold watch tonight (Thursday) for making the best all-around showing in a series of student judging contests held recently on the St. Paul campus of the University of Minnesota.

Ripley, a junior in agriculture, received the award at the annual All-Ag Stag chicken barbecue, traditional award night for the annual contest series.

Runner-up in over-all competition was Tom Laughlin, 883 W. Nebraska St., St. Paul.

Rodney Briggs, professor of agronomy at the University, was master of ceremonies at the award dinner which was prepared and served by the Poultry Science club, an organization of students in poultry husbandry.

Other winners in contests received awards ranging from belt buckles to trophies and plaques. Other winners were:

Dairy products--milk, John Ostgaard, Climax; butter, Herman Arvidson, Eagle Bend; ice cream, Ripley; cheese, Grunther Behrens, P-39 University Village, Minneapolis; over-all dairy products, Ostgaard.

Dairy cattle--Jersey, George Schwartz, Le Sueur; Holstein and oral reasons, Wilbert Schaffer, Cannon Falls; top freshman, Gerald Strandlund, Mora; over-all dairy cattle and products, Paul Suomalla, Frazee.

Crops--first, Kenneth Strand, 2362 Wellswood court, Bloomington; second, Russel Steen, Ada; Ed Pavek, Waubun; fourth, Jerome Haeg, Mora.

Soils--first, Ronald I. Anderson, Cokato; second, Donald Pluth, Estherville, Iowa; third, Stanley Blasey, Ada; Darrel Lockwood, Austin.

Poultry--breed judging, Ronald Hayes, Mountain Lake; market judging, Delbert Stoner, Ceylon; over-all poultry, Joseph Shatava, Pine City.

General livestock--beef, Bob Leary, Caledonia; swine, Elton Klaustermeier, Lester Prairie; sheep and high freshman, Dean Larson, Rothsay; oral reasons and over-all general livestock, Laughlin.

Meats--first, Dave Moe, 4521 York Ave., Robbinsdale; second, Leary.

Horticulture--identification, Pavek; judging, Dale Wreisner, 2926 45th Ave. S., Minneapolis; over-all horticulture, ipley.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 11 1958

To all counties

For use week of

February 17 or later

FARM FILLERS

"Probe and weigh will make hogs pay" is a slogan from H. G. Zavoral, extension livestock specialist at the University of Minnesota. At 200 pounds, he says, gilts kept for brood sows should not probe more than 1.3 inches of back fat. He points to Iowa research showing that for every 1/10 inch less back fat, it took 4 1/2 pounds less feed to make 100 pounds of gain.

* * *

Recent University of Minnesota research with sheep shows that stilbestrol can increase gains in wether lambs, but may actually decrease gains when fed to ewes. Also, a promising way to feed stilbestrol to wethers is to mix it in their salt and self-feed it, according to R. M. Jordan, livestock scientist.

* * *

S. A. Engene, University of Minnesota agricultural economist, says poultry producers can look for egg prices a little higher between now and late summer than they were during the same months of 1957. During the fall months, however, prices will be somewhat lower.

* * *

Electricity is really a cheap hired hand around the farm and home, says A. J. Schwantes, head of the agricultural engineering department at the University of Minnesota. In fact, its cost per unit has decreased by 24 percent or more on half of the lines studies in a 1956 survey in southern Minnesota.

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The U. S. Department of Agriculture forecasts 6 percent more pork next fall and winter, based on farmers' plans for baby pigs expected early in '58.

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A billion trees were planted in the U. S. in 1957 -- most in history.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958 Immediate release

MINNESOTA FARM CALENDAR

Feb. 10-21 Lumbermens Short Course, St. Paul campus.

Feb. 16-20 National Association of Soil Conservation Districts annual conference, Leamington hotel, Minneapolis.

Feb. 20-22 Upper Midwest Nitrogen conference, Lowry hotel, St. Paul.

Feb. 20-22 Spring Barrow Show, Albert Lea.

Feb. 24-28 Red River Valley Winter Shows and Northwest School Farmers Week, Crookston.

Mar. 1-8 National 4-H Week.

Mar. 3-4 Minneapolis Farm Forum, Radisson hotel, Minneapolis.

Mar. 8 State 4-H Radio Speaking contest, St. Paul campus.

Mar. 24-25 Fair Management Short Course, Radisson hotel, Minneapolis.

Mar. 24-29 Dairy Herd Improvement association training school, St. Paul campus.

Mar. 24-26 LP Gas Service School, St. Paul campus.

Mar. 27 Commencement, North Central School of Agriculture, Grand Rapids.

Mar. 27-29 State Rural Youth conference, St. Paul campus.

Mar. 27-28 Horticulture Short Course, St. Paul campus.

Mar. 28 Commencement, West Central School of Agriculture, Morris.

Apr. 10-12 Home Economics Career Days, St. Paul campus.

For more information, contact the Information Service, Institute of Agriculture, University of Minnesota, St. Paul 1.

B-1869-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

Immediate release

HORTICULTURE SHORT COURSE IN MARCH

The University of Minnesota's annual horticulture short course, planned especially for home gardeners, will be held on the St. Paul campus March 27 and 28, J. O. Christianson, director of agricultural short courses, announced today.

Separate sessions will be devoted to vegetable gardening, home fruit growing, commercial fruit growing and ornamental horticulture. Because of the interest in ornamental horticulture and in commercial fruit growing, a whole day's program will be devoted to each of these areas, according to R. E. Widmer, assistant professor of horticulture and program chairman for the course.

Members of the University horticulture, entomology and plant pathology staffs and representatives from industry will be featured speakers for the two-day event.

B-1870-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

Immediate release

UNIVERSITY RECEIVES MALTING BARLEY RESEARCH FUND

The University of Minnesota will receive $55,000 per year for an indefinite period from the Malting Barley Improvement association, Milwaukee, Wis. for barley research.

The grant was approved by the University Board of Regents at their recent meeting and will be used by the departments of agronomy and plant genetics, plant pathology and botany and agricultural biochemistry.

The Malting Barley Improvement association is supported by maltsters, malting brewers and the United States Brewers Foundation.

Research under the grant will be conducted in cooperation with the association and will be carried on at the St. Paul campus and the University's Northwest School and Experiment station, Crookston.

There will be three main subprojects in this research:

First, there will be studies on development, selection and evaluation of new strains and varieties of barley and on fundamental problems in barley inheritance, including disease reaction, malting quality and other characteristics.

Second, studies will be made on life cycles, survival, methods of spreading, response to surrounding conditions and control of organisms that cause diseases of barley. Scientists will also study microorganisms that grow in and on barley seed before, during and after harvesting and how they affect malting and brewing quality of barley.

Third, the research will include analyses for predicting malting quality of strains and varieties of barley. Studies will be made to improve methods of predicting quality of malting barley.

It is expected that this expanded barley research program will result in superior varieties of barley acceptable for malting and brewing and make barley a more dependable higher income cash crop for Minnesota farmers.

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B-1871-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

Immediate release

MINNESOTA SOIL GROUP TO HOLD LUNCHEON

Two nationally-known soil conservation authorities will address a Feb. 18 noon luncheon of the Minnesota Chapter of the Soil Conservation Society of America, to be in the Curtis hotel, Minneapolis.

According to W. P. Martin, head of the University of Minnesota soils department and president of the state chapter of the society, the luncheon will be in conjunction with the annual conference of the National Association of Soil Conservation Districts.

Speakers will be Russell Hill, East Lansing, Michigan, president of the Soil Conservation Society of America and H. Wayne Pritchard, Des Moines, Iowa, executive secretary of the society.

Claude Ebling, agricultural representative for the Soo Line, Minneapolis, will present his "Conservation Magic" show.

B-1872-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

Immediate release

WRAP PORK WELL FOR FREEZING

Consumers who are planning to put pork loins or other cuts of pork into the freezer while it is in plentiful supply should check on freshness of the meat and pay special attention to wrapping it properly.

University of Minnesota frozen foods specialists J. D. Winter and Shirley Trantanella point out that storage life of pork depends upon a number of factors. In the first place, pork should be frozen as soon as possible after the carcass has been thoroughly chilled following butchering. Freezer storage life of pork will be reduced in proportion to the length of time it is held at the market.

To retain top quality in pork flavor, it is also necessary to wrap the meat tightly in air-tight, moisture-resistant material. Though the recommended storage period for pork is four months, it will keep longer if the meat is fresh and if it is well wrapped. The University researchers recommend storing pork at 0°F. or, better still, at -10°F.

Press wrapping material close to the meat to keep out as much air as possible and to make a tight seal. The drugstore wrap is best.

Wrapping material that provides effective protection against oxygen and moisture is important because chemical reactions between air and pork fat produce unpleasant changes in both flavor and odor.

University of Minnesota tests show that Saran-type materials, combinations of polyethylene and cellophane or combinations of polyethylene and aluminum foil are all good protection against air. Many of the laminated papers, as well as aluminum foil, are good barriers to both oxygen and moisture vapor. Waxed locker paper is porous to both moisture vapor and to oxygen and hence should not be used for packaging unless pork is being held for only a month or two. Polyethylene bags are likely to be more satisfactory than waxed locker paper but not as good as the other materials mentioned.

Temperature makes a tremendous difference in keeping time, according to Winter and Miss Trantanella. In their tests they found that food kept at -15°F. was much superior in quality to food stored at 0°F., even when the latter food was wrapped well.

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B-1873-jbn

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 11 1958

To all counties

For use week of

February 17 or later

LAMBS NEED A GOOD START

The number of lambs you eventually get to market depends to a great extent on the care you give them at lambing time.

Philip A. Anderson, livestock scientist at the University of Minnesota, gives these pointers to help save a higher percentage of the lamb crop.

Clean out the lambing pens and use a good disinfectant spray if possible, Anderson says. There are always many sources of infection that lambs need protection against.

Use heat leamps and have on hand a supply of common medicants often needed for lambing. Plan to treat the navel cord with iodine.

When the lambs are being born, don't attempt to help the ewe unless absolutely necessary. More important, make sure the newly-born lamb starts breathing. Then put him in front of the ewe so that she will claim him and dry him off.

Next, check into the "milk supply." Make sure the lamb gets his first meal by a half an hour or so after being born. Many sheepmen say a lamb is "half-raised" if he is strong and nursing well.

If at all possible, see to it that lambs get ewe's colostrum shortly after birth. An orphan lamb may be put on a ewe that has lost her lamb or only has one. But where it's absolutely necessary to use cow's milk, remember that ewe's milk is much higher in fat than cow's milk, so don't add water. Use milk from a recently-freshened cow if possible. Warm the milk if necessary but don't overheat it. Lambs will drink from 1-2 ounces every 2-3 hours for the first 3or 4 days.

Lambs usually don't need any feed other than milk until they are 10-14 days old. Then give them a ration of ground or crushed oats, bran and oil meal. When the lambs are older, grinding is no longer necessary and you may add some corn to the ration. See that feed racks are clean and keep the grain fresh.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 11 1958

To all counties

For use week of

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NEW TREATMENT EFFECTIVE FOR ANEMIA IN PIGS

Injecting with an iron-dextran solution is the best way to cure iron-deficiency anemia in your baby pigs, according to H. C. H. Kernkamp, veterinary pathologist at the University of Minnesota.

The treatment is also a very good way to prevent this anemia.

Iron-dextran material is available in most areas and comes in solution form. The dose is calculated so that each pig receives 100 milligrams, so it needs to be used according to directions. The treatment is not difficult to administer.

When used as a preventive treatment, it should be given to pigs when they are about 6-9 days old. The dosage, though, is the same for preventive treatment as it is for pigs that have anemia.

This treatment has given remarkable results when used on pigs suffering from iron deficiency. Some of the earliest research on this treatment in this country was conducted by the University's College of Veterinary Medicine.

Kernkamp reports that iron-dextran injections cured more than 90 percent of the pigs treated in the most recent tests. No other treatment so far has given such good results against anemia. Even pigs not completely cured showed a marked improvement after being treated. Also, there were no undesirable side effects from the treatment.

Iron-deficiency anemia, when it occurs, usually hits pigs between 10 and 30 days old. Symptoms are general unthriftiness and weakness. The condition may be either a direct or indirect cause of many deaths in pigs.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 11 1958

To all counties
For use week of
February 17.

County Agent: This is the last in a series of six articles summarizing research on use of nitrogen fertilizers.

UREA FERTILIZER IS EFFECTIVE IN MINNESOTA

If it ever becomes cheaper, urea nitrogen will be used much more often on Minnesota soils.

County Agent _____ says University of Minnesota experiments show that urea is equal to other forms of nitrogen in increasing yields. At present, though, urea nitrogen costs about 15-16 cents per pound, compared to around 10-14 cents for other common forms of nitrogen.

In 1954 field trials in Minnesota's Isanti county, Soils Scientist J. M. Mac Gregor at the University compared urea and nitrate nitrogen on oats at two different rates -- 20 pounds and 40 pounds of nitrogen per acre.

Plots receiving 20 pounds of nitrate nitrogen per acre yielded 20.6 bushels of oats per acre, compared with 23 bushels from plots receiving urea nitrogen at the same rate.

At the 40-pound rate, nitrate nitrogen plots produced 26.2 bushels and urea plots yielded 28.4 bushels per acre.

Unfertilized plots yielded only 13.1 bushels of oats and .45 tons of straw per acre.

At the 20-pound rate, ammonium nitrate-fertilized plots yielded .89 tons straw and urea plots .82 tons straw per acre. Straw yields for the 40-pound rates were .82 and 1.08 for the nitrate and urea plots, respectively.

More research on use of nitrogen fertilizers is being reported this week at the Nitrogen Conference in the Lowry Hotel, St. Paul.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 10 1958

To all counties

ATT: HOME AGENTS

For use week of
February 17 or later

HOMEMAKERS NEED LEISURE TIME

What happened to the leisure time you were hoping to have today? asks ____ _____ county home agent.

Many _____ county homemakers feel they don't have time for relaxation.

The average homemaker uses about 52 hours a week in homemaking activities and 49 hours in sleep. This leaves over 60 hours a week to invest pretty much as she chooses.

If you find you don't have as much time as you think you should have, it may help to discover how you spend your time, says Kathleen Jeary, assistant professor of home economics at the University of Minnesota.

You may discover you are wasting time. Or you may find by the time you finish your homemaking tasks that you are too tired to really enjoy your leisure time.

By rearranging your schedule or learning more efficient ways of doing these homemaking tasks, you may find many added hours.

Just having a schedule and planning the important jobs will help you see when you can make time for leisure, Miss Jeary points out. Some of the unimportant things can wait. Plan large jobs such as cleaning so that a little is done each week rather than trying to do the whole job at once.

Some homemakers find that by alternating the difficult and disliked tasks with the more pleasant ones they get a more relaxed feeling. For some women, baking may be very enjoyable. Yet this is a useful activity, also.

Shopping, a necessary task, may be turned into an outing with the baby in the family. This activity does not have to be hurried. A leisurely trip to the store, perhaps taking a different route from time to time to enjoy nature's wonders, can be very relaxing.

You may be able to use the time the children are napping for leisure time pursuits. Or a good time for Mother to relax may be when the older children are home from school to watch the younger ones. - meb -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 11 1958

To all counties

ATT: 4-H AGENTS

For use week of
February 17 or later

4-H'ERS SHOULD MAKE MID-WINTER FIRE CHECK

Fire is a greater threat to life and property in winter than at any other time of year.

That's why a mid-winter check now may help to prevent disastrous fires. This is a good time, too, for 4-H members who are taking the safety activity to make their inspections and complete the fire prevention phase of their safety work, suggests 4-H Agent _____ _____.

Farm fires in Minnesota destroyed more than a million dollars worth of property last year - much of it food and produce vital to the national economy. In 1956, 11 farm people lost their lives.

Many fires are caused by such thoughless acts as tossing away a lighted match, cigarette or cigar, allowing rubbish to accumulate, overloading electric wiring or leaving children alone at home.

Glenn Prickett, extension safety specialist at the University of Minnesota, points out that the only way to reduce the tremendous loss of life and property from fire is to remove the causes. He cites these as the most frequent causes of farm fires in order of their importance:

1. Defective electrical equipment or misuse of electrical equipment.
2. Overheated or defective stoves, furnaces, pipes.
3. Defective chimneys. Defective chimneys are the number one cause of farm home fires.
4. Burning rubbish.
5. Careless smoking, careless handling of matches.

In making the inspections for fire hazards around the farm and in the home, keep in mind the principal causes of Minnesota farm fires and make every effort to eliminate them, Prickett urges.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 11, 1958

Special to Wilcox

County Agent Introduction

President of the Minnesota County Agricultural Agents' association is Miles Rowe, Wadena county agent. A veteran extension worker, Rowe has been in Wadena county since 1934. He grew up in Illinois, Iowa and southern Minnesota and attended the University of Minnesota, where he studied agricultural economics and dairy husbandry. ~~Ne~~ In 1951, he received the Distinguished Service Award from the National Association of County Agricultural Agents.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 13, 1958 Immediate release

4-H PIE QUEEN IN NATIONAL CONTEST

Minnesota's 4-H pie queen, Doris Benson, 17, Clitherall, will compete with other state pie champions in the national cherry pie baking contest Feb. 20, in the Sheraton hotel, Chicago.

She will leave for Chicago from the Twin Cities Monday, Feb. 17, accompanied by Verna Mikesh, extension nutritionist at the University of Minnesota.

Doris won the trip to Chicago to compete in the national contest when she was selected state 4-H pie baking champion at the Minnesota State Fair last fall in competition with 69 county winners. She scored 98 points on her pie and 97 on her technique.

A freshman this year at St. Cloud State college, she plans to major in home economics. At the West Otter Tail county 4-H Demonstration day last year, she won top placing in dairy foods, silent pie, silent bread and clothing demonstrations. She is the third member of the Nidaros 4-H club to be selected Minnesota 4-H pie queen.

The national cherry pie baking contest, sponsored for the 26th year by the National Red Cherry institute, is scheduled for Thursday morning, Feb. 20, in the Grand Ballroom of the Sheraton hotel. Each contestant will bake two cherry pies. Special tours and entertainment are planned for the contestants while they are in Chicago.

Awards include a $500 college scholarship in home economics, a trip to New York City and Washington, D. C., and a new electric range to the national champion; $200 college scholarships and electric ranges to the four regional winners; and $100 bonds to the regional reserve winners.

The contest is limited to boys and girls between the ages of 14 and 21. Only one representative from each state may participate.

B-1874-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 13, 1958 Immediate release

NITROGEN CONFERENCE TO COVER MANY TOPICS

How much nitrogen fertilizer will pay off on Minnesota soils?

What crops need extra nitrogen and how should it be applied?

These and other questions farmers have on nitrogen--a fertilizer nutrient that's gaining popularity rapidly nowadays--will get some careful discussion at the Upper Midwest Nitrogen conference Feb. 20-22 at the Lowry hotel, St. Paul.

The conference is sponsored jointly by the Minnesota Fertilizer Industry, Soil Improvement committee and the University of Minnesota.

Keynoting the conference Thursday, Feb. 20, will be M. H. McVickar, chief agronomist for the California Spray Chemical corporation, Richmond, Calif. He will talk on the question "How can we work as a team to put soil fertility facts to work on the farm?"

Following an address by Harold Macy, Dean of the University's Institute of Agriculture, a panel of University men, commercial representatives, a banker and a farmer will discuss "Our part in getting the job done."

Speaking on this panel will be W. P. Martin, head of the University soils department; Roland Abraham, assistant director of the Minnesota Agricultural Extension Service; Proctor Gull, chief of agronomy development section for the Spencer Chemical company, Kansas City, Mo.; H. E. Hartzler, Manhattan, Kansas; Les Boler, farmer near Winnebago, Minn.; and Richard Bird, banker at Red Wing.

An evening open house will be held Feb. 20 in the new University soils building, which is expected to be completed by that time.

The keynote speaker for the Friday, Feb. 21, session will be George D. Scarseth, director of the American Farm Research association, Lafayette, Ind., who will discuss "Nitrogen--our big need." "Nitrogen, soil organic matter and soil structure" will be discussed by George Blake, University of Minnesota soils researcher.

(more)

"Nitrogen and the life of the soil" will be the topic for a talk by E. L. Schmidt, University soils scientist, and John Grava, supervisor of the University's soil testing laboratory, will explain "Nitrogen availability measurements in soils."

Visitors to the conference will be admonished "Don't forget phosphorus, potash and lime," by A. C. Caldwell, soils research worker.

"Crop production possibilities for Minnesota soils" will be viewed by Charles Simkins, extension soils specialist at the University, and Ermond Hartmans, extension farm management specialist, will talk on "The economics of production potentials."

A panel on "The role of nitrogen in production potentials" will be a feature of the Feb. 21 afternoon session. Speakers will be J. M. MacGregor and P. M. Burson, University of Minnesota soils scientists; R. A. Young, soils research worker from North Dakota Agricultural college and M. R. Teel, agronomist from Purdue University.

Laurie Peterson, Midland Cooperative, Inc., will speak on "Industry's program for getting the job done in Minnesota."

The conference will wind up with a tour of the St. Paul Ammonia Products Nitrogen Plant south of the Twin Cities Saturday morning, Feb. 22.

B-1875-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 13, 1958 Immediate release

DEMONSTRATION SHOWS IMPROVEMENT IN HOG FEEDING

Like American families, pigs today are getting better food than ever.

This was strikingly portrayed in a recent University of Minnesota demonstration.

Four pigs on a modern menu gained 16 times as rapidly during a 2-month feeding period as did four of their brothers that received a ration used by many Minnesota farmers a half century ago.

Besides, pigs on the 1957-58 ration required less than a fourth as much feed for each pound of gain as did those on 1908 feeds.

This demonstration was conducted by R. J. Meade, swine nutritionist at the University. A similar test was run by L. E. Hanson, head of the animal husbandry department, in 1953.

Actually, there were four rations tested in the recent demonstration. Meade used pigs from four litters, divided so there was one pig from each litter in each of four groups. One group received a 1908 ration, one a 1930 ration, a third was fed a 1953 menu and the fourth was fed by 1957-58 standards.

Pigs on all four rations averaged about 33.5 pounds when put on the test. But 62 days later, there were some big differences.

The pigs fed 1957-58 rations weighed 132.2 pounds at the end of the test. These pigs had gained 1.6 pounds daily and required only 2.82 pounds of feed for each pound of gain--most efficient of all four groups. Pigs on the 1908 ration weighed only 40.2 pounds when the test ended, for a daily gain of about .1 pound daily and a feed requirement of 13 pounds for each pound of gain.

In general, gains and feed efficiency for the 1930 ration were poorer than those from the 1908 ration. Pigs on the 1953 feed made about the same gains as the 1957-58 group, but required slightly more total feed for each pound of gain.

The 1908 ration contained ground yellow corn and a complex mineral mix, which was a common ration given to hogs in that day. The 1957-58 ration contained ground

(more)

yellow corn, tankage, soybean oil meal, fish meal, ground limestone, steamed bone meal, high zinc trace element salt and a vitamin-antibiotic premix.

The main difference between the 1953 and 1957-58 rations is that the more modern one had a lower proportion of high fiber feeds, more high energy components and contained higher levels of some feed additives.

Also, the up-to-date ration was geared to meet the changing requirements of the pigs. From the beginning of the test to 50 pounds in weight, the mixture contained 18.5 percent protein. From 50-100 pounds, it contained 16.5 percent and after the pigs weighed 100 pounds, it was reduced to 14.5 percent protein.

This ration was the same as recommended for the Minnesota Swine Evaluation station. It contains about 2.5 percent more protein than is normally recommended for market pigs. The higher level is used at the Evaluation station because boars require more protein than do market pigs.

Why did pigs on the 1908 ration do so poorly? Meade says the old-time feed mixture was deficient on riboflavin, niacin, pantothenic acid, vitamin B_{12} and choline. Besides, it lacked quantity and quality of protein. It was deficient in several of the "essential" amino acids, or protein components which hogs need.

The 1930 ration contained ground yellow corn, meat and bone scraps and high-zinc trace element salt. This ration had 16 percent protein, which is adequate for 33 pound pigs. Yet, these pigs did as poorly as did those on 1908 rations. Meade says this is most likely because the 1930 ration used in the demonstration was too high in calcium and deficient in certain vitamins. It was also low in at least one of the essential amino acids which are needed to correct the protein deficiencies of corn.

Meade says the demonstration clearly shows why farmers didn't produce many pigs in drylot 28 and 50 years ago. They were able to produce spring pigs because these pigs were then raised on pasture, which supplied many nutrients lacking in the feed rations.

B-1876-pjt

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 15 1958

HELPS FOR HOME AGENTS

(These shorts are intended as fillers for your radio programs or your newspaper columns. Adapt them to fit your needs.)

In this issue:

CONSUMER MARKETING

Beverages Served at Home

We drink more coffee at home than tea or soft drinks, according to the U.S. Department of Agriculture household food consumption survey. A little over 16 six-ounce cups of coffee a week is the per person average, as compared with 5 cups of tea per person and a little over 2 cups of soft drinks. As for milk, 94 percent of the families interviewed reported using it compared with 91 percent for coffee. But not all the milk was used as a beverage. Thus it seems likely that the quantity of milk we drink is less than the quantity of coffee, though total use of milk runs higher.

* * *

Revolution in Carrot Patch

A revolution has been going on in the carrot patch -- among people who raise carrots and ship them to market. The result: today about 85 percent of our carrots come to us in plastic bags with no tops. Only five years ago, almost all carrots came to market with their tops on. But market men found that carrots got to consumers in better condition with less loss if tops were taken off and carrots packed in plastic bags. The grower got more carrots in the refrigerator car and it took less ice--so the practice has saved money for everyone and given us better carrots.

- jbn -

Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and U. S. Department of Agriculture Cooperating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

HOME BEAUTIFICATION

Make Lilies of Valley Bloom Now

How would you like to enjoy the fragrance of lilies of the valley from your own garden when cold March winds are blowing?

That's not impossible, even here in Minnesota, says C. G. Hard, extension horticulturist at the University of Minnesota.

If you have a bed of lilies of the valley, dig up a few clumps. Put them in a pan about 4 inches deep, keeping the clumps moist. Keep them in a cool, dark room until the shoots are about 1 1/2 inches long. Then you can place them in the living room or wherever you want to enjoy their delicate bloom and lovely fragrance. It will take two to three weeks to force them.

* * *

Bring Spring into the House

Tired of winter? One cure for those winter doldrums is to bring a touch of spring into the house by forcing branches of some of your flowering shrubs.

Here are some tips from C. G. Hard, extension horticulturist at the University of Minnesota, on how to force branches for early bloom.

With a sharp pruner, cut large branches with interesting shapes from apple, cherry or plum trees or early spring-flowering shrubs. French hybrid lilac, mock orange, bridal wreath, flowering almond, crabapple or plum will all bloom successfully. Cut the branches on a warm day when there is some activity in the plant.

Bring the branches into the basement of a cool room about 60°F. Crush the stems and then place them in a deep container of water. Once the branches are thawed out, soak them in water -- the laundry tub is a good place -- for half an hour or 45 minutes to soften the bud scales. Repeat the soaking process at intervals several days apart until buds begin to appear. When the branches are in full flower, arrange them attractively in a vase or bowl and bring into the living room or wherever you want to enjoy their color and fragrance. Cut the ends occasionally to keep the branches fresh longer.

Branches from the horse chestnut, Ohio buckeye, sumac, aspen, tamarack, grape and dogwood all make interesting arrangements too.

- jbn -

CLOTHING

Accessories -- Finishing Touch

That extra something that completes a costume may be a large handbag or just a tiny scatter pin. No matter how large or small this article is, it must "go with" your outfit.

It all adds up to this, says Mrs. Charlotte Baumgartner, associate professor of home economics at the University of Minnesota. Accessories should be similar in texture to the outfits with which they are used. Accessories for casual clothes tend to be opaque and loosely constructed, with uneven surfaces. Tailored accessories are generally opaque, firm and smooth. Dressy accessories can be more varied: rich or lustrous or may be transparent.

For casual separates, a low-heeled walking shoe and a sturdy shoulder strap bag might add that finished look. A tailored suit may be combined with medium-heeled calf pumps and a simple matching purse. Suede sandals and a soft, gathered handbag in matching suede or broadcloth would "go with" a silk afternoon dress.

* * *

Select Flattering Clothes

"It's the latest fashion."

This phrase has been the guide of many women in selecting their wardrobes. Mrs. Charlotte Baumgartner, associate professor of home economics at the University of Minnesota, gives these suggestions about the "latest fashion":

A woman cannot completely ignore fashion and be considered well dressed, but no one is required to be the first to accept a new style when it enters the fashion scene. The important thing to remember is to select from current fashions only those lines, colors and textures which are flattering to you as an individual.

The woman of good taste and imagination turns to fashion as a source of ideas and inspiration. She doesn't become a slave to fashion, but rather remains its master and uses it to build her own distinctive style.

- sah -

HOME EQUIPMENT

Re-Season Waffle Bakers to Eliminate Sticking

Waffles which stick in your waffle baker can be eliminated by re-seasoning the iron. Florence Ehrenkranz, professor of home economics of the University of Minnesota suggests brushing the baker with unsalted fat, heating it, then cooling it slightly. Bake one waffle to absorb the excess fat and throw this waffle away. Remember that a waffle recipe low in fat may cause waffles to stick also.

If brushing the waffle iron with unsalted fat does not correct the sticking, the wax on the grids may have melted or worn off. In that case, one manufacturer has this suggestion: heat the waffle baker and lay waxed paper between the grids. Then allow the waffle baker to cool and remove the waxed paper.

* * *

Consider Stripped Ranges

Many women don't use their ranges to the fullest advantage when they have so many small appliances. Before you purchase a range, consider the models stripped of "extras" if you own several small appliances, suggests Florence Ehrenkranz, professor of home economics at the University of Minnesota.

* * *

Tip When Buying Deep Fat Fryers

Most deep fat fryers are very difficult to clean. Consider this problem carefully when you're buying a deep fat fryer. Be sure it is relatively easy to clean.

* * *

Separate Circuit for a Washer

A separate circuit for the automatic washer is a good idea, according to the National Adequate Wiring Bureau.

The automatic washer requires low current and wattage while running, but upon starting and spinning the current and wattage rise instantly. If other appliances are being used at the same time as the washer starts or spins, a fuse might "blow".

- sah -

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

Timely Tips for The Farmer, issue of Feb. 15

The big factor in profitable pork production is raising the most pigs per sow and getting them to market in the shortest time. It is best to aim for at least eight or more pigs per sow and get them on the market weighing 220 pounds in less than 6 months.

--- H. G. Zavoral

* * * * *

If possible, plan your cattle feeding operations to avoid marketing this spring. From all indications, it looks like there will be a price slump on fat cattle during March or April.

--- Paul Hasbargen and Ermond Hartmans

* * * * *

There are several ways to prevent iron deficiency anemia in pigs farrowed this winter. One way is to give the little pigs access to good, clean soil. If you do this, put the soil in a box where the pigs can get to it. Another way is to paint iron-containing solutions on the sow's udder. You can also get solutions or pills for treating the pigs individually. Finally, there are new compounds which can be injected into the pigs when they're about 4 days old. These injections not only prevent anemia; they also help the pigs gain more efficiently.

--- R. B. Solac

* * * * * *

The recently completed Hay Show at the University of Minnesota demonstrates that value of hay can be improved by cutting at the right time and either using hay conditioners or mow curing systems or a combination of the two.

--- W. F. Hueg

* * * * * *

If you're planning to put in or replace an electric water heater in the milk house, it pays to check on whether the power supplier has lower rates for off-peak electrical equipment. If he does, an off-peak heater can save money on operating costs.

--- V. M. Meyer

* * * * *

It doesn't pay to use heavy nitrogen applications on land for corn when the field was in alfalfa the year before. In the X-Tra Corn Yield Contest last year, farmers who used 100 pounds of nitrogen for corn following alfalfa or on well-manured land lost up to $15 per acre on their investment.

--- C. A. Simkins and C. J. Overdahl

* * * * *

Ground or crushed oats, bran and oil make up a good ration for young lambs. When they get older, grinding is no longer necessary and some corn may be added to the ration.

--- P. A. Anderson

* * * * *

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 17 1958

To all counties

ATT: HOME AGENTS

For use week of
February 24 or after

TIPS GIVEN ON HOW TO BE WELL DRESSED

It requires thought and careful planning to be a well dressed woman.

When a woman selects her clothes, she uses three basic elements in art - line, color and texture - in making her decision.

To help you choose the most flattering outfit, Home Agent _____ _____ passes on some clothing suggestions from Mrs. Charlotte Baumgartner, associate professor of home economics at the University of Minnesota.

If you are short and heavy, strong vertical movement from hem to shoulder is best to give you that tall, slim look. Dark or grayed solid tones in firm, medium -weight fabrics will also help.

If you are tall and slender and would prefer a fuller figure, you may use horizontal lines effectively. Soft and slightly bulky fabrics are generally becoming.

If you are tall and large boned and want to look shorter and more slender, diagonal lines will help camouflage the true proportions of the figure. Choose colors that are quiet and subdued with flat fabrics that have body, yet are not thick or stiff.

In addition to selecting clothes that accent the best parts of the figure, you will want garments of good-quality fabrics, with fine workmanship and excellent fitting.

Another aspect of being well dressed is to wear the right garment at the right time. In general, today's informal way of life allows a woman to dress casually. During the day, functional clothes are the accepted standard of dress. For street, business, or travel an.. impersonal tailored outfit is correct, while for social events, you may want to strive for elegance or drama.

Dark and neutral tones like black, brown and gray are usually best as the basic wardrobe colors. Bright colors are more often reserved for use as contrasting accents. It is wise to remember that if a bright color is used for an entire garment, it is most pleasing if worn by a small or slender person. - sah -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 17 1958

To all counties

For use week of

February 24 or later

BETTER CARE WILL RAISE HOG PROFITS

Farrowing stalls, guard rails, electric heat lamps and extra care at farrowing time can make it possible to raise two more pigs from each litter to market weight, according to County Agent _____.

Here are some tips for farrowing time from H. G. Zavoral, extension livestock specialist at the University of Minnesota, to make such increase possible.

First, use clean farrowing stalls. A third of the farmers that made the 1957 Minnesota Swine Honor Roll used farrowing stalls and saved 9.3 pigs per sow. The average for the entire state is 7.

Second, install heat lamps about 30 inches off the floor. Start out with 250-watt lamps and change to smaller ones as the pigs get bigger. Lamps do more than keep the little pigs warm; the light attracts them and keeps them from getting too close to the sow. That way, the little pigs are less likely to get laid on.

Third, avoid drafts and keep the bedding dry. About 48 hours after the pigs are born, use a treatment to prevent iron deficiency anemia.

Fourth, follow a good feeding plan. Give the pigs a "pre-creep" feed -- one fortified with vitamins, antibiotics and minerals -- as soon as they will eat it. When the pigs are about 8 to 10 days old, boost the protein content of the sow's ration to about 16-17 percent, to make sure she milks well. Keep her on this ration as long as the pigs are nursing.

Finally, pick out your strongest, most uniform litters and identify them with an ear-notching system. Then you can select the best pigs for breeding later on. Charts showing how to ear-notch pigs are available at the county agent's office.

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University Farm & Home News
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February 17 1958

To all counties

For use week of

February 24 or later

NEW DAIRY PLAN AVAILABLE SOON

How much are Bess, Rose and the other cows in your herd producing?

What kind of wages are you getting for taking care of them?

These and other questions can be answered by a new milk record and culling guide recently developed by extension dairymen at the University of Minnesota, according to County Agent _____.

Here's what it involves:

You simply weigh the milk one day each month. A chart shows you, based on these weights, what each cow is paying you in wages. Forms for this system are available from the County Agent's office.

This is the simplest of all record systems and, of course, doesn't supply the complete information that you would get from standard DHIA testing. But as ____ _____ points out, only _____ percent of the cows in _____ county are being tested through the DHIA program. Therefore, there is a real need for the other _____ percent to get some information on production of individual cows to find out which ones need to be culled out.

Records are essential to find which cows are making money, _____ says. In many herds, there are some cows that are not even paying for their feed, to say nothing of paying other costs and still giving the farmer something for his labor.

The new record plan can give the diaryman a start in finding which cows are just boarders, and which are paying theif keep.

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University Farm & Home News
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A U. of M. Ag. & Home Research Story

To all counties

NEW HARDY FRUIT FOR MINNESOTA

Three new hardy fruit varieties have been developed for fruit growers and home gardeners by the University of Minnesota and will be available for planting this spring, announces County Agent _____ _____.

The Welcome gooseberry, Centennial and Northland apple-crabs are the new fruits being introduced by the University this year. Stock of these new fruits is available from Minnesota nurseries.

The new fruits are the result of years of breeding work at the University of Minnesota Fruit Breeding Farm and some years of testing there and at other locations. The fruits have also been tested for freezing and canning quality at the University food processing laboratory on the St. Paul campus.

The Welcome gooseberry has two characteristics especially welcomed by gardeners -- 1) the spines are reduced in size and number so the fruit can be picked comfortably and safely and 2) the bushes are relatively resistant to disease. The mildly tart large red berries are good for jam and pie.

The two new apple varieties are called apple-crabs because they are larger than crabapples and resemble apples in eating quality. A medium-early apple, the Centennial bears heavy crops of red fruits during late August and early September. It is a hybrid of Wealthy apple and Dolgo crabapple. Because trees are semi-dwarf, they are suitable for planting in the home yard. The Centennial is winter hardy.

The Northland apple-crab is a hardy, early, productive variety, particularly for northern Minnesota. It has been described as the best all-round crab for that area. An attractive, bright red apple, the Northland is larger than Dolgo, one of its parents, but smaller than McIntosh, its other parent. It is good for sauce, jelly and pickles and for eating fresh. Trees are medium in size and very productive but are not entirely free from blight or scab. Ripening season is early, beginning in mid - August.

- jbn -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 17 1958

To all counties

ATT: 4-H CLUB AGENTS
Fillers for use week of
February 24 or March 3

FILLERS FOR NATIONAL 4-H WEEK

Leaders in industry say one of the finest recommendations a young man or woman can offer in applying for a positionis a successful 4-H background. They have found from experience that such 4-H'ers have learned to get along with people and have developed good work habits.

* * *

4-H is dedicated to all boys and girls between 9 and 21 who want to "learn by doing."

* * *

4-H is an international organization with more than 2 million members. In Minnesota close to 47,000 boys and girls in some 2,000 4-H clubs carry on 4-H projects with the help of nearly 8,000 volunteer leaders. The 4-H program is a part of the extension work in agriculture and home economics carried on by the Cooperative Extension Service of the United States Department of Agriculture, the University of Minnesota and the counties.

* * *

An opportunity for fun and good fellowship, for practical training and for character and personality development -- these are some of the things the 4-H program means to 4-H club members. Boys and girls between the ages of 9 and 21 learn by doing through carrying projects in agriculture and home economics or general projects such as junior leadership, home beautification, soil conservation or farm and home shop.

Boys and girls interested in joining a 4-H club should see their local club leader or county extension agent.

* * *

Climax of National 4-H Week in Minnesota is the statewide 4-H speaking contest. The two state champions will broadcast their speeches over WCCO at 3 p.m. on Saturday, March 8.

* * *

Boys and girls living in cities, towns and suburban as well as rural areas are eligible to join 4-H clubs. Last year, 20 percent of Minnesota's 47,000 4-H members came from urban and other non-farm areas.

* * *

The four H's on the 4-H cloverleaf emblem stand for head, heart, hands and health, which are emphasized in the club program. They imply these goals: head - to learn the value of science by applying the latest scientific knowledge to agriculture, homemaking and other projects; heart - to develop wholesome character and personality and the qualities of good citizenship; hands - to acquire useful skills in homemaking, agriculture and other vocations; health - to cultivate good health habits which lead to satisfying, happy living.

- jbn -

University Farm & Home News
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February 17 1958

To all counties

For use week of

February 24 or later

FARM FILLERS

From the standpoint of livestock farmers, the hog and beef feeding ratios are the most favorable on record, say agricultural economists at the University of Minnesota. These ratios are the amount of feed which can be bought with 100 pounds of liveweight of the animals concerned. The beef-corn ratio, for example, was 29.1 for January. The highest it was in the past was 26.7 in fall, 1932.

* * *

If ewes aren't shorn before lambing, they should at least be shorn around their eyes -- if the sheep normally have wool on their faces -- and inside the thighs and around the udders. This advice comes from R. E. Jacobs, extension livestock specialist at the University of Minnesota.

* * *

Fertilization can change the actual forage composition of a field, regardless of the kind of legume-grass mixtures used. Paul Burson, University of Minnesota soils scientist, says adding at least 60 pounds of nitrogen per acre can change a mixture of 70 percent legumes and 30 percent grass to just the reverse -- 70 percent grass and 30 percent legumes. This can be important in the possible control of bloat when the field is used for pasture.

* * *

If you have a Farm Conservation Plan as a soil conservation district cooperator, this is a good time to check it over. It may need revising, says Roger Harris, extension soil conservationist at the University of Minnesota.

* * *

In most fields, soybeans do not respond to nitrogen applied to the soil the year before, says J. M. MacGregor, soils scientist at the University of Minnesota.

* * *

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 17 1958

To all counties

ATT: 4-H CLUB AGENTS

For use week of Feb. 24
or March 3

PRAISE GIVEN 4-H PARENTS

Parents of 4-H club members in _____ county deserve special recognition for the vital part they have played in contributing time, effort and resources in supporting a youth program of learning by doing, says Leonard Harkness, state 4-H club leader at the University of Minnesota.

National 4-H Week, March 1-8 is an appropriate time to salute parents for their important contribution to the success of the 4-H program, he declares. Many of these parents are volunteering their services as adult leaders of their local clubs, giving in time alone what amounts to a total of 16 days a year or more to their club activities. Besides spending some time in training for their work, the volunteer leaders help members plan their programs, attend regular club meetings, visit homes of members to assist with demonstrations and accompany members to club events outside the community.

Scores of parents who are not local leaders also play a vital role in the success of the 4-H program through the encouragement and advice they give to their sons and daughters. The most successful 4-H members, County (Club) Agent _____ points out, have the interest and the support of their parents.

A special word of praise, too, during National 4-H Week, could go to many local business people -- many of them also 4-H parents -- who give invaluable financial support to 4-H work and many of its activities, County (Club) Agent _____ says.

Among the many benefits parents reap in taking an active part in 4-H club work is a closer relationship with the children, as 4-H work becomes "a family affair." _____ also lists among the satisfactions parents get is that of knowing that their children are learning important skills and getting citizenship training under competent and dedicated leaders. This fact, coupled with the recognition their children receive for their achievements, can give a glow of pride and a feeling that worthwhile activities are available in their own community.

- jbn -

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 18, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate release

UNIVERSITY POULTRY SCIENTIST RECEIVES NATIONAL POST

Milo H. Swanson, associate professor of poultry husbandry at the University of Minnesota, has been named chairman of the technical advisory committee for the Poultry and Egg National Board.

The appointment was made during a recent meeting of the committee in Chicago.

The Poultry and Egg National Board is a non-profit organization for consumer education and promotion of the poultry industry.

-pjt-

University Farm and Home News
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St. Paul 1, Minnesota
February 18, 1958

Special to Television Stations

PLANT PATHOLOGISTS TEST CROPS FOR DISEASE RESISTANCE

VISUAL	AUDIO
Picture # 1 J. J. Christensen and wheat	"Plant disease" plots at the University of Minnesota are helping plant breeders in their battle against plant diseases. In these plots, the scientists deliberately expose crop varieties and strains to scores of plant diseases, to see which varieties have resistance. Here, J. J. Christensen, head of the University's plant pathology and botany department, shows an example of rust resistance in wheat. The variety on the right is rust-resistant and healthy, while the one at left is susceptible to rust and was severely damaged.
Picture # 2 Matthew B. Moore and Bill Roberts	Here is a similar situation in oats. Again, the variety at right is resistant to stem rust, while the one at left is susceptible. The susceptible variety didn't grow well and yielded poorly. Through tests of this kind, plant breeders get information needed in selecting crop varieties that have greater resistance to major plant diseases. Shown on this picture are Matthew B. Moore, right, and Bill Roberts, plant pathologists. Some 10,000 crop varieties are being tested this way.

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University Farm and Home News
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February 18, 1958

SPECIAL TO WILCOX

Introduction to County Agent

What makes a high-quality hog carcass is as important to the farmer who raises the porkers as it is to the housewife shopping for her meat at the local market. Here, W. J. Aunan, left, University of Minnesota meats specialist, explains pointers on pork cuts to Howard Balk, Big Stone county agent. Balk has been in his present county since last April, earlier was agent in Clearwater county for 22 years. A seasoned agricultural extension worker, Balk in 1950 received a Distinguished Service Award from the National Association of County Agents.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 19, 1958

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* For release at 3 p.m. *
* Friday, February 21 *
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NITROGEN DOESN'T INCREASE CORN MOISTURE

Farmers looking for ways to avoid the soft corn problem in the future won't help it any by applying less nitrogen fertilizer.

In fact, nitrogen is more likely to be a help where the high-moisture corn problem is concerned.

Field tests at the University of Minnesota in recent years have shown that average ear corn moisture in late September is about the same in corn receiving heavy nitrogen doses as it is in corn receiving either no fertilizer at all or a no-nitrogen fertilizer.

J. M. MacGregor, University soils scientist, told the Nitrogen conference in St. Paul today this holds true whether the nitrogen comes from ammonium nitrate, anhydrous ammonia or urea fertilizer.

In 1955 tests, he said, scientists compared unfertilized corn with plots receiving rates of 60, 120, 180 and 300 pounds of nitrogen per acre, alone and with 40 pounds each of phosphate and potash per acre. None of the fertilizer rates changed the corn moisture percentage by more than 1 percent.

Tests in 1956 showed similar results with urea nitrogen. The only difference from the earlier tests was that applying 60 pounds urea nitrogen along with 40 pounds each of phosphate and potash per acre resulted in 3 percent less moisture in the corn.

Actually, proper fertilizing can help avoid a soft corn problem, MacGregor said. He reasoned this way: Excessive moisture often results from corn freezing before it matures. Corn plants that receive an adequate supply of plant nutrients will grow faster and therefore will be more likely to get ripe before the first frost.

B-1877-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 19, 1958

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* For release at 4 p.m. *
* Thursday, Feb. 20 *
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BEST SALES TOOLS FOR FERTILIZER EXPLAINED

Knowledge of the product by salesmen and product performance make up the best sales tools for fertilizer, a California agronomist said here today.

M. H. McVickar, agronomist for the California Spray Chemical corporation, Richmond, Calif., told the Upper Midwest Nitrogen conference in St. Paul that "It's time we sell results, or profits--not pounds of nitrogen."

"The old and still used approach of cost per ton or pound of fertilizer must give way to stress on the farmer's return on investment," according to McVickar. He stressed the need to make "yield per acre and cost per ton of fertilizer secondary to return on investment" so that the fertilizer industry "will become of age and take its proper place as a chemical industry."

"Service selling--how much to use, when and how to apply for greatest profit--is of real value to the farmer. Such service costs money, but it makes profits for the farmer," McVickar said.

Richard Bird, banker from Red Wing, said that in his work with farm customers, a country banker must be prepared to "stay with the farmer over a long period of time."

"The cow herd and soil fertility programs, Bird said, are not just "four to five year jobs. Rather, they are projects into which effort and cash are expended as long as the man farms.

"This winter, perhaps, the farmer's wet corn is still standing in the field and 30 out of his 60 acres of beans are under a couple of inches of snow, throwing our tailored plan temporarily out of the window." A country banker in such a case, Bird said, must "be able to rework plans and help his customer develop new ones without losing sight of the long range farm plan."

B-1878-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 19, 1958

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* For release at 9:30 a.m. *
* Friday, February 21 *
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NITROGEN USE COULD BECOME EASY PRACTICE TO "SELL"

Using more nitrogen fertilizer could become "the easiest of all production practices to sell" to farmers, a group of fertilizer salesmen and research workers was advised today during the Nitrogen conference in the Lowry hotel, St. Paul.

But to make this possible, farmers need to be convinced to follow top management practices for efficient and low cost production, George D. Scarseth, director of the American Farm Research association, Lafayette, Ind., told the conference.

"There is much evidence to show the profitableness of using adequate nitrogen in balance with other top practices to lower the cost of production," Scarseth said. "Lowering the cost of production is one way to broaden its acceptance in the market."

He pointed out that lack of nitrogen is one of the first limiting factors in crop growth in the Midwest. "We have built a highly productive agriculture based on mining our soil for nitrogen, a capital wealth which was really inherited from virgin land," he said. "Legumes have tended to delay this day of nitrogen starvation, but they have taken their expensive toll in depleting our soils in phosphorus, potassium and other mineral elements.

"Therefore, we can no longer depend on inherited nitrogen from organic matter and in many places it will not be economical to depend on nitrogen from legume sources."

Stating the need for nitrogen on Midwest soils, Scarseth said in 1954, average nitrogen use per crop acre by states was: Minnesota, 3.5 pounds; Wisconsin, 4; Illinois, 6.9; Ohio, 10.8; and Indiana, 14. This use, he stated was "hardly a drop in the bucket."

B-1879-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 19, 1958

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* For release at noon, *
* Friday, February 21 *
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NITROGEN MOST EFFICIENT WHEN FERTILITY IS BALANCED

Important as nitrogen fertilizer is, it returns the biggest dollar profits to the farmer who makes sure his soil also has plenty of the other plant food nutrients--phosphate, potash and lime.

That statement was made at the Upper Midwest Nitrogen conference in the Lowry hotel, St. Paul, today by A. C. Caldwell, soils scientist at the University of Minnesota.

The limiting nutrient--the one that makes the biggest difference in yields--can vary in different soils, Caldwell said. In experiments with corn on land low in potassium, for example, adding high-potash fertilizer made the biggest yield increases.

In a second set of experiments, phosphate was the most needed nutrient and in still another trial, nitrogen was the limiting plant food nutrient.

Yet, Caldwell added, "in all three of these experiments, a balanced fertilizer containing nitrogen, phosphate and potash gave the best corn yields."

Lime may be equally important in getting the best yields, Caldwell stated. "If soils are too acid, some nutrients, like phosphorous, are fixed in an unavailable form. Then, even added phosphates become unavailable very quickly. Also, beneficial action of soil organisms is inhibited and organic matter breakdown slows down."

John Grava, soils scientist in charge of the University's soil testing laboratory, said a new test procedure called the "chemical release" method looks like the best routine test for nitrogen. This procedure, recently developed, gives a "dependable estimate of the total nitrogen content in soils," Grava said.

However, he added, the method is still in the experimental stage and requires more extensive studies. It involves boiling a sample of soil for 5 minutes in a chemical reagent and then measuring the released ammonia.

(more)

add 1 Nitrogen is most efficient when fertility is balanced

E. L. Schmidt, soil microbiologist at the University, told the conference that farmers need to keep in mind when adding nitrogen fertilizer that some of this nitrogen may be used or changed by soil "microbes" in converting soil residue to useful soil organic matter.

"To convert a ton of cornstalks into organic matter, some 30-40 pounds of nitrogen is needed and the residue itself contains only about 10 pounds," Schmidt said. "The deficit must come from the soil or must be added as fertilizer. Soils well supplied with nitrogen may easily meet these demands of the soil life. But soils low or moderately low in nitrogen will need fertilizer nitrogen to insure rapid breakdown of the cornstalk residue and to insure against nitrogen shortage for the growing crop."

B-1880-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 19, 1958

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* For release at 4 p.m. *
* Friday, February 21 *
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IMPORTANCE OF NITROGEN IN GRAIN CITED

By using more nitrogen fertilizer and eliminating the summer fallow, farmers in many areas of the Upper Midwest could increase grain yields by a third or more, the Nitrogen conference at the Lowry hotel, St. Paul, was told today.

R. A. Young, agronomist from North Dakota State college, pointed out that yields of small grains are "considerably below potential levels" in the Upper Midwest.

"Many controllable factors are involved," he said, "and an important one is the supply of available nitrogen in the soil."

In North Dakota, he reported, the state average yield of wheat--much of which is grown on fallow land--was 18.8 bushels per acre in 1957. "During this same year," Young said, "average yield of wheat from the best treatments in 19 fertilizer trials on non-fallow land was 34 bushels per acre."

Results of nitrogen fertilizer trials on non-fallow land from 1948-57, he reported, indicate that "a 25 to 30-pound application of nitrogen is a good average recommendation on non-fallow land in western North Dakota and that 30 pounds or more should be used in the eastern part of the state."

Soil in the Red River Valley area of eastern North Dakota is very similar to land on the Minnesota side of the river.

In contrast to the recommended rates, Young noted that only 10 percent of the wheat, 4 percent of the oats and 16 percent of the barley in North Dakota received any fertilizer in 1954. While usage of fertilizer in the state approximately doubled from 1954-57, Young stated that "even so, very little is used in relation to what could be used profitably."

A six-point "success formula" which fertilizer manufacturers and dealers can follow to increase nitrogen sales was outlined by another speaker at the conference.

(more)

In explaining the plan, Laurie Peterson, Midland Cooperatives, Inc., Minneapolis, said "a certain amount of teamwork is necessary to achieve our common objective. The fertilizer manufacturer is really the 'captain' of the team, with many responsibilities."

The most important link in the distribution team, Peterson said, is the fertilizer dealer, because he makes the all-important contact with the farmer.

The fertilizer dealer program he offered included these points:

1. Offer a complete fertilizer service, including bagged fertilizer, bulk fertilizer spreading service, and side-dressing or a preplant program with either ammonium nitrate, nitrogen solutions or anhydrous ammonia.

2. Sell a sound fertility program. This includes promoting soil tests, planting adapted seed varieties, stepping up corn plant populations, liming where necessary, fertilizing according to soil test, controlling insects and weeds and applying pre-plant or side-dress applications of "straight nitrogen" material.

3. Set up a training program for dealers, employees and salesmen, so they understand the products and how to help farmers get maximum return from their fertilizer dollar through wise use.

4. Advertise, by following up fertilizer company advertising with local advertising.

5. Merchandise the material in the store, with fertilizer displays, bulletin boards, taking orders in advance, keeping card files for each patron.

6. Set up demonstration plots to sell fertilizer.

B-1881-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 19, 1958

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* For release at 2:30 p.m.*
* Friday, February 21 *
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FERTILIZER, GOOD MANAGEMENT CAN TRIPLE CROP RETURNS

By wisely applying fertilizer and adopting better management, Minnesota farmers could almost triple their net returns from field crops, a pair of University of Minnesota extension specialists said today.

Ermond Hartmans, economist, and Charles Simkins, soils specialist, said that in a 27-county area of south central Minnesota, net returns from all crops could be increased from the present $8 to $20 per acre.

For a farm with 320 crop acres, this would boost crop returns from $2500 to $6400 annually. For the entire 27 counties, it would mean an extra $100 million in net farm income and $50 million in increased fertilizer sales. These estimates are based on current cash values of farm crops.

To make such increases, farmers need to use 5-6 times as much fertilizer as they are now using, the specialists said. The present fertilizer expenditure: $1.50 per crop acre annually. The needed level: $3.80 worth of additional nitrogen, $3 more phosphorus and $1.25 more potash per acre. These figures are for needed fertility levels in a rotation with 40 percent corn, 15 percent soybeans, 15 percent alfalfa and 20 percent small grains.

Hartmans and Simkins said corn yields in this area for the past 10 years averaged 48 bushels per acre. But if all farmers applied lime and fertilizer according to what soil tests show the land needs, this average could be raised to 75-90 bushels on most fields. And each dollar spent for fertilizer applied by soil test will return at least $2 in net profit, the specialists pointed out.

They said these estimates are really conservative, and are based on long-time studies of soil potential in the 27 counties.

B-1882-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 20, 1958

Immediate Release

NEW PUBLICATION ON PLANNING THE HOME KITCHEN

Careful planning is the key to a convenient and attractive kitchen for the family expecting to build or remodel.

How this important room of the house can be planned to save steps and lighten work is explained in detail in a bulletin recently published by the University of Minnesota Agricultural Extension Service, "Planning the Home Kitchen," Extension Bulletin 286. Authors are Elizabeth A. Rivers, extension home economist, and Data Hochhalter, extension home improvement specialist, University of Minnesota.

Location of the basic work centers with relation to each other and to doors and windows, along with the completeness of each center, will determine the convenience and ease of work in the kitchen. Important to remember when planning the arrangement of work centers is that the general direction of work for a right-handed person is from right to left, and for a left-handed person from left to right. The authors also emphasize building counters at the best working height for the homemaker. For example, the mixing center should be lower than the other counters in the kitchen--about 32 inches from the floor for the woman of average height.

Basic work areas are the preparation and mixing center which usually includes the refrigerator, the cleaning and dishwashing center planned around the sink and the cooking and serving center planned around the range. Each center is made up of the large equipment needed, adequate storage space for supplies, small equipment and tools and enough counter space for carrying on the work at the center.

A principle of good kitchen arrangement is to have the three work centers as near each other as possible to reduce the number of steps. The distance around the triangle formed between sink, range and refrigerator should be not more than 22 feet and if possible less--preferably, 15 to 20 feet. The U-shaped kitchen, with the work surface continuous around three sides of the room, usually provides the shortest distance around the work triangle, according to Miss Rivers and Miss Hochhalter. The bulletin has diagrams showing various arrangements of basic work centers with both free-standing and built-in equipment.

Copies of Extension Bulletin 286, "Planning the Home Kitchen," are available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1.

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B-1883-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 20, 1958

Immediate Release

ANNUAL RURAL YOUTH CONFERENCE IN MARCH

The annual state Rural Youth conference and short course has been scheduled for March 27-29 on the University of Minnesota's St. Paul campus, Stanley R. Heinen, assistant state 4-H club leader, announced today.

"Our Centennial Challenge" is the theme of the conference, to which all members of Rural Youth and YMW (Young Men's and Women's) groups and other young adults are invited.

The history of Minnesota and the heritage of Minnesotans will be highlighted in many of the talks during the conference. One afternoon will be devoted to tours of historical interest in the Twin Cities.

Plans for the conference also include the annual business meeting of the Minnesota State Rural Youth federation, workshops and the annual banquet and party.

B-1884-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 20, 1958

Immediate Release

GRASS PASTURES CAN PAY OFF, DEMONSTRATION SHOWS

Old bluegrass pastures can be a tremendous "feed reservoir" for dairy herds in eastern Minnesota.

A demonstration at the University of Minnesota's North Central School and Experiment station at Grand Rapids last summer showed that with nitrogen fertilizer and proper management, pastures of bluegrass, timothy and bromegrass can:

* Yield in total feed value what would amount to 5 tons of hay per acre annually.

* Provide all the grazing needed for 33 high-producing cows for 13 days on just one acre.

* Produce total digestible nutrients (TDN) at a lower cost than a farmer would pay for many other feeds that he would need to buy if he didn't have such good pasture.

This demonstration was conducted by research workers at the Grand Rapids station, in cooperation with Charles Simkins, extension soils specialist, and Ermond Hartmans, extension farm management specialist at the University.

They kept complete feed and milk production records on a 33-cow Guernsey herd grazing on 10 acres of permanent grass pasture--80 percent bluegrass and the rest timothy and bromegrass. The pasture was divided into one-acre plots. Two received no nitrogen and on the others, research workers compared treatments of 50, 100, 200 and 300 pounds of nitrogen per acre.

The entire 10-acre field supplied all the pasture the herd needed from May 30 to Sept. 5. A series of electric fences made it possible to give the cows only as much pasture as they would graze in one day. When one field was grazed, the cows were moved to the next tallest pasture.

After the cows finished a field, the workers clipped the pasture and spread the manure spots with a drag harrow.

Cows require a certain amount of TDN to produce each 100 pounds of milk and to maintain each 100 pounds of their body weight. So by subtracting the TDN from other feed given the cows during the summer and keeping records on weight of the cows and

(more)

add 1 pasture demonstration

milk they produced, the research workers and specialists determined exactly how much TDN came from each acre of pasture.

The best yields came from applying 200 pounds of nitrogen per acre. Applying the first 100 pounds of nitrogen cost about 80 cents for each 100 pounds of TDN, and the cost was about $2 for each 100 pounds of TDN produced by the second 100 pounds of nitrogen fertilizer.

These costs are no higher than a farmer would pay for each 100 pounds of TDN in alfalfa-brome hay or oat silage, and are lower than the TDN cost in corn grain or silage, oats or in a 16-percent-protein dairy concentrate.

Where no nitrogen was used, the cows produced only 3,178 pounds of milk per acre, compared to 6,121 pounds on plots where 50 pounds was used and 8,564 where the application rate was 100 pounds per acre. Cows on the plots receiving 200 pounds nitrogen per acre produced 10,705 pounds of milk--or 125 10-gallon cans--from each acre of pasture. The cows also received grain, though, meaning that the increased milk yield did not all come from pasture.

On plots where nitrogen fertilizer was used, the pasture was ready to be grazed two weeks earlier in the spring and two weeks later in the fall. It was possible to graze each acre of unfertilized plots only 5 days, compared to 7.5 days on the 50-pound plots and 11 days where 100 pounds of nitrogen were used.

The research workers and specialists emphasize that the demonstrations show high rates of nitrogen on pasture pay off only when the farmer follows the right management practices. These include ration-a-day grazing, clipping ungrazed forage and spreading the manure after each grazing.

B-1885-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 20, 1958

Immediate Release

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B-1883-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 20, 1958 Immediate release

GET TOP PERFORMANCE FROM CLOTHES DRYER

Most homemakers will agree that an automatic clothes dryer can be one of the more foolproof--as well as more useful--home appliances if it is used correctly.

Florence Ehrenkranz, professor of home economics at the University of Minnesota, has some suggestions to help homemakers get top performance from the clothes dryer:

. Don't overload your dryer. An ordinary washer load usually makes a dryer load. Remember that if you have washed eight pounds of clothes in the washer, they come out of the washer with about six pounds of added water, giving you a 14-pound load.

. Avoid overdrying your clothes. Overdrying is likely to produce wrinkles that are hard to remove.

. Remove articles that don't require ironing while they are still somewhat damp. The exception to this rule is turkish or terry cloth towels, which may be dried completely if they are not dried so long they lose their fluffiness.

. Don't use the dryer for articles that are wet from cleaning fluids. Combining a cleaning fluid with the heat of the dryer may result in a fire. Only articles washed in water should be dried in a dryer, though dry articles may be fluffed in some dryers.

. Don't blame your dryer for results that may be due to poor washing techniques. If, for example, you use too much detergent and it is not rinsed out sufficiently, the direct heat of the dryer is likely to scorch the unrinsed detergent, making the clothes look yellow. The fault, however, is not with the dryer but with poor washing procedure.

B-1886-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 21, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate release

RUTFORD TO ATTEND CONFERENCE CALLED BY PRESIDENT EISENHOWER

Skuli Rutford, director of the University of Minnesota Agricultural Extension Service, next Tuesday will attend a national security conference called by President Dwight D. Eisenhower.

The non-partisan conference will be on "The Foreign Aspects of U. S. National Security" and will meet in Washington, D. C.

Speakers will include President Eisenhower, Secretary of State John Foster Dulles, former President Harry Truman, former Secretary of State Dean Acheson, Vice President Richard Nixon and Adlai Stevenson.

According to White House aide Eric Johnston, purpose of the conference will be to "discuss requirements of the U. S. foreign policy, with emphasis on partnership in developing nations of the Free World and to explore means of conveying to our citizens a fuller flow of information about these requirements."

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 21, 1958

Special to U. S. Information Agency

AUSTRIAN CORN BREEDER STUDIES AT UNIVERSITY OF MINNESOTA

Some valuable information on hybrid corn breeding will be taken back to Europe by Kurt E. Rohringer when he completes his study period at the University of Minnesota.

Rohringer, a corn breeder from a plant breeding institute at Stainwerk, in southern Austria, has a F.A.O. United Nations fellowship for a year's study at the University of Minnesota. He is studying under [illegible], [illegible] and plant genetics. Rohringer will also visit the Universities of [illegible], Illinois and Iowa State college to study corn breeding programs.

"The corn breeding program in Austria started in 1946," Rohringer explains. "So there are a number of questions on breeding methods on which I can get a good deal of information here.

"You might say that, in Austria, we came into the corn [illegible] in the middle." While we already have some information on [illegible] methods, it's never possible to develop new methods on [illegible] have the historical background of the program where it has been [illegible] time.

"I'm studying what has happened since the early beginning [illegible] America, to help us form the 'total picture' for corn breeding [illegible] carefully studying methodology here, I can select information [illegible] in corn breeding in my own country."

Since 1953, the corn breeding station at Stainwerk has been [illegible] based of two American variation. Yields in [illegible] Austria are [illegible] per acre—quite high by U. S. standards.

add 1 [illegible]

The Institute at Steiermark is constantly increasing [illegible] corn seed. "In 1956, the institute produced enough seed of single-cross [illegible] corn to plant 1200 acres of double seed fields," according to Rohringer. [illegible] increased hybrid seed utilization from 10 percent of the total used in [illegible] 30 percent in 1957. We expect to increase at a similar rate in the [illegible]

"Our ultimate goal is to develop our own hybrid with our own [illegible] That way, we can get the highest yielding ability in hybrids that are [illegible] for our own environment.

"Next year, we hope to have the first Austrian-bred double-cross [illegible] hybrid on the market. It will be produced from two Austrian inbred lines [illegible] American lines. It will have hard kernels, will yield well and will be [illegible] suited to Austrian conditions."

The Institute at Steiermark cooperates fully with the 17 countries [illegible] participate in the European and Mediterranean Corn Improvement Group, [illegible] the Food and Agricultural Organization of the United Nations since [illegible] not only our own material, but also materials from other countries in our [illegible] to obtain the best for Austria," Rohringer says.

[illegible]

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 21, 1958 Special to U. S. Information Agency

KOREAN STUDENT GETS FORESTRY BACKGROUND AT UNIVERSITY OF MINNESOTA

"Keep Korea Green" could someday be as popular a slogan in that country as "Keep Minnesota Green" is in the Gopher State.

That's one hope of Soon Chul Hong, Korean student at the University of Minnesota. He also hopes that information from forestry courses at Minnesota will help him in working toward that objective in his homeland.

"I am now taking courses in advanced forestry genetics, genetics of speciation, forest management and similar courses. Genetics in speciation is concerned with the evolution of certain organisms," he explains.

"Information in these courses helps form a basic background for more advanced work I will do later," says Soon.

Soon came to the United States and the University in Sept., 1957. He will go to the Institute of Forest Genetics at Placerville, Cal., in March.

"There I will see what is being done in the field of genetics. I am also going to do some work there," he says.

After being at California for two months, he will go home to Korea. There he will work at the Institute of Forest Genetics, near Seoul, where he worked for two and one-half years before coming to the U. S.

He says, "If we manage the forests well, we will be able to get a wider variety of products from them. Some 100 million seedlings are planted each spring.

"We are also trying to improve the trees by making them grow faster and improving the quality of the wood.

"The tree situation is pretty bad in Korea. The people burn many of the trees for heat in their homes. The primary reason for forestry work is to make Korea green; we want to cover the area with trees."

(more)

add 1 Soon Chul Hong

Soon says a large portion of the forestry work in Korea involves varieties of trees from the United States with native Korean pine trees to get faster growth and better quality, and still retain the frost resistance necessary in Korea's cold climate.

"Work is also being done on the poplar tree at the Institute of Forest Genetics," says Soon.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24, 1958

SPECIAL TO TWIN CITY OUTLETS
* * * * * * * * * * * * *
* For release at 7 p.m. *
* Tuesday, Feb. 25 *
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RALPH NICHOLS RECEIVES OUTSTANDING TEACHER AWARD

Ralph G. Nichols, head of the department of rhetoric at the University of Minnesota, this evening received the outstanding teacher award of 1958 from the University student Agricultural Education club.

The plaque award was made during the club's annual banquet at the Northwood Country club, North St. Paul, by John Thell, Foley, agricultural education senior.

This is the third time the award has been given.

Nichols, a noted public speaker, lecturer and authority on speech and listening comprehension, has been a staff member at the University since 1937. Originally from Nebraska, he has both an M. A. and a Ph. D. from the University of Iowa.

He came to the University as an instructor in speech in 1937, was named head of the department of rhetoric in 1944 and was named a full professor in 1949. This department has a staff of some 20 speech and English instructors and is located on the University's St. Paul campus.

He is co-author of the recent book "Are You Listening?" and of a text on "Listening and Speaking." In 1951-52, Nichols was president of the National Society for the Study of Communication. He has served on editorial boards of two national publications and has taught in a variety of adult education programs.

For a number of years, he has been chairman of a national committee on listening comprehension. His experimental studies and research in this area have led to training programs involving industry, government, education and military services.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate Release

T. H. CANFIELD PORTRAIT GIVEN TO UNIVERSITY

A portrait of the late Thomas H. Canfield has been given to the University of Minnesota by the Midwest Goose Growers association.

Canfield was an associate professor of poultry husbandry at the University until his death in March, 1957.

The portrait, which will be hung in the seminar room of Peters hall on the St. Paul campus, was presented to Elton Johnson, head of the poultry department, by Melvin Speckman, Sleepy Eye, president of the association.

This portrait is in recognition of Canfield for his guidance and service with the Goose Growers association and for his interest and research in goose production.

Canfield was secretary-treasurer of the association and held a similar position on the Minnesota Poultry Industry council for several years. His research with geese resulted in improved diets to prevent perosis, a deficiency disease, and increased livability of goslings. His later work also dealt with development of "junior geese."

Born at Lake Park, Minn., in 1901, Canfield received B. S. and M. S. degrees at the University. He was known as an outstanding teacher at the University and for years coached the University's poultry judging team, which always placed near the top in the intercollegiate contests at Chicago.

He received the All-University Faculty Recognition for teaching in 1952 and received the Agricultural Education Club award as outstanding teacher of 1956. He also received an outstanding teacher's award from the Poultry Science association, an international organization, in 1955.

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Jo Nelson
Information Service
St. Paul Campus
Feb. 24, 1958

Special to Minnesotan

6 pictures

HORTICULTURE DEPT.
DEVELOPS NEW FRUITS,
ORNAMENTALS FOR NORTH

Minnesota gardeners looking for new plants that will do well in northern climates can add three more new fruits and three new ornamentals to their list, as a result of breeding work by the University department of horticulture.

The Welcome gooseberry, Centennial and Northland apple-crabs are the three new hardy fruit varieties being introduced by the department this year, along with a new flowering crabapple and two new garden chrysanthemums especially adapted to northern gardens. The new ornamentals and stock of the new fruits will be available to the public this spring from Minnesota nurseries.

The new fruits are the result of years of breeding work at the University of Minnesota Fruit Breeding Farm and some years of testing there and at other locations. A. N. Wilcox, professor, and T. S. Weir, assistant superintendent of the Fruit Breeding Farm, have been largely responsible for the development of these new fruits. J. D. Winter and Shirley Trantanella of the food processing laboratory have tested the fruits for freezing and canning quality.

The Welcome gooseberry has two characteristics especially welcomed by gooseberry growers--the spines have been reduced in size and number so that the fruit can be picked with comfort and safety and the bushes are relatively disease resistant. Plants are vigorous and productive. The mildly tart large red berries make a good red jam and are good for pie.

The two new apple varieties are called apple-crabs because they are larger than crabapples and resemble apples in their eating quality. The Centennial apple-crab is a high-quality eating apple, small for an apple but very large for a crab. Medium early, it ripens during late August or early September. A hybrid of Wealthy apple and Dolgo crabapple, the Centennial bears heavy crops of fruit with a red blush. The fruits retain their prime condition much longer than Whitney crabs.

(more)

Because the trees are semi-dwarf, they require less space than most apple trees and so are well adapted to planting in the home yard. They have a roundish-spreading shape and in spring are covered with a profusion of single white blossoms. The Centennial is winter hardy even in the northernmost regions of the country.

The Northland apple-crab is being introduced as a hardy and productive variety particularly for northern Minnesota. It has been described as the best all-round crab for that area.

The attractive fruit of the Northland resembles that of one of its parents, the Dolgo, in shape and bright red color. It is larger than Dolgo, but smaller than McIntosh, its other parent. It is good for sauce, jelly and pickles and for eating fresh.

Trees are medium in size and very productive. However, they are not entirely free from blight or scab. Ripening season is early, beginning in mid-August.

The Radiant flowering crabapple, a small, compact tree with sturdy, wide-angled crotches, is ideally suited for landscape purposes. The new foliage in spring and early summer has a bright reddish cast. Flower buds are a deep red, opening to deep pink single flowers which make a brilliant display for about 10 days. The flowers are followed by small, bright red fruits which stay on the tree all winter, serving as food for the birds.

The trees are completely hardy in all parts of the state where they have been tested and appear to be highly resistant to scab, cedar rust and fire blight.

Responsible for the development of the new flowering crabapple were L. C. Snyder, head of the department of horticulture, R. A. Phillips, assistant professor, R. J. Stadtherr, instructor and A. G. Johnson, research fellow.

Introduction of the new garden chrysanthemums brings to 37 the number developed by the University of Minnesota for northern regions. The work was begun by L. E. Longley and has been continued by Phillips and Assistant Professor R. E. Widmer.

(more)

Princess chrysanthemum is a carnation-flowered variety. The double, 2-inch flowers are old rose with gold-tipped petals which are deeply forked, giving a delicate effect. The plant is a vigorous, high-mound type which reaches a height of 15-18 inches with a spread of 18-24 inches. The well rounded growth habit of this plant makes it useful for window boxes as well as the mid-portion of the flower border. Blossoming starts early in August and within a few weeks the plant is covered with a prolific display which continues until freezing weather.

Minnehaha chrysanthemum is a medium-tall upright bushy plant with salmon colored, rose-tinted fully double flowers 2½ inches in diameter. Blossoming starts about mid-September and continued until killing frost. By the end of September the plant is completely covered with blooms. The plant, almost as wide as it is tall (20 inches), should be set in the middle or at the back of the flower border. Plant habit and stem stiffness make the flowers especially adaptable for bouquets.

Miscellaneous Report 29, "New Ornamentals for Minnesota," and "Three New Fruits," Miscellaneous Report 30, give descriptions of the new varieties. These publications are available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24, 1958

* * * * * * * * * * * * *
* For release at 6 p.m. *
* Tuesday, Feb. 25 *
* * * * * * * * * * * * *

BIG STONE COUNTY RURAL YOUTH GROUP RECEIVES AWARD

Outstanding community service has won an award of $50 for the Big Stone county Rural Youth group.

The award was presented this (Tuesday) evening at the annual Minnesota Jaycees' Outstanding Young Farmer banquet at the Lowry hotel, St. Paul.

Second prize of $25 went to Kandiyohi county Young Men's and Women's organization and third prize of $10 to Wright county Rural Youth.

The Minnesota Rural Youth and YMW (Young Men's and Women's) Community Service Awards program is being sponsored by the Minnesota Jaycees Agricultural committee in cooperation with the University of Minnesota Agricultural Extension Service and Cargill, Inc. Cargill provided the awards.

Community service activities carried on last year by the 33 members of the Big Stone county Rural Youth group included a safety campaign during the corn pickin season and a safety booth at the county fair, sponsoring a junior-senior night in Apr for juniors and seniors in high schools in the county, giving two square dances for young people in the county in May and October, helping to paint the exhibit hall and barn at the county fair grounds and assisting the County Extension Service and Soil Conservation Service in planting crop variety plots.

The Big Stone Rural Youth also had various money-raising projects. The grou operated a refreshment stand at a March of Dimes talent show and contributed the money earned to the March of Dimes. Members worked 60 hours planting 9,630 trees on various farms and gave the nearly $100 earned to the 4-H leaders' council. The grou also raised money by operating a food stand at the Big Stone county fair and used th profits for contributions to the International Farm Youth Exchange program and to various nursing homes.

Cooperation in blood donor drives, Christmas caroling for shut-ins and sponsorship of recreational activities for young people were other community service activites of the winning groups.

B-1887-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24, 1958

Immediate release

WINNERS IN 4-H LIVESTOCK CONTESTS

James Marti, 18, Sleepy Eye, and Robert Gole, 12, Brainerd, have been named state winners in two 4-H livestock contests, Leonard Harkness, state 4-H club leader at the University of Minnesota, announced today.

James won top placing in the ten-ewe contest by raising 15 lambs from his 10 Columbia ewes to a weight of 1,278 pounds in 135 days, or an average of 127.8 pounds of lamb per ewe. Each ewe produced 11.5 pounds of wool.

A member of the Sleepy Eye Wide Awakes club, the Brown county 4-H member has carried the sheep project for five years.

Robert Gole won first place in the ton-litter project by raising a litter of 13 pigs to a weight of 3,249 pounds in 165 days, or an average of 249.9 pounds per pig. His pigs were farrowed by a Purebred Yorkshire gilt.

The Crow Wing county boy has carried the pig project two years. He is a member of the East Gull Lake 4-H club.

Second place in the ton-litter project went to Roger Mahoney, Appleton. Robert Zupan, Goodland, was runner-up in the ten-ewe contest.

Objective of the ten-ewe project is to produce maximum yields of lamb and wool in 135 days. Production of at least 2,000 pounds of pork from one litter in 165 days is the goal of the ton-litter project.

The Minnesota Livestock Breeders' association is providing cash awards to state and county winners in both contests.

B-1888-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24,1958

Immediate Release

MANY ELECTRICAL ITEMS COULD BE ADDED ON FARMS

Electric irons, washing machines, refrigerators and radios are common in rural homes in southern Minnesota, but more farms could well add some more helpful electrical items.

A. J. Schwantes, head of the agricultural engineering department of the University of Minnesota, bases that statement on a survey which a rural electric company conducted on some 4,000 members on a power line in 1956.

All the homes had radios and about 96 percent had electric irons. Other "high-use" items were: refrigerators, 95.4 percent; washing machines, 85.8 percent; television, 77 percent and electric water systems, 71.8 percent.

At the other end of the scale, less than 1 percent had electric garbage disposal units, 1.1 percent had air conditioners and about the same percentage had either bulk milk coolers or barn cleaners.

Also, only 4.4 percent had milk house heaters and 6.3 percent had can milk coolers.

Some other use figures were: milking machine, 41.8 percent; electric range, 41.7 percent; deep fryer, 25.7 percent; barn ventilation, 11.4 percent and dairy water heater, 11.4 percent.

Schwantes points out that much of this usage represents a big increase in recent years. He adds that the more electricity farm people use, the cheaper per unit it gets.

B-1889-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24, 1958 Immediate release

MOST OF 4-H MEMBERS FROM FARM HOMES

Minnesota 4-H clubs draw most of their members from farm homes.

At present nearly 30 percent of Minnesota farm boys and girls between the ages of 9 and 21 are members of 4-H clubs.

According to Leonard Harkness, state 4-H club leader at the University of Minnesota, 46,554 boys and girls were enrolled in 2,029 clubs in the state in 1957. Since 1912 about half a million rural young people have participated as members of 4-H clubs - organized groups of young people who engage in community, farming and homemaking activities under the guidance of cooperative extension workers and local volunteer leaders.

Of the total membership, 81 percent live on farms, as compared with a nation average of 66 percent. Slightly more than 5,100 - or 11 percent - live in small tow and about 3,500 come from urban areas.

Though many states have shown an increase in urban club work in recent years 4-H membership in Minnesota has always come largely from farm homes, Harkness says. Only two states, Iowa and South Dakota, have a 4-H enrollment more predominantly rural farm than Minnesota.

Largest proportion of urban 4-H members in Minnesota is from Ramsey, Hennepin and St. Louis counties. Ramsey county has 21 suburban and 2 city 4-H clubs with an enrollment of 824 members. In Hennepin county 12 4-H clubs are located in non-farming areas, including 3 in Minneapolis. Only 30 percent of the 1,070 members now enrolled in Hennepin county actually live on farms. St. Louis county has 859 non-farm boys and girls in 4-H--slightly over half of its total enrollment.

B-1890-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 24, 1958 Immediate release

LP GAS COURSE SCHEDULED AT ST. PAUL CAMPUS

"How-to-do-it" information on installing and servicing gas equipment and appliances will be featured at the 10th annual Liquefied Petroleum Gas Service School March 24-26 on the St. Paul campus of the University of Minnesota.

According to J. O. Christianson, director of agricultural short courses, the school is open to anyone interested. A. M. Flikke, University agricultural engineer, is program chairman for the event.

The school will provide instruction for beginners and an advanced course.

Topics in the basic course will include installation procedures and tests, controls, ranges, water heaters, safety, brooders, tank heaters and other equipment.

In the advanced course, instruction will cover clothes driers, space heating, tractor carburetion and servicing, automatic top burner controls, grain drying and burner characteristics and care.

For more information, contact the Director of Agricultural Short Courses, Institute of Agriculture, University of Minnesota, St. Paul 1, Minn.

B-1891-pjt

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 25 1958

To all counties

For use week of

March 3 or later

FARM FILLERS

Permanent grass pastures can produce, in total feed value, what amounts to 5 tons of hay per acre annually. This was shown last summer by a demonstration at the University of Minnesota's North Central School and Experiment Station, Grand Rapids. Secret to these results was proper fertilizing and good pasture management.

* * *

Implanting with stilbestrol or a combination of hormones increased gains of wether lambs on pasture in recent University of Minnesota research. Lambs on rape pasture implanted either with 3 milligrams of stilbestrol or with synovex grew 28-31 percent faster than did lambs not receiving the implant, according to R. M. Jordan, University livestock scientist.

* * *

A recent survey conducted by a rural electric company in southern Minnesota showed that 41 percent of the members on a rural line had milking machines, 41 percent had electric ranges, but only 11 percent had dairy water heaters. More than 70 percent had electric water systems, according to A. J. Schwantes, head of the agricultural engineering department at the University of Minnesota.

* * *

By wisely applying fertilizer and adopting better management, Minnesota farmers could almost triple their net returns from field crops, say Ermond Hartmans, extension farm management specialist and Charles Simkins, extension soils specialist at the University of Minnesota. In south central Minnesota, for example, this would be an increase from the present $8 to $20 per acre in net returns from all crops.

* * *

Important as nitrogen fertilizer is, it returns the biggest dollar profits to the farmer who makes sure his soil also has plenty of the other plant food nutrients --phosphate potash and lime--says A. C. Caldwell, soils scientist at the University of Minnesota.

* * *

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 25 1958

To all counties

For use week of

March 3 or later

WHEEL-TRACK METHOD WORKS FINE WITH SPRING PLOWING

If the late corn crop kept you from getting your plowing done last fall, you might consider planting your corn this spring by the wheel-track method.

This advice comes from County Agent _____ and Curtis Overdahl and Charles Simkins, extension soils specialists at the University of Minnesota.

They point out that wheel-track planting works particularly well with spring plowing.

This technique means planting corn in the tractor tracks on undisked soil, generally a day or less after the field is plowed.

By eliminating disking, you avoid much of the excess soil compaction that often results from this tilling. Wheel-track corn planting has other advantages, too. By not using the disk, you can save $3-$5 per acre in seedbed preparation costs. Also, the unworked soil between the tracks absorbs more moisture which will be an asset in a dry year.

Overdahl and Simkins explain that one of the reasons why fall plowing is generally better than spring plowing in Minnesota is that it makes it easier to keep the soil in proper physical condition. Even if the soil is lumpy from being plowed when too wet in the fall, freezing and thawing during the winter generally puts it back in shape.

With spring plowing, though, the farmer needs to be more careful about when he plows. If the soil is too wet, the soil may remain lumpy for the entire crop season, resulting in poorer stands and lower yields.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 25 1958

To all counties

For use week of

March 3 or later

PLENTY OF HOT WATER NEEDED FOR PIPELINE MILKER

How big should the water heater be in the milkhouse?

V. M. Meyer, agricultural engineer at the University of Minnesota, gives this guide to follow:

For even the smallest herds, you need a 50 gallon heater.

If you have a pipeline system and a bulk tank, you need a 66-gallon heater for a 20-40 cow herd and a 40-60 cow herd with this equipment would require an 80-gallon tank.

Plenty of hot water is a must with pipelines and bulk tanks. Some tests show that for each foot of pipeline to be cleaned, there must be about 1/4 to 2/3 gallons of hot water daily. This would make up 50-75 percent of the total hot water usage in the milkhouse.

In addition, there must be a good supply of hot water for washing milk utensils and the bulk tank, massaging udders and for other uses.

Approximately 90 percent of the water heaters used in milkhouses on Minnesota farms are electric, Meyer says.

For farmers planning to put in or replace an electric heater, Meyer says it pays to check on whether the power supplier has lower rates for off-peak electrical equipment. If so, an off-peak heater can be more economical in operating costs.

Check some other features on a water heater, too, Meyer advises. He points out that some electric water heaters are designed so that they help heat the milkhouse.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 25 1958

To all counties

ATT: 4-H CLUB AGENT

For use week of
March 3 or after

STATE MEETING
OF RURAL YOUTH
MARCH 27 - 29

Members of the _____ county Rural Youth (or YMW) group and other interested rural young people will have an opportunity to attend the annual Rural Youth and Young Men's and Women's conference and short course on the University of Minnesota's St. Paul campus March 27-29.

According to Club Agent _____ _____, among those planning to attend the conference are: (list names and addresses).

(Insert a paragraph here listing names and responsibilities of any county members active in planning or taking part in the conference.)

"Our Centennial Challenge," theme of this year's meeting, will be brought out in talks on the heritage of Minnesotans and history of the state. Tours to places of historical interest in the Twin Cities are scheduled for Friday afternoon, March 28.

The conference will open Thursday evening, March 27, with registration and a buffet supper in the Agricultural Union. Margaret Mallak, International Farm Youth Exchange delegate to India, will give the opening talk.

Other speakers during the two-day meeting will include Skuli Rutford, director, Agricultural Extension Service, and T. H. Fenske, associate dean, Institute of Agriculture, University of Minnesota; and Russell Fridley, director of the Minnesota Historical Society.

Workshop sessions and the annual meeting of the Minnesota State Rural Youth federation will be held on the final day of the conference.

- jbn -

University Farm & Home News
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February 25 1958

To all counties

ATT: HOME AGENTS

For use week of
March 3 or after

DRIED PRUNES
MOST ABUNDANT
FOOD IN MARCH

March brings a new list of plentiful foods from the U. S. Department of Agriculture, says Home Agent _____ _____.

Dried prunes heads the list. A heavy harvest last summer and the summer of 1956 has given the nation the largest supply of dried prunes it has ever had. The popular medium size, which gives more fruit for your money, will be heaviest in supply during the week of March 16. Raw or cooked, this fruit makes a nutritious snack for your youngster when he or she comes racing in after a day at school. To cook prunes cover with boiling water, then simmer until tender. Lemon or spices can be added to accent flavor.

The grocery shelves will also be stacked with apples and canned pears. The large harvests last summer and fall have left generous amounts of these fruits for the March shopper.

Peanuts and peanut products - all-time teenage favorites - are also on the spring abundance list.

Eggs are increasing seasonally, with ample supplies due in March.

Corn, canned or frozen, will be the plentiful vegetable of the month. Try adding a can of cream-style corn to 2 beaten eggs, 1/2 cup of milk and 1 teaspoon each of salt and sugar. Pour into a greased casserole set in a pan of hot water and bake at 350° for about an hour. You will find this a quick and tasty treat for the entire family.

The number one meat for March will continue to be pork.

- sah -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 25 1958

To all counties

A U. of M. Ag. & Home Research Story

NEW ORNAMENTALS FOR NORTHERN GARDENS

_____ county gardeners looking for ornamentals to add beauty to their home yards will be interested in a new flowering crabapple and two new garden chrysanthemums especially adapted to northern climates.

The three new ornamentals - radiant flowering crabapple and Princess and Minnehaha chrysanthemums - were developed by the University of Minnesota horticulture department and are being introduced to the public this spring. They will be available from nurseries in the state.

The Radiant flowering crabapple is a small, compact, hardy tree ideally suited for landscape purposes. The new foliage in spring has a bright reddish cast. Flower buds are a deep red, opening to deep pink single flowers. The flowers are followed by small bright red fruits which stay on the tree all winter, supplying food for the birds.

L. C. Snyder, head of the University department of horticulture, and horticulturists R. A. Phillips, R. J. Stadtherr and A. G. Johnson were responsible for the development of the new flowering crabapple.

Introduction of the Princess and Minnehaha chrysanthemums brings to 37 the number of garden 'mums developed by the University of Minnesota for northern regions. The work was begun by L. E. Longley and has been continued by R. A. Phillips and R. E. Widmer.

Princess chrysanthemum has double, 2-inch rose-colored flowers with deeply forked gold-tipped petals. The plant reaches a height of 15-18 inches with a spread of 18-24 inches. Its well rounded growth habit makes it appropriate for window boxes and for the mid-portion of the flower border. Blossoming starts early in August.

Minnehaha chrysanthemum is a medium-tall upright bushy plant with salmon-colored, rose-tinted fully double flowers 2 1/2 inches in diameter, especially adaptable for bouquets. Blossoming starts about mid-September. The plant is almost as wide as it is tall (20 inches). It should be set in the middle or at the back of the flower border.

- jbn -

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 25 1958

To all counties

For use week of
March 3 or later
A U. of M. Ag. & Home Research Story

SOIL PACKING CAN LOWER CROP YIELDS

More and more evidence is showing that "minimum tillage" leaves the soil in better condition, according to County Agent _____.

Minimum tillage literally means working the soil less, by eliminating much of the tillage with disks, drag harrows and other implements that often cause excess surface compaction.

Some of the latest research at the University of Minnesota's Rosemount Agricultural Experiment Station shows that when the surface soil is packed too much, crop yields can definitely be reduced. Reporting on this study are George Blake, University soil physicist and Rollin Dennistoun, Rosemount station assistant superintendent.

They experimentally compacted the plow layer alone, the surface soil alone, and both the plow layer and the surface, to see if this compaction would affect yields. They compacted the plow layer with a 2 1/2-ton, especially-built tractor wheel, and compacted surface soil with a heavily loaded truck.

Corn where just the surface soil was compacted yielded 77 bushels per acre compared to 84.1 bushels on uncompacted soil. Compacting subsoil alone didn't affect yields, but where both surface and subsoil were compacted, yields dropped to 72 bushels per acre. Most of this reduction was caused by the surface compaction.

Why did the compaction reduce yields? In the laboratory, Blake found that the packed soil "puddled," leaving a poor soil structure. Packed soil had less air space and poorer draining ability. Also, it was harder to penetrate, meaning young corn plants had a tougher time getting through it.

In these studies, Blake and Dennistoun maintained an "effective" corn stand of 20,000 plants per acre by planting 24,000, then thinning. This is much higher than the average Minnesota farmer plants and shows that surface compaction can reduce yields even with high populations.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 28, 1958

SPECIAL TO WILCOX

County Agent Introduction

The new Rural Development program in northern Minnesota is moving at a steady pace in Hubbard county. The county extension staff behind the program here look over a "wheel of activity" which shows how the committees of the program function. From left to right are John Eix, rural development agent, Donna Sutton, home agent and Bill Dorsey, county agent.

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News Bureau
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 26 1957

SPECIAL NO.1
Farmer-Sportsman Award

FARMER-SPORTSMAN
AWARD TO BE MADE

Nominations for _____ County's outstanding Farmer-Sportsman are due in County Agent_____'s office, March 16.

Anyone can make nominations for the honor, according to County Agent_____. The county's top farmer-sportsman will be selected and will compete for a special award given each year at the Northwest Sports show, April 5-April 17 in Minneapolis.

According to County Agent_____, a winner and runner-up will be selected for each of four districts in the state. One of the four district winners will be selected Minnesota's top farmer-sportsman. That winner will be honored at the Sports Show Sunday, April 14, and he and his wife will receive an all-expense week-end vacation to the Twin Cities and other awards at the Show.

All county winners will receive special certificates of recognition.

Points that will be considered in selecting the farmer-sportsman include reputation as a successful farmer in the community; wildlife conservation practices; forestry practices; soil conservation and land use program on the farm; and community activities including those with youth, sportsmen, and farm groups.

Further details on making nominations can be obtained from the County Extension Office.

-hbs-

News Bureau
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 26 1957

SPECIAL NO. 2
Farmer-Sportsman Award

FARMER-SPORTSMAN
NOMINEE PICKED

_____ has been selected as the outstanding Farmer-Sportsman in _____ County for this year, County Agent_____announced today.

He will compete for the honor of being selected as one of Minnesota's four outstanding farmer-sportsmen for 1957. One nominee will come from each of the 4 sections of the state.

One of the four district winners will be named Minnesota's Farmer-Sportsman of the year and will be honored at the Northwest Sports Show, Minneapolis, on Sunday, April 14.

District and statewide winners will be picked from the county nominations by a committee of sportsmen, conservationists and agricultural specialists headed by Parker Anderson, University of Minnesota Extension forester, chairman of the Farmer-Sportsman award committee.

The local winner was selected by County Agent_____, county commissioners, sports clubs, and game wardens. (Add others involved). He was picked for his good job of farming, wildlife conservation and forestry practices, soil management, and leadership in improving farmer-sportsmen relationships.

_____ will receive a special certificate of recognition for his outstanding efforts.

(ADD PARAGRAPH OR TWO ABOUT MAN SELECTED).

-hbs-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 1958

To county agents in northeastern Minnesota

Editors Note: This is the first in a series of three articles from the county extension office on problems and possibilities for agriculture in northeastern Minnesota.

FARM SITUATION CHANGES IN NORTHEAST AREA

It takes almost twice as much total cash receipts to give a farmer the same net income now as was true 20 years ago, according to County Agent_____.

This is also true in _____county and other areas of northeastern Minnesota, he says. It's an important point for farm families to consider in planning for the future.

Ermond Hartmans, extension farm management specialist at the University of Minnesota, says that 20 years ago, less than half of the total cash receipts on a dairy farm was needed to pay all expenses. Today, however, costs use up more than 70 percent of all the money the farm brings in.

These facts are explained by Hartmans in a recently issued University extension pamphlet "Agriculture in Northeastern Minnesota."

Tractors, other power equipment and mechanical devices to replace horses and manual labor cost more money and force farmers to invest in a larger size of agricultural business to make the same net income as 15 or 20 years ago.

Today, a farmer needs to sell $10,000 worth of agricultural products annually to receive $3,000 income for his labor on the farm. In addition, if he owns all his farm land, buildings, livestock and equipment, he would have another $1,000 to spend, since 5 percent interest is charged on the $20,000 investment normally needed for a farm big enough to produce $10,000 worth of goods per year.

The lower real estate taxes, lower cost for housing and food and certain income

tax privileges may be worth up to $1,500 per year on the farm, compared to cities.

Add it all up, and it means that a $3,000 labor return on the farm can be comparable to a $5,500 income in town for the farmer who owns all the capital, Hartmans and _____ say.

They explain that farms in northeastern Minnesota are getting larger, but many are still too small to bring a good return for full-time farmers. There are about 14,000 farms in the northeastern counties, compared to 20,095 in 1940.

Average number of crop acres on farms in this area has increased from less than 40 to about 60 acres. With excellent crop and livestock management, a high-producing dairy herd in a grade A market will require a minimum of 60 acres of cropland, Hartmans points out. Since the average in northeast Minnesota is only 60 acres, and relatively few farmers have a grade A market, the great majority of the present farms may not be capable of obtaining a $3,000 labor income.

Copies of the pamphlet "Agriculture in Northeastern Minnesota" are available at the county agent's office.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 1958

To corn-producing areas in northeastern Minnesota

Editor's Note: This is the second in a series of three articles on possibilities and problems in farming in northeastern Minnesota

EXPERTS LIST
NEEDS FOR
FARM SUCCESS

It's possible for _____ county farms with 60 or more acres of good cropland to take in $10,000 in total cash income annually, says County Agent _____.

Such a total income would mean a net return for labor of $3,000, since, normally, it takes 70 percent of the total income to pay for farming expenses.

But to make such a return in this area of Minnesota, a farmer must be a mighty good manager.

In a current University of Minnesota agricultural extension pamphlet, "Agriculture in Northern Minnesota," Ermond Hartmans, extension farm management specialist, lists several farm business setups that can return a $3,000 net labor income in _____ county.

These setups are all based on full-time farming operations, yields of at least 50 bushels of corn per acre and at least 2½ tons hay per acre annually.

Under these conditions, Hartmans says a 19-cow dairy herd with highly efficient management can return the $3,000 net labor income. This would require high quality hay and silage ration a day grazing, cows averaging 350 pounds butterfat, a grade A fluid milk market and at least 55 acres of cropland producing 2½ tons of high quality hay per acre.

With good efficiency and 95 acres of cropland, the same income would be possible with 23 cows on 95 acres of cropland, with milk sold on a grade A market.

Where the farmer sells to a processed milk market, it takes a larger size business to make the same return. A farmer doing highly efficient managing can make

a $3,000 labor income with 33 cows and 100 acres of cropland, when selling milk for processing. With good average management, it would take 45 cows on 200 acres of cropland. In this case, a loose housing setup would work out well, Hartmans says. It would make it easier for the farm operator to handle the workload aided only by other members of the family.

Other enterprises that could bring a farmer a $3,000 labor income include: Fifty pasture-fed calves and 125 hogs on at least 120 acres; a livestock combination of, say, 150 ewes and 150 hogs on at least 100 acres of cropland; or a large "specialized poultry" flock, such as 3,000 chickens or 4,500 turkeys.

Hartmans adds that even though these enterprises all have good possibilities, farms with less than 160 acres of cropland will generally do better with an efficient, high-producing dairy herd selling milk to a fluid market and keeping some hogs as an extra enterprise.

For farms with more than 160 acres, a combination of either sheep or feeder cattle with hogs has the best income potential and still makes it possible to handle the business with family labor.

You can get a copy of "Agriculture in Northeastern Minnesota" at the county agent's office.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 1958

To non-corn-growing areas
in northeastern Minnesota

Editor's Note: Following is the second in a series of three articles on possibilities of farming in northeastern Minnesota

EXPERTS LIST NEEDS FOR FARM SUCCESS

It's possible for _____ county farms with 60 or more acres of good cropland to take in $10,000 in total cash income annually, says County Agent _____.

Such a total income would mean a net return for labor of $3,000, since, normally, it takes 70 percent of the total income to pay for farming expenses.

But to make such a return in this area where little corn is grown and where ear corn is practically unknown as a crop, a farmer must be a mighty good manager.

In a current University of Minnesota agricultural extension pamphlet, "Agriculture in Northeastern Minnesota," Ruzand Hartmans, extension farm management specialist, lists several farm business setups that can return a $3,000 net labor income in _____ county.

These setups are all based on full-time farming operations.

With highly efficient management, a farmer could reach the $3,000 net labor income mark with a 19-cow dairy herd, if the cows average at least 350 pounds of butterfat per cow annually and the milk is sold on a fluid milk market. This could be done with as little as 60 acres of good cropland.

With good efficiency and 185 acres of cropland, the same income would be possible with 23 dairy cows, a 350-pound butterfat average and a fluid milk market.

Where the farmer sells to a processed milk market, it takes a larger size business to make the same return. A farmer doing highly efficient managing can make a $3,000 labor income with 33 cows and 180 acres of cropland when selling to processed milk market. With good average management, it would take 45 cows on 300 acres of

cropland. A loose housing setup would be highly desirable in this case so that the workload can be handled by the operator with help from family members.

Here are some livestock enterprises that in some cases could bring a farmer a $3,000 labor income: 235 feeder calves, bought at 400 pounds and sold at 950 pounds each, on 160 acres of cropland; 400 ewes, with a 125 percent lamb crop, averaging 90 pounds per lamb and 8 pounds of wool per head, also on 160 acres of cropland; sheep or feeder cattle in combination with poultry or feeder pigs, such as 150 ewes with either 2,000 hens or 2,500 turkeys. In the latter case, such a business would be possible on a farm with 60 crop acres, if all the feed is bought for poultry.

All of these business choices are based on land that will produce 2½ tons of hay or an equal amount of feed value in other crops annually. Requirements for dairy herds are based on market prices of $1.15 per pound butterfat for fluid milk and $.85 per pound butterfat for processed milk.

Hartmans also points out that each of these setups will return $3,000 net income for labor only if all the labor is supplied by the family. Except for the 45-cow dairy herd, all the setups listed here could normally be handled by one man. And even that could be handled with help from other members of the family.

Copies of the pamphlet "Agriculture in Northeastern Minnesota" are available from the county agent's office.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
February 1958

To counties in northeastern Minnesota

Editor's Note: This is the last in a series of three articles from the county extension office, on possibilities and problems in farming in northeastern Minnesota.

PART-TIME FARMING MUST BE PLANNED TO BE SUCCESSFUL

Part-time farming may be necessary for some families in _____ county to make a good income, but it isn't always profitable, says County Agent_____.

He points out that when the head of a family works a good share of the time off the farm leaving little time for farm work, the farmer is strongly limited in what kind of operation he can handle.

Based on average cost and return figures used by Ernand Hartmans, extension farm management specialist at the University of Minnesota, _____ points out that part-time farming with a dairy herd is seldom successful.

Here's why: Even with a 350-pound butterfat average per cow and with the milk sold on a grade A market, it takes all the income of 15 cows to pay for the expenses in operating a farm that produces feed for those cows. That means a 15-cow herd can't be expected to show much if any net income, even with good management.

Dairy herds start showing a profit only when there are at least 19 cows, Hartmans says. Yet, a herd that size requires more labor than would be available if the farmer were spending half or more of his time working somewhere else.

So for successful part-time farming, the farm should have enterprises that bring a good return per hour of labor, even when operated on a small scale. Also, the enterprises shouldn't require high overhead costs.

That means that sheep, from a possible income standpoint, stand out above all other types of agriculture for part-time farming in northeastern Minnesota. A 40-ewe flock would return about $2.50 per hour of labor--more than feeder cattle, poultry

or pigs. A 1,000 hen flock, 1,000 or more turkeys or feeder pigs might also be considered. Feeder cattle have less potential for part-time farming than any other enterprise except dairying.

With any part-time farming setup, overhead costs can be cut best by keeping machinery and other equipment costs as low as possible. Much of the field work can be done by custom operators. The part-time farmer might be better off by not raising any legumes at all, but by depending on natural grass for feed. That could mean using some of the grass for pasture and having a neighbor harvest the rest on a share basis.

If there's feed shortage under such a system, one of the best ways to solve it is by fertilizing the natural grass. Field demonstrations in northeastern Minnesota last summer show that can be profitable.

There's more information on this subject in a recent University Extension pamphlet "Agriculture in Northeastern Minnesota." You can get a copy at the county agent's office.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota

To County Agents in
potato growing areas

POTATOES CAN
BE USED FOR
LIVESTOCK FEED

If they are cheap enough, potatoes are okay to feed to cattle, sheep or hogs, says County Agent_____.

According to E. G. Zavoral, extension livestock specialist at the University of Minnesota, potatoes are about 80 percent water. The best way to use them is as a substitute for part of the grain in the ration.

Generally, you can figure that 450 pounds of fresh potatoes are equal to 100 pounds of shelled corn and 300 pounds of spuds are equal to 100 pounds of alfalfa hay in feeding value, Zavoral says.

Potatoes are low in Vitamins A and D, meaning that good legume hay should be fed with them. Raw potatoes have little feeding value for swine or poultry; cooking makes them almost 4 times as valuable for these animals. However, it isn't profitable to cook potatoes for cattle or sheep.

Zavoral emphasizes that spuds must be cut up or chopped for cattle or sheep, to avoid choking. If they are fed whole, it's a good idea to put them in a low bunk with a rail about 3 feet above the bunk. This forces animals to keep their heads down and avoid choking.

Potatoes must be fed gradually at first, to avoid bloat and scours.

In feeding trials at the Northwest School and Experiment Station, Crookston, potatoes were successfully substituted for about half of the grain. Straw was a satisfactory roughage for feeding with them. Yearling steers ate up to 60 pounds of fresh potatoes daily.

In North Dakota experiments, dairy cows ate 25-40 pounds of potatoes daily as a substitute for silage, with good results.

Frozen potatoes should not be fed to livestock, Zavoral says.

Since spuds are low in minerals, a mineral feed should be given free-choice with them.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 27, 1958 Immediate release

MINNESOTA 4-H MEMBERS OBSERVE NATIONAL 4-H WEEK

Some 47,000 boys and girls and 7,820 adult volunteer leaders in Minnesota will observe National 4-H Club week March 1-8.

Featured during the week will be special programs, exhibits, radio broadcasts and newspaper articles telling the public about the 4-H program of "learning by doing.

The 4-H program is part of the national educational system of cooperative extension work in which the U. S. Department of Agriculture, the state land-grant colleges and the county extension service share. Nationally, the organization has more than 2 million members.

Parents and volunteer adult 4-H leaders will receive a special salute during the week for their contribution in making the 4-H club program a success. According to Leonard Harkness, state 4-H club leader at the University of Minnesota, most of the 7,820 volunteer leaders who work with 4-H members are interested parents. Last year the average adult leader devoted time equivalent to nearly 17 days to 4-H work alone, Harkness said.

Climax of the observances during National 4-H week will be the state 4-H radio speaking contest on Saturday, March 8. Seventeen district winners will take part in the finals Saturday morning on the University of Minnesota's St. Paul campus. Winner of the state radio speaking title will be announced following broadcast of the speeches of the two highest-scoring contestants over WCCO radio between 3 and 3:30 p.m.

Participants in the state contest will be entertained at a banquet Saturday evening given by the Minnesota Jewish council, co-sponsor of the speaking event with the University of Minnesota Agricultural Extension Service.

Close to 800 4-H members in Minnesota have taken part in this year's radio speaking contest, writing their own speeches on "Our Country's Most Important Problem Today--What Can I Do About It?"

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 27, 1958

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* A FARM AND HOME *
* RESEARCH FEATURE *
* * * * * * * * * * *
Immediate release

IMPLANTING HORMONES INCREASES LAMB GAINS IN EXPERIMENTS

Implanting with stilbestrol or a combination of hormones increased gains of wether (male) lambs on pasture in recent University of Minnesota research.

R. M. Jordan, University livestock scientist, reports that lambs on rape pasture implanted either with 3 milligrams of stilbestrol or with synovex grew 28-31 percent faster than did lambs not receiving the implant.

Synovex is a material which contains $2\frac{1}{2}$ milligrams of estradiol and 25 milligrams of progesterone, two hormones in each dose.

This work was conducted at the West Central School and Experiment station in cooperation with Harlie Hanke, staff member there.

Daily gains of lambs on rape pasture averaged .4 pounds for those getting no implant, .55 for lambs implanted with stilbestrol and .57 for those implanted with synovex.

Jordan says the same comparison was made with wether lambs on alfalfa pasture. In this case, lambs implanted with stilbestrol gained .35 pounds per day, those on synovex gained .34 pounds daily and those receiving no implant gained .25 pounds per day.

With ewe lambs on rape pasture, implanting with stilbestrol increased gains by 16 percent, but the same treatment of ewes on alfalfa reduced gains 8 percent, Jordan says. There were no tests with synovex on ewes.

Jordan emphasizes that implanting lambs with these materials is still an experimental procedure only; it hasn't been approved for general use by the U. S. Food and Drug Administration. Jordan also points out that past research at the University has shown there have often been unfavorable "side effects" in sheep implanted with hormones or hormone-like material.

B-1893-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 27, 1958 Immediate release

FARMER FINDS HIGH CORN YIELD POSSIBLE ON LIGHT SOIL

OGILVIE, MINN.--A hundred bushels of corn per acre is no trick for dairy farmer Duane Pearson, even though he never uses a disk when he's getting the seed bed ready.

Most important, though, Pearson, who farms 280 acres here in Kanabec county, gets a good profit from the methods he used to increase his corn yields.

His corn-raising formula includes heavy manuring, fertilizing according to soil test and planting the corn in the tractor wheel tracks on freshly plowed but undisked ground. The money he saves by not disking almost covers the cost for the starter fertilizer he uses.

Pearson has followed this pattern for the past four years and for three years has been first place zone winner in the Minnesota X-Tra Corn Yield contest.

This contest is sponsored by the University of Minnesota Agricultural Extension Service and THE FARMER magazine. Farmers taking part in it compare two corn plots on the same kind of soil--one fertilized and one unfertilized.

Pearson harvested 102.9 bushels per acre from his fertilized plot last summer, compared to 81.3 from the unfertilized plot. Even that is a good yield from a plot that received no fertilizer, but there's an explanation: Pearson had spread 10 tons of manure on each acre of all his corn land during the previous winter.

On his X-Tra yield plot, he applied 140 pounds 5-20-20 per acre as starter fertilizer in the corn row. He didn't use a sidedress fertilizer application during the growing season because, as he explains, "I've found in the past that it doesn't pay off where I've used such a high manuring rate."

The field had also received 300 pounds of 8-16-16 fertilizer broadcast in 1956 and was limed 4 years ago.

(more)

"The high yields have certainly shown me the payoff from fertilizing," Pearson says. He used the same fertilizer application on the rest of his corn as he does on the X-Tra yield plot.

Wheel-track planting is one of the key points in Pearson's corn program. He plows all his corn land in the spring. Then, within a day after a field is plowed, he narrows the tractor wheels and hitches his corn planter behind the tractor so that it plants in the wheel tracks. This way, the tractor wheels do all the "seedbed preparing" that's necessary. There is no disking or harrowing at all between plowing and planting.

This practice is recommended by University of Minnesota extension soils specialists and Kanabec county agent Roland Skelton. By not disking or harrowing, a farmer can save up to $5 or more per acre in seed preparation costs. And $5.25 per acre is all it cost Pearson for his starter fertilizer for corn in 1957.

He doesn't think he's reached the limit yet on his corn yields. "I believe I could do even better if I get a higher corn population," he states. "Last year, I had about 14,500 plants per acre, but I think it would be better if I could get it up to 16,000 or more."

He may also change to a high potash fertilizer, such as a 3-9-27, Pearson says, since soils in his area tend to run low in that nutrient.

At present, Pearson is following a rotation of two years corn, one of grain and three years of hay. But with good corn yields, he may change to a rotation with only two years hay.

He has a 27-cow herd of Holsteins, which averaged 427 pounds of butterfat in 1956 and just under 400 pounds last year. He is secretary-treasurer of the local Dairy Herd Improvement association. In addition to his herd, he keeps 8 or 10 brood sows, which farrow twice every year.

Corn isn't the only crop that turns out maximum yields on the Pearson farm. The fields of alfalfa-brome-clover do well, too. Pearson pastures his hay fields in the third year, usually, and follows a rotational grazing plan. He changes the cows to fresh grazing every few days, or in some cases daily.

B-1894-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
February 27, 1958

Immediate Release

WE'LL CONTINUE TO EAT WELL

Americans will keep right on eating well in 1958, if the amount of food available is an indication.

Food prices probably will average about the same as last year. Mrs. Eleanor Loomis, extension consumer marketing agent at the University of Minnesota, believes that if consumers have less money to spend on food, they'll buy about as much as before but will cut back their spending by buying fewer prepared and partially prepared foods.

Although the total amount of food will be just as great as it was in 1957, the amounts of different foods will vary, Mrs. Loomis reports.

Supplies of meat--especially beef--will be smaller than they were in 1957. Late in the year the pork supply probably will increase enough to help make up the drop in beef.

Consumers will have as much chicken and turkey as in 1957 when Americans ate record amounts of these two foods. According to U. S. Department of Agriculture forecasts, there will be slightly fewer eggs but as much or more milk, cheese, butter and other dairy products.

The Florida freezes cut down the amount of oranges and grapefruit that will be available, but there should be plenty of other fruits, especially canned and froze

Americans will have as many canned and frozen vegetables to eat in 1958 and about the same amount of fats and oils as in 1957. There will be plenty of grain of all kinds. However, Americans are eating a little less bread each year.

The Department of Agriculture predicts that Americans will eat about as much food as they did in 1957, but just a little less than in the "banquet" year of 1956, when the average American set an all-time high record for eating.

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