

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 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:

New Shield Against Poor Quality
Tips for Laundering Nylon, Orlon,
Dacron
Washing Orlon Sweaters
Laundering Man-Made Fibers

Storing Eggs
The Easter Egg Tree
Have Hard-Cooked Eggs on Hand
Freezing Pork
Uses for Leftover Egg Yolks
and Whites

CONSUMER MARKETING

New Shield Against Poor Quality

Before long you may see a new emblem - a red, white and blue shield - on a bag of potatoes or a tube of tomatoes at your retail market. When you see it, it will be your guide to quality in whatever kind of fresh produce you're buying. The red, white and blue shield will be the U. S. Department of Agriculture's mark for inspection of fruits and vegetables.

Recently the U. S. Department of Agriculture offered the fruit and vegetable industry a continuous inspection service in which a government inspector would be at the packing house all the time. The service will be voluntary. It will be up to the farmer or shipper to decide if he wants it and is willing to pay the cost. Besides keeping an eye on the quality of fruit or vegetables, the inspector will see that buildings are kept clean and sanitary.

The growers and shippers who meet all the requirements will be entitled to use the government red, white and blue shield on their packages. When it comes into use, it will help you judge the quality of the vegetables you buy.

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CLOTHINGTips for Laundering Nylon, Orlon and Dacron

Remember four basic principles when you launder nylon, Orlon and Dacron:

- . Pre-treat badly soiled areas by rubbing with a paste made of soap or synthetic detergent mixed with water.
- . Wash white articles separately.
- . Wash at low temperatures, and follow with a very thorough rinsing.
- . Hand-launder garments of delicate construction or trim.

* * *

Washing Orlon Sweaters

Orlon sweaters can be machine-washed unless they are trimmed with sequins or delicate material, but hand washing is preferable. In hand laundering, avoid wringing or twisting. A final rinse in fresh water containing a fabric softener will maintain the soft luxurious texture of the sweater.

* * *

Laundering Man-Made Fibers

Dresses or blouses made of nylon, Orlon or Dacron should be hand- or machine-washed after each wearing. Be sure to remove trimmings that might not be washable. To remove badly soiled areas, pre-treat by rubbing with a paste of soap or synthetic detergent and water. Wash in warm water and rinse thoroughly. Remove the article dripping wet from the rinse water and allow to drip-dry on a non-staining hanger. If the garment is sturdily constructed, you may use the complete wash and spin cycle and let it tumble dry at a low temperature setting.

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FOODS AND NUTRITIONFreezing Pork

If you're planning to put pork cuts into the freezer while pork is in plentiful supply, check on freshness of the meat and be sure to wrap it properly.

J. D. Winter and Shirley Trantanella of the University of Minnesota food processing laboratory point out that pork should be frozen as soon as possible after it has been chilled after butchering. Freezer storage life of pork will be reduced in proportion to the length of time it is held at the market.

To keep top quality in pork flavor, it is also necessary to wrap the meat tightly in air-tight, moisture-resistant material. The University researchers recommend storing pork at 0° F. or, better still, at -10° F. 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 and stored at 0° to -10° F.

* * *

Uses for Leftover Egg Yolks and Whites

No thrifty homemaker would think of wasting food, but many wonder what to do with leftover egg yolks or egg whites. The Poultry and Egg National Board, in promoting National Egg Month this March, offers some hints for dealing with that "half-an-egg" problem.

If you don't wish to use the leftover yolks immediately, store them in the refrigerator up to three days covered with cold water. Use yolks in sauces for vegetables or desserts in custards or you can cook them by placing them in a strainer and lowering into simmering water for about 10 minutes. Cool and mince them for use in sandwiches and salads or as a garnish.

Egg whites may be kept up to 10 days in the refrigerator in a covered jar. Here's a check list of uses for leftover whites: angel food cake, seven-minute frosting, white cake, meringues, fruit whip and snow pudding, soft and baked custards -- all delicious desserts your family will enjoy.

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Timely Tips for The Farmer, issue of March 1

Ewes can be shorn from 2 weeks to a month before lambing, if the farmer has a lambing shed that will protect the ewes from extremely cold weather.

--R. E. Jacobs

Before too long, the melt-water will be coming down the swales or field run-off areas. The water will seek the natural flowage line. By watching for the run-off path, you can find out where to locate sod waterways this spring.

--Roger Harris

Make a final check on seed and fertilizer needs by setting up a 1958 cropping map of the farm. Place your fertilizer order as soon as possible, because less 1957 fall spreading will mean a rush this spring.

--Lowell Hanson

This is a good time to plan an improved pasture program. Forage species such as alfalfa-brome need to be managed intensively. One way to do this is with ration-a-day grazing. Under such a program, some farmers in Minnesota are keeping 1-2 cows for each acre of pasture. Production of total digestible nutrients (TDN) can be as high as 4,000 pounds or more per acre under good management. Milk production can be doubled or tripled under this system, when compared to continuous grazing.

--Bill Hueg

add 1 timely tips

Have sows farrow in clean places and install heat lamps about 30 inches off the floor. Start out with 250-watt lamps and change to smaller ones as pigs get bigger. In addition to keeping little pigs warm, the light from heat lamps attracts them and keeps them from getting too close to the sow. That can make them less likely to be laid on.

-- H. G. Zavoral

Electricity hasn't become any more expensive for farmers. In a study in southern Minnesota, there was no increase in the kilowatt hour cost during the past 10 years on rural lines. In some cases, there was a 33 percent decrease. Kilowatt hour rates went down 24 percent or more in half of the lines.

--A. C. Schwantes

No one would knowingly care for a dairy cow all year for nothing. Yet, the record seems clear that some farmers are doing it unknowingly. Your county agent has a new milk record and culling guide that can help you find the facts about your cows.

--H. R. Searles

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To all counties
For use week
March 10 or later

GRAIN SORGHUM
MAKES GOOD FEED
FOR SWINE, BEEF

Grain sorghum can be profitably fed to swine and beef cattle if it's handled properly and is supplemented.

R. J. Meade, livestock nutritionist at the University of Minnesota, says that good quality grain sorghums have a higher protein content than corn. Swine and beef cattle should be able to put on 100 pounds of gain at little, if any, more total cost than would be involved in using No. 2 yellow corn as the main "energy source" in the ration, Meade says.

In general, grain sorghums are worth 90 to 95 percent as much per pound as No. 2 yellow corn. However, sorghum grain contains about 10.9 percent protein, compared to 8.7 percent in No. 2 corn.

The two grains differ little in total digestible nutrients (TDN), fat, fiber and mineral content, but grain sorghums have practically no vitamin A. They do have more pantothenic acid -- another vitamin -- than corn.

There is little difference in protein quality between grain sorghum and No. 2 corn. But to take advantage of the increased protein content of grain sorghum, swine rations containing this grain would need to be supplemented with protein supplemental feed like good quality tankage or fish meal -- feeds that are relatively high in lysine and methionine, two essential amino acids. Grain sorghum protein is deficient in both, Meade points out.

Grain sorghum can be left whole if self-fed to swine. For hand-feeding, though, it needs to be ground, for pigs or beef cattle.

It's important to supplement grain sorghum with vitamin A, Meade says, or to make sure there is enough vitamin A in other feeds the animals receive.

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PRUNING CAN HIKE
MARKET VALUE OF
PINE TREES

A "barber" treatment on your pine forest trees late this winter or in early spring can add up to better prices in the lumber market later on.

This "barbering" is the kind you do with a pruning saw, say County Agent _____ and Marvin Smith, extension forester at the University of Minnesota.

They say, prune Norway pine and white pine just before growing season. But don't do any pruning on oak trees after the end of March. If you do, you might leave the tree open for an oak wilt infection.

Pruning puts the "finishing touches" on a well-managed farm woodland. It helps produce large, straight, clear logs that bring top prices. In fact, pruning can easily mean raising the logs to the next higher grade when they're sold.

For best results, trees need two prunings. The first should be on young trees, 4-6 inches in diameter. Then, cuts heal fast and leave only small knots.

Prune no more than the 200 best formed trees on an acre. Don't waste time and money pruning trees which will be cut out in intermediate thinnings.

A second pruning may be necessary a few years later to get limb-free, 16-foot logs.

Smith says pruning cuts need to be as close to the trunk as possible. Stubs take too long to heal and may let in rot or insects. Use a fairly heavy pruning saw, with a blade 12-18 inches long. For high branches, you can use a saw on a long pole.

Prune no more than two-thirds of the total height of the tree at the first pruning.

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FARM FILLERS

The key to low-cost dairy production is high production per cow. Extension dairymen at the University of Minnesota say 1956 records of the Minnesota Dairy Herd Improvement association show that feed for a cow producing 5,000 pounds of milk per year cost \$1.85 for every 100 pounds of milk produced. But a cow producing 10,000 pounds per year had a feed cost of only \$1.29 per 100 pounds of milk produced.

* * *

Proper fertilizing can actually help avoid a soft corn problem, says J. M. MacGregor, soils scientist at the University of Minnesota. Excessive moisture often results from corn freezing before it matures. But plants that receive an adequate supply of plant nutrients will grow faster and therefore are more likely to get ripe before the first frost.

* * *

Forages are important both as livestock feed and for soil improvement, say agronomists and soils experts at the University of Minnesota. They point out that quality forages yield three times as much protein and an equal amount of digestible nutrients from each acre as will good corn. Forages also improve soil structure, water infiltration and drainage, increase organic matter and cut down soil erosion.

* * *

The U. S. Department of Agriculture reports that milk cows bred from 932 proved sires used by artificial dairy breeding associations in the nation in 1956 produced an average of 11,301 pounds of milk and 477 pounds of butterfat.

* * *

In 1940, only 33 percent of American farm households had electricity. By 16 years later, 94 percent had electricity, 64 percent had piped running water and 90 percent had mechanical refrigerators.

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A U. of M. Ag and Home Research Story

COMPANION CROP
STUDIES REPORTED

When oats are used as a companion crop for legume-grass mixtures, cutting the oats for hay or silage can mean higher forage yields the following year.

A. R. Schmid, University of Minnesota agronomist, says alfalfa-timothy mixtures in recent field tests yielded 3.55 tons per acre where the companion oats crop the year before had been cut for hay in early July.

In comparison, where oats were combined in August and the straw removed, forage yields the next year were 2.5 tons per acre. Combining and then clipping the stubble increased forage yields during the following year to 2.9 tons per acre, but this was still a good half ton less than where the oats had been removed for hay or silage.

Schmid says the reason for better results from cutting the companion crop for hay is that this practice gives the legumes a better chance to develop during the first year. This means more vigorous, hardier plants.

The experiment also showed little difference between broadcasting fertilizer at seeding time or applying it in a band below the legume seed. This was on a fairly heavy soil, however, and might not hold true on lighter soils.

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March 4 1958

To all counties

ATT: 4-H CLUB AGENTS

For use week of March 10 or after

VARIETY OF FOOD
IMPORTANT TO
GOOD HEALTH

Good health and good looks of young people depend to a great extent on a good diet, County 4-H (Home) Agent _____ says.

Such a diet includes a wide variety of foods. _____ passes on some suggestions teen-agers will want to follow to help them look and feel their best.

A good daily food plan is an essential for good health. Such a food plan will include foods from each of four food groups, according to Grace Brill, extension nutritionist at the University of Minnesota, - the milk group, the meat group, vegetables and fruits, bread and cereals.

Teenagers need four or more cups of milk a day, though cheese, ice cream or other milk products may be substituted for part of the milk. The milk group supplies large amounts of the calcium necessary for good bones and teeth and helps to meet the needs for protein and the vitamin riboflavin.

Two or more servings from the meat group, which includes fish, poultry, eggs and dry beans and peas and nuts, are recommended for the day's diet. The proteins in this group contribute toward growth and general body maintenance.

Four or more servings of vegetables and fruits will provide many of the vitamins and minerals the body needs. Eat one of the dark green and deep yellow vegetables at least every other day, since they are high in vitamin A - which helps prevent night blindness and other eye deficiencies, aids in preventing infections

and promotes healthy skin. Foods rich in vitamin A are the dark green and deep yellow vegetables such as carrots, broccoli, chard, pumpkin, spinach, winter squash, sweet potatoes. Apricots, cantaloupe and tomatoes are also high in A.

Every day have some citrus fruit - oranges, grapefruit or tangerines - or other fruits or vegetables rich in vitamin C. Tomatoes, broccoli, Brussels sprouts, raw cabbage, green pepper, strawberries, raw pineapple and cantaloupe are all high in vitamin C. This vitamin aids in maintaining teeth, bones, blood vessels and tissues and must be supplied every day. Potatoes, other vegetables and fruits should provide the other servings needed from this group. Whole grain, enriched or restored cereal products and bread in each day's meals supply large amounts of the B-group of vitamins essential for good appetite, growth and proper body functions, as well as iron for blood and worthwhile amounts of protein. Nutritionists recommend four or more servings a day of whole-grain, enriched or restored cereals or bread.

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To all counties

ATT: HOME AGENTS
For use week of
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TREAT YOUR
AFRICAN VIOLETS
WITH CARE

Growing African violets has become a favorite hobby of American home-makers during the past 20 years.

Home Agent _____ says that _____ county homemakers may find it an interesting and rewarding pastime if they follow these suggestions from C. Gustav Hard, extension horticulturist at the University of Minnesota

- Use a soil mixture containing equal parts of good garden soil, sand and organic matter. Sources of organic material might be leafmold, rotted manure or peat.
- Any container 4 inches in diameter or more is satisfactory, though glazed containers are preferable. If you must use a clay flower pot, line the edge with aluminum foil or dip it in hot paraffin to prevent the breakdown of leaf tissue caused by leaves touching the edge of the pot.
- Keep the day temperature close to 70-72 degrees F. and don't let night temperatures fall below 62 degrees F.
- Keep plants near east or north windows if possible, since light should not be direct or bright. If the plant must be placed in west or south windows, put a light shade or curtain between the plants and the window.
- Water plants either from the top or from the bottom using water at room temperature. Be careful not to get cold water on the leaves. And do not keep the soil saturated with water; allow it to become nearly dry before watering.

The University horticulturist lists some causes of common problems in growing African violets:

- YELLOWING of the foliage may be caused by over fertilization, not enough light, too high temperature, too low temperature, or over watering.
- RING SPOTS on the foliage may be caused by cold drafts, use of cold water in watering and direct sunlight.
- POOR FLOWERING means not enough light or poor temperature control.
- LIGHT GREEN GROWTH and leaves cupped downward indicate too low a temperature.

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March 4, 1958

Immediate release

STATE 4-H SPEAKING CONTEST SATURDAY

Seventeen district winners in the statewide 4-H radio speaking contest will compete for the championship title and a \$200 award Saturday (March 8) on the University of Minnesota's St. Paul campus.

The state finals will be held at 9 a.m. in Coffey hall. Announcement of the winner will be made following broadcast of the speeches of the two highest-ranking contestants over WCCO radio between 3 and 3:30 p.m.

Competing in the state contest will be Karen Thurston, Madelia; Alma McClintock, Pine River; Wayne Marzolf, Preston; Beverly Carlson, Braham; Norma Krenik, Madison Lake; Beverly Kramer, Marshall; Roger Cone, Elmore; Darroll Bussler, Brownton; Ann Sabol, Milaca; Erna Barstad, Slavton; Donald Kronemann, Fergus Falls; Jerry LaVoi, Fosston; Marie Johnson, Roseau; Mary Ann Holliday, Hibbing; Deann Chamberlain, Clontarf; Michael Stetzler, Wadena; and Louise Dallman, Barnesville.

The Minnesota Jewish council, co-sponsor of the speaking contest with the University of Minnesota Agricultural Extension Service, will be hosts to the district winners at a banquet at the Lowry hotel Saturday evening at 6 p.m. Speaker at the dinner will be Reverend Karl Baehr, New York City, executive director of the American Christian Palestine committee and a member of the Speakers' Research committee of the United Nations. He will speak on "Can Democracy Win the Underdeveloped People?" Dr. Louis R. Weiss, president of the Minnesota Jewish council, will be master of ceremonies.

Contestants will participate in two assembly programs at Central high school, St. Paul, Friday morning. The afternoon will be devoted to a tour of St. Paul, including the state capitol and Mount Zion temple.

Awards provided by the Jewish council include a \$200 first prize, a \$100 second prize and \$50 and \$25 to champion and reserve champion, respectively, to buy books for the local public or school library. District winners received \$15 from the council and trip to the Twin Cities; district reserve champions \$10 and county winners \$5. All members prepared speeches on "Our Country's Most Important Problem Today--What Can I Do About It?"

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF MINNESOTA

University of Minnesota
U. S. Department of Agriculture
County Extension Services
Cooperating

Agricultural Extension Service
Institute of Agriculture
St. Paul 1 Minnesota
February 27 1957

TO: County Agricultural Agents

Continuing the program begun in 1947 state-wide recognition will again be given to outstanding farmers who have contributed to the development, protection, and encouragement of further advancement of natural resources.

It is only through the interest and cooperation of our farmers and the proper land use practices which they carry on that we continue to make great strides in building up depleted soil, water, and wild-life resources.

Through the opportunity and courtesy offered by the Northwest Sports, Travel and Boat Show, farmers have received recognition which they so rightly deserve.

Your whole-hearted interest and cooperation through your various personal contacts will provide the state award committee with the opportunity to select a state winner with an all expense trip for himself and his wife to the show with a special ceremony on Sunday, 3 p.m., April 14. In addition, of course, the county agent (and his wife) from the state winner's county also will receive the all-expense weekend award.

This year again each designated county winner will receive a certificate of recognition for his contributions.

In order that your nominees may be considered by the state committee your selection must be in the hands of the state award committee no later than March 23. We have sent letters to game wardens, conservation clubs, Rangers, etc., asking them to submit entries to you by March 15.

Remember that any nominations which have been submitted in previous years may again be re-submitted for state award consideration, but adding such additional facts about his program that have been continued or added since his last nomination.

We again welcome your whole-hearted cooperation. It is important that your county be represented with a nomination so that none of our good farmers may be overlooked.

Two news releases prepared by our Information Service are enclosed for your use.

Send your county winner nomination to Northwest Sports, Travel and Boat Show, 409 Times Building, Minneapolis, Minnesota.

Parker Anderson

Parker Anderson
Extension Forester

PA:ew
Enc.

Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 3, 1958

SPECIAL TO WEEKLIES AND DAILIES

Immediate Release

AG. SCHOOL COMMENCEMENT, ALUMNI ACTIVITIES SCHEDULED

Events in connection with the 69th annual commencement and 67th alumni reunion of the University of Minnesota School of Agriculture, St. Paul, will be held March 16, 17, and 19.

Special reunions will be held Sunday, March 16 from 1 to 6 p.m. by the following classes: 1893, 1898, 1903, 1908, 1913, 1918, 1923, 1928, 1933, 1938, 1943, 1948, 1953.

Mr. Kenneth Law, Hastings, Class of 1915 and Mr. Victor Dose, St. Paul, Class of 1937, who are president and secretary, respectively, of the School of Agriculture Alumni Association, urge all alumni and former students of the School to attend the festivities. Alumni headquarters will be in Coffey Hall on the St. Paul Campus.

Dr. Hugo Thompson, Professor of Philosophy and Religion at Macalester College, St. Paul, Minnesota, will give the commencement sermon at 8 p.m. on March 16 in the auditorium of Coffey Hall on the St. Paul Campus.

The annual Alumni Association business meeting will be held at 1:30 p.m. Monday, March 17 in Party Dining Room of Agricultural Cafeteria. The alumni banquet and program is scheduled at the School of Agriculture Dining Hall at 6 p.m. the same day. Mr. Frank W. Peck, Class of 1908, former Director of Agriculture Extension, U. Farm, President of the Federal Land Bank, St. Paul, and executive of the Farm Foundation, Chicago, Illinois, will be the Master of Ceremonies at the banquet.

There will be a reception on March 19 from 3 to 4:30 p.m. for members of the graduating class and their parents by Dr. and Mrs. H. Macy and Dr. and Mrs. J. O. Christianson. Dr. Macy is dean of the University Institute of Agriculture and Dr. Christianson is superintendent of the School of Agriculture. The reception will be held in the Fireplace Room of the Home Economics Building.

Dean T. H. Fenske, Assoc. Dean, Institute of Agriculture, St. Paul, will speak at the graduation exercises at 8 p.m. on March 19 in the auditorium of Coffey Hall. Diplomas will be presented to graduates by Dean Macy. Presiding over the capping ceremony for young women who have completed the course in Practical Nursing and Home Management offered jointly by

(Over)

the School of Agriculture and the School of Nursing of the University of Minnesota will
Miss Katharine J. Densford, director, Miss Eugenia Taylor, Assistant Professor in the
School of Nursing, and Helen Peterson, Instructor, School of Nursing.

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March 4, 1958

LAMBERTON CO. YOUTH
EXCH FROM GUATEMALA

Bearvan Johnson, R.R. 6, ATWATER, returned to Washington, D.C., on March 4, after spending six months in Guatemala under the International Farm Youth Exchange program, a people-to-people program for promoting understanding and friendship.

Johnson is part of a group of seven returning 1957 IFYE delegates who will spend four days in the Nation's Capital evaluating their experiences abroad. This final consultation program, arranged by the National 4-H Club Foundation, will include visits with officials of the departments of Agriculture and State, the Pan American Union, the embassies of their host countries and the IFYE staff of the National 4-H Foundation.

During 1957 a total of 124 rural young people have lived in rural homes in more than 40 countries throughout the free world. In return, 176 exchangees from cooperating countries have come to the United States to see the American way of life first-hand. The exchanges are conducted in the United States of the Cooperative Extension Service and the National 4-H Club Foundation.

As a people-to-people program, the International Farm Youth Exchange is financed by voluntary contributions of 4-H clubs, civic and rural groups, business concerns, individuals, foundations, and others interested in world understanding. No Federal or State government funds are used to finance the actual exchanges. An exchange with Guatemala was made possible in 1957 by a grant from the Old Matheson Chemical Corp. to the National 4-H Foundation.

Upon returning to Minnesota, Johnson will devote several months to reporting his experiences. Groups interested in having him tell about his life in Guatemala should contact Marian Dryden, 4-H Club Agent, WILLMAR.

FOR IMMEDIATE RELEASE

TOM Kunkle Co
Kunkle photo

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Immediate release

CASH RECEIPTS CHANGE LITTLE, BUT NET INCOME DROPS ON MINNESOTA FARMS

Minnesota farmers took in about the same amount of total cash receipts for agricultural products in 1957 as they did the year before.

Realized net income, however, may have declined by as much as \$20 million in 1957, according to E. W. Learn, agricultural economist at the University of Minnesota. He bases these conclusions on data from the U. S. Department of Agriculture and the State-Federal Crop and Livestock Reporting Service.

On a per farm basis the decline was less severe because number of farms also declined by 3 percent in 1957.

Learn says farmers took in about 10 percent less from crop sales in 1957, but this was offset by a 4 percent increase in cash receipts from livestock and live-stock products.

Total cash receipts from marketings in 1957 are estimated to be about \$1,277,000,000, compared with \$1,279,000,000 the year before, Learn says.

The Minnesota index of prices received by farmers for crops fell 13 percent during the year. In the last quarter of 1957, corn prices averaged only 76 percent of the 1956 average for the same period.

Cash receipts from hogs increased 13 percent in 1957 over 1956. Hog prices, which had shown some gains by late 1956, were still favorable through 1957 and averaged 23 percent higher than in 1956.

Cash receipts from cattle and calves were 13 percent above 1956. Although marketings declined slightly, average prices for cattle and calves went up about 14 percent.

Small increases in both prices and marketings meant that dairy producers received about 2 percent higher receipts in 1957 than a year earlier.

Poultry producers received lower total cash receipts in all lines of production in 1957. Cash receipts from eggs declined more than 10 percent and turkey receipts went down 12 percent.

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MOST OF HOME DEMONSTRATION CLUB MEMBERS ARE FARM WOMEN

Seven out of every 10 members of home demonstration clubs in Minnesota live on farms, according to findings of a recent study of home demonstration clubs in 13 counties in Minnesota in 1957.

Two out of every 10 members come from rural communities, including towns under 2,500 in size, but do not live on farms.

In cooperation with home agents, club members themselves secured information from 100 or more members selected at random in each of the 13 counties. Information obtained in Minnesota is included in a national study of home demonstration club members and their families, Dorothy Simmons, state leader, home economics extension, University of Minnesota, said today.

At the present time approximately 3500 home demonstration clubs with nearly 50,000 members participate in an educational program in homemaking planned by local women and conducted cooperatively by the Extension Service of the U. S. Department of Agriculture, the University of Minnesota and the local counties. The women study various phases of homemaking and family living.

More than half of the members in the Minnesota study are in the age group 30 to 49 years, but about a sixth are 29 or younger. Wilkin county showed the highest proportion of young homemakers enrolled.

A third of the members have children under age 5; one third also have children between 10 and 14 years of age and a fourth between 15 and 19 years. About four out of every 10 members have children between 5 and 9 years of age.

Though most of the present members have been in their local clubs from two to nine years, about 13 percent have belonged over 15 years.

As far as education is concerned, nearly half of the members attended high school, but only a third completed the four years. Almost a fourth of the members attended college, and three percent have completed four or more years of college. More than a third of the members have had training in business or for such professions as teaching or nursing.

About one Minnesota member in every seven works for pay away from home--five percent full time and nine percent part time. A small number of the women earn money at home by marketing produce, caring for children for others, dressmaking, baking, renting rooms or serving meals.

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CHANGE TO COMPLETE LIVESTOCK FARMING BOOSTS INCOME

ALDEN, MINN.--Like a well-worn engine, the farm business sometimes needs a complete overhaul to really put it in high gear.

Wesley Pierson, who has been farming here in Freeborn county in partnership with his father, Arvid, since 1945, found eight years ago that the best way to improve his operation was to get rid of the milk cows and keep other livestock instead.

Wesley and his father originally had 13 dairy cows - all their small barn would hold. They also kept 600 laying hens, marketed about 100 hogs every year, and fed some lambs. Considering their size, all enterprises were doing reasonably well; yet, the total business didn't have enough volume for a really good income.

In 1950, there were 160 acres in the farm. Since then, Wesley has added another 40 acres.

A bigger dairy barn and a new milk house would have meant a big expense. With hogs, sheep and a bigger-than-average poultry operation, more dairy cows would have caused a labor problem.

So to expand at least cost and do a bigger business with a minimum of labor, Pierson in 1950 sold the cows and expanded the hog business and planned to also raise feeder lambs or feeder cattle. He kept fewer hens each year and in 1954 quit raising them altogether.

With the chickens gone, the well-insulated poultry house was easily converted into an ideal farrowing house. The barn was made into a hog house and the barnyard became a drylot for cattle or lamb feeding.

For the next two years, the Piersons kept about 40 feeder cattle annually, and no lambs. They had both feeder lambs and feeder cattle for two years after that, but since 1955 have had lambs and no cattle. This is a matter of fitting livestock to the farm and to fit his own likes and dislikes, Wesley says.

"We're raising lambs instead of beef because we have a good deal of hay in the crop rotation. Raising both hogs and drylot-fed cattle would call for more corn. Sheep can be fed to market on a ration that's half hay."

(more)

add 1 Change to Complete Livestock Farming Boosts Income

Wesley and his father usually buy about a thousand feeder lambs in three groups every year.

Last September they bought 521 lambs, sheared them and turned them into the corn fields. "The lambs eat up a lot of the weeds and lower leaves of standing corn, without hurting the corn itself," Wesley says.

In early December, the lambs went into drylot and Wesley "topped out" the heaviest lambs and marketed them. He did this four times until all were marketed by mid-January. He then bought another 360 lambs which are now fed in drylot and will be marketed in spring. He plans to get a third bunch this month.

This system fits the Pierson farm "and my own preferences" much better than a ewe flock would, Wesley says. "There's less of a parasite problem with no ewes around. Also, we would need more buildings for lambing if we kept our own ewes."

The Piersons keep 14-16 sows and gilts and have them farrow in January and July. "This is to hit the market when prices are better," Wesley reasons. "The winter-farrowed pigs reach market in July and August and we sell the others between December and February. With our warm farrowing house, January farrowing is no problem." He uses heat lamps, gives sows and litters plenty of attention at farrowing time and regularly markets eight or more pigs from each litter. The farrowing house always has a constant 60-degree temperature, thanks to a thermostatically controlled fan in the building.

Wesley Pierson's record books show he is in the top half of the Southeast Minnesota Farm Management association as far as gross income is concerned. Before the change, he was always in the lower half.

Harvey Bjerke, West Concord, fieldman for the association, says that like the Piersons, many farmers could profitably change their livestock operations. He adds, though, that just what livestock will best fit each farm can be determined only after a careful analysis, such as the Piersons made in 1950.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 4, 1958

SPECIAL TO WILCOX

County Agent Introduction

Birdsfoot trefoil is a legume that, while rather new in Minnesota, is receiving increased attention in some areas of the state. A sample of trefoil seed here is being shown to Abel Anderson, left, Red Lake county agent, by R. C. Scine, agronomist at the University of Minnesota's Northwest School and Experiment station, Crookston. More than 500 acres of trefoil were raised for seed in the Red River Valley last summer.

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-pjt-

FOOD AND NUTRITIONStoring Eggs

Store eggs in the refrigerator, large end up to maintain their just-bought freshness. And buy them from a store that keeps its eggs refrigerated, too.

* * *

The Easter Egg Tree

The Easter Egg tree is an Old World and old Pennsylvania Dutch custom any family can adopt. It began when people wanted to show off their decorated Easter eggs by hanging them on their house plants and shrubs.

Start with eggs either hard-cooked or "blown." The number you'll need depends on the size of the shrub or branch you choose to hang them on. Then let your imagination take over. The children will enjoy dressing up the eggs with sequins, feathers, colored papers and plastic tapes or little bits of lace. Attach your creations to the tree or branch with transparent adhesive tape and use the Easter egg tree for your centerpiece.

To "blow" eggs, make a hole about 1/8 of an inch in diameter in both ends of egg. Use a hat pin to do this, inserting it deeply enough to break the yolk. Hold egg over bowl and blow gently into hole at large end until shell is empty. Rinse shells in cold water and dry. If shells are to be dyed, rinse them again in hot water, as shells dye best when not. The shells can be threaded with ribbon or cord and fastened to the tree.

* * *

Have Hard-Cooked Eggs on Hand

A supply of hard-cooked eggs in the refrigerator is a meal half ready. Many recipes such as deviled eggs, scalloped eggs or egg salad sandwiches require hard boiled-eggs, and most of these recipes are the speedy kind if you have already cooked your eggs.

In preparing your hard-cooked eggs, the Poultry and Egg National Board offers this reminder: Eggs will be more delicate in flavor, more tender, and more attractive if they are cooked in water just under simmering for 20 minutes and then cooled quickly in cold water. Hard-cooked eggs should be kept in the refrigerator until used.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 5, 1958

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* RELEASE AT: *
* 3 p.m., Wednesday, Mar. 5 *
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POULTRY INTEGRATION DISCUSSED BY U OF M POULTRY SCIENTIST

EAU CLAIRE, WIS.--Integration in the poultry industry is here to stay, Elton Johnson, head of the poultry department at the University of Minnesota, said here today.

He spoke at the dedication of the Wisconsin "Chicken Broiler House of the Year."

Johnson said "the extent of integration in any chicken enterprise may vary considerably with the broiler producer, feed manufacturer, equipment supplier, processor, building contractor and other interested parties. Integration may involve only one or two such agencies or it may involve all those plus additional ones.

"In most instances, the broiler producer has the choice between a few contractual agencies, with the broiler producer retaining a greater share of the risk involved or the use of many contracts or agreements in the integration operation with a reduction in producer risk accordingly. The individual producer must arrive at a decision regarding the extent of his integration. There is no one rule of thumb that will guide him to the ideal solution."

Although "integration" is the common term applied to poultry production on a contract basis, there are different types and degrees of integration, Johnson said. "Vertical integration" sometimes refers to this trend of contract agreement between producer and other agencies involved in feeding, financing, processing and selling broilers. Complete vertical integration ordinarily means a situation in which one organization had complete control of the entire process, from the production of the broiler chicks until they are sold to the consumer.

"This is not apt to be developed to any extent since many of the agencies involved have diversified interests and objectives, which usually result in several phases of the broiler industry joining together for an integrated production program," Johnson said.

(more)

He stated that major benefits of an integrated program to an individual producer include reduced responsibility in terms of management and capital investment. "The assurance of a certain price relationship is also frequently included in such contractual arrangements and tends to stabilize the price received by the producer for various production periods. The development of a definite market for the sale of these birds is another item that is normally included and is very important in this type of venture."

What prices can broiler growers receive in an integrated program? "This is a difficult question to answer," according to Johnson. He said it "can only be stated in general terms in any contract agreement, since most prices are based on definite market quotations which vary daily. A common market quotation for Minnesota producers is the North Georgia price.

Local prices may be adjusted to that particular price quoted by United States Department of Agriculture market reports. The price per pound on a live weight basis at the farm in North Georgia was 17.7 cents in January of this year. This price compares with 16.4 cents in 1957 and 21.3 cents in 1956 during the same month.

Broiler prices received by farmers in Minnesota and Wisconsin are usually slightly higher than those in North Georgia, Johnson pointed out. Prices reported by USDA for the last three months are 1.4 and 1.8 cents higher in Minnesota and Wisconsin than in Georgia. Prices in this area are also higher than for U. S. as a whole, according to Johnson, and the abundant supply of feed in this area at a reasonable price would indicate that broiler production could be profitable under a high level of efficiency, with special emphasis on minimizing housing and processing costs in this area.

Since competition in the Midwest with Southern and Eastern broiler producers is needed, it seems desirable to use maximum promotion of Minnesota and Wisconsin grown ideas in broiler sales.

"Broiler producers and all related industries must push promotion of broiler meats for table consumption to effect maximum returns," Johnson said.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 6, 1958

Immediate Release

DRIED PRUNES LEAD THE MARCH PLENTIFUL FOOD LIST

Dried prunes take the number one place on the U. S. Department of Agriculture's plentiful food list for March, reports Mrs. Eleanor Loomis, extension consumer marketing agent at the University of Minnesota.

During the past two summers, California has produced large crops of prunes. As a result, the nation this year has one of the largest supplies of prunes on record. The popular medium size will be in heaviest supply and the best buy.

Modern dried prunes are tender enough to eat raw. But, raw or cooked, prunes make a nutritious snack, Mrs. Loomis points out.

Among other fruits look for apples and canned pears. The large crop last fall has left plenty for the March shopper.

The most plentiful vegetable will be corn, canned or frozen from the big crops harvested two years in a row. Take advantage of this surplus and try preparing new corn dishes, Mrs. Loomis suggests. An appetizing one is Corn Pudding. To one can of cream-style corn, add 2 eggs, a half cup of milk, 1 teaspoon each of salt and sugar and a little pepper. Pour into a baking dish, set in a pan of hot water, and bake at 350 degrees for an hour.

Since cows give more milk in the spring, butter, cheese, evaporated milk and other dairy products will be available in almost unlimited quantities.

Egg supplies, too, are increasing seasonally. March has been designated as National Egg Month.

Pork will continue to be the most plentiful meat in March.

Peanuts and peanut products complete the list of abundant foods for the month.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 6, 1958

Immediate release

IMPACT OF VERTICAL INTEGRATION SEEN ON MINNESOTA AGRICULTURE

How will vertical integration--often called "contract farming"--affect Minnesota agriculture?

It will have a number of effects, but not always the same. It could help some farmers and hurt others, says Darrell Fienup, agricultural economist at the University of Minnesota.

A farmer under an integrated system may be giving up a higher average income over a longer time for a somewhat lower but less variable income, Fienup points out. But for a farmer who doesn't have enough capital or credit to operate on a very high scale by himself, integrating may give him both a higher and more stable income.

Vertical integration isn't new; many non-agricultural industries have been integrated for a long time. Large oil companies, for example, have complete control over supplies of their raw materials. Neither, for that matter, is integration new in farming. A farmer selling milk through a cooperative has "integrated" production and processing.

There are two main types of integration involving farmers. One is the farm cooperative, in which the farmer hires a business man to do certain jobs for him. The other is when private business contracts with the farmer to do certain things.

The processor or distributor stands to gain through vertical integration, because it helps him cut production and selling costs. It can help him even out his supplies and reduce storage costs. It gives him a greater control over his supply than he formerly had.

An example of vertical integration would be a feed company financing the cost of the farmer's feed and hogs, with the farmer in turn agreeing to use the company's feed. The farmer might also agree to sell his hogs to a particular packing company.

(more)

add 1 vertical integration

In some cases, the farmer doesn't own the hogs at all; he supplies only land, buildings, equipment and labor and is told how and what to feed and where and when to sell.

The biggest reason why contract farming is gaining ground, Fienup says, is the need for credit at a reasonable rate. Farmers need more and more equipment, fertilizer and land--all costing more than ever. But this need for capital and the lack of it causes many farmers to turn to vertical integration. It gives them the needed capital, takes away the risk involved in borrowing money, and may result in a more efficient, higher-volume farm unit. Also, the farmer gets expert management help through integrating, resulting in more efficient production.

For agriculture in general, Fienup says it will undoubtedly lead to greater specialization on the farm, and each farm will need more capital. It will lead to higher total production. Take the broiler industry for example: 143 million birds were produced in 1940, 631 million in 1950 and one-third billion in 1956. Integration played a key role in this increase.

While vertical integration can bring about some drastic changes in agriculture, the only way to stop it would be through government control, Fienup points out. Another alternative would be to accept it, but organize integrated farmers into a type of labor union to bargain collectively with the integrators.

A third way to handle integration is through farmer cooperatives. In this case, farmers would be the integrators; they would control the processing and distribution. Some cooperatives already are attempting to "out-integrate" the integrators by extending credit and expanding their operations toward the consumer level.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 6, 1958

Immediate release

ANNUAL RURAL YOUTH CONFERENCE MARCH 27-29

Members of Rural Youth and Young Men's and Women's groups throughout the state will meet for their annual conference and short course on the University of Minnesota's St. Paul campus March 27-29.

"Our Centennial Challenge," theme of the meeting, will be carried out in talks on the history of the state and the heritage of Minnesotans. Tours to places of historical interest in the Twin Cities are scheduled during the conference.

Speakers will include Russell Fridley, director of the Minnesota Historical society; T. H. Fenske, associate dean, Institute of Agriculture, Skuli Rutherford, director, Agricultural Extension Service, Louise Stedman, director, School of Home Economics, George Donohue, extension rural sociologist, University of Minnesota, and Margaret Mallak, Winsted, International Farm Youth Exchange delegate to India.

Workshops and the annual meeting of the Minnesota State Rural Youth federation will be held on the final day of the conference.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 6, 1958

Immediate release

HORTICULTURE SHORT COURSE TO FEATURE SPECIAL SPEAKERS

Donald Hoag, horticulturist at North Dakota State college, Fargo, will be one of the featured speakers at the thirty-seventh annual horticulture short course on the University of Minnesota's St. Paul campus March 27-28.

Hoag will discuss perennials for landscaping in the North at the session on ornamentals on the final day of the short course.

Other speakers on the program on ornamental horticulture include T. C. Solem, 7100 Oakland Ave., Minneapolis, president of the Minnesota Dahlia society, and University of Minnesota horticulturists, entomologists and plant pathologists. Subjects of the talks will range from what's new in ornamentals to basic information on watering ornamentals.

At a special section on vegetable gardening opening the short course Thursday morning, March 27, Harold Andrews, horticulturist, Chun King company, Duluth, will discuss vegetable growing problems in northern Minnesota and tell how to overcome them. Members of the University staff will give tips on how to get the most from a vegetable garden and will suggest new ideas to try in vegetable growing.

As a highlight of the program on home fruit growing Thursday afternoon, March 27, Eldred Buer, Canby farmer and certified seed grower, will relate his experiences in growing fruit as a hobby. Home fruit growers will also hear talks on recommended fruit varieties, use of mulches in fruit growing and control of fruit diseases.

A complete day's program for commercial fruit growers on Friday, March 28, has been planned as part of this year's short course. Speakers will include Joseph C. Lowey, director of sales and marketing, W. C. Ritchie and company, Chicago; F. S. Stephens, produce buyer, National Tea company, St. Paul; G. P. Greg, produce buyer, Hove's Food Markets, St. Paul; Arnold Ulrich, Rochester, president, Minnesota Fruit Growers' association; and T. T. Aamodt, supervisor of fruit pest detection and information service, State Department of Agriculture.

Copies of the horticulture short course program may be secured from the Director of Short Courses, Institute of Agriculture, University of Minnesota, St. Paul 1.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 6, 1958

ATT: Agricultural Agent
Home Agent
4-H Club Agent

GARDEN FACT SHEET FOR MARCH
By O. C. Turnquist
C. Gustav Hard
Extension Horticulturists

Vegetables

1. Consult Extension Folder 154 for the suggested list of vegetable varieties for the home garden. The revised folder, which summarizes last year's vegetable trials, will be off the press in about a month. All varieties are available, but not all from one seed company. There are no changes in the recommended list in the revised folder.
The first half of March is the time to start seeds of some of the cool-season crops inside or in a hotbed. Head lettuce, early cabbage, broccoli, cauliflower peppernick plant can be sown now.
3. Don't start tomato seeds until early April. It takes only six weeks to make a plant from seed, and too early seeding results in long, spindly plants.
4. Early tomato varieties are Fireball, Firesteel, and Hybrid E; mid-season - Stokesdale, Pritchard; late - Marglobe and Rutgers.
5. Try hybrid tomatoes this year. To be sure you have the hybrid, get the seed and grow your own plants. Dependable greenhouse operators in the state will also sell properly identified hybrid tomato plants.
6. Don't save seed left over from last year. It may not germinate as well, and a poor stand might result if it is used. Seed of onion, parsnip, or parsley is viable only one year, so it is especially important to get new seed of these vegetables each year.
7. Make a cold frame on the south side of your house or garage. By building it near a basement window, you can heat it with warm air from the basement if

if cold temperatures develop. An old storm window leaning from the house to the ground with boards on each end will make an ideal coldframe for growing seedling plants.

8. Some new varieties for starting early are Badger Market cabbage, Greenback cabbage, Green mountain broccoli, Snowball cauliflower, Premier Great Lakes head lettuce, and Wisconsin Lakes pepper.
9. If you have had trouble growing potatoes in your garden because of late blight scab, try the new Cherokee variety. Kennebec is also a blight-resistant variety worth growing. Space these varieties eight to ten inches apart in the rows.
10. Make sure your tools for gardening are in tip-top shape. Repair broken handles and sharpen your tools.
11. Make your garden plan now. Show arrangements of crops, length of rows, spacing between rows, space within rows and date of planting each variety. Draw the plant a scale.

Fruits

1. If you plan to plant some new fruit varieties this year, try the Centennial apple crab. It is a high-quality eating apple, small for an apple but very large for a crab. It retains its prime condition much longer than Whitney but not as long as the later ripening Chestnut. Trees are vigorous, but only medium or small in size, roundish spreading but compact, hardy and productive. The fruit ripens in early mid-season.
2. The Welcome goose berry is another fruit worth trying. It has two plant characteristics that are especially welcome to gooseberry growers. The bushes are nearly disarmed of thorns and relatively resistant to disease. Plants are vigorous and productive. The berries are a good size, and make a red jam. Preliminary tests show that this variety makes a good pie.
3. March is the month for pruning fruits. When pruning is done just before growth starts in the spring the wounds heal better.

4. When pruning apples, remove all dead or partially dead branches, cut off water sprouts and branches that cross and rub each other. Remove weak and unproductive wood in the center of the tree. Space branches on the young tree so that no two come out at the same place on the trunk. In removing large branches, undercut one foot from the trunk and then cut off, leaving a stub. Next remove the stub by cutting close to the trunk. Paint all cut surfaces over $1\frac{1}{2}$ inches in diameter with orange shellac.
5. Prune out the oldest canes (over four years) in currants and gooseberries, leaving only 12 to 15 canes per bush. This will make the plant more productive.
6. Prune grapes early, before the sap starts to flow. Leave only four to six side branches from the main trunk and cut back each branch to 10 buds.
7. Order fruit plants from reliable local nurseries. Extension bulletin 224 discusses suitable fruit varieties for Minnesota. Folder 181, "The Home Fruit Spray Guide" gives spray recommendations.
8. We don't recommend high bush blueberries, peaches or apricots for Minnesota at present. Experience has shown that they do not have enough hardiness for our severe winters.
9. Dwarf fruit trees are not yet recommended. Research is under way to determine the hardiness of dwarfing stocks and also to study the effect of dwarfing stocks on the recommended hardy varieties. Interest still grows in hardy sour cherries. The North Star and Meteor cherries are sour types and are excellent for pies. These appear to be adapted to most of our state. No special pollinizers are needed for these cherries.
10. Check trees early for possible mouse or rabbit damage. Severely damaged trees can be saved by bridge grafting. Cut scions now and store where they will remain dormant until the graft can be made the latter part of April. Send for bulletin 273 "Grafting Fruit Trees".

Ornamentals

1. March is a good time to start seedlings of annual flowers that may not be available in local greenhouses. Such plants as petunias, snapdragons, pansies, salvia, lobelia all can be started this month. Use a sterilized medium for starting seedlings. When the first true leaves begin to appear, transplant into individual plant bands or into larger flats.
2. Don't overlook the new varieties of flowers on the market this spring. They can bring new color and glamour to the garden this season.
3. Two new chrysanthemums developed by the University of Minnesota are being released this spring. These two varieties are "Minnehaha" and "Princess". "Minnehaha" is a medium tall, bushy plant with salmon-colored rose tinted and fully double flowers. It makes a medium-tall sturdy plant that starts blooming about mid-September. "Princess" is a vigorous-growing mound-type plant that reaches a height of 15 to 18 inches. Its flowers are fully double and are rose with gold centers. Blooming starts in August and within a few weeks the plant is covered with a prolific display of blooms.
4. Radiant flowering crabapple is a fine new flowering crab available this season. The tree is compact and upright in habit of growth with sturdy wide-angle crotches. The flower buds are deep red, opening to deep pink single flowers of medium size. The flowers are followed by small, bright red fruits that average a half-inch in diameter and reach their peak of color in early September. The tree is named after its showy fruits which are a brilliant red in the fall of the year.
5. Start tuberous begonias this month. Use a soil mixture high in organic matter and start in vermiculite soaked in a fertilizer solution, 1 teaspoon of complete fertilizer to a quart of water. Pot in acid soil mixture when tops are 2 inches tall. In starting, have the tops level with the top of the rooting medium.
6. Prune shade trees this month. Cut off lower branches that interfere with traffic around the yard. Make all cuts close to the trunk. If the crown of the tree is

very dense, thin out some of the branches so that light can filter down through the tree.

7. Summer-flowering shrubs that bloom on new wood can be cut or pruned this season. Hydrangeas and summer-flowering spirea are shrubs belonging to this group.

University Farm and Home News
University of Minnesota
Institute of Agriculture
St. Paul 1, Minn.
March 8, 1958

Special to Brownston Bulletin

Special File

LOCAL YOUTH WINS STATE 4-H RADIO SPEAKING CONTEST

Darroll Bussler, 17, son of Mr. and Mrs. Richard Bussler, won state championship in the 4-H radio speaking contest held Saturday (March 8) on the University of Minnesota's St. Paul Campus.

He received as his award a check for \$200, in addition to \$50 for the local public or school library.

Darroll won the title in competition with 16 other district champions.

Reserve champion in the contest was Deann Chamberlain, 17, Clontarf, senior in the Benson high school. Both champion and reserve champion gave their speeches on WCCO Saturday afternoon, and announcement of the winners and presentation of the awards was made during the broadcast.

State and district winners were honored at a banquet Saturday evening in the Lowry hotel, St. Paul, by the Minnesota Jewish council, co-sponsors of the speaking contest with the University of Minnesota Agricultural Extension Service. Awards were given by the Jewish council.

General subject for the original speeches this year was "Our Country's Most Important Problem Today--What Can I Do About It?"

Now a senior in high school, Darroll has been active in 4-H clubwork for 10 years. This was his third year in the 4-H radio speaking activity. His current projects include swine, junior leadership, health and conservation.

Title of Darroll's speech was "Threats to Democracy."

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University Farm and Home News
University of Minnesota
Institute of Agriculture
St. Paul 1, Minn.
March 8, 1958

Special to Benson News

Special to

sent

CLONTARF GIRL WINS RESERVE CHAMPIONSHIP IN RADIO CONTEST

Beann Chamberlain, 17, daughter of Mr. and Mrs. Ellard Chamberlain, Sr., Clontarf, won reserve championship and a check for \$100 in the state 4-H radio speaking contest held Saturday (March 8) on the University of Minnesota's St. Paul Campus.

She also received a check for \$25 for the local public or school library. Awards were given by the Minnesota Jewish council, co-sponsors of the contest with the University of Minnesota Agricultural Extension Service.

Champion in the contest was Darroll Bussler, 17, Brownton, a senior in high school. After competing with 15 other district champions, both champion and reserve champion gave their speeches on WCCO Saturday afternoon, and announcement of the winners and presentation of the awards was made during the broadcast.

State and district winners were honored at a banquet Saturday evening in the Lowry hotel, St. Paul, by the Jewish council. All contestants wrote original speeches on the subject, "Our Country's Most Important Problem Today--What Can I Do About It?"

Miss Chamberlain is a senior in high school here. A club member for 8 years, this was her first radio speaking contest. Her current 4-H projects are advanced clothing, advanced food preparation, junior leadership and health.

-JRW-

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 10 1958

To all counties
For use week of
March 17 or later

CONTEST GIVES
POINTERS ON
FERTILIZER USE

If you wind up with less than 12,000 corn plants on each acre this year, it won't pay you to use more than starter fertilizer on the field.

But if you follow the right practices and are now getting less than 80 bushels of corn per acre, it will pay you to invest up to \$20 per acre in fertilizer for the crop.

These pointers come from a summary of results from the Minnesota X-Tra Corn Yield Contest, according to Charles Simkins and Curtis Overdahl, extension soils specialists at the University of Minnesota.

They explain that in 1957, farmers who had less than 12,000 plants per acre increased yields by less than 6 bushels per acre through using fertilizer. When population ranged from 14,000 to 16,000 plants per acre, fertilizing increased yields by 12.5 bushels.

But farmers who had between 16,000 and 18,000 plants per acre -- the recommended population -- using fertilizer increased yields by almost 26 bushels per acre.

The contest also showed that it often doesn't pay to use heavy nitrogen applications when the corn is on land that was in alfalfa the year before. On the average, 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.

Summing up, Simkins and Overdahl say moderate fertilizing according to soil test is the pattern to follow to get the most return for each fertilizer dollar. At the same time, the wise farmer will allow for the nitrogen in the legumes in the past years and for the nutrients in manure that was applied.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 10 1958

To all counties
For use week of
March 17 or later

FARM FILLERS

If you plan to put up a new farm building, it might pay you to heed this advice from J. H. Pomroy, agricultural engineer at the University of Minnesota. He says, always take south slopes over north, and pick east slopes over west. North slopes can be as hot in summer as south slopes and will definitely be colder in winter. North slopes also are slower to warm up in spring.

* * *

A 200-pound gilt for breeding shouldn't probe more than 1.3 inches of backfat, says H. G. Zavoral, extension livestock specialist at the University of Minnesota. One study shows that for every 1/10 inch less backfat, it takes 4 1/2 pounds less feed to put on 100 pounds of gain.

* * *

Now there's evidence that fertilizing helps get more mileage from pastures for dairy heifers. At the University of Minnesota's Northeast experiment station, Duluth, fertilized pastures produced 436 pounds of heifer gain per acre in 1957. The average was 148 pounds per unfertilized acre.

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Frequent stirring helps keep the poultry house litter in good condition, says Cora Cooke, University of Minnesota extension poultry specialist. Good ventilation is important, too.

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It's wise to paint-brand each ewe and her day-old lambs with the same number. Then, the lambs can easily be identified, says R. M. Jordan, University of Minnesota livestock scientist.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 10 1958

For all counties
For use week of
March 17 or later

CAREFUL SEEDING
MEANS BETTER
FORAGE STANDS

Green, lush, fields of alfalfa-brome or other forage crops don't come by accident.

They're a result of careful planning and seeding practices, says Bill Hueg, extension agronomist at the University of Minnesota. He gives several tips for getting good forage stands started this year.

First, plan a mixture of legumes and grasses, Hueg says. Mixtures such as alfalfa-brome-timothy outyield alfalfa alone or most other combinations in Minnesota. If the field is for hay, silage, or pasture, it definitely should contain alfalfa and bromegrass -- both tall-growing crops. There should be enough grass to prevent bloat if pastured.

If the field is for hay only, use more legume and less grass.

Seed the field in spring, if possible. Legumes need to be seeded shallow, on a firm seedbed. If you mix bromegrass with oats, drill it in shallow on a culti-packed seedbed. Don't cultipack when the soil is too wet. Seed the companion crop, such as oats, at half or two-thirds the normal seeding rate.

Legumes will get a better start if the field is first fertilized with phosphate and potash. Apply this fertilizer according to soil test. The field may need lime, too.

If there is any danger of the companion crop lodging, shading or using up too much moisture, cut it for silage or hay. This can often mean the difference between a good forage stand and no stand. You can also graze off the companion crop with cattle or sheep, if you're careful. But don't graze continuously or when the ground is soft.

There's more information on this subject in "Forage Mixtures," a recently issued University of Minnesota extension folder. You can get a copy from the county agent's office.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 10 1958

A U. of M. Ag. & Home Research Story
For use week of
March 17 or later

ALFALFA VARIETIES
DIFFER LITTLE
AS GREEN MANURE

Here is some advice for Minnesota farmers who plan to seed green manure crops this year.

If sweet clover weevil is no problem or if you plan to control the insect by spraying, one of the improved sweet clover varieties, such as Evergreen or Madrid, is the best crop to use.

But if you expect trouble from the weevil and don't plan to spray, use the cheapest alfalfa seed you can get, which is free of weed and other seeds and has good germination.

These recommendations are based on three-year research results at the University of Minnesota's West Central Experiment Station, Morris. Reporting on this work are Rodney Briggs, agronomist, Roy Thompson, Morris station agronomist and Kenneth Tucker, entomologist.

For the three-year period, Madrid sweetclover gave the highest total top and root yield of any forage variety. Next in line were Ranger and Southwest Common alfalfa, but there was no important difference between these two varieties in top and root yield.

Madrid sweetclover for the three years averaged 1117 pounds dry matter per acre. Northern-hardy Ranger alfalfa averaged 809 pounds. Non-hardy Southwest common alfalfa yielded an average of 874 pounds dry matter from each acre. The difference between the two alfalfas is not enough to be significant, say the researchers, and show that either one would be satisfactory for green manure where sweetclover isn't used.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 11 1958

To all counties
ATT: HOME AGENTS
For use week of
March 17 or later

REFUEL TEENAGERS
WITH NUTRITIOUS
AND FUN SNACKS

When your teenager reaches for a snack, help him refuel his vitality. Give him nutritious food.

In this country of boasted abundance many teenagers are under nourished, says Home Agent _____. The reason for this lies partly in the fact that during adolescence more proper foods are needed than at any other time in life. Three meals a day often do not furnish enough of the foods that a growing boy or girl needs. As a result, teenagers are perpetual snackers. From 15 to 17 per cent of their food intake is through these extra meals.

In preparing snacks Grace Brill, extension nutritionist at the University of Minnesota, suggests that you keep in mind these foods which should be eaten every day: meat or fish or eggs or legumes, milk or milk products, vegetables, fruits, and breads or cereals.

Snacks can undermine health or be a great help in getting daily food requirements. Since teenagers like to snack, capitalize on their interest, and prepare nutritious, yet "fun" foods. Avoid snacks that contain only calories.

At home or for parties, serve meat or meat products dressed up as barbecues or chiliburgers, hamburgers smothered in chili, or roasted frankfurters stuffed with cheese and wrapped in bacon.

Milk shakes with ice cream and fresh fruit flavoring are delicious and nutritious. Or try making a punch with frozen orange juice and crushed fresh fruit blended with finely chopped ice.

Ice cream, milk, potato chips with dips and small sandwiches with meat or cheese spreads are always good. And don't forget fresh fruit.

Try arranging a cheese, cold meat, and fruit platter. The result will decorate your table and will furnish tasty, appealing and nutritious snacks.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 11 1958

ATT: 4-H AGENTS
For use week of
March 17 or after

4-H'ERS START SPRING SEWING

When you start your spring sewing, choose patterns and fabrics suited especially to you, 4-H Club (Home) Agent _____ suggests to 4-H girls taking the clothing project.

Simple, versatile clothes which are suited to your figure and personality will be good additions to a spring wardrobe.

The fabrics you select should suit your coloring, figure, personality and pattern, says Evelyn Harne, assistant state 4-H club leader at the University of Minnesota. It should also be a fabric fitted to your knowledge of sewing. Cottons are particularly easy to sew, and are just right for spring in fashionable colors, or charming prints, plaids and stripes. For party apparel don't forget the easier-to-sew fabrics such as linen, especially good in vivid colors, or whisper-weight wool for its fine draping quality. If you are a beginner, perhaps it would be wise not to sew plaids or stripes, because matching can be a complicated problem.

Be particular about fit, says Miss Harne, Be sure to find your correct pattern type and size, by comparing your measurements and the pattern measurements. Knowing your figure and how to flatter it will also give the finished product a much more pleasing effect.

For spring wardrobes, fabric coordinates yield striking ensembles, Miss Harne suggests. It's fun to line a jacket or coat with the same print as your dress. For spring into summer wear, try a solid color dress and lining with a print jacket or coat. Linen or one of the new lightweight wool prints are good fabrics for these ensembles.

Another popular item for spring is the dress-coat or the dress-overskirt ensemble. Hems are especially important here. Remember that coats should be slightly longer than your dress hem, but that dress and overskirt hems should be the same length.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 11, 1958

Immediate release

FARMER SHOWS VALUE OF PASTURE FERTILIZATION, MANAGEMENT

CARLTON--A high-producing dairy cow can get all the summer pasture she needs from less than a half-acre of land, if it's managed well.

Dairy Farmer George Oraskovich here in Carlton county last summer pastured his 26 Holstein milk cows from early May through late September on just 10 acres. The only other feed the cows received was a pound of grain for every 10 pounds of milk they produced.

Where he used heavy fertilizer doses, the cows "yielded" 100 10-gallon cans of milk per acre.

The secret to doing this, Oraskovich says, was fertilizing according to soil test and pasturing the cows on a "ration-a-day" system. That means the cows were fenced in an area just big enough for one day's grazing.

Without fertilizing or controlling the grazing, Oraskovich figures the same herd would have needed five or six times as much pasture.

He knows almost to the penny how well better pasture management paid off on his farm. In fact, his whole pasture plan last summer was a demonstration, which he set up in cooperation with Sigmund Restad, Carlton county agent, and extension specialists from the University of Minnesota.

Oraskovich divided his 10-acre alfalfa-brome pasture into three areas. On one area, he put no fertilizer at all. On a second, he applied 80 pounds of a 45 percent phosphate fertilizer (0-45-0) and 160 pounds of 60 percent potash (0-0-60). The third area received the same treatment, plus 100 pounds of nitrogen the fall before and another 100 pounds last spring.

Where he had used the most fertilizer, the cows produced 7,951 pounds of milk, or about 100 10-gallon cans, from each acre during the summer.

Where Oraskovich applied phosphate and potash fertilizer but no nitrogen, the cows averaged 3,535 pounds or 44 cans of milk per acre. And where no fertilizer was used, there were only 20 cans of milk produced per acre.

The heaviest fertilizer application Oraskovich used cost \$30 per acre, but the increase in "milk yield" more than repaid that cost.

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B-1904-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 11, 1958

Immediate release

TIME TO PRUNE SHADE, FRUIT TREES

Prune shade and fruit trees while they are still dormant--this month or in early April.

That suggestion comes from extension horticulturists O. C. Turnquist and C. G. Hard at the University of Minnesota.

Summer-flowering shrubs that bloom on new wood may also be pruned now.

Hydrangeas and summer-flowering spirea are shrubs belonging to this group. Spring-flowering shrubs, however, should not be pruned until after they are through blooming.

Shearing off the top is not the best way to control growth of a large tree, the University horticulturists say. It is more effective to cut back terminal branches to a fork or to a side bud. This practice will give a better shaped tree.

An important part of the pruning job is to remove dead branches and branches that cross and rub each other. If branches crowd each other, prune out some of the weak, narrow-crotched branches to make room for better development of the more desirable branches. Always cut out weak, unproductive wood in the center of large apple trees.

In removing a large branch, the horticulturists advise first undercutting it about a foot from the trunk. Then cut the branch off, leaving a stub. The next step is to saw the stub off close to the trunk. To hasten healing of wounds, paint all cut surfaces more than $1\frac{1}{2}$ inches in diameter with orange shellac or any good tree preservative compound.

Information on how to prune is given in Extension Folder 161, "Pruning Fruit Trees," available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1. The same principles apply to the pruning of fruit and shade trees.

University Farm and Home News
Institute of Agriculture
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* A FARM AND HOME *
* RESEARCH REPORT *
* * * * * * * * *
Immediate release

TRIPLING DAIRY HERD SIZE ONLY DOUBLES LABOR NEEDS

Tripling the size of the dairy herd doesn't mean tripling the chore load.

A 1-year University of Minnesota study on 100 farms in southern Minnesota shows that a 30-cow dairy herd calls for only twice as much labor as do 10 cows.

These results are reported by H. J. Aune and L. M. Day, U. S. Department of Agriculture economists at the University, in the current issue of "Minnesota Farm Business Notes," a University Agricultural Extension publication.

Aune and Day found it takes almost 129 hours during the year to care for each cow in a 10-cow herd. In a 30-cow herd, it takes only 80 hours per animal yearly.

For one particular 15-cow herd, the economists found it took 23.7 labor hours per week in summer and 35.2 hours during winter. For this herd, each cow added to the herd would require .83 hours extra labor per week during summer, and that more than half of this labor would be for milking.

So during summer, the logical way to save chore labor would be to, somehow, shorten the milking time. Yet, this raises other problems. A loose housing system with a milking parlor will shorten milking chores, but not every farmer with a stanchion barn would find it profitable to make the change.

In winter, less than a third of the total dairy chore time was used in milking, mostly because of the hay and silage feeding and manure disposal work that a farmer doesn't have in summer. This means that a farmer with a stanchion barn and short on help in winter can make a substantial reduction in chore time by installing a silo unloader or a gutter cleaner or both.

In summer, Aune and Day say, a dairy farmer with a stanchion barn is often better off by looking for ways to shorten his field work, rather than trying to make big work savings in the dairy barn.

This study was based on feeding grain and hay twice daily, two single milker units, can coolers for selling manufacturing milk, stored hay and bedding overhead, upright silos and litter carriers or drive-through systems for manure disposal.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 11, 1958

Immediate release

INSTITUTE OF AGRICULTURE IS, "ON PAPER," 100 YEARS OLD

The Institute of Agriculture at the University of Minnesota is technically 100 years old this week.

This fact was pointed out today by T. H. Fenske, associate dean of the Institute, and chairman of the agricultural committee of the Minnesota Centennial commission.

Fenske explained that an act of the Minnesota legislature on March 10, 1858, created an "Agricultural College of Minnesota," which was to be established at Glencoe, in what is now McLeod county.

This college was never actually set up at Glencoe, although a college board was appointed by the 1858 legislation. The college existed "on paper" until 1868, when the state legislature incorporated it into the University of Minnesota.

At first, the agricultural college was located on the Minneapolis campus and had an experimental farm near there. It was moved to its present site on the St. Paul campus in 1882.

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B-1907-pjt

University Farm and Home News
Institute of Agriculture
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SPECIAL TO WILCOX

County Agent Introduction

Good 4-H potato projects call for good seed potatoes. That's the theme of the discussion here between Maynard Helgeson, left, 4-H assistant in Clay county and Harlem Sandberg, 4-H club agent in Marshall county. Sandberg is a native of Chisago county and is a 1955 graduate of the University of Minnesota. Both of these young men have extensive 4-H project backgrounds.

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

Immediate release

STOPPING WEEDS MEANS PREVENTING SEED GERMINATION

"Birth control" may some day be the answer to the weed problem.

R. S. Dunham, University of Minnesota agronomist, says this means keeping weed seeds from germinating, rather than trying to kill weeds growing in a crop.

Dunham looks for chemicals to be developed in the future that will either kill weed seeds on the plant--probably in fall--or to stimulate weed seeds to germinate in fall and then be killed by winter cold. Another way might be to prevent weed seed germination in spring by applying chemicals before planting the crop.

Such methods are things of the future, but aren't available so far.

One way farmers now have of killing weeds before they get into the crop--but not the best--is pre-emergence spraying. This means applying a chemical after a crop is sown but before it comes up.

Benefits of pre-emergence treatments are these: First, it's done with attachments on the planter, so planting and spraying are one combined operation. Second, in some cases, pre-emergence applications are the only ones that won't injure the crop. Third, often a substitute for the harrow or rotary hoe, pre-emergence controls early weeds, when water and plant nutrient competition is stiff. It can eliminate one cultivation.

On the other hand, pre-emergence spraying is done before the farmer really knows what his weed problem is, what chemical to use and how much. Second, it doesn't control perennial weeds or second-year growth of biennials. And third, results are sporadic. Sometimes it works well and sometimes it hurts the crop more than the weeds, with no explanation for the difference.

Some recent chemicals have given promising results as pre-emergence sprays, however. Among these are Randox, Simazin and EPTC. Randox consistently kills annual grass weeds in corn and soybeans and rarely injures the crop. Simazin also gives little corn injury. Neither Simazin nor EPTC, however, have been cleared for use by the U. S. Food and Drug Administration.

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* A FARM AND HOME *
* RESEARCH FEATURE *
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Immediate release

SOILS RESEARCH SHOWS RESULTS OF SOIL COMPACTION

Crop yields can definitely be reduced when the surface soil is packed too much, research at the University of Minnesota has shown.

This is more evidence that many farmers could get yields as high or higher by practicing "minimum tillage"--working the soil less. That would mean eliminating much of the tillage with disks, drag harrows and other implements that often cause excess surface compaction.

George Blake, University soil physicist and Rollin Dennistoun, assistant superintendent at the Rosemount Agricultural Experiment station, compared corn yields on compacted and uncompacted soil in 1957. They compacted the plow layer with a specially built, $2\frac{1}{2}$ -ton tractor wheel, and compacted surface soil with a truck loaded so there were about $3\frac{1}{2}$ tons of weight on each rear dual wheel.

Corn planted on uncompacted soil yielded 84.1 bushels per acre, while yields where the surface soil was compacted were reduced to 77 bushels. Compacting the subsoil alone didn't affect yields, but where both the surface and subsoil were compacted, yields were 72 bushels per acre. In general, though, the surface compaction is what made the biggest difference, say Blake and Dennistoun.

They planted corn at 24,000 plants per acre in these tests, then thinned the population to 20,000. This is still higher than the average Minnesota farmer plants, which shows that excess surface compaction can cut yields even with high populations. Besides, Blake and Dennistoun say that under normal field conditions, packing itself would tend to reduce corn plant emergence, which would mean an even sharper yield decline.

Laboratory studies showed that the packed soil "puddled," resulting in poor soil structure. There was less air space in packed soil and poorer draining ability. Also, packed soil was harder to penetrate, meaning the young corn plants had a tougher time breaking through it.

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Immediate release

PLAN VEGETABLE GARDEN ON PAPER

"Plan before you plant" is a basic rule for successful vegetable gardening.

So says O. C. Turnquist, extension horticulturist at the University of Minnesota.

Turnquist suggests taking time now to draw a garden plan on paper, drawing it to appropriate scale. The plan should show size of the garden, spacing between rows, crops and varieties to be planted, date of planting, length of row of each crop, spacing of transplanted crops, succession plantings and arrangement of crops.

Many vegetables grown in the home garden are wasted because too large a quantity of one vegetable matures at the same time. One way to avoid having too large a crop at once is to make succession plantings of the same vegetables, the University horticulturist points out. Plant only enough seed crops like lettuce, radish and spinach to provide the amount that can be used within a short period. Then, after a few weeks, plant another lot to mature after the first harvest. Or follow quick-maturing crops with later-maturing vegetables.

Another point to consider in making the garden plan is location of tall-growing crops and perennial vegetables like asparagus and rhubarb. Arrange the crops so that tall plants like sweet corn and pole beans do not shade the small plants. Plant perennial vegetables like asparagus and rhubarb on one side of the garden where they will not interfere with garden preparation.

In choosing varieties of vegetables for the garden, consider the family's likes and dislikes, Turnquist urges. Plan for crops that will give high nutritive returns such as snap beans and tomatoes. Select disease-resistant varieties whenever possible, since they usually make gardening easier.

The University horticulturist gives this additional bit of advice: Order your seed early from reliable seed companies; don't wait until planting time. New varieties disappear from the seed store shelves early in spring.

A University publication, "Getting Started With Your Vegetable Garden," Extension Folder 164, gives information on making a garden plan, tips on planting and transplanting, including when to start seeds indoors and when to plant seeds in the garden. Copies of the publication are available free of charge from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1, Minn.

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Immediate release

MINNESOTA FARM CALENDAR

May 16-18 Rural Youth Western Regional Conference, Waseca.
May 21 Recognition Assembly, St. Paul campus.
May 28 Annual Retirement Luncheon, St. Paul campus.
June 2-6 District 4-H Weeks--Morris, Crookston, Grand Rapids.
June 10-13 4-H Junior Leadership Conference, St. Paul campus.
June 14-20 National 4-H Club Conference, Washington, D. C.
June 15-21 Boys State.
June 20 Rose Growers Day, St. Paul campus.
June 25-26 Bovine Mastitis Short Course, St. Paul campus.
July 2 Field Day, Rosemount Agricultural Experiment station.
July 8 Field Day, Southern Experiment station, Waseca.
July 10 Field Day, West Central Experiment station, Morris.
July 14 Southwestern Minnesota Field Day, Minneota.
July 16 Field Day, Northwest Experiment station, Crookston.
July 24 Field Day, North Central Experiment station, Grand Rapids.
July 25 Field Day, Northeast Experiment station, Duluth.
July 30-Aug. 1 School Lunch Workshop, Northwest Experiment station, Crookston.

For more information, contact the Information Service, Institute of Agriculture, University of Minnesota, St. Paul 1.

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B-1986-pjt

University Farm and Home News
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March 13, 1958

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* A FARM AND HOME *
* RESEARCH REPORT *
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---For release March 14---

ATTITUDES TOWARD PRICE SUPPORT PROGRAMS REPORTED

Farmers in northern and northeastern Minnesota's "Cutover" area have mixed reactions toward farm price support programs, a University of Minnesota survey shows.

Almost half of 575 farmers interviewed favored rigid price supports and slightly less than a fourth preferred no price support program at all. About one-tenth favored flexible supports.

Slightly more than half said support programs have not helped them and about 42 percent thought supports have been beneficial.

And while 73 percent said supports haven't hurt them, about a fourth of these farmers felt they have been injured by price support policies.

Reporting on this study are George Donohue and Lowry Nelson, rural sociologists. They discuss the survey in the current issue of "Minnesota Farm and Home Science," a University Agricultural Experiment station publication.

The sociologists in 1956 interviewed full-time and part-time farmers in two principal regions: the mining area (Carlton, St. Louis, Itasca, Lake and Cook counties) and the "western" area of the Cutover (Lake of the Woods, Koochiching, Beltrami, Clearwater, Hubbard, Cass, Crow Wing and Aitkin counties).

For the entire 13-county area, 49.6 percent of the farmers favored rigid support programs, 23.4 percent wished for no program at all, 11 percent favored flexible supports and 16 percent preferred some modified form of support program.

There was a definite difference between the mining area and the western counties on attitudes toward support programs preferred, but there was no difference in these attitudes according to age of operator or whether he was a full-time or part-time farmer.

In the mining area, 55 percent favored rigid supports, 22 percent wanted some other type program, 16 percent wanted no supports and only 6.5 percent preferred flexible supports.

(more)

add 1 price support attitudes

In the "western" counties, almost twice as high a proportion of farmers--13.4 percent--preferred flexible supports. Here, 46.6 percent preferred rigid supports, 11 percent wanted a different type support program and 27.5 favored no support program at all.

More farmers in the western area--71.5 percent--thought a sound agricultural program was "very important" to the prosperity of the town and city than was true in the mining area. In the second case, 60 percent thought such a program "very important." However, only 1 percent of all farmers in the study said a farm program was "unimportant" to prosperity. The others said it was "fairly important."

The higher a farmer's net worth, the survey showed, the more likely he is to favor flexible supports or no program at all. Of those with high assets above debts--\$10,000 or more--only 42.2 percent desired a rigid support program.

In the "medium" assets group--\$5,000 to \$9,999--54 percent wanted rigid supports and 52.9 percent of the "low" assets group--under \$5,000--preferred such a program.

Of the high income group, 17.4 percent preferred flexible supports. This is compared to 8.9 percent of the medium net worth group and 6.5 percent of the low net worth group.

More than 53 percent of all farmers questioned said the support program so far had not helped them in any way. Slightly less than 42 percent said the programs had helped them. And most of this 42 percent said the help was primarily in maintaining higher prices for their products.

When operators were asked if supports had hurt them in any way, 73.7 percent said "No." Slightly more than 26 percent said they had been hurt by support programs, mostly because they felt supports benefit only large farmers or specialized types of farming, rather than dairy farming which is most common in the 13 counties surveyed.

University Farm & Home News
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Special
(with Mat)

4-H BOY, GIRL WIN
SPEAKING HONORS

Darroll Bussler, 17, Brownton, (left) and Deann Chamberlain, 17, Clontarf, topped 15 other 4-H club members in taking a youthful approach to the nation's most perplexing problems last week.

Bussler and Miss Chamberlain won champion and reserve honors, respectively, in the statewide 4-H radio speaking contest sponsored by the University of Minnesota Agricultural Extension Service and the Minnesota Jewish Council. More than 900 4-H'ers took part in this year's local, county and district contests.

Bussler received a cash prize of \$200, in addition to \$50 to buy books for his public or school library. Miss Chamberlain received a cash award of \$100 and \$25 for books.

Donor of the awards was the Minnesota Jewish Council.

Both winners wrote and gave original speeches on the subject "Our Country's Most Important Problem Today -- What Can I Do About It?"

A senior in high school, Darroll has been in 4-H club work for 10 years. This was his third year in the 4-H radio speaking activity. His current projects include swine, junior leadership, health and conservation. He is the son of Mr. and Mrs. Richard Bussler.

Miss Chamberlain is a senior in the Benson high school. A club member for eight years, this was her first radio speaking contest. Her current 4-H projects are advanced clothing, advanced food preparation, junior leadership and health. She is the daughter of Mr. and Mrs. Ellard Chamberlain.

University Farm & Home News
Institute of Agriculture
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St. Paul 1 Minnesota
March 18 1958 and April 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.)

Special Housecleaning Issue

Some of you have asked for a special issue on housecleaning, with tips to make cleaning easier. This issue repeats some of the information in last year's special housecleaning issue and contains some new material. It was prepared with the help of extension home improvement specialists Mrs. Myra Zabel and Data Hochhalter. Because of the length of this issue, it will replace the one for April 1.

(Mrs.) Josephine Nelson
Extension Assistant Editor

In this issue:

Banish that Tired Feeling
Plan for Cleaning
Less Dirt and Disorder
Mechanical Aids

Cleaning Aids
Cleaning Walls
Cleaning Furnishings
Eyes of the Home
Care of Hard Floor Coverings

BANISH THAT TIRED FEELING

Cut Down Fatigue by Proper Use of Muscles

Learning to use your muscles properly when you are cleaning will help prevent fatigue. Use strong thigh muscles to lift heavy objects with a minimum of effort. Relieve strain on your back muscles by squatting rather than bending when dusting or washing baseboards or picking up articles from the floor.

Comfortable shoes and comfortable clothes help to maintain good posture and reduce fatigue. For the good of your morale, put on makeup and look neat - in case an unexpected visitor calls.

Alternate easy and hard tasks. Take frequent short rest periods between heavy cleaning jobs. In fact, rest periods are just as important for homemakers as coffee breaks are for office and industrial workers. According to Kathleen Jeary, assistant professor of home economics at the University of Minnesota, a 10-minute rest after each hour of work is much more effective than four hours of work followed by 40 minutes of rest. -jbn-

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

PLAN FOR CLEANING

A Flexible Plan for Cleaning

Do you dread spring and fall housecleaning?

An annual spring and fall housecleaning may have some advantages, but too often these semi-annual upheavals leave the homemaker and her family physically and emotionally exhausted.

A good way to ease the chore of housecleaning is to make it a gradual process. A little time spent in planning the cleaning will pay off. Make a schedule for yourself. Include some special cleaning with your regular weekly cleaning. For example, you may want to wash windows in one or two rooms one week and brush down the walls or launder curtains the next week. Or you may prefer to concentrate on one cleaning operation such as brushing down walls in several rooms one week. The next week you may decide to wash the woodwork. Or you may choose to clean one room thoroughly each month or two along with the daily and weekly care of the whole house.

A well organized but flexible plan of cleaning covering a period of time will make you work easier. And if you make use of all your mechanical aids and many of the new products on the market, your job will be easier and more pleasant.

Give Yourself Time

If for some reason you prefer to do a thorough spring and fall housecleaning instead of spreading the cleaning jobs throughout the year, give yourself plenty of time-- but plan that time. You'll get better results if you plan your attack on the winter's accumulation of dirt and then spread the housecleaning job over several days.

Start out by making a schedule of your cleaning chores room by room. Plan your work for each day so you'll have time for rest and a refreshing bath -- and time to make a good dinner -- before the family returns at the end of the day.

- 3 -

LESS DIRT AND DISORDER**How to Keep Dirt Out**

Cleaning would be a simple matter if there were some way of keeping dirt out of the house. Cement walks and hard-surfaced paths will, of course, reduce the amount of dirt clinging to boots and shoes. Mats and scrapers near the outside entrances are reminders to the family to remove dirt from their shoes. And sweeping walks, porches and steps often will help eliminate some of the dust and dirt tracked into the house. A "mud room" or place near the entrance where the family can leave soiled work clothes, boots and rubbers will prevent soil from being carried through the house.

Provide Storage to Reduce Clutter

Adequate storage space for clothing and equipment will go far toward making cleaning easier. Hooks and rods which children can reach encourage them to hang up their clothing. Shelves for toys invite them to put playthings away. Storage places for personal possessions for each member of the family encourage tidiness. Shelves or racks for magazines and newspapers help prevent clutter.

Where storage is inadequate, many families improvise inexpensive closets or other storage from crates, packing cases or old wardrobes.

Have Handy Storage for Cleaning Equipment

Easy access to cleaning equipment will save both time and energy. A centrally located storage place for major cleaning equipment is ideal. Wherever possible, keep duplicates of the less expensive items of cleaning equipment near the areas where you use them. In a two story house, a dry mop, dustpan, dust cloth and other similar articles can be stored on the second floor as well as on the first floor. A hanging shoe bag behind a door can be used to store detergents, polishes and cloths in various pockets.

And, remember -- the first step in getting your money's worth out of your vacuum cleaner is to store it in a convenient place -- where you can get it out easily so you will use it.

-jbn-

MECHANICAL AIDSEmpty Dust from Vacuum

How long since you emptied the dust bag of your vacuum cleaner? Many vacuum cleaners fail to operate efficiently because the bag is full of dust. That's the reason given by many vacuum cleaner service men for most of their service calls. Since the cleaning is dependent upon suction of air which comes in through the nozzle and passes out through the bag, the cleaner cannot operate efficiently if the bag is full of dust and there is no way for the air to escape. Empty the dust bag or change it before it is full.

* * * *

Use Your Vacuum Attachments for Many Jobs

Of course you use the vacuum cleaner on your rugs or carpets once or twice a week, to pick up surface dust and embedded dirt. But how often do you use your vacuum attachments to perform other tasks? If you make them do a lot of routine chores regularly, you'll find your home is much easier to maintain. Try putting your vacuum attachments to work at these jobs:

- . Cleaning floors with the floor brush. Your vacuum will suck up the dust instead of merely pushing it from one place to another as a dust mop does.
- . Dusting furniture. The vacuum will enable you to dust low places without stooping. Too often the dust cloth merely transposes dust from one piece of furniture to another.
- . Cleaning upholstered furniture once a week with the upholstery nozzle to keep the surface soil from accumulating.
- . Removing surface dust from curtains and draperies, thereby saving several launderings a year.
- . Getting accumulated dust from radiators with the crevice tool.
- . Dusting walls, over doors and windows with the long wand of the cleaner.
- . Going over mattresses with the upholstery nozzle, when beds are stripped for changing.

. Cleaning lampshades, books, Venetian blinds, lamps, picture frames, moldings and baseboards with the dusting brush. Your painted woodwork will need washing far less often when the dust is gently loosened by the vacuum cleaner brush and then removed by suction, not just smeared about.

- jbn -

CLEANING AIDSUse Dry-Cleaning Solvents with Care

Carbon tetrachloride and other dry-cleaning solvents are useful in removing grease spots and other soil from upholstery that cannot be sponged with soap and water. However, many fat solvents are dangerous to use, warns Glenn Prickett, extension safety specialist at the University of Minnesota. Fumes of carbon tetrachloride are poisonous and a serious health hazard if they are inhaled. That's why it's important to use this solvent with windows open or out of doors. Many other dry cleaning solvents are fire hazards and must be used with care. Be sure to read the label before buying or using a dry-cleaning solvent.

Scouring Powders for Sinks?

Be kind to your sinks! Coarse, harsh scouring powders should never be used to clean enameled sinks, bathtubs and toilet bowls. Enamored surfaces are made of glass and are easily scratched. Once the glazed surface is scratched, it soils easily and is difficult to clean. Use a detergent and water or a detergent and fine powdered whiting to clean these surfaces. Harsh scouring powder is one of the worst offenders in damaging the glaze. Also avoid excessive use of chlorine bleach. If you have a stubborn stain that cannot be removed by other methods, use only a dilute solution and rinse the bleach off quickly and thoroughly

Time-Saver for Cleaning Woodwork

A good way to eliminate drudgery when woodwork needs a thorough cleaning is to use one of the cream kitchen waxes on the market. The cream wax will remove the soil and leave a clean, waxed surface that will not soil as readily as one that has been washed. The same cream wax can be used to remove spots and finger marks and smudges from the walls, thus reducing the need for washing walls as often.

CLEANING WALLSTo Remove Cobwebs

When you dust your walls with the vacuum cleaner and find cobwebs, remove them with a lifting stroke. They are greasy and may cause streaking if brushed downward.

Your walls won't show soil as quickly if you dust them once a month instead of twice a year.

Wash Walls Upward

Washing walls is hard work. But it's less discouraging if you start with an easy place and then get help with difficult hard-to-reach areas like the ceiling.

Here's a solution you can make at home for washable kitchen and other walls that are grimy. Add 1/2 cup washing soda or sal soda, 1 cup household ammonia and 1 cup vinegar to 6 quarts of warm water. Apply lightly and quickly, without dripping, following quickly with another cloth or sponge wrung out of clear water. Dry thoroughly. It's a good idea to start at the bottom and wash upward.

Spot Treatment on Wallpaper

When the wallpaper shows smudges and stains, there are special ways of removing them. Finger marks or smudges on wallpaper made by picture frames will usually respond to artgum. To remove wax crayon marks, rub lightly with alcohol or drycleaning fluid. For grease spots, apply a paste made of fuller's earth or whiting and a nonflammable spot remover. Have the windows open while working and avoid inhaling the fumes. After several hours, brush off with a soft brush. Apply again if necessary. If you plan to repaper or paint, cover the area with sizing or shellac or the grease spot might reappear.

To clean an entire wall of nonwashable wallpaper, use commercial wallpaper cleaner, beginning at the ceiling.

If a portion of the wallpaper is damaged, pull it off and sandpaper the edges of the paper remaining. Then apply a patch with torn edges. The torn edges will help to conceal the patching.

If the wallpaper is very dingy, it can be covered by special quick-drying paints that are easy to apply. Ask your paint dealer about these paints.

-jbmr

CLEANING FURNISHINGS, UPHOLSTERY AND LAMPSHADESCleaning Foam-Rubber Upholstery

A solvent-type cleaning fluid is effective in removing spots from most upholstered furniture, but never use it on foam rubber upholstered pieces.

Mrs. Myra Zabel, extension home improvement specialist at the University of Minnesota, warns that this type of cleaning fluid - which smells like gasoline - will damage the foam rubber padding. If such furniture needs cleaning, make a thick suds of a liquid syndet and water, whip it up and apply the dry suds with a sponge or soft brush. Use a case knife to scrape off the lather, then wring cloths out in warm water and wipe off the detergent. Follow with a dry terry towel or other cloth.

Shampoo for Upholstery

An effective way to clean soiled upholstery -- tapestry, denim, frieze, nylon -- is to shampoo it with a detergent or a commercial preparation. Test the fabric first in an inconspicuous place to be sure the color will not fade or run.

Make suds of a synthetic detergent and warm water and work up a thick lather by squeezing the solution through a sponge. Apply the dry suds to the upholstery with a sponge or a soft brush, not over a square yard of area at a time. Use a circular motion. Take up suds on the surface with a bath towel, then rinse by wiping with a clean cloth wrung dry out of clear warm water. Repeat the rinsing several times. Wipe as dry as possible with clean, dry towels. Apply the lather to another small area, overlapping with the first area to prevent rings. Dry the furniture in the draft of an electric fan.

New Look for Lampshades

A quick shampoo in mild suds will give soiled silk or rayon lampshades a new look if the fabric is color-fast. Before the shampoo, though, check these points: Be sure the fabric and trimmings are sewed on, not glued. Sometimes only the trim is non-washable, in which case it can be removed and the lampshade itself washed.

Prepare a solution of a mild detergent and warm water in the laundry tub or a utensil large enough to hold the shade. Swish the shade up and down in the suds. Rub very soiled spots with a soft brush. Rinse in warm water and place on a heavy bath towel to dry. It's a good idea to hasten drying with an electric fan. Blot the water from the metal wires and rims with a soft, clean cloth to prevent rusting.

Clean parchment shades with a dough-type wallpaper cleaner, art gum eraser or damp cloth. Wipe plastic shades with a damp cloth. -jbn-

Cleaning MarbleCLEANING FURNISHINGS

If you have a marble-topped table, treat it carefully. Wash it often with a clean cloth and lukewarm water. Occasionally, use a mild detergent to remove accumulated dirt.

Though marble looks hard, it is porous and will show scratches and stains. Protect it by using mats or pads under objects placed on the table. Since acids will etch the surface, be sure to wipe up spilled foods immediately.

Simple Care of Leather, Plastic Upholstery * * *

To clean leather upholstery or leather on tables wash it with a cloth or sponge wrung out of warm, soapy water. Clean only a small area at a time. Rinse with another cloth wrung out of clear warm water and wipe dry with a clean, soft cloth. Any gloss that disappears will be restored by friction of the last rubbing. Or wipe off the leather with a damp cloth and saddle soap.

Keeping leather as clean as possible and in a dry place is a protection against mildew in humid weather. Wash mildew off promptly, then dry with an electric fan.

Avoid using furniture polishes, oils or varnishes on leather because these preparations frequently contain solvents that make leather sticky.

Clean plastic or imitation leather upholstery with mild soap suds. Rinse and wipe dry.

* * * *

Removing White Spots

White spots on wood finishes from hot dishes or water will usually disappear if you rub them with a bit of salted butter or salt and salad oil, linseed oil or any other liquid oil. Try this immediately, and repeat if the spot is stubborn. Or you may try rubbing the surface lightly with cotton moistened with spirits of camphor, essence of peppermint or with a soft cloth wrung from water to which a little ammonia has been added (1 teaspoon household ammonia to 1/2 cup warm water). Follow quickly with furniture polish and rub with a clean, soft cloth.

CLEANING FURNISHINGS: RUGS AND FURNITUREClean Rugs Often

Tests show that several short cleaning periods a week are more effective in removing carpet dirt than one longer period of equal total length.

* * * *

New Look for Carpet

Every year or two your carpet should have a thorough cleaning--if possible, by a commercial rug cleaning establishment. If you must do the cleaning yourself, absorbent powder cleaners are available which will absorb dirt and grime from the pile when brushed into the rug. It will be necessary to vacuum thoroughly a number of times to remove the powder.

Shampooing rugs with suds of a synthetic detergent is another method of home cleaning, but it is usually more practical for upholstery and small rugs than for room-size carpets.

* * * *

Time to Clean and Wax Furniture

Come spring, your furniture is likely to be covered with a film that makes the surface look dull. That means it's time to give it a complete "going-over" to remove film and fingerprints and restore a hard surface that resists dust.

You can use one of the many commercial furniture cleaners on the market, apply it as directed and rub the wood surface until it shows no fingerprints. Then polish with a soft, dry cloth.

If you prefer to make your own cleaner, Mrs. Myra Zabel, extension home improvement specialist at the University of Minnesota, suggests this recipe: Add 3 tablespoons boiled linseed oil and 1 tablespoon turpentine to 1 quart water. Keep hot in a double boiler, but never directly over a flame. Dampen a clean cloth in the solution, rub the furniture to clean it and then polish with a clean cloth. Polish across the grain of wood, then with the grain. Continue until finger marks do not show when you touch the surface.

This same cleaning solution is effective on cane or rush seats. Vacuum or brush out the loose dust first and then clean with the solution.

THE EYES OF THE HOMESparkle for Your Windows

To add sparkle and luster to your windows, clean them with clean warm water. Wash the glass with a soft cloth or sponge wrung as dry as possible, and dry with a soft lintless cloth or a clean damp chamois. Try not to work in direct sunlight, as rapid drying causes streaks.

For very soiled windows use one of the commercial preparations on the market or make your own. A solution of 1/4 cup of household ammonia and 1/4 cup of vinegar in 1 gallon of warm water is effective. Other good window-cleaning solutions are made by adding 1 tablespoon of household ammonia to 1 quart of warm water, or 1/2 tablespoon of kerosene to 1 quart of warm water.

These solutions will cut the dust and film on the windows. After washing, polish with a soft dry cloth or a clean damp chamois. Be careful not to spill an ammonia solution on the woodwork as it may injure the finish.

Remove spatters of paint or varnish from windows with turpentine or paint remover, or scrape them off with a putty knife or razor blade.

* * * *

Cleaning Venetian Blinds

Several times a year Venetian blinds need a more thorough cleaning than the weekly dusting. Mild soapy water and a soft cloth will remove the grime that has collected on the slats. You can do this cleaning without taking the blinds down, washing each slat carefully without bending it. Avoid dripping and be careful not to smear the tapes or cords. Rinse quickly with clear water. Sponge soiled cords and tapes with dry cleaning fluid, with windows open.

If both blind and tapes are badly soiled, you may want to take the blinds down and wash slats and tapes in the laundry tub in warm, soapy water with a brush. Dissassemble the blinds when cleaning if you wish. In either case, be sure to stretch the tapes to proper length while they are wet; otherwise they may shrink. An easy way is to re-hang the blinds while they are still wet but through dripping, stretching them to the proper length.

* * * *

Cleaning Window Shades

Dust window shades frequently with a soft cloth, brush or vacuum cleaner attachment.

Heavily soiled paper shades may be cleaned with an art gum eraser or with commercial wallpaper cleaner. Very soiled washable window shades may be cleaned in this way: Dust and place the shade on a flat surface. Apply a dry soap lather with a soft brush or sponge. Rinse off lather with a clean cloth and wipe the shade as dry as possible. Hang shade unrolled at the window to dry.

Reinforce weak places with transparent tape. Sometimes you can lengthen the life of a shade by reversing top and bottom.

CARE OF HARD FLOOR COVERINGSDon't Wash Linoleum Away

If you want your linoleum to last, don't scrub it too much. Scrubbing with strong powders and soap or synthetic detergent (syndet) will wear away the surface much faster than traffic. Wipe up spills immediately and keep the floor swept or dusted with a dry mop.

When it's necessary to give the linoleum a thorough cleaning, avoid using strong soap or syndet and don't use too much water. Be sure to follow soapy water with a rinse. Strong detergents fade and discolor linoleum. Too much water will make the linoleum deteriorate. You may want to use the liquid floor cleaner recommended by the floor covering manufacturer.

* * * *

Waxing Key to Long Wear of Linoleum

Proper waxing is the key to long wear and good appearance of linoleum. Use either a thin coat of self-polishing wax, applying it at intervals when the wear requires it, or use a paste wax. Paste wax lasts longer but is harder to apply. It's best to apply paste wax by placing it inside of several thicknesses of cloth and allowing only a very thin film to filter through. Buff the wax when it has dried to a milky haze. Two thin coats are better than one thick coat.

* * * *

Care of Rubber and Asphalt Tile

Keep asphalt and rubber tile dusted with a floor brush or a dry mop--but never an oil mop--to prevent damage from soil or grit. Wipe up spilled food at once to prevent permanent spotting. Damp-mop with a mild detergent and warm water when necessary, but always rinse and dry thoroughly.

When you wax your asphalt or rubber tile floors, be sure to use only light coats of a water-base wax. A wax containing any solvent but water will damage the tile. A whiff of the wax will tell you if it smells like dry cleaning fluid--in which case it contains a solvent and should not be used on asphalt or rubber tile. And don't apply lacquer, shellac or any plastic finish. Read the manufacturer's directions to find out exactly what care is recommended for your type of tile. -jbn-

CARE OF HARD FLOOR COVERINGSCare of Linoleum, Vinyl and Cork

To remove grease, soil and paste wax from linoleum, vinyl and cork floors, use either a liquid cleaner recommended by the manufacturer or warm water and washing soda--2 tablespoons to a quart of water. If you use the latter, always rinse well and dry thoroughly. In between times, damp mopping with cold water should be sufficient.

A thin coat of water-base (self-polishing) wax or paste wax may be applied to linoleum, vinyl or cork.

Manufacturers warn against use of varnish, plastic and shellac on all resilient floor coverings because they may cause the surface to become dull and yellow and to crack.

* * * *

Self-Polishing Wax the Easy Way

Next time you use self-polishing wax on your linoleum, asphalt or rubber tile, remember that you'll get better results by doing it the easy way--according to directions. That's the purpose of self-polishing wax--to save work.

First of all, don't shake up the wax. Shaking makes it foamy and prevents it from drying evenly. In a good-quality product, the wax is in microscopic particles which are always evenly distributed.

To apply self-polishing wax, begin by pouring a small amount of wax right on the floor, making a pool about as large as a dinner plate. Soak this up into the wax applicator or cloth, then start covering a section with wax, using straight strokes. Don't rub in self-polishing wax. Just spread it, using as few strokes as possible. This type of wax begins to dry as soon as it is on the floor. Disturbing the film as it dries lessens the final shine.

Here's another tip for getting an even coating. When using a long-handled applicator, start each stroke forward. If you pull the applicator toward you, there's a tendency to use too much pressure at the end of the stroke. The result is an uneven film of wax. Blend the section being coated with the one just finished by raising the applicator at the end of each outward stroke. Allow at least 20 minutes for drying before walking on the floor.

Before rewaxing, always remove the old wax completely with warm water and a mild detergent. Rinse carefully, using a minimum of water.

-jbn-

CARE OF HARD FLOOR COVERINGSCare of Wood Floors

Do you scrub your wood floors with soap and water? If you do, you can expect those floors to warp and crack many years before they should be showing the signs of wear.

Another thing to remember is that self-polishing waxes with a water base should never be used on hardwood. Self-polishing waxes are about 85 per cent water, and water from this source is just as injurious to hardwood as water from a scrub bucket.

To keep your wood floors looking well, use either a paste wax or a liquid polishing wax with a solvent base. You can easily recognize a liquid polishing wax because it smells like dry cleaning fluid.

Spots on the floor can be removed or touched up with liquid polishing wax in between periods when the entire floor is waxed.

* * * *

Sticky Linoleum

Some homemakers complain that there are sticky or gummy spots on their linoleum after washing it. The reason may be that all the soap or syndet (synthetic detergent) has not been rinsed off with clear water before waxing the floor.

An excess of soap or syndet allowed to remain on the surface of linoleum will draw out some of the linseed oil in the floor covering. When this mixes with wax applied after washing, a gummy or sticky finish results. So be sure that all detergent has been rinsed off with clear water. This applies even to cleaners recommended by their manufacturers as no-rinse products.

* * * *

Daily Care of Waxed Floors

It's a good idea to keep waxed floors as dust-free as possible so grit isn't ground into them. A dry mop is effective in picking up the dust and gives additional polishing to the waxed surface. But never use an oiled or chemically treated mop on a waxed floor. It will make the surface gummy, the shine will disappear, dust and dirt will stick to the floor and frequent scrubbing will be necessary to remove the greasy film.

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Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 18, 1958

Immediate release

TREES CAN BE A CROP FOR FUTURE

Under the 1958 Conservation Reserve, Minnesota farmers can get some special help in planting trees--an important "crop for the future."

The sign-up period for this program is open until April 15.

Marvin Smith, extension forester at the University of Minnesota, points out that trees can bring a good income after they get started and the 10-year Conservation Reserve contracts have run out.

This is one crop which never has been and likely never will be in surplus. The U. S. Department of Agriculture expects a 25 to 40 percent greater need for trees by 1975.

Land which is either too poor, too steep or otherwise unsuited for farm crops can yield a good return if planted to trees. Farmers and other land owners interested in starting a timber crop on such land can get in touch with the county agent or local Agricultural Stabilization and Conservation Committee.

From the county extension office, you can get general advice on local markets for forest products and about State and Federal programs for financial and technical aid to tree planters. ASC committees will explain the terms of the Conservation Reserve and the Agricultural Conservation program.

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Immediate release
(with Mat)

4-H BOY, GIRL WIN
SPEAKING HONORS

Darroll Bussler, 17, Brownston, (left) and Deann Chamberlain, 17, Clontarf, topped 15 other 4-H club members in taking a youthful approach to the nation's most perplexing problems in a recent contest.

Bussler and Miss Chamberlain won champion and reserve honors, respectively, in the statewide 4-H radio speaking contest sponsored by the University of Minnesota Agricultural Extension Service and the Minnesota Jewish Council. More than 900 4-H'ers took part in this year's local, county and district contests.

Bussler received a cash prize of \$200, in addition to \$50 to buy books for his public or school library. Miss Chamberlain received a cash award of \$100 and \$25 for books.

Donor of the awards was the Minnesota Jewish Council.

Both winners wrote and gave original speeches on the subject, "Our Country's Most Important Problem Today -- What Can I Do About It?"

A senior in high school, Darroll has been in 4-H club work for 10 years. This was his third year in the 4-H radio speaking activity. His current projects include swine, junior leadership, health and conservation. He is the son of Mr. and Mrs. Richard Bussler.

Miss Chamberlain is a senior in the Benson high school. A club member for eight years, this was her first radio speaking contest. Her current 4-H projects are advanced clothing, advanced food preparation, junior leadership and health. She is the daughter of Mr. and Mrs. Ellard Chamberlain.

B-1913-jrm

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Immediate release

MINIMUM TILLAGE TRIALS REPORTED

A number of Minnesota farmers learned again last summer that corn yields aren't reduced a bit by planting on undisked and undragged soil.

These farmers, 18 in all, conducted carefully-planned field trials on "minimum tillage," in cooperation with soils scientists at the University of Minnesota.

"Minimum tillage" means working the soil as little as possible. It eliminates most or all of the disking and drag harrowing before planting corn.

Curtis Overdahl, extension soils specialist, and George Blake, soil scientist, say that 12 farmers had greater yields from minimum tillage and six had lower yields, in comparison with fields where conventional tilling practices were used. In most cases, though, the differences either way were too small to be important.

On the average, yields were 2-5 bushels per acre greater from minimum tillage.

Some of these farmers used wheel-track planting--planting the corn in the tractor tracks on undisked, freshly-plowed soil. Others planted the corn outside the tractor tracks, but again on undisked and undragged land. Results were as good from one procedure as from the other, Overdahl and Blake report.

Many of these trials were on medium to coarse-textured soils. However, Overdahl and Blake say minimum tillage seems to work just as well on heavy-textured soils, although this calls for careful plowing. Shallow planting the same day as plowing will mean a good stand and fast germination. Deep planting is unnecessary, because the soil surface at this time is moist and warm.

Minimum tillage helps avoid much of the excess soil compaction--and as a consequence, poor soil structure--that often results from overworking soil. Other advantages are less erosion, more water "trapped" in the soil for later use, less weed growth in the loose soil between the rows and less cultivation. The first cultivation can be delayed until corn is 6-8 inches tall.

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* For release: *
* Thurs., Mar. 20 *
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FARMER-SPORTSMAN AWARD WINNER NAMED

Providing protection and food for wildlife, practicing soil conservation and working closely with youth has won Jeff H. Tikkannen, New York Mills, the title of Minnesota's outstanding farmer-sportsman for 1958. He will be honored at the Northwest Sports show, April 13, in Minneapolis.

Regional winners in the competition include: John Morton, Glenwood, northwest; B. C. Wilkins, Brainerd, northeast; Oscar Iteit, Kiester, southwest; and Harry Larson, Hasty, southeast.

Tikkannen is chairman of his local credit union and Farmer's Elevator and of the Otter Tail Dairy Herd Improvement association. He is a member of several farm organizations including the Farmers' Union in which he once served as an officer.

Active in youth activities, he is an instructor and local director of the New York Mills gun safety program. He has made his own farm available to 4-H members to harvest waterfowl food, and he has appeared on several 4-H programs.

He helped organize the New York Mills conservation club, serving as an officer for six years. He has been a member of the Greater Otter Tail County Conservation committee and is a supervisor of the East Otter Tail Soil Conservation district.

Certificates of recognition go to: William Anderson, Carp; Walter and Harry Enzmann, Cook; Walter and August Grothe, Benson; Arthur Narr, Henderson; John Strauss, Lake City; Delmar Golden, Eagle Lake; Byron Pearson, Red Wing; Sylvester Harguth, Waseca; Evard Berdan, Ortonville; Elinas Grotnes, Detroit Lakes; Harvey Wells, Waubun.

Robert Miles, Elbow Lake; Rudulph Hansen, Long Prairie; Glen Hall, Granada; Leonard Latterell, Foley; Carl A. Jilek, Lester Prairie; A. F. Walgrave, Luverne; William Kunze, Sleepy Eye; Ray Johannsen, Pipestone; Paul Strand, Lindstrom; Clinton Moline, Isanti; Gerrit Kiel, Milaca; and Bert Le Blance, Little Falls.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
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To all counties
For use week of
March 24 or later

PLAN IMPROVEMENT
IN WOODLANDS
THIS SPRING

About nine-tenths of the farm woodland owners in Minnesota could more than double their forestry incomes simply through better "forest planning."

County Agent _____ and Marvin Smith, extension forester at the University of Minnesota, point out that less than 10 percent of these owners in Minnesota are cutting their timber wisely.

About three-fourths are leaving cut-over land without making any provision for the forest to grow and improve. This amounts to a goodly acreage, too. About 26 percent of all commercial forest land in Minnesota is in small, private tracts, averaging about 45 acres each.

Smith says spring is a good time to plan some improvement that will turn these forests into real money-makers. To get the most growth from young, well-shaped trees, it's important to weed out the over-age, surplus trees. This means getting rid of diseased and damaged trees, branchy and badly shaped ones, vines and poor tree species.

Many of these cuts will pay for themselves, through firewood, pulpwood, fence posts, poles or even sawlogs.

If they are to be profitable, though, over-mature trees must be harvested before they rot or are damaged. You can recognize them by flattened tops, thin foliage, and somewhat lighter bark.

There's more information on small woodland management in U.S. Department of Agriculture Farmers' Bulletin 1989. To get a copy, see your county agent or write to the Extension Forestry Office, Institute of Agriculture, University of Minnesota, St. Paul I.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
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To all counties
For use week of
March 24 or later

FARM FILLERS

April 15 is the deadline for sign-ups under the 1958 Conservation Reserve plan, according to County Agent . Under this plan, farmers can enter into 5 or 10-year contracts, under which they get payments for applying certain conservation practices to land kept out of production for the specified period.

Agronomists and soils experts at the University of Minnesota say soil tests help decide the kind and amount of fertilizer to use and the amount of lime to apply. This is important. Phosphate and potash fertilizing, for example, aids in more rapid forage crop establishment and helps prevent winter killing.

A pound of hydrated lime on every four square feet of floor space will help prevent damp litters in the poultry house, says Cora Cooke, extension poultry specialist at the University of Minnesota.

Weed control in the future may be mostly a matter of "birth control," according to R. S. Dunham, agronomist at the University of Minnesota. He looks for chemicals to be developed that will either kill weed seeds on the plant--probable in the fall--or stimulate weed seeds to germinate in fall and then be killed by winter cold. Another way might be to prevent weed seed germination in spring by applying chemicals before planting the crop.

About a third of American farmers' total income is from crops and livestock products whose prices are supported by the U. S. government.

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To all counties
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FERTILIZING MEANS
HEIFERS NEED
LESS PASTURE

Fertilizing pastures can nearly cut in half the amount of grazing land needed for young dairy heifers, according to research findings at the University of Minnesota's Northeast Experiment station, Duluth.

W. W. Nelson, agronomist at the Duluth station, reports that heifers on fertilized pasture areas in 1957 required only 52 percent as much grazing area during the season as did their twin sisters on unfertilized grass.

Since the experiment started in 1955, the fertilized areas have received 60 pounds nitrogen and 40 pounds each of phosphate and potash each spring, plus 33.5 pounds of nitrogen top-dressing per acre in the summer. Fertilized plots also received 4 tons of lime per acre the first year.

Each year, identical heifer twins or sister heifers were divided so that one of each pair would be on fertilized pasture and one on unfertilized grass. The heifers received no other feed.

There was no difference in the amount of pasture used by heifers on fertilized compared to unfertilized areas in 1955. But in 1956, those on fertilized pasture required only 62 percent as much area as did heifers on unfertilized grass. Last summer, it took twice as much area to feed the heifers on unfertilized pasture.

Also, heifers each summer gained more rapidly on the fertilized pasture. In 1957, the daily gains averaged .93 pounds for fertilized grass and .64 pounds on the unfertilized area. Fertilized pasture produced 436 pounds of heifer gain per acre in 1957, compared to only 148 pounds per acre on the unfertilized pasture.

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To all counties

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March 24 or later

BIRDSFOOT TREFOIL
CAN TURN OUT WELL
IN MINNESOTA

Birdsfoot trefoil, when managed properly, can work out well in Minnesota.

A newcomer to the Gopher state, trefoil can be a good pasture crop, says County Agent _____ and Bill Hueg, extension agronomist at the University of Minnesota. It shouldn't be the only pasture, though, because it starts later in spring than most native pastures. _____ and Hueg advise these steps for trefoil:

Use land that's worth improving and suitable for pasture. Prepare a good seedbed. Fall plowing is best, because that kills the old sod. Apply lime and fertilizer according to soil test, just as you would for clover or alfalfa.

Use trefoil inoculant on the seed. Where fields have never raised trefoil before, use two or three times the normal amount of inoculant. You can use milk as a "sticker" for the inoculant.

Use the Empire variety of trefoil and plant early in the spring. Seed 5 pounds of trefoil with 6 pounds bromegrass or 5 pounds of timothy. If possible, use band-seeding to get quick establishment. Don't seed more than a half inch deep. Plant a bushel or a bushel-and-a-half of oats as a companion crop. Pasteur the oats when 12 inches high or harvest it as silage. If there's no weed problem, trefoil can be seeded alone.

Empire usually isn't ready to graze until late June or early July. But it stands continuous grazing better than alfalfa or red clover and works out well with rotational grazing.

After the cattle have grazed an area, clip it and spread the droppings. The second growth of trefoil recovers slower than alfalfa, but it will stand pasturing better without danger of bloat. Put up any surplus growth as silage or hay.

Since birdsfoot trefoil makes a long term stand, follow a good fertility-management plan, to keep up the soil supply of lime, phosphorus and potash.

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University Farm & Home News
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To all counties
ATT: HOME AGENTS

For use week of
March 25 or after

SELECT DRAPERIES
TO HARMONIZE
WITH YOUR HOME

If you are planning to make some new draperies for your home this spring, Home Agent _____ urges careful selection of the fabric for a successful and satisfying job.

Keep in mind several factors when selecting fabrics for draperies, suggests Mrs. Myra Zabel, extension home improvement specialist of the University of Minnesota. The locality in which you live, the architectural style of your home, the kind of living and entertaining you do, the amount of time you have to care for your home should all affect your choice.

Mrs. Zabel has these suggestions to help you make your selection.

. Choose fabrics which will fit in with the other furnishings in your room. Simple furnishings demand similar draperies. Chintzes go well with Colonial and Early American furnishings, classic patterns are suitable for traditional rooms, while modern textures and patterns go with contemporary furnishings.

. Let the amount of privacy you need determine whether to select an opaque or semi-sheer fabric. When draperies are drawn largely for privacy, opaque materials are needed. Semi-sheer fabrics used over the glass cut down glare, soften the architectural lines of the windows and let light come in.

. Choose a plain color if there is dominant pattern in other furnishings or if you want to give a feeling of more space in a small room. If you pick a pattern, scale its size to the room by using small patterns in small rooms and large patterns in large rooms. Remember that vertical stripes make short windows seem higher, while horizontal stripes create a shortening and widening effect.

. Use color carefully to create the effect you want. Cool colors produce a quiet feeling, while warm colors give an effect of cozy nearness. White, off-white, cream of beige will allow for changes of color schemes.

University Farm & Home News
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To all counties
ATT: 4-H AGENTS
For use week of
March 25 or after

"SHARE THE FUN"
PROGRAM PLANNED
FOR 4-H'ERS

_____ county 4-H club members will again be able to participate in the 4-H "Share the Fun" program, announces _____ Club (Agricultural) Agent _____

_____.
_____ urges members to work on their acts as soon as possible, since all local contests must be completed by _____. Acts may be in one of four (date)

classes: musical, dramatic, folk and square dancing or novelty stunt or skit. No limitations have been set on the number of participants in any act. Time limit for each act is six minutes.

The _____ county Share the Fun festival will be held _____. Between (date)
12 and 18 acts from the county festival will be chosen for the district audition.

Six district auditions in the state are being planned for July, in place of the four district festivals held last year. The state Share the Fun festival will be held during the Minnesota State Fair and will consist of from 12 to 20 acts chosen from the district auditions.

The University of Minnesota Agricultural Extension Service and Cargill, Inc., are sponsors of the Share the Fun program.

Caption for mat # 1: Here is a wheel-track planting arrangement used by many farmers in Minnesota. This is a four-wheel, general-purpose tractor, with a mounted two-row corn planter. The distance from the center of one rear wheel tread to the center of the other is about 40 inches. On this particular tractor, it was necessary to move each rear wheel rim 3 inches farther in than normal. There are 3-inch sections of pipe or washers between the wheel and the rim. If the rear wheels can be narrowed to 44 inches between wheel centers, that is narrow enough as long as the tires are at least 10 or 11 inches wide. At this width, it's still possible to plant a 40-inch row.

Caption for mat # 2: This is a row-crop tractor with a pull-type planter hitched for wheel-track planting. There are 40 inches between the center of each rear wheel and the center of the tracks made by the narrow front wheels. When planting in one direction, the planter is hitched to one side of the tractor and the hitch is moved to the other side for the opposite direction.

Caption for mat # 3: Shown here is an experimental four-row planter that plants by the wheel-track method. The "press wheel" at the lower left corner makes the track for the planter, independent of the tractor wheel tracks. While this type planter is not yet generally available, some farmers have used this principle in remodeling their own corn planters.

Caption for mat # 4: Four-row planters can be used for wheel-track planting, too. This farmer has hitched his planter so that the two inside rows are planted in the tracks left by the rear wheels and the outside rows in the tracks of the front wheels. The rear wheels are narrowed to 44 inches or less from the center of one wheel to the next. The front wheels are spaced 80 inches apart, from center to center. On this particular tractor, as on most, it was necessary to build a special extension for the front axle. Farmers using this type arrangement say there is little difficulty in turning with the wide front axle.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 18, 1958

SPECIAL TO WILCOX

County Agent Introduction

How good conservation practices can help control wind erosion is shown by this exhibit, constructed by a Minnesota county extension worker. Viewing the exhibit, are, from left, Max Amberson, Minneapolis; Abel Anderson, Red Lake county agent; and Robert Ascheman, Lake of the Woods county agent. The exhibit was made by Curtis Flint, extension soils agent in Norman county. At the rear of the exhibit is a wind tunnel. At the left, where no field practices are used, the wind sweeps across, as can be seen by the paper fluttering at the end on that side. Less wind gets across the center strip where the field is stripcropped, and, on the right, the field windbreak stops all air movement and the paper hangs limp. This same principle can, in actual fields, help farmers hold their soil in place.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul, Minn.
March 19, 1958

Special to Isanti County
(with mat)

NEW HOME AGENT
IS GRADUATE OF
ST. OLAF COLLEGE

With the addition of Jo Ann Heil of Faribault to the county extension staff as home agent, home economics extension work will soon be under way on a full scale in Isanti county.

Miss Heil, who assumed her duties March 5, is Isanti county's first home agent. Her headquarters will be in the county extension office in Cambridge.

As home agent, Miss Heil will work with County Agricultural Agent Royal Anderson in carrying out an expanded extension program for this county, with special emphasis on the home economics phases of 4-H work and development of the extension home economics program. Miss Heil will spend a large part of her time working with local leaders, 4-H'ers and members of the extension home council.

Since August 1, she has served as assistant home agent in Anoka county, where she received special training in home economics extension work.

Miss Heil received her bachelor of arts degree from St. Olaf college in June, 1957, with a major in home economics. She attended the University of Minnesota during the summer of 1956.

As a former 4-H member in Rice county, she is acquainted with 4-H club work. She was reared on a dairy farm in Rice county.

Increasing public sentiment in favor of a more complete extension program is reflected in the action of the county extension committee in adding Miss Heil to the staff. Members of the committee are: (Fill in names and addresses)

Objective of the extension home program is the further development of efficient rural homes and a satisfying rural life. Programs carried on by extension home groups include food preparation for more appetizing and nutritious meals, selection of home furnishings and equipment, color schemes, choice and

care of clothing, clothing construction, beautification of home grounds, safety and family relationships, as well as public affairs.

County homemakers will have a chance to consult with extension leaders in the selection of projects most suitable for this county. Since a large part of the extension home program is carried out through local volunteer leaders, there will be opportunity for community-minded women to serve in the enlarged Isanti county extension program , according to County Agent Anderson.

-jbn-

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

SPECIAL

Immediate release

L. M. WINTERS, NOTED LIVESTOCK AUTHORITY, DIES

L. M. Winters, 66, former animal husbandry professor at the University of Minnesota and noted authority on livestock breeding, died Sunday, March 16, in Baghdad, Iraq.

At the time of his death, Winters was livestock advisor for the U. S. International Cooperation Administration (ICA) mission in Iraq. He had held this position since summer, 1956, when he retired from the University of Minnesota staff after 28 years there.

Winters was widely known for developing three new breeds of hogs--the Minnesota No. 1, No. 2 and No. 3--all of which are widely used in Minnesota and the nation. He was also instrumental in developing two new sheep breeds--Minnesota No. 100 and 102. He helped develop miniature pigs, which are now being used in livestock and medical research.

A native of Lake City, Minn., Winters received his B. S. in 1919 and his Ph. D. in 1932, both from the University of Minnesota. In 1920, he earned an M. S. from Iowa State College. He was a professor of animal husbandry at the University of Saskatchewan, Canada, from 1920-28 and joined the University of Minnesota staff in 1928.

As a result of his early research in breeding, crossbreeding hogs for commercial production has become an established practice on most hog belt farms. Benefits of this one practice has meant millions of dollars to Minnesota farmers, since it alone improved hog production efficiency 10-15 percent.

His other early research involved the prenatal development of farm animals and techniques in artificial insemination of cattle.

Attention of associates and contemporary workers was first attracted to Winters through the publication of his book, "Animal Breeding," in 1930. This book attained

(more)

add 1 L. M. Winters, Noted Livestock Authority, Dies

wide acceptance as a text for undergraduate courses in animal breeding at agricultural colleges. The fifth revision of this book was published in 1954.

In 1936 he began the research that led to the development of the many new breeds of hogs and sheep. This work established Winters as one of the leading pioneers in the application of genetic principles to the improvement of farm animals. His work in hog breeding was a companion development to the production of hybrid corn.

In 1948 he received the \$1,000 Morrison Award for distinguished services in animal husbandry research.

In 1949 he was called to England to discuss animal breeding work. While there he was honored by the "Worshipful Company of Butchers" and the Lord Mayor of London by presentation of a special scroll.

He was a member of several honorary and professional societies including Alpha Zeta, Gamma Sigma Delta (national secretary for about six years), Phi Kappa Phi, Sigma Xi, American Association for the Advancement of Science, Genetic Society of America and American Society of Animal Production.

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-pjt-

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

Special to Cottonwood and
Faribault counties

Former 4-H Agent to Laos

Evelyn Gray, who has served as 4-H assistant in Cottonwood and Faribault counties, has accepted a two-year appointment to Laos, formerly a territory of French Indo-China and now an independent kingdom.

Miss Gray will receive her bachelor of science degree in home economics education and extension from the University of Minnesota March 20. She will leave from San Francisco April 20 by Japan Air Lines for Laos.

During the two years in Laos, she will serve as the home economics member of a community development team.

Her appointment is with International Voluntary Services, under whom she will serve as the home economics member of a community development team working with the people in Laos. The International Voluntary Services organization has a contract with the International Cooperation Administration.

Miss Gray is the daughter of Mr. and Mrs. Walter Gray of Lake City.

-jbn-

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

Special to Lake City Graphic
and Wabasha Herald

Miss Gray to Laos

Evelyn Gray, daughter of Mr. and Mrs. Walter Gray of Lake City, has accepted a two-year appointment in Laos, formerly a territory of French Indo-China and now an independent kingdom.

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Miss Gray was 4-H assistant in Cottonwood county between 1951 and 1954. During the summers of 1955-57 she was 4-H assistant in Faribault county.

-JBN-

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

Immediate release

SHORT COURSE FOR GARDENERS THURSDAY, FRIDAY

Several hundred home gardening enthusiasts are expected to attend the University of Minnesota's annual horticulture short course March 27 and 28 on the St. Paul campus.

Exhibits in Room S, horticulture building, will include a model of a small greenhouse for home gardeners, a display of gardening equipment and gadgets, pesticides and fruit packaging materials for commercial growers.

Use of gibberellic acid, commercial weed killers and plastic mulches, tips on disease control and on garden planning and planting will be discussed at the opening session on vegetable gardening Thursday morning in Peters hall auditorium. The session will begin at 9:15 a.m. with a talk by R. E. Nylund, associate professor of horticulture at the University, on new ideas in vegetable growing. Other speakers Thursday morning include H. G. Johnson, extension plant pathologist and O. C. Turnquist, extension horticulturist, University of Minnesota, and Harold Andrews, horticulturist, Chun King company, Duluth.

Thursday afternoon's program, beginning at 1 p.m., will be devoted to home fruit growing, with talks by University staff members on recommended fruit varieties, mulches and control of fruit diseases. Eldred Euer, Canby farmer, will relate his experiences in fruit growing as a hobby.

Morning and afternoon sessions on ornamental horticulture and on commercial fruit growing are scheduled for Friday. The ornamental horticulture program, in Peters hall auditorium, beginning at 9:30 a.m., will feature talks on new developments in lawn care, new ornamentals, perennials for the North, proper watering and disease control.

Commercial fruit growers will meet in Room 102, horticulture building, at 10 a.m. They will hear discussions of problems in commercial growing, handling and marketing of Minnesota apples. Directors of the Minnesota Fruit Growers' association will have a luncheon meeting at 11:30 a.m. Friday in the agricultural cafeteria.

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

Immediate release

MAKE SNACKS NUTRITIOUS AND FUN

Snack foods can make an important contribution to an adolescent's food intake each day.

Since three meals a day often do not furnish enough of the foods growing boys and girls need, teenagers are perpetual snackers. From 15 to 17 percent of their food intake is through these extra meals.

Too often snack foods contain "empty calories"--that is, they contribute calories without any important nutrients, say extension nutritionists at the University of Minnesota.

Surveys shows that many teenagers have diets that are inadequate for health. Skimpy breakfasts and poorly chosen snack foods add to the problem. The less a teenage girl eats at breakfast, for example, the more snacks she is likely to eat, according to studies.

University nutritionists point out that parents can prepare snacks the children will enjoy but foods that will at the same time contribute toward good nutrition. Keep in mind these foods which should be eaten every day: meat, fish, eggs or legumes; milk or milk products; vegetables; fruits; breads or cereals.

The extension nutritionists give these suggestions for snack foods for teenagers:

At home or for parties, serve meat or meat products dressed up as barbecues or chiliburgers, hamburgers smothered in chili or roasted frankfurters stuffed with cheese and wrapped in bacon.

Milk shakes with ice cream and fresh fruit flavoring are delicious and nutritious. Or try making a punch with frozen orange juice and crushed fresh fruit blended with finely chopped ice.

Ice cream, milk, potato chips with dips and small sandwiches with meat or cheese spreads are always good. And don't forget fresh fruit.

Try arranging a cheese, cold meat and fruit platter. The platter will decorate your table and will furnish tasty, appealing and nutritious snacks.

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

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH REPORT *
* * * * * * * * *
Immediate release

CONGENITAL TREMOR IN BABY PIGS BEING STUDIED

One of the most puzzling diseases of baby pigs is getting some careful attention from veterinary scientists at the University of Minnesota.

This condition is congenital tremor, often called "the shakes," "trembles," or "jumpy pigs," according to M. W. Stromberg, assistant professor, and R. L. Kitchell, professor in the University's College of Veterinary Medicine.

The disease has been reported recently in some areas of Minnesota and has occurred in Europe, North America and Australia.

At present, the exact cause of the disease is not known. Congenital tremor was once thought to occur only in the first litters of gilts (young female swine), but recent information shows that offspring from both gilts and sows may be affected.

Newborn pigs with the disease tremble, sometimes violently. Yet, they appear normal when at rest or asleep. Since the tremor may resemble ordinary shivering, many owners try to give affected pigs a warmer area. This usually has no effect, but some pigs do improve when moved to a warm room.

While the disease doesn't kill many pigs, it still can be costly, especially to purebred breeders. Affected pigs usually recover in a few weeks, but many breeders are unwilling to risk allowing the disease to spread. Therefore, they often sell young pigs as feeder stock. This usually means a big financial loss.

Although they don't believe the disease is inherited, Stromberg and Kitchell have found that the boar plays a vital role in spread of the disease. One boar sired offspring with tremor on six different farms. Yet, not all offspring of such a boar will have "trembles;" some appear completely normal.

For the present, Stromberg and Kitchell advise breeders to avoid using any boar that has ever sired pigs with congenital tremor. Also, it's uncertain so far whether once-affected pigs should be used as breeding stock. Much more work must be done on the disease before these questions can be definitely answered.

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

Immediate Release

WHEEL-TRACK PLANTING GAINS FAVOR IN WASHINGTON COUNTY

STILLWATER -- A corn-planting procedure that saves the farmer's time, cuts costs by as much as \$5 per acre and helps keep the soil in good condition is getting a thorough test here in Washington county.

The practice is "wheel-track" planting. Nearly two dozen farmers in Washington county alone have adopted it for good.

In general, all these farmers get yields just as high from wheel-track planting as where they use conventional procedures, according to Clifton Halsey, Washington county extension soil conservation agent.

Wheel-track planting is one form of "minimum tillage." It means planting corn in the tractor wheel tracks on freshly plowed but undisked and undragged soil. Eliminating disking and harrowing can save an hour of working time on a 5-acre field and can cut costs by up to \$5 per acre.

In addition, the reduced tillage also avoids excess soil compaction.

Julius Monson, Scandia, has followed the practice for two years and says "It was a thrill to find that such a procedure could be so successful." He hitched the planter behind a small 4-wheel tractor, with the wheels set about 42 inches apart.

"There were practically no weeds between the rows, because the soil there was so loose that the weeds couldn't grow well," according to Monson.

"The practice worked well on all kinds of fields--old sod, former hay pasture, rough fields and gumbo and in clay areas. We had nice, ^{clean} corn and it yielded well--from 101-130 bushels per acre, depending on the maturity of the corn and the number of plants per acre."

Lloyd Marier, Forest Lake, compared 13 acres of corn planted in wheel tracks with another acre planted by the conventional method. He harvested 91 bushels of corn per acre from wheel-track planting and 89 bushels on the rest. (more)

Add 1 Wheel-track Planting Gains Favor in Washington County

Even though he had a severe quack grass problem, Eugene Zahler, Stillwater, said that his corn planted in wheel tracks actually yielded as well as it did in the past when he disked and dragged the fields before planting. "I plan to use wheel-track planting again this year." Other farmers said:

Gene LaCasse, Hugo: "I used a 4-row planter, set the rear wheels 40 inches apart and modified the front axle so the front wheels were 120 inches apart. The corn planted this way turned out very well."

Elmer Nielson, Lake Elmo: "There was very little erosion where the corn was wheel-track planted--less than often occurs when the field is disked. I used a row-crop tractor and a two row planter."

Wilbert Hauser, Lake Elmo: "The practice worked so well and weeds in the loose soil between the rows grew so poorly that I didn't need to cultivate until the corn was knee-high. Yet, the corn averaged 90-100 bushels per acre."

Gerald Simon, Lake Elmo: "Even though I only cultivated it once, my wheel-track planted corn yielded 90-100 bushels per acre."

Louis Wright, Hastings: "I used a 4-row planter that has its own press wheels to make 'tracks' for the planter. I compared one area where the press wheels were used with another area where soil had been disked. The disked area had many more weeds."

Tom Seeger, Hastings: "Wheel-track planting works well even with soybeans on my farm. I used a row-crop tractor, and welded a handle to the drawbar pin so that I could swing the drawbar when turning at the end of the field. In this way, I could plant in the front wheel tracks and either rear wheel track and not drive over planted rows."

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 25, 1958

* * * * * * * * *
* For release *
* Thursday, March 27 *
* * * * * * * * *

JUNIOR CONSERVATION ACHIEVEMENT AWARD WINNER NAMED

Arlan W. Henderson, 17, Houston, is the winner of the third annual "Frank Blair Junior Achievement Award."

The Winona high school senior will be honored at the third annual youth achievement day at the Northwest Sports show, Minneapolis, April 12.

The award--a trophy--is given in the name of Frank Blair, long-time Minnesota director of Game and Fish and conservation leader. It is presented to the boy or girl, 12 to 21, who has achieved the best record in conservation, wildlife development and sportsmanship in Minnesota.

A committee of conservationists and educators headed by Parker Anderson, extension forester at the University of Minnesota, selects the winner.

Runner-up honors went to Douglas Johnson, 19, Braham, a student in wildlife conservation at the University of Minnesota.

Arlan, who lives on a 240-acre farm near Houston, has a long record of conservation achievements. He set out 1,000 pine seedlings and worked with his father in laying out 170 acres of contour strips, applying lime and making selective cuttings on two farm woodlots.

Interested in wildlife development, Arlan has trapped foxes and pocket gophers, built several bird-houses, left 800 feet of fence row for wildlife cover and left rows of corn for deer feeding.

Arlan also advocates conservation in speeches and demonstrations for FFA, Isaac Walton, Boy Scouts and many other groups. In 1956 he was named FFA State and Soil and Water Management winner. Last year he received honorable mention in the Frank Blair junior trophy competition.

Other winners in the competition who will receive special certificates of recognition are: Douglas Johnson; Bruce Bremer, Lake City; Ronald Kral, Sleepy Eye; Donald E. Schmidt, Detroit Lakes; Harvey Nelson, Cannon Falls; Richard Mackenthun, Frazee; Roland Schwichtenberg, St. Peter; Darell Pries, Sargeant; Loren Bystol, Ashby; James Nelson, Chisholm; Larry R. Jensen, Redwood Falls; Duane Kvittum, Kenyon; and Roger Legried, Frost.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 25, 1958

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* For release: 3 p.m. *
* Thursday, March 27 *
* * * * * * * * *

SPRAY PROGRAM IMPORTANT IN FRUIT GROWING--HORTICULTURE SHORT COURSE

A complete spray program and planting healthy stock are the best methods of combating diseases in growing apples, strawberries and raspberries in the home garden, H. G. Johnson, extension plant pathologist at the University of Minnesota, told home gardeners today (Thurs. p.m.).

Johnson spoke at a special session on home fruit growing during the University's annual horticulture short course on the St. Paul campus.

Spraying throughout the growing season with captan will control such common diseases as scab and rust in apple trees, he said.

He also recommended spraying for controlling foliage diseases in strawberries and raspberries. Soil treatment and use of healthy plants will also reduce fruit diseases for small fruits.

Speaking at the same session, E. T. Andersen, University horticulturist, recommended both summer and winter mulching for best results with strawberries. A summer mulch of sawdust or woodchips applied soon after setting out strawberry plants will have the advantage of conserving moisture near the soil surface and controlling weeds. A winter mulch of coarse straw or marsh hay applied in late fall will serve the dual purpose of protecting plants against both heat and cold. The protection against the warm spells that may start unseasonal growth is just as important as protection against cold, Andersen said.

Separate sessions on both ornamental horticulture and commerical fruit growing have been scheduled for Friday as part of the short course.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 25 1958

To all counties
For use week of
March 31 or later

FARM FILLERS

If the dairy industry is to maintain its markets and gain additional outlets, high quality must be a permanent feature of all dairy products. This statement comes from James H. Gholson, extension dairy products specialist at the University of Minnesota.

* * *

This is a good year to push early pullets to maturity as fast as possible to get them into production while the seasonal rise in egg prices is still under way. Cora Cooke, extension poultry specialist at the University of Minnesota, says the large number of yearling hens now in flocks will be out of the race by that time. Prospects are for a big hatch of chicks this year, she says.

* * *

It will pay you to use durable posts in fence construction this spring. University of Minnesota tests in past years have shown that treating wood posts can give them a service life of 20 or more years.

* * *

Parker Anderson, extension forester at the University of Minnesota, has this advice for folks planning to harvest and produce maple sirup: Test the sap from each tree for sugar content, with a hydrometer, and collect sap for sirup only from trees with 2 percent or more sugar. Nearly 40 percent of maple sirup production costs go for labor. So it doesn't pay to bother with sap low in sugar content.

* * *

Don't let needless foot injuries stop you on the eve of the spring rush season. Check around the farmstead area, advises Glenn Prickett, extension farm safety specialist at the University of Minnesota. Pick up loose wire, broken glass and other junk.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
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March 25, 1958

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH REPORT *
* * * * * * * * *
Immediate release

ALTERNATE ROW LEGUME SEEDING NOT PRACTICAL

"Alternate row" legume seeding is not a practical way to reduce percentage of legumes in a pasture mixture, University of Minnesota researchers say.

While this practice can make some reduction in legume proportion, it also reduces total forage yields too much to be feasible.

Agronomist A. R. Schmid compared solid drilling of legumes in a pasture mixture with different alternate row legume seeding procedures. Reason for these tests was to help determine which methods of controlling legume percentage are practical. Scientists have found that low legume proportion in a pasture helps avoid bloat in cattle.

Plots in Schmid's tests were seeded in 1954 with an oats companion crop. Legumes were Vernal alfalfa, ladino and alsike clover. Lincoln brome grass and meadow fescue were mixed with the oats.

Where researchers drilled legumes solid, the mixture was 57 percent legume in 1956 and 34 in 1957. These plots yielded 3.65 tons forage per acre in 1957.

Where one drill spout was left open and the next two plugged, the mixture was only 37 percent legume in 1956 and 25 percent in 1957. However, 1957 forage yields on these plots averaged only 2.32 tons per acre.

Plots in which the research workers left two spouts open and plugged the next two averaged 37 percent legumes in 1956 and 26 percent in 1957, and yielded 3.1 tons forage per acre last summer. Leaving one spout open and plugging the next three gave similar results.

These tests show that it's apt to be more practical to control legume percentage by some other means--such as fertilizing more heavily to keep up the grass content and by using higher proportions of grass in the seeding mixture or adding more aggressive grass species, such as orchardgrass, to the mixture.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 25, 1958

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* For release: 9 a.m. *
* Thursday, March 27 *
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USE OF NEW TECHNIQUES INCREASE GARDENERS' YIELDS--Horticulture Short Course

Home gardeners can double and even quadruple their yields of tomatoes by adopting some of the techniques used by University of Minnesota plant scientists, a University horticulturist said today (Thurs., March 27).

R. E. Nylund, associate professor of horticulture, made this recommendation at the opening program of the University's horticulture short course on the St. Paul campus.

Combined use of four of the new gardening "ideas" increased total yields of tomatoes 400 percent and early yields 50 percent in recent University of Minnesota experiments in Grand Rapids. The techniques used were a starter solution at planting time, plastic tents over the plants until the first blossoms appeared, a black plastic mulch applied before transplanting and a hormone spray to set blossoms.

The starter solution alone, applied at transplanting time, more than doubled total yields of tomatoes. Home gardeners can make a starter solution by adding 4 tablespoons of any good lawn fertilizer - or 6 tablespoons of a 4-12-4 fertilizer - to a gallon of water, Nylund said. About $\frac{1}{2}$ cup of the starter solution should be applied around each transplant after it is set into the garden.

Use of the black plastic mulch in the University experiments increased early yields of tomatoes 30 percent, though it had no effect on total yields. It had the additional advantage of controlling weeds and helping prevent rot by keeping fruits off the ground. The plastic was laid on the ground before planting the tomatoes. Tomato plants, set into the soil through slits in the plastic, grew four or five times as large as under ordinary conditions.

Plastic mulch used for other warm-season crops like melons would make possible earlier planting because the mulch could be applied several days before planting to warm up the soil, Nylund said.

Potted plants produced twice as many tomatoes as plants grown in flats. Peat pots were used in the experiments so the pots could be left in the ground.

The horticulture short course will continue through Friday.

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Institute of Agriculture
University of Minnesota
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March 25, 1958

SPECIAL TO TWIN CITY OUTLETS

Immediate release

UNIVERSITY STUDENTS TO ATTEND MARKETING CLINIC

Nine students and a faculty member of the University of Minnesota's department of animal husbandry will participate in an undergraduate clinic on live animal and carcass evaluation at St. Joseph, Mo., March 27-29.

W. J. Lunan, associate professor of animal husbandry, will accompany the students.

Students making the trip are Edward J. Haeg, Mora; Roger Baer, Utica; Victor Jorges, Jr., Madison; William Louk, Austin; Walter Willey, Worthington; Eugene Scheffert, New Richland; Linden Olson, Worthington; Paul Schultz, Courtland; Charles McCarthy, 234 6th ave. N., South St. Paul. All are seniors in animal husbandry.

The educational clinic will aid students from several Midwest colleges in relating meat on the hoof to meat on the hook. They will also discuss employment opportunities with people actively engaged in the livestock and meat industry.

Speakers and panel discussions will cover livestock marketing, meat processing, meat retailing and other related subjects.

The Minnesota group will visit meat packing plants, agricultural colleges and purebred livestock breeders during the trip.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 25 1958

To all counties
except Cook, Lake
and N. St. Louis
For use week of
March 31 or later

County Agent: Use this article and the
accompanying 4 mats as you see fit. It
could be used as one complete feature,
or as a series of 1 or more mats weekly
for 2, 3 or 4 weeks.

WHEEL-TRACK METHOD FITS MOST EQUIPMENT

Wheel-track corn planting can fit most tractor-and-planter combinations used on Minnesota farms, according to County Agent _____.

This practice fits in well with the "minimum tillage" idea -- working the soil less.

Wheel-track planting can be done with ordinary pull-type, two-row corn planters, hitched behind either general purpose or row-crop tractors. It works with four-row planters, too, although most tractors need special modifications for wheel-track planting with four-row equipment. There are also experimental planters that have special "press wheels" to make tracks in which to plant the corn.

_____ and Curtis Overdahl, extension soils specialist at the University of Minnesota, say planting wheel tracks on freshly-plowed, but undisked soil, has these advantages:

1. It prepares a good seedbed for the corn in the wheel tracks without making an equally good seedbed for weeds between the rows.
2. Working the soil less helps avoid much of the excess soil compaction-- and as a consequence, poor soil structure--that often results from overworking.
3. It results in less soil erosion and more water trapped in the soil for later use.
4. It saves time and money, since you don't need to disk or drag the field and you can delay the first cultivation until the corn is 6-8 inches tall.

During the past two summers, farmers working in cooperation with University soils researchers, have found that corn planted by the wheel-track method yields just as high as corn planted by conventional procedures. # # #

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 25 1958

To all counties
For use week of
March 31 or later

PREMIUM EGG MARKET GROWS IN STATE

The "premium" egg market is growing steadily in Minnesota.

It is offering more and more egg producers in the state an opportunity to receive a price increase that can pay well for their extra effort, according to Cora Cooke, extension poultry specialist at the University of Minnesota.

"Premium" eggs are considered better than grade A eggs as normally received, because producers on a premium plan follow a program specially designed to produce eggs higher and more uniform in quality.

To get on a premium program, a producer contracts with a buyer who specified which production practices will be followed. These practices may vary from one buyer to the next, depending on the requirements of the particular outlet supplied.

In all cases, though, premium egg contracts call for confining the flock during the entire year. The contracts generally specify the number of times the eggs must be gathered daily, the number of deliveries weekly, and, to some extent, the methods used in casing and holding eggs.

Some premium programs require dry cleaning eggs, a mechanical cooler and spray-sealing eggs to slow up quality loss.

In return, the buyer contracts to pay a specified premium over a selected market price.

Miss Cooke says the premium program has definite promise for Minnesota. It could ultimately increase the volume of high-quality eggs being shipped out of the state and could increase demand for Minnesota eggs.

The new Minnesota egg law encourages these programs, by authorizing the Commissioner of Agriculture to approve contracts made on this basis between producers and buyers.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
March 25 1958

To all counties
ATT: HOME AGENTS
For use week of
March 31

CHICKEN, PRUNES
APRIL PLENTIFULS

April promises an abundance of some popular and economically priced foods for _____ county shoppers, according to Home Agent _____.

Calling attention to the U. S. Department of Agriculture's list of plentiful foods for the month, _____ points especially to broiler and fryer chickens. Bigger supplies of these birds are in prospect than last year, and prices are expected to be reasonable.

Dried prunes are another featured item on the plentiful foods list, reflecting the large harvest of prunes the past two summers. Canned pears also continue to be abundant. For a striking black and white fruit combination for dessert or salad, serve cooked prunes and canned pear halves together, _____ suggests.

Canned and frozen green peas and sweet corn -- two favorite vegetables -- are in even heavier supply than last year. Watch for specials on these vegetables at local markets.

For the member of the family who carries lunch to school or work, the honey and peanut butter sandwich will fit the budget and the appetite. Both these spreads are plentiful.

Milk and milk products will be abundant, as milk production continues at record levels and increases seasonally.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
March 25 1958

ATT: 4-H AGENTS

For use week of
April or after

NEW IDEAS
FOR BREAKFAST
INTEREST

Teen-agers are often guilty of skimping on breakfast, the most important meal of the day, says 4-H (Home) Agent _____.

The reason is often monotony of menus, but just a few new variations can make the meal interesting and appealing.

Quick breads served occasionally can add this needed interest, suggests Evelyn Harne, assistant state 4-H club leader at the University of Minnesota. They are tasty, easy for 4-H members to prepare, and can be varied in many ways.

Dress up muffins by adding 1 cup of any chopped fruit to the dry ingredients of a basic muffin recipe. Miss Harne suggests apples, raisins, dates, cranberries, pineapple or even nut meats.

Sweet-top muffins are a special favorite of children and teen-agers. Just sprinkle a mixture of half cinnamon and half sugar on the surface of the muffins before baking.

To give plain baking powder biscuits new shapes and flavors, follow these suggestions:

. Pinwheel biscuits: Roll the dough in a rectangle 1/4 inch thick, spread lightly with softened butter and sprinkle with a mixture of 2 tablespoons sugar and 1/4 teaspoon cinnamon. Roll as a jelly roll. Cut in 1 1/2 inch slices and bake, cut side up, in oiled muffin tins.

. Orange-top biscuits: Prepare plain biscuits and place 1 teaspoon of the following mixture on the top of each biscuit -- 1 tsp. orange rind, 1/3 cup sugar and 2 tbsps. orange juice combined.

. Blueberry biscuits: Prepare biscuit dough and roll to the thickness of 1/4 inch. Line greased muffin tins half way up with dough. Fill the middle with sugared blueberries. Cover with a round of dough and bake.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
March 25 1958

For use week of
March 31 or later
A U. of M. Ag. and Home Research Story

FORAGE FEEDING SYSTEMS COMPARED

Most dairy farmers would be better off by improving their present summer forage feeding systems than they would by changing to a different plan.

J. D. Donker, dairy husbandman at the University of Minnesota, says recent research shows little difference in milk production per cow between different grazing systems, green-chopping -- also called "soiling" -- and silage feeding in summer.

What makes the most difference in milk production, he says, is the quality of the forage, not the way it's fed. He says that which system a farmer adopts depends mostly on how much pasture land is available, adaptability of land, buildings and equipment to change, labor available, personal preferences and other things.

Studies have shown, however, that some form of rotational grazing can reduce the number of acres needed by 30 to 40 percent, in comparison to letting cows graze a whole field. Rotational grazing means dividing the pasture into several plots. Then the cows graze one plot at a time.

Green-chopping means confining the cows to a feeding lot and hauling fresh, chopped forage to them daily. This practice, when used with tall-growing crops such as sudan grass or oats, saves material that otherwise would be lost through trampling or contamination. On the other hand, with short-growing crops, cows need fewer acres if pastured than if fed green-chopped material, Donker says.

There are problems in green-chopping, too. It requires more labor and equipment than grazing and wet weather makes the operation difficult.

Harvesting and storing the entire forage crop, then feeding silage, grain and hay overcomes some of the disadvantages of green-chopping. But again, this system is one that will fit only certain situations, according to Donker.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 25, 1958

SPECIAL TO WILCOX

County Agent Introduction

Two extension workers from Northwest Minnesota--both named Johnson--take a look at important product in the Red River Valley, a bag of certified grain seed. The agents are Curtis Johnson, left, assistant agent in Clay county, and Marlin Johnson, assistant West Polk county agent. They are not related. Curtis grew up on a diversified farm near Alexandria and is a 1957 graduate of the University of Minnesota. Marlin hails from Hallock, is also an agricultural graduate of the University.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 26, 1958

SPECIAL TO THE MINNESOTAN

ICE CREAM RESEARCH MOVES FORWARD

Ice cream seems like a genuine treat every time you eat it!

It is -- and it's no accident!

For more than 30 years, dairy products scientists on the St. Paul campus have been searching for ways to improve initial quality and keeping ability of ice cream.

W. B. Combs, professor of dairy husbandry, was a pioneer in this type of research. He was first to report--in 1927--that sweet-cream buttermilk, a plentiful by-product of Minnesota's booming butter business, could be an effective ingredient of ice cream.

Today, Elmer L. Thomas, associate professor of dairy husbandry, and several assistants are continuing ice cream research. They have studied effects of packaging materials and are now comparing different basic stabilizers.

During World War II, there was a limit to the solids that could be used in ice cream. Major use of sweet-cream buttermilk was shifting from animal to human consumption and ice cream seemed like a natural place for it.

Further research showed that sweet-cream buttermilk gives ice cream improved whipping quality. That means it can be whipped to the desired over-run in less time. What's more, it also makes a creamier, tastier product.

Main purposes of ice cream manufacture on the St. Paul campus are teaching and research. To simulate commercial conditions, however, large commercial size batches are prepared. Surplus is turned over to University services.

In 1948, Thomas began to study ice cream shrinkage caused by loss of air during storage.

Ice cream is basically a foam, according to Thomas. By whipping in a certain

add 1 ice cream

amount of air, ice cream becomes palatable. Freezing stabilizes the foam.

In recent years, most of this "frozen foam" has moved to consumers in half-gallon containers through self-service merchandising cabinets. With home freezers, many consumers are storing ice cream longer than ever before.

To preserve the foam-like structure of ice cream, consistently low storage temperatures are vital. Otherwise, it shrinks and becomes hard and ~~dry~~ ^{icy} -- a problem in many a home and store.

During 1953, Thomas and Vernal S. Packard, Jr., research fellow in dairy husbandry, surveyed retail store managers and consumers as ground work for a study of storage problems.

Then they borrowed self-service merchandising cabinets and tested ice cream under typical super-market conditions. They soon spotted the main problem. Ice cream in the top layer noticeably shrank and became icy in texture during a four-week storage period, even when the cabinet had a sliding top.

Although their initial plans did not call for it, the dairy product workers soon found themselves in the midst of a study of packaging materials. Aluminum containers provided better control of shrinkage than ordinary fiber containers. They reasoned that aluminum not only reflected radiant heat, but also through conduction reduced the temperature gradient between the ice cream at the top and bottom of the cabinet.

They found also that housewives who store large cartons of ice cream can protect it from shrinkage and coarseness by wrapping the carton in aluminum foil during storage and placing it near the bottom of the freezer where temperatures are more uniformly cold.

With the packaging approach to the storage problem nearly exhausted, emphasis is now shifting to ice cream ingredients.

add 2 ice cream

Ice cream has always required stabilizers to bind the water and slow down ice crystal growth. Since the war, stabilizers of vegetable origin such as sodium alginate, locust bean gum and guar gum have become popular. St. Paul campus researchers are now determining whether these compounds have differing effects on ice cream keeping quality.

At any rate, these men aim to make ice cream an even more delicious treat in the future -- one that keeps longer in the store and home.

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-jrm-

SPECIAL TO THE MINNESOTAN

CULLINE FOR ICE CREAM PIC

The proof's in the taste. These dairy products scientists are comparing several samples of ice cream. To test body and texture, an ice cream taster bites through the ice cream and shifts it around his tongue against the roof of his mouth. Members of this tasting panel are, left to right, Vernal A. Packard Jr., research fellow; Robert J. Anderson, research assistant; Elmer L. Thomas, associate professor; Howard A. Morris, associate professor; W. B. Combs, professor; all from the department of dairy husbandry.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 26, 1958

Immediate release

"SHARE THE FUN" PROGRAM FOR 4-H MEMBERS

A statewide "Share the Fun" program for 4-H club members for 1958 was announced today by Earl Bergerud, district 4-H club leader at the University of Minnesota.

The "Share the Fun" program takes the place of the former talent contests. Four-H members may prepare acts individually or in groups in one of four classes: musical, dramatic, novelty or folk and square dancing. No limitation has been set on number of participants in any act. Time limit for each act is six minutes.

Six district auditions will be held in the state in July, in place of the four district festivals held last year. Between 12 and 18 acts from county festivals will be chosen for each district audition.

The state "Share the Fun" festival will be staged during the Minnesota State Fair and will consist of acts chosen from district auditions.

The University of Minnesota Agricultural Extension Service and Cargill, Inc., are sponsors of the Share the Fun program.

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B-1924-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 26, 1958

Immediate release

MINNESOTA FARM FIRE LOSSES REPORTED

More than a million and a half dollars' worth of Minnesota farm property went up in flames in 1957, according to Glenn Prickett, extension farm safety specialist at the University of Minnesota.

Ten people died as a result of farm fires during the year.

Prickett bases this information on recent reports from the State Fire Marshal's office and from the Minnesota Department of Health.

There were 128 barns, 95 homes, 24 poultry houses and 13 granaries reported damaged or destroyed in 1957. Other major fires in the report included 9 machine shops and sheds, 7 garages and 43 miscellaneous machinery and crops fires.

The three most common causes of these fires, in order of importance, were: defective and misused electrical equipment; defective, overheated and exploding heating units; sparks from chimneys, motors and welders.

Other causes of farm fires reported were rubbish fires, lightning, careless smoking and match handling, spontaneous combustion and defective chimneys.

Farm fire losses accounted for about 10 percent of the property loss from all fires in Minnesota during 1957, the State Fire Marshal's report shows.

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B-1925-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 26, 1958

Immediate release

BEEKEEPERS SHORT COURSE SCHEDULED

Feeding candy to honey bees may sound a bit peculiar, but beekeepers often have a good reason for doing it.

How and why this "candy" is made and fed will be one of the featured topics at the 15th annual Beekeepers Short Course, May 6-8 on the St. Paul campus of the University of Minnesota. The course was announced today by J. O. Christianson, director of agricultural short courses.

Program chairman for the event, and the man who developed this bee candy, is M. H. Haydak, University entomologist. The candy is a pollen substitute for bees that use up last year's pollen supply before they can get new pollen from growing plants in early spring. Pollen is the food bees need to stay alive and active.

Other topics at the short course will include queen rearing, colony management, installing "package bees," honey harvesting, processing and marketing, bee diseases and general bee management.

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

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B-1926-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 26, 1958

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* For release: 2 p.m. *
* Friday, March 28 *
* * * * * * * * * *

KENTUCKY BLUEGRASS BEST FOR MINNESOTA LAWNS--Horticulture Short Course

Kentucky bluegrass is still the most reliable lawn grass for Minnesota, according to a University of Minnesota horticulturist.

University tests show that many of the new varieties such as Mondo and Zoysia are unsatisfactory for this area, R. J. Stadtherr told home gardeners attending today's (Friday p.m.) session of the University's annual horticulture short course on the St. Paul campus. Stadtherr is in charge of University turf grass experiments.

The University horticulture department is now growing different mixtures of lawn grasses at the Fruit Breeding Farm near Excelsior, at Crookston, Grand Rapids, Morris and Duluth, in an effort to find suitable selections for different parts of Minnesota.

The householder who does not enjoy mowing the lawn may want to plant Merion bluegrass, a dwarf-type grass, Stadtherr said. In University plots over the last two years Merion bluegrass grew 20 inches less per season than Kentucky blue, thus requiring fewer cuttings.

Fertilizer studies conducted by the University, Stadtherr reported, show that previous fertilizer recommendations for the lawn have been insufficient. Instead of the 1 or 2 pounds of actual nitrogen previously recommended per 1,000 square feet of for lawn, the present recommendation is for up to 8 pounds/bluegrass on some soils. Red fescues do not require as heavy fertilization as the bluegrasses.

Speaking on new ornamentals for the home yard, University horticulturists A. G. Johnson and R. E. Widmer recommended to gardeners some of the woody plants and chrysanthemums which the University has developed especially for northern climates. Among the newest of these are the Radiant flowering crabapple, a small, compact tree ideally suited for landscape purposes and attractive for its flowers and fruits, the Princess chrysanthemum, old rose in color with deeply forked gold petals and the Minnehaha chrysanthemum, a medium-tall bushy plant with salmon-colored double flowers. Among recent introductions proving especially popular is a low raspberry pink cushion-type mum, Minnpink, Widmer said.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 26, 1958

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* For release: 11 a.m. *
* Friday, March 28 *
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NO DEFINITE RULES FOR WATERING PLANTS--Horticulture Short Course

No definite rule can be given for watering ornamentals at specific times such as every day or two or three times a week, home gardeners attending the University of Minnesota's annual horticulture short course on the St. Paul campus learned today.

Speaking to the group on "Water - its Use and Abuse," L. C. Snyder, head of the University's horticulture department, cautioned gardeners not to water plants until they actually need water. Then saturate the ground deep enough so the roots of the plants will get water, he added.

The plant itself should be used as a guide in determining when to water, according to Snyder. Knowledge of different types of plants and of the role water plays in the life of a plant will help gardeners know when to water. For example, the amount of water needed will be influenced by the rate of transpiration or water evaporation, which varies according to humidity, temperature, light and wind, as well as such plant characteristics as thinness of leaves and hairs on leaves. The intake of water is also influenced by the depth and penetration of the roots of a plant, the type of soil and the amount of rainfall.

Aster yellows, a common disease affecting a large number of annual flowering plants and very prevalent last year, causes plants to turn yellow and stop flowering, H. G. Johnson, extension plant pathologist at the University of Minnesota, told the audience. The only way to prevent aster yellows, he said, is to control the six-spotted leafhopper with DDT or malathion.

The horticulture short course concludes this (Friday) afternoon.

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B-1928-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

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* For release *
* March 31 *
* * * * * * * *

SALES TAX LIKELY TO INCREASE FARM TAX BURDEN IN MINNESOTA

A sales tax in Minnesota would likely put a heavier portion of the total tax burden on farmers, according to Philip M. Raup, agricultural economist at the University of Minnesota.

His conclusion is based on a study he made while a member of Governor Freeman's tax study commission last year. He reports on this study in the current issue of "Minnesota Farm Business Notes," a University Agricultural Extension Service publication.

The sales tax has recently been considered as a possible method of increasing state tax revenue in Minnesota. It also has been proposed as a way of relieving the burden on the property tax. But in either case, Raup says, a sales tax would shift a larger portion of the tax burden to farmers.

He explains that the income tax falls relatively lightly on the farmer. A sales tax, however, is based on volume of purchases. Since farmers are heavy buyers of household goods and farm supplies, both for the farm business and for the home, a sales tax hits them harder than non-farmers.

Both Illinois and Iowa have $2\frac{1}{2}$ percent sales taxes, although the two states handle them somewhat differently. A recent report from the University of Illinois shows that sales taxes on farm household items and farm machinery in that state averaged about 50 cents per acre, or roughly \$24 per farm person annually. This was higher than the sales tax burden on the non-farm population.

Besides, the Illinois report did not include all farm purchases; it omitted building equipment, fencing, well supplies and other items. Therefore, the actual sales tax burden per farm person in Illinois is even higher than these figures show.

In Iowa, 1954 sales tax collections averaged \$28 per person for farm families and \$18 per person for non-farm families.

(more)

add 1 sales tax

Suppose an additional \$10 million were to be raised by taxes in Minnesota, If it had been raised by the income tax in 1955, Raup figures that farmers would have paid about \$350,000 or $3\frac{1}{2}$ percent of the total increase.

But if a sales tax were used and if the burden per person were similar to that reported for Illinois, Minnesota farmers would have paid about 19 percent of the increase, or about \$1.9 million of the \$10 million total.

Basing the calculation on Iowa per-person figures, Raup says Minnesota farmers would have paid about 25 percent of the total, or about \$2.47 million.

While exact measurement isn't possible, Raup figures that using a $2\frac{1}{2}$ percent sales tax in Minnesota would put from three to five times as large a percent of the new tax burden on farmers as would be the case if the same amount of revenue were to be raised by the existing income tax.

There is also evidence that farmers would be no better off if the sales tax were used to replace the personal property tax. In fact, they could be worse off in this case, according to Raup. To replace the personal property tax would probably require at least a 2 percent sales tax, and perhaps even a $2\frac{1}{2}$ percent tax.

In 1954, about half of the personal property tax levies in Minnesota were in Hennepin, Ramsey and St. Louis counties--counties that also contain about half of the state's population. This means the personal property tax at present is distributed throughout Minnesota in about the same proportion as the state population.

But Raup says it's reasonable to assume that a $2\frac{1}{2}$ percent sales tax in Minnesota would have results similar to Iowa, where the tax per person is 50 percent higher on farmers than on non-farmers. If that were the case here, adopting a sales tax to replace the personal property tax would shift a sizeable portion of the tax burden from non-farm to farm people.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Immediate release

HOW TO KEEP EASTER FLOWERS BLOOMING LONGER

If you're planning to buy flowers to decorate your Easter table, you'll find plenty of high-quality cut flowers as well as potted plants.

The supply of cut flowers, reduced during winter because of severe freezes in Florida, is now back to normal, according to R. E. Widmer, floriculturist at the University of Minnesota. Tulips, daffodils, Dutch iris, hyacinths, carnations, stock, snapdragons, sweet peas and roses are particularly abundant. There is also a large supply of potted plants, including many Easter lilies of superior quality.

Easter bouquets of cut flowers will last longer, Widmer says, if cut flower "food" is placed in the water or if the water is changed daily. Be sure to keep the water level up in the containers so all stems are actually in water. Keep the flowers away from drafts and radiators and in a cool room at night.

If iris wilt prematurely, puncture the thickened green stems immediately below the flower with a hat pin.

If cut roses are not in water when delivered, placing the stems in warm water (100°F.) upon delivery and then letting the water cool naturally will force air bubbles out of the stems and allow the flowers to get all the water necessary to keep them fresh. This technique is particularly helpful in reviving roses which may wilt or which bend just below the flower.

To keep Easter plants blooming as long as possible, the University floriculturist gives these tips:

- Place the plants in bright light, preferably sunlight.
- Keep the soil moist but not bog-like.
- Keep the plants at cool night temperatures, approximately 60°F.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

* * * * * * *
* For release *
* April 1 *
* * * * * * *

NEW FLAX VARIETY RELEASED

Release of Arny flax, a new variety, was announced today by W. M. Myers, head of the department of agronomy and plant genetics at the University of Minnesota.

The variety was developed by the University in cooperation with the U. S. Department of Agriculture. It was named after the late A. C. Arny, long-time agronomist and flax specialist at the University.

J. O. Culbertson and Verne Comstock, U. S. Department of Agriculture agronomists, describe Arny flax as having blue flowers and brown seeds. It is about four days later in maturity than Marine and about a day later than B5128. Arny has given good yields in widespread tests and has good lodging resistance. The variety is slightly taller than the varieties recommended in Minnesota - Marine, B5128, Redwood and Bolley - and is similar in test weight.

In oil quality, the variety is slightly superior to B5128 and Redwood, while in oil content it is similar to the recommended varieties.

Arny is immune to prevalent races of flax rust and has a type of resistance not contained in the varieties Redwood and B5128.

Arny is quite superior to the recommended varieties in wilt resistance and is as resistant to pasmo as Marine.

According to Carl Borgeson, University of Minnesota seed specialist, about 500 bushels of seed have been allotted to approved growers through county seed distribution committees for 1958 planting in Minnesota. Other states that have distributed seed to their growers are North and South Dakota and Wisconsin.

Seed produced this year will be available to flax producers for 1959 plantings.

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B-1931-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

* * * * * * * * *
* For release: 6 p.m. *
* Saturday, March 29 *
* * * * * * * * *

MARTIN COUNTY YOUTH RECEIVES LEADERSHIP AWARD

Allen Kahler, Sherburn, has been named Minnesota Rural Youth Member of the Year and winner of the WNAX leadership award.

Kahler received the award this (Saturday) evening at a special dinner during the State Rural Youth and Young Men's and Women's conference and short course on the University of Minnesota's St. Paul campus. His award will be an all-expense trip to the Western Regional conference of Rural Youth at the Southern School of Agriculture and Experiment station, Waseca, May 16-18.

The WNAX leadership award is made each year to the Rural Youth member who best exemplifies local club leadership and has been of greatest service to his county group. It is sponsored by Radio Station WNAX, Yankton, South Dakota, in cooperation with the Agricultural Extension services of Minnesota, South Dakota, Nebraska, Iowa and North Dakota. Each of the five states selects an award winner.

Kahler has been an active member of the Martin county Young Men's and Women's organization and has served as its president.

Honorable mention in the leadership competition goes to Garnett Deters, Eitzen, Houston county; Richard Fox, Rosemount, Dakota county; Glenn Johnsen, Sleepy Eye, Brown county; Helen Vitek, Rochester, Olmsted county; and Darlene Pomenke, Odessa, Big Stone county.

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B-1932-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to Lincoln County Agent

DAHL TO SPEAK
ON CREDIT AT
LOCAL MEETING

Credit--particularly for consumers like those in Lincoln county--will be the main topic for a meeting scheduled for (date, place.)

Speaking on this topic will be Reynold Dahl, agricultural economist at the University of Minnesota. He will analyze the key points in costs of consumer credit and will demonstrate ways to calculate the accurate costs of credit.

Dahl will also discuss sources of credit available to average consumers, and the advantages and disadvantages of these different sources.

A native of Willmar, Dahl has been an agricultural economics staff member at the University since September, 1950.

He received his B. S. degree from the University in 1949, his M. S. in 1950 and his Ph. D. in 1954. His work is mainly in agricultural finance and agricultural marketing. He is author of a 1955 University publication on "Agricultural Production Loans of Minnesota County Banks" and wrote a 1957 bulletin on "Operating Loans of the Farmers Home Administration in Minnesota."

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to home town papers
For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Jeannine Anne Engler, Randolph, Minnesota, a Freshman at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Secretary of the University Agricultural Extension Club.

Miss Engler is a daughter of Mr. and Mrs. Wesley Engler, Randolph, Minnesota.

She has taken up duties in her new position during the winter quarter at the University.

The University Agricultural Extension Club gives students who are members of 4-H club membership while attending the College of Agriculture.

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 Engler will hold her present position in the organization until it holds its next election during the fall, 1958 quarter. She is also active in professional and other campus groups.

1. Dakota County Tribune
Farmington, Minn
2. Northfield News
" , Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to home town papers
For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

John A. Houle, Brainerd, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry, and Home Economics, has been named President of the Alpha Gamma Rho Fraternity.

Houle is a son of Mr. and Mrs. Philip Houle, Brainerd, Minnesota.

He has taken up duties in his new position during the winter quarter at the University.

Alpha Gamma Rho is a professional agricultural fraternity.

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.

Houle will hold his present position in the organization until it holds its next election during the winter, 1959 quarter. He is also a member of toastmasters club.

1. Brainerd Daily Dispatch
Brainerd, Minn.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to home town papers
For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Kenneth A. Jensen, Clinton, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Secretary of the Agricultural Education Club.

Jenson is a son of Mrs. Florence Jensen, Clinton, Minnesota.

He has taken up duties in his new position during the fall quarter at the University.

The Agricultural Education Club is designed to familiarize future agricultural teachers with the responsibilities and problems of the agricultural education profession.

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.

Jenson will hold his present position in the organization until it holds its next election during the fall, 1958 quarter.

1. Clinton Advocate
Clinton, Minn.
2. Ortonville Independent
" , Minn.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to home town papers
For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Harold Mindermann, Frazea, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been elected President of the Alpha Zeta Fraternity, and Vice President of the Agricultural Education Club.

Mindermann is a son of Mr. and Mrs. Clarence Mindermann, Frazea, Minnesota.

He has taken up duties in his new positions during the winter quarter at the University.

Alpha Zeta is an honorary agriculture fraternity which recognizes superior scholastic achievement and discusses critical problems of the agricultural profession.

The Agricultural Education club is designed to familiarize future agricultural teachers with the responsibilities and problems of the agricultural education profession.

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. In addition Mr. Mindermann is organising chairman for Delta Theta Sigma, a new social fraternity.

1. Fergus Falls Daily Journal
" " , Minnesota

2. Detroit Lakes Tribune
" " , Minn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to home town papers
For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Deloris Marie Olson, Hutchinson, Minnesota, a Junior at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named President of the University Agricultural Extension Club.

Miss Olson is a daughter of Mr. and Mrs. Oswald J. Olson, Hutchinson, Minnesota. She has taken up duties in her new position during the winter quarter at the University.

The University Agricultural Extension Club gives students who are members of 4-H club membership while attending the College of Agriculture.

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 Olson will hold her present position in the organization until it holds its next election during the fall, 1958 quarter. She is also active in the Lutheran Student Association, and the Home Economics Association.

1. The Hutchinson Leader
Hutchinson, Minn

University Farm and Home News
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LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Gerald Strandlund, Mora, Minnesota, a Freshman at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Treasurer of the Dairy Science Club.

Strandlund is a son of Mr. and Mrs. Andy Strandlund, Mora, Minnesota.

He has taken up duties in his new position during the winter quarter at the University.

The Dairy Science Club promotes professional interests of its members through a program of demonstration discussions and speakers.

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.

Strandlund will hold his present position in the organization until it holds its next election during the spring, 1958 quarter.

*I. Kanabec County Times
Mora, Minnesota*

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 27, 1958

Special to home town papers
For immediate release

LOCAL STUDENT NAMED OFFICER OF UNIVERSITY ORGANIZATION

Larry A. Tande, Madelia, Minnesota, a Sophomore at the University of Minnesota's College of Agriculture, Forestry and Home Economics, has been named Treasurer of the University Agricultural Extension Club.

Tande is a son of Mr. and Mrs. Leslie M. Tande, Madelia, Minnesota.

He has taken up duties in his new position during the winter quarter at the University.

The University Agricultural Extension Club gives students who are members of 4-H club membership while attending the College of Agriculture.

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.

Tande will hold his present position in the organization until it holds its next election during the fall, 1958 quarter.

*1. Madelia Times Messenger
" , Minnesota*

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 28, 1958

SPECIAL TO WEEKLIES

For release week
*March 31 *

STUDENT FORESTERS TO CLOQUET

A group of 48 students from the University of Minnesota's School of Forestry began training this week at the 3500-acre Cloquet Forest Research center. This year's session is under the direction of Bruce A. Brown, assistant professor of and forestry, /is the thirty-fifth consecutive class to receive forestry instruction at Cloquet. This two and one-half month session is required of all forestry and forestry-wildlife management students before they graduate.

The program will include use of aerial photographs in forest management, wildlife census methods, field problems in game management, forest cultural practices such as marking, thinning and planting, and an evaluation of disease and insect problems as related to forestry.

The forestry seniors will visit forest product industries in the Cloquet-Duluth area and observe forest management practices on private, state and federal forest lands in the northern part of the state. Frequent talks by practicing foresters from industry and government will also be included.

The group this year will be the first to use a new mess hall which has taken shape under the guidance of T. Schantz-Hansen, director of the Forest Research center. Assisting in the instruction will be faculty members from other departments of the Institute of Agriculture, Paul J. St. Amant of the U. S. Forest Service and Dixon Sandberg of Kimberly-Clark of Minnesota, Inc.

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Special to Yellow Medicine County Agent

Mar 1 1958

ASSISTANT AGENT
NAMED FOR 1958

Cecil E. Hall, Atwater, Minnesota, has been named assistant agricultural agent for Yellow Medicine county.

Beginning April 1, he will assist County Agent David S. Johnson in the overall extension program.

Hall was raised on a 225-acre farm in Kandiyohi county, and for 10 years was an active 4-H club member. He had projects in beef, sheep, farm mechanics and gardening.

From 1951-53, he served in the U. S. Army.

He entered the University of Minnesota's College of Agriculture, Forestry and Home Economics in 1953 and received his B. S. December 19, 1957. While at the University, he was active in the Dairy Science Club, the Block and Bridle club and other organizations. He will complete one quarter of graduate work in March, 1958.

He worked part-time for the University, on inspection of seed purification samples, cleaning and grading inbred and single-cross corn and in filling seed orders.

Hall is married and has 2 children.

4444

Harold B. Swanson
Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

SOYBEANS--Minnesota's
No. 2 Cash Crop

Soybeans - often called the miracle crop of the twentieth century - today account for perhaps the most spectacular development in Minnesota agriculture, the growth of a new farm industry. Twenty-five years ago we planted less than 2,000 acres of soybeans for beans in Minnesota. In 1957 we have over 2,000,000 acres--a thousandfold increase! Today in Minnesota's centennial year we rank as the nation's third highest soybean-producing state. And soybeans are our No. 2 cash grain crop.

Soybeans are an old crop. As far back as 2838 B.C. Chinese Emperor Shang-Nung described over 300 medical remedies from this golden bean. Native to southeastern Asia, soybeans have been long known for their unusual protein and oil properties.

Early missionaries sent beans back to Europe. Soybeans were planted in Paris as early as 1740. The climate, however, held down production in Europe, and today the European soybean production centers in Russia, Austria, Yugoslavia, Hungary, Romania, and Bulgaria.

Soybeans were first mentioned in the U. S. in 1804. But it was not until the last years of the nineteenth century that the U. S. Department of Agriculture developed new varieties suitable to America. At first soybeans were most widely grown in the south, but by 1924 the cornbelt had become the leading producing area. Thus a new industry came to the midwest, an industry destined to make its force felt in the Gopher State a quarter century later.

University of Minnesota researchers were interested in soybeans as far back as 1893. Old record books show that the first variety tested was entered merely as "Soja bean" and was called Minn. No. 1. Such varieties as "Black", "Green", and "Late Yellow" soon were being tested. University crop men apparently obtained these and other varieties at the 1892 World Fair (Columbian Exposition). Since then 321 different seed lots or varieties have been entered in the accession book and have been tested by the Experiment Station. This does not count the hundreds of strains from the breeding program that are tested in a preliminary way.

In 1909 the University entered on its books a name - Habaro - that was destined to be an important one in soybean history for years. University scientists developed Habaro from a U. S. Department of Agriculture introduction brought to Minnesota for testing.

John Evans, a member of the board of directors of the American Soybean Association who still farms near Montevideo, was one of Minnesota's pioneer soybean raisers. He began raising soybeans in 1917. Many other farmers, too, were experimenting with soybeans at that time. Evans recalls those early years in these words:

"I raised soybeans for about five years and then gave them up. We raised them for silage and seed. We used mostly the Wisconsin Blacks and later the Chestnuts. I can still hear the beans cracking as they went through the concaves of the large threshing machines which could not be slowed down enough."

"H. H. Kalme of Montevideo, who farmed in Lac qui Parle County, raised Chestnut soybeans for many years, and then due to difficulties in threshing and a decline in interest dropped them."

"John A. Nelson, Maynard, also grew soybeans about the same time and then discontinued them. Nelson was a cattle feeder in that early period and recalls buying soybean oilmeal originating from Shantung, China, for \$28.00 per ton."

"1925 records of the Minnesota Crop Improvement Association show that Emil Wagner of Ada raised 300 bushels of Wisconsin Black soybeans for seed. Hebaro, Minsoy, Ito San, Wisconsin Black, Manchu, and Chestnut were common varieties in the early twenties. About 60 growers were raising soybeans for certified seed in 1925," Evans concludes.

Another pioneer soybean enthusiast is R. E. "Bob" Hodgeon of the University's Southern Experiment Station at Waseca. He reports, too, that there was Hebaro soybean seed in the granary when he came to Waseca in 1919. The Waseca station has grown and worked with soybeans ever since.

During the drought years of the early thirties "Bob" advocated growing soybeans for hay. In 1933 he pointed out that by growing soybeans, "Minnesota livestock feeders can have, with almost no cash expense, a protein supplement equal to oilmeal."

A year later, still commenting on the advantages of soybeans, "Bob" pointed out that several mills were now buying beans for pressing.

In 1937 he said:

"There seems to be a big revival of interest in soybeans as a field crop for Southern Minnesota. This isn't a "revival" for me, because I have had that kind of religion for "lo, these many years." I believe in soybeans because of their good effect upon the soil. I believe in soybean hay (where alfalfa kills out). I believe in soybeans by the bundle for all classes of cattle. I believe in ground soybeans for dairy cows. I believe in soybean straw for sheep or horses, and even believe in soybean oil meal @ (when the price is lower than flax or cottonseed meal) as a protein supplement. I believe we can profitably grow a larger acreage of soybeans in Southern Minnesota - but who cares what I believe?"

People believed "Bob" and other pioneers, too, because soon the shift from hay to seed and grain was to pick up speed. Behind this the rapid expansion were three things: (1) wartime and postwar needs for domestic oils, (2) greatly

expanded use of soybean oilmeal in livestock and poultry feeds, and (3) availability of new, improved varieties. These three factors, plus the development of the all-purpose combine, worked together to bring Minnesota to its leading position today.

Improved Varieties

Let's look first to varieties. The University, through the efforts of H. K. Hayes, A. C. Arny, and "Bob" Hodgson, tested varieties for years and selected the best for further development. Farmers and seed companies had also been doing some selection. For awhile, however, the varieties selected didn't bring a big increase in growing.

An event that took place in 1936 in Illinois proved to be a most important one for Minnesota. In that year the U. S. Regional Soybean Laboratory was set up at Urbana. Now varietal improvement was intensified and coordinated over the whole north central area.

the more popular varieties in Minnesota included During the late thirties/Mukden, Mandarin, Richland, Mineoy, Habero, and several selections from Manchu. Mineoy and Habero were developed by the University.

It was during the war years, however, that the rapid expansion of the soybean industry got underway. These same varieties remained important and new selections came on the scene. They included Wisconsin Manchu 3 and 606, Earlyana, and Ottawa Mandarin, Pridesoy (a farmer's selection from central Minnesota) and Flambeau, developed from a Russian variety.

After the war hybridization took the spotlight in the soybean breeding picture in Minnesota. Today most of our varieties have been selected from planned crosses made and developed by agricultural experiment stations in our north central states and in Canada. The first important hybrid selected this way for the cornbelt was Lincoln selected at the University of Illinois during the war. Lincoln was too late for Minnesota but was used in crosses that produced well-adapted varieties now widely grown in Minnesota.

Minnesota's breeding work today is aimed at developing higher oil content, earlier maturity (especially for central Minnesota and the Red River Valley),

better standing ability and less shattering. Leading this work at the University since 1946 has been agronomist Jean Lambert.

The Minnesota breeding work is coordinated with that of several other universities in the area. Thus Minnesota farmers benefit from the scientific achievements of many researchers.

Actually the development of varieties for Minnesota by hybridization has gone through two cycles since the war. The first brought out such varieties as Blackhawk, Capitol, and Hawkeye.

The second cycle during the past five years has seen such new varieties as Chippewa, Renville (a Minnesota developed variety), Grant, Norchief, and Harcoey come on the scene.

Now many of these varieties developed by hybridization and others from nearby states are being used in further crosses that show even greater promise for better things for Minnesota farmers. In addition the University is trying materials such as a very early Swedish variety and a German variety in new crosses.

As these new varieties are developed and become established the soybean growing will extend further and further north, the experts believe.

Today's 1963 lineup of varieties recommended by the University of Minnesota Agricultural Experiment Station includes Acme, Blackhawk, Capitol, Chippewa, Flambou, Grant, Harcoey, Norchief, Ottawa, Mandarin, and Renville.

Expanding Market

Markets and farm production in Minnesota naturally had to go together. Even though exports were large, Minnesota farmers had only a small market until crushing plants could be developed in the state. At the same time processors needed beans with higher oil content if they were to expand in Minnesota. For years, as a result, the soybean processing industry had centered - as it still is today - in Illinois, especially around Decatur.

Behind the establishment of the processing industry in the state were many men. They included James Hayward and the late F. E. Benson of Archer-Daniels-Midland; Whitney Eastman of General Mills; Riley Lewis; Joseph Oberhauser, Milwaukee Road Agricultural agent; and many others.

In 1937 several of these pioneers began a series of educational meetings lasting through the rest of the thirties to tell the story of soybeans to the state and to encourage growing beans.

"Joe" Oberhauser set up /the meetings--nearly 100 over the years--working with county agents and other local leaders. Oberhauser gave details on how to raise soybeans often with the help of Ralph Crim, extension agronomist at the University of Minnesota, and "Bob" Hodgeon.

Telling how to raise soybeans, however, was not enough so F. E. Benson of Archer-Daniels-Midland discussed markets and more or less guaranteed Minnesota farmers a market for their beans. This problem of a market had long been a stumbling block to expansion. Another ADM man, Fred M. Haffner (now vice president of General Mills) discussed soybeans as a feed. An added attraction was an exhibit provided by Ford Motor Co. on commercial uses of soybeans including a steering wheel and many other auto parts.

At this same time the Minneapolis and St. Louis Railroad sent an exhibit train, featuring soybeans, to many areas of the state.

These educational meetings and the guaranteed markets proved to be the turning point in soybean history in Minnesota. Industry soon added new outlets for the beans, and Minnesota had a new farm crop.

Before 1939 Archer-Daniels-Midland had crushed soybeans in its linseed oil plant in Minneapolis on a sporadic basis. Then in 1939, in spite of warnings that the Mankato area couldn't support a soybean plant, Riley Lewis, with the help of several Mankato businessmen, built the first soybean processing plant in Minnesota. This plant is now operated by Honey-mead.

As the soybean crop increased and better varieties became available other processors became interested. In 1944 the Consumers Soybean Mills was built at Lakeville and Hubbard Milling Co. constructed a plant at Preston now called Preston Soya Mills, Inc.

Honeyland at Mankato and Cargill at Savage followed with plants before 1950. In 1950 the greatest expansion in history took place with plants at Glencoe (now out of business), Blooming Prairie (Farmers' Coop Elevator Association), and Mankato (Archer-Daniels-Midland) going up.

Since then the industry has continued to grow with new processing plants cash providing even more markets for Minnesota's second largest/crop - soybeans. Included in this group are the Tri-county Co-op Soybean Association at Dawson and finally the newly-constructed facilities of the Halstad Elevator Co., Inc. completed late in 1957. Thus with facilities in the Red River Valley near the Canadian border, soybeans have moved to the northernmost parts of the state. Today, eight processing plants producing soybean oil and soybean meal plus many other types of products provide Minnesota with a large local market for their soybeans.

Minnesota, too, may soon be able to expand its foreign market for soybeans with the completion of the St. Lawrence seaway, and the expansion of the Duluth-Superior harbor. Today soybeans for export are shipped by barge to New Orleans for transfer to ocean-going vessels. With facilities for ocean-going vessels at Duluth, the market can be expanded and costs cut.

Thus the growth of Minnesota's newest crop - soybeans - has been a notable example of the joint efforts of farmers, industry, and scientists in industry and in our Land Grant Colleges.

Harold B. Swanson
Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota

Crops--Triumph of Plant Breeders

The king no longer reigns. Minnesota no longer is the bread basket of the nation. Yet wheat, for nearly three quarters of a century our most important crop, still makes its impact felt on the agriculture and business of Minnesota. ^{along with other grain crops, Much} Industry still revolves around it. Labor still depends on its products and transportation for its livelihood, and many farmers, especially in the Red River Valley, regard it as their number one crop.

The king's story has run the gamut of human emotions - from frustration to hope and achievement. The story revolves around adversity, depression, hard work, the breaking of virgin sod, and the battle against disease--around the development of huge new industry, milling, around good times, bumper crops, and glorious satisfaction.

When cultivation began in Minnesota, spring wheat was the main crop. This gave impetus to the creation of the first of Minnesota's food processing industries, milling.

Enlisted men at Fort Snelling were raising wheat in 1820. A grist mill at St. Anthony Falls on the Mississippi--in what is now the heart of Minneapolis--produced the first flour for the army.

Richard Rogers built the first private mill to grind flour at Minneapolis. In fact in the 1850's, eastern buyers refused to believe flour from the Minnesota territory was genuine. Later in 1858 one of the first shipments of wheat was made to Boston at a cost of \$2.25 per barrel.

As the early pioneers settled along the Mississippi and Minnesota, they depended on wheat for cash income. Wheat was the only product they could raise that could be shipped East. By 1866 the state was producing over 6,000,000 bushels of wheat on 450,000 acres of land. By 1870 over a million acres or two-thirds of our cultivated acres were in this crop and by 1880 over three million acres.

At first our wheat was shipped in barges down the Mississippi to New Orleans. Later railroads moved both flour and grain to distant markets. As the milling industry grew, Minneapolis became the world's largest milling city, and farmers had a ready outlet for their crop. By 1870, there were 216 flour mills, powered by water in operation along Minnesota's numerous streams and rivers. By 1876, 20 mills were operating in Minneapolis alone. It was in those days that the men who were to make Minneapolis famous as a milling center came to the front--names such as Loring, Dunwoody, Christian, Crosby, Pillsbury, Barber, and Washburn.

Minnesota, however, was spring wheat state, and spring wheat wasn't held in high repute in those days. It was inferior to winter wheat in color and clearness, making its market demand light.

That situation was changed, however, in the early 1870's when Edmund C. La Croix, a French immigrant, built a "middlings purifier" for a Minneapolis mill. This purifier made clear white flour and revolutionized spring wheat milling, assuring a real market for Minnesota's most important crop. About the same time millstones were replaced by rollers in milling wheat, another move toward the modern flour industry.

Thus Minneapolis became the heart of the nation's and world's milling industry. Milling continued to expand until 1916. Its decline started in 1917. Even so Minneapolis today ranks as the nation's third largest milling center.

With a ready market it was only natural that wheat production should expand in Minnesota. There were the usual "ups" and "downs", of course. Pioneers remember the great grasshopper invasions of the seventies. In June, 1873, riding on a fresh breeze from the southwest, Rocky Mountain locusts--as they were known--swarmed over the 13 southwestern Minnesota counties, reducing wheat yields to 6 bushels per acre in that area.

In 1874 the grasshoppers' toll exceeded 2,500,000 bushels of wheat. And in 1875 the loss was nearly as great. The Legislature and the Governor were deeply

concerned. Relief measures were passed. April 26, 1877 was set as a day of prayer and the state joined in as the plague threatened the very existence of Minnesota farmers. But there was no immediate relief. Snowfall in April and heavy rain in June gave the wheat a head start on the hoppers. Then miraculously in July, 1877, hordes of the pest rose in the sky and left the state entirely. The plague was over.

By 1875, too, the tall ungainly elevators were springing up all over the state. Now farmers need not construct huge granaries on their own farms but could depend more upon local storage. Strangely enough elevators received their name from the endless leather belt armed with metallic cups which could raise or "elevate" the wheat to the storage bins. Thus the name elevator.

Production of wheat grew steadily until by 1891 over 4,000,000 acres were planted and over 72,000,000 bushels harvested. In that year, too, a new average yield record was set, 18 bushels per acre. Four years later yields averaged 19 bushels, and in 1896 Minnesota raised its largest wheat crop on record--106,000,000 bushels on over 6,000,000 acres. This was followed by a rapid drop in acreage until about 1906. For the next ten years acreage remained fairly constant just over the 3,000,000-acre mark.

Since World War I, acreage has been declining. Finally in 1950, for the first time since 1867, wheat acreage fell below 1,000,000 acres. It fell still further so it's now below the three-quarter million mark and is largely concentrated in the Red River Valley. Polk, Marshall, Kittson, and Clay Counties today lead all others in acreage, production, and yields. As wheat acreage dropped, oats acreage increased, rapidly becoming Minnesota's number one small grain.

To talk about wheat and not about the researchers who have waged the never-ending war against disease including the "red menace" of the Northwest--dread stem rust--would mean overlooking one of the greatest scientific stories of our modern day agriculture.

Wheat farmers indeed had other problems than grasshoppers. Rust was already taking a heavy toll. This toll in 1898 prompted G. S. Pillsbury and ~~S~~ S. M. Owen,

editor, Farm Stock and Home, to call on the University of Minnesota to develop a new and improved wheat that would resist rust.

Crop improvement work started in earnest when W. M. Hays joined the University staff in 1888. Hays soon became a real pioneer and an inspirational leader in a new and a largely unexplored field--plant breeding and crop improvement.

Hays brought to the plant breeding world a novel theory that there were "Shakespeares" among plants or plants with genius strains. Working on this theory and selecting these "Shakespeares," he developed wheat varieties we still remember today.

By 1890 he was testing promising wheat varieties in six parts of the state. These tests showed that Haynes' Bluestem, Snoball, Scotch Fife, and Powers Fife were the best yielders.

To find a better wheat, Hays and D. N. Harper gathered hundreds of varieties from other states and from Russia, Hungary, and other foreign nations. Consuls in foreign nations were alerted to the needs of the Northwest and gathered samples for Hays' testing operations.

All samples were first planted at Warren in Marshall County in 1890. The best of these were collected and planted at Glynden in 1891. In 1892 Hays moved to North Dakota State College where he continued his wheat breeding for two years at Fargo and then returned to Minnesota. All during these years, he was constantly eliminating poorer varieties and adding more promising ones to his experiments.

From these experiments two famous Minnesota wheats were developed. The first, Minnesota No. 163, (Improved Fife), was started in 1892. It was released to farmers in 1899 after yielding 26.2 bushels per acre or 21 percent more than its parent, Scotch Fife.

Minnesota No. 169 (Haynes (Haynes Bluestem) was first developed by a North Dakota farmer, L. N. Haynes, and then improved and released to farmers in 1901 by the University.

While plant breeders were seeking better strains of wheat, another scientist was pioneering in the field of plant disease. That man was E. M. Freeman who founded and directed the nation's first plant pathology division at the University of Minnesota and wrote one of the first books on the control of plant diseases.

Soon after Freeman's pioneering efforts in plant disease work there began an all-out cooperative effort by plant scientists, disease experts, and cereal chemists to develop new, better varieties of grain. Better yields and greater disease resistance became common terms to describe the outpouring of these combined efforts.

Behind this modern miracle of plant science stands the work of many men in many states. At the University of Minnesota this distinguished list includes such plant experts as plant breeder H. K. Hayes, chief of the agronomy division; cereal chemist C. H. Bailey, ^{Institute} ~~Department~~ ^{2nd later} Emeritus of the University's ~~Department~~ of Agriculture; plant disease experts E. M. Freeman and E. C. Stakman, world-famous for his rust work; and ^{pathology} John Parker, Olaf Aamodt, and E. R. Ausonne of the U. S. Department of Agriculture. North Dakota's L. R. Waldron and H. L. Belley and South Dakota's Edgar McFadden and A. N. Hume paralleled their work in the Dakotas.

All these men brought scientific research to the aid of the farmer. Instead of trying to locate the best varieties already available, they set out to tailor-make new varieties by hybridizing and crossing.

To restrict the story of wheat improvement in the Northwest to Minnesota and the Dakotas would do real injustice to our neighbors to the north, Canada. By 1912, Canadian scientists had developed Marquis wheat which swept the country and pushed aside Minn. No. 163 and 169. For a while it seemed to have demented the dread stem rust to the position of a minor disease. Actually, however, Marquis' early ripening habits enabled it to escape stem rust for several years.

In 1916, a terrible rust epidemic hit the country. Marquis, as well as the older varieties, was ruined. Wheat was so hard hit by both stem rust and head blight that thousands of farmers quit growing wheat or shifted to growing durums. Even so Marquis did remain a leading variety until the 'thirties.

Epidemics only stepped up the tempo of the fight against stem rust! North Dakotans had already developed Kota whose promise was soon destroyed by another of wheat's many shifty enemies, ergum orange leaf rust.

In 1914 Minnesota plant scientists began work on a cross of Marquis and Lumille, a durum resistant to black stem rust. Finally, late in the 1920's, the result, Marquillo, was distributed to farmers. It, like so many other wheats, had great promise, but its flour color was too yellow to meet market demands.

At about the same time, L. R. Waldron of North Dakota Agricultural College was experimenting with a cross of Marquis and Kota. The result in 1926 was the popular Ceres. Until 1935 Ceres was a highly successful and popular variety. Then Race 56 of black stem rust appeared and Ceres was largely eliminated.

Minnesota scientists Hayes, Stakman, Ausmus, and their colleagues had already developed Thatcher. It withstood the onslaught of rust that year, made yields of upwards of 30 bushels per acre, of 55-pound to 60-pound wheat, while Ceres yields were down to eight or ten bushels per acre of light, chaffy wheat. Again in 1937 Thatcher stood its ground against a rust epidemic. Thus it had its baptism under fire and came through almost unscathed to attain unprecedented popularity.

Yet there was a flaw in its armour. That flaw was susceptibility to leaf rust and scab which by the early 'forties had pushed most of it out of Eastern North and South Dakota and Minnesota.

Wheat breeders were well aware of this Thatcher flaw and were developing varieties resistant to leaf rust as well as the strains of stem rust that were causing so much damage. There was a wheat, Rival, ready to take over the acreage vacated by Thatcher, and it soon did take it over. That was developed by ~~L. R.~~^{It} Waldron of North Dakota Agricultural College. It in turn in many communities is giving way to another Waldron variety, Mida. What these plant breeders achieved, however, wouldn't have been possible had a South Dakotan not laid a foundation for them. He was agronomist-farmer Edgar S. McFadden who in 1916, the year of one of the nation's worst black stem rust epidemics, made what is called a "wide cross" between Yaretslov Emmer and Marquis

spring wheat. Many plant scientists did not believe that such a cross was possible. He worked for the U. S. Department of Agriculture at Highmore. His experimental work was interrupted by World War I and then again when the Highmore station was closed.

Other less staunch men would have been discouraged and quit plant breeding, not McFadden. He returned to the home farm in Webster, South Dakota, bringing his precious seeds with him. He farmed for a living but was burned out by drought in 1921, haled out in 1922, and rusted out in 1923. Through all these he continued experimenting with his so-called "improbable" cross.

Finally in 1928 he was sure that his new varieties "Hope" and H-44 had the rust resistance so long sought by Northwest farmers. He distributed 25 kernel lots of H-44 to Canada and of Hope to North Dakota State College and the University of Minnesota. Before long, 50 agricultural experiment stations were using Hope and H-44 to establish new varieties resistant to prevalent rust races.

Hope in itself was not a good wheat but as a parent for other rust resistant varieties it is without equal today. For years many leading hard spring bread wheats had Hope as one of their parents. These included Waldron's Rival and Midas; Canadian varieties, Regent and Renown, and Pilet, a variety developed by the U. S. Department of Agriculture.

In 1949 the University released another new variety which was more resistant to the common types of leaf rust of the day. Lee soon became Minnesota's most popular spring wheat variety.

However, new trouble loomed. Race 15B of stem rust was damaging most wheat varieties and Lee was susceptible. It still does remain on the recommended lists of Minnesota wheats along with Selkirk. Selkirk today is the most widely grown wheat variety and is fairly resistant to the disease-race 15B.

Meanwhile University researchers are devoting much of their efforts to breeding for resistance to 15B with some promising crosses in the works. Many of these involve Kenya Farmer, a variety imported from Kenya, which is resistant to 15B.

It does, however, have other undesirable characteristics which make it difficult to breed and develop it in crosses.

Thus as new races of rusts come on the wheat scene, plant breeders have to be constantly alert to develop varieties suitable to Minnesota conditions and needs.

Other Small Grains

To tell the story of oats, barley, flax, and other small grains is largely to repeat the story of wheat. Names of other scientists who contributed greatly to crop improvement could be added to those we have already mentioned.

The development of wilt-resistant Bison and Buds flax through the persistent efforts of Dr. H. L. Belley and Prof. O. A. Hegeness at North Dakota Agricultural College is only one of the many examples of service rendered by scientists to farmers. Before Belley, the story of failure of flax had always been the same. Flax flourished on newly broken soil but failed after two or three years.

Belley established the famous "Plot 30" at Fargo. This plot was laden with every possible flax disease. He soon found, too, that flax wilt was responsible for much of the flax failure. Equipped with this knowledge, Belley now sought a flax that could survive the rigors of Plot 30. A variety from Budapest, Hungary, in the early 1900's became the parent stock of Buds. Another one selected by Prof. O. A. Hegeness from samples brought from Belgium became the popular variety, Bison. Both resisted flax wilt.

Somewhat later A. C. Arny, H. K. Hayes and later J. O. Culbertson of the University of Minnesota started research work in flax. Red Wing was introduced in the early twenties, and Crystal and Minerva flax more recently. It still remained for North Dakota, however, to introduce two very popular flax varieties--Dakota and Keto.

The greatest recent impact on flax development and improvement has been made by a U. S. Department of Agriculture agronomist, Harold Fler, stationed at North Dakota Agricultural College. He isolated four genes which gave immunity to all known North American ^{races of} rusts. Some of these had been used in older varieties such

B 5128. Flax breeders are now incorporating these into all present varieties, and rust is no longer a problem.

Today in Minnesota four flax varieties are recommended--B 5128, Belley, Marine (the first to have some tolerance to plasmo), and Redwood. Belley and Marine were developed at North Dakota Agricultural College by Fler, ~~and his associates~~. Redwood was developed by the University of Minnesota from a cross of B 5128 and Redson.

Just a few days ago on April 1, the University of Minnesota announced its latest achievement--a new flax variety, Arny, named after the late plant breeder, A. C.

Arny. A cross of Crystal and Redson, it is immune to rust and has a high degree of J. O. Culbertson, a U.S.D.A. agronomist stationed at the University wilt resistance. of Minnesota for 15 years, was responsible for its development. Culbertson who also helped develop Redwood now has charge of flax breeding for the

Up to last year most of the problems in flax breeding seemed to be in finding ~~nation~~ at Washington, D.C., a better quality flax even more suitable to processing. Last summer, however, a serious outbreak of aster yellow virus disease, and plant breeders have another serious problem facing them today.

Oats

At the University of Minnesota, Dr. H. K. Hayes and his colleagues in 1915 started a search for better oat varieties. The result was the selection of a strain that later became Gopher oats.

Gopher Gopher, along with two other University developed varieties, Anthony and Minrus, remained the area's main oat variety until Iowa State College developed Vicland and Tama. These and other Victoria crosses were introduced in Minnesota in the early forties and proved superior to the existing varieties until root rot knocked them out.

Fortunately Minnesota scientists had begun work on Bond crosses in 1930. The station didn't release their new Bond crosses immediately because they did not yield much better than Vicland, Tama, and Boone. However, seeing trouble ahead for the Victoria crosses, they perfected Bonds and Minda for release in 1946. These new varieties, along with Clinton from Iowa, were resistant to the root rot, and for awhile were our leading oat varieties.

New races of crown rust came on the scene and the Bond varieties were next to fall to the continuing onslaught of disease. Breeding scientists, including H. K. Hayes and later Will Myers, head of ^{the department} agronomy and Francis Kee at Minnesota, started using Landhafer and Santa Fe in crosses to beat the new menace. These were ^{varieties} resistant to crown rust. ^{From these} Indiana/developed Clintland and Iowa, Clintafe, but they proved susceptible to race 7 of stem rust. Consequently they didn't become popular in Minnesota.

Canadians meanwhile were breeding late varieties such as Ajax, Gerry, Rodney, ^{and} and Fawn which became popular and accepted in Minnesota. Earlier Minnesota had developed Andrew, a Bond cross that remained useful because it was resistant to ^{7 and} race 7A of stem rust.

Landhafer x [Bond-Rainbow x Itajara-Joanette]

In 1957, the University released its newest variety, Minhafer (⁵) which is proving to be one of the best in the area. It is the first combination of such complete resistance to crown and stem rust. Many states south of us are clamoring for seed. In tests conducted in the North Central states' uniform regional ~~seed~~ nursery—each state^s test all varieties under uniform conditions—Minhafer was the highest yielding of all named varieties and third highest of all^y varieties, many of which were still in the experimental stages.

Barley, rye, and winter wheat developments have been just as spectacular as those already recounted. However, the story is the same with different names and places substituted.

As Minnesota celebrates its centennial, it can look with pride on the achievements of its plant scientists in the past and look for even greater strides in the future.

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"YOUR SOIL TO USE"

Early pioneers and politicians alike once regarded Minnesota's fertile soils as inferior, incapable of growing good crops.

It took Minnesota's two first farmers--Joseph Haskell of Afton and James Norris of Cottage Grove--to prove to these skeptics that Minnesota soils could grow crops with the best. They started farming about 1839.

It was true that Indians had raised corn successfully for centuries--that early soldiers stationed at Fort Snelling in 1820 produced both vegetables and wheat--that refugees from the Selkirk settlement in Canada raised wheat in 1821 on the Fort Snelling reservation--and that Joseph Brown had a crop near Minnehaha Falls in 1829 and two years later on land where Hastings now stands. But people were skeptical.

Even Henry Hastings Sibley, later a congressman, governor, and one of Minnesota's most prominent statesmen, may have had his doubts. In his "Minnesota Historical Collections," he admits that his doubts were dispelled by Haskell and Norris "who demonstrated that our lands are equal to any others in the West for the production of cereals, a fact that was denied not only by men not resident in the territory, but by individuals among us."

Over a hundred years later government officials ^{telling} ~~told~~ us that Minnesota's land is among the best--47 percent is classified as good; 14 percent as fair; and 39 percent as poor.

What about this soil of ours? Where did it come from? Is it running out, never to be replenished in its native fertile state? Or is its potentials greater than

ever?

It is fitting that we review these important questions as Minnesotans celebrate their 100th year of statehood--that we look to the past for some of the answers and look to the future with hope of saving the soil that has served us so well.

Practically all of Minnesota is covered today with thick deposits of glacial material. As the pre-historic glaciers successively advanced and retreated across the state they left these thick deposits behind. The result was an intricate pattern of materials mostly rich in plant nutrients, on which our soils later developed.

After the last glacier left, streams laid down deposits on some of our border valleys. Peat accumulated in many of the poorly drained depressions.

In another area melting ice was impounded in the Red River basin, forming glacial Lake Agassiz which lasted for thousands of years. Finally a lower outlet was opened and the Red River Valley formed.

The makeup of this glacial material and the character of our native vegetation are largely responsible for our different soils today. Both tall grasses and dense stands of trees grew well in our climate. The grasses grew in the south and west and formed one set of soils. The trees were more plentiful in the north central and northeast and formed another set of soils. For the most part the soils developing under the grasses are richer in plant nutrients than those developed under the forests. The grass vegetation produced enormous quantities of fibrous roots, mostly in the upper 6 to 14 inches of soil. This concentration of organic matter proved to be a storehouse for nutrients and was favorable to plant growth after cultivation started.

This then were the rich soils that our early settlers could use. First they sought the protection of the big woods with all their costly, time-consuming tasks of breaking. They feared the fierce winds and terrible prairie fires, and they wanted the trees of the east for firewood and fences.

Many pioneers did not trust the prairies soils. They believed that the soil was so poor that trees could not grow. However, by the seventies, free lands and the

coming of the railroads made the prairies open for settlement and a new soil available for growing Minnesota's bunker crops.

Yes, the soil was rich. Farmers harvested it and literally mined it raising the same crop--often wheat--year after year. Many thought the soil inexhaustable. On the other hand, even in the nineties, some far-sighted farmers expressed concern that this fertile soil might soon wear out.

In 1891, Harry Snyder of the University's College of Agriculture was getting questions like these from farmers:

"Will this soil wear out?"

"Is ther enough phosphate in this soil to successfully grow wheat?"

"Why do all cultivated soils dry out so rapidly compared to virgin soil?"

As a result of these questions, Snyder studied soil samples sent in by farmers for two years. He concluded that "continuous cropping for 10-15 years on original soil of half decomposed animal and vegetable matter will cut yields in half."

"A rotation of crops will be necessary to keep the fertility of the soil," he emphasized even in 1893.

Soon, too, farmers became interested in fertilizers to restore lost production. As a result of repeated requests, the University made its first test on fertilizers in 1905 or 1906. They found that applying a complete fertilizer NPK, to old soil reduced to yields of 7 bushels of wheat per acre by continuous cropping would only increase yields to a little over 10 bushels per acre. They found, too, that fertilizers could not return yields to the same level as in adjoining fields where the culture had kept the land in good shape.

As a result of these trials University specialists felt fertilizer on old soils would not pay but suggested that farmers might want to try fertilizing the rotation. They had found, too, that nitrogen was removed rapidly, but by using clover in the rotation the nitrogen content of the soil could be maintained.

The concern about loss of fertility and the need for soil conservation, however,

was isolated. But leaders were pointing to the dangers ahead. On September 12, 1910, the second annual National Conservation Congress was held in St. Paul. The roll call of famous speakers for this event was overwhelming. There was Theodore Roosevelt, who as Western North Dakota rancher and President of the United States had gained fame as a conservationist. There was President William Howard Taft. And there was the Honorable Gifford Pinchot, former governor of Pennsylvania and who had been leader of the movement to establish the United States Forest Service in 1905. Keynote speech was delivered by the builder of the Great Northern Railroad, James J. Hill.

Said Mr. Hill: "There remains an opportunity and a need of conservation transcending in value all others combined. The soil is the ultimate employer of all industry, and the greatest source of all wealth. It is the universal banker. Upon the maintenance, unimpaired in quantity and quality of the tillable area of the country, its whole future is conditioned."

Such men as former President Theodore Roosevelt, Pinchot, James J. Hill and a very few soil scientists were then quite lonely men in their concern about the soil. Farmers generally weren't seeing anything to become alarmed about. They needed hog feed and horse feed so a common crop rotation was corn followed by oats, and back to corn again, and there wasn't a great deal of attention being given to what was coming of this simple rotation.

In fact, soil scientists themselves held conflicting ideas about what happens to soil when it is cropped. Professor Milton Whitney of the United States Department of Agriculture and Professor Cyril G. Hopkins of the University of Illinois, both highly regarded in their day, held opposing points of view. Whitney claimed that each crop generated some sort of toxic substance singularly poisonous to that particular crop. Crop rotations and the use of fertilizers seemed somehow to dispel this poison. Hopkins ridiculed this viewpoint. He claimed, what is now known to be fact, that plant nutrients occur in measurable quantities in the soil. These quantities can be quite accurately calculated. So can the quantities taken off as crops hauled

from the farm, or as meat, milk, eggs, wool and bone. You then subtract one sum from the other and you learn how rapidly the soil is being depleted, and which of the plant nutrients is being depleted most rapidly.

In 1919, at the time James J. Hill made his eloquent plea on behalf of the "ultimate employer of all industry, and the greatest source of all wealth," much of the land in the Upper Midwest had been farmed for only 25 years or a little longer. Only those fields where corn had followed oats, and oats had followed corn were showing very marked response to manuring. There were just a few erosion creases down the steeper slopes. Here and there one could find a sizeable gully, but there weren't many of them.

Such counsel as was being given concerning soil maintenance and improvement was given without enthusiasm. Surely the statements given by University Soils Specialists a few years early could be placed in this category.

But there was research going on, on ~~these~~ serious soils problems. In 1915, the University started liming experiments in southeastern Minnesota.

In 1925, University soils researchers concluded that applying phosphate fertilizer on the land west of a line from Albert Lea through Minneapolis and Sauke Centre to Roseau would increase yields, especially of clover and alfalfa. They pointed out, too, that lands in southeastern Minnesota needed lime to unlock their productive potentials.

As researchers at agricultural experiment stations across the country carried on their studies of soil fertility through the years, Hugh H. Bennett of the United States Department of Agriculture was arguing that soil erosion was agriculture's chief enemy and the main threat to America's abundant food supply. He crusaded for appropriations to be used in erosion control demonstrations and experiments, but found little interest until the first "black blizzard" years of the early 30's. His crusade enjoyed its first success on appropriation was made a part of September 17th, 1933 when there was appropriated a \$5,000,000 fund for the work. Even then the

Insert "A"

The most famous and oldest of all soils experiments, however, is the Morrow plots in the heart of the University of Illinois campus at Urbana. These plots were named after Professor George E. Morrow, who established them over 80 years ago in 1876. He set them up to study the effects of continuous corn versus various cropping rotations and various rates of fertilizer applications.

Last year one of these plots in corn continuously for 82 years yielded 121 bushels per acre. This soil had received a manure-lime-phosphate treatment since 1904 with extra nitrogen, potash and phosphate in 1955, 1956, and 1957.

Another plot yielded 106 bushels per acre. It, too, had been in corn 82 years but received no plant food until 1955. Since then it has received lime, nitrogen, phosphate, and potash. For the three years before plant food treatment, the plot yielded 23 bushels of corn per acre.

Land Grant colleges were making similar, but not as spectacular, research to bring important soil discoveries to farmers.

victory was not exactly clear-cut because the appropriation was not made a part of agricultural appropriations legislation. The administration then was trying to pump money into the nation's economic blood stream, and administration officials saw in Hugh Bennett's plans an opportunity to put men to work.

First use of the funds was made early in 1934 when, in 41 communities throughout the United States, Civilian Conservation Corps barracks were built and young men went to work planting trees, building water control structures, and doing other jobs aimed at reducing soil loss. That was the Origin of the Soil Erosion Service. Work of the CCC units and the soils men who directed them so impressed Congress that in April of 1935 it passed, without a single dissenting vote, a bill that created the Soil Conservation Service and gave the new born agency bureau status within the Department of Agriculture.

While Bennett was fighting for appropriations for soil conservation on the national scene, many Minnesotans were becoming conscious of the problem, too, Preston Hale, Goodhue county agent, sought the soils experiment station - later located at La Crosse - for the Goodhue county area.

H. B. Roe, agricultural engineer at the University of Minnesota, had long been interested in soil conservation and management and was especially enthusiastic about terracing. In his bulletin "Soil Erosion--Causes and Methods of Control" pointed out that several enterprising farmers in southeastern Minnesota had been running their corn rows across and not up and down to stop soil erosion.

The University, working with local farmers and through county agents, set up two terracing demonstrations in southern Minnesota in the spring of 1933. One was $5\frac{1}{2}$ miles east of Caledonia and the other one mile east of Lewiston. During those same and later years, the University's Soils Department was emphasizing soil fertility under the direction of department heads, F. J. Alway and C. O. Rost.

About the same time Ruben Anderson, Lindstrom, now a soil conservation district supervisor, laid out his own terraces after reading in magazines how farmers in

Oklahoma, Missouri and Texas had done the same job. Anderson used the town road blade to construct very acceptable terrace.

Several county agents, too, were pushing soil conservation and showing a real interest in the new movement. Leading figures among these agents were: the late H. O. Anderson of Houston county; the late J. B. McNulty and Harold Pederson, Winona county; Julius Ausen, Olmsted county; and M. A. Thorfinnson Goodhue county.

Pederson is now an extension marketing specialist at the University of Minnesota and Thorfinnson, executive secretary of the Minnesota State Soil Conservation Committee.

The Soil Erosion Service, later the Soil Conservation Service, was making its influence felt in Minnesota.

Wisconsin's Coon Valley project established in 1933 was the first soil conservation project in the U. S. and drew national attention. Here soil conservation practices such as terracing and strip cropping were put into effect on the land where farmers could see them for themselves. One of the "farm planners" for this project was Herbert Flueck, Minnesota present state conservationist. Flueck in 1934 became Minnesota's field director for SCS, a position he still holds although the title has changed.

At first demonstration areas in Minnesota were set up and completely financed by the government. Established in late 1934 and 1935 were the Deer-Bear Creek area near Spring Valley, the Beaver Creek area near Caledonia, Gilmore Valley near Winona, and Prairie Creek near Faribault. Later a wind erosion project at Clear Lake and a water and wind erosion project near Twin Valley in 1939 in the Red River Valley were started.

But let's back up a moment. Last fall, soil conservationists celebrated the 25th anniversary of conception of the idea of the Gilmore Valley Watershed project at the "Silver Soil Celebration" near Winona. Speaking at the celebration Harold Pederson, who was county agent when the project was set up, pointed to the views and problems of those days by reviewing questions farmers asked him in 1932. They included:

"How Can I stop a gully that is forming in my fields?"

"Can't flood waters be controlled so they won't wash sand over my fields?"

"How can I keep good top soil on the ridges?"

Yes, people were concerned in the area. Henry (Lefty) Hymes, reporter for the Winona Republican Herald, dramatized the story of soil erosion. He pointed to Lake Winona, filled with silt in only 20 years. Carlos Bates, forester with the Lakes States Experiment Station in St. Paul, had made a study of soil erosion in Southern Minnesota and Western Wisconsin in 1930. Winona county residents asked him to make a similar study in 1932. Thus the Gilmore Valley project got its impetus although not put into effect until 1935.

In the belief that soil conservation work would move faster if local conservation units were established, Dr. Bennett and his co-workers urged the setting up of soil conservation districts within the states. So that there would be uniformity of legislation in establishing these districts, standard legislation forms were sent to governors of all the states in 1937. Nearly all state legislatures of that year passed enabling legislation providing that through local vote, some on a county basis, some on the basis of natural watersheds, landowners could set up soil conservation districts.

In Minnesota the first district, the Burns--Homer-Pleasant, was organized in Winona county on May 3, 1938, on the watershed basis. Early the next year, the Rollingstone, Stockton, and Gilmore Creek district, also in Winona county, was organized. Today there are 77 soil conservation districts in Minnesota. In addition recent congressional action has made watershed project development for flood control more practical and 23 applications for watersheds have been received. Four have been approved and one is under construction. It is the Rush Pine Creek watershed in Houston, Winona, and Fillmore counties. Plans are ready for the Ten-mile Creek watershed in Lac qui Parle and Yellow Medicine counties, while the Coon Creek and Middle fork of Two Rivers in Roseau and Kittson counties are being planned.

Insert "B"

Soil conservation districts have been governed by locally elected supervisors.

Supervisors banded together in the Southeastern Minnesota Soil Conservation Association with O. U. Haberstad, Lanesboro, president. In 1941 the group changed its name to the Minnesota Soil Conservation Association with Alfred A. Burkhardt, Plainview; H. August Lohman, Zumbrota; and William A. Benitt, Hastings serving as presidents. In 1948 the group became the Minnesota Association of Soil Conservation districts with William A. Benitt, Burton Chambers, Owatonna; Alfred Wiger, Ulen; Theodore Hegseth, Fergus Falls; Cyrus P. Crawford, Winona; George Williamson, Shakopee; and Campbell, LeSueur as presidents.

Yes, much soil from water erosion is being saved by farm planning including construction of terraces, grassed waterways, and contour strip cropping. In prairie area where wind erosion is the problem, stubble mulch tillage, wind strip cropping, field windbreaks, and rough tillage of summer fallow are important conservation practices. Most recently wheel track planting has become important.

While these and other soil conservation practices are being put to work, farmers and scientists haven't forgotten the importance of rotations, planting legumes, liming, fertilizing and many other farm practices designed to save and build the precious soil.

FERTILIZER GROWTH

The recent growth of the use of fertilizer has been phenomenal. Research over the years had shown the importance and the practicability of fertilizer application. Adoption was slow, however.

In 1926, for instance only 5,000 tons of fertilizer was sold. By 1940, the amount was 18,627 tons, and by 1950, 21,143 tons. In 1956 this had risen to 371,000 tons and last year nearly 15 percent more or to 414,140 tons.

Especially spectacular in this development has been the increased use of nitrogen. During the past 10 years, the use of nitrogen in Minnesota has climbed 712 percent from 4,537 to 36,850 tons annually.

If Minnesota follows the pattern of other states to the East which have been using fertilizer for a longer time, we'll be using $2\frac{1}{2}$ times as much fertilizer in 1965.

This rapid growth in the use of fertilizer--along with all the other soil conservation and building practices--is nowhere enough to keep our soil in good shape. William Martin, head of the University's soils department, points out that to just replace the nutrients we take out of the soil by cropping, we would need 1,600,000 tons of fertilizer a year or almost four times what we use today. At the same time we need even more lime. 3,000,000 tons a year or six times what we're using today.

Remember these figures will nearly cover the loss of nutrients to crops and not to wind and water erosion and land lost to roads and buildings.

Martin believes we must go beyond this figure to keep up our production where it is today.

Fertilizer also helps cut crop production costs and makes for great production efficiency. When costs go down, profits go up and, by increasing the acre yield, profit margins are substantially higher. Fertilizer on Minnesota soils has often returned as much as \$3 to \$5 in increased crop value for every \$1 invested in plant food nutrients.

The upward trend in fertilizer use in Minnesota has also been influenced particularly by the rapidly increasing number of soil tests. In 1956, the soil testing laboratory handled over 20,000 samples; the number had already gone over that by November of 1957. The fertilizer recommendations in the field are handled by the county agricultural agents.

What has been accomplished by these soil saving and soil fertility practices?

The best overall measure is increased crop production. A year ago, THE FARMER reported that tonnage of food and fiber from our land had increased 40 percent since 1940. Let's take a look at some of the examples.

We've already mentioned the famous Morrow plots in Illinois and the effect of fertilizer on corn there. The X-tra Yield Corn Contest held for the past five years by the University of Minnesota Agricultural Extension Service and THE FARMER provide other examples.

In 1957 Donald Hassing, Easton, received the top award for producing the highest yield--165.9 bushels per acre. Donald Eickhoff and son Emil, Fountain, placed first in the "Extra Yield" division. They increased yields by 132.5 bushels per acre in a fertilized plot, compared to an unfertilized area.

Charles Simkins, extension soils specialist at the University, says that the contest has conclusively shown that farmers in major corn-growing areas of Minnesota can get yields of 100 bushels per acre or more.

He says 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 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.

Ralph Young, associate soil scientist at North Dakota Agricultural College, reports that in North Dakota, during the period, 1952 to 1957, the average yield of wheat from the best treatments in 64 fertilizer trials over the entire state on nonfallow land was 25.9 bushels per acre. Many of these were on farmers' land. The highest statewide average yield of wheat (much of which is grown on fallow) for any year during the period was 18.8 bushels per acre in 1957. During this year, the average yield of wheat from the best treatments in 19 fertilizer trials on nonfallow land was 34.0 bushels per acre. All this indicates that small grain yields in this area are falling far short of those which are possible. This same situation undoubtedly applies in other states and to other small grains.

Bromegrass, bluegrass, alfalfa and other forage and pasture crops have responded to soil enrichment as much as corn. In Northeastern Minnesota in 1956, five dairymen set out to discover what fertilizer would do for their bluegrass pastures. Average per acre production in terms of milk was 4,333 pounds, and valuing it at \$3.50 per hundredweight, their return was \$66.65 per acre over what they had paid for the 300 pounds of 33 percent nitrogen fertilizer they had applied.

Leo F. Puhr, head of South Dakota State College's soils department, gives this report on experiments to discover what would come of adequate rates of fertilizer on irrigated bromegrass at the Redfield, South Dakota experiment station: The application of 180 pounds of nitrogen (actual) resulted in a yield of 6,980 pounds of brome hay per acre compared to 1,640 pounds of unfertilized land. Unfertilized brome had a protein content of 9.9% percent as compared to 17 percent in the fertilized brome. On an acre basis, this increased content coupled with the increased tonnage made a difference of 793 pounds of protein in favor of the fertilized land.

Similar results, under different conditions are being obtained at the University of Minnesota's Grassland and Soils farms at Rosemount.

These reports have dealt largely with the results of fertilizer application. Are there measures of the influence of soil and water conservation practices that indicate their dollars and cents value? H. O. Anderson and P. E. McPhail, University of Wisconsin farm management specialists, recently completed a study of these influences in the Coon Creek watershed near LaCrosse in Southwestern Wisconsin. In this area mentioned earlier, there were 200 farmers who had soil and water conservation practices on their farms in 1934. Now there are more than 3,600. The researchers discovered that farms having the largest percentage of their land under soil and water conservation practices were averaging 21 percent more corn and oats per acre than their neighbors with fewest acres protected by conservation practices. And the high "conservation farmers" income was 10 percent higher than that of the low "conservation farmers."

At the University of Minnesota, soils experiments have been going on for years. Today for example the soils department under William Martin conducts with over 20 projects in seven major fields:

1. Surveying and classifying soils
2. Forest soils
3. Soil fertility and management and soil testing
4. Soil chemistry
5. Soil and water conservation
6. Soil physics. This is a new area of research and deals with soil structure or tilth, soil-water relationships, aeration, and soil temperature as related to drainage, tillage, irrigation, erosion and cropping practices.
7. Soil microbiology, another new field

In addition experimental work in crops, agricultural engineering, forestry and many other fields is going on. Many departments are cooperating in the areas listed above. Many are using the products of war, radioactive elements, to further the welfare of farmers.

Research in soils has been given real impetus recently by action by Congress and

the Minnesota State Legislative. Congress has appropriated additional funds for USDA and Land Grant College use, including several research projects of interest to Minnesotans and the establishment of a half-million dollar Soil and Water Field Research Laboratory at Morris for the Agricultural Research Service. The Minnesota Legislature has provided the University a million dollar plant with the most modern research facilities. Both, too, have provided additional funds for soil conservation work through the SCS and the University of Minnesota Agricultural Extension Service.

the Minnesota State Legislature. Congress has appropriated additional funds for USDA and Land Grant College use. These include several research projects of interest to Minnesotans and the establishment of a half-million dollar Soil and Water Field Research Laboratory at Morris for the Agricultural Research Service. The Minnesota Legislature has provided the University a million dollar soils plant with the most modern research facilities. Both, too, have provided additional funds for soil conservation work through the SCS and the University of Minnesota Agricultural Extension Service.

The research of the future could well take on many new aspects. The old lines will continue, but Martin believes that we may be doing much more research with water conservation, with soil chemistry, and in the fascinating area of climate and moisture control. It is possible that in the future we may be able to control, to some degree, both climate and moisture, adding new potentials to the soils of Minnesota. These potentials, scientists agree, are 40 to 50 percent above what we are producing today on our soils.

THE FUTURE

In these days of revolutionary agriculture, it is difficult to predict the future. Many things, though, are evident:

1. Our soil is steadily losing its productive capacity, perhaps not to a point of being immediately alarming but certainly of future gravity. This loss is coming through erosion, through loss of land to highways and urban expansion, through crops taking more from the soil than is being replaced, and through many other factors.
2. Our soils have the potential of producing at least 50 percent more than they do today. The USDA estimates this potential in Minnesota at 30 to 180 percent depending on the crop involved.
3. Farmers, through their own actions and initiative, government agencies such as the SCS, the Agricultural Extension Service, the Forest Service, and many others, through their programs, the land grant colleges through their research, and

commercial firms are making real contributions to soil conservation, fertility, productiveness every day. These combined efforts mean we can be confident that our serious soils problems can be licked and that the future is bright.

4. Research in soils promises to open entirely new horizons of scientific achievements that may involve moisture and climatic control and basic discoveries in soil chemistry not dreamt of today.

Thus Minnesotans face another 100 years assured their soil can produce abundantly for the needs of the future but, at the same time, cognizant that they must preserve their soil zealously to assure this abundance.

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"The Information Worker's Role
in Program Projection"

SPECIAL TO ACE

Many extension program projection reports today may not be worth the paper they are printed or duplicated on! Much of the time local committees and agents spend on long-time program plans may be wasted.

We as information workers and as communicators can help avoid this waste. Notice the word, communicators. Recently many of us have received and have given communications training. Some of us have a major responsibility in the communications training program.

In Minnesota our poorer efforts in long-range program planning have been caused by poor communications...poor communications from the state and federal staff to the county staffs about the "why", "what", and "how" of long-range planning...and poor communications from the county staffs to the committees as to what their responsibilities are.

Actually we as publications editors, visual aids and radio specialists, and newsmen have important jobs in all the different stages of program projection. These stages are planning, training, actual program projection, preparation of reports, and distribution and evaluation.

PLANNING

A lot of planning must precede program projection. On the state level this is usually done by committees including administrators, specialists, county extension workers, and information workers. This committee more or less decides how program projection is to be done.

Here the visual specialist can help work out teaching tools which will help explain the program to county and extension staffs. In Minnesota special charts and flannelgraphs help show the steps the agent has to take to complete his county's long-range plan.

Other information workers can help put the objectives of the program in clear terms so both agents and local committees will understand what's involved. It is especially important to emphasize at this time the need to prepare complete local situation reports.

TRAINING

The first group of our agents doing program projection was definitely at a disadvantage because they received no training and little briefing on what was expected. Since then, however, we have held training sessions for the two new groups entering program projection.

It is here where better communications can and must be woven into the training. Most agents are perplexed about how to stimulate worthwhile discussion and bring out valuable farmer and homemaker thinking at local committee meetings. Frankly some fail because the suggestions made by some local committees amount to nothing more than a glorified yearly program of work. To avoid this we have included training in discussion leadership, committee work, and some social action in our long-range sessions.

Training should also involve the information team in showing agents how visuals specially prepared will make program projection clearer to county groups; how committee progress and reports can be the basis for good newspaper articles and radio programs; and how the final report can be written.

A poorly written and organized report can be triply dangerous. It may go out to the public as it is, to be misunderstood and misinterpreted. The county agent may have to rewrite it. Or we as information workers may have to share rewriting responsibilities. All mean wasted time and effort.

In the three years we have been working with program projection, we have come up with an outline that has helped make reports more effective and easier to prepare. Here it is:

1. Message from the committee, often in letter form, thanking those who helped and telling what it has done. The message points out that the report is the committee's, not the county agents'.
2. Forward or introduction, answering these questions: "What is extension work?", "Why this report and long-range planning?", "How was the program set up and how were the committees formed?", and "How will the report be used?"
3. General county situation, including a brief historical sketch, an explanation of the make-up of the county (population, community and business facilities, etc.), and a review of the general agricultural situation.
4. Committee reports, including specific situations and trends, problems or needs, and a suggested extension teaching program to meet these needs.
5. Listing of committees, the report "legitimizes".
6. Summary of recommendations, combining recommendations from several fields to make an intelligible extension program.

ACTUAL PROGRAM PLANNING MEETINGS

This is the stage that will make or break the entire program projection program! Widespread participation in these meetings serves an end in itself. That end is involvement in the extension planning and greater understanding of extension work by participants.

Here, too, the information staff can help. Suggested visuals to/agents explain the program are important. Many of our agents used materials from our communications training course at local meetings. These included the movie, "The Changing Scene" and the flannelgraph, "We Look at Ourselves."

Occasionally information workers may take part in local committee meetings as a source person on teaching methods or report preparation. Although long-range planning committees should not consider extension methods, they sometimes do get into the field and ask for help.

PREPARING REPORTS

Although major emphasis in reporting is on the published report, we cannot overlook the day by day reports of progress through press and radio. If the training has been good, the instructions complete, and the basic work in gathering facts thorough, writing the report will be much easier for the agent.

In Minnesota we meet individually with agents reviewing their manuscripts both for readability and for statements that might be misinterpreted. Part of that review may come after agents have written only a section or two. We can then show them how they can better organize and improve the report before they complete the job. Others submit the entire manuscript and make general suggestions for rewriting or revision.

Thus far our editorial staff has edited and been responsible for general layout of all reports (about 15). This definitely is an added responsibility which has required additional part-time help. By doing the work on these first reports, however, we have been able to work out a general pattern that can be used by agents doing program projection in the future.

DISTRIBUTION AND EVALUATION

Information people should have an advisory function in distribution of reports and evaluation of the program. Early in the training sessions, before committee work is started, we need to emphasize how important it is to determine our audience and plan the distribution of information. When agents do this, they see that their audience is not only farmers and homemakers but also business and professional men, clergy, county officials, high school social science and vocational agriculture classes, legislators, and many others. That audience has one thing in common--a

basic reliance on agriculture. When we consider audience, the steps in program projection become increasingly significant and the use of committee conclusions takes on new meaning. Distribution of the report and analysis of the audience then becomes one of the first, not last, steps considered in program projection.

Finally, information workers should be constantly involved in evaluation. The evaluation is two-fold. First, program projection in itself involves a running evaluation of extension work and the subjects we emphasize in printed material, mass media, and visual aids. It gives a valuable insight into the changing extension job.

Second, we need to evaluate the success of program projection as we go along. As information people, we would be especially interested in the effectiveness of information media telling the story of program projection and of extension itself.

Obviously information workers do have an important job in program projection-- a job we must not overlook or slight.

Harold Swanson
Information Service
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CORN--A MODERN DAY MIRACLE

Russia's hybrid corn is the world's best! Nikita Khrushchev made that boast only a short time ago. Yet only two years ago, this same Khrushchev--recognizing American superiority--ordered his top plant scientists to focus their efforts on producing hybrid seed corn.

Khrushchev headed those 14 top level Russian agriculturists who toured the cornbelt, including Minnesota, during the summer of 1955. When Vladimir Matkevich, Russia's Minister of Agriculture, Boris Sokolov, corn breeder, and other crop experts saw our corn, they were impressed. Their experience probably resulted in Russia's turning its efforts in corn breeding toward the development of hybrid corn.

Minnesotans celebrating their statehood centennial know that the history of corn--the state's number one crop--cannot be told in years or decades or in terms of Minnesota alone. This article traces some of this story through the centuries to the hybrid corn of today.

Corn is old. Some experts say that corn existed 100,000 years ago as a wild plant or grass. In 1953, scientists found fossil corn pollen 50,000 years old, further bearing out the fact that the history of corn is a long one.

Some botanists say that the cradle of corn is in the extreme southwest part of the unexplored Amazon River basin of South America. The Indians who today live in Peru, Bolivia, and northern Chile probably were the first to cultivate corn. The ancient Incas, living in a corn economy, developed a culture and standard of living rivaling that of ancient Greece, Egypt, and Babylonians.

Corn culture probably moved north through Latin and Central America to New Mexico and Arizona. Next it turned east and north to the New England states and Canada.

Excavations in New Mexico show that wild pod-corn of the pop type, with ears three-quarters of an inch long, existed 5,600 years ago. Shortly after the time of Christ, Indians in this area had lengthened these ears to 4 inches. They did this by carefully selecting the best corn each year. Next this pod-corn may have been accidentally crossed with the wild grass, teosinte, developing a more promising plant. The Indians continued to develop corn until it was something like our corn today. Many built their religion and culture around corn. Other Indian races made accurate astronomical observations and developed some of the world's best calendars, largely to know when corn should be planted.

There is no doubt that the Indians were responsible for corn's survival. Without their planting, hoeing, harvesting, and preserving of seed, corn may not have survived until today. All five types of corn--pop, sweet, flour, flint, and dent--were developed, in some degree at least, by the Indians.

Our European ancestors first saw corn when Caribbean tribes introduced Columbus to it on November 4, 1492. Here Columbus' sailors saw corn fields stretching across the Caribbean countryside for 18 miles. Later some of this corn was returned to Spain and grown in Europe. Historians estimate that Indians were raising 50,000 acres of 6-rowed corn when Columbus discovered America.

Corn saved the lives of many of our early American colonists. It is said, too, that it hastened the colonization of America by a hundred or more years. To save Jamestown from starvation in 1607, John Smith, after mingling with the Indians, ordered everyone to raise one acre of corn. In 1620, Miles Standish of the Pilgrims found seed corn grounds. Then Squanto, his trusted Indian friend, instructed the Pilgrims in raising corn. When European grains failed, corn provided the means of survival for these hardy pioneers.

As they moved West, the whites wrested corn ground from the Indians until, in 1832, the Black Hawk War gave the whites all the corn ground east of the Mississippi.

Thus in incident after incident, corn provided the bridge that helped the pioneers cross and settle our nation.

Early Scientists

There are many stories about how Indians and practical-minded farmers improved corn through selection and crossing during the 18th and 19th centuries. The open-pollinated cornbelt dent varieties, popular only a few years ago, all originated by selection from early crosses of New England 8-rowed flint with a late, high-rowed, southern gourd seed dent. Some of these are the basis for our modern hybrids.

During the same time scientists were delving for the secrets that eventually led to hybrid corn.

Long before the United States became a nation, Cotton Mather, famous as a New England religious leader, in 1716 noticed how blue, red, and yellow corn crossed. Thus he discovered the secret of sex in corn--how pollen and silk were necessary to produce seed.

The monk, Gregory Mendel, and the evolutionist, Charles Darwin, among many others, contributed to scientific hybrid corn indirectly. Mendel's discoveries revolved around characters in plants--important knowledge in plant breeding. During the 1870's, William J. Beal, a Michigan State University botanist, read Darwin's new book, "The Effects of Cross and Self Fertilization in the Vegetable Kingdom." Darwin is often called the "great grandfather" of hybrid corn. Among other things he pointed out that crossing two samples of one variety grown at some distance from each other would produce an offspring with greater vigor than either of the parents.

So Beal did just that in 1887. He crossed two yellow dents, and got a 57 percent increase over the College Dent strain in yield. Thus he became the producer of our first varietal hybrid.

The New Approach

It wasn't until early this century, however, that scientists seriously blazed the scientific trail leading to our hybrids of today. It was in the eastern United States where two young scientists, working independently, took the lead in this field. They were G. H. Shull of the Carnegie Institute of Washington at Cold Spring Harbor, Long Island, N. Y., and E. M. East, a young chemist who moved from the Agricultural Experiment Station in Illinois to the Connecticut Experimental Station. Each ~~had~~ been called the "father of hybrid corn." Each contributed mightily to the advancement of hybrid corn.

Shull was the first scientist to arrive at a clear concept of hybrid vigor or "heterosis." His main interest was in the theories of hybridization and he worked largely in the laboratory and his garden. Today he would be known as a "basic" scientist.

East, too, was more interested in basic research principles. To him goes the credit for developing the first inbred varietal crosses hybrids between inbreds and open-pollinated corn. Thus he helped make hybrid corn a commercial possibility. Actually East used some of the material he helped develop and inbreed at the University of Illinois. Even then, in 1907, East noted that varietal crosses increased yields 3 to 9 bushels but that one inbred-varietal cross yielded 42 bushels per acre. What's more, one cross of inbred Leaming lines (a famous open-pollinated corn) yielded 202 bushels per acre!

Today most of our American corn breeders have been trained by East or students of East. Among the most famous of East's students is Minnesota's own H. K. Hayes, retired head of the University of Minnesota Department of Agronomy and Plant Genetics.

Hayes started as East's assistant at Connecticut in 1909. East joined the Harvard staff that fall, but continued to advise Hayes, who was placed in charge of plant breeding in 1911. It was Hayes who began inbreeding Burr white corn. This inbred later became one half of the Burr-Leaving double cross made in 1918 by D.F. Jones, Hayes' successor at Connecticut and another East pupil. This first double cross was the first really successful hybrid corn as we know it today. It made commercial hybrid seed production a definite possibility. Without this early work by Hayes and Jones, hybrid corn would have been delayed indefinitely.

In 1915 Hayes moved to the University of Minnesota and began a long and distinguished career of service to the state.

Since those early days many individuals have played important parts in developing and spreading modern corn. Some were commercial seed producers and scientists. There was P. G. Holden who, Henry Wallace says, spread Reid's yellow dent over the cornbelt. There was James Holbert of Funk's, Lester Pfister of Pfister's, Charles Gunn of the DeKalb Agricultural Association, Henry Wallace--who was later to become vice president of the United States--of the Pioneer Hi-Bred Corn Company, and many others.

Our Land-Grant Colleges and U. S. Department of Agriculture, of course, led the way in both research and seed distribution. Great names--perhaps little recognized today outside of scientific circles--make immeasurable contributions to the onward march of science in corn production. There was Frederick D. Richey of the U. S. Department of Agriculture who openly dared to come out and advocate hybrid corn breeding in 1920. It was he, too, who turned the USDA from its old methods in 1922. It was he, along with H. K. Hayes, who in 1925 helped the experiment station directors in the North Central states to set up the first regional research project--a project which speeded the development and spread of superior hybrids throughout the cornbelt.

Each Land-Grant College, too, had its pioneers--like H. K. Hayes at Minnesota--who established the principles of hybridizing and who developed inbred lines later used by commercial companies in their hybrid corn varieties of today.

If we were to summarize the great steps in developing commercial hybrids, they would include the development of:

1. The double cross plan following Jones' first double cross corn.
2. Tests to select inbreds for combining ability. These became established by the early thirties.
3. Development of a prediction method whereby scientists could predict how various inbred crosses might work out without trying out every one in the field. Minnesota scientists, led by Hayes, were prominent in this advance. A simple illustration shows how important this was. Starting with 20 inbred lines, it is possible to produce 190 single crosses and 14,535 double crosses. Under the old system scientists would have to make all 14,535 double crosses to find out which yield best. Applying the theory developed by Hayes and others, it is possible to test only the 190 crosses and then accurately predict what the over 14,000 double crosses will do.

MINNESOTA AND ITS CORN

But now, let's turn back to see how corn fits into Minnesota's fascinating history.

Early pioneers in Minnesota first settled in our southeastern counties up the Mississippi Valley to the Twin Cities. Next they moved to the south and west along the Minnesota river to Mankato. Wherever they settled, they found Indians growing corn. Indians had developed a hardy flint that matured even north of Lake Mille Lacs. Col. John Harrington Stevens, first settler west of the Mississippi, told of wide fields of flint there.

Where the Indians had succeeded, the white man at first failed. And the reason was obvious. Most of our pioneers came from warmer regions. Instead of accepting Indian flint, they brought corn from their old homes. These varieties failed because they could not mature here.

Over the years, the history of corn in Minnesota divides itself into three eras; the early years to 1890; 1890-1930; and the modern hybrid era. Today--without the perspective of history behind us--we may be entering an even newer era.

Early Years

From 1850 to 1890 Minnesota farmers developed and improved many corn varieties and strains. These varieties were so good that their yields established records that stood for 45 years. However, those early high yields were in part due to the productive virgin soil.

First official records of corn acreage and yields were kept in 1866. Then we raised 120,000 acres of corn. Yields averaged 23 bushels an acre, and the total crop was 2,760,000 bushels.

Two years later in 1868 we had 150,000 acres in corn, with an average yield of 37 bushels per acre. Even then the crop totalled over 5,000,000 bushels!

That 1868 record of 37 bushels per acre stood for a generation and a half or 45 years until 1913 when yields hit 38 bushels per acre!

For those who believe that this was a backward agricultural era, old University Experiment Station reports tell another story.

For example, the University built its first silosⁱⁿ 1884 and lined them with tarred building paper. Three years later the University started silage experiments with sugar, flint, and dent corn.

Early farmers gave colorful names to their corn varieties. Sugar corn included Narragansett, Marblehead, Old Colony Sugar, and Black Mexican. Flints included King Phillip, Longfellow, and Canada. Dents included the famous Leaming, Pride of the North, Minnesota white, Minnesota yellow, and Sheepstooth.

Many may think that grass silage is a new development. Not so. The University pointed out that/only corn but also any plant fit for cattle feed when green can be preserved in the silo indefinitely.

One of the early pioneers in crop research, University staffer Willet M. Hays, in 1889 recommended limited cultivation, supposedly a modern development. He had studied root growth and planting and cultivating methods and felt limited cultivation was a practical step. Even then he pointed out that deep, close cultivation destroyed many roots and cut yields. The skeptics of that day pointed to good yields and good crops, but he believed that yields were good in spite of root pruning and that even better crops were possible.

Even then Hays recommended proper rotation including clover, the use of manure, preparing a good seedbed, seed treatment, etc. to obtain good corn yields!

Perhaps more important, however, he initiated selection and breeding studies before the laws of inheritance were known.

The Minn. No. 13 Era

By 1890, however, a new corn era was dawning in Minnesota. Hays was working with cross fertilization of corn varieties to obtain high-yielding, early-maturing corn, suitable to this, the northern edge of the corn belt.

To discover even better varieties, he asked farmers who had varieties well adapted to Minnesota to save at least a half dozen ears and send them to the University for testing and further selection.

Minnesota corn was soon destined to enter the national market. Leslie Edgerton said that the Chicago Board of Trade marvelled when the first carload of corn ever received from Minnesota arrived in Chicago in 1892. They were amazed that corn could be raised so far north.

Minnesota corn acreage passed the million mark in 1893, when nearly 30,000,000 bushels were harvested.

But 1893 was significant for an even more important corn milestone. In that year Hays sent Andrew Boss, who later headed the University's Agricultural Experiment Station, to buy two bushels of corn from the De Cou Seed Co. in St. Paul. That early, vigorous and golden yellow corn was recorded as entry No. 13 among the corn varieties the Station was testing. That name stuck, and Minnesota No. 13 was destined to become one of the most famous names in Minnesota corn annals and one of the most widely known varieties in the nation.

In 1895 Hays reported, "We have 300 bushels of corn known as University No. 13 which we are offering for sale at \$1.00 per bushel, the price we paid farmers in the neighborhood of University Farm for raising and saving the seed. By putting in some from our own fields we are able to sell this corn improved in yield by selection."

The same year Hays declared that there were at least a half-dozen varieties of dent corn which, in general, if planted throughout the state, would increase total yields 10 to 20 percent.

Some authorities say that the development of Minnesota No. 13 moved the cornbelt north 200 miles. By 1900, No. 13 was widely distributed, establishing Minnesota as a high ranking corn state.

University yield tests showed the importance of No. 13 which averaged 51 bushels per acre from 1893 to 1896. The best average for those years was 61 for a variety named Cosgrove, and the best individual average for one year was in 1896 when the yellow flint, Pillsbury, yielded 71.4 bushels.

C. P. Bull, at the University in 1902, began selecting Minn. No. 13 for type, marking another important step in the development of this famous corn.

Several strains of No. 13 was developed over the years. H. P. Hanson, a farmer near Albert Lea, obtained a half bushel of No. 13 in 1894. Not entirely pleased by its small ear size but liking it in other ways, Hanson set out to improve the corn to meet his own needs. Soon he had developed the Hanson strain--a vigorous and larger No. 13.

In western Minnesota, Hjalmer Kalmo of Montevideo preferred a redder, longer ear. He then developed what was known as the Kalmo strain, perhaps the reddest of all No. 13's.

Seeking to move the cornbelt northward and find a corn suitable to the area near the Red River Valley, George Haney, a representative for the International Harvester Co. developed a shorter maturity corn known as the Haney Strain.

University trials showed that the Morris Station strain may have been the most desirable of all No. 13's.

Another pioneer, Theodore Mellum, of Ulen developed still another well-known strain of Minn. No. 13--Mellum's strain.

Many others, too, worked and developed individual strains of No. 13.

Ralph Crim, for many years extension agronomist for the University of Minnesota and secretary of the Minnesota Crop Improvement Association, judged the International Corn Show at Chicago for many years. He reports he saw strains of Minn. No. 13 from Washington and Idaho to Western New York, indicating its nationwide acceptance. H. K. Hayes reports he found a strain of Minn. No. 13 in Chile in 1941 and that it was known in other foreign countries.

During those years from 1890 to 1930, several other outstanding open-pollinated varieties were raised. These included such well-known names as Rustler, Golden King, Golden Jewell, Silver King, Murdock, and Northwestern Dent.

It was during the early years of the twentieth century, too, that two interesting and widespread events came into being--corn weeks and corn shows.

Each fall agronomists at the University proclaimed "seed corn week" usually around September 10-20. Farmers were advised to select ripe ears during that week to give them the short maturity they needed for the northern cornbelt. Too many varieties were being brought in from Iowa, Illinois, and other states to the south that wouldn't mature in Minnesota. To get vigor and maturity, the agronomists advised farmers to select "a ripe ear on a green plant in a full hill."

Corn shows did stimulate interest in corn. They were based on erroneous assumption that good looking ears meeting all the requirements of a special score-card would also give the best corn in next year's fields. Farmers would enter their 10 best ears of corn. Uniformity was stressed, and the ideal was set at 9 $\frac{1}{2}$ " to 10" ears with 18-20 rows. One discerning scientist pointed out that "fine feathers don't make hens lay and fancy points don't make corn ears yield." However, corn shows flourished in Minnesota and the nation. Some were local; others were countywide; and some were statewide and even national. Fantastic prices were paid and generous prizes were given for the best ear or best 10 ears in these popular shows.

It is said that P. J. Holden sold the famous Pascal ear for a fabulous \$150. Here in Minnesota C. L. Blanchard, Fox Lake, won one of the largest prizes on record, a tractor, at the district show at Mankato just before World War I with his 10-ear exhibit. Blanchard grew Silver King for many years and was a leader in the Minnesota Crop Improvement Association for many years.

Northrup King and Company sold Blanchard's seed. The company also produced seed of Ruster, N. W. Dent, King Phillip, and Longfellow flints as well as Minn. No. 13. It and other seed corn producers played an important part in the northward movement of corn, first with open-pollinated varieties and later with hybrids.

Fertilizing corn, too, is not a new idea to Minnesota. In the early nineties, the University had tried fertilizer experiments. Commercial fertilizers, however, didn't increase yields probably because the soils were comparatively new then. Again in 1906 the University tested fertilizers, feeling that declining yields might be stopped. Again, however, the light applications made at the time usually failed to increase yields. However, at the Herman Pfander farm near New Ulm, potash and nitrogen as well as complete fertilizers gave substantial gains.

Harry Snyder wrote about these experiments and field trials two years later. He declared that fertilizer was not justified on corn but could be of great value judiciously used in a rotation of crops to encourage the growth of legumes.

At the same time C. P. Bull and other corn experts at the University were seeking better corn to extend the growing of corn even further north. Bull felt this could be done by careful selection of seed as his work with Minn. No. 13 shows. Minn. No. 23, which Bull bought from a farmer near Menster, for example, was grown later within a hundred yards of the Rainy River near Baudette.

1915 could be well marked as a most significant date in the history of Minnesota corn. In that year H. K. Hayes came to Minnesota after doing pioneer work with Edward East at Connecticut in developing the principles that were to lead to modern hybrid corn. He immediately started inbreeding Minn. No. 13, Rustler, N. W. Dent, and some flints.

In that same year Hayes started to compare the value of first generation crosses between standard varieties in Minnesota. Some of the crosses were between the famous No. 13 and flint varieties; later crosses were between No. 13 and Rustler.

In 1919 Hayes reported that first generation cross seed may be produced by planting varieties in alternate rows and detasseling all of one variety before any of its pollen matured. He compared 12 first generation crosses in which Minn. No. 13 was used as a male parent with their parents for yields. Eleven of the 12 outyielded their better yielding parent by from .3 percent to over 32 percent.

Early in the twenties, after Jone's successful double cross in Connecticut, it seemed only a matter of time before commercial hybrids would be a reality. University plant breeders tried, without marked success, to make double crosses within inbreds of single varieties such as Minn. No. 13, Rustler, and Silver King. As research went on, it became apparent that the lines crossed had to be widely diverse to be more successful. That became the key to hybrid success.

The Hybrid Corn Era

By 1930 Hayes and his associates had developed many inbred lines of corn that could be used in the commercial production of hybrid seed corn. They reported

on this work in 1930 in an Agricultural Experiment Station Bulletin called "Double Crossed Corn in Minnesota." Meanwhile researchers in many other states and the U. S. Department of Agriculture had been working on the same development. The time was indeed ripe for the era of hybrid corn.

The University by then had developed many inbred lines that were to become the basis not only for its own Minhybrid varieties but also for a majority of the first hybrid corn varieties offered for sale in Minnesota by the major seed companies. Nebraska's T. A. Kieselbach in 1950 said that 90 percent of the hybrid corn in the United States used only 60 inbred lines, showing the importance of land-grant college breeding work.

Two of the first three hybrids developed for Minnesota, Minhybrids 401 and 402, had as parents two yellow lines from Minn. No. 13 and two white lines from Rustler dent. In spite of the mixed grain color, many farmers grew these hybrids as they outyielded the open-pollinated varieties by 15 to 20 percent and had less stalk breakage in the field in the fall.

Later University scientists crossed a cross of two inbred Minnesota No. 13's with selections (called 374 and 375) obtained from J. C. Helbert and grown and further inbred in Minnesota. The cross was Minnesota's first yellow double cross corn and was introduced as Minhybrid 403.

It was in 1930, too, that the University distributed 500 lots of 5 pounds each of the new hybrid double cross seed corn varieties to farmers throughout the state. They planted four rows down the middle of their fields to show how the hybrid would yield against open-pollinated corn--an early and important demonstration of hybrid seed corn in the state.

In 1930 the Agricultural Experiment Station also started distributing the single cross seed needed to produce Minhybrids 401 and 402. Twenty-four farmers received enough seed stock to produce an acre each of these new hybrids. While the 500 demonstrations were showing the value of hybrid corn, the University was attempting

to increase the seed enough to take care of the needs of those who wanted to plant hybrids.

Thus during those early years both commercial producers and smaller farmers growers belonging to the Minnesota Crop Improvement Association played important roles in making hybrids available. Then over the years the University Experiment Station produced many inbreds, supervised the single crosses produced by farmers under contract for the Station, and then sold seed to double-cross seed growers. This seed was certified by the MCIA.

By 1945 the cooperative plan was extended to several hundred growers. In that year there were 15,000 acres of double cross seed plots distributed--enough to produce nearly a half million bushels of Minhybrids or to plant over 2,500,000 acres of corn.

Thus a new era in corn began. In 1933 only 4,000 acres of hybrid corn were planted. This amounted to one tenth of one percent of the total acreage. A year later 19,000 acres were planted, still less than one half of one percent of the total acreage.

By 1936 nearly 175,000 acres or nearly 4 percent of the total acreage was planted to hybrid. Each year thereafter hybrid corn spread like wildfire to 926,000 acres in 1938 and to 1,662,000 acres in 1939 (better than one of every three acres). By 1945 over 90 percent of our corn was hybrid and over 5,526,000 acres were planted.

Today over 99 percent of Minnesota corn is hybrid. These years have marked the real contributions of a few commercial seed companies and the University of Minnesota in developing varieties suitable for Minnesota.

All during this time University scientists, like Ernest Rinke, Carl Borgeson, and Emmett Pinnell, have been establishing corn breeding principles while developing high yielding hybrid varieties that are adapted to the many different maturity requirements of Minnesota. Hybrid varieties have now been developed which range

from 115 to 78 days required for maturity. Thus we find our corn areas ever creeping northward as a result of corn breeding efforts. One such short maturity hybrid is AES 101, an early 77-day variety with real promise.

In this rapid development of hybrid corn, scientists have been fearful that some of the old open-pollinated varieties would be lost forever--a real blow to corn breeders. As result different Universities have agreed to maintain certain varieties. Thus, in this day of modern hybrids, the Minnesota Agricultural Experiment Station is maintaining for posterity Murdock, Silver King, Golden Jewel, Golden King, Rustler, Northwestern dent (both late and early strain), and Minnesota No. 13 (U. Farm late, U. Farm early, Mellum's Strain, ~~or~~ Haney's 13, and the Morris strain).

With these advances in science it is only natural that recent years should show amazing corn production records.

As related earlier the 37-bushel per acre yield record set in 1868 remained unbroken for 45 years until 1913 when yields averaged 38 bushels and total production exceeded 100,000,000 bushels for the first time. The next substantial jump in yields came when hybrids were well established in '38 when yields hit an average of 45 bushels per acre.

The long remembered drought year of 1934 saw another record set--the lowest average yield, 17 bushels per acre, in Minnesota history. Only 1894 had approached these depths when average yields were 18.5 bushels per acre.

As the hybrid corn era dawned, other corn records were soon to fall.

1943 saw the first \$200,000,000 corn crop in Minnesota. In 1945 more corn was planted than in any other year before or since--6,059,000 acres.

The highest value corn crop in Minnesota came in 1947 when our corn was worth \$397,365,00.

In 1948 another yield record, 52.5 bushels per acre, was set and the largest crop in history--272,055,000--was harvested. It was in this year, too, that corn

prices hit a new high--\$2.46 per bushel in January, saw the greatest one month drop to \$1.79 in February, and the greatest one year drop to \$1.14, or a total of \$1.32 per bushel.

1956 proved to be another record breaking year when yields averaged 57.5. Total production hit a new high, 329,705,000 bushels, and 1956 corn income, \$395,646,000, came a close second to the post-war high in 1947. In that same year, too, Houston county set the modern county record yield with an average of 75 bushels per acre. 1957, in spite of its soft and unharvested corn in the field, nearly equalled 1956 production figures.

These high yields are only a partial fulfillment of the promise that corn still has for even larger yields and more efficient production. Extensive cooperative research involving the University of Minnesota, neighboring state universities, and the U. S. Department of Agriculture has been particularly responsible. The work of commercial seed producers both in Minnesota and neighboring states has made its contribution. In fact, a new million dollar industry, hybrid seed corn production, has become a major industry in the state, producing about three-quarters of a million bushels of seed corn per year. Like with the auto industry, seed production recently has become more and more specialized with fewer and fewer producers meeting the market needs.

These advances, coming rapidly as Minnesota approaches its centennial, would mean little without being put into practice by Minnesota's progressive farmers. Superior corn breeding, heavier fertilizer application, greater use of rotations, and other soil conserving practices, wider use of machinery, scientific weed control, heavier seeding--all have played a part in this remarkable progress that has made Russia's Matshevich adopt many of our methods and ideas.

Just what such practices mean in better yields, lower costs can be seen by the spectacular "Corn--Yesterday and Today" demonstration three years ago on the Walter and Paul Wenzel farm near Red Wing.

Working with the Wenzels, county soils agent Arnold Wiebusch, county agricultural agent Arnold Wiebusch, G. J. Kunes, and University extension specialists decided to compare modern methods with those used in the twenties. Two adjoining plots on the Wenzel farm were used.

The "Corn Yesterday" plot was not fertilized, except for ~~manure~~ manure; open-pollinated (Minn. No. 13) corn was checked in rows, 12,000 plants per acre; and the corn was cultivated four times.

The "Corn Today" plot was fertilized three times--before planting, at planting, and after the last cultivation; insecticides and herbicides were applied; a modern hybrid was planted on the contour, 18,000 to 20,000 plants per acre; and cultivation was limited.

"Corn Today" shows its superiority to "Corn Yesterday" in many important respects, including the following:

Higher yields, 123 bushels per acre compared to 59 bushels.

Greater returns, \$90 per acre compared to \$35. Higher yields offset the higher cost of production per acre which was \$39 for "Corn Yesterday" and \$64 for "Corn Today."

Lower bushel costs, 52 cents compared to 66 cents per bushel.

Fewer weeds, 60 percent less than the "Corn Yesterday."

Fewer barren stalks, only 2 percent compared to 13 percent.

Less lodging and fewer broken stalks, 5 percent compared to 16 percent.

Thus with the ingenuity of the modern farmer working hand in hand with the scientific knowledge of modern scientists, "Corn Tomorrow" in Minnesota could well make "Corn Today" hopelessly out-of-date in the near future--another mark of progress as Minnesota moves into its second hundred years.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 31, 1958

Immediate release

LAWN GRASS NEEDS FEEDING FOR SPRING GROWTH

Early spring and early fall are the best times to fertilize lawn grasses, a University of Minnesota horticulturist said today. Those are the seasons when grasses awaken to a period of rapid growth if they have sufficient plant food to stimulate them.

According to Richard J. Stadtherr, in charge of grass turf studies at the University, applications of fertilizer at other times, especially during hot weather, may burn the grasses and stimulate crabgrass and other weeds.

Since grasses are heavy nitrogen feeders, the amount of fertilizer recommended is usually figured in terms of pounds of nitrogen per 1,000 square feet of lawn. Kentucky bluegrass requires 3 to 4 pounds of actual nitrogen per 1,000 square feet per season; Merion bluegrass requires a heavier application. The usual recommendation is to apply not more than 2 pounds of actual nitrogen at any one time. Lawns containing a big percentage of red fescues should not receive over 3 pounds per 1,000 square feet per season. If trees are present, doubling the rate beneath the spread of the branches will reduce the competition between trees and grass for nutrients.

A complete fertilizer based on a 10-6-4 formula is 10 percent nitrogen, 6 percent phosphorus and 4 percent potash. An 80-pound sack of this fertilizer would contain 8 pounds of actual nitrogen--enough for about 2,000 square feet of lawn per year.

Stadtherr recommends applying 20 pounds of complete fertilizer to each 1,000 square feet of lawn area now. As long as the grass is not actively growing, it is not necessary to water the fertilizer into the lawn. However, if the grass is growing it is important to give it a thorough soaking after applying the fertilizer.

Many types of fertilizer are available, some organic, derived from such sources as sewage sludge, tankage and soybean meal, and some inorganic, purely chemical in nature. Both types are effective plant foods. Some commercial fertilizers are a mixture of these two. In general, the organic fertilizers, which cost more per unit of actual nitrogen, release their nutrients more slowly than the inorganic, thus giving more uniform stimulation to the grass over a longer period. Addition of organic material also improves the texture of most soils.

Some home owners may be interested in trying a relatively new, high-nitrogen, urea-form fertilizer. Sold under several different trade names, this fertilizer spreads easily and releases its nitrogen slowly. Applied at recommended rates, it will not burn grass leaves, doesn't overstimulate the plants and is effective over a longer period than some of the older-type fertilizers. Since it contains at least 38 percent of actual nitrogen, a much smaller quantity is needed to provide the recommended amount.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 31, 1958

Immediate release

DETERS IS PRESIDENT OF RURAL YOUTH

Garnett Deters, Eitzen, has been elected president of the Minnesota State Rural Youth federation for 1958-59.

As president, he will head an organization of some 1,500 young men and women in 38 organizations throughout the state.

He was elected during the State Rural Youth-Young Men's and Women's conference and short course held last week-end on the St. Paul campus at the University of Minnesota.

Other officers elected were Harriet Olson, Buffalo, vice president; Lois Schwartz, Northfield, secretary; and Wallace Backes, Cold Spring, treasurer.

The Rural Youth program was set up by the University of Minnesota Agricultural Extension Service in 1932 to meet the needs and interests of out-of-high-school young adults 18 to 30 years of age. Major objectives of the Rural Youth program are: to help young people acquire knowledge and skills in farming and homemaking; to assist young people in developing worthwhile social and recreational activities; to provide opportunities for developing rural community leadership; and to help develop community-service programs.

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B-1934-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 31, 1958

Immediate release

MINNESOTA FARM CALENDAR

- April 10-12 Home Economics Career Days, St. Paul campus.
- April 17-24 Northland Recreation Leaders Laboratory, Camp Iduhapi, Loretto.
- April 22-23 Dairy Bacteriology Short Course, St. Paul campus.
- April 28-May 2 Minnesota State Fire School, St. Paul campus.
- May 4-6 State FFA Convention and Vocational Agriculture Short Course,
 St. Paul campus.
- May 4-10 National Home Demonstration Week.
- May 6-8 Beekeepers Short Course, St. Paul campus.
- May 11 4-H Sunday.
- May 16-18 Rural Youth Western Regional Conference, Waseca.
- June 2-6 District 4-H Weeks--Morris, Crookston, Grand Rapids.
- June 10-13 4-H Junior Leadership Conference, St. Paul campus.
- June 15-21 Boys State.
- July 2 Field Day, Rosemount Agricultural Experiment station.

For more information, contact the Information Service, Institute of
Agriculture, University of Minnesota, St. Paul 1.

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B-1935-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
March 31, 1958

Immediate release

DAIRY BACTERIOLOGY SHORT COURSE SCHEDULED

Twenty-four dairy plant workers from Minnesota will attend a dairy bacteriology short course April 22 and 23 on the St. Paul campus of the University of Minnesota, according to J. O. Christianson, director of agricultural short courses.

Program chairman is J. C. Olson, Jr., dairy bacteriologist at the University.

The course is primarily for personnel in field service departments, who are now doing or are planning to do microscopic work on raw milk and dried milk.

Instruction will cover the direct microscopic counting procedure.

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

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B-1936-pjt

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

To all counties
For use week of
April 7 or later

FARM FILLERS

Here's a point for sheep men to keep in mind. Prospects are that ewe lambs will bring \$2 to \$3 more per hundred pounds than wethers this year, according to R. M. Jordan, livestock scientist at the University of Minnesota. This is because many sheep men are looking for ewes to expand their flocks. However, farmers will cash in on this premium only where lambs are marketed in large numbers.

* * *

Alfalfa-grass or alfalfa-clover-grass pasture mixtures will require intensive grazing this year to get the most yield per acre and still preserve the legume stand, say agronomists at the University of Minnesota. But grazing should not start until the alfalfa is 8-10 inches tall.

* * *

As a result of farm fires during 1957, more than a million and a half dollars' worth of Minnesota farm property went up in smoke, reports Glenn Prickett, extension farm safety specialist at the University of Minnesota. Most common causes of these fires were defective and misused electrical equipment, defective, overheated and exploding heating units, sparks from chimneys, motors, welders.

* * *

Arny flax, a new variety, has been released jointly by the University of Minnesota and the U. S. Department of Agriculture. About 500 bushels of seed have been allotted to approved growers through county seed distribution committees for 1958 planting in Minnesota. Seed produced this year will be available to flax producers for 1959 planting.

* * *

A sales tax in Minnesota would likely put a heavier portion of the total tax burden on farmers, according to Philip M. Raup, agricultural economist at the University of Minnesota. Income tax falls relatively lightly on the farmer. A sales tax, though, is based on volume of purchases. Since farmers are heavy buyers of household goods and farm supplies, both for the farm business and for the home, a sales tax hits them harder than non-farmers. * * *

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
April 1 1958

To all counties
For use week of
April 7 or later

SAFETY TIPS
LISTED FOR
HEAT LAMPS

As helpful as they are at lambing or farrowing time, heat lamps are a serious fire hazard if they aren't handled carefully, says County Agent _____.

Glenn Prickett, extension safety specialist, and Vernon Meyer, agricultural engineer at the University of Minnesota, list these rules for preventing costly accidents with heat lamps.

Keep the lamps at least a foot from straw, hay, shavings or anything else that burns easily. If there is any danger of breakage from moisture, use only hardened glass bulbs. You can now get both hard and soft glass in both clear and red glass.

Always use a porcelain socket for heat lamps and have the bulb protected with a metal guard.

Suspend the lamp or lamp unit with a chain, wire or bracket. A chain is best, because it makes it easier to adjust the height of the lamp. Connect the chain to the ceiling with a large hook. A bent nail may turn or come loose. In any case, don't suspend the lamp from the electrical cord.

Be sure your electric circuit isn't overloaded. Use no more than four 250-watt lamps on a 15-amp. No. 14 wire circuit and no more than seven 250-watt lamps on a 20-amp. No. 12 circuit.

Avoid sockets with individual switches. Heat lamps should be turned off and on by plugging in or removing the extension cord from the outlet.

Don't allow lamps to become scratched. Scratches from laying on the floor or other hard, rough surfaces will eventually cause breakage.

Make sure the cord for the unit is the heat and moisture-resistant type.

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

To all counties
For use week of
April 7 or later

BIRDSFOOT TREFOIL
VARIES IN RESULTS
IN MINNESOTA

Birdsfoot trefoil has varied widely in pasture trials in Minnesota.

In some cases, research workers and farmers have found, it was possible to establish good stands that produced well for five or more years. In other situations, the stands dwindled away in two or three years.

Lack of winter hardiness is one reason why trefoil often doesn't survive.

However, trefoil when managed correctly, can be a good pasture crop, according to Bill Hueg, extension agronomist at the University of Minnesota. He says this could be a good time for farmers to find out how it performs on their own land.

Trefoil shouldn't be the only pasture on the farm, though, because it starts later in spring than most grass or legume pastures. Hueg recommends these steps for establishing and managing birdsfoot trefoil:

Use land worth improving and suitable for pasture. Fall plowing is best, because that kills old sod. Apply lime and fertilizer according to soil test.

Treat the seed with trefoil inoculant. Milk can be used to make the inoculant "stick." Use two or three times the normal amount of inoculant where trefoil is being raised for the first time.

Plant the Empire variety of trefoil, early in spring. Seed 5 pounds trefoil with 6 pounds bromegrass or 5 pounds timothy. If possible, use band-seeding. Don't seed more than a half inch deep. Oats is a good companion crop, but it should be pastured when 12 inches high or harvested as silage. If there's no weed problem, trefoil can be seeded alone.

Empire usually isn't ready to graze until mid-June or July. But it stands continuous grazing better than alfalfa or red clover and is fine for rotational grazing. When cattle have grazed an area, clip it and drag the droppings. Second growth trefoil recovers slower than alfalfa. There is no bloat danger from pasturing trefoil.

Put up surplus growth as silage or hay. Finally, keep up the soil supply of lime, phosphorus and potash on established birdsfoot trefoil stands.

University Farm & Home News
Institute of Agriculture
University of Minnesota
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To all counties
ATT: 4-H CLUB AGENTS

For use week of
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SNACKS CAN BE
BEAUTY AIDS

Do you always want to feel and look your best?

Good looks are not just accidental. An important factor in appearance is your diet. Complexion problems, decaying teeth, overweight or general fatigue can stem from eating improper foods.

During your teens nutritious food is required probably more than at any other time in life, says Club (Home) Agent _____. As a teenager you no doubt like to snack. These snacks can help you get enough of the protective foods or they can ruin your whole dietary plan.

Avoid eating snacks that contain only calories, urge extension nutritionists at the University of Minnesota. When hunger pangs strike, don't fill up on candy and pop. Think of your weight and complexion. Choose foods that are beneficial, not detrimental.

Milk is almost a necessity if the diet is to be adequate. Ice cream is a nutritious food as well as being a tasty snack. Milk shakes are good, too. When the gang comes over, try making a beverage of crushed graham crackers, milk and vanilla ice cream beaten with a rotary beater or blender. Your friends will want seconds.

Don't forget to eat fruits. After school, reach for an apple or orange instead of candy. For a party, serve a fruit platter, so cleverly arranged it will add a distinctive touch to the refreshment table. The fruit will provide good eating, too.

Meat is another important food in the diet. Hamburgers and hot dogs are satisfying and are good for you. Dips and spreads can supply delicious new tastes to party snacks and provide important nutrients.

Choosing your snacks wisely can make a difference in the way you feel and the way you look.

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

To all counties
ATT: HOME AGENTS
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GOOD PRESSING PAYS DIVIDENDS

Good pressing can make the difference between a smart professional looking garment and one you might not consider wearing.

That's a tip Home Agent _____ passes on from Ethel Gorham, assistant professor of clothing at the University of Minnesota, to women interested in clothing construction. As women plan their spring sewing, they will want to keep these suggestions in mind.

Good pressing takes time, patience and careful manipulation, Miss Gorham says, but is worth the extra time. She gives these suggestions to guide the home-maker in pressing:

- . Test a scrap of the fabric for (1) proper ironing temperature, (2) amount of moisture needed and (3) amount of moisture which should be left in the fabric if it is wool. The temperature can be slightly higher when moisture is present -- as when using the steam iron or a dampened press cloth.

- . If possible, press from the wrong side to avoid shine. Or use a press cloth to protect the fabric when pressing from the right side. In pressing wool, use a woolen press cloth next to the right side of the garment.

- . Press on the straight of the fabric, not on the bias. Press from a wide area toward a narrower one -- for example, from the fold of the hem toward the inside edge of the hem when shrinking out fullness.

- . Leave some moisture in wool at the end of pressing and let the fabric dry in position as pressed on the ironing board, pinned in place to prevent shrinkage.

- . Avoid fusing the fabric or giving it shine from too much heat or pressure or both. Use a low setting on the iron for nylon, Dacron, Orlon and acetate. Use a low setting below 250° F. for Dynel to avoid fusing, which will be permanent.

- . Use moisture in pressing to (1) remove wrinkles, (2) give crease lines or (3) to re-shape. In general, the heavier the fabric, the greater the amount of moisture needed to moisten the fibers enough to reshape the fabric in the desired way. Moisture should always be used in pressing wool. Heat without moisture will make wool lose its softness and elasticity.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
April 1 1958

For immediate use

A U. of M. Ag. and Home Research Story

LATE VARIETIES
ARE BEST FOR
OAT SILAGE, HAY

If you plan to harvest your oats specifically for hay or silage this year, use a late variety.

But if you plan to have a particularly large acreage of oats for silage, you might be better off planting both a late and a medium-maturing variety. This will make it possible to spread the harvest season over a longer period.

Rodney Briggs, University of Minnesota agronomist, says 1957 trials at five stations showed that late varieties consistently gave the highest forage yields. This held true both on a wet and on a dry basis.

Highest silage yielder of all oat varieties in the 1957 trials was Rodney, averaging 11.38 tons per acre. Branch and Garry, also recommended late varieties, yielded 10.2 and 10.5 tons, respectively.

When the yields were figured on a dry-matter basis, these three varieties again yielded more than medium or early-maturing varieties. Rodney averaged 3.85, Branch, 3.84 and Garry 3.66 dry tons per acre.

These tests were conducted at University branch experiment stations at Waseca, Morris, Crookston, Grand Rapids and Duluth.

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

SPECIAL TO WILCOX

County Agent Introduction

How well a farmer handles his forage makes a big difference in his milk check. That's the subject under discussion here by George Oraskovich, left, Carlton county farmer, Charles Simkins, extension soils specialist at the University of Minnesota, and Sigmund Restad, Carlton county agent. Oraskovich last year found that by managing his pastures well, he was able to feed his 26 cows for the entire summer on just 10 acres. Here, Simkins and Restad examine some top quality grass silage which Oraskovich put in his silo last summer.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 2 1957

HELPS FOR HOME AGENTS

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

In this issue:

Family Planning and Sharing
Prenatal Diet Important
Give Baby New Foods Gradually
Costs Twice as Much for Two
New Annuals for 1957

New Rose Varieties
America's Favorites
After the Radishes
A Place in the Sun
Rapid Bloom

FAMILY LIFE

Family Planning and Sharing

One of the most effective ways of building family unity is by planning and sharing -- discussing together family problems and setting goals and standards for the family.

Charles Martin, extension family life education specialist at the University of Minnesota, says that both the family unit and the individuals themselves benefit from planning and sharing. Besides building a unified family through agreement of its members rather than by authority of the head, the practice of planning and sharing places emphasis on the individuality of its members and their personality adjustment rather than their unquestioning obedience to the family. Children develop the ability for independent thinking and build good attitudes toward responsibilities. Moreover, as a result of planning and sharing, children get training and practice in problem solving and preparation for new experiences.

Family planning and sharing should operate in decisions made regarding work, money, housing, use of family possessions, recreation, standards of conduct as well as many other areas.

-jbn-

FOOD AND NUTRITIONPrenatal Diet Important

A baby's health may suffer during pregnancy even though the mother's diet is only moderately deficient. Nature does not protect the baby at the mother's expense; both of them will suffer if her diet is poor. The quality of the mother's prenatal diet can't be stressed enough, says Annette Gormican, assistant professor of home economics at the University of Minnesota.

* * *

Give Baby New Foods Gradually

The milk diet of babies must be supplemented early in life. The most successful additions of new foods are made gradually according to Annette Gormican, assistant professor of home economics at the University of Minnesota. They should be given at first in small amounts so the child may become accustomed to new flavors and textures. Foods the baby accepts should be given soon again so that they become familiar. A food he rejects should be offered again after a few days. A food dislike may last only a few days and if a food is not forced upon him, chances are good that he'll accept it another time.

* * *

Costs Twice As Much for Two

The old saw, "Two can live as cheaply as one," has been spiked again! It costs at least twice as much, according to the U. S. Department of Agriculture, which has just published the first of a series of reports on Food Consumption of Household in the United States.

On the basis of the amount of food actually used in representative households in cities and towns during a week in spring, 1955, the single person living alone used \$11.17 worth of food in a week, while two people used an average of \$23.56 worth. For a family of three, the figure went up to \$31.73; for four, it was \$37.49, and for families of seven or more, the weekly food bill was \$45.14.

HOME YARD BEAUTIFICATIONNew Annuals for 1957

Looking for something new to plant in the flower garden this year? In this year's list of All-America selections of flowers, there are three new annuals: Glitters petunia, Red Satin petunia and Twinkle phlox.

According to C. G. Hard, extension horticulturist at the University of Minnesota, Glitters petunia is a scarlet and white star-patterned petunia. Plants grow to a height of 12 inches. Because of its low-growing habit, it may be used as an edging plant or for bedding.

Red Satin petunia is a vivid, non-fading, deep scarlet flower. A prolific bloomer, the plant grows to a height of about 12 inches. The University horticulturist suggests planting Red Satin in the foreground of the flower border or in raised plant beds. To bring out its vivid color, it can be contrasted with a white petunia such as the Paleface.

Twinkle phlox is a low-growing annual, six to eight inches in height, with small, crisply pointed stars of salmon pink, cream, white with red, purple, lavender and rose. It can be used as an edging plant or a bedding plant.

Seeds of petunia and phlox should be started indoors to extend season of bloom.

Other new annuals include a double-flowered Morning Glory, a new single-flowered French marigold and a new dwarf-type verbena.

* * *

New Rose Varieties

To many homemakers, adding a new rose or two to the flower garden each year means new adventure in gardening. Among the new rose varieties this year are the All-America award winners, Golden Showers, a fragrant yellow ever-blooming pillar and climbing rose, which can be grown without support or trained on a trellis or along a fence, and White Bouquet, a new floribunda with sparkling white gardenia-like flowers.

C. G. Hard, extension horticulturist at the University of Minnesota, urges gardeners to order rose plants from Minnesota nurseries to be sure they are grown on hardy rootstocks.

HOME YARD BEAUTIFICATIONAmerica's Favorites

Do you know what flowers grown from seed are America's favorites? Here they are in the order of popularity: zinnias, marigolds, petunias, nasturtiums, asters, morning glories, sweet peas and snapdragons.

* * *

After the Radishes

If you arrange your vegetable garden so the radishes are on the outside row, you can make the space do double duty. Since radishes are harvested early, there's still plenty of time to plant zinnias or marigolds in the same spot. Or, suggests Orrin C. Turnquist, extension horticulturist at the University of Minnesota, plant the flower seed at the same time as you plant the radishes. Then, about the time the vegetable garden is beginning to look forlorn, you will have a beautiful border to catch the eye and to provide cut flowers as well.

* * *

A Place in the Sun

All annual flowers and most biennial and perennial flowers do best when planted where they will receive full sun all day long. Where they receive less than half a day of sun they are sure to be pretty sad specimens. So for your shade spots resign yourself to ivy, plantain lilies, lily of the valley, vinca minor and the like, saving the sunny beds for the annuals.

Rapid Bloom

While no gardener would want all of his garden to bloom early, leaving nothing for last summer and fall, still it's nice to know what will rush to bloom fast from spring-planted seeds. Here are the quickest annuals to flower: alyssum, candytuft, clarkia, linaria, nemophila, and dwarf French marigolds.

-jbn-

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

**FIRST E. G. CHEYNEY SCHOLARSHIPS AWARDED BY
MINNESOTA FORESTRY ALUMNI ASSOCIATION**

The first E. G. Cheyney Memorial Scholarships were awarded at the annual March meeting of the Minnesota Forestry Alumni Association. Scholarships of \$100 each were awarded to Roger Myhre, Grand Meadow, Minnesota, and Robert Thompson, St. Paul, Minnesota. The Scholarships were presented by Stanley Ringold, President of the Association, and F. H. Kaufert, Director of the University of Minnesota School of Forestry.

The Scholarship was named and established in honor of Professor E. G. Cheyney, a member of the School of Forestry staff from 1904 to 1947, who recognized the importance of speaking and writing skills in the education of professional foresters and emphasized this in all of his classes. 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 six forestry textbooks.

The E. G. Cheyney Scholarships are supported by contributions from the Alumni of the School of Forestry.

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

SPECIAL

Immediate release

ESTABLISHMENT OF BROWN COUNTY SCD APPROVED

Establishment of a new Soil Conservation District in Brown county was approved at the recent meeting of the Minnesota Soil Conservation Committee, held on the St. Paul campus of the University of Minnesota.

This brings the number of soil conservation districts in the state to 78, according to Matt Thorfinnson, executive secretary of the State Committee. The new district will include all but three townships of Brown county.

Supervisors named for the Brown district are Waldo G. Erickson, Springfield, 2 years and B. Norman Knowles, Morgan, 1 year. Elections to name three other supervisors for the district will be held later.

In other action, the state committee:

1. Set up a referendum for April 21 in Wadena county, to determine whether a soil conservation district should be established there.
2. Reviewed and approved election returns from the Winona Soil and Water Conservation District, which was recently formed by consolidation of two other districts--the Whitewater district and the Rollingstone, Stockton and Gilmore Creek district. Supervisors elected March 11 for the new district were: Howard Andersen, Altura, 5 years; Charles Taylor, Utica, 4 years; Norman E. Heim, St. Charles, 3 years; Ralph Herber, Rollingstone, 2 years; Robert Wessel, Winona, 1 year. Taylor was named chairman of the district, Wessel is vice-chairman and Heim is secretary-treasurer.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 2 1958

ATT: Agricultural Agent
Home Agent
4-H Club Agent

GARDEN FACT SHEET FOR APRIL

By O. C. Turnquist

C. Gustav Hard

Extension Horticulturists

Vegetables

1. Apply a liberal amount of barnyard manure to the garden plot at the time of soil preparation. Use 3-4 bushels of well rotted manure or compost or similar material per 100 square feet. This will supply organic matter to the soil and will increase the water-holding capacity as well as provide for better aeration and easier working.
2. After spading or plowing down the manure, apply a complete fertilizer like 5-10-5, 8-10-6, 5-20-20 or 8-16-16 at the rate of 3 lbs. per 100 square feet. Rake this into the upper 2 or 3 inches of soil before planting.
3. As soon as the frost is out of the ground and the soil dry enough so it does not stick to implements or shoes, the early crops may be sown directly in the garden. These cool-season crops include spinach, lettuce, radish, turnips, peas, kohlrabi, cabbage, cauliflower, broccoli, Brussels sprouts, head lettuce, potatoes, onions, parsnips, carrots, beets, rutabagas, asparagus and rhubarb.
4. Don't set out tomato plants too early. The soil as well as the air temperature should be warm for growth and development. Wait until Memorial Day before transplanting tomatoes to the garden.
5. If you want to grow your own plants to be sure of getting the variety or hybrid you want, sow the seeds indoors in mid-April in bands or new jiffy-pots. It takes only six weeks to make a good plant from seed.

6. Other warm-season crops like beans, corn, cucumbers, squash and melons should not be seeded until mid-May when soil and air temperatures are warmer.
7. When planting potatoes, use certified seed which will insure the fact that the potatoes are free of disease. Bags with certified seed bear a blue tag indicating that the seed is healthy.
8. Check Extension Folder 154 on new varieties for planting this year. These have been tested and found to be suitable for Minnesota conditions.
9. Apply granular heptachlor or dieldrin to the soil at planting time to control maggots in the soil. Follow directions on the container for rate of application.

Fruits

1. Fruit trees may be pruned until the time growth starts. Cut out dead branches and those that cross or rub each other. Weak wood growing in toward the center of the tree should be removed.
2. Use a complete fertilizer or ammonium nitrate around fruit trees at the rate of 1 lb. or 1/2 lb., respectively, per inch of diameter of the tree. Apply early in the spring as growth starts. Spread the fertilizer out under the branches.
3. Clean out your raspberry rows now and provide a proper support for the canes that will bear this season. If the old dead canes were not removed last fall, cut them out now and thin out the young bearing canes to not over four per foot of row or 10 per hill.
4. Do not remove the straw mulch from strawberries until the leaves are starting to push through the mulch. After removing the mulch, keep it alongside the row so it will be handy for rapid cover if temperatures should fall again.
5. All fruit plants may be set out as soon as the ground may be worked. Be certain to prune raspberry canes back to 3 or 4 inches from the ground.

Ornamentals

1. April is the month to put in a foundation planting. First, be sure the soil has a high level of nutrients and also is well drained. Improve the soil in the foundation area by adding organic matter, or if the soil is very poor it would pay to replace the soil with good top soil. Plant shrubs and evergreens at least 3 to 4 feet from the house. Select only hardy, fine-textured materials of the proper height. Be careful not to crowd the plants too closely.
2. When setting out shrubs, prune them back after planting. This is necessary to balance the loss of roots and causes new branches to start near the ground. This does not apply to evergreens.
3. Early spring lawn care will consist of raking up the fallen twigs and other debris. Use a broom rake to avoid injury to the grass roots. Do not rake out all of the dead grass. This dead grass will soon rot and add valuable organic matter to the soil. Fertilize the lawn, using a complete fertilizer high in nitrogen. A safe guide to follow is to add enough fertilizer so that each 1,000 square feet will receive two pounds of actual nitrogen. This will take 20 pounds of a 10-8-6 or 40 pounds of a 5-10-5 fertilizer per thousand square feet. If your lawn has been doing poorly, a soil test may reveal part of the problem.
4. Uncover roses as soon as the frost is out of the ground and the danger of freezing is past. A few light frosts will not hurt the roses. Check the roses periodically during spring to note if any mildew diseases are beginning. If mildew persists, use a spray or dust with Ferbam.
5. Plant hybrid tea roses in good well-fertilized soil so that the crown is about 2 inches below the soil surface. Hybrid tea roses and flora-bundas prefer a soil high in organic matter.
6. Seed hardy annuals as soon as the soil can be worked. This group includes annual phlox, calendulas, larkspur, sweet peas, cosmos, portulaca zinnias and marigold.
7. When spacing perennials in the flower border, consider their mature size. Crowded plants do not produce good flowers and may make diseases and insects a greater problem.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 3, 1958

Immediate release

STUDENT FORESTERS BEGIN STUDIES AT CLOQUET

Forty-eight students in the School of Forestry at the University of Minnesota this week started a summer training session at the 3500-acre Cloquet Forest Research center.

Directing the session is Bruce A. Brown, assistant professor of forestry. This is the 35th time the two and one-half month session has been held.

Instruction will include use of aerial photographs in forest management, wildlife census methods, field problems in game management, forest cultural practices--such as marking, thinning and planting--and an evaluation of disease and insect problems in forests.

The students will visit forest product industries in the Cloquet-Duluth area and observe forest management practices on private, state and federal forest lands in the northern part of the state. There will be frequent talks by practicing foresters from industry and government.

This year's student group will be the first to use a new messhall, which has taken shape recently under guidance of T. Schantz-Hansen, director of the Forest Research center.

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B-1937-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 3, 1958

Immediate release

NEW CHEMICALS FOR HOME GARDENER

New chemicals are taking much of the gamble and drudgery out of home gardening.

Many of the newest chemicals have not been adequately tested in this area but some of them show great promise, say University of Minnesota horticulturists, entomologists and plant pathologists. Among the newer chemicals developed for various uses in the home garden and on the lawn are these:

- A combination insecticide, herbicide and fertilizer for the home lawn. This material looks promising for keeping crabgrass out of the lawn for a whole season. It also controls grubs and various soil insects and fertilizes the lawn with enough nitrogen for one normal lawn feeding.

- A combination of 2,4-D and disodium methyl arsenate for crabgrass control. This is a combination material which controls both broadleaved weeds and crabgrass.

- Urea-form fertilizer for lawns. A mixture of urea and formaldehyde, this fertilizer releases the nitrogen gradually over a period of several months so there is little danger of burning the grass.

- New and better soil fumigants. These fumigants tend to kill weed seeds, nematodes and disease organisms. Use of one of these materials before seeding a new lawn will practically eliminate the weed problem in the lawn the first season. The possibility of using these soil fumigants in the vegetable garden is now under study by University of Minnesota horticulturists.

- Gibberellic acid. In some experiments around the nation, gibberellic acid has resulted in unusual elongation and other changes in vegetable and ornamental plants. In University of Minnesota experiments, gibberellic acid did not increase vegetable crop yields, in many instances producing adverse rather than beneficial effects. University of Minnesota horticulturists recommend that gardeners delay use

(more)

add 1 New chemicals for home gardener

of this material until further information is available from experiments now in progress.

. A fruit-setting spray for use on tomatoes. The advantage of the new spray is that it contains materials which make it possible to spray the entire plant instead of confining the spray to blossom clusters alone.

. Insecticides such as malathion and Diazinon which control both mites and insects. Malathion, the least hazardous of the newer insecticides for the vegetable garden, is also useful in controlling aphids and mites on fruits. Diazinon is approved for use on fruits but not on all vegetables. It has a somewhat longer lasting effect than malathion.

. A rabbit repellent - trinitrobenzene-aniline. This is one of the most effective chemical repellents for rabbits and very easy to apply. It should not be used on evergreens, however.

. A tree-wound coating chemical in an aerosol container for easy spraying on fruit or shade tree wounds.

. A soil fungicide, PCNB. Mixed with the soil before planting, this fungicide will control club root in cabbage and related plants, various root rot diseases, potato scab and damping off.

. Dinitro phenyl crotonate fungicides for control of powdery mildew. This is a useful material for home gardeners, since powdery mildew is a foliage disease of numerous fruit, vegetable and ornamental plants.

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B-1938-jbn

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 3, 1958

* * * * * * * * *
* A Farm and Home *
* Research Report *
* * * * * * * * *
Immediate release

SHEARING FEEDER LAMBS CAN PAY IN SPRING

It's a good idea to shear feeder lambs at this time of year.

Shearing now will keep the lambs cleaner, meaning the carcasses will yield higher when marketed. Also, sheared lambs will eat more and therefore gain faster.

Research conducted by the University of Minnesota in 1957 showed that lambs sheared in March, about 28 days before being marketed, ate more grain. In half of the trials, lambs sheared at this time also gained faster than did unshorn lambs.

These trials were conducted by R. M. Jordan, livestock scientist, and Harley Hanke and H. G. Croom, Morris station staff members.

In general, there are three reasons why sheep men shear feeder lambs. First, it will reduce the initial cost of the feeder lamb. Second, shorn lambs can be fed in less space and third, shorn lambs won't get as muddy in wet weather. A lamb in full fleece in a muddy feed lot can carry up to 10 or 15 pounds of mud in its wool. This can mean a big discount at market time.

But whether shearing pays depends on a number of things: the season, whether the lambs have shelter, price of shorn lambs in comparison with lambs in full fleece and amount and price of the wool.

Usually, shearing feeder lambs pays off most in spring. Trials at the University's West Central Experiment station, Morris, showed that shearing in fall or in winter had little effect on daily rate of gain. However, the shorn lambs had a carcass yield of 1-3 percent more and graded slightly higher than did unshorn lambs.

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B-1939-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 3, 1958

Immediate release

SPRING CHICKEN PLENTIFUL THIS MONTH

When you plan April menus, you'll be wise to include foods in plentiful supply during the month, particularly if you must keep an eye on the budget, according to Mrs. Eleanor Loomis, extension consumer marketing agent at the University of Minnesota.

Broilers and fryers and dried prunes are at the top of the U. S. Department of Agriculture's list of plentiful foods for April.

Because broilers and fryers are in heavy supply the country over and reasonably priced, spring chicken deserves a place of honor on the family platter during April. Though frying is the most common way of cooking these young, tender birds, many homemakers are going in for easy oven barbecues for variety, Mrs. Loomis says.

California has produced large crops of prunes the past two summers, with the result that this fruit is in record supply. Modern dried prunes are tender enough to eat raw, Mrs. Loomis points out, but raw or cooked, they make a nutritious snack.

Canned pears will also be abundant this month. Supplies are even larger than they were a year ago.

Two favorite vegetables--canned and frozen green peas and sweet corn--continue to be plentiful and good buys. Watch for week-end specials on these vegetables at your local markets.

Plenty of honey is available this month for sweetening pancakes, waffles and French toast and for use in baking cakes and cookies.

Generous supplies of milk and dairy products are assured for April as milk production rises seasonally.

Peanut butter is another welcome plentiful for April.

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B-1940-jbn

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

Timely Tips for The Farmer, issue of April 5

Grass fires in fence rows readily ignite untreated wood fence posts once they have begun to decay at the ground line. The posts often burn off at the ground line and sometimes burn completely. At any rate, fence-row grass fires greatly increase fence maintenance and repair costs.

--John E. Neetzel

This may be the year when early marketing of your hogs will give you the greatest profit. Plan now to push pigs with the best rations.

--Henry Zavoral

Our nation's surplus of milk represents about one glass of milk per person per week. If consumers refuse to buy cheese, butter or other dairy products because a previous purchase was of poor quality, here's how they are hindering dairy surplus reduction in terms of glasses of milk: one pound of Cheddar cheese is equivalent to seven glasses of milk, one pound of butter equals 46 glasses of milk, and 12 ounces of cottage cheese equals 6 glasses of milk. If the dairy industry is to maintain its markets and gain additional outlets, high quality must be a permanent feature of all dairy products.

--James H. Cholson

The easiest and often the cheapest way to raise dairy calves is to feed them whole milk for four to six weeks. Calves can be shifted from whole milk to dry feed at four to six weeks of age. From then on, the most important feed factor is plenty of good legume hay.

--Harold Searles

timely tips - 2

Aster yellows virus disease, which caused a 15 to 20 percent yield loss in flax during 1957, does not carry over from year to year in seed, soil or crop refuse. The disease is spread from infected wild perennial plants by six-spotted leafhoppers. Therefore, there is no danger in planting seed from fields that were infected with aster yellows virus last year.

--Herbert Johnson

Prospects are for a big hatch of chicks this year. That means this is a good year to push early pullets to maturity as fast as possible to get them into production while the seasonal rise in egg prices is still under way. The large number of yearling hens now in flocks will be out of the race by that time.

--Cora Cooke

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

SPECIAL

Immediate release

UNIVERSITY STUDENTS WILL ATTEND FLOWER JUDGING CONTEST

Three University of Minnesota students and their coach, R. E. Widmer, associate professor of horticulture, will leave April 8 for the Inter-Collegiate Flower Judging contest at North Carolina State college, Raleigh, North Carolina.

The team will compete with teams from approximately 20 other colleges. Team members are Harland Chapman, sophomore from Osakis; Wayne Lough, junior from Rochester; and Gary Zitzer, sophomore from Crookston. All three are students in the College of Agriculture, Forestry and Home Economics.

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

SPECIAL

Immediate release

FIRST E. G. CHEYNEY SCHOLARSHIPS AWARDED

The first E. G. Cheyney Memorial scholarships were recently awarded to two University forestry students by the Minnesota Forestry Alumni association.

Scholarships of \$100 each were presented to Roger Myhre, Grand Meadow, Minn. and Robert Thompson, 973 Laurel, St. Paul. The scholarships were presented by Stanley Ringold, president of the association, and F. H. Kaufert, director of the University of Minnesota School of Forestry.

The scholarship was named and established in honor of the late Prof. E. G. Cheyney, a member of the School of Forestry staff from 1904 to 1947. Cheyney recognized the importance of speaking and writing skills in the education of professional foresters and emphasized this in all of his classes.

Cheyney taught English to St. Paul campus students during both World Wars, and was known for his conviction that excellence in speaking and writing could be as important to success following graduation as professional training.

Also, he was an author in his own right. He wrote the Scott Burton books for boys and six forestry textbooks. He died in 1949.

The E. G. Cheyney scholarships are supported by contributions from the alumni of the School of Forestry.

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

SPECIAL

Immediate release

SEVERE FOREST TENT CATERPILLAR ATTACK EXPECTED

The forest tent caterpillar attack is expected to be at least as severe in St. Louis county this year as it was in 1957.

Also, the troublesome caterpillar is likely to show up on aspen trees in a larger area than was affected last summer.

Entomologist A. C. Hodson at the University of Minnesota bases this prediction on an egg mass survey conducted in the area last fall. He points out that the current Minnesota outbreak, which started in 1948, has lasted longer than any previous tent caterpillar infestation. The last one persisted for only 5 years, ending in 1938.

Heaviest defoliation this year is expected in an area extending roughly from Cloquet on the southern boundary to Cotton in the north, and between Twig in the east and somewhat beyond Brookston on the western boundary. The outbreak area may extend northeast a short distance beyond Island Lake. There may also be an isolated attack just south of Wrenshall in Carlton county.

Entomologists can't explain exactly why the current tent caterpillar outbreak has lasted for so long. One reason, though, may be that the large gray flesh fly has lost some of its effectiveness recently. This fly has a parasitic effect on the forest tent caterpillar. Maggots of the fly feed on pupae in caterpillar cocoons. But for some reason, parasitism from the flesh fly has been lower recently than anticipated. This might possibly be due to a fungus disease which kills the fly, according to Hodson.

Conspicuous defoliation where the attack occurs will start on aspen trees in late May and will show up most during the first two weeks of June.

Tent caterpillars can be controlled by aerial spraying with DDT. Due to the cost of this treatment, however, it has been recommended only for resorts and other high-value areas. Recent research has shown that a tent caterpillar won't kill many

(more)

add 1 forest tent caterpillars

aspen trees, but it will reduce tree growth by as much as 2 cords per acre after 2-3 years of heavy defoliation. Whether it pays forest owners to spray would depend on the available markets for this timber.

"Light trap" surveys in the area in recent years have shown the caterpillars are present around the general area in small numbers, but haven't disappeared from any individual spots.

The light trap is a device used to trap caterpillar moths at night. Recent tests with this device indicate that it is better than older caterpillar survey methods, says Hodson. It gives entomologists advance warnings of caterpillar buildups and gives them a good guide for predicting changes in caterpillar populations.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 8, 1958

Immediate release

WHEEL-TRACK PLANTING PROTECTS SOIL, FIGHTS WEEDS

OWATONNA--Wheel-track planting can be a powerful antidote for soil erosion and weed problems in the corn field, a Steele county farmer has learned.

Marvin Meixner last summer compared wheel-track planting with conventional corn planting on his farm near here, and this is what happened:

Corn planted by the wheel-track method yielded 70 bushels per acre--five bushels more than where he planted it in the usual way.

There was less soil erosion in the wheel-track-planted corn and weeds didn't grow as well there.

Besides, Meixner found there is much less field work involved in wheel-track planting. This practice means hitching the planter so it plants in the wheel tracks of the tractor on undisked, but freshly-plowed land.

Meixner made the comparison on yellow clay soil. On one part of the field, he spring plowed, disked the field, went over it with a spring tooth and dragged it. He planted corn, dragged the field once more and cultivated the growing corn twice.

On the other part of the field, he spring plowed the land, planted the corn in the tractor wheel tracks with no further field tilling and cultivated only once.

Why did wheel-track planting bring such good results? J. Russell Gute, Steele county agent, explains it this way: The soil compaction caused by the tractor provides the only seedbed preparation necessary. This leaves the soil loose between the rows and provides a poor seedbed for weeds.

With regular seedbed preparation, weed seeds usually have two or three days head start on the corn, meaning the farmer must cultivate the corn when it is small. This cultivation, unless done very carefully, can kill many corn plants. But with wheel-track planting, corn and weed seeds in the row germinate at the same time, while weed seeds between the rows remain "dormant." That means the corn is usually 6-12 inches high before any cultivation is needed.

Also, the loose soil between the rows absorbs water readily. This helped Meixner reduce soil erosion.

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B-1941-pjt

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
April 8 1958

To all counties
For use week of
April 14 or later

FARM FILLERS

It's a good idea to shear feeder lambs at this time of year, says R. M. Jordan, livestock scientist at the University of Minnesota. He says shearing now will keep lambs cleaner, meaning carcasses will yield higher when marketed. Also, sheared lambs will eat more and therefore gain faster.

* * *

A trend toward more corn and soybeans and less small grains is continuing in Minnesota. Agricultural economists at the University of Minnesota point out that corn acreage in 1956-57 was 8 percent above the 1946-55 average, in spite of acreage controls. Soybean acreage has doubled.

* * *

If you plan to raise soybeans this year, choose a variety developed for your particular zone, advises Bill Hueg, extension agronomist at the University of Minnesota. Also inoculate the soybeans before planting. Seed that has been badly weathered or damaged may need treatment with a fungicide.

* * *

By adding 30-50 pounds of actual nitrogen per acre after each grazing, you can make your grass pastures remain productive throughout this summer's grazing season. This tip comes from Charles Simkins, extension soils specialist at the University of Minnesota.

* * *

In 1946, "land contracts" were used to finance about 20 percent of all farm sales in Minnesota. This had increased to 38 percent of all sales in 1957, according to a survey by agricultural economists at the University of Minnesota. With a land contract, legal title to the land remains with the seller until payments on the contract have been completed. Under a mortgage, title passes at the time of sale.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 8, 1958

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH FEATURE *
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Immediate release

ANTIBIOTICS MAY HAVE BIGGER ROLE AGAINST PLANT DISEASES

Antibiotics, already doing yeoman service against diseases in humans and livestock, may be a formidable weapon of the future against diseases of farm crops.

The fact that antibiotics can slow down or completely kill some plant disease organisms has been known for some time. About all that remains is to develop economically practical methods of treating crops with materials containing antibiotics.

Antibiotics are now used on a few high-value, intensively-grown crops. For example, some apple growers use antibiotic-containing sprays to control fire blight in their trees.

This doesn't mean that scientists have all the information they need on antibiotics. But one thing is certain: antibiotics have some remarkable--and often weird--effects on organisms that cause plant diseases.

J. J. Christensen, head of the plant pathology department at the University of Minnesota, says that in these effects are terrific potentials for future application.

Some of the effects of antibiotics on plant diseases would help farmers and some wouldn't. For example, Christensen and Patricia Allison, formerly a plant pathologist at the University, recently found that one antibiotic causes cancerous growth in spores that cause a blight disease in grain. Is this change harm or help? At present, no one knows.

Antibiotics, Christensen explains, are substances produced by one organism--such as a fungus, bacterium or algae--which are poisonous to other organisms. Penicillin, streptomycin, aureomycin and terramycin are common antibiotics used to combat diseases in man and domestic animals.

One effect of antibiotics may be to either slow down growth of a disease organism, or to kill it. Which effect occurs may depend upon the dosage; a high

(more)

add 1 antibiotics

concentration of an antibiotic may kill the disease organism, a low concentration might only inhibit the growth.

Antibiotics have other effects, too. Sometimes, more resistant individual organisms will increase in a mixture of these organisms, while weaker ones are killed by antibiotics. This can build up a population more resistant to the antibiotic.

Another effect of antibiotics may be mutations--sudden changes--that an organism may pass on to its descendants. These mutations are common in plants and animals, and may result in a new race or strain of a disease-producing organism that attacks plants which are resistant to prevalent races of the disease.

In one experiment, Christensen and other plant pathologists found that mutations of *Helminthosporium sativum*, a blight organism of grasses and cereals, occurred 10 to 100 times as rapidly in organisms treated with antibiotics as was true where antibiotics were not present.

With one particular treatment of an antibiotic called filipin, *Helminthosporium* spores germinated, but developed into a mass of tumor-like cells. These cells resembled those formed in some plant galls, and in some respects, they resembled certain animal cancers. Yet, when the antibiotic was removed from these cells, they seemed to recover.

Christensen admits that the complete significance of these findings is not known. But they do show some of the different things that can happen to microscopic organisms when treated with antibiotics. Besides, these studies may have a wide application to other fields and in a way that can't be foreseen at present.

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B-1942-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 8, 1958

Immediate release

LOCATION IMPORTANT FOR SUCCESSFUL VEGETABLE GARDEN

If you plan to start a garden this year, be sure the site you select is adapted to growing vegetables.

Orrin C. Turnquist, extension horticulturist at the University of Minnesota, says gardeners can waste both time and energy on a poor plot and get only disappointing results. Even the best seeds won't grow into fine vegetables unless they are planted in a reasonably favorable location, according to Turnquist.

The ideal garden plot would be a level, well drained, sunny spot with rich, deep, friable sandy loam soil free of rocks and debris. Most garden enthusiasts have to make do with something less than this. But there are a few important things every gardener should look for in planning the location of a garden plot, the University horticulturist points out.

One of the most important is good drainage. Vegetable plants will drown if allowed to stand too long in water or really wet soil. Too much moisture in a badly drained area deprives plant roots of air and nutrients needed for healthy development. Avoid land that has low areas where water might stand or where late spring and early fall frosts might strike. Prospective gardeners would do well to observe the drainage of a spot for awhile before turning it into a vegetable garden.

Another important ingredient for garden success is an open space with plenty of sunshine. Direct sunlight for at least six hours a day is a "must" for leafy crops. Others like tomatoes, eggplant, peppers and lima beans will need more than that. Trees close to the garden plot not only shut out sunlight, but also rob the soil of water and minerals the vegetables need.

A further consideration in choosing a garden site is having a source of water close by. A garden hose or a few lengths of temporary piping will afford protection against the summer droughts that can cut a garden's production.

Generally speaking, Turnquist says, a soil that is well drained and produces a rank, quick growth of weeds or grass can probably be developed into a good garden plot.

"Getting Started with Your Vegetable Garden," Extension Folder 164, gives information on selecting a plot and planting a garden. Copies are available free of charge from Bulletin Room, University of Minnesota, St. Paul 1, Minnesota.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
For use week of
April 14 or later

KEEP SEEDLING
TREES MOIST

If you're setting out some tree seedlings this spring, keep them moist from the time you get them until they're in the ground.

Roots dry out rapidly and may be injured if you aren't careful, warn County Agent _____ and Marvin Smith, extension forester at the University of Minnesota.

Water the seedlings as soon as they arrive from the nursery, Smith says. Store them in a cool place, keep them moist and they will stay in good condition for several days.

If the seedlings won't be planted for more than four or five days, "heel them in". To do this, dig an open V-shaped trench in moist soil. Then open the bundle of trees and cut any inner wrappings or ties and spread the roots out along one side of the trench. Fill the trench with soil, so that all roots are covered and drench with water. Stamp the soil down firmly and keep the soil moist until planting.

When you're ready to set them out, keep the roots covered with a damp burlap sack, or keep them submerged in a bucket of muddy water. But never expose the roots to sun or wind, even for five or ten minutes.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
For use week of
April 14 or later

STARTER FERTILIZER
MOST IMPORTANT FOR
1958 CORN CROP

Starter fertilizer heads the list of all fertilizer treatments in importance to the corn crop, says County Agent _____.

He points out that in most areas of Minnesota, starter fertilizers consistently give the highest return per fertilizer dollar.

There's a good reason for this. Curtis Overdahl, extension soils specialist at the University of Minnesota, explains that cool weather in May and June keep soil bacteria from becoming very active. This means that very little phosphorus or nitrogen is released to growing crops from the organic matter in the soil. Starter fertilizer supplies the plant food until the weather warms up -- even on high fertility soils.

Starter fertilizer usually isn't all the fertilizer needed, though. If corn doesn't follow legumes, you'll need to sidedress with nitrogen during the growing season. Also, soils especially low in fertility need either a plow-down application or a broadcast treatment of a complete fertilizer disked in before planting.

Normally, if the field needs only 150 pounds of a complete fertilizer, such as 5-20-20 or 8-24-12, you can apply up to this amount in the row, as a starter. But if soil tests show 300 pounds are needed, for example, it's necessary to split the application by plowing down 200 pounds before planting time and putting the other 100 pounds in the row. Most planter attachments will damage the seed at rates above 200 pounds per acre. Besides, by plowing fertilizer down, you put it in a good position--7-9 inches below the surface, where corn roots can easily feed on it in July and August.

If the field was plowed last fall and still needs a heavy rate of fertilizer, broadcast and working it into the surface is a satisfactory technique. Again, the important thing is to use a starter rate no higher than the planter can handle without damaging the seed.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
For immediate use

A U. of M. Ag. and Home Research Story

BALING SILAGE HOLDS PROMISE

A year of tests with baled grass silage show the practice is a promising way to deal with a wet hay crop.

But it also has some problems and at present is an experimental procedure, according to Rodney Briggs, University of Minnesota agronomist.

This method involves cutting and baling hay at 35-50 percent moisture -- high for mow hay, low in comparison to normal grass silage. The bales are stacked on one end of a sheet of plastic. The sheet is then pulled over the stack and ends and edges are covered with enough soil to make the entire stack air-tight.

Research workers tried the idea on the St. Paul campus and at four branch experiment stations last summer.

Wherever the plastic held, the baled silage was good when the stacks were opened this winter. At the Grand Rapids station, for example, total dry matter losses were below 5 percent.

However, all the baled hay silage had some white mold in it. This, Briggs says, may be due to "trapped" air, which was in the bag when sealed. The mold grew until the trapped air was used up. Curiously enough, this white mold seemed to be more help than harm. It apparently made the silage more palatable; cattle ate it well.

Silage spoiled wherever the plastic bags tore or had holes punched in them -- just as anyone would expect. It's clear, according to Briggs, that plastic used this way must be at least 8 or 10 "mil" in thickness.

There were also problems in opening and feeding this silage. Once you open a plastic bag, the entire surface is exposed to air. If the temperature is above 40 degrees, this makes a big spoilage problem.

These preliminary results show more work must be done on the technique to iron out the problems, Briggs says.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
ATT: 4-H CLUB AGENTS

For use week of
April 14 or later

SAFETY CONTESTS
FOR COUNTY
4-H'ERS

Four safety programs and contests are open to 4-H'ers of _____ county this year, announces 4-H club Agent _____. The four contests offer varied awards to 4-H'ers for their work in increasing accident prevention and awareness of safety.

The Farm Fire Safety Program encourages 4-H'ers to inspect farm homes and buildings - their own as well as others - to see that hazards are removed in order to save loss of lives and property by fire. For county and state awards, a 4-H'er must make at least four farm inspections, using the official guide and inspection report. Work may be done individually or in committees.

County winners in the Farm Fire Safety Program will receive a cash award, and state winners - one boy and one girl - will each receive a trip to the National Safety Congress, Chicago, in October. For the national contest, six inspections and reports must be made. A trip, and cash and plaque awards are given top winners in the nation.

Writing safety slogans to be featured during National Farm Safety Week is the object of the Safety Slogan Contest. The contest is open to all 4-H members, 14 years of age or older, who are enrolled in the safety project. A club member wishing to enter may submit up to three slogans to his county office before June 15. The county winner's slogan must be entered for state competition by July 1. The state winner will get a trip to the National Safety Congress in Chicago, and the second place winner will receive a trip to the Minnesota State Fair.

The 4-H Club Safety Activities Program is a contest which emphasizes club efforts rather than individual member achievement. A top club in each of five districts in the state will be named. Each of the five clubs will select a junior or adult leader to attend the National Safety Congress in Chicago.

Individual safety awards will be given again this year through the National 4-H Club Safety Awards Program. Selection is made from standard report forms and on the basis of past records. County winners receive medals and the state winner will receive a trip to the National 4-H Club Congress in Chicago.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
For use week of
April 14 or later

CHOOSE VEGETABLE
VARIETIES FOR
MINNESOTA

Selecting varieties adapted to Minnesota is one of the keys to success in vegetable gardening, says County Agent _____.

To help home gardeners choose varieties that will do well in Minnesota, the University of Minnesota Agricultural Extension Service each year publishes a list of recommended varieties based on vegetable variety trials conducted annually.

Newly revised and just off the press is "Vegetable Varieties for Minnesota," Extension Folder 154, which summarizes results of last year's tests and gives a suggested list of varieties suitable for Minnesota home gardens. Author of the publication is Orrin C. Turnquist, extension horticulturist at the University. Copies of the publication are available from the county extension office.

Listed below are a few varieties recommended for Minnesota home gardens:

Asparagus - F₁ Hybrid; snap beans - Tendergreen, Cherokee (wax); carrots - Nantes; sweet corn - Golden Freezer; slicing cucumbers - Burpee Hybrid; peas - Wando, Lincoln; potatoes - Cherokee, Kennebec, Tawa; radish - Cherry Belle, Comet; rhubarb - Valentine, MacDonald Crimson; spinach - America; winter squash - Hybrid R.

Among the newer varieties and hybrids tested by the University in 1957, Turnquist suggests these as worth trying:

- . Pearlgreen snap bean, an All-America award winner, mosaic resistant, high yielding. White seeded at maturity, it is also suitable for dry shell beans.
- . Morning Sun and Golden Beauty sweet corn, new hybrids of excellent quality.
- . Ruby Queen and King Red beets, globe-shaped with solid red interior.
- . Marketer cucumber, a dependable, excellent yielder.
- . Slobolt lettuce, productive even in hot weather.
- . Indian Queen onion, a yellow onion of high yielding ability and keeping quality.
- . Moreton Hybrid, Big Boy and Fireball tomatoes. Moreton Hybrid is very early, thick-walled and meaty. Big Boy is later but very large fruiting. Fireball is an extra-early standard variety, well adapted to the north. Fruit size is small to medium.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF MINNESOTA

University of Minnesota
U. S. Department of Agriculture
County Extension Services
Cooperating

Agricultural Extension Service
Institute of Agriculture
St. Paul 1 Minnesota
April 8 1958

TO: Home Agents
County Agents in non-home agent counties

Enclosed are three suggested stories for use before National Home Demonstration Week. Localize them in every way possible. The more localized they are, the more effective they will be.

Try to interest your editors in attending one of your meetings and taking pictures to use with a feature on the extension home program in the county for use during National Home Demonstration Week. Tell them about your plans for Achievement Day. They may be interested in both picture and story coverage of the event.

If you use a Centennial Theme, pictures of some of your members in costume, would add interest.

National Home Demonstration Week is also an appropriate time to interview some of your council members or young homemakers on your radio programs.

Sincerely yours,



(Mrs.) Josephine B. Nelson
Extension Assistant Editor

JBN/nh

Enc.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota
April 8 1958

To all counties
ATT: HOME AGENTS
NATIONAL HOME DEMONSTRATION WEEK
PACKET
Use if suitable week of April 14

HOME GROUPS TO
HAVE SPECIAL
EVENT IN MAY

Minnesota's Centennial will be featured in _____ county's observance of National Home Demonstration Week May 4-10, announces Home Agent _____.

Highlight of the week will be an Achievement Day program to be held in _____ in _____ beginning at _____ on _____.
(city) (bldg.) (hour) (date)

Special speaker for the event will be _____. (Identify speaker, give subject of talk, etc.)

(If public is invited, say so here.)

During the week exhibits will be on display in _____ showing the work (tell where) that has been done by women enrolled in the extension home program. (Add a sentence or two describing exhibits.)

Approximately _____ rural homemakers in _____ county will participate in the activities planned for the week. In the state as a whole, nearly 50,000 are expected to join in special observances during National Home Demonstration Week. All of them are taking part in the extension home economics program, an educational activity carried into rural homes and communities by the University of Minnesota Agricultural Extension Service. The women study various phases of homemaking and family living.

Committees in charge of the special activities for Home Demonstration Week in _____ county are: (List names and address. If the list is very long, it may be better to include chairmen only.)

- jbn -

NOTE TO AGENTS: This is a suggested story which you will want to adapt to fit your local plans. If you have already announced plans and committees, you might substitute a story on the speaker, some phase of the program or the exhibits. We can supply mats of most extension specialists who may be guest speakers. Be sure to tell the exact number you need.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
ATT'L HOME AGENTS
NATIONAL HOME DEMONSTRATION WEEK
PACKET
For use week of April 21

HOME EXTENSION
CLUBS GIVE HELP
TO HOMEMAKERS

Many a homemaker who has been confronted with a problem she is not equipped to solve has wished for the kind of on-the-job training often provided in industry.

Understanding the development of children in the family, how to spend the family budget wisely, how to make the home more comfortable and attractive, how to save energy in doing housework--these are a few of the everyday concerns of homemakers.

Hundreds of _____ county women are getting on-the-job training in solving these and other homemaking problems through membership in home demonstration clubs which are participating in the extension home economics program, reports Home Agent _____.

Home demonstration work -- or the extension home economics program, as it is known in Minnesota -- is a national educational movement for better homemaking, planned by homemakers themselves and open to all rural women. In Minnesota, home agents, assisted by University home economics specialists, provide professional guidance for the program. _____ county is one of some 70 counties in the state with a home agent.

The _____ members of _____ county's _____ home demonstration clubs (no.) are among a million and a half homemakers in the United States who are learning the newest reliable information on various phases of homemaking and family living. Subjects for study depend on the needs and interests of members. This past year, _____ county groups studied _____.

Extension home councilors represent their townships in working with the home agent to plan, organize and carry out the extension home program. Local women are trained by the home agent, serve as volunteer leaders, presenting lessons to their local groups. This unique system of training and leadership makes it possible for the home agent to carry on her work effectively, bringing to people in all parts of the county the latest information on homemaking and family living. This past year _____ women served as local volunteer leaders.

Home councilors in _____ county who are responsible for the organizational aspects of the home program are; (list, giving names and addresses).

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 8 1958

To all counties
ATT: HOME AGENTS
NATIONAL HOME DEMONSTRATION WEEK PACKET
For use week of April 28

MOST OF HOME
EXTENSION CLUB
MEMBERS RURAL

If members of home demonstration clubs in _____ county are typical of those elsewhere in Minnesota, seven out of every 10 members live on the farm and two of every 10 come from rural communities, including towns under 2,500, but do not live on farms.

In the nation as a whole, 51 percent of home demonstration club members live on a farm or ranch; 28 percent live in villages of less than 2,500 or in the country, but not on a farm; and 21 percent come from cities or large towns.

These facts have come from a recent national study of home demonstration club members and their families, reports Home Agent _____ . The Minnesota study was part of the national survey. In cooperation with home agents, club members themselves secured information from 100 or more members selected at random in each of 13 Minnesota counties. Purpose of the study was to get information on characteristics of club members in order to plan programs to fit their needs.

At the present time approximately _____ home demonstration clubs with _____ (no.) nearly _____ members in _____ county participate in an educational program (no.) in homemaking planned by local women and conducted cooperatively by the Extension Service of the U. S. Department of Agriculture, the University of Minnesota and this county. The women study various phases of homemaking and family living.

Here are some other facts about home demonstration club members in Minnesota* brought out in the study:

- . More than half of the members are in the age group 30 to 49.
- . A third of the members have children under 5; a third also have children between 10 and 14 years and a fourth between 15 and 19 years. More than a third have children between 5 and 9 years.
- . Most of the present members have been in their local clubs from two to nine years. About 13 percent have belonged over 15 years.
- . Nearly half of the members attended high school. More than a third of the members have had training in business or for such professions as teaching and nursing.
- . About one member in every seven works for pay away from home--five percent full time and nine percent part time.
- . Nearly half of the members personally teach ways of doing something learned in Extension work to other homemakers not members of the group.

* Substitute or add county figures if you prefer - and if your county was in the study.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 8, 1958

SPECIAL TO WILCOX
County Agent Introduction

If trees could talk, they could often tell a centennial story of Minnesota all by themselves. Frank Svoboda, left, Renville county agent, points to a ring in a section from a 60-year-old pine tree. The ring to which Svoboda is pointing represents World War I, when he was in the U. S. Army. Svoboda has been Renville county agent since March, 1927. Holding the tree section is Parker Anderson, extension forester at the University of Minnesota.

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

Immediate release

ELECTRICITY IMPORTANT TO MINNESOTA AGRICULTURE

Electricity has played a key role in building Minnesota's agriculture and may well do even more for farm families in the future, according to a University of Minnesota agricultural engineer.

A. J. Schwantes, head of the agricultural engineering department, points out that on a group of rural power lines studied in Minnesota, electrical use had doubled during the last 10 years. And it may double again in the next decade, another survey shows.

In four out of ten lines, use increased by $2\frac{1}{2}$ times or more and on one line it is three times what it was in 1948.

Happily enough, electricity hasn't become any more expensive. In fact, the more it's used, the cheaper it gets per unit. The same study showed that in no case was there an increase in the kilowatt hour cost and, in some cases, there was a 33 percent decrease. Kilowatt hour rates went down 24 percent or more in half of the lines.

Schwantes also reports on a recent survey of managers of rural electric lines in Minnesota. Many of these managers said they expected use of electricity in rural areas to be doubled within the next 10 years.

A typical comment from these managers was that "rural electrification is still in its infancy." Electricity has only begun to become adapted to the farm, they felt.

Some of the uses of electrical equipment that are rapidly gaining popularity are crop drying, silo unloading, barn cleaning, bulk milk handling, electric brooding and feed handling. One of the new uses introduced during the past year or two is electrical home heating. The managers of electric lines all felt this use had a big future in Minnesota.

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

Immediate Release

FARMER LEARNS EFFECTIVENESS OF WEED KILLERS

ALDEN, MINN.--A bit of on-the-farm "experimenting" can sometimes give a farmer just the information he needs to lick one of his biggest field crop problems.

Henrik Pederson here in Freeborn county found in a weed control demonstration on his farm last summer that "band spraying" 4 pounds of Randox per acre does a good job of controlling bothersome giant foxtail in his corn and soybeans.

The results were so good that this year he plans to use the procedure on all his corn and soybeans where foxtail is a problem.

Pederson set up the demonstration in cooperation with Eldon Senske, Freeborn county agent. He compared Randox at 2, 4 and 6 pounds per acre on corn and soybeans. He tested three other chemicals, but got the best result from Randox.

He applied the spray shortly after planting. He rigged his boom sprayer so that one drop nozzle sprayed a band about 1½-inches wide over each row. This is much more economical than it would be to spray broadcast over the entire field.

"The 4-pound rate of Randox did wonders," Pederson says. "It practically eliminated the giant foxtail in the corn and soybean rows. Several weeks after we did the spraying, you could plainly see the dark row strips where the chemical was applied. The corn and soybeans grew fine."

The 2-pound rate of Randox wasn't enough to give good control and the 6-pound rate was more than needed, Pederson says. "At 4 pounds, the cost is about \$3.50 per acre, but it's a good investment where you have trouble with giant foxtail."

Pederson cultivated the corn three times, even where it was sprayed with chemical, but thinks one cultivation may be enough in the future. He adds one point on cultivating: "If you throw much soil on the band that was sprayed, the weeds may grow there later. It might pay to use a 'weeder' type of cultivator instead of conventional shovels. Then you wouldn't throw any dirt on the row band when cultivating."

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

* A FARM AND HOME *
* RESEARCH REPORT *

Immediate release

NATIVE FEEDER LAMBS CAN DO AS WELL AS WESTERN STOCK

Minnesota farmers can make as much or more profit from feeding out native lambs as they can by feeding lambs from Western ranges.

That's the conclusion reached by University of Minnesota researchers after three years of experiments at the West Central Experiment station, Morris. R. M. Jordan, University livestock scientist, and H. G. Croom and Harley Hanke, Morris station staff members, report these results.

In 1954, '55, and '56, they compared lots of 30 native and 30 western lambs. Each year, both types of lambs received the same feed and management.

Selling price per hundred pounds at market time was the same for native and western lambs during the first two years, and averaged 25 cents per hundred pounds higher for the native lambs in 1956. But since the native feeders were bought at a lower price, they returned a higher profit in every year than did western lambs.

There was little or no difference in rate of gain or feed consumption between the two kinds of lambs, but native lambs graded slightly higher. Carcass yield, though, was not affected by where the lambs came from. The trials showed no greater death loss in natives than western lambs. Also, native lambs are often transported for shorter distances and therefore usually have less shrink.

In the past, native lambs have had a poor reputation and their purchase price has been somewhat lower than for westerns. Lamb feeders have generally considered natives less uniform and less able to take heavy feeds and make satisfactory gains. Besides, many sheep feeders expect parasite infestation and heavy death losses from Minnesota feeder lambs.

The University studies, however, show these fears are not always borne out. The research also indicates that good quality native feeder lambs could justifiably sell for at least as much as western lambs, the scientists say.

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

Immediate release

RESULTS OF POTATO VARIETIES REPORTED

Results of 1957 Minnesota potato variety demonstrations were reported today by Orrin C. Turnquist, extension horticulturist at the University of Minnesota.

Irish Cobbler outyielded all varieties in the Red River Valley, averaging 209 100-pound bags per acre. Next was Antigo, averaging 199 cwt. (hundredweight), followed by Kennebec, Red Pontiac and Cherokee, in that order. These varieties also averaged 90 percent or more number 1 size potatoes.

Kennebec was top yielder and had highest percentage of No. 1 potatoes at Grand Rapids and Osseo. The Russet Burbank variety was well adapted to the lighter soils in the Grand Rapids area. One of the top yielders there, this variety averaged 295 100-pound bags per acre. Highest yielder at Hollandale was Red Pontiac.

Three new potato varieties tested were Norland, Tawa and Plymouth.

Norland is a red variety recently introduced by the North Dakota Agricultural Experiment station. Although not one of the highest yielders, Norland showed excellent market quality. It has smooth tubers, good distribution of shallow eyes, is more tolerant to common scab than Red Pontiac and produces a quality chip.

Tawa, a white spud, has multiple disease resistance, high market and cooking quality. It is resistant to common scab, late blight and mosaic. It matures along with Irish Cobbler, but has fewer grade defects. It produces good quality chips at harvest and after being conditioned from storage.

Plymouth, a scab-resistant, white variety with flat tubers, was developed by the USDA and North Carolina Agricultural Experiment station. It has shallow eyes, but somewhat rough and flaky skin. It is resistant to common scab, mosaic and late blight.

Cooperating in these demonstrations were commercial growers, county agents, branch experiment stations and the Minnesota Department of Seed Potato Certification.

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

Immediate release

MONDO NOT ADAPTED TO MINNESOTA

Want a lush, thick growth of grass that makes your lawn the envy of your neighbors?

Then stick to the permanent grasses recommended for Minnesota, such as the bluegrasses, red fescues and bent grasses. That recommendation comes from R. J. Stadtherr, University of Minnesota horticulturist in charge of turf studies.

Don't buy the highly publicized "miracle grasses" which may be advertised to grow under all possible conditions, he warns.

One of the "wonder grasses" that is not adapted to Minnesota is Mondo. Stadtherr reports numerous queries from householders who ask if Mondo is the answer to all their lawn problems.

One of the disadvantages of Mondo is that it will not tolerate heavy traffic. For that reason it would be a poor choice for any lawn area used to any extent by the family, particularly as a play area.

Another disadvantage is that it is not winter hardy. In experimental plots of Mondo at the University Fruit Breeding Farm, Mondo has completely winter killed for two years in succession.

Mondo is actually not a grass at all, but a member of the lily family, native to Japan, Korea and northern China, according to Stadtherr. It has dark green, coarse, leathery leaves about one-eighth-inch wide, forming an open rosette. The plants, which may grow from 6 to 12 inches tall, often produce pale blue flowers in late summer. Because of its characteristics, Mondo will not blend well with any of the common lawn grasses, Stadtherr said.

Mondo has grown and spread very slowly in University tests, even though the plants are given ideal environmental conditions. It propagates in the same way as quack grass--by underground stolons or runners.

An argument in favor of Mondo, as far as most householders are concerned, is that it should not be mowed. Though it makes a dense turf-like growth in some of the southern states, it is not hardy enough for Minnesota conditions, the University horticulturist said..

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

Immediate release

MOTHERS, TEACHERS INFLUENCE HIGH SCHCOL GIRLS' CAREER CHOICE

Mother and teacher wield a strong influence on high school senior girls in their choice of future careers, but Dad's word doesn't carry much weight.

That conclusion is based on findings of a recent study reported by Clarice Olien, assistant extension rural sociologist at the University of Minnesota. The survey was made of more than 800 high school senior girls in 20 schools in northern and southwestern Minnesota to find out what they planned in the way of future careers and how they arrived at their decisions.

About 29 percent indicated that their mothers were the most important individuals in helping them decide on their future occupations. About 10 percent said teachers were most influential. Next in order of influence came friends and vocational counselors. But only 7.3 percent of the girls' fathers played an important role in helping them decide on a future career.

Almost a third of the girls questioned felt that reading, hearing about certain careers and talking with adults in particular occupations had a definite impact on their career choices. A few--about 8 percent--were influenced in their decision by the financial return.

When asked what type of work they were contemplating after graduation, only 3 percent of the girls indicated homemaking.

Most of the senior girls--about 89 percent--had ambitions of going into a profession or a clerical occupation. More of the girls--46.3 percent--favored professional than clerical work. In the professional field, they were interested in teaching, nursing and the medical profession, with the majority attracted to teaching. Those showing a preference for clerical work--42.2 percent--specified positions such as that of stenographer, typist, salesgirl and receptionist. Only

(more)

add 1 Mothers, teachers influence high school girls' career choice

7.5 percent said they wanted to take semi-skilled work - for example as a waitress or on a factory assembly line. Less than half a percent of the girls showed any interest in owning or managing their own business.

Career choices of the students, Miss Olien explained, reflect in large part the ideas they have gathered about various occupations from their associations with parents and other adults in their community. In many cases, their choices may be a reflection of the types of work parents would like to see them do.

The survey of the high school senior girls was part of a larger study of high school seniors--both boys and girls--made by George Donohue and Lowry Nelson, rural sociologists at the University of Minnesota.

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B-1949-jbn

University Farm and Home News
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University of Minnesota
St. Paul 1, Minnesota
April 10, 1958

Immediate release

X-TRA CCRN YIELD CONTEST HAS CHANGES THIS YEAR

The Minnesota X-Tra Corn Yield contest will have some new wrinkles this summer.

In addition to shooting for high corn yields and big increases in yield from fertilizing, farmers in the contest will also compete for the highest profit increase from using fertilizer.

Curtis Overdahl, extension soils specialist at the University of Minnesota, says the "X-Tra Profit" will be based on net return per acre from fertilized corn plots, after all production and tillage costs are subtracted.

Farmers who enter the contest raise corn on an unfertilized "check" plot alongside another plot which is fertilized.

Two other rule changes for this year specify that:

1. Both the check and the fertilized plot must have been in the same crop and received the same fertilizer treatment last year.

2. The plots must have had a complete soil test during the past year.

Six state winners in the contest will be named, including a top placer and a runner-up in each of the three divisions--"Top Yield," "X-Tra Yield" from fertilizing and "X-Tra Profit."

Overdahl says farmers entering this contest get a good deal of information on fertilizer response, moisture differences in their corn and actual differences in corn population. These measurements are made by local agricultural leaders helping with the contest, and provide information the farmer normally wouldn't have.

The contest, now in its 6th year, is sponsored jointly by the University of Minnesota Agricultural Extension Service and THE FARMER magazine, St. Paul. A total of 388 farmers entered last year.

Farmers wishing to enter may contact their county agents for details.

University Farm and Home News
Institute of Agriculture
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April 10, 1958

Immediate release

GET THE MOST OUT OF YOUR ELECTRICAL APPLIANCES

Small electrical appliances can provide the homemaker with automatic maid service to lighten her household chores--if she gives those appliances proper care and uses them to best advantage.

Florence Ehrenkranz, professor of home economics at the University of Minnesota, gives some general rules to help the homemaker get the best service from her appliances:

- Read the instruction booklet. It will give directions on the care and cleaning of your appliance. For example, some heating units must not be put in water during cleaning; others can be.

- Read the warranty. You usually will find that if you try to repair the appliance yourself, your warranty is invalid.

- If you must use an extension cord, be sure that it is a heavy-duty cord. Wattage of automatically controlled small electric appliances is usually high.

- Remember that the cooking time given in the recipe booklet is approximate. It can be affected by the quantity of food you cook, the degree of doneness you prefer or the voltage available. Voltage may vary during the day.

- Don't expect too much from your appliances. For example, toasters usually are adjusted to toast two-day old white bread. If you use another kind of bread, you may not get the same degree of brownness automatically.

- Enjoy your appliances. Try some of the variations given in the user's booklet. Besides regular waffles, try blueberry waffles ($\frac{1}{2}$ cup drained berries per one and one-half cup of flour). Or you may want to use your electric fry pan for a sweet coffee cake.

University Farm and Home News
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Immediate release

IFYES TO MINNESOTA FROM THREE COUNTRIES

Four young farmers from Portugal, Australia and Burma will come to Minnesota in May under the International Farm Youth exchange, Stanley Meinen, assistant state 4-H club leader in charge of the program, announced today.

They are Armando Ferreira Madail, 25, Rus Eca de Queiroz, Portugal, who will arrive in the Twin Cities May 12; Keith Holmes, 25, Raleigh, New South Wales, Australia, who is tentatively scheduled to arrive May 27; Toe Aung, 27, Maubin, Burma and Win Kyi, 23, Rangoon, Burma. The two young men from Burma will come to Minnesota May 29.

All four of them will spend the period through July living and working with farm families in the state to learn about the American way of life and farming methods. They will also attend the 4-H Junior Leadership conference on the University's St. Paul campus June 10-13.

Minnesota will be host to nine rural young people from other countries this year under the International Farm Youth exchange, a program sponsored by the National 4-H club foundation in cooperation with the Agricultural Extension Service to promote better world understanding at the grass roots level. In the return phase of the exchange, Minnesota will send three delegates to foreign lands this year.

Since the International Farm Youth exchange program was inaugurated 10 years ago, Minnesota has been host to 83 exchangees from other countries and has sent 27 delegates to foreign lands.

The four young men coming to Minnesota in May have all had scientific and agricultural training in college and experience in farming. Holmes is a dairy farmer in Australia and Madail is working toward a degree in agricultural engineering in Portugal. Aung is a student at the State Training College for Teachers and State Agricultural institute in Burma and Kyi is junior executive officer for the Agriculture and Rural Development Corporation Poultry farm in Rangoon, Burma.

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Institute of Agriculture
University of Minnesota
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April 10, 1958

SPECIAL TO TWIN CITY OUTLETS
Immediate release

BAILEY NAMED HONORARY MEMBER OF NATIONAL ASSOCIATION

Clyde H. Bailey, retired dean of the University of Minnesota's Institute of Agriculture, has been named an honorary member of the American Association of Cereal Chemistry.

The honor was made in recognition of Bailey's "distinguished accomplishments in cereal chemistry" and for his service over the years to the association. Bailey helped establish the organization, of which he was president from 1937-38.

In 1932, Bailey received the Thomas Burr Osborne Medal from the association for work in cereal chemistry and in 1947 was awarded the Nicholas Appert Medal from the Institute of Food Technology.

Bailey was on the University staff from 1911 until his retirement in 1952. He was dean of the Institute of Agriculture during his last 11 years at the University.

His research work earned Bailey a reputation as a noted cereal chemist. He was instrumental in the development of enriched bread, and invented several devices now widely used in science.

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University Farm and Home News
Institute of Agriculture
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April 10, 1958

SPECIAL TO TWIN CITY OUTLETS
Immediate release

UNIVERSITY STUDENT FROM MORRISON COUNTY GETS SCHOLARSHIP

Gerald M. Adamek, Cushing, agriculture sophomore at the University of Minnesota, has been awarded a Minnesota Dairy Industry scholarship of \$100 for the spring quarter 1958. The award was announced recently by A. A. Dowell, assistant dean of the College of Agriculture, Forestry and Home Economics.

Adamek is majoring in dairy industry and is a member of the Dairy Science club.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 11 1958

HELPS FOR HOME AGENTS

(These shorts are intended as fillers for your newspaper columns. Adapt them to fit your needs. This issue was prepared with the help of Mrs. Myra Zabel, extension home furnishings specialist.)

In this issue:

SPRUCE UP FOR SPRING

Exercise Care in Home Decorating
A White Ceiling is Best
Color Creates Space
Color Can Lower a Ceiling
Color Gives Unity
Color Samples Can Be Deceptive
Carefully Select Lampshade Colors

Flat vs Enamel Paint
Paint the Ceiling First
Painting Success Depends on Careful Preparation
Plaster Patched; Holes Disappear
A Good Brush Is An Important Painting Tool
Stop Dripping Paint

Exercise Care in Home Decorating

Home decorating can be very rewarding if you keep it in hand.

Watch your color schemes. Don't have an entirely different scheme in each room. Plan your entire house as a unit around a few colors. Use color according to the way your rooms face -- warm colors such as yellow in the north rooms and cool colors like blue and green in those that face south. Don't be a fad follower. Remember that a well decorated room should last longer than a fad.

* * *

A White Ceiling Is Best

If you're going to paint or wallpaper your home, remember that white or off-white is best for ceilings because it reflects the most light. A white ceiling can easily be keyed to the walls by adding a small amount of the wall color to the ceiling paint.

- sah -

Spruce Up Your House For SpringColor Creates Space

If you're faced with having too large furniture in too small a house, paint the walls and woodwork the same color. A light cool color such as green or blue will give the greatest feeling of spaciousness. Your furniture will be less conspicuous if you slipcover or reupholster it in a color value that is close to the wall color.

To avoid monotony add spots of a bright warm color such as red, orange or yellow in pillows, pictures and various accessories.

* * *

Color Can Lower a Ceiling

An unusually high ceiling can be made to appear lower by proper color choice. A white ceiling reflects the maximum amount of light, but if you don't use the room for close work like sewing or studying, you may paint the ceiling a darker value than the walls to make it appear lower. Lowering the ceiling line down on the wall 12 or 18 inches also helps to get the illusion of a lower ceiling.

* * *

Color Gives Unity

When door, windows, large radiators or dark woodwork cut up a room, they will take on a more unified feeling if they are painted the same color as the walls. Painting woodwork, doors and radiators the same color as the walls will also make the room seem larger.

* * *

Select Lampshade Colors Carefully

When selecting new lampshades, remember that white fits in well in nearly every room. Shades with white linings shed good-quality light, while dark linings absorb much of the light, says Mrs. Myra Zabel, extension home furnishings specialist at the University of Minnesota. Opaque shades of any color will shed good-quality light if the linings are kept white. But avoid translucent red or chartreuse shades, Mrs. Zabel cautions. A red shade over a large bulb casts a bright red light which in a short time will cause eye strain. A chartreuse shade casts a yellow-green light over people and food and is most unflattering to both.

Spruce Up Your House For SpringPAINTINGColor Samples Can Be Deceptive

The small color samples on the dealer's paint folders often appear less dark and bright than when they are seen on a large area, says Mrs. Myra Zabel, extension home furnishings specialist at the University of Minnesota. It's nearly impossible to look at small samples and visualize what the color will look like in your room. Always select a color that is lighter than the color you want.

Try a sample of the paint on the wall and let it dry. If it is too dark, add small amounts of white paint until you get the right shade. To neutralize a bright color, add small amounts of the complementary color.

* * *

Flat vs Enamel Paint

Science has produced paints that will fill nearly every painting need. Out of this great variety has arisen the problem of deciding which paint will suit your need best.

There are two general types of paints: Flat and enamel. Flat paint is generally used on walls because it produces a dull and pleasing finish. It is greatly favored by interior decorators. Good-quality flat paint will not show brush marks. It can be applied by either a brush or a roller.

Enamels may be flat, semi-gloss or high-gloss. They give off an odor and are harder to apply than flat paint because they have a tendency to run. They have the advantage of standing up better under washings and hard service. Enamels are used for kitchens, bathrooms and woodwork.

* * *

Paint the Ceiling First

When painting a room; it's best and easiest to start with the ceiling. Because lap marks may show on ceilings when part of the paint has been allowed to dry, don't start painting the ceiling if you can't finish it in one session. Have the ceiling completely finished, including both coats of paint, before you start the walls. Paint the walls from the top down. Cover an 18-inch square area with your brush or roller.

Spruce Up Your House For SpringPainting Success Depends on Careful Preparation

The success of a paint job often depends on the care taken in preparation, says Mrs. Myra Zabel, extension home furnishings specialist at the University of Minnesota. Before painting, wash the walls or brush them if there is no clinging grease or dirt. Always wash kitchens and bathrooms. Remove all loose paint and smooth the edges with steel wool or sandpaper. Buff glossy paint with fine steel wool or wash with sal soda and water.

Don't paint calcimine. Remove it with warm water and a mild detergent. A stiff brush will usually remove calcimine from a sand finish wall.

Turpentine or thinner will remove furniture polish, oil or wax from woodwork

To remove wallpaper, soak it with warm water. Then pull and scrape it off with a knife. Wet a small area at a time so the water doesn't dry before you can scrape the paper off. After removing the paper, wash the wall with sal soda and water to remove any remaining paste or glue.

* * *

Plaster Patched; Holes Disappear

You can make cracks and holes in walls invisible by a good job of plaster patching. Patch cracks by first scraping out the loose plaster, then wetting with water and filling with plaster. Leave the plaster slightly higher than the crack to allow for shrinkage. When the plaster is dry, finish it by smoothing with sandpaper and sealing with shellac or glue size.

To patch holes, first cut around the edges and make the hole larger on the inside than on the surface to keep the plaster from falling out. Wet the hole and half fill it with plaster. Leave a rough surface on this first coat. After the first application is dry, fill the hole with plaster, leaving it a little higher than the surface of the wall. After this coat is dry, smooth it with sandpaper wrapped around a block of wood. Then seal with shellac or glue size.

Spruce Up Your House For SpringA Good Brush is an Important Painting Tool

One of the most important tools in painting is a good brush, says Mrs. Myra Zabel, extension home furnishings specialist at the University of Minnesota.

Here are a few points to remember when you buy one.

- * Brushes with Chinese hog bristles are the best.
- * Nylon brushes are durable, but they can't be used for shellac.
- * Bristles should be elastic and should not spread out excessively.

To check these qualities brush the bristles across your hand.

- * A few cheap brushes are handy to have.

Your brush will have a long life if you care for it properly. Be sure to clean it thoroughly after each use. If you used oil paints such as enamels and varnish, use turpentine or mineral spirits to clean it. With water base or rubber base paints, use water for cleaning the brush. With lacquer, use lacquer thinner. With shellac, use denatured alcohol.

Wash the brush with water and a liquid syndet after cleaning with a solvent. Rinse and shake out excess water. Let it dry by standing it upright in a water glass. Store the brush by wrapping it in waxed paper or aluminum foil. Place it flat. Don't stand a brush on its bristles.

If oil and enamel paint jobs are not finished in one day, suspend the brush in linseed oil. Drill holes through the brush handle so that heavy wire when slipped through the hole will hold the brush off the bottom of the container of linseed oil.

* * *

Stop Dripping Paint

Dripping paint is a waste and a mess. There are three main reasons for dripping: A poor brush, too much paint on the brush or too much pressure. Dip the brush about two inches into the paint and tap it against the sides of the can to remove excess. Don't wipe it against the sides. Using less paint when you paint the ceiling also helps prevent dripping.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minn.
April 11, 1958

Special to E. Otter Tail Co.
(with mat)

LOCAL TEACHER
TO BE COUNTY
HOME AGENT

Cleone Luchau, home economics instructor in Perham high school, has accepted the position of home agent for East Otter Tail county and will take over ~~new~~ duties June 23.

As home agent she will work with County Agricultural Sherman Mandt in carrying out the extension program for this county, with special emphasis development of the on the home economics phases of 4-H work and on/the extension home program.

East Otter Tail county has been without a home agent for the past year.

Since Miss Luchau served as 4-H assistant in East Otter Tail county last year, she is well known to many county residents.

After graduating from the University of Minnesota in 1955 with a bachelor of science degree in home economics education, she taught home economics in Verndale for two years.

For nine years she was a member of the Lockhart Larks 4-H club, for seven years was a 4-H junior leader and has been an officer of the Norman county 4-H Leaders' council. As a 4-H member she won the 4-H key award and numerous leadership awards.

She grew up on a farm near Lockhart.

-Jbn-

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minn.
April 11, 1958

Special to Pennington Co.
(with mat)

MISS WARNE
BEGINS WORK AS
ACTING HOME AGENT

Wanda Warnes, instructor of home economics in the Southern School of Agriculture, Waseca, has joined the agricultural extension staff as acting home agent.

She will work primarily with the 4-H club program, particularly with the home economics projects.

Miss Warnes is a graduate of Augsburg College, Minneapolis, where she received her B. A. in home economics education in 1956. She has taught home economics in the Southern School of Agriculture for the past two years. Last summer she was a member of the Alberta Provincial 4-H club staff in Edmonton, Alberta, Canada.

For eight years she was an active 4-H club member in Marshall county. She grew up on a farm near Stephen.

-jbm-

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

Special to Chippewa County
(with mat)

NEW HOME AGENT
COMES FROM
NORTH DAKOTA

Jean L. Lovdokken, now a teacher of home economics in Ortonville, will take over the duties of Chippewa county home agent June 16.

A graduate of Concordia college, Moorhead, where she majored in home economics, she has taken graduate work at the University of Wisconsin the past two summers. She taught home economics in Karlstad from 1955-1957 and has been employed in the Ortonville schools this past year.

While in college she was active in debate, was a reporter and feature writer on the school paper, served on the student senate and was a member of Omicron Tau Delta, home economics sorority. As a sophomore she won a home economics award.

Miss Lovdokken is a native of Wyndmere, North Dakota.

-jbn-
As home agent, she will work with County Agent Eugene Pilgram and Assistant Agent Roger Larson in carrying out an expanded extension program for Chippewa county. Her responsibilities will be concerned largely with the home economics extension program and the home economics phases of 4-H work.

-jbn-

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

Immediate release

BUILD TO FIT CLIMATE, BUILDING SPECIALIST SAYS

Regardless of how well you like Minnesota's weather, you can still plan farm buildings to fit this erratic climate.

Whether it's for livestock or family, a building properly planned can be warmed by the winter sun and still be refreshed by the cool breezes of summer.

Jesse Pomroy, agricultural engineer at the University of Minnesota, suggests several rules for "building to fit the climate." His tips appear in the current issue of "Minnesota Farm and Home Science," an Agricultural Experiment station publication.

Take advantage of the sun, Pomroy says. Face long, narrow buildings toward the sun, with the long axis east and west. Build some overhangs to shade sun in summer.

Shield buildings from prevailing winter winds, but don't cut off summer breezes.

If you have a choice of sites, always take south slopes over north, and pick east slopes over west. Pomroy says north slopes can be just as hot in summer as south slopes and will definitely be colder in winter. North slopes will also be slower to warm up in spring.

West slopes are very hot in summer; yet they offer no winter advantage, since the sun then is too low to be any help.

Avoid building in small valleys and low spots, Pomroy advises.

Also, avoid large windows. But if a large glass area is absolutely necessary, make sure you have a "double glazed" arrangement--either a window with two panes or two windows. If possible, don't have such a window face prevailing winter winds.

If the ground has the right slope, there's something to be gained by building into a bank or side hill. This usually means more gradual temperature changes and walls will be warmer in winter and cooler in summer.

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

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH FEATURE *
* * * * * * * * *
Immediate release

LAND CONTRACT GAINS IN POPULARITY

More and more farmers in Minnesota are buying property by the "land contract" method, a pair of University of Minnesota agricultural economists report.

R. V. Elefson and Philip M. Raup found that 38 percent of all Minnesota farm sales in 1957 were financed by land contracts. This is an increase from 20 percent in 1946.

Under a land contract, title to the land remains with the seller until the buyer has completed all payments on the contract. With a mortgage, the buyer gets the title at the time of the sale.

Elefson and Raup report on a recent study of land contracts in the current issue of "Minnesota Farm Business Notes," a University Agricultural Extension Service publication.

The economists found that as a group, land contract buyers bought a higher percentage of farms with "good" land than did mortgage or cash buyers. Also, contract buyers were more likely to buy farms with buildings on them, and the buildings in general were in better shape. Contract buyers were more interested in getting a complete unit, instead of a parcel or tract to be added to an existing farm. More farmers buying on land contract intended to operate the farm themselves.

The land contract--also called "contract for deed"--is a method of low equity financing. Down payments for Minnesota farm property bought this way average about 20 percent of the purchase price, in comparison to 40-50 percent for mortgage down payments. This, the economists say, means the seller should have a good deal of confidence in the buyer. On this basis, you might expect to find many land contract sales between relatives. But such was not the case.

The proportion of land contract sales involving transfers between fathers and sons or other relatives was not much different from cash or mortgage sales.

(more)

add 1 land contract

In a survey of 350 farmers who had financed farm purchases with land contracts, the economists found that, in general, the farmers had good experiences with this system.

Most farmers in this survey had bought farms recently, although some had bought in the 1920's and several bought during the 1930's. Eighty-four percent of these farmers had never missed a payment on their contracts, while about 14 percent--33 farmers--had missed payments. Of those who had missed payments, only 9 percent had missed four or more.

Under a land contract, Minnesota law permits the seller to repossess his land by a simple eviction procedure, which can be set in motion 30 days after a buyer has defaulted. Yet, of the 33 farmers in this study who had missed payments, only one had received notification of contract cancellation, even though some of the buyers were in default for as long as three or four years.

Elefson and Raup say this indicates a lenient attitude on the part of those who sell farms on contracts.

The economists explain that the disadvantages of the 30-day cancellation period is offset to some extent by a practice, often used, in which the contract permits the buyer to make advance payments or to exchange the contract for a mortgage.

This allows a buyer to pay out on his contract whenever he has built up enough equity to shift his financing to a more conventional mortgage.

Twenty-seven percent of the farmers questioned had an explicit provision written into their contracts for exchanging the contract for a mortgage. Seventy-four percent had the privilege of making payments of any size they desired, in advance.

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

Immediate release

TRY SOME NEW VEGETABLE VARIETIES THIS YEAR

Home gardeners who are interested in planting some new vegetable varieties this year will find some helpful suggestions in a newly revised bulletin published by the University of Minnesota Agricultural Extension Service.

Just off the press is "Vegetable Varieties for Minnesota," Extension Folder 154, which contains a list of recommended varieties for this state based on trials conducted annually in various locations in Minnesota in cooperation with both home and commercial gardeners. The new edition of the publication summarizes results of last year's tests of hybrids and newer varieties, in addition to giving a suggested list of older varieties found dependable for Minnesota home gardens. Author of the publication is Orrin C. Turnquist, extension horticulturist at the University. Copies of the publication are available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1.

Turnquist suggests that home gardeners can add interest to their plantings by putting in some of these newer varieties and hybrids, along with some of the older varieties:

- Pearlgreen snap bean, an all-America award winner, mosaic resistant and high yielding. White-seeded at maturity, it is suitable for dry shell beans if all pods are not picked at the young snap stage.

- Ruby Queen and King Red beets. Both are globe shaped with solid red interiors and no conspicuous rings. Gardeners have reported favorable results with both varieties but show preference for King Red.

- Morning Sun and Golden Beauty sweet corn, new hybrids of excellent quality.
- Marketer cucumber, one of the most dependable varieties for slicing.
- Slobolt lettuce, a loose leaf variety that remains productive when other varieties go to seed in hot weather.

- Moreton hybrid, Big Boy and Fireball tomatoes. Moreton hybrid is very early, thick walled and meaty. Big Boy is a large fruiting hybrid, later than Moreton, but one of the most popular in Minnesota. Fireball is an extra-early standard variety, especially well adapted to the north. Fruit size is small to medium.

University Farm & Home News
Institute of Agriculture
University of Minnesota
April 15 1958

To all counties
ATT: HOME AGENTS

For use week of
April 21

SERVE FAMILY HONEY TREATS

Honey, a favorite sweet throughout the ages, is on the U. S. Department of Agriculture's plentiful foods list for April.

Because it is in such good supply, many _____ county homemakers will want to surprise the family with special honey treats, suggests Home Agent _____.

Foods made with honey may appear dry when they come out of the oven, but they take up moisture from the air and therefore stay moist longer than foods made with sugar.

There are two general ways of mixing honey into a baked food, according to Mrs. Esther Trammell, assistant professor of home economics at the University of Minnesota. One method is to add the honey to the creamed shortening. The second is to mix it with the other liquid ingredients.

Honey is tricky to measure accurately. When it is thick it rounds up over the top of the cup or spoon. To get an accurate measurement, cut off the rounded honey with a knife. Pour honey into the measuring spoon. If the spoon is dipped into the liquid honey, extra honey will be deposited on the bottom and sides.

Store honey on your kitchen shelf. Honey in a refrigerator will crystallize. If this happens, heating the honey gradually will liquify it. Care must be taken in heating however, because a temperature above 140 degrees will injure the flavor.

Here are a few honey treats Mrs. Trammell suggests for your family:

Honey salad dressing - 6 tablespoons honey and 2 tablespoons lemon juice. This very easy-to-make dressing is especially good because it doesn't separate rapidly.

For an extra-special dessert, combine 1 cup honey with 1/2 cup orange juice, grated orange peel and 1/8 teaspoon salt. Let the mixture stand over hot water without cooking for about 30 minutes to blend the flavors. Pour over ice cream.

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Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 15 1958

To all counties
For use week of
April 21 or later

BIGGER LITTERS
MEAN BIG SAVING
IN FEED COSTS

At the same price per hundred pounds at market time, the farmer who raises 9 pigs from each litter to market weight is actually making a dollar more profit for each 100 pounds of hogs than is the farmer averaging only 5 pigs per litter.

This is because, with large litters, feed cost per pig weaned is much lower than is true with small litters, according to a pair of extension specialists at the University of Minnesota, Hal Routhe, economist and Henry Zavoral, animal husbandman.

The difference shows up in the feed requirements for a gilt from the time she is bred and for the pigs until they are weaned at 40 pounds each. Based on current feed prices, this feed cost averages out to \$8.93 per pig in a 5-pig litter.

For 7-pig litters, the cost is \$7.30 per pig, and it's only \$6.30 when the litters average 9 pigs each. These costs are based on feeding corn, oats and sow supplement to the gilt and 40 pounds of starter supplement to each little pig before weaning time.

These figures show there is a \$2.33 per pig saving in 9-pig litters, compared to litters averaging 5 pigs. At market time, the difference would amount to about \$1 per hundred for 230-pound pigs.

Minnesota farmers, on the average, raise 7 pigs per litter to market weight, although the number varies from farm to farm. Management--particularly at farrowing time--makes a big difference . Averaging 9 pigs per litter is possible for the farmer who feeds the gilt well, uses farrowing stalls, heat lamps, and gives the little pigs good care and feed.

The saving is even greater for farmers who raise 11 pigs per litter to market weight. With this average, the feed cost per pig at weaning weight is only \$5.60, Routhe and Zavoral say.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 15 1958

To all counties
ATT: HOME AGENTS
For use week of
April 21 or after

CONSIDER FREEZING
VARIETIES WHEN
BUYING SEED

If the snap beans you froze last year were a disappointment, the reason may be that you selected a poor variety for freezing, says Home Agent _____.

She reminds _____ county homemakers who are planning to fill their freezers with some of their own garden vegetables to be sure to select varieties that freeze well and are recommended for planting in Minnesota. But don't wait till harvest time to think about varieties, she cautions. Select a good variety for freezing when you buy your vegetable seed.

Results of experiments in the University of Minnesota food processing laboratory show that one of the keys to success in freezing vegetables is to use a first-class freezing variety. Vegetable varieties differ greatly in appearance and in flavor when they are frozen.

Below is a listing of some of the vegetable varieties the University department of horticulture recommends for planting in Minnesota home gardens and for freezing. Other varieties suggested for freezing are given in the newly revised publication, Extension Folder 154, "Vegetable Varieties for Minnesota," available from the county extension office.

Asparagus - Washington, F₁ Hybrid.

Green beans - Topcrop, Tendergreen, Wade.

Yellow bush beans - Cherokee, Pencil-Pod Black Wax, Brittle Wax.

Broccoli - Waltham 29.

Cauliflower - Snowball, Super Snowball.

Sweet corn - (on cob) - Golden Freezer, Golden Cross Bantam, Golden Beauty. - (whole kernel) - Most good garden varieties.

Peas - Little Marvel, Laxtons Progress, Burpeana Early Dwarf (early); Thomas Laxton, Lincoln, Dark Seeded Perfection (midseason).

Spinach - Bloomsdale Long Standing, America, New Zealand.

Squash, winter - (for pies) - Greengold.

- (for mashed squash) - Greengold, Buttercup, Butternut, Hybrid R.

There are, of course, many other vegetable varieties satisfactory for freezing, _____ points out. However, only those that have been tested by the University food processing laboratory and found to be successful are listed in the University publication.

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

To all counties

ATT: 4-H AGENTS
For use week of
April 21 1958
Use only if appropriate
for your county

LEADER TRAINING
ON 4-H PROJECTS
TO BE IN MAY

A 4-H leader training meeting on the 4-H electric and tractor projects will be held in May for counties in this area, 4-H Club Agent _____ announced today.

Instructions will be given in both the electric and tractor projects on the same day and in the same town, though separate meetings will be held for each.

The meetings will be conducted by D. W. Bates, extension agricultural engineer, members of the state 4-H staff, and representatives of an electrical power supplier and the Standard Oil Company. Safety will be emphasized at the sessions, as will planning of demonstrations and exhibits.

Adult and junior leaders interested in attending these meetings should contact the county extension office.

Note to 4-H Club Agents: Meeting Dates and Locations

May 5 - New Prague at the headquarters building of the Minnesota Valley Breeders Association.

May 6 - Willmar at the Lakeland Hotel.

May 7 - Fergus Falls (place to be announced.)

May 8 - Grand Rapids at North Central School and Station

-rlr-

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

A U. of M. Ag and Home Research Story

For immediate use

BONUS EFFECT
ON LEGUMES
NOTED ON CORN

Agronomists at the University of Minnesota are convinced that alfalfa has an important "bonus effect" on corn planted on the field later on.

Legumes do much more than simply provide nitrogen, the scientists say. Field trials reported in past years and again in 1957 at the University have indicated this is true, and 1957 results back it up.

These tests have been conducted at the Southern Experiment station, Waseca, by University agronomists, soils scientists and Waseca station staff members. In 1955, corn was planted on plots that were either in grain, grass or alfalfa the year before.

Every plot has been in corn since. Rates of 20, 40, 60 and 80 pounds of nitrogen have been compared on each set of plots during each of the three years.

For each fertilizer rate, plots that were in alfalfa in 1954 have consistently yielded more corn. Three-year yield averages show 104 bushels of corn where the corn followed alfalfa and where 80 pounds of nitrogen was added. Where the same fertilizer application was used but where corn followed grain, yields averaged 84 bushels per acre.

The increased yield where corn followed alfalfa was nearly as significant in 1957 as it was during the first two years.

While some of this increase is from nitrogen supplied by alfalfa, much of it must certainly come from other things. It's quite likely, the agronomists and soils scientists say, that the legume improves the soil structure and internal drainage. There is also a possibility that alfalfa moves plant nutrients up from lower soil layers and leaves them where corn can use them in following years.

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University Farm and Home News
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To all counties
For use week of
April 21 or later

LESS GRASSHOPPERS
EXPECTED THIS YEAR

A somewhat lighter grasshopper attack is expected in Minnesota this year, according to a 1957 adult and egg survey conducted by the Minnesota Department of Agriculture in cooperation with the University of Minnesota.

Control measures will still pay off where hoppers are especially abundant. Minnesota county agents' reports for 1957 indicate that farmers lost almost \$1.5 million from grasshopper damage where no spraying was done. Farmers who did spray saved an estimated \$590,000.

"Severe" infestations are predicted for this summer in West Polk, Pennington, Marshall, Roseau, Clay, Pope, Stearns, Kanabec and part of Aitkin county.

"Threatening" infestations are expected in southeastern counties and in a belt extending roughly from there to northwestern Minnesota. The outlook is also for threatening grasshopper infestations in Cottonwood and parts of Nobles, Jackson, Murray, Brown and Watonwan counties.

For other counties, infestations will be light or economically unimportant.

Recommended insecticides are aldrin, heptachlor, dieldrin and toxaphene. Crops to be pastured or fed to dairy cows or cattle being finished for slaughter should be sprayed with aldrin or heptachlor.

Aldrin can be used up to 15 days before hay is cut or pastured and heptachlor can be applied up to 7 days before cutting or pasturing. Dieldrin and toxaphene are recommended mainly for hopper control along roadsides or on hayfields in early spring before there is much growth. Dieldrin must be used no later than 30 days before forage is pastured or cut and 40 days is the rule for toxaphene.

Where the "two-striped" grasshopper is a problem, entomologists advise farmers to spray ditch lines soon after hatching starts--usually between the first and third weeks of June.

Grasshoppers usually don't do much damage to first crop hay. But if they should be abundant, it's wise to leave a strip of hay and spray that strip within two or three days after removing each cutting. That treatment is usually enough, for the first crop, but it may be necessary to spray second crop hay fields.

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SPECIAL TO WILCOX

County Agent Introduction

While soil conservation is really not a "guessing game," these two extension soils agents are trying out a device that does require some careful choosing of soils practices. Clifton Halsey, left, Washington county soils agent, and Ervin Junkans, West Ottertail soils agent, are showing how it works. Each button gives a selection of practices to follow. Only one practice of each group is correct. If a person makes the correct selection on all buttons, a bell rings. The device, built by Junkans, is used at meetings, county fairs and other events as an educational exhibit.

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University Farm and Home News
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April 17, 1958

Immediate release

UNIVERSITY PROFESSOR RETIRES AFTER 43 YEARS

Philip A. Anderson, associate professor of animal husbandry at the University of Minnesota, will retire from the staff in June, after 43 years.

Anderson has established a wide reputation as an expert in sheep production and meats.

To commemorate his long record of service in teaching and research, Block and Bridle club, student organization for animal husbandry majors, in cooperation with leaders of the meat packing and livestock breeding industries will sponsor a retirement dinner for Anderson May 14 at the Normandy hotel, Minneapolis. Anderson's friends and former students are invited to attend.

Anderson, born in St. Paul, was graduated from the University's College of Agriculture in 1914. The following year he became an instructor in the department of animal husbandry, and in 1918 was advanced to the rank of assistant professor in charge of meat and sheep sections.

Anderson has contributed to research in meat curing, records of performance with swine and marketing of slaughter hogs and cattle by carcass weight and grade.

He has served as superintendent of the sheep division of the Minnesota State Fair since 1919 and has acted as a judge of sheep and carcass shows at the International Livestock Exposition at Chicago, American Royal show at Kansas City, Mo., and several county fairs throughout Minnesota. He has also been superintendent of the carcass show of the Junior Livestock show at South St. Paul.

Anderson is a member of the American Association for the Advancement of Science, American Society of Animal Production, has served as a director and president of the American Shropshire Sheep association and is secretary-treasurer of the Minnesota Sheep Breeders' association. He served as an advisor to A. D. Wilson, state food administrator during World War I. He is the author of several University bulletins and folders.

Tickets for the retirement dinner can be obtained from the Block and Bridle club department of Animal Husbandry, University of Minnesota, St. Paul 1, Minn.

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April 17, 1958

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* For release at noon, *
* Friday, April 18 *
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KOLLER REPORTS INCREASED DAIRY PLANT EFFICIENCY

CHICAGO--Milk drying plants in Minnesota and other Midwestern states are among the most efficient dairy plants in the nation, a University of Minnesota agricultural economist said here today.

E. Fred Koller said the drying plants have been able to reduce their "per unit" costs since World War II, in spite of rising wages and other increased costs. In contrast, he pointed out, Midwest creameries and cheese factories on the average have shown increasing costs per pound in recent years.

Koller spoke at an annual meeting of the American Dry Milk Institute. He explained that University of Minnesota studies show that average output of dry milk per hour of labor in drying plants is now about 120 pounds. This compares with about 90 pounds per labor hour in 1948.

There are several reasons for the more efficient operation of many of these plants, Koller said. "In general, they are new organizations, operating with new views, new approaches and without restrictions from the old methods and outmoded economic structures surrounding many of our older dairy firms.

"For instance, the specialized milk drying plants in our area, from the beginnin based their operations on the concept that large volume operations will bring the largest economic advantages."

Another thing boosting efficiency in drying plants is good use of technology, according to Koller. "Since they are largely new organizations, they could start with buildings of newest design, with new equipment having high efficiency ratios and with the latest in dairy processing know-how," he said.

At present, there are about 80 plants in Minnesota drying milk for human use. Of these plants, Koller said 18 process only dry milk products. These 18 plants last year averaged about 10 million pounds per plant.

Forty of the plants are local butter-powder plants, averaging about 4 million pounds dry milk annually. Fourteen plants are large-scale butter-powder plants producing 11 million pounds of dry milk and 3 million pounds of butter per plant.

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April 17, 1958

Immediate release

\$3000 HOME ECONOMICS FELLOWSHIPS ANNOUNCED

Awards of two \$3,000 fellowships for graduate study in home economics were announced today by Louise Stedman, director of the University of Minnesota's School of Home Economics.

The award winners are Lillian Miller, instructor, and Betty Faye Smith, teaching assistant in home economics at the University of Minnesota. Both will continue their graduate work at the University next year.

The fellowships are being given for the second year by General Foods Fund, Inc., New York City. Candidates for the fellowships must show superior potentialities in their respective fields and must plan to pursue careers in home economics.

Mrs. Evelyn Franklin, 1472 W. Larpenteur, St. Paul, and Mrs. Kathleen H. Stuart, Radford, Virginia, last year's recipients of the awards, are now completing a year of graduate study in home economics at the University under the General Foods fellowship.

Miss Miller will use her fellowship to work toward a doctor's degree in nutrition. She holds a bachelor of home economics degree from the University of British Columbia and received her M. S. in foods and nutrition from the University of Manitoba in 1957. She has been a lecturer at the University of Manitoba, has served as staff dietitian at University hospital, Saskatoon, Saskatchewan, and at Mt. Sinai hospital, Minneapolis and is presently a part-time dietitian at North Memorial hospital, Minneapolis.

Miss Smith's major field is textiles research. She plans to do college teaching and research after completing work on her doctor's degree. A graduate of the University of Arkansas, she received her master's degree from the University of Tennessee in 1955. She has been a home demonstration agent in Sheridan and Osceola, Arkansas. She joined the University of Minnesota staff last fall as a teaching assistant and at that time began work toward her doctorate.

The General Foods Fund home economics fellowships were established last year in recognition of the need for qualified people with advanced training in all fields of education. The University of Minnesota is one of 12 universities in the country selected to receive the General Foods Fund fellowships for graduate study in home economics.

University Farm and Home News
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St. Paul 1, Minnesota
April 17, 1958

Immediate release
(with mat)

SPECIALIST APPOINTED TO AID HANDICAPPED HOMEMAKERS

Mrs. Marion Melrose, 2184 Carter ave., St. Paul, has joined the University of Minnesota staff as extension specialist to work in special programs for handicapped homemakers, Skuli Rutherford, director of the Agricultural Extension Service, has announced.

Mrs. Melrose will develop a program of work simplification for homemakers who have below normal physical energies, particularly because of heart disease. On a county basis she will plan and carry out her work cooperatively with county units of the Minnesota Heart association, the Minnesota Department of Health, local doctors and the county Agricultural Extension Service.

The work with handicapped homemakers is being made possible through funds from the State Department of Health and the Minnesota Heart association.

Tentative plans call for several pilot classes this spring emphasizing energy-saving techniques in housework. In the fall Mrs. Melrose will be available to teach classes of handicapped homemakers in communities interested.

Mrs. Melrose holds a bachelor of science degree from the University of Minnesota in home economics education. Her experience includes teaching home economics in Fulda, serving as a dietitian in Midway hospital, St. Paul and as a home agent in Blue Earth county. She has also been assistant director of volunteer services for the St. Paul chapter of the American Red Cross.

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April 17, 1958

Immediate Release

FFA CONVENTION SCHEDULED ON ST. PAUL CAMPUS

Some 2,000 blue-jacketed farm youths will converge on the University of Minnesota St. Paul campus May 4-6 for the 29th annual State Future Farmers of America (FFA) convention.

The event was announced today by J.O. Christianson, director of agricultural short courses at the University, and G. R. Cochran, state FFA advisor.

Features of the event will include showing of the centennial film "Agricultural Portrait" and a talent contest May 4, the awards luncheon and annual banquet May 5 and an awards assembly May 6.

State farmer degrees will go to 240 FFA members during the May 5 banquet at Coffman Memorial Union. Banquet speakers will be J.O. Christianson and Jerry Rulon, Arcadia, Ind., national FFA vice president. The Future Homemakers of America group from Aitkin will present a skit with a centennial theme during the banquet session.

A public speaking and parliamentary procedure contest will be May 6. Judges will be: Public speaking--Ronald Brown, University rhetoric instructor; Verlon Welch, assistant to the president, Minnesota Farm Bureau Federation; Farley Bright, assistant commissioner of education. Parliamentary procedure-- Robert Handschin, Farmers Union Grain Terminal association; Walter McLeod, regional director, Sears Roebuck Foundation; Paul Brown, instructor at the University's School of Agriculture.

The winner of the State Star Dairy Farmer award will compete with Judy Merritt, Minnesota's Princess Kay of the Milky Way, in a hand milking contest May 6.

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B-1960-pjt

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

Special to Big Stone County
(with mat)

NEW HOME AGENT
IN COUNTY
JULY 1

Audrey Christopherson, Staples, will begin work July 1 as Big Stone county home agent.

Miss Christopherson is well known to many Big Stone county residents, since she served as 4-H club assistant in the county last summer.

She will receive her bachelor of science degree from the University of Minnesota in June, with a major in home economics. While at the University she has been active in the college Home Economics association, the YWCA and in Wesley foundation.

As a 4-H club member for nine years, she specialized in home economics projects and junior leadership and for six years served as 4-H club treasurer. She grew up on a farm in Wadena county near Staples.

As home agent, Miss Christopherson will work with County Agent Howard Balk in an expanded extension program for Big Stone county, with special emphasis on the extension home economics program and the home economics phases of 4-H work.

-jbn-

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

SPECIAL TO TWIN CITY OUTLETS
Immediate release

UNIVERSITY STUDENT FROM ST. PAUL GETS SCHOLARSHIP

Frank A. Staffenson, St. Paul, agriculture sophomore at the University of Minnesota, has been awarded a Minnesota Dairy Industry scholarship of \$100 for the spring quarter 1958. The award was announced recently by A. A. Dowell, assistant dean of the College of Agriculture, Forestry and Home Economics.

Staffenson is majoring in dairy industry.

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-vns-

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF MINNESOTA

University of Minnesota
U. S. Department of Agriculture
County Extension Services
Cooperating

Agricultural Extension Service
Institute of Agriculture
St. Paul 1, Minnesota
April 17, 1958

To all county agents:

Enclosed are five articles on weed control recommendations. These are merely revisions of articles sent last year, but they do contain a number of technical changes that bring them up-to-date.

We're getting all this information in a packet, you can choose whatever items are most important in your own area.

If you'd like to have newspaper mats of line drawings of weeds, we can supply mats of:

Perennial Sowthistle	Wild Mustard
Canada Thistle	Tansy
Cocklebur	Yellow Rocket
Field Bindweed	Leafy Spurge
Water Hemlock	Jerusalem Artichoke
	Tall Buttercup

Let me know if you want to receive any of these.

Sincerely,



Phillip J. Tichenor
Extension Information Specialist

PJT:nj

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

Special to County Agents
For immediate use

CULTIVATION IS
MAIN KEY TO
QUACKGRASS CONTROL

Cultivation before planting time is still the cheapest way to get rid of quackgrass in a large area--if soil erosion is no problem.

Cultivate this spring whenever there is 2-3 inches of quackgrass leaf growth, advises Bill Hueg, extension agronomist at the University of Minnesota. This uses up food reserves in plant roots. Then keep on cultivating with a sharp disk or duckfoot cultivator as long as possible, before sowing a crop.

During summer, cultivate to bring roots and rootstocks to the surface. This dries them out and kills them.

There are ways to kill quackgrass chemically. In September or October, you can apply 22 pounds TCA per acre on land recently plowed or thoroughly cultivated. Then with normal rainfall, you can plant flax, potatoes, sugar beets, oats or corn and there won't be any chemical damage to the crop.

Some crops though--wheat, barley or soybeans-- would be severely injured by TCA, so don't plant these crops after using the chemical. If there is dry weather after using TCA, all crops may be injured.

Field tests show fall-applied dalapon is just as effective as TCA. Application rate is 12-15 pounds per acre. You can also apply dalapon this spring on forages to be plowed under. Recommended rate in this case is 5 pounds dalapon, applied on grass 4-10 inches tall. Then plow or cultivate the field about 2 weeks later. Don't plant any crops in the field until 4 weeks after treatment, or there may be chemical damage.

Amino triazole and MH are also effective against quackgrass in early spring. They are best on fertile soils, or following fertilization with nitrogen. They leave no toxic residue in the soil; crops may be sown shortly after treatment.

Chemicals must be applied only according to directions on approved labels.

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

Special to county agents
for immediate use

WEED CONTROL
METHODS LISTED

Canada thistle, perennial sow thistle and field bindweed are three weeds that can best be attacked with field practices, chemicals, and a combination of the two.

County Agent _____ and Bill Hueg, extension agronomist at the University of Minnesota, have several tips for controlling these weeds.

1. Plow deep before freeze-up in fall.
2. Where these weeds are particularly troublesome, start cultivating 2 weeks after they come up this spring. Cultivate 4 inches deep with a field cultivator. Use duckfoot sweeps. This cultivating can continue every 3 or 4 weeks until freeze-up, until a crop is planted in early July, or until you sow winter wheat or rye in September.

3. On well-drained soils, particularly fields intensively cultivated last year, you can sow alfalfa or alfalfa-grass mixtures and cut the forage for hay for several years. Use reed canary grass on wet land.

4. You can use amino triazole, 2,4-D and MCP chemicals on Canada and sow thistles. On field bindweed, you can apply 2,4-D, Karmex, or other compounds.

The most successful rate of amino triazole, against Canada thistles, is 4-6 pounds in 30 gallons water. Spray it just before the bud stage. It's also possible to get good control by mowing or plowing thistles under and spraying the regrowth with the amino triazole.

Control rate for field bindweed is $\frac{1}{2}$ -1 pound of 2, 4-D in bud to bloom stage and in late fall.

Chemicals must be applied only according to directions on approved labels.

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

Special to County Agents
For immediate use.

FOXTAIL CAN
BE LICKED
IN MINNESOTA

You can lick the foxtail problem in your fields--regardless of whether you have the yellow, green or giant types of this bothersome grass.

Here are some ways foxtail can be controlled, say County Agent _____ and Bill Hueg, extension agronomist at the University of Minnesota.

1. In corn, CDAA (Randox) has given good results in research and on-the-farm demonstrations. It can be used as a pre-or post-emergence spray, when corn is between the "spike" and 2-leaf stages, at 5 pounds per acre. If you use a "band" application over the row, you can get good results at lower cost per acre. DM-type sprays, such as Premerge or Sinox PE, used at ¼ pounds per acre, in 20-40 gallons water, will also give some control on foxtail in corn.

2. Flax can be sprayed with 5 pounds TCA per acre when the weeds are less than 2 inches tall. You can also use this practice in fields being seeded to alfalfa.

3. The Randox application--5 pounds per acre--can also be used in soybeans. Again, band applications reduce the cost.

4. For alfalfa, you can sow the legume seed with an early-maturing small grain and spray after harvest with 1 pound dalapon per acre. This herbicide reduces the competition from older foxtail and kills seedlings. The treatment is practical when there is a heavy stand of annual grassy weeds in alfalfa. Tame grasses in the mixture will be badly hurt or killed by dalapon, though.

Apply chemicals only according to directions on approved labels, _____ and Hueg caution.

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

Special to county agents
For immediate use

KILL COCKLEBURS
BY "BIRTH CONTROL"

"Birth control" is the best approach to controlling cockleburs.

This means keeping the pesky weed from producing seed, say County Agent _____ and Bill Hueg, extension agronomist at the University of Minnesota.

You can kill cockleburs in flax when the weeds are less than 6 inches tall by applying 4 ounces of MCP per acre. In small grain or corn, 8 ounces of 2,4-D amine is best, tests show. These treatments prevent the plant from producing seed.

Cockleburs in the later stages can be stunted, but seldom killed, with an 8 ounce treatment of either 2,4-D or MCP.

Each bur on this weed contains two seeds. One germinates the year it is produced and the other germinates the next year or later.

Apply chemicals only according to directions on approved labels,
 and Hueg caution.

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

Special to County Agents
For immediate use

CROP MANAGEMENT
CONTROLS WEED

Cultivation and crop management are the farmer's best weapon against leafy spurge, say County Agent _____ and Bill Hueg, extension agronomist at the University of Minnesota.

They advise one of three methods, all of which have controlled leafy spurge well in field tests. Each method involves fall-plowing the land 4-6 inches deep, working it with a field cultivator every 2-3 weeks until freeze-up. Then in spring, cultivating, if done, starts 2 weeks after the spurge comes up.

There are three different ways you can handle this procedure.

First, you can cultivate until freeze-up and let it go at that.

Second, you can cultivate only until you sow winter rye or winter wheat, then cultivate again after harvest and until time for sowing another crop of rye or wheat. This will result in good control after several years.

Third, you can continue cultivating until sowing a crop, such as sudangrass, in early July. Then after the crop is harvested, cultivate until freeze-up with a cultivator equipped with duckfoot sweeps.

Grazing will also control leafy spurge. One way is to sow winter rye at 2 bushels per acre in the fall and pasture it in the spring with sheep until the crop begins to head out. Then plow the rye under and sow sudangrass, pasture it, plow and sow winter rye, all the same year. During the following year, pasture or harvest the rye and cultivate the land until freeze-up.

Chemicals must be applied only according to directions on approved labels, _____ and Hueg caution.

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

Timely Tips for The Farmer, issue of April 19

If you plan to harvest your own fence posts from the farm woodlot, this is a good time to plan the operation. As soon as the trees begin to leaf out, the bark will "slip" best and the posts can be easily peeled.

--John R. Neetzel

Terraces need maintenance. Watch for low spots on the ridges where heavy rains are liable to break over and ruin that part of the terrace. Do the repair work before seeding so that the earth will have a chance to settle and become more firm.

--Roger Harris

All fertilizer used on flax should be applied so that it does not touch the seed. Flax is susceptible to injury from fertilizer.

--Lowell Hanson

Alfalfa-grass and alfalfa-clover-grass mixtures require intensive grazing management to obtain the most yield per acre and preserve the legume stand. Don't start grazing until the alfalfa is 8-10 inches tall.

--Bill Hueg

When spring clean-up begins, rubbish fires will become serious fire hazards on many Minnesota farms. Be sure to locate the fire away from the farm buildings and burn only when the wind is low or from a safe direction. If handled right, rubbish fires can be a boon to farm safety -- especially if you burn oily rags and trash that might cause unexpected fires and junk which might cause falls during farm chores.

--Glenn Prickett

Hundreds of thousands of hard maple trees that are potential producers of maple sirup and sugar are not now being tapped. These trees could provide income and labor outlet for many people during the slack early spring period. Normal yield of maple trees ranges from 5 to 15 gallons of sap per tap hole or as much as three quarts of sirup in a year.

--Parker Anderson

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH FEATURE *
* * * * * * * * *
Immediate release

EXPERIMENTAL STRUCTURE SEEKS ANSWERS TO BUILDING PROBLEMS

A sprawling wooden structure with sides resembling strips from a patchwork quilt is the subject of a novel building experiment at the University of Minnesota.

The building is a pole-type, 196 x 54-foot turkey barn, under construction at the Rosemount Agricultural Experiment station.

Instead of having uniformly-built sides, the building has outside walls made up of 56 different panels. These panels include 28 different combinations of lumber and wood preservative treatment, on both east and west sides.

As years go by, research workers will closely watch the panels, to see which deteriorate most rapidly, and whether there will be any difference in decay between east and west exposure.

In charge of this experiment are C. K. Otis, agricultural engineer, and J.R. Neetzel, forestry researcher. Neetzel is interested primarily in the wood materials and wood treatment aspects of the building, while Otis is concerned with the materials and structural features.

The panels on the side walls of the building include four different lumber combinations: 8-inch vertical boards; 10 and 12-inch vertical boards, alternating; 6-inch drop siding attached horizontally and 6-inch drop siding attached vertically.

For each lumber combination, there is one panel with no wood treatment and six others with these paint or preservative treatments: white paint alone; clear, water-repellent penta, with and without painting; water-repellent penta with dark pigment; penta in fuel oil; and copper naphenate, a green preservative.

All treatments involved simply dipping the lumber in the material for three minutes.

Otis and Neetzel have no doubt that it pays to treat lumber. But their aim now is to find, for each type of lumber, which treatment will do the job at the least cost.

(more)

add 1 building experiment

While this turkey barn is unusually large--it contains 56 pens of experimental turkeys--it is a type of structure that could be built at most any size.

Other experimental features of the building include:

- * Purlins (timbers that support the roof) placed on top of upright poles instead of attached to the sides as is now common in pole-type buildings.
- * Metal rods instead of wood members for tension braces and ceiling supports.
- * Poles in walls sawed, above the ground, so they are flat on each side and therefore allow for uniform wall thickness.
- * Braces attached to upright poles and purlins with bolts instead of nails.
- * Overhanging gable ends, open underneath, so outside air can freely enter the building attic.
- * An exhaust fan system, which draws fresh air from the attic, through slats in the ceiling, into the pen area of the building.
- * Special ground line construction, designed to keep the floor warm and to prevent rodents and other pests from getting inside.
- * Poles treated with preservatives--some pressure-treated with creosote, others pressure-treated with penta.
- * Lumber in ground line penta-treated.

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B-1961-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

To all counties
For use week of
April 28 or later

FARM FILLERS

If your corn planter has the "split boot" fertilizer attachment, don't apply more than 10 pounds of nitrogen and 20 pounds of potash per acre in the row at planting time, advises Curtis Overdahl, extension soils specialist at the University of Minnesota. This type attachment puts the fertilizer close to the seed, and higher rates could cause injury. However, if there is a good deal of rain during May, there will be less chance of injury.

* * * *

Average output of dry milk per hour of labor in Minnesota milk drying plants is about 120 pounds. This compares with about 90 pounds per labor hour in 1948, showing that these plants have made important gains in efficiency, according to E. Fred Koller, agricultural economist at the University of Minnesota.

* * * *

Whether it's for livestock or family a building properly planned can be warmed by the winter sun and still be refreshed by summer breezes, says Jesse Pomroy, agricultural engineer at the University of Minnesota. He advises, face long, narrow buildings toward the sun, with the long axis east and west. Where there's a choice, take south slopes over north and pick east slopes over west.

* * * *

A Conservation Reserve can help farmers do a better job of soil, water, forest and wildlife resource development, says Parker Anderson, extension forester at the University of Minnesota. Farmers entering this program are eligible for two kinds of payments, he says. To find out more about the program, check with your local ASC office.

* * * *

Records from the Southeastern Farm Management association show that mechanized power has made a telling impact on farm operation. Between 1928 and 1952, farms in this association increased their mechanical power by 370 percent, according to George Pond and Truman Nodland, agricultural economists at the University of Minnesota.

* * * *

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

Immediate release

4-H LEADER MEETINGS IN MAY

A series of 4-H leader training meetings on the 4-H electric and tractor projects will be held in May, Earl Bergerud, district 4-H club leader at the University of Minnesota, announced today.

Purpose of the meetings is to train 4-H adult and junior leaders in the electric and tractor projects for half the counties in the state.

The sessions, which will stress safety and planning of demonstrations and exhibits, will be conducted by D. W. Bates, University of Minnesota extension agricultural engineer, members of the state 4-H staff, representatives of Standard Oil company and an electrical power supplier.

Meeting times and locations are: May 5 - New Prague, at headquarters building of the Minnesota Valley Breeders' association; May 6 - Willmar, REA building; May 7 - Fergus Falls, old post office building; and May 8 - Grand Rapids, North Central School and Experiment station.

Both projects will be discussed on the same day, though separate meetings will be held for each. Similar meetings will be held next year for the other counties of the state, Bergerud said.

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B-1962-rlr

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

Immediate release

ECONOMIST WHO WILL RETIRE IN JUNE IS HONORED

George A. Pond, University of Minnesota agricultural economist who will retire in June, has been honored by the North Central Farm Management Research committee.

At a recent meeting in Chicago, the committee passed a resolution recognizing Pond for "his outstanding services to the creation, launching and continued functioning" of the North Central committee.

Pond, who has been a University staff member for 44 years, was one of a group of people who organized the committee in 1946, and was the committee's first chairman. As chairman of the organization's sub-committee on farm records, he guided a regional evaluation of farm accounts as a source of information for farm management research.

In Minnesota, Pond has been known as a leader in farm management improvement and research. He helped form the Southeast Farm Management association in 1928 and later helped organize the Southwest Farm Management association.

He developed a "short cut" technique for using farm records. This has been widely used in farm management teaching, research and extension work in Minnesota.

Pond was born in 1889 at Shakopee, attended the University's School of Agriculture from 1911-13, then entered the College of Agriculture, from which he earned his B. S. in 1918. He served in the U. S. Army in World War I, then received his M. S. in 1921 from the University and earned his Ph. D. in 1927 at Cornell university.

He was an agricultural economics staff member at the University of Minnesota from 1919-26, and from 1928 until now.

Since 1924, Pond has been chairman of the editorial committee for "Minnesota Farm Business Notes," a monthly publication of the University's Agricultural Extension Service. He is co-author of a text "Modern Farm Management" and has written or helped write more than two dozen bulletins and 216 individual reports published by the University.

Pond is a member of numerous organizations, including the American Farm Economic association; the Minnesota Farm Managers' association, of which he was 1951 president; the Minnesota Academy of Science; Sigma Xi; Gamma Sigma Delta and the International Conference of Agricultural Economists.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 22 1958

To all counties

ATT: 4-H AGENTS

For use week of
April 28 or after

RURAL YOUTH
MEET
MAY 16 - 18

Members of Rural Youth groups, older 4-H members and other interested young people are invited to attend the Western Regional Rural Youth Conference at the University of Minnesota Southern School of Agriculture, Waseca, May 16 - 18, announces 4-H Club Agent _____.

Keynote speaker for the three-day conclave will be Carl Rowan, of the Minneapolis Tribune, who will speak at the first general assembly Friday afternoon, May 16. J. O. Christianson, director of agricultural short courses, University of Minnesota, and Warren Schmidt, International Farm Youth Exchange coordinator, National 4-H Foundation, will speak at other assemblies during the meeting.

At the final assembly following church services on Sunday, May 18, the speaker will be Dr. Truman Coss, assistant professor of philosophy and religion, Hamline university.

Other activities will include group discussions concerning the agricultural revolution, national social problems, impact of urban living, and young adults and politics. Special interest sessions will be held to discuss topics such as vocations and careers, marriage and courtship, and adventures in politics.

Information on cost of the meeting and registration procedure may be obtained from the _____ county extension office.

University Farm and Home News
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University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

To all counties
For use week of
April 28 or later

CORN CONTEST
TELLS RESULTS
OF FERTILIZING

How much will fertilizer add to your corn profits?

There's an easy way to find out, says County Agent _____.

Simply enter the Minnesota X-Tra Corn Yield contest. All interested farmers are eligible. The contest is sponsored jointly by the University of Minnesota Agricultural Extension Service and THE FARMER magazine, St. Paul.

The contest involves raising corn on an unfertilized "check plot" alongside another plot which is fertilized.

By entering this contest, you can get a good deal of information on fertilizer response, moisture differences in corn and actual differences in corn population. Agricultural leaders helping with the contest will make these measurements, which you normally wouldn't have.

Now in its 6th year, the contest will have three important changes in its rules this summer:

1. In addition to competing for high corn yields and increases from fertilizing, there will also be an "X-Tra Profit" division. Profit will be based on net return per acre from fertilized corn plots, after all production and tillage costs are subtracted.

2. Both the check and fertilized plot must have been in the same crop and received the same fertilizer treatment as last year.

3. The plots must have had a complete soil test during the past year.

For details on the contest, check at the county extension office.

Helping out with the contest locally will be (use and complete this statement if applicable.)

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

To all counties
For use week of
April 28
ATT: HOME AGENTS

CHOOSE SMOOTH
FLOOR COVERING
WITH CARE

If you are planning a new floor covering for the kitchen, be sure to select one that is resistant to alkalis, grease, household acids and stains, warns Home Agent _____.

She reports that many _____ county homemakers planning to install new hard floor coverings in various rooms in the home ask for help in their selection.

Such help is now available in a bulletin newly published by the University of Minnesota Agricultural Extension Service, "Smooth Surface Floor Coverings," Extension Bulletin 291, written by Elizabeth Rivers, home economist, and Mrs. Myra Zabel, extension home furnishings specialist at the University. The bulletin is available from the county extension office.

Miss Rivers and Mrs. Zabel say the kind of floor covering to choose will depend upon: where it is to be placed; amount of traffic; type of heating; type of activity carried on in the room; color and design desired; need for quiet; ease of maintenance and cost.

Wearing quality of a smooth floor covering is directly related to the thickness or gauge of the wear layer, to the composition of the flooring material and to the type and thickness of the backing. Often a thinner gauge will be satisfactory if properly cared for, although a thicker or heavier gauge will add to quietness and comfort.

The following types of floor coverings are satisfactory for various rooms in the house: linoleum, vinyl, grease-resistant asphalt, vinyl asbestos, printed vinyl or printed enameled covering for the kitchen; linoleum, vinyl, vinyl asbestos, rubber, grease-resistant asphalt for either bathroom or laundry; asphalt or vinyl asbestos for basement rooms.

Least expensive materials include asphalt tile, light-weight inlaid linoleum, printed vinyl and printed enameled floor covering. Grease-proof asphalt tile, standard linoleum and linoleum tile and vinyl asbestos tile are medium in cost. Cork, rubber and vinyl tile are high cost.

University Farm and Home News
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St. Paul 1, Minnesota
April 22, 1958

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH FEATURE *
* * * * * * * * *
Immediate release

EXPERIMENTAL STRUCTURE SEEKS ANSWERS TO BUILDING PROBLEMS

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Instead of having uniformly-built sides, the building has outside walls made up of 56 different panels. These panels include 28 different combinations of lumber and wood preservative treatment, on both east and west sides.

As years go by, research workers will closely watch the panels, to see which deteriorate most rapidly, and whether there will be any difference in decay between east and west exposure.

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Otis and Neetzel have no doubt that it pays to treat lumber. But their aim now is to find, for each type of lumber, which treatment will do the job at the least cost.

(more)

add 1 building experiment

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Other experimental features of the building include:

- * Purlins (timbers that support the roof) placed on top of upright poles instead of attached to the sides as is now common in pole-type buildings.
- * Metal rods instead of wood members for tension braces and ceiling supports.
- * Poles in walls sawed, above the ground, so they are flat on each side and therefore allow for uniform wall thickness.
- * Braces attached to upright poles and purlins with bolts instead of nails.
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To all counties
For use week of
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GRAIN SORGHUM
IS ALL RIGHT
FOR DAIRY COWS

Both grain and forage sorghum varieties can be fed to dairy cattle,
according to County Agent _____.

Grain sorghum is quite similar to corn in feed value; it's generally
considered worth about 90-95 percent as much per pound in total feed value as
shelled corn. Forage, or "sweet" sorghum can be used for silage.

J. D. Donker, dairy husbandman at the University of Minnesota, says
sorghum may also be used for fodder or silage, but you get more total digestible
nutrients (TDN) per acre when you put it up as silage.

Donker points out, though, that the TDN content of sorghum silage is
somewhat lower than corn. There is a smaller proportion of grain in it and
more of the grain passes through the animal undigested than is true with corn.
This means sorghum forage needs to be supplemented with legume hay and with a
protein-rich concentrate to make a complete ration for diary cows.

Sorghum is not a good crop to pasture or "green-feed," according to
Donker. The reason is that when fresh and green, it may contain dangerous amounts
of prussic acid. After it has been stored, though, there is no longer any prussic
acid danger.

Sorghum grain can be substituted for corn, but it's best to crush or
grind it for adult cattle. Donker advises farmers not to feed heavy amounts of
grain from sweet sorghum, because these varieties are bitter and cattle may not
eat them well.

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University Farm and Home News
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University of Minnesota
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To all counties
For use week of
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CHEMICAL STOPS
SOIL INSECTS

A determined attack on corn rootworms and other soil insects now can prevent a good deal of corn lodging later on this season.

Bill Hueg, extension agronomist, and Herb Johnson, extension plant pathologist at the University of Minnesota, say these insects can cause trouble in two ways.

First, if the seedlings or young roots are damaged, the corn may lodge later on when increasing weight and high winds force the plants to lean.

Second, this damage may result in small and chaffy ears of corn.

There isn't likely to be trouble from rootworms in corn on land that was not in corn last year. This is because the adults lay their eggs at the base of the corn plants in the fall. Other soil insects may be present, however.

But where you're raising corn for more than one year in the same field, it may pay to use chemicals. This is particularly true where you saw or suspected rootworm damage last year.

If you decide to use chemicals, you can apply 3/4 pound heptachlor, 1 pound aldrin or 1 $\frac{1}{4}$ pounds chlordane before planting time. Apply the material broadcast, either as a spray, dust or in granular form. Work the material into the soil within a few hours after applying.

You can also use these chemicals in a row or band at planting time, or before the corn comes up. Put the insecticide an inch or two below the soil surface. For this type treatment, use $\frac{1}{2}$ pound heptachlor, 3/4 pound aldrin or a pound of chlordane.

It isn't a good idea to mix the insecticides with the fertilizer, if the fertilizer is to be placed below the seed. It also is not wise to mix it with pre-emergence weed chemicals, but you can place liquid insecticide directly in the furrow opening, if you have an attachment for this operation.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 22, 1958

SPECIAL TO WILCOX
County Agent Introduction

Mrs. Edna Jordahl, Clay county home agent, is president of the Minnesota home agents association. She is a graduate of Normal and Industrial college, and Ellendale, N. D., took her present position in 1955. Earlier, she was Itasca county home agent for three years and was on the staff of the Farm Security Administration in North Dakota for seven years.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 24, 1958

Immediate release

PLANT VEGETABLES ADAPTED TO FREEZING

If you want high-quality vegetables in your freezer next winter, select good freezing varieties when you buy your garden seed.

Shirley Trantanella and J. D. Winter of the University of Minnesota food processing laboratory say that home gardeners often fail to plan ahead for freezing when they plant their vegetables. The result is that at harvest time they freeze varieties that prove to be disappointing in both flavor and appearance when taken out of the freezer later.

Experiments in the University food processing laboratory show that vegetable varieties--for example, varieties of green beans--differ greatly in appearance and in flavor when frozen. For that reason, Miss Trantanella and Winter suggest that gardeners expecting to freeze vegetables/plant varieties especially adapted to freezing and recommended for Minnesota.

Given below is a list of some of the vegetable varieties recommended for freezing as a result of tests by the University food processing laboratory. Still other varieties suggested for freezing and for planting in Minnesota home gardens are given in the newly revised publication, Extension Folder 154, "Vegetable Varieties for Minnesota," available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1.

Asparagus - Washington, F₁ Hybrid.

Green beans - Topcrop, Tendergreen, Wade.

Yellow bush beans - Cherokee, Pencil-Pod Black Wax, Brittle Wax.

Broccoli - Waltham 29.

Cauliflower - Snowball, Super Snowball.

Sweet corn - (on cob) - Golden Freezer, Golden Cross Bantam, Golden Beauty.
(whole kernel) - Most good garden varieties.

Peas - Little Marvel, Laxtons Progress, Burpeana Early Dwarf (early); Thomas Laxton, Lincoln, Dark Seeded Perfection (midseason).

Spinach - Bloomsdale Long Standing, America, New Zealand.

Squash, winter - (for pies) - Greengold.
(for mashed squash) - Greengold, Buttercup, Butternut, Hybrid R.

Miss Trantanella and Winter point out that there are many other vegetable varieties satisfactory for freezing. They are not included in the list because they have not been tested by the University food processing laboratory.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 24, 1958

FORESTRY STUDENT RECEIVES NATIONAL LUMBER MANUFACTURERS
ASSOCIATION SCHOLARSHIP

The National Lumber Manufacturers Association has announced that Robert W. Erickson, a student in the Building Products Merchandising and Construction curriculum at the University of Minnesota School of Forestry, will receive one of six scholarships offered by the NLMA. The scholarship is for \$500 plus expenses to and from Washington, D. C. for a ten week period of training at the laboratory of the Timber Engineering Company, an affiliate of the NLMA.

Selection for this scholarship is made on a basis of interest in the field of wood products, future plans of the nominee, scholastic record, and extra-curricular activities.

The aim of the lumber industry in offering these scholarships is to advance further its cooperation with the schools of forestry to the end that a growing number of young men will be trained for employment opportunities in the forest industries.

The recipients work on projects normally in progress at the TECO Laboratory. Studies conducted will include wood chemistry, electronics, microscopy, product development and testing.

Previous NLMA scholarship winners from the School of Forestry are Daniel P. Remington (1951), Donald G. Butler (1953), and Donald C. Markstrom (1955).

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 24, 1958

Immediate release

DON'T HIDE HOUSE WITH FOUNDATION PLANTS

Your foundation planting can add to or detract from the value of your house.

That's why it pays to consider carefully before buying plants for this purpose, according to C. G. Hard, extension horticulturist at the University of Minnesota.

Overplanting is a common error made by amateur landscape gardeners, Hard says. The reason for this may be a natural impatience to fill the empty spots quickly. Hence the tendency is to plant too closely and to choose materials that grow fast, without allowing sufficient space for their ultimate size.

In general, foundation plants should be low and spreading for the modern-type ranch house. Low plants are especially desirable at doorways and under windows, unless the house has a high foundation. It is not necessary to hide every expanse of wall, Hard cautions. Sometimes placing plants only at the doorway and corners of the house produces a better effect.

Foliage color and seasonal color change add to the interest of the foundation planting. Shrubs with high autumn color include Amur maple, winged euonymus, sumac and highbush cranberry. Twig coloring and winter effects of many deciduous shrubs are just as interesting as evergreens, Hard points out. If you plan to use evergreen shrubs, be sure to select species such as Mugho pine, arborvitae and juniper which offer varieties that will grow only to the height you desire, he suggests.

A list of shrubs especially adapted to Minnesota conditions is given in "Woody Plants for Minnesota," Extension Bulletin 267. "Landscaping the Home," Extension Bulletin 283, gives suggestions on how and where to use particular shrubs. Copies of these bulletins are available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 24, 1958

Immediate release

GIVE HARD FLOOR COVERING GOOD CARE

Proper care of the smooth-surface floor coverings in your home is one of the keys to long wear.

Elizabeth A. Rivers, home economist, and Mrs. Myra Zabel, extension home furnishings specialist at the University of Minnesota, give some tips on care of hard floor coverings in a new University of Minnesota Agricultural Extension Service publication, "Smooth Surface Floor Coverings," Extension Bulletin 291. Copies of the bulletin are available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1.

Hot sun constantly shining on flooring through glass is hard on some colors and materials, the specialists warn. The sun may even cause shrinkage and brittleness. Neutral colors have the best and pastel colors the poorest light resistance. Light will fade cork.

Frequent washing with strong soaps and abrasives can wash away linoleum and other hard floor coverings faster than traffic, according to Miss Rivers and Mrs. Zabel. For that reason, they recommend washing the floor only when needed. Keep the floor clean by sweeping daily with a dry mop--not an oil mop--soft broom or vacuum cleaner floor brush and wipe up immediately anything spilled or tracked in. Be sure to wait until the adhesive is thoroughly set before washing the floor--at least four or five days after laying it.

It is important to use the correct type of wax on the floor, the University specialists say. When installing a new floor covering, be sure to find out what the manufacturer's directions are for its care. Only liquid self-polishing (water-base) wax, for example, should be used on rubber and asphalt. Always avoid use of solvents on asphalt and rubber. Never use varnish, shellac or lacquer on resilient floor coverings.

To prevent dents, use furniture cups or glides under furniture legs.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 24, 1958

Immediate release

HYBRID ONIONS PERFORMED WELL IN DEMONSTRATION

Onion hybrids performed well in field demonstrations conducted in Minnesota last summer.

According to Orrin C. Turnquist, extension horticulturist at the University of Minnesota, trials were conducted at three locations, on hybrids and varieties. At each place, hybrids scored the highest yields.

At the Reynen Brothers farm near Maple Island, Bronze Perfection yielded 875 50-pound bags of onions per acre, followed by 737 bags from Elite and 691 from B5176 X B2215. All three are hybrids.

Highest yielding open-pollinated variety on this farm was Indian Queen, with 564 bags per acre.

A hybrid called Bl340 X B2215 yielded 1,161 50-pound bags per acre at the C. Muilenberg farm near Maple Island, followed by 950 bags from B2217 X B2215.

Four-year averages from plots at Hollandale showed a 936-bag average from Abundance and 926 from Elite. Both are hybrids. These averages were about 350 bags more than either Brigham Yellow Globe or Early Yellow Globe, two common open-pollinated varieties.

As a result of these trials, many onion growers in southern Minnesota are turning to hybrids, Turnquist says.

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B-1967-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 24, 1958

Immediate release

FFA AWARD WINNERS ANNOUNCED

Winners of eleven awards which will be presented during the 1958 Minnesota FFA convention, May 5, on the St. Paul campus of the University of Minnesota, were announced today.

Each award includes a \$100 check from the National FFA Foundation, according to G. R. Cochran, state FFA advisor.

The awards and winners are:

Farm Mechanics Award--Arlan Henderson, Winona.

Farm and Home Electrification Award--Tom Hollihan, Forest Lake.

Star Dairy Farmer--Dayle Besemer, New Ulm.

Soil and Water Management--Gene J. Leroux, Forest Lake.

Star Sheep Farmer--Arlen Olson, Fosston.

Star Poultry Farmer--LeRoy Leinenweber, St. James.

Star Crops Farmer--John Appelen, Canby.

Star Forestry Farmer--Donald E. Schmidt, Detroit Lakes.

Star Beef Farmer--Robert Klein, Tracy.

Star Hog Farmer--Hartwin Kreft, Redwood Falls.

The Farm Safety Award went to the Winona FFA chapter.

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B-1968-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minn.
April 25, 1958

Special to Mower County
(with mat)

MOWER COUNTY
TO HAVE HOME
AGENT JULY 1

When Carol Pinney, Le Sueur, takes over the duties of home agent for Mower county on July 1, she will bring with her a background of experience in 4-H work.

As home agent she will work with County Agent Donald Hasbargen and 4-H Agent Ronald Seath in carrying out an expanded extension program for Mower county. Miss Pinney's responsibilities will be with the extension home program and the home economics phases of the 4-H program.

For 11 years Miss Pinney was an active 4-H member in Le Sueur county. Her achievements in the food preparation project won for her a \$100 scholarship. Last summer she served as 4-H assistant in Carver county.

Miss Pinney will receive her bachelor of science degree, with a major in home economics, from the University of Minnesota in June.

She is a member of Phi Upsilon Omicron, national home economics society, and has served as historian of the University of Minnesota chapter. She is also a member of the University Home Economics association and of Clovia, 4-H sorority. She is ~~more~~ active in United Campus Christian Fellowship.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 25, 1958

SPECIAL TO TWIN CITY OUTLETS
Immediate release

CLOVER MITES ABUNDANT IN TWIN CITIES AREA THIS YEAR

Don't be alarmed if you see clusters of tiny, dull, reddish-brown creatures on your window or walls this spring.

Chances are that what you're seeing are clover mites, which are more abundant in the Twin Cities area this spring than ever before. But while they may be a nuisance, these mites are harmless as far as homes and people are concerned, according to E. F. Cook, entomologist at the University of Minnesota. What's more, they should all disappear in a week or two.

Clover mites are about the size of a pinhead. They are dull brown or black and have reddish-orange legs. When crushed, they leave a rusty-reddish spot. Hundreds or even thousands of them may congregate in a small area.

Cook says the mites entered homes last fall and lived over winter in cracks and crevices around windows, under siding and in similar places. Now, with warm weather, they have become active. Within the next couple of weeks, most of them will move out of houses and back into the grass and sod, which is their normal summer habitat.

Indoors, you can partially control clover mites with aerosol sprays of pyrethrum, pyrethrin or allethrin. You can get these materials at most drug or hardware stores.

Outside, you can control them with a mixture of Kelthane and Malathion, available at larger hardware and seed stores. Mix 2 tablespoons of Kelthane and 2 teaspoons of Malathion in a gallon of water. Spray this mixture on the side of the house, especially around windows and on the ground next to the house.

To prevent reinfestation of your house next year, cut the sod back from the house for 18-24 inches. You can plant this non-sodded area to flowers or shrubs, but keep it well cultivated and free of grass and weeds. This is especially important in the fall when these mites begin to move back to shelter for winter.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 25, 1958

SPECIAL TO TWIN CITY OUTLETS
Immediate release

STAFF MEMBER LEAVES FOR OVERSEAS U. N. ASSIGNMENT

Ronald Beazley, associate professor in the University of Minnesota School of Forestry, has left for an overseas assignment being conducted jointly by the Economic Commission for Asia and the Far East and the F. A. O. of the United Nations.

He will be forest economist in charge of a study of the timber requirements, forest resources and forest industries of the Far East, and will return to the University by October 1, 1958.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 25, 1958

SPECIAL TO TWIN CITY OUTLETS
Immediate release

UNIVERSITY MINNESOTA ROYAL PLANS ANNOUNCED

St. Paul campus students of the University of Minnesota will kick off their annual Minnesota Royal celebration with a "Remember When" talent show at 7 p.m., May 8, in Coffey hall auditorium.

Other highlights of the celebration, May 9-11, include everything from a wagon train to livestock showmanship to hand-milking contests for girls.

Students of the College of Agriculture, Forestry and Home Economics and the College of Veterinary Medicine sponsor the annual event to acquaint friends and parents with activities of the St. Paul campus and to promote campus spirit.

A wagon train manned by students will leave Stillwater May 8 and will arrive at the campus sometime during the next day. Other features on Friday, May 9, include a rodeo, chuck wagon chow, repeat performance of the talent show, queen coronation and a dance.

The chuck wagon chow will be a combination smelt fry and beef barbecue.

Saturday, there will be livestock showmanship contests on the campus mall during the morning, a bean feed at noon and a canoe derby at Marine-on-St. Croix in the afternoon. That evening there will be a chicken barbecue and dance at the William O'Brien state park, north of Stillwater.

Sunday, all departments on the St. Paul campus will hold open houses and give guided tours for visitors to the campus. Home economics students will model the latest styles of clothing--as well as some centennial styles--on the campus mall. Awards for the winners in competitive events will be presented Sunday afternoon.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 25, 1958

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Immediate release

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minn.
April 28, 1958

Special to Benton & Winona Counties
(with mat)

BURMESE IFYE
TO COUNTY

A young man from Burma will spend about a month in this county learning about rural life in America as an International Farm Youth exchangee.

Toe Aung, 27, "aubin, Union of Burma, will arrive in Minnesota on May 28. He will live and work with farm families in Benton county May 29-June 23 and will spend the period from June 23 to July 26 in Winona county. He will attend the State 4-H Junior Leadership conference on the University of Minnesota's St. Paul campus June 10-13.

While in this county, the Burmese youth will live with _____

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(names and addresses of host families)

Aung is a student at the State Training College for Teachers and State Agricultural Institute in Burma. He has completed four years of advanced education in agricultural and educational subjects. He has had 10 years of experience in living on a farm of 100 acres where rice is the major crop. He is a Boy Scout leader.

Aung's special interest while here ~~now~~ is learning about rural youth and extension organizations. He is also interested in animal husbandry and horticulture.

The Burmese youth is one of nine rural young people who will spend some time in Minnesota as IFYES this year. In the return phase of the program, three Minnesota rural youths will go abroad this summer and fall. Objective of the International Farm Youth Exchange program is to further world peace by increasing understanding among peoples at the grass roots level. Delegates have the opportunity to learn through personal experience about the rural problems and attitudes in other countries of the world.

The international Farm Youth Exchange program is sponsored by the National

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of Agriculture, with financial assistance in Burma of the Ford Foundation
and the GUB Agricultural Institute.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 28, 1958

Special to Wadena and LeSueur counties
(mat)

Portuguese IFYE
To County

A young man from Portugal will spend about a month in this county learning about rural life in America as an International Farm Youth Exchangee.

Armando Madail, 25, Rus Eca de Queiroz, Portugal, will live and work with farm families in Wadena county May 12-June 10 and from June 13-July 26 will be in LeSueur county. He will attend the State 4-H Junior Leadership conference on the University of Minnesota's St. Paul campus June 10-13.

While in this county, the Portuguese youth will live with _____

(names and addresses of host families)

Madail is a member of the Portuguese Youth Organization and the Students Association of Agricultural Institute in Lisbon. He has attended agricultural school for 5 years, studying agricultural industry. He is now working on an Agricultural Engineer degree.

While in America, Madail is interested in learning about dairying, organization of the farm, dairy technology and farm extension work.

The Portuguese youth is one of nine rural young people who will spend some time in Minnesota as IFYEs this year. In return, three Minnesota rural youths will go abroad this summer and fall. Objective of the International Farm Youth Exchange program is to further world peace by increasing understanding among peoples at the grass roots level. Delegates have the opportunity to learn through personal experience about the rural problems and attitudes in other countries of the world.

The International Farm Youth Exchange program is sponsored by the National 4-H Club Foundation and the Federal Extension Service of the U. S. Department of Agriculture, with financial assistance in Portugal of the Nestle Company, Lisbon.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 28, 1958

Special to Morrison and Mower counties
(mat)

Australian IFYE
To County

A young man from Australia will spend about a month in this county learning about rural life in America as an International Farm Youth Exchangee.

Keith Holmes, 25, Raleigh, Australia, will arrive in Minnesota on May 27. He will live and work with farm families in Morrison county May 27-June 23 and from June 23-July 13 will be in Mower county. He will attend the State 4-H Junior Leadership conference on the University of Minnesota's St. Paul campus June 10-13.

While in this county, the Australian youth will live with _____

(names and addresses of host families)

Holmes is a member of the Junior Farmer's Club, and is a dairy farmer in Australia.

While in America Holmes is interested in learning about cattle breeding and dairy management.

The Australian youth is one of nine rural young people who will spend some time in Minnesota as IFYEs this year. In the return phase of the program, three Minnesota rural youths will go abroad this summer and fall. Objective of the International Farm Youth Exchange program is to further world peace by increasing understanding among peoples at the grass roots level. Delegates have the opportunity to learn through personal experience about the rural problems and attitudes in other countries of the world.

The International Farm Youth Exchange program is sponsored by the National 4-H Club Foundation and the Federal Extension Service of the U. S. Department of Agriculture, with financial assistance in Australia of the Nestle Company, Sydney, Australia.

University Farm and Home "News"
Institute of Agriculture
University of Minnesota
St. Paul 1, Minn.
April 28, 1958

Special to ~~Minneapolis and~~ ~~Minnehaha~~ and ~~nearby~~ ~~counties~~
~~counties~~

BURMESE IFYE
TO COUNTY

A young man from Burma will spend about a month in this county learning about rural life in America as an International Farm Youth Exchangee.

Win Kyi, 23, Rangoon, Burma, will arrive in Minnesota on May 28. He will live and work with farm families in Mille Lacs county May 29-June 23 and from June 23-July 26 will be in Olmsted county. He will attend the State 4-H Junior Leadership conference on the University of Minnesota's S. Paul campus June 10-13.

While in this county, the Burmese youth will live with _____
(names and addresses of host families)

Kyi is a junior executive officer for the Agriculture and Rural Development Corporation Poultry farm in Rangoon, Burma. He holds a bachelor of science degree from the University of Rangoon, where he specialized in science and agriculture.

While in America Kyi is interested in learning about rural community life and American methods of poultry production.

The Burmese youth is one of nine rural young people who will spend some time in Minnesota as IFEs this year. In the return phase of the program, three Minnesota rural youths will go abroad this summer and fall. Objective of the International Farm Youth Exchange program is to further world peace by increasing understanding among peoples at the grass roots level. Delegates have the opportunity to learn through personal experience about the rural problems and attitudes in other countries of the world.

The International Farm Youth Exchange program is sponsored by the National 4-H Club Foundation and the Federal Extension Service of the U. S. Department of Agriculture, with financial assistance in Burma of the Ford Foundation and the Agricultural and Rural Development Corporation of the Ministry of Agriculture and Forestry.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 29 1958

To all counties
For use week of
May 5 or later

FARM FILLERS

Never use plant pesticides on livestock, advises Raymond B. Solac, extension veterinarian at the University of Minnesota. Even though the same material may be used in materials designed for animals as is used in preparations for crops, the concentration and chemical formulations may be entirely different. The difference could mean that materials designed for plants, if used on livestock, could result in sick animals.

* * *

Flaxseed prices are tied more directly to the current economic slump than any other agricultural commodity produced in the upper Midwest, says W. M. Manion, St. Paul, economist for the USDA Agricultural Marketing Service. He says slow-downs in new construction, automobiles, building maintenance and high paint inventories have reduced demand for flaxseed and linseed oil. But when the economy swings upward again, he expects flaxseed to regain its place as an important source of income to Midwest farmers.

* * *

Even with the new type fertilizer attachments on corn planters--which prevent fertilizer damage to seed--it's advisable to apply no more than 200 pounds fertilizer in the row at planting time. By July or August, fertilizer applied in the row wouldn't be low enough in the soil for corn roots, according to Curtis Overdahl, extension soils specialist at the University of Minnesota. If the soil is particularly low in fertility, better plow down part of the fertilizer.

* * *

Does grazing hurt woodlands? Yes! says Parker Anderson, extension forester at the University of Minnesota. Wisconsin studies showed that in one storm grazed woodlands lost 1600 pounds of soil per acre and 9 percent of the total rain from run-off. Ungrazed woodlands lost less than 1 percent of the rain through run-off and only 17 pounds soil per acre.

* * *

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

SPECIAL
* * * * * * * * * * *
* For release at 6:30 p.m. *
* Wednesday, April 30 *
* * * * * * * * * * *

COLBURN RECEIVES KMG AWARD

Floyd Colburn, Itasca county extension forestry agent, this evening received a senior forestry award from Keep Minnesota Green, Inc.

The award was made at the annual meeting of KMG in the Normandy hotel, Minneapolis. Also receiving the award were George A. Selke, Minnesota Commissioner of Conservation, Robert R. Power, Backus, manager of the KMG emergency radio net and the Pine county KMG committee,

The award is made to individuals and groups who have made outstanding contributions to forestry work in Minnesota.

Colburn was one of the first extension forestry agents in the nation. He took his present post in 1946 and has led an extensive forestry program in Itasca county.

For example, Colburn has helped some 150 farmers draw up complete woodlot management plans and has aided more than a thousand local farmers in cruising woodlots, planning cuttings, finding markets and carrying out reforestation projects.

In addition, he has promoted a program in which more than a million trees per year have been planted on local farms and has helped dozens of youngsters get started in 4-H forestry work.

Colburn was raised on a farm near Excelsior, Minn., and is a 1933 forestry graduate from the University of Minnesota. He was employed by the Lake States Forest Experiment station and the U. S. Forestry Service and served in the U. S. Army before taking the Itasca county position.

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**University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul I Minnesota**

Special to Big Stone county agent

**CROONE NAMED
4-H AGENT
FOR SUMMER**

Allen N. Croone, Chisago City, the 1956 Minnesota International Farm Youth Exchange (IFYE) delegate to Greece, will be 4-H assistant in Big Stone county this summer.

He will assist the county extension staff in promoting the 4-H program here.

Croone was raised on a general dairy farm in Chisago county, and has been a 4-H club member for 12 years. He has had projects in soil conservation, home and garden, health, safety, farm records, tractor maintenance, and junior leadership.

He attended the State College at St. Cloud from 1952-53, served in the U. S. Army for two years, then entered the University of Minnesota in 1955. He is presently studying in the College of Agriculture, Forestry and Home Economics at the University.

At the University, he has been active in a number of student organizations, including the Lutheran Student association, the Veterans Club, and has been an organizational leader for several student activities on the St. Paul campus.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

Immediate release

SIMAZIN CLEARED FOR USE ON CORN

Simazin, one of the most promising chemicals for weed control in corn, has been cleared by the U. S. Food and Drug Administration for use on this crop.

Bill Hueg and Harley Otto, extension agronomists at the University of Minnesota, say the chemical can be used on field corn, sweet corn and seed corn of both crops.

University field trials last summer showed simazin gives good control of annual grass and broad-leaved weeds. But at recommended rates it is not too effective against most perennial weeds.

Recommended rate for applying simazin is 3 pounds of active ingredient per acre. This rate gave best results in University research. Farmers can reduce the cost per acre by applying simazin in a band over the corn row.

Simazin can be used either as a pre-emergence application, at planting time, or at the "spike" stage--just when the corn emerges.

It takes from 20-40 gallons of water per acre for broadcast applications and 7-14 for band applications of simazin. The agronomists recommend that farmers use sprayer nozzles with a 50-mesh screen and at least 20 gallon capacity.

The product which contains simazin is a 50 percent wettable powder. This means that the spraying equipment used must have mechanical agitation to keep the material in suspension.

A note of warning on simazin: At present, farmers will have to plan on corn next year in fields treated with simazin this year. This is because it isn't known how long the residue holds over in the soil to injure susceptible crops. Also, the agronomists aren't sure, so far, about which crops are susceptible. These questions are being studied this year in extensive research at the University.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

* * * * * * * * *
* A FARM AND HOME *
* RESEARCH REPORT *
* * * * * * * * *

Immediate release

IT PAYS TO TREAT SOYBEAN SEED, TESTS SHOW

It definitely pays to treat soybean seed with a fungicide before planting, University of Minnesota studies show.

Plant Pathologist T. D. Wyllie says trials during the past two years show that soybean seed treated with Arasan fungicide yielded, in some seedlots, up to six bushels more per acre than untreated seed.

How much it increases yields on individual farms, however, will depend on general growing conditions and seed condition, Wyllie says. The biggest increase occurs in lots of ~~poor~~ quality seed. With high quality seed, there may not be a marked increase from seed treatment.

These trials were conducted on samples of commercial Renville and Blackhawk seed, which had been sent in to the state seed testing laboratory by Minnesota farmers.

Treating kills many disease organisms which may interfere with plant growth.

The advantage from treating may be somewhat less in a good growing year for beans, such as summer, 1957. Also, in these trials, the biggest yield increases from treating occurred in seed samples having germination below 85 percent.

The treating only costs about 30 cents per acre for materials. But that is a cheap investment when compared to the "insurance" it gives. If it only increased yields by a half bushel per acre, the farmer would still be money ahead.

One final point: treating is especially important in fields which have been raising soybeans continuously for several years, because these fields may have greater populations of disease organisms.

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B-1970-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

Immediate release

TWO EXTENSION SPECIALISTS NAMED AT UNIVERSITY

Two new extension specialists have recently taken up duties at the University of Minnesota, according to Skuli Rutherford, director of the University's Agricultural Extension Service.

The new extension men are Martin K. Christiansen, dairy marketing specialist, and Harley J. Otto, agronomist.

Christiansen was formerly an agricultural economics instructor at the University. Otto came from Cornell university, where he was an extension specialist in field crops.

A native of Slayton, Minn., Christiansen received his B. S. in 1950 and his M. S. in 1956, both from the University of Minnesota and both in agricultural economics. He conducted dairy marketing research as a graduate student and since 1955 has been an agricultural economics staff member.

He will work with county agents, other University specialists and farmers on problems connected with dairy marketing.

Otto is originally from Kansas, has attended Colorado State university, the University of Hawaii and Cornell university, where he earned his Ph. D. in agronomy in 1956. He will work in cooperation with William Hueg, the other extension agronomist at the University, county agents and state farmers on field crops problems and improved practices.

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B-1971-pjt

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

Immediate release

RURAL YOUTH CONFERENCE DATES ANNOUNCED

The Western Regional Rural Youth conference will be held May 16-18 at the University of Minnesota Southern School of Agriculture, Waseca, Minn., Stanley Meinen, assistant state 4-H club leader, announced today.

Members of county Rural Youth groups, older 4-H members and other interested young people are invited to attend.

Carl Rowan, writer for the Minneapolis Tribune, will be keynote speaker for the three-day meeting. The assembly featuring his talk at 1:15 p.m. Friday, May 16, will be open to the public.

Others speaking to the group will be J. O. Christianson, director of agricultural short courses, University of Minnesota; Warren Schmidt, International Foreign Youth Exchange coordinator of the National 4-H foundation; and Dr. Thurman Coss, assistant professor of philosophy and religion, Hamline university.

Activities will include group discussions dealing with the agricultural revolution, national social problems, impact of urban living and young adults and politics. Special interest sessions will be held to discuss topics such as vocations, courtship and politics.

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B-1972-rlr

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 29 1958

To all counties
For use week of
May 5 or later

CONTROL LEAFHOPPER TO STOP ASTER YELLOWS

Aster yellows virus -- plant disease that hits several hundred plants from field crops to garden crops to ornamentals -- made its most severe attack in several years during 1957.

The virus spreads from infected overwintering plants by the six-spotted leafhopper, according to Herbert Johnson, extension plant pathologist at the University of Minnesota.

The aster yellows virus symptoms for a few crops are:

- . Flax - plants often stunted, yellowed; flowers have no color; bolls do not form.
- . Potatoes - on this crop the disease is called purple top wilt; purple color may or may not be present depending on the variety; leaves curl inward; plant slowly wilts and eventually dies.
- . Celery - stems twist and curl; breaks occur and turn black; leaves turn yellow.
- . Carrots - leaves turn yellow or bronze; numerous shoots arise from the crown; numerous small roots arise from the main tap root; carrot takes on an off-flavor.
- . Onions - plants stunted and yellowed; bulb becomes soft and spongy.
- . Leaf lettuce - growing tip dies and no new leaves are formed; plant eventually withers and dies.
- . Ornamentals - plants generally turn yellow; flowering and growth stops.

To control aster yellows virus, you must control the leafhoppers. DDT or Malathion sprayed or dusted at 5 to 7 day intervals for several weeks during the first half of the summer have been effective in some cases. It's a good idea to make additional chemical applications immediately following rains.

Symptoms of the disease do not appear until 3 to 6 weeks after the leafhoppers carry the virus to the plant. Therefore, control measures must be used long before the trouble is evident, says Johnson.

University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

Winnipeg

SPECIAL
* * * * * * * * * * * * * * *
* For release at 6:30 p.m. *
* Wednesday, April 30 *
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COLBURN RECEIVES KMG AWARD

Floyd Colburn, Itasca county extension forestry agent, this evening received a senior forestry award from Keep Minnesota Green, Inc.

The award was made at the annual meeting of KMG in the Normandy hotel, Minneapolis. Also receiving the award were George A. Selke, Minnesota Commissioner of Conservation, Robert R. Power, Backus, manager of the KMG emergency radio net and the Pine county KMG committee.

The award is made to individuals and groups who have made outstanding contributions to forestry work in Minnesota.

Colburn was one of the first extension forestry agents in the nation. He took his present post in 1946 and has led an extensive forestry program in Itasca county.

For example, Colburn has helped some 150 farmers draw up complete woodlot management plans and has aided more than a thousand local farmers in cruising woodlots, planning cuttings, finding markets and carrying out reforestation projects.

In addition, he has promoted a program in which more than a million trees per year have been planted on local farms and has helped dozens of youngsters get started in 4-H forestry work.

Colburn was raised on a farm near Excelsior, Minn., and is a 1933 forestry graduate from the University of Minnesota. He was employed by the Lake States Forest Experiment station and the U. S. Forestry Service and served in the U. S. Army before taking the Itasca county position.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 29 1958

To all counties
ATT: 4-H CLUB AGENTS
For use the week of May 5

4-H SUNDAY
MAY 11

Four-H members of _____ county will observe 4-H Sunday on May 11, according to Club Agent _____.

(NOTE TO AGENT: Add a paragraph on the particular observances of your county clubs, such as holding special services, or taking part in regular church services.)

Four-H Sunday emphasizes the spiritual values and character-building qualities of 4-H club work. Observance of 4-H Sunday aids in the spiritual development of the individual so essential to a full, well rounded life of service, says

_____. It helps 4-H members realize their responsibilities to the (agent) church of their own choice, and enables them to learn the place of church activities in everyday living, _____ points out.

Four-H club Sunday is an outgrowth of Rural Life Sunday. It is associated with the ancient practice of blessing the land and seed at planting time. It is always observed the fifth Sunday after Easter.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 29 1958

TIPS LISTED FOR
GOPHER CONTROL

The most effective way to control gophers is to put some powdered strychine - treated stomach poison bait in their runways.

This advice comes from the Minnesota Department of Agriculture. Department pest control experts point out that gophers are very active at this time of year. They are building runways which serve as homes, storehouses, and routes to underground food hunting.

Pocket gophers are rapidly becoming serious enemies of farmers in most of Minnesota. Their burrows in roadsides and in sloping, light sandy soil can be blamed for much of the soil erosion problem.

You can get up-to-date information on the habits, placement of bait, bait formulas and other advice on control from University of Minnesota extension folder 75, "Controlling Pocket Gophers." For a copy of the folder, write to the Agricultural Bulletin Room, University of Minnesota, St. Paul 1.

You can also get information on this problem by writing to the State Department of Agriculture, Division of Plant Industry, 312 Coffey Hall, University of Minnesota, St. Paul 1.

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University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 29 1958

To all counties
For use week of
April 28 or later

A U. of M. Ag. and Home Research Feature

MOST FARMERS HAVE
GOOD RESULTS WITH
LAND CONTRACTS

In general, Minnesota farmers who buy farm property under "land contracts" are having good experiences with this system.

R. V. Elefson and Philip M. Raup, University of Minnesota agricultural economists, make this conclusion after a recent survey of 350 farmers who financed purchases this way.

Eighty-four percent of these farmers never missed a payment on their contracts and only 14 percent had missed one or more payments.

Minnesota law permits the seller, with property sold under land contract, to repossess his land by a simple eviction procedure, which can be started 30 days after a buyer has defaulted.

Yet, of the farmers in this study who had missed payments, only one had received notification of contract cancellation, even though some buyers had been behind in payments for three or four years. This shows that in general, persons selling farms on land contracts have a lenient attitude.

Under a land contract, title to the land remains with the seller until the buyer has completed all payments on the contract. With a mortgage, on the other hand, the buyer gets the title at time of the sale.

Land contracts are gaining in popularity in Minnesota, the study by Raup and Elefson shows. Thirty-eight percent of all farm sales in Minnesota during 1957 were financed this way. This is an increase from 20 percent in 1946,

As a group, the study showed, land contract buyers bought a higher percentage of farms with "good" land than did mortgage or cash buyers. Also, contract buyers were more likely to buy farms with buildings on them, and the buildings in general were in better shape.

University Farm & Home News
Institute of Agriculture
University of Minnesota
St. Paul 1 Minnesota
April 29 1958

To all counties
ATT: HOME AGENTS
For use week of May 5

MAY PLENTIFULS
INCLUDE MILK
AND VEGETABLES

May markets will have plenty of milk and other dairy foods, as well as more fresh vegetables than usual at this time, reports Home Agent _____.

There is every indication that more milk will be produced in May than ever before in one month, according to U. S. Department of Agriculture forecasts. Milk production for each month in 1958 has surpassed the record for the same month a year ago. Since May is usually the month of highest milk production, there is assurance of an abundance of fluid milk, cream, evaporated milk, cheese, butter and other dairy products.

Snap beans, cucumbers, sweet corn, celery and asparagus are some of the crops expected in plenty this month. The abundance of vegetables harvested at the normal time in the Carolinas, Georgia and other southern states. Florida's vegetable crops were greatly reduced by a series of freezes during the winter, and the spring harvest comes from the plants made after the last freeze.

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University Farm and Home News
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
April 29, 1958

SPECIAL TO WILCOX
County Agent Int~~s~~duction

What's the best way to lick the weed problem this year? This is the conversation topic here between William Hueg, left, extension agronomist at the University of Minnesota, and Arnold K. Sandager, Scott county agent. Sandager has been at Jordan in Scott County since 1955. He is a native of Rice county and is a 1953 graduate of the University of Minnesota.

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