

Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1 -- tél. 647-3205
July 2, 1963

Immediate release

FILLERS FOR YOUR WOMEN'S PAGES

Eating a good variety of foods is the secret of a good diet, say extension nutritionists at the University of Minnesota.

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For extra nutrition, try substituting milk in place of water when cooking cereal. Follow the directions on the package, using milk as the liquid.

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Cheese and ice cream may sometimes replace milk in your daily diet. To get the equivalent amount of calcium you would substitute a 1-inch cube of cheddar cheese for 2/3 cup milk; 1/2 cup cottage cheese for 1/3 cup milk; 1/2 cup ice cream for 1/4 cup milk.

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To get all the nutrients from rice, don't wash it before or after cooking. If you do, you'll lose valuable vitamins and minerals.

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Rolling out pie crust between sheets of waxed paper eliminates the use of additional flour and helps keep clean-up to a minimum. Dampen the work surface to make the paper adhere to it.

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About half of the nation's home economists receive their education from land-grant schools.

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Much of the soil on painted walls and wallpaper is simply dust. You'll save yourself a lot of hard work later if you vacuum walls occasionally, say extension home management specialists at the University of Minnesota.

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When freezing foods at home, use a container with a wide top opening to make food easier to remove before it is completely thawed.

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To reduce steps when cleaning, equip a basket or shopping bag with small cleaning equipment and materials such as dust cloths, glass cleaner, furniture wax.

MISC.
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SPECIAL EVENTS FEATURED AT FIELD DAYS

A plant pest control clinic, a discussion of safe use of pesticides, and a rural civil defense readiness demonstration will be featured at a series of field days starting late this week at University of Minnesota experiment stations.

The field days are at the Southwest station, Lamberton, July 6; Rosemount experiment station, July 9; Southern experiment station, Waseca, July 10; West Central experiment station, July 11; Northwest station, Crookston, July 16; North Central station, Grand Rapids, July 18 and Northeast station, Duluth, July 19.

The plant pest control clinic will be handled by a plant pathologist, a weed specialist and an insect control specialist from the University. Visitors may bring specimens of weeds, diseased or insect-injured plants, or insects to the clinic for identification and recommended control measures.

The rural civil defense readiness demonstration will show the value of different kinds of farm buildings for protection from radioactive fallout. The demonstration will also show how rural people can protect themselves and their livestock in case of nuclear attack.

Discussions of safe use of chemical pesticides will be handled by L.K. Cutkomp, University entomologist, at the Rosemount, Waseca and Crookston stations, and by John Lofgren, extension entomologist, at the Lamberton and Morris events.

A demonstration of fire prevention on engine-driven farm machinery will be held at the Lamberton, Waseca, Rosemount and Morris days.

Each of the field days will feature tours of studies and trials and other research at the individual stations. The public is invited to each one.

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63-200-pjt

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ST. PAUL CAMPUS DEPARTMENT CHANGES DESIGNATION

One of the plant science departments of the University of Minnesota Institute of Agriculture will have a change of name, effective July 1.

The designation "Department of Plant Pathology and Physiology" will replace "Plant Pathology and Botany," according to M. F. Kernkamp, head of the department.

The change reflects recent shifts in teaching and research, Kernkamp explains. Emphasis on elementary botany subjects, such as plant and seed identification, is being replaced by more concern with the fundamental physiology of plant growth.

A number of extensive research projects on plant physiology have been undertaken within the department in recent years. One such project concerns the physiology of plant disease organisms, and physiology of host-parasite relationships. Another involves the uptake and translocation of chemicals and radioactive particles within plants. Courses in these areas for students have also been developed in recent years.

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APPLE MAGGOT FLIES STARTING TO EMERGE: SPRAYING NEEDED

Apple trees in orchards and back yard plantings are threatened again by the apple maggot, according to John Lofgren, extension entomologist at the University of Minnesota.

Maggot flies began to emerge in southeastern Minnesota by July 1, Lofgren says. Spraying should start immediately, and be repeated every 7 to 10 days through August.

One of three spray materials may be used. One is a diazinon 50 percent wettable powder, mixed at 1 tablespoon per gallon of water, or equivalent, using emulsion concentrate. A second is Sevin 50 percent wettable powder, at 2 table-
of
spoons per gallon/water. The third is an all purpose fruit spray mix, such as methoxychlor plus malathion and a fungicide,

Whatever type of sprayer is used, Lofgren says, it should give thorough coverage of the tree. All foliage and fruit must be completely covered. A mature tree will require from 3 to 5 gallons of spray.

Sanitation is also important. Dropped apples should be destroyed immediately, especially if your trees are fairly well isolated from other orchards.

The apple maggot, Lofgren says, is the most destructive pest of farm and home orchards in the state.

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63-202-pjt

Information Service
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St. Paul 1, Minnesota
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To all counties
Immediate release

SHEEP OWNERS
MAY ADOPT
IMPROVEMENT PLAN

The production testing idea, a proven boon to dairy and hog farming, is being picked up in the sheep business too.

Minnesota county agents are offering a Sheep Improvement Program to flock owners throughout the state. The plan involves selecting flock replacements according to twinning ability, gaining ability and wool production.

The program is being coordinated by Irvin Omtvedt, extension animal husbandman at the University of Minnesota. Cooperating farmers record data, for each ewe, on twins, fleece weight, weight of lambs at weaning time, and age.

This information is then used in computing a "selection index" for each ewe. The details for this index are spelled out on forms given the flock owner when he enrolls.

The plan is available to all 18,000 flock owners in the state, and some have already enrolled. It is not a contest, but provides information for the benefit of the flock owner himself.

Total cash receipts to Minnesota farmers for sheep and lambs sold in 1960 were nearly \$20 million.

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July 2, 1963

To all counties
Immediate release

AGRICULTURAL CHANGES
CITED BY ECONOMIST

Some of the changes in farming and **agricultural** business in the U. S. and the rest of the world have been summed up by a University of Minnesota economist.

After a series of recent conferences with U. S. Department of Agriculture representatives, and with national agricultural and business development association representatives, extension marketing economist W. H. Dankers noted these changes and consequences:

1) The entire agricultural industry has been adjusting to changes in the economy. Population growth has been primarily in coastal regions, and feeding of poultry and processing of food are tending to be located closer to population centers.

2) Products such as corn and other grain are transported over longer distances, and more is being transported. In the 1961 crop year, less than 60 percent of the U. S. corn was fed on farms where produced, compared with 75 percent 20 years ago. More grain is being exported. With more transportation, it is important to move products at the lowest possible cost.

3) Special effort must be made to find new and good ways to provide necessary services in food production, processing and marketing, to have maximum efficiency and lowest possible cost. Many lawmakers and others will very likely become increasingly critical of programs which increase Treasury expenditures and increase the food costs.

4) Domestic and international objectives, policies and procedures of the U.S. are inextricably interrelated. Unless both are achieved together, there is a risk of achieving neither. Special efforts must be continued for a united front among nations of the non-Communist world in helping shape government agricultural and trade policies.

add 1 - agricultural changes

5) The European Common Market, in attempting to become an integrated economic union, will gradually equalize the price supports of different members. In the U. S., the same freedom is within the frontiers. If such Western Europe integration is to be achieved (The U. S. has backed it since World War II), we must get used to thinking not of France, Germany or Holland as separate entities, but of the European areas--as economically united, if not yet politically.

6) The Atlantic Community will eventually become a reality, although it may take somewhat longer than originally anticipated.

7) With our international deficits and loss of gold, we need to produce as many dollars as possible through the sale of our agricultural products. If we are to export our products to developing countries for dollars, we must make it possible, and probably give help, for them to earn dollars. If a nation wants to export, then it must also import.

8) A united front is necessary in all cases. Agricultural and general economic policies must be considered for what is best for all from the long range point of view.

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To all counties
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IN BRIEF.....

Compounds called chelates, known to improve iron uptake of soybeans and other crops on high lime soils, can apparently aid strawberries in the same way. University of Minnesota horticulturists used several forms of chelated iron for plants growing in alkaline soils--which seem to tie up iron in a form not available to plants. The chelating agent seems to maintain the iron in an available form. Using radioactive iron, the researchers found that it moved readily throughout strawberry plants when applied to the soil with chelating agents. Some chelates were better than others.

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The word "chelate" comes from the Greek term for claw. In agricultural circles, it refers to organic compounds capable of holding metal ions such as iron, zinc, manganese, or copper in such a way that they are less subject to chemical or biochemical changes. This property allows chelates to help maintain a soil supply of elements for crops in areas where natural conditions would favor moving these elements into insoluble mineral compounds. Iron in high-lime soils, for example, may be tied up in forms unavailable to plants, resulting in so-called "iron-deficiency chlorosis." A similar problem may occur with zinc. The problem is unknown in neutral or acid soils of eastern and extreme southwestern Minnesota.

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How much Minnesota land is treated with pesticides? A rather small amount, in comparison to the total. According to J. R. Sandve, Minnesota Department of Agriculture, about 7 percent of Minnesota's 18 million acres of cropland would be treated even during a bad insect year. That would mean a year with large numbers of grasshoppers, armyworms, aphids, corn borers and other crop pests. And if you subtract from that treatment the soil insecticides used in corn, only 1.7 percent of the cropland would be treated.

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To all counties
Immediate release

RURAL AREAS CAN
RECOVER SHORTLY
FROM NUCLEAR ATTACK

A nuclear attack, if one should occur, wouldn't mean "the end of everything." How fast the rural area recovers would depend to a great extent on the water supply and electrical power.

Water from any unprotected source such as a stream, spring or cistern might be dangerously contaminated with radioactive fallout. It wouldn't be usable until Civil Defense or the U. S. Department of Agriculture gave it the O.K.

What would this mean for livestock? It depends on the kind of livestock and amount of radioactive material they consume. Heavy doses of contaminated water would kill livestock in two or three weeks. Lighter amounts might just leave animals sick, but could also leave them unfit for human food and affect production.

Clifton Halsey, rural civil defense agent for the University of Minnesota Agricultural Extension Service, points out that most livestock can live four to five days without water. Younger animals may not go that long. (Also: if an animal isn't getting water, it shouldn't be fed either. Feed without water can mean quicker death.)

Just how much water an animal needs for bare survival depends on size, age, pregnancy, period of lactation, activity, and temperature.

Dairy specialists say the average dairy herd would recover about half of its previous level of production if the cows are on full feed and water within seven or 10 days after feed and water are first withheld. When the herd returns to full production depends on the stage of lactation. Cows early in lactation may recover quite rapidly, those nearly dry when feed is withheld may not recover until the following lactation.

add 1 - rural areas recovery

A poultry flock will stop producing eggs after about the third day of going without water. When put back on feed and water, it would take the flock about six weeks to recover full production.

The most serious effects are on nursing young animals. Female animals stop producing milk unless they have water.

What about electrical power after a nuclear attack? The answer brings up many "ifs," but most power companies believe that power can be maintained or re-stored within four to five days. Modern transmission lines are set up to reduce the possibility of lengthy power interruptions.

There is a rapidly growing supply of information available on what rural people might expect in a nuclear attack, and what might be done about it. This information is available from county extension agents and local Civil Defense offices.

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To all counties
ATT: Home Agents
Immediate release

GUIDELINES TO CHOOSING YOUR ACCESSORIES

Attractive accessories are never "extras" in a woman's wardrobe. When carefully chosen, they add new zest to a year-old dress and always give the final touch in unifying and completing the costume.

In selecting accessories, ask yourself these questions: Is the accessory right for me? Is it right for the other accessories I'm wearing with it? Is it right for my costume?

Positive answers to these questions place you on the path to fashionable dressing, for the wearer and the costume becomes a pleasing unit when accessories harmonize with the wearer, with each other and with the costume.

Here are some guidelines from Thelma Baierl, extension clothing specialist at the University of Minnesota, to help you solve accessory questions.

Accessories which are right for you serve as a background without overshadowing you. Select actively becoming colors by considering your skin, hair and eyes in that order to determine their becomingness for you. Decide a color is becoming only after trying it on in daylight and under artificial light.

Accent your best figure features. If you wish to accent a pretty face or a nice smile, wear an attractive short necklace or a pin worn high. This season's cowl or ring collars soften the lines of a square chin. Any accessory should be right for your figure proportions, your coloring, your age and, most important, your personality.

Accessories worn at the same time should appear to belong together. You can obtain harmony in accessories worn together through texture, color and design. Coarse materials and fine textures are inharmonious together. But either texture can be used with the in-between group of materials. Pearls and unadorned gold and silver jewelry are considered in-between. You can use them with coarse tweeds and grained leathers. Since they are in-between they relate also to fine textures, such as wool or silk crepes and patent leather or fabric shoes.

add 1 - accessories

Color of accessories may match, blend or contrast. When you are using a contrasting color, limit it to two or not more than three areas. The brighter the color accent, the less area it should cover.

A well designed accessory is suited to its use, is well proportioned and has simple lines. Accessories worn together should present an orderly arrangement of lines and shapes.

Appropriate accessories complement you and your costume. They provide one major accent. For example, if you have a large flowered hat, a plain purse is better than a printed tapestry bag. Smart accessories are coordinated to the color, texture and type of garment--casual, tailored, semi-tailored or dressy.

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To all counties
4-H NEWS
Immediate release

4-H FILLERS

Breadmaking and canning were the first projects for girls in Minnesota and came under the heading of "home economics." Today about 1½ million girls, between the ages of 10 and 21 are engaged in a broad program of home economics projects, ranging from home management to home furnishings.

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The four H's on the 4-H cloverleaf emblem stand for head, heart, hands and health. These four facets of the 4-H program imply goals for members: head--to learn the value of science through applying the latest scientific knowledge to agriculture, homemaking and other projects; heart--to develop wholesome character and personality and the qualities of good citizenship; hands--to acquire useful skills in homemaking, agriculture and other vocations; health--to cultivate good health habits which lead to satisfying, happy living.

* * * *

Home sewing seems to be more popular today than ever before. Millions of girls and women have found it a clothing budget stretcher and a rewarding hobby as well. In Minnesota 16,231 girls were enrolled in the 4-H clothing project last year.

* * * *

Foods and nutrition is the most popular 4-H project for girls, with nearly one million participants. Outdoor cooking, party fare, and the three-meals-a-day routine are explored, plus efficient shopping practices.

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Last year 9,610 4-H members presented 2,490 acts or numbers in the 88 county 4-H Share the Fun Festivals. Dates for the district contests this year are July 9, 10, 11, 16, 17 and 18.

* * * *

Two new 4-H scholarships were offered for the first time this year. Scholarships of \$400 each went to two students in a 12-state area for their interest in the transportation and marketing of grains. One of the pioneering 4-H contributors, the Milwaukee Road, is the award donor.

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*For release at noon, *
*Saturday, July 6 *

CORN ROOTWORM BEING STUDIED AT LAMBERTON STATION

LAMBERTON--Research on the life and habits of a bothersome little soil insect may be crucial to the success of modern corn growing methods, area farmers were told today by a University of Minnesota entomologist.

H. C. Chiang explained studies on the corn rootworm to Field Day visitors at the University's Southwest Experiment Station here.

The corn rootworm is one of the worst potential insect troublemakers ever to hit the Corn Belt, Chiang said. By damaging corn roots, it can result in lodging, undersized ears, and other damage that can mean ruination of part or even all of a corn crop.

Because of its way of living, the rootworm is most serious in fields where corn is raised year after year on the same field. This "continuous corn" practice has been a fairly recent innovation in Minnesota corn farming.

Why is rootworm more of a problem in continuous corn? Chiang explained that the eggs are laid in the fall and overwinter in the soil. The larvae hatch in June and feed on the roots of corn--assuming corn is there. Plants so attacked may tilt over, yields may be reduced.

Farmers have dealt with the rootworm effectively by treating fields with a soil insecticide at planting time. Now, the danger looms that rootworms may develop resistance to the chemicals which have been so effective in the past.

Chiang described three kinds of corn rootworms. The most common one in Minnesota is the northern rootworm, which so far has not developed much insecticide resistance. Other kinds are the southern rootworm, which does not overwinter in Minnesota, and the western rootworm.

The last of these--the western--is common in Nebraska and has been found to have developed resistance to aldrin and heptachlor, the common soil insecticides. While some western rootworms have been found in southwestern Minnesota counties, it is not widespread here.

(more)

add 1 -- corn rootworms

Adult beetles start showing up in August, then feed on corn silk and other parts of the plant. They lay eggs for many weeks, but only in corn fields.

Because their egg laying is confined to corn fields, and because the worms depend almost entirely on corn, the cycle can be broken by a rotation system, in which a field has alfalfa or some other crop in years between corn production.

But where corn follows corn on the same field, the rootworm population can continue building up over the years.

Chiang and Lamberton Station men are studying many facets of the rootworm problem. They are attempting to find out how many years of continuous corn are needed for rootworm infestations to build up. They are looking at whether method of planting makes a field more vulnerable to lodging.

They are studying location of eggs in the field. Early evidence shows that in an unplowed field, 40 percent of the eggs stay in the top 2 inches, 40 percent in the next 2 inches, and the rest below 4 inches. If the field is plowed, the eggs move down. But where the eggs are located seems to have little to do with rootworm survival. About 60 percent survive regardless of whether the field was plowed.

Rootworms seem to be tough creatures. Chiang and his co-workers found that if the soil dries out, for as long as three weeks, hatching may be delayed, but is not reduced. The eggs simply wait for more moisture, then hatch out as well as they would have if moisture had come earlier. So early spring weather doesn't seem to make much difference.

The research is also showing something about heat needed for rootworm hatching. Chiang has found that time of first hatching can be predicted fairly well from soil temperature data in spring.

Chiang's research goes beyond the Lamberton studies. Other questions involve how far the larvae can move, and when the beetles appear in different parts of the state. About 40 FFA (Future Farmers of America) and 4-H members are cooperating on this project. Chiang is working also with the U. S. Department of Agriculture on other aspects of the rootworm problem.

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*For release at 1 p.m. *
*Saturday, July 6 *

RESEARCH PROGRAM MOVES FORWARD AT UM SOUTHWEST STATION

LAMBERTON--Research at the University of Minnesota's Southwest Experiment Station is expanding to a wide range of problems involving soil and crop production problems of this region, Station Field Day visitors learned today.

After viewing dozens of field research plots, the visitors heard State Senator John Zwach, Walnut Grove, say that the Station, established in 1959, was already beginning to realize its potential.

"We are working too much in the dark; this will give us some light," Zwach said. "Research to the problems peculiar to our area will give us the answers we need."

Staff members from the Station and the University's St. Paul Campus reported a variety of research in progress. Among the reports were the following:

*Tillage experiments. Research men from the U. S. Department of Agriculture Soil and Water Conservation Station at Morris, working cooperatively with the Lamberton Station, said that early growth and yield of corn can be influenced by tillage. But there is wide variation in this influence from one soil to another and from one year to another. At least part of this effect is on soil temperature, which is crucial to early corn growth. This research is aimed at determining how management can affect physical and chemical properties of the soil and crops.

(more)

add 1 -- Lamberton coverage

* Different sources of nitrogen. Soils researcher J. M. MacGregor explained experiments comparing ammonium nitrate and urea as sources of nitrogen, both at rates of 40, 80 and 160 pounds per acre. Also, the project compares broadcast, row application at planting time, and sidedressing. One ultimate goal is to study removal of fertilizer nutrients by the crop and loss in other ways. While results to date show much variation, there has been no appreciable difference between ammonium nitrate and urea sources of nitrogen.

* Intensive vs. unintensified corn growing techniques. Extension soils specialist Lowell Hanson reported a demonstration at Lamberton, set up to show what happens with unusually high fertility rates. The demonstration includes corn plots receiving as much as 500 pounds of 0-30-15 fertilizer broadcast per acre--with either 20,000 or 30,000 corn plants per acre. Also being studied are plots without fertilizer and having only 15,000 plants per acre.

* Combining fertilizing and weed chemicals on flax. Weed control chemicals in flax seem to be most important where heavy nitrogen fertilizing is used. The reason is that nitrogen also encourages broad-leaved weeds. Last year, flax yields, in bushels per acre, were 10.2 where no nitrogen was used and 15.9 where 80 pounds nitrogen was applied on each acre. Applying a mixture of chemicals MCP and dalapon increased yields to 16.3 bushels per acre. However, chemicals were not as helpful where lower levels of nitrogen, or none at all, were used.

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*For release at noon *
*Tuesday, July 9 *

RESEARCHERS SEEK TOLERANCE TO RUST DISEASES

ROSEMOUNT--A shift in approach to the rust disease problem in small grains is being tried out at the University of Minnesota's Agricultural Experiment Station here.

The goal is to learn whether tolerance to diseases might be a useful alternative to development of specific physiological resistance in plants.

The research was explained to Crops and Soils Day visitors at the Station by Bill Roberts, U. S. Department of Agriculture plant pathologist at the University.

A tolerant grain variety would be susceptible to many kinds of rust. But the rust spores growing on the plant would not affect greatly its yield or grain quality. A resistant variety, on the other hand, has genetic characteristics which actually prevent the growth of a few specific races of rust.

A limitation of the traditional approach--developing varieties with specific resistance--is that it leads to something of a vicious cycle in plant breeding. A new grain variety may have resistance to a race of rust which is common today. But new races may develop, through mutation, which may devastate that same variety.

Therefore, plant scientists must continually develop new varieties for resistance to new and specific races and must spend a good deal of effort on identification of different races of rust. If the disease tolerance approach worked, rust race-identification and specific resistance would be less important.

(more)

add 1 -- tolerance approach to rust

One fact favoring the tolerance approach, Roberts said, is that rust epidemics do not occur every year. If an oats variety could tolerate a heavy stem rust attack that occurred say, one year in five, and reduced yields only 10 or 20 percent even then, grain producers wouldn't worry too much.

Roberts is studying some 5,000 different oats varieties from around the world. He inoculates some of each with heavy doses of rust spores, and keeps other plants free of rust. He then compares yields to learn tolerance levels.

Early results are encouraging. Results in the first two years show that yield loss varies from over 99 percent to some susceptible varieties to as low as 40 percent on others. While 40 percent is not a usable level of tolerance, Roberts believes still greater tolerance may be found in future research. Besides, he used extreme infections, much more severe than would occur on most farms.

The disease tolerance approach has at least one loophole, however, since it would mean keeping varieties on which spores of rust grow and multiply. Introducing resistant varieties, as has been done in the past, tends to reduce the areas where spores of particular races can grow, and thereby helps reduce the chances of spreading infection. However, this may not be an overriding factor, since rust also spreads in many other ways, such as by wind movement from other parts of the country.

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*For release at 2 p.m. *
*Tuesday, July 9 *

MINNESOTANS TAKE ADVANTAGE OF CONTINUING EDUCATION

ROSEMOUNT--More and more rural Minnesotans are realizing that education doesn't stop with the diploma or degree certificate.

In fact, they can't afford to do otherwise, the director of agricultural short courses for the University of Minnesota said here today. LaVern Freeh said the person without a plan for keeping up educationally in today's dynamic society may find himself producing below his potential and unable to compete.

Importance of continuing education, he said, is based on the fact that "the current generation of mature adults represents the first generation faced with a culture different in kind from the one originally transmitted to them.

"The consequence of this fact," according to Freeh, "is such that the well-educated youth of today is the obsolete man of tomorrow.

"In agriculture," he said, "there has been more progress in the past 15 years than in the previous 1500, there was more change between 1900 and 1950 than in all the years before 1900. And between 1950 and 1962, its potential and progress almost doubled again."

Freeh said that last year some 12,000 persons took part in nearly 70 short courses and conferences on the St. Paul Campus. These events averaged slightly over three days apiece and had an average attendance of 180 persons.

Another 13,000 persons took part in tours of the St. Paul Campus and about 100 foreign visitors and students were there.

(more)

add 1 -- Freeh talk

"The primary purpose of an agricultural short course," according to Freeh, "is to provide continuing educational opportunities for people who are employed in the broad or related fields of agriculture, home economics, forestry, forest products, and veterinary medicine.

"For the most part, the educational experience is accomplished by bringing interested people together with faculty members of the University in a specially designed learning situation such as a conference, an institute, a seminar, field day, or short course.

Generally, he said, short courses have three characteristics:

- 1) They provide educational experiences for off-campus people.
- 2) They assist participants in gaining a better understanding of current problems, developments, and changes.
- 3) They are usually planned and conducted jointly by the participating groups, University faculty members, and the Department of Agricultural Short Courses.

Short courses were offered for groups ranging from aircraft sprayers to school lunch personnel--from firemen to farmers--from salesmen to business executives. Subject matter areas included most everything from beekeeping to farm income tax.

"If there's a need--and interest, we try to serve it," Freeh concluded.

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*For release at noon *
*Wednesday, July 10 *

HIGHER CORN POPULATIONS MAY CALL FOR NARROWER ROWS

WASECA--Narrower corn rows may be a necessary companion of other modern corn growing practices, a University of Minnesota agronomist said today.

James Sentz told Field Day visitors at the Southern Experiment Station that narrower spacing between rows may be required to get the full benefit of high corn plant populations.

He said 1962 field data from the Waseca station indicated that with corn plant populations of about 25,000 per acre, yields went up as rows were narrowed. Specific yields at that population level were 104 bushels per acre in 40-inch rows, 116 in 30-inch rows and 128 in rows 20 inches apart.

In the past, corn rows have been about 40 inches apart and plant populations have ranged from 12,000 to around 20,000 plants per acre.

The width of corn rows is something of a historical accident. Forty inches was about the width required to allow a horse pulling a cultivator to walk between the rows. For the most part, this width has been retained even though the work is now done with tractor-drawn equipment.

Sentz emphasized that these data are preliminary, and the trials are being repeated this year. But he said the results also suggest that the narrow rows have their biggest advantage at populations up to 25,000, but not beyond that point.

When research men planted 31,000 plants per acre, yields at all row spacings went down, and the 20-row width was no better than 40. At extremely high populations--over 60,000 per acre--the 20-inch rows had lower yields than the wider ones.

Sentz said that the advantage of narrower rows at populations up to 25,000 per acre is probably due to evening out the plant competition for moisture. But the extremely high populations, the narrower rows may shut out light to the lower parts of plants, thereby reducing growth and cutting yields.

Fertility level was not varied in these studies. At each population level, fertilizer was applied at rates sufficient to satisfy plant and soil needs.

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*For release at noon *
*Wednesday, July 10 *

CLOVER VARIETY FROM EGYPT HAS POSSIBILITIES FOR MINNESOTA

WASECA--There's a touch of Egypt at the University of Minnesota's Southern Experiment Station here, and it has nothing to do with Cleopatra.

It's a variety of clover called Berseem, and early research suggests that it might be welcomed by southern Minnesota farmers as an emergency crop or as a companion crop for seeding alfalfa.

Berseem was first brought to this state from Egypt a few years ago. Some people even call it "Egyptian" clover.

Visitors to the annual Field Day at the Southern Experiment Station were told this morning that in first crop cuttings this year, Berseem plots yielded over a ton of forage per acre. That's a good yield by any standards.

Berseem is an annual clover variety. It can be seeded in early spring on fields where the established forage may have winterkilled or failed for other reasons. Also, it might be used as a companion crop for new seedings of alfalfa. Compared with oats, the traditional companion crop for legumes, Berseem produces higher yields of better quality forage.

Still another possibility is to seed Berseem with oats as a silage crop.

Research on Berseem was explained by Gordon Martin, U. S. Department of Agriculture agronomist at the University's St. Paul Campus. He said that Berseem plants look much like alfalfa, but have a blossom similar to white clover. The stems are hollow, which is one disadvantage of the crop; if allowed to grow too tall, it could lodge. Therefore, it must be cut fairly early.

Trials with Berseem are being repeated at other locations and will continue in future years. The seed is available commercially in some southern Minnesota areas.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 9, 1963

*For release at 2 p.m. *
*Thursday, July 11 *

INSTITUTE OF AGRICULTURE PROGRAM EXPANDS TO MEET CHANGING NEEDS

MORRIS--The total research and educational program of the University of Minnesota's Institute of Agriculture is adjusting to the changing needs of rural Minnesota, visitors at the West Central Experiment Station were told today.

William F. Hueg, assistant director of the Institute's Agricultural Experiment Station, outlined the Institute's major program areas of teaching, extension and research.

"Teaching agriculture," he said, "no longer means teaching how-to-do-it, but instead emphasizes the underlying principles. It must be recognized that only about 8 percent of the graduating seniors from the Institute of Agriculture return to farming.

"The total program of the Institute is putting increased emphasis on service to agriculture in the broadest sense.

"Extension programs are no longer designed just for the farm family, but consider rural, suburban and urban audiences. This trend is exemplified by programs in horticulture, home economics, public affairs and rural adjustment in general.

"Agricultural research is delving into more basic problems, combining studies in the laboratory and in the field. There is increased attention to genetics and physiology of plants and animals as these matters relate to the agricultural sector of the state."

(more)

add 1 --

Hueg said that the teaching and research program of the Institute of Agriculture and the outlying experiment stations offers a training ground for future scientists. If research projects of today are well designed, they will offer solutions for problems of tomorrow, he said.

In all these programs, Hueg said, increased emphasis is placed on the human resource in Minnesota and the rest of the U. S. One question, he said, is how to better train young people both to earn a good living and to become useful and practicing citizens. The answer, he said, lies in a combination of formal and informal teaching.

"New research today is being directed to the behavior of people. Social scientists are studying, for example, the leisure time activities of people and the implications of these activities for recreation in a state that has a wealth of natural resources."

Hueg said that in addition to the traditional areas of teaching, extension and research, the Institute of Agriculture is becoming active in the international area. He pointed to the role of St. Paul Campus faculty people in teaching Peace Corps trainees, and to the growing number of foreign students on the campus, especially those doing graduate work.

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63-205-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 9, 1963

*For release at noon, *
*Thursday, July 11 *

CHEMICAL COULD MEAN ELIMINATING CORN CULTIVATION ENTIRELY

MORRIS--If the soil residue problem can be licked, one of the modern weed chemicals could make it possible to eliminate corn cultivation entirely, visitors at the University of Minnesota's West Central Experiment Station were told today.

The chemical is atrazine and it can be applied shortly before or after the corn comes up.

Agronomist Richard Behrens told Field Day visitors that in trials last summer, corn treated with atrazine, but not cultivated at all, yielded 78 bushels per acre. That was just as high as plots which got both the chemical and cultivation during the growing season. And it was 10 percent higher than plots getting no chemical.

Some research, he continued, shows that cultivation can sometimes be harmful through damaging roots.

Not every chemical does this well. Behrens found that Radox-T, combined with cultivation, also gave a 10 percent yield increase. But the chemical Radox-T alone didn't give that much increase.

The only problem with atrazine is that it leaves some residue in the soil the following year. This residue doesn't harm corn, but may damage grain or legumes that might be planted in that particular field. Therefore, the chemical is most useful at present to a farmer raising continuous corn--year after year in the same field.

This is the third year of studies on atrazine, Behrens said. Other research is being done on the residue problem--to learn whether the residue may be reduced in some way.

Behrens also discussed research with two other chemicals that look promising. One is trifluralin, used as a pre-emergence treatment on soybeans. The other is dicamba, which can be used on small grains to kill some broad-leaved weeds which aren't touched by 2,4-D. One problem with dicamba is that it may cause some grain injury. Research is aimed at finding doses low enough to kill weeds without involving such damage to the grain.

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63-206-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 9, 1963

Immediate release

MINNESOTA RURAL ART TO BE SHOWN IN WASHINGTON

Thirty paintings by members of the Minnesota Rural Artists' Association will be on display this month in Washington, D.C.

The paintings were sent to Senator Hubert Humphrey and Senator Eugene McCarthy in whose offices they will be exhibited beginning this week through July 31.

The oils and water colors were selected by a committee headed by A. Russell Barton, coordinator of the University of Minnesota's annual Rural Art Show and University adviser to the Minnesota Rural Artists' Association. Selection was on the basis of representing all areas of the state as well as possible.

A plaque describing the Minnesota Rural Artists' Association and its aims, along with the list of paintings and names of the artists, was sent with each group of art works to the senators' offices. Now numbering about 200 members, the Minnesota Rural Artists' Association is an outgrowth of the annual Rural Art Show held on the University's St. Paul Campus. It is a non-profit organization whose purpose is to promote the practice of and interest in the creative arts among the rural people of Minnesota.

The 30 artists whose works were selected for showing in Washington are Hazel Burtzloff, Stillwater; Josephine Caron, Fridley; Dorothy Cina, Stanchfield; Sally Cone, Hutchinson; C. E. Ecklund, Marine-on-the-St. Croix; Bessie Hanson, Pine River; Vernetta Johnson, Lake Crystal; Marion Killmer and Harvey Turner, Falcon Heights; Helga Moe, Mary Pratt and Ade Toftey, Grand Marais; Geneva Molenaar, Willmar; Florence Page, Maplewood; Virginia Tofte, Tofte.

Helen Field Watson, Northfield; Beatrice Windhorn, St. Peter; Jennie Arkins, White Bear Lake; Theodora Brown, Anoka; Beulah Gemmill, Sherburne; Olaf W. Gustafson, Badger; Agnes Hauge, Elbow Lake; Ada A. Johnson, Parkers Prairie; Olga Kjell, Fergus Falls; Val Mainquist, Buffalo; Herbert Millington, Coon Rapids; Millie Miller, Appleton; E. B. Orton, Redwood Falls; Edna L. Richmond, Akeley; Nels Saltnes, Solway.

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63-207-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 9, 1963

Immediate release

LLOYD E. JOHNSON FELLOWSHIP AWARDED TO U OF M GRADUATE STUDENT

Kenneth E. F. Hokanson, a first-year graduate student and Ph.D. candidate in fisheries at the University of Minnesota, has received the Lloyd E. Johnson Fellowship.

The fellowship is awarded by the Sport Fishery Research Foundation in honor of Lloyd E. Johnson, founder and president of Johnson Reels Inc., Mankato, Minnesota. The fellowship will enable Hokanson to pursue a three-year research study of the effects of household detergents and other domestic pollutants on spawning success and the survival of young game fish in the upper Mississippi River.

Hokanson graduated with distinction receiving his B. S. degree in Fisheries and Wildlife at the University of Minnesota. As an undergraduate, he was a four-year recipient of the Evans Scholarship and received the Blunt Award for outstanding scholarship.

Johnson is a distinguished inventor and holds a number of significant patents for fishing reel mechanisms. The Lloyd E. Johnson Fellowship is a result of his strong interest in conservation and the well being of sport fishery resources.

This fellowship is the third in a series of graduate fellowships being established by the Sport Fishery Research Foundation. The Foundation's purpose is to "augment the supply of highly-trained fishery biologists needed to assure proper conservation of sport fishery resources."

Lloyd L. Smith Jr. of the Department of Entomology, Fisheries and Wildlife, University of Minnesota, will supervise Hokanson's fellowship studies.

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63-208-lsr

Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
July 9, 1963

To all counties
Immediate release

NEW POTATO VARIETY
DEVELOPED BY USDA

A new potato variety that has moderate resistance to many common potato diseases has been developed by the U. S. Department of Agriculture and is adapted to Minnesota.

The variety, named Reliance, is a medium-maturing potato. A limited amount of seed is available from seed-certifying agencies of Minnesota and North Dakota. Agricultural Experiment stations of the University of Minnesota and North Dakota State University helped in the varietal development.

Reliance has moderate resistance to late blight, common scab, russet scab, silver scurf, asters yellow, and leaf roll.

Tubers of Reliance variety are smooth and oval, with shallow eyes and show a tendency to delay sprouting. This is a real advantage in storing. The skin is white but turns russet when grown at some locations. It is particularly well adapted to peat soils of southern Minnesota.

Reliance produced higher yields than the comparable Kennebec variety at 10 of 16 locations in five different states (including Minnesota).

Reliance is intended chiefly as a fresh market potato.

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Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
July 9, 1963

To all counties
Immediate release

IN BRIEF.....

Corn rootworms promise to be among the worst insect troublemakers ever to hit the Corn Belt. Entomologist H. C. Chiang at the University of Minnesota says the rootworm is most serious where corn is raised year after year on the same field. Now, the danger looms that rootworms may develop resistance to chemicals which were effective in the past. Much research is being done on these pests. Findings so far show them to be tough; whether the field is plowed or not affects them little. Nor does unusually dry spring weather bother them much.

* * * *

New clover from the Nile: Berseem clover, a variety imported from Egypt a few years ago, holds some promise as an emergency forage crop in Minnesota. In first crop cuttings at the University of Minnesota's Waseca experiment station this year, Berseem yielded over a ton of forage per acre. It might also do well mixed with oats. Berseem in the Waseca plots was seeded in April. It is an annual variety and might do well where established forage has winterkilled.

* * * *

Narrower corn rows? If farmers are to use higher corn populations, they may need to narrow up the rows to get the full yield potential. University agronomist James Sentz says that in 1962 trials with corn populations at 25,000 plants per acre, yields went up as rows became narrower. Yields were 104 bushels in 40-inch rows and 128 in rows only 20 inches apart. This is a high population; standard plant levels usually go no higher than 18-20,000 plants per acre and many farmers plant still fewer.

* * * *

Apple maggot flies have started to emerge. Spraying of apple trees should be repeated every 7 to 10 days through August, according to John Lofgren, extension entomologist at the University of Minnesota.

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Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
July 9, 1963

To all counties

Immediate release

CHANGES IN DAIRYING
SHIFT QUALITY PROBLEMS

Updating milk house equipment has changed the milk quality problem for dairy producers, but hasn't eliminated it.

No longer is there any serious, widespread problem with high bacteria counts in milk sold by farmers for fluid consumption. That problem went out with cans and water tanks.

But with the bulk tank have come other problems--especially the rancidity matter. Extension dairy products specialist Vernal S. Packard at the University of Minnesota says rancidity involves a chemical alteration of butterfat, leaving free acids in the milk.

Rancidity results from agitation and foaming of milk, and seems to be most serious in milk pipeline units. Field men for dairy plants, however, have found a number of ways to modify equipment to reduce such agitation. The trouble may be traced to air entering at the milker claw, bubbling in the milk hose, the number of risers or bends in the pipeline, splashing in the milk tank or other factors.

Rancidity has nothing to do with sanitation, but is nevertheless a critical quality problem. Rancid milk seldom reaches consumers, thanks to stiff standards at processing plants.

The shift in milk handling methods is among the most striking changes in Minnesota farming technology. Fifteen years ago, practically all state milk was handled in cans, most of which were cooled by running water. Today, about 85 to 90 percent of the fluid milk sold in the state comes from farms having bulk tanks. And those still having cans have some sort of mechanical refrigeration for those cans.

Even among farmers selling manufacturing milk, the can and water tank system is disappearing. Packard predicts mechanical cooling will be universal on Minnesota dairy farms within the next decade or two.

While mechanical cooling doesn't necessarily lead to better sanitation, it does greatly reduce growth of bacteria. A bulk tank keeps milk at 36-38 degrees. Milk in cans, cooled in water, rarely gets below 50 degrees.

Bacteria growth in 50-degree milk can be at least five times that of 40-degree milk.

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Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
July 9, 1963

To all counties

Immediate release

NEW DUTCH ELM CASES
EMPHASIZE NEED
FOR TREE CLEANUP

Recently discovered cases of Dutch elm disease in Minnesota increase the urgency for a program of cleaning up dead wood from elm trees.

The Minnesota Department of Agriculture this week reported 16 new cases--13 near Monticello northwest of the Twin Cities and three in the St. Paul area. Those in Monticello are near an area of Dutch Elm infection first discovered two years ago. But those in St. Paul are areas where infection was not found before.

Dutch elm disease is a fungus spread by European and native bark beetles, which, overwinter as larvae in the bark of dead elm branches and trees. The best prevention is to remove and burn all dead branches and trees which might harbor the insects over winter.

This advice is from Herbert Johnson, extension plant pathologist, and John Lofgren, extension entomologist at the University of Minnesota.

European beetles transmit the disease by feeding on young branches, and the native beetles by building feeding and overwintering tunnels in the bark. The disease can also spread by root grafts.

Dutch elm disease is not easy to diagnose. It causes leaves to wilt, but so do many other things. Small wilted branches, about a half-inch thick, may be sent to the University of Minnesota Plant Disease Clinic, St. Paul 1, for diagnosis.

Control of Dutch elm disease is a community problem. Bark beetles can fly to other elms carrying the fungus, so sanitation and control must cover broad areas. The recommended procedure is to remove and burn all dead elm branches anywhere in the state.

Spraying may be done as an additional treatment, but is useful only on live, healthy, trees in an area near infected ones. But once a tree is infected, spraying is no help.

Such a sanitation program can delay or stop the spread of Dutch elm disease for several years. While this procedure is expensive, it is generally much more expensive to let the disease flourish and later face the much higher cost of tree removal.

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Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
July 9, 1963

To all counties
ATT: Home Agents
Immediate release

BETTER MANAGEMENT
WILL GIVE
MORE LEISURE

More efficient management of household chores this summer will mean more time for the homemaker to spend with her family, to relax and to pursue favorite hobbies or activities.

Mary Frances Lamison, state home economics agent at the University of Minnesota, suggests some principles of management women can apply to create more leisure time:

- . Buy only the kinds of furnishings and accessories you are willing to keep clean, and keep around the home only the bric-a-brac and other accessories you have time to care for.
- . Develop a family work schedule and give every family member responsibility for certain tasks.
- . Plan simple menus that take a minimum of preparation, yet have a gourmet touch. If you eat outside, make the meal simple enough so it is fun, not extra work. Paper plates and cups will save the work of dishwashing.
- . Let each member of the family share meal responsibility by learning how to make some simple dish.
- . Omit some tasks or steps in certain jobs. For example, instead of drying dishes, let them air dry. Omit the ironing of sheets, towels, pajamas, underwear. Use your clothes dryer to reduce ironing to a minimum. The automatic dryer makes wash-and-wear a reality for many garments. If you need to clean and wax furniture or floors, do it in one operation, using the special cleaner-waxes on the market.
- . Dovetail tasks whenever possible. For example, bake more potatoes than you need for one meal, using the left-overs for hash browns for another meal. While putting away the dishes from one meal, set the table for the next one.
- . Divide chores into short jobs. For example, if you have 10 minutes to spare, while waiting for something to cook, straighten a drawer or empty waste-baskets. Or use an extra five minutes to wipe off spots on the range or finger marks off the refrigerator door.
- . Plan simple menus that take a minimum of preparation, yet have a gourmet touch. If you eat outside, make the meal simple enough so it is fun, not extra work. Paper plates and cups will save the work of dishwashing.

Information Service
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota
July 9, 1963

To all counties

4-H NEWS

Immediate release

4-H FILLERS

Safety is the most popular project of the 2 1/3 million young people in 4-H in the United States. Foods and nutrition is second, and clothing and health come close behind. In Minnesota foods and nutrition ranks first with 28,466 participants, with horticulture (18,560) and clothing (16,231) second and third.

One out of every 10 persons in the United States has at one time been a member of a 4-H club, according to the U. S. Department of Agriculture. Nearly 23 million American youths have taken part in the "learning by doing" program. This is the largest alumni group of any co-educational youth organization in the world.

* * * *

Dress revues are popular 4-H events. More than one-third of all girls enrolled in 4-H Clubs participate in dress revues. Last year more than 400,000 young home sewers took part.

* * * *

As 4-H'ers in the entomology project learn the life history and habits of insects, they also become familiar with the different kinds of insecticides and their specific uses. Members gain practical experience when they organize and conduct insect control programs in the home, the garden, for crops or livestock.

* * * *

4-H'ers interested in agronomy explore the factors involved in growing and marketing a profitable crop. Before beginning work with their crop, agronomy and field crops project members learn what is needed for a successful crop before they plant. This project includes corn, small grains, soybeans and forage crops.

* * * *

In 1912 some 200 young people were members of 4-H Clubs in Minnesota. The number has now grown to more than 53,000.

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Clovvia, a national sorority, is an organization of women college students, former or present 4-H members. At the University of Minnesota they own their own house which they operate on a cooperative basis, putting into practice their home and 4-H training.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 1 -- tel. 647-3205
July 10, 1963

* For release at noon *
* Friday, July 12 *

STUDY OF CHEMICALS IN SOIL GOES BEYOND RESIDUES

COLUMBUS, OHIO--The pesticide residue question merits a good deal of research, but the total problem is much broader than the toxic substances left in soils, a University of Minnesota researcher said today.

W. P. Martin, head of the University's soil science department, said that research must be concerned with a wide range of questions concerning chemical compounds that occur in the soil, that may be added, or which may be formed.

In addition to pesticides (such as antiweed chemicals) Minnesota researchers are studying a variety of other chemicals. Among them are chelates (Key-lates) used to correct iron-deficiency chlorosis in soybeans, flax, and ornamentals. Chelates used in the studies have negligible toxic effects on plants and decompose rapidly in the soil.

Chelates are compounds that hold a soil mineral in a form which plants can use.

Martin addressed the American Farm Research Association meeting here. He mentioned Minnesota research on other soil compounds:

* "Evaporation inhibitors"--Organic materials made from linseed oil, mixed with the soil to reduce the amount of moisture loss. These compounds are non-toxic.

* "Quinone" compounds from humus--Used to stimulate respiratory enzymes and uptake of potassium. European studies have shown that extracts from rotted straw caused rye plants to take up more potash; similar results occurred from use of a synthetic product called thymohydroquinone.

* Relationship between pesticide residues and other nutrients--Current studies at Minnesota suggest the importance of soil microbes in the disappearance of residue of weed chemicals. Recent findings suggest a link between the disappearance and level of certain soil nutrients.

* Amino acids and soil microbes--Amino acids have been found to occur free in the soil. Minnesota research men found that adding glucose, stepped up the activity of soil microorganisms, which in turn released amino acids in a free state.

Martin said the relationship between soil microbes and other compounds is an important area of research.

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63-209-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 10, 1963

(With sketch)

Immediate release

THREE-BEDROOM FARMHOUSE HAS ENERGY-SAVING KITCHEN

A three-bedroom house plan with an energy-saving kitchen is now available for prospective home builders.

Although plan No. 7152 from the U. S. Department of Agriculture's Cooperative Farm Building Plan Exchange was designed especially as a farmhouse, it may be equally satisfactory for rural non-farm areas and adapted for town or city living.

One of the features of the plan is that the work areas and arrangement of equipment in the kitchen are planned to reduce walking, lifting and reaching, according to Mary Muller, extension home improvement specialist, University of Minnesota.

The family room with dining space is a continuation of the kitchen area and contains a fireplace and built-in office. Sliding glass doors open onto a terrace located within sight of both the kitchen and family room. Nearness to the kitchen makes the terrace an ideal outdoor dining area.

The living-dining room can be used as one large room or divided by an accordion-type partition.

A rear entrance from the yard and carport opens to a bath, work clothes closet, heater and to the front entrance hall.

The workroom, between the kitchen and the family bathroom, has space for laundry equipment, a freezer and storage of canned goods.

Storage space includes one or two large closets in each bedroom, a linen closet at the end of the hall near the bedrooms, and a towel closet accessible from both bathroom and workroom.

A descriptive leaflet is available free from Bulletin Room, Institute of Agriculture, University of Minnesota. Copies of building plan No. 7152 may be obtained from Blueprint Room, Agricultural Engineering Department, for 75 cents. Money must accompany the order for the plan.

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63-210-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 10, 1963

Immediate release

INFORMATION AWARDS TO INSTITUTE OF AGRICULTURE

STILLWATER, OKLA.--The University of Minnesota's Institute of Agriculture has received two excellent and eight good awards for its informational services during the past year.

The national honors were announced at the 47th annual convention of the American Association of Agricultural College Editors held here this week (July 7-10).

The entries were made by the Institute's Department of Information and Agricultural Journalism headed by Harold B. Swanson.

Top or excellent awards went to:

. The press informational service to newspapers, trade papers, radio and TV stations, prepared by Phillip Tichenor, information specialist, and Mrs. Josephine B. Nelson, extension assistant editor.

. The information training letter, "Reaching People with Information," for state and county Agricultural Extension Service staff.

Good ratings were awarded to:

1. Tape and news service to radio stations. Responsible for the radio service are Raymond Wolf, extension information specialist in radio, Leo Fehlhafer, assistant extension information specialist and Mrs. Nelson.

2. Minnesota Farm and Home Science, a quarterly publication reporting research of the Minnesota Agricultural Experiment Station and edited by Harlan Stoehr, agricultural bulletin editor.

(more)

add 1 -- information awards

3. Experiment Station Bulletin 461, Incorporating the Family Farm Business, written by Robert Beck, a member of the Minnesota Bar and formerly research assistant, Department of Agricultural Economics, and Philip M. Raup, professor of agricultural economics, and edited by Mrs. Shelly Elliott, assistant editor.

4. A single black and white photo taken by Gerald R. McKay, extension visual aids specialist.

5. A series of black and white photographs on roasting turkey, taken by Fehlhafer in cooperation with Robert Berg, extension poultry specialist, and Milo Swanson, associate professor of poultry science.

6. A motion picture, "Let Me Show You," on 4-H demonstrations.

7. A panel exhibit showing soil conservation practices.

8. An exhibit of the maple syrup industry planned in cooperation with extension foresters Marvin Smith and William Miles.

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63-211-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 12, 1963

Immediate release

U FIELD DAYS GO INTO LAST TWO WEEKS

The University of Minnesota Agricultural Experiment Station field days will go into their final two weeks with three events scheduled for northern Minnesota. Included are field days at Crookston, Tuesday, July 16; Grand Rapids, Thursday, July 25; and Duluth, Friday, July 26.

University officials point out that some incorrect dates had been announced for the Grand Rapids and Duluth events and that they are anxious that visitors remember the right dates--Grand Rapids at the North Central Station, July 25, and Duluth, at the Northeast Experiment Station, July 26.

The field days give visitors an opportunity to see the latest University research in crops, livestock and horticulture. Other highlights include a pest control clinic, a discussion of the safe use of pesticides and a rural defense readiness demonstration.

The pest control clinic will give visitors an opportunity to bring specimens of weeds, insects, disease or insect-injured plants, to the stations for identification and recommended control measures.

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63-213-hbs

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 12, 1963

(With Mat)

Immediate release

ELMER LEARN NEW HEAD OF AG ECONOMICS AT U OF M

New head of the Department of Agricultural Economics at the University of Minnesota is Elmer W. Learn, who has been a member of the department since 1954.

He succeeds Sherwood O. Berg, who became dean of the Institute of Agriculture July 1.

Learn was born in Sayre, Pennsylvania, Jan. 19, 1929. Educated in Pennsylvania, he holds B. S., M. S. and Ph. D. degrees from Pennsylvania State University.

He served as an agricultural economist at Pennsylvania State University before joining the U.S. Army in September, 1951. Upon receiving his discharge from the Army two years later, he returned to graduate school at Penn State, where he remained until coming to the University of Minnesota for one year in September, 1954. He completed his graduate work at Penn State and returned to the University of Minnesota as a research assistant in October, 1956.

In 1957 he was promoted to the rank of assistant professor, in 1960 to associate professor and in 1962 to professor.

Learn's research specialization is agricultural prices and policy. A major project in which he participated concerned policies for expanding food consumption in the United States.

Twice in the past few years he has traveled in Europe on research assignments. From June to September, 1960, he supervised research of the University under contract with the U. S. Department of Agriculture on evaluation of market development projects in West Germany under Public Law 480. Between July and November, 1962, he did research on the impact of the European Common Market on American agriculture for the USDA while on leave from the University. Recently he completed a series of programs on the common market on KTCA-TV.

He is the author of several publications on agricultural policy and trade and holds membership in a number of honorary and professional organizations.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
July 16, 1963

To all counties
Immediate release

KIND OF EMPLOYMENT
LINKED TO INCOME
IN MINNESOTA

While family income may be related to many factors, one of the best predictors of income level in a Minnesota county is the kind of jobs people hold. Level of education of the people also helps predict income.

Two economists on the University of Minnesota's St. Paul campus, Paul Hasbargen and Keith Bryant, recently studied variation in the level of income among Minnesota's 87 counties. They used 1959 figures for median income of families (reported in the 1960 census), including one-person families.

The best income predictor was the proportion of the labor force in the primary industries--agriculture, forestry, and mining. Counties with the lowest proportions of their labor forces in these industries tended to have higher median income levels.

In general, there was an increase in income of \$357 for every 10 percent drop in proportion of labor in the primary industries. Across the state, this proportion varies from almost zero to over 50 percent. Therefore, this factor accounts for median income differences of up to \$2,000 between urban and agricultural counties.

Counties with less than 10 percent of the labor force in primary industries as of the 1960 census included Anoka, Carlton, Cook, Dakota, Hennepin, Koochiching, Ramsey and Washington. All these counties except Cook also have median incomes of over \$5,000. Cook itself has a median of \$4,340, compared to the state median of \$4,674.

add 1 - kind of employment

Counties with 45 percent or more in primary industries are Grant, Lac qui Parle, Lincoln, Marshall, Murray, Norman, Roseau, Sibley and Todd. All these counties have incomes under \$3,500.

On the other hand, Hasbargen and Bryant found, income rises as employment opportunities expand in manufacturing, trade and services. But the relationship wasn't as sharp as was the case with employment in primary industries.

These patterns, the economists explain, fit with general trends of economic development. As industry develops, the proportion of the labor force in primary industries declines. During the 1950's, employment in primary industries in Minnesota dropped 26 percent, while other industries increased 22 percent.

As primary industries have less labor needs, incomes in these industries decline. The expanding non-primary industries attract labor from the primary industries and we tend to have population migration, largely from rural to urban areas. However, the economists continue, people already employed in agriculture, for example, don't change occupations as readily as do some others, because they often have capital tied up in their businesses which may have little salvage value.

Any such reluctance to change occupation results in even lower incomes in such primary industries as agriculture.

Educational level of the population was also related to median income, but not as markedly so as was kind of employment. The measure of education used by Hasbargen and Bryant was the percent of the county population 25 years of age and older who had completed high school, minus the percent with less than five years of formal education.

add 2 - kind of employment

An increase of 10 percentage points in proportion of high school graduates, or a decrease of 10 percent in low educational level people, was associated with an increase of \$377 in median incomes.

The study also raised the question as to whether unemployment levels are related to median income. However, annual average figures for unemployment were not available. The census figures are for unemployment during the first two weeks of April, 1960, and this measure was not related to median income level for 1959.

For example, Aitkin and St. Louis counties both had more than 9 percent of the labor force unemployed during early April, 1960. Aitkin, however, is a low income county, with a median level of \$2,484, while St. Louis is one of the higher income counties with a median of \$4,728.

Hasbargen and Bryant found that 70 percent of the variation in median incomes of families plus unrelated individuals could be accounted for by three factors--proportion of labor force employed in 1960 in primary industries; percentage increase in employment in manufacturing, trade and service from 1950-60, and education. The first accounted for about a third of the variation and the second and third each accounted for slightly under a fifth.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
July 16, 1963

To all counties
Immediate release

CLEAN WATER AND
CARCASS DISPOSAL
CUT POULTRY DEATHS

Mortality rates of poultry flocks can be kept down by water systems sanitation and proper disposal of dead birds.

Robert W. Berg, University of Minnesota extension poultry specialist, gives some helpful advice on these two aspects of poultry care in the current issue of Poultry Patter, a bi-monthly Agricultural Extension Service publication.

During the hot summer months chickens keep cool by breathing at an abnormally fast rate. This cooling process releases 50 percent of the water drunk by the chicken. Therefore, water consumption is also unusually high. If the watering equipment and water supply aren't clean, increased summer-month water consumption can create poultry disease problems.

Berg advises daily washing and disinfecting of all watering equipment. The float valves in automatic watering systems can also collect disease organisms and should be disinfected regularly.

Berg warns that throwing dead birds behind buildings or on manure piles is a sure way to spread diseases. Most often the bird has died of a disease and improper disposal can allow pets, birds, insects and other wild animals to carry the diseased carcass around the farm neighborhood.

It's best to burn dead birds if there are shallow wells in the area, suggests Berg. Commercial incinerators are available, but it may be hard to justify their fuel costs if flock sizes aren't very large.

add 1 - clean water and carcass disposal

He says it's best to construct a 6' x 6' x 8' pit with a small opening for bird disposal if flock sizes range from 3,000 to 5,000 birds. Such a pit is child-safe and will keep disease carriers away from the carcasses.

Chemical digestors will do an efficient job of destroying diseased carcasses too. Decomposition rates are much faster in digester pits than in the regular dry pits. But a $1\frac{1}{2}$ to 2-foot water level is needed for them to function properly.

If flocks are small and don't warrant using pits, digestors or incinerators, burying the dead bird is the next best disposal method.

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-ISR-

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota . 55101
July 16, 1963

To all counties
Immediate release

IN BRIEF.....

Agricultural research broadens. Laboratory and field studies are being combined in the University of Minnesota's broadening approach to agricultural research, according to W. F. Hueg, assistant director of the Agricultural Experiment Station. There is increased attention to genetics and physiology of plants and animals as these matters relate to the agricultural sector of the state, Hueg says. Increased emphasis is placed on the human resource in Minnesota; social scientists at the St. Paul campus are studying the leisure time activities of people and implications of these activities for recreation in a state that has a wealth of natural resources.

* * *

Pesticide residue problems go beyond the question of toxic substances in soils. Research is concerned with a wide range of questions on chemical compounds in the soil, that may be added, or formed, according to W. P. Martin, head of the University of Minnesota's soil science department. Soils men are studying a number of such compounds. Among them are: chelates, used to correct iron-deficiency chlorosis in crops; evaporation inhibitors, used to reduce soil moisture loss; quinone compounds from humus, to stimulate uptake of potassium; relationship between pesticide residues and plant nutrients; relationship between chemicals and soil microbes.

* * *

Resistance to crop diseases--or tolerance? Farmers and plant scientists may be asking this question; some in fact are already. At the University of Minnesota's Rosemount Experiment station, studies are under way to learn whether tolerance to a wide range of rust diseases, among small grains, might be a useful alternative to specific physiological resistance. A tolerant variety would be susceptible, but the rust spores on the plant would not affect greatly its yield or grain quality. Some tolerance has already been found in world collections of small grains.

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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 16, 1963

Immediate release

SIX STUDENTS ATTEND LEADERSHIP CAMP

Six students from the University of Minnesota and the Duluth branch have been selected to attend the American Youth Leadership Training Camp at Camp Minniwanca, Shelby, Michigan, in July and August.

Attending the girls' session from July 29-August 11 are Lillian Koskinen, 19, Cromwell; Sarah Souther, 18, 2000 W. Hoyt, St. Paul; and Jean Suhr, 20, DeKalb, Ill.

Wayne Sommars, 19, Verndale; Robert Gehrman, 19, 12720 Wayzata Blvd., Minneapolis; and Bruce W. Palm, 21, Grove City, will attend the boys' session August 12-25.

Leonard Harkness, state 4-H Club leader at the University of Minnesota, will be a guest lecturer at Camp Minniwanca, speaking on leadership.

Miss Koskinen, a sophomore at the University of Minnesota, Duluth, was chosen by a 4-H selection committee for her record in 4-H and junior leadership. She is a Key Award winner and secretary of the Carlton County 4-H Federation. Miss Souther and Miss Suhr are winners of University of Minnesota Danforth scholarships which enable them to attend the camp. A long-time 4-H'er, Miss Souther was one of four who won a trip to the National 4-H Club Conference in Washington, D.C., last April to represent 53,000 Minnesota 4-H members. Miss Suhr is a transfer from Iowa State University and a senior in home economics and related art. This spring she was tapped for Mortar Board, national women's honorary fraternity.

Sommars has served as treasurer of the Wadena County 4-H Federation and president of the Oakdale 4-H Club, both terms for two years each. He was chosen as a 4-H delegate to the camp. Gehrman, a sophomore, and Palm, a senior, were University of Minnesota winners of Danforth scholarships. Gehrman has been active in Hennepin County 4-H activities and represented Minnesota 4-H'ers at the National 4-H Club Conference last April with Miss Souther. Palm is a member of Block and Bridle, an animal husbandry club, and Delta Theta Sigma, a professional agriculture fraternity.

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63-213-kmr

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 16, 1963

Immediate release

FARM SAFETY WEEK KICK-OFF LUNCHEON THIS WEEK

Efforts of Minnesota young people in promoting safe living will be highlighted during the Farm Safety Week Kick-off luncheon Thursday, July 18, on the St. Paul Campus of the University of Minnesota.

Farm Safety Week is July 21-27.

Featured at the luncheon will be an 11-year-old 4-H girl who last winter saved a companion from drowning, a report on youth activities in the National Safety Congress, a discussion of Future Farmers of America activities in promoting safety and a 4-H safety display.

Susan Turja, Dassel, will receive the Honor Deed Safety medalion from the Minnesota Safety Council for saving a life while ice skating last January. Susan's companion fell through the ice in deep water and was pulled out by Susan herself, with no other help.

The award will be made by Thomas F. Gallagher, associate justice of the Minnesota Supreme Court and president of the Minnesota Safety Council.

John Arneson, 4-H Club member from Shevlin, Minn., will speak on what a youth club can do to promote safety. John attended the National Safety Congress last fall and is a member of the youth planning committee for the Congress this year.

Drew Naseth, Faribault, reporter for the Minnesota Future Farmers of America, will discuss FFA safety activities.

Other speakers at the luncheon will include A. J. Schwantes, head of the University's agricultural engineering department, Kenneth Austin, executive secretary for the Minnesota Implement Dealers Association and Glenn Prickett, extension safety specialist for the University. Master of ceremonies will be Maynard Speece, WCCO farm director.

The luncheon is sponsored by the Minnesota Implement Dealers Association and will be attended by representatives of public and private organizations interested in promoting farm safety.

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63-214-pjt

Department of Information
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Institute of Agriculture
University of Minnesota
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July 16, 1963

Immediate release

FILLERS FOR YOUR WOMEN'S PAGES

Between 1947 and 1949 about 26 percent of a family's disposable income went for groceries, according to the U. S. Department of Agriculture. In 1961 this had been reduced to 20 percent; and in 1962, it was 19 percent.

To prevent chocolate from turning white, store it at temperatures below 75° F. But don't throw it out just because it has turned white. That's simply a sign that some of the cocoa butter has separated out in hot weather and has come to the surface. When the chocolate is melted, it will turn brown again.

You can trim 10 percent off your grocery bill by taking advantage of specials at the food market. However, to make a saving, these items must account for a fourth of your purchases--and of course you have to be able to use them once you've bought them.

Scalding snap beans and corn before freezing is a must. Experiments in the University's food processing laboratory show that when vegetables are not scalded before freezing they lose much of their original color and flavor as well as vitamin C.

The best indicator of ripeness in peaches is the ground color of the skin, not the blush, according to Mary Ryan, extension consumer marketing specialist at the University of Minnesota. Look for a whitish or yellowish background color.

Fruits and vegetables are about the only foods Americans are consuming at the same rate today as in 1950, according to the U. S. Department of Agriculture. There has been a shift, however, to less fresh fruit and more processed items.

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July 16, 1963

Immediate release

TIPS ON WEED CONTROL IN U PUBLICATION

Having trouble with crabgrass or chickweed in your lawn?

These two weeds are particularly troublesome in Minnesota lawns this summer, according to University of Minnesota horticulturists. But complete control of crabgrass is difficult if started now, they say. Crabgrass can be controlled most successfully in spring or in late fall with the use of arsenicals or Zytron or Dachthl. Dachthl and Zytron have given excellent results in turf trials at the University of Minnesota.

The chemicals Silvex or 2,4,5-TP will control chickweed. These chemicals are sold under various trade names. Follow manufacturer's directions in their use.

Tips on weed control are given in a newly revised publication of the University of Minnesota Agricultural Extension Service, The Home Lawn, written by Donald White, assistant professor of horticulture.

In addition to weed control, White gives information on starting and maintaining a lawn, on seeding and sodding, mowing and fertilizing. He discusses the common lawn grasses and the types to use for various conditions. The publication also contains sections on turf diseases and on control of toadstools or mushrooms in the lawn.

A copy of Extension Folder 165, The Home Lawn, is available free of charge from county extension offices or from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 55101.

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6 3-216-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
July 16, 1963

To all counties
ATT: HOME AGENTS
Immediate release

CUT DOWN
ACCIDENT TOLL
ON OUTINGS

Better supervision of recreational activities would help to reduce the number of accidents that occur during family outings.

Among accidents that have occurred on such outings this summer Glenn Prickett, extension safety specialist at the University of Minnesota, lists drownings, burns from barbecue grills and falls from trees.

The toll of lives lost in drownings is particularly high this year, the University safety specialist says. He points to the fact that 68 Minnesotans have drowned thus far this year compared to 56 at this time last year. Over the Memorial Day weekend alone, nine Minnesotans drowned.

The University specialist urges parents to see that children:

- . Learn to swim properly. Many communities offer Red Cross instruction.
- . Always swim with a partner, never alone. The buddy system, popular at many camps, is good to remember wherever or whenever anyone is swimming.
- . Do not go in swimming immediately after eating.
- . Don't become dependent on air mattresses and inner tubes. They may be fun in the water but they can also be dangerous, since they are not life preservers.
- . Stick to individual limitations of swimming ability and health.

Pointing out that many barefoot youngsters have burned their feet badly by stepping on hot ashes from barbecue grills, Prickett emphasizes the importance of extinguishing hot briquettes and ashes completely when they are emptied from the barbecue grill. Use of asbestos pads or mittens by the barbecue chef and care in use of starter fluids will also prevent burns.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
July 16, 1963

To all counties
ATT: HOME AGENTS
Immediate release

USE EQUIPMENT
TO SAVE TIME IN
PREPARING MEALS

Every homemaker has a staff of servants at her beck and call in the modern equipment in her kitchen; yet many homemakers don't use their equipment to best advantage to save time and energy in meal preparation.

In a recent survey Minnesota farm women rated these items of small equipment as most useful and their biggest timesavers: a paring knife, rubber spatula, kitchen tongs, small egg beater, a peeler with floating knife blade, can opener and kitchen scissors.

Whatever equipment you rate high on your list, keeping it in good condition is one of the keys to its efficient use, says Grace Brill, extension nutritionist at the University of Minnesota. Having knives sharp, for example, can save time.

Storing small equipment in the areas where it is used most is another timesaver. If it is not stored in the place of most frequent use, you'll be time and energy ahead if you do some rearranging. Many homemakers would use the electric mixer for more purposes if it were stored in a convenient place.

With better planning and some imagination, most large appliances such as the range can be used to better advantage, Miss Brill says. An illustration is to use the oven more often for preparing a complete dinner, including the meat, vegetables and dessert. Timesavers, too, are the automatic oven timer, used to start food cooking when you're not at home, and the minute minder to remind you when various foods are through baking or cooking. Often these range accessories don't pay their way.

add 1 - use equipment to save time

Use the refrigerator to save time by preparing foods ahead, Miss Brill suggests. Vegetables can be washed, trimmed and stored in the hydrator or in plastic bags ready for use.

Many homemakers find the greatest asset of the home freezer is its timesaving feature. When you bake cake, cookies or bread, double the batch and store part of the baked goods in the freezer. Do the same when you make a casserole dish and you'll be able to plan emergency meals quickly without even going to the store.

-jbn-

Department of Information
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St. Paul, Minnesota 55101
July 16, 1963

To all counties
4-H NEWS
Immediate release

4-H'ERS PROMOTE
COMMUNITY SAFETY

Safety-minded 4-H'ers have done much to help promote safety in their communities. Many of the 8,752 Minnesota 4-H members enrolled in the safety project have conducted farm and home fire prevention inspections in their communities and directed campaigns to aid children in reflectorizing their bicycles and farmers in reflectorizing machinery.

Through their various safety projects, Minnesota 4-H'ers emphasize "inspection plus correction equals protection," theme of Farm Safety Week, July 21-27.

For example (include paragraph on 4-H safety activities in your area).

Here is what some of the other 4-H Clubs in Minnesota are doing.

The Hennessy Hill 4-H Club in Hennepin County will demonstrate the importance of reflectorizing farm machinery throughout the year at their booth at the ninth annual Farm Safety Week kick-off luncheon Thursday, July 18, on the University of Minnesota's St. Paul Campus.

To help indicate the scene of an accident at night, the Shikoma 4-H Club of Ramsey County converted milk cartons and candles into flares which can be easily carried in a car. These 4-H'ers also reflectorized the driveways and any unlighted or poorly lighted turns off the highway near their homes.

Conducting hazard tours of area farms and practicing home safety are important activities for the Caledonia Champion Racers 4-H Club of Houston County. One 4-H family built a farm pond and installed a fire plug, enabling the pond to become an emergency source of water in 15 seconds in case of farm fire.

add 1 - 4-H'ers promote safety

4-H'ers in Olmsted County, last year's state winner in the 4-H safety contest, devoted a number of meetings to safety. Special guests included the sheriff, a highway patrol officer, members of the rural fire department, civil defense officers and the University of Minnesota safety specialist.

Safety is a year-round activity for the Country Cousins 4-H Club in Hennepin County. They emphasize seasonal safety from water safety to shoveling snow away from stop signs in the winter. This summer the Country Cousins are maintaining a swimming beach and providing Red Cross swimming lessons. They also conduct a bicycle rodeo and reflectorize more than 1000 bicycles. They surveyed intersections where stop or yield signs might be necessary and reported to the local safety department.

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July 18, 1963

Immediate release

AMERICAN FARM ECONOMICS ASSOCIATION TO MEET AT UM AUG. 25-28

Some 2,000 members of the American Farm Economics Association will hold their annual meeting Aug. 25-28 on the University of Minnesota's Minneapolis Campus.

The event will feature more than 50 presentations and panel discussions by agricultural economists from colleges and universities and private organizations around the nation.

Areas of discussion at the meeting will include agricultural exports, bargaining in agriculture, economic growth, changes in the rural economy, agricultural economics research in underdeveloped countries, rural development, public programs in agriculture, taxation, marketing, food consumption, the European Common Market and related topics.

Among the speakers at the meeting will be W. W. Cochrane, director of agricultural economics for the U. S. Department of Agriculture and a former member of the University of Minnesota's agricultural economics department. Cochrane will discuss potential use of farm products for aid to underdeveloped countries.

The meetings will be held in the Coffman Memorial Union and the Mayo Center on the Minneapolis Campus. S. A. Engene, agricultural economist at the University, is in charge of arrangements for the meetings.

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63-217-pjt

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 18, 1963

Immediate release

SCALD BEANS BEFORE FREEZING

If you want the green beans and other vegetables you prepare for freezing to be edible next winter, scald them before freezing.

That recommendation comes from Mrs. Shirley Munson, assistant professor, in charge of the University of Minnesota's food processing laboratory.

Homemakers who are thinking about omitting the scalding process should consider research results obtained by the laboratory, she says. She emphasizes that there are no "new" methods which omit the scalding process.

Experiments in the food processing laboratory show that vegetables that aren't scalded lose much of their original color and flavor and after a short time take on an unpleasant, straw-like taste. Unscalded vegetables also lose ascorbic acid-vitamin C- rapidly.

Among the best varieties of beans for freezing are Kentucky Wonder (pole), Tendergreen, Topcrop, Tendercrop and Wade.

Here are Mrs. Munson's directions for preparing beans for freezing:

Wash beans and snip off tips. Cut or break into suitable pieces or freeze small beans whole.

For scalding, use a gallon of water for each pound of vegetable. A pound is about 4 cups of cut beans. Using a large kettle, bring the water to a full rolling boil. Place the prepared beans in a wire basket or large, loose cheesecloth bag and submerge in the boiling water. Scald for 3 1/2 minutes. Start counting scalding time as soon as the beans are put into the boiling water. Keep the kettle covered during the scalding and keep the heat on high. Immediately after scalding, cool the beans in cold running or ice water for about 3 1/2 minutes. Drain and pack in polyethylene bags or other moisture-vapor-proof containers. Freeze.

Timetables for scalding vegetables and other information on freezing are given in Freezing Fruits and Vegetables, Extension Folder 156. Free copies are available from county extension offices or from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 55101.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 23, 1963

*For release at noon, *
*Thursday, July 25 *

LEAD POISONING STUDIED IN CATTLE, HORSES

NEW YORK--Some cases of accidental lead poisoning of cattle and horses on several Minnesota farms in the past year turned out to have some beneficial effects.

The situation gave research men some new insights into this health problem, which accounts for more cattle deaths due to toxicity than any other cause. Dr. Paul B. Hammond, veterinary scientist from the University of Minnesota, told the New York Academy of Scientists about the accidental poisoning and the research to which it led.

Hay and other feed on several farms were accidentally contaminated with lead, apparently from the fumes of a lead smelter. Some cattle and horses died and veterinary scientists studied the causes and nature of this toxicity.

One finding was that a lower intake of lead was required to kill horses than cattle. Hammond said the cumulative lethal dose for cattle on one farm was calculated to be approximately 7 milligrams of lead per kilogram of cattle weight per day but probably was lower for horses. The cattle had eaten more contaminated hay than horses and contaminated silage besides, which horses do not eat.

The studies also shed some light on whether lead poisoning occurs in the chronic as well as the acute forms in cattle. A chronic disease is one in which harmful effects exist over an extended period of time. With acute poisoning, death or recovery follows shortly after the first symptoms.

(more)

add 1 -- lead poisoning

In this outbreak, the horses sustained both chronic and acute forms of poisoning, a fact which has long been appreciated.

However, even some of the cows exhibited evidence of chronic toxicity, in the form of anemia and poor condition. It was clearly revealed that lead can accumulate in a cow's system over a long period of time. This accumulation may have one of two results. Some animals show no clinical symptoms until a sudden attack of acute toxicity occurs. Other animals, however, may manifest a separate and distinct syndrome of chronic poisoning.

Such findings could be important in diagnosing health problems in cattle. With extended, chronic ailments in cattle, lead poisoning would have to be considered as a possible cause. Hammond pointed out, however, that animals exhibiting a chronic syndrome of lead poisoning would have a heavy concentration of lead in the blood, which could be detected readily by chemical means.

Lead poisoning usually kills cattle through an extreme toxic effect on the brain. In horses, the toxicity leads to respiratory difficulties of such a nature that the animal often dies through suffocation. There was some evidence that horses would sustain the toxicity from lead poisoning in chronic form while kept inside, but would die shortly after first going outside. Apparently, their exercising would trigger the acute respiratory difficulties which in turn would result in death.

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63-220-pjt

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July 23, 1963

*For release at noon, *
*Thursday, July 25 *

HIGH ALFALFA YIELDS DEPEND ON POTASH, LIME

GRAND RAPIDS-- Liberal or continuous applications of lime and potash are essential for high alfalfa yields on northern Minnesota soils.

Curtis Overdahl, University of Minnesota extension soils specialist, had this to say to North Central Experiment Station field day visitors. Continued topdressing with high potash rates, heavy manure applications and adequate liming are the practices responsible for the abundant growths of alfalfa.

Overdahl added that the heavy potash treatments have increased the concentrations of the essential element in the root zone.

Soil samples taken in treated fields show properly administered potash treatments have moved potassium to a depth of 18 inches with little, if any, of it being lost into the water table.

Farmers in the Grand Rapids area who have been giving their fields similar high potash and lime treatments are also reporting good alfalfa yields this year.

Overdahl pointed out that the liberal liming rates have increased the soil pH in the area to about 7.0 which compares very well with the 6.5 minimum requirement for growing alfalfa.

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63-221-lsr

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
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Immediate release

SIX GRASS ROOTS AMBASSADORS TO MINNESOTA

Young people from two continents and a Caribbean island will make their homes in Minnesota for three months as part of the International Farm Youth Exchange (IFYE) program this summer and fall.

The six exchangees are Patchanee Natpracha, 25, Bangkok, Thailand; Carla Bottazzi, 22, Parma, Italy; Pauline E. Fuller, 21, Jamaica, W.I.; Lars Henningson, 27, Tingvalla Ed, Sweden; Henryk Wrona, 24, Radomsko, Poland; and Mavrianos Grafyadellis, 23, Salonika, Greece.

The six IFYE's will be living and working with 24 Minnesota families in 12 counties from early August through late October. During their stay, they will be guests at the Minnesota State Fair.

Miss Natpracha teaches cooking, food preservation, sewing and crafts as an assistant of Yuwa Kasikorn, equivalent to our 4-H. She is particularly interested in all phases of the 4-H home economics program and local leader training.

Miss Bottazzi hopes to bring back ideas from Minnesota 4-H clubs and agriculture to use in her work with rural women in Italy. Her major course of study is home economics but she is also interested in crops and livestock.

As a teacher in Jamaica, Miss Fuller wants to pursue a variety of interests while staying in Minnesota, ranging from interior decorating to community organization and livestock management.

Minnesota's forestry industry will be an important item of interest for Henningson. He is a forestry youth work instructor in Sweden and hopes to be a forester and teacher.

Currently a student in Poland, Wrona plans to work in the Agricultural Extension Service. While in Minnesota he hopes to learn more about mechanized agriculture and rural youth activities.

Since he plans to specialize in animal husbandry with the Ministry of Agriculture in Greece, Grafyadellis will observe animal husbandry and gardening practices in Minnesota.

The IFYE program is sponsored by the National 4-H Club Foundation and the Agricultural Extension Service to promote better world understanding at the grass roots level.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota 55101
July 23, 1963

To all counties

4-H NEWS

Immediate release

4-H'ERS PROMOTE
CONSERVATION
IN MINNESOTA

Minnesota has nearly 2,000,000 newly planted trees this year, thanks to some 5,500 4-H'ers active in the 4-H conservation project.

The 4-H Club members planted these trees as windbreaks, for landscaping and beautifying purposes or to prevent erosion.

More than a fourth of the 2,000 4-H Clubs in Minnesota include conservation in their planned program for the year. As a group, club members go on nature hikes, plant trees, build bird and game feeding stations, tour museums, parks, nurseries, arboretums and game farms, and construct conservation booths, displays and floats.

4-H'ers in _____ County have carried on many conservation projects this year, according to _____, county agent. (Add paragraph elaborating activities).

Rice County 4-H'ers collect Christmas trees each winter for a pheasant shelter and 4-H'ers in Cottonwood County raise baby ring-neck pheasants to an age when they can be released to add to the wildlife population. This is done in cooperation with the County Game and Fish League. Cottonwood County 4-H'ers also planted Black Hill Spruce trees for a shelterbelt for wildlife cover. The Rost Rustler's 4-H Club in Jackson County built 12 houses for wood ducks.

Since brush hampered the growth of young trees in Carlton County, 4-H'ers cut back the brush and planted 400 trees, while managing one acre of woodlot.

Developing a public picnic center and recreation playing field was a big project for the Beaverbrook 4-H Club in Cass County. They planted trees and shrubs and built fireplaces for public use on the picnic grounds.

-more-

add 1 - conservation

The Mille Lacs County Rural Area Development Committee leased an 80-acre tract of land and turned it over to the 4-H clubs for development. 4-H'ers in that county transplanted 500 spruce trees as part of their activities in the area.

In return for the use of the school library for 4-H meetings, the Minnewashta Pioneers 4-H Club in Carver County planted trees and did landscape work on the school grounds.

The Swandale 4-H Club of North St. Louis County was chosen the outstanding 4-H Conservation Club of the year for its varied conservation activities. Some of their activities include going on early morning bird tours during the period of greatest bird migration in spring, on nature trail hikes and wild flower tours. Because of the success of their bird feeders and houses, the 4-H'ers are now putting up a bluebird trail.

-kmr-

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota 55101
July 23, 1963

To all counties
ATT: Home Agents
Immediate release

VARIETY OF HOT
AND COLD FOODS
RECOMMENDED

Variety is the key to appetite appeal and good nutrition in hot weather meals.

Don't limit yourself to cold foods even on the hottest summer days, advises Verna Mikesh, extension nutritionist at the University of Minnesota. For good nutrition as well as for appetite appeal, the body needs a variety of foods, both hot and cold. The summer months should not be used as an excuse for an unbalanced diet. Variety should also extend to color, texture and shape of foods the homemaker serves her family.

Cold cuts, for example, might be accompanied by a hot potato dish and freshly cooked, hot vegetables. If a crisp tossed salad is to be the mainstay of a meal, strips of meat and cheese should be added to provide necessary protein. The hot part of the meal could be a hot bouillon consomme or hot rolls.

Fresh peaches, melons or other fresh fruits make colorful, attractive desserts and have the additional advantage of pleasing the palate with a minimum of calories. Ice creams and sherbets rate higher with most families during summer than rich pastries loaded with calories.

Milk is as important for the family in summer as at any other time of year, Miss Mikesh says, because it provides the calcium almost impossible to get otherwise. Carbonated drinks may be refreshing but they add empty calories and are no substitute for milk.

Eating large meals in hot weather causes your body temperature to rise; hence it's wise to eat frequent small meals. Since overweight increases discomfort in hot weather, this is a good time to cut down on total intake of food.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota 55101
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To all counties
Immediate release

RURAL COMMUNITY GROWTH
VARIES WITH
SIZE, LOCATION

Bigger Minnesota communities may have a better chance for survival in the next century, but present size isn't the whole story.

Location of a community is also linked to potential community growth, according to a trio of agricultural economists at the University of Minnesota. Kenneth Thomas, James App, and D. F. Fienup take a look at growth patterns of Minnesota trade centers in the current issue of "Farm Business Notes," an Agricultural Extension publication.

There is no doubt, of course, that the bigger a town is now, the better its chances are for the future. The economists classified trade centers in four categories -- (1) wholesale-retail, (2) shopping centers, (3) convenience centers, and (4) hamlets. Population of these trade centers ranks the same way, with the first type being the largest and hamlets the smallest.

Of the centers in the top two categories, more than half were classified as having fast growth in 1930-60 period. But of the centers in the hamlet category, only 21 percent could be described as having fast 1930-60 growth, while 59 percent had slow growth or actually declined. The remaining 20 percent experienced moderate growth.

What is behind these growth and decline patterns? The economists explain them in terms of the general urbanization pattern of Minnesota. Local government units and urban settlements were established soon after the first farmers arrived in the 19th century. Since then, changes in transportation, agriculture, manufacturing have shifted the pioneer pattern markedly. Urbanization has increased sharply in the past three decades, with concentrated growth at a relatively small number of larger trade centers.

add 1 - rural community growth

The question of "What is happening to this town?" is now a central point of discussion in hundreds of Minnesota communities. And understandably enough. Small towns represent 82 percent of Minnesota's trade centers, and the economists checked on whether those with average 1960 populations of under 1,000 were showing different growth rates in different state areas.

Larger centers, averaging about 800 in 1960 population, were termed "minimum convenience centers," and small ones averaging 239 in population were called "hamlets."

Next the economists divided Minnesota into three economic areas. These were (1) the Twin City - Southeast complex, with the highest growth in per capita income and population, (2) the Northeast complex, which has less than 10 percent of the state's agriculture and manufacturing, and (3) the agricultural complex of West Central and Southwestern and Northwestern Minnesota. The third complex has a majority of the state's farms but little manufacturing. Its population actually declined and showed less income growth than the other two areas.

The minimum convenience centers, whose population averaged 828 in 1960, showed the least growth in the Northeast complex between 1930 and 1960, but showed moderate growth in the other two regions. The strongest growth in such centers was in the Twin City - Southeast complex, where 30 percent of the centers showed fast growth rates.

At the other extreme, 57 percent of the minimum convenience centers in the Northeast complex showed slow growth or declined. The steady decline of agriculture in this area over the past three decades probably contributed to this trend.

Smaller trade centers also tended toward slow growth in the agricultural complex. The economists pointed out that farmers are showing increasing preference for more complete shopping areas, and are therefore tending to bypass the smaller trade centers. This trend was most marked during the 1950-60 period.

add 2 - rural community growth

Similarly, among the hamlets, or smallest of the trade centers, those in the Twin City - Southeast complex were most likely to grow. Fifty-two percent in this complex showed moderate to fast growth rates in the 1930-60 period compared to 34 percent in the agricultural complex and 41 percent in the Northeast.

The economists say that the more favorable growth patterns in the Twin City - Southeast complex may be explained partially by the greater economic growth of the big cities. In the agricultural complex, little future growth of hamlets and minimum convenience centers can be expected.

There is more of a question in the Northeast complex, however. Decline of certain kinds of mining and in agriculture has weakened the position of the small trade centers. But the future is open to question. The extent to which development of recreation, for example, will affect the future of these trade centers remains to be seen.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 1, Minnesota 55101
July 23, 1963

To all counties
Immediate release

FARM LAND USE
DECLINES, SHIFTS
IN MINNESOTA

The often heard point that total farm acreage is on the decline may obscure some of the facts on shifting land patterns in Minnesota.

The fact is that while total acreage is dropping, amount of land in corn, soybeans and alfalfa hay have been increasing steadily since World War II and earlier.

The major drop in farm acreage is being absorbed by such crops as oats, barley, rye, flax and hay other than alfalfa.

These facts are pointed out in a recent article in "Farm Business Notes," a University of Minnesota Agricultural Extension publication.

The article, by economists Henry Hwang and Harold Pederson, points out that in 1959, Minnesota had 30.8 million acres of farm land. This is 1.5 million below 1954, and is the biggest decrease for any period since 1945.

Hwang and Pederson classify crops in three categories:

(1) Crops with increasing acreage. These include corn for grain and silage, soybeans, and alfalfa for hay. Acreage of the first is now pushing 7 million acres, compared to less than 6 million in 1945. Soybean acreage, now at 2.2 million, has increased more than tenfold since World War II. Alfalfa hay acreage, at 2.06 million, is more than 75 percent above 1945 levels.

(2) Crops with decreasing acreage. Winter wheat, rye, flax seed, hay other than alfalfa, Irish potatoes, and field seed crops have seen declining acreage. No marked departure from this pattern is expected in the future.

(3) Crops with generally declining acreage, but large fluctuations. In this category are spring wheat, oats, barley, sorghums and other field crops except for sugar beets and potatoes. Acreage of oats, for example, is just

add 1 - land use

slightly under 1940 levels, but markedly below the high point of 4.9 million acres in 1954. In 1959 there were slightly fewer than 3.6 million acres of oats in Minnesota.

The economists explain that increases in acres of some crops are due mainly to decreases in acres of others, since total cropland has not increased since 1940. In fact, the total cropland acreage has been maintained at about 22 million since 1930.

However, cropland which was harvested has gone down from 19.8 million in 1950 to about 19 million in 1959.

During the 1960's, Hwang and Pederson believe, government programs in wheat, seed grains and some other crops will largely determine the amount of cropland harvested.

Even though we have more cattle than ever, land in pasture has declined since 1935. And the decline will probably continue, but not as drastic as in the 1954-59 period, when it dropped from 7.6 to 5.9 million acres.

As is well known, average farm size in Minnesota has been going up steadily since the 1930's. Average number of acres per farm was 165 in 1940, 184 in 1950 and 212 in 1959.

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St. Paul 1, Minnesota 55101
July 23, 1963

To all counties
Immediate release

IN BRIEF.....

Changes in Chemical Label Registrations: Linuron (Lorox) has received residue tolerances for corn herbage, according to Harley Otto, extension agronomist at the University of Minnesota. Fodder or corn silage treated with this chemical according to label instructions may be fed to livestock. Soybeans treated with it according to directions may be used for food, feed, oil, or seed. But soybean forage from treated fields may not be fed to livestock. Also: Radox now has label approval for 5 pounds of active ingredients per acre on corn and soybeans. County extension agents have information on other recent label registrations.

* * * *

Good Crop Year Forecasted. In spite of weather's being stingy with rain in some areas, crop prospects as a whole look good for 1963, according to Francis Graham, of the State-Federal Crop Reporting Service. In fact, the service is forecasting a corn yield of 63 bushels per acre, or the second highest yield ever realized. For soybeans, predictions aren't made until August. Spring wheat yields are expected to be better than average and best since 1958. Effects of early July drouth aren't thoroughly assessed yet, but flax was probably hurt most.

* * * *

Protein malnutrition is the most serious and widespread nutritional deficiency in the world today, especially in Central and South America, Africa, India and the Far East. This deficiency stems from the fact that little meat is eaten in those countries, and the cereal protein that the people do eat is short on lysine, one of the amino acids vitally needed by growing animals or humans. Amino acids are the building units of protein, needed by the body to build tissues. I. E. Liener, biochemist at the University of Minnesota, points out that adding lysine or lysine-rich proteins, such as skimmed milk to native diets such as wheat, rice or corn, causes a marked improvement in health. Lysine supplementation would not be expensive--about \$2 or \$3 per person per year.

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Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 24, 1963

Immediate release

SPECIALS IN MANY FROZEN FRUITS AND VEGETABLES

Consumers who have plenty of freezer storage space can find some good buys in many frozen fruits and vegetables before the produce from this season comes from the processors.

But be sure you know the temperature of your home freezer storage space before buying a supply of frozen foods, cautions Mary Ryan, extension consumer marketing specialist at the University of Minnesota. Zero is recommended. If the temperature is above zero, use the frozen foods in a very short time.

If you have adequate low-temperature freezer space and want to hold frozen foods for weeks or months, be concerned about the quality you buy. Know the brands and the store where you buy.

Handling of the frozen products before they reach you is just as important as the handling you give it, Miss Ryan points out. For that reason, it's important before you buy to check the frozen food case. The packages should be stacked no higher than the fill line. Check the temperature if there is a thermometer. It should be 0° F. or lower.

Choose packages that are clean and firm. Misshapen packages may indicate that the food was thawed and refrozen. Make sure packages are not torn, crushed or juice-stained.

Select frozen foods after you have shopped for your other groceries, just before you go through the check-out line. Ask the checker to place your frozen foods in an insulated or double grocery bag. Then as soon as you get home, store the frozen foods in the freezer.

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63-224-jbn

Department of Information
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Institute of Agriculture
University of Minnesota
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Immediate release

TO RETAIN VITAMIN C, HANDLE FRESH FRUITS, VEGETABLES WITH CARE

Grocery bins this summer are filled with vitamin C-rich fruits and vegetables.

But to get the most for your money, handle and cook them properly. This suggestion comes from Verna Mikesh, extension nutritionist at the University of Minnesota, who explains that vitamin C is lost more quickly from most foods than other important nutrients. This vitamin, which we need to replenish every day, is destroyed by high heat. Prolonged exposure to the air also results in some loss.

Vitamin C-rich fruits and vegetables available fresh from the home garden or from markets during summer include cantaloupe, strawberries, oranges, broccoli and green peppers. Be sure to include a serving of one of these foods in your meals every day, Miss Mikesh urges. Or you will get approximately the same amount of vitamin C from two or three servings of honeydew melon, watermelon, raw cabbage, tomatoes, greens or potatoes cooked in their jackets.

Here are some suggestions from the University nutritionist to preserve as much vitamin C as possible in fresh fruits and vegetables:

- . Handle vegetables and fruits carefully to avoid bruising.
- . Cut green peppers, cabbage and other raw vegetables just before serving, using a sharp knife.
- . Keep greens covered and refrigerated.
- . Avoid prolonged storage. Greens will lose about half their vitamin C after five days' storage. Potatoes will lose a third or more of their vitamin C by spring. Fresh cabbage will lose about a fourth of its vitamin C after two months of refrigerated storage.
- . Avoid prolonged cooking and heating of any fruit or vegetable.
- . Have the water boiling before adding vegetables to start the cooking rapidly. More vitamin C is lost when vegetables are started in cold rather than in boiling water.

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63-223-jbn

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 24, 1963

*For release at noon, *
*Friday, July 26 *

POTASH IMPORTANT TO ALFALFA PRODUCTION IN DULUTH AREA

DULUTH--Potassium fertilization is apparently the key to successful production of alfalfa in northeastern Minnesota.

But to give good results, potassium, in K_2O form, must be applied at rates of about 200 pounds per acre, field day visitors at the Northeast Experiment Station were told today.

John Grava, soil scientist at the University, based these conclusions on studies of potassium uptake in alfalfa plants. He said that applications of potassium fertilizers at rates below 200 pounds were not sufficient to affect the potassium content of alfalfa leaf tissues. There were marked uptakes of potassium in the plots getting 200 pounds of potassium fertilizer as compared to the plots getting none of the nutrient.

Higher rates did increase the leaf tissue content of potassium, but by smaller quantities for each pound of potassium fertilizer than was true at the 200-pound K_2O level.

Potassium has another benefit for alfalfa in this region, too. The high treatments have helped reduce winter kill in fields near the Northeast Station.

Years of research have shown that potassium is the most essential element for good alfalfa yields on soils in northeastern Minnesota. And raising good forage such as alfalfa is critical to agriculture, especially dairying, in this area where the growing season is not favorable to corn.

The results reported by Grava were from a potassium-magnesium-calcium study under the supervision of A. C. Caldwell, soil scientist at the University.

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University of Minnesota
St. Paul 55101 -- Tel. 647-3205
July 24, 1963

*For release at noon, *
*Friday, July 26 *

FIVE-TON PER ACRE ALFALFA YIELDS POSSIBLE

DULUTH--Five-ton per acre alfalfa yields can be expected from Vernal alfalfa in Minnesota under proper management and a good fertility program according to L. J. Elling, University of Minnesota agronomist.

Elling spoke to Northeast Experiment Station field day visitors at Duluth today (Friday).

He said there were no serious alfalfa stand losses due to winter kill where Vernal or Ranger, the two recommended varieties were planted at the Northeast Experiment Station, although they showed an 18- to 20- percent winter kill.

Estimated winter kill percentages ranged from 10 percent for an experimental synthetic variety to 89 percent for the Lahonton variety, according to Elling. Approximated winter kill percentages for the Flemish varieties such as Du Puits, F. D. 100 and Orchies, were around 70 percent. He added that observations at the Rosemount, Lamberton and Morris stations were similar.

Elling pointed out five factors which affect the winter hardiness of an alfalfa stand: 1) the inherent ability of the variety to withstand cold weather, 2) how well the stand is managed before winter, 3) adequacy of the fertility program with special reference to potash, 4) climate--good snow cover is helpful, but freezing and thawing cycles are detrimental, and 5) diseases such as bacterial wilt in the plant make it more susceptible to winter kill.

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63-221-1sr

Department of Information
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St. Paul 55101 -- Tel. 647-3205
July 26, 1963

*For release at noon *
*Monday, July 29 *

PROGRAM FOR ELIMINATING TURKEY DISEASE MEETS SUCCESS IN MINNESOTA

NEW YORK--One of the major diseases of turkeys can be kept in check by a well coordinated, industry-wide program of elimination of infected breeding flocks, the nation's veterinarians were told today.

The disease is infectious sinusitis and it has been known to account for 65 to 70 percent of all the condemnations in turkey processing plants. In 1961, a fourth of a million turkeys in Minnesota were condemned because of air sac infections alone.

A respiratory disease, infectious sinusitis produces infections of air sacs and lungs, resulting in damage to the rest of the turkey carcass which makes it unacceptable for processing. The disease is transmitted mainly through eggs, and no medication has been found to prevent its spread.

Therefore, control must be aimed at eliminating breeding and hatchery flocks where the disease has been found to prevent infected young poults from being sold to growers.

Benjamin S. Pomeroy, professor of veterinary medicine at the University of Minnesota, reported a research project that demonstrates how effective an eradication program can be. Of about 700 turkey breeding flocks involved in a pilot control program in Minnesota in 1961-62, incidence of infectious sinusitis was quite low--under 2 percent. And among 801 breeding flocks studied in 1962-63, 2.6 percent were infected--still a low rate.

(more)

add 1 -- turkey disease

These infected breeding flocks were eliminated and spread of the disease was halted. However, Pomeroy said, experience from last year gives a good example of what happens without a control program. Three cases of infected breeder flocks in the state were not reported and the new birds were subsequently put on turkey farms. One of these cases resulted in 160,000 infected growing birds and another, 40,000.

The eradication program approach has proven so successful that on July 1 this year, Minnesota started an official, voluntary program of infectious sinusitis control through the state Livestock Sanitary Board. Hatching flocks participating are designated as free of the disease.

The research project led by Professor Pomeroy involved cooperation with R. E. Dierks and John A. Newman, also of the College of Veterinary Medicine; Claude J. Pflow of the U. S. Department of Agriculture animal disease eradication section; and Harry R. Olson, of the Minnesota Livestock Sanitary Board.

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63-225-pjt

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101--tel. 647-3205
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Immediate release

TIPS GIVEN ON FREEZING, CANNING WITHOUT SUGAR

Can fruits be canned and frozen without sugar?

Many homemakers have been asking this question since the price of sugar went up this spring. Others have members of the family who are on low-calorie diets or can't eat sugar.

Home economists at the University of Minnesota say the fruit will keep without sugar but in canned and frozen products, sugar helps to hold the shape as well as the flavor of the fruit. Hence you cannot expect the fruit to be as flavorful when you preserve it without sugar.

The home economists point out, too, if the price of sugar is the obstacle, homemakers should consider the fact that the cost of the sugar used is actually small in proportion to the cost of fruit, if the latter is purchased. Prices have gone down considerably in the last month or two, and sometimes it is possible to get specials on 10-pound sacks of sugar.

To can without sugar, Verna Mikesh, University extension nutritionist, says you follow the usual procedure of canning with sugar, but, instead of pouring a boiling sugar syrup over the fruit, pour boiling water or juices obtained from crushing some of the fruits over it. Then process for the recommended time in the hot water bath.

Procedures for freezing without sugar vary with different fruits, according to Mrs. Shirley T. Munson, in charge of the University's food processing laboratory. Experiments in the laboratory show that peaches will retain good quality when frozen without sugar if they are packed in water to which ascorbic acid has been added. Use one teaspoonful of ascorbic acid to each quart of water and use just enough water on the peaches to cover them. But raspberries and strawberries keep best without sugar if they are crushed and frozen in their own juices.

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63-226-jbn

Department of Information
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Institute of Agriculture
University of Minnesota
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Immediate release

WRIGHT COUNTY STUDY ILLUSTRATES CREAMERY INDUSTRY CHANGES

How the dairy manufacturing industry has been changing in Minnesota during recent years is illustrated by a University of Minnesota study of one county near the Twin Cities.

The study was concerned with market organization and competition in the creamery industry in Wright County, and is the first of a series of such studies to be completed in coming months.

As in the Minnesota dairy industry as a whole, the trend in Wright County during the past decade was toward fewer and larger dairy processing firms. Number of creameries receiving manufacturing milk from farmers dropped from 15 to nine.

Furthermore, the creameries that remained have sounder financial footings than a decade ago, according to Willis L. Peterson and E. Fred Koller, agricultural economists who conducted the study.

In general, it was the smallest creameries that closed down, with the middle size creameries about holding their own and the largest ones growing rapidly.

Why did the larger firms grow more rapidly? The economists found that a large source of increased volume for large creameries has been through buying whole and skim milk from other plants and stations. As far as could be determined, all butterfat receipts of creameries in Wright County in 1950 came from farmers. But by 1960, the three largest creameries received nearly two-fifths of their butterfat as whole milk from other plants and receiving stations.

Such a method of achieving greater volume (by purchasing from other plants) points to a major trend in the dairy industry. Small creameries often find it more profitable to stop processing^{and} simply receive milk for a larger creamery or drying plant. This can mean net savings, to be passed on to farmers in case the small plant is a cooperative.

(more)

add 1 -- changes in creamery industry

But if both the small and large plant are cooperatives, another question arises. Wouldn't net returns to farmers be still higher if milk didn't stop at the receiving station, but went straight to the larger plant instead? In many cases, complete close-down is what occurs. And whether the small plant becomes a receiving plant or quits entirely, the result is the same: the larger firm increases its volume of milk received.

There was little evidence of merger or consolidation in Wright County, although several plants had considered it.

Even with fewer plants, however, the procurement areas of the Wright County firms overlap considerably. As many as five different plants may buy from farmers in a given area.

The economists studied two forms of competition between creameries for milk--price competition and nonprice competition. There was a tendency for average quoted pay price to farmers in an area to be higher where there was more overlapping of procurement areas. In other words, competition can be maintained or intensified even when the number of creameries is declining--if the procurement areas of the remaining creameries are enlarged.

Average net pay price to farmers was calculated by subtracting hauling charges from quoted pay price and adding any cash patronage refund.

Creameries provided a number of different nonprice services for patrons. One was advancing money on the next check. Another was withholding assignments from patrons' checks. Others included selling farm supplies, making group insurance available, providing milk cans at cost or less, providing daily weight slips and sponsoring community projects.

Between the two kinds of competition, nonprice services seemed to be most helpful in keeping patrons satisfied and continuing to sell to a given creamery. Managers apparently preferred to gain patrons on overall merits of the firm rather than strictly on price.

(more)

add 2 -- changes in creamery industry

The economists do suggest a warning here, however. Since nonprice services are easier to start than stop, they could become excessive in the future. A point may be reached where some services may be provided more efficiently by other institutions or by farmers themselves.

The economists emphasize the importance of the fieldman and hauler, who, with their direct patron contacts, are in an excellent position to influence patron loyalty. Moreover, their importance may increase in the future as creameries become larger and further removed from farmers.

While no final conclusions were drawn on market performance, Peterson and Koller do raise some questions on certain aspects where improvement may be possible.

Their first question: Is the market operating at highest possibly efficiency? They suggest that procurement efficiency could be improved by less overlapping of buying areas among cooperative creameries. Overlapping could be reduced through consolidation of two or more associations, with processing done in one large plant. Another way is to form a federation of local cooperatives. Then, the local plants would stay in operation but under control of one management, thereby allowing reorganization of hauling routes and less cross-hauling.

Consolidation would quite likely also lead to greater processing efficiency.

A second question: Do farmers receive enough information on price, test, hauling charges, patronage refunds and services? A farmer must know these things to make a sound decision as to which creamery to patronize. The economists suggest that farmer knowledge of the market could be increased if pay prices, rates and refunds were published, such as in local newspapers.

This study is explained in detail in Report No. 525, "Market Organization and Competition in the Creamery Industry in Wright County, Minnesota." Copies are available from the Department of Agricultural Economics, University of Minnesota, St. Paul 55101.

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To all counties
Immediate release

WINDBREAK STUDIES
SHOW NEED FOR
BETTER MANAGEMENT

Either wider spacing or better thinning should be used in farmstead windbreaks, according to Harold Scholten, University of Minnesota forestry instructor.

He says that 330 demonstration farmstead windbreaks were planted throughout Minnesota about 40 years ago with hopes that owners could manage them as small farm woodlands.

The demonstration windbreaks were 6 to 10 rows deep, planted with conifer and hardwood species, with spacings ranging from 4 by 6 feet to 6 by 12 feet. Theoretically, the close spacing would have provided fuelwood and fence posts from early thinnings, and poles and lumber from later thinnings, with reproduction perpetuating the windbreaks indefinitely.

Failure to thin the windbreaks before excessive crowding caused the lower branches to die. The result was reduced effectiveness of the windbreaks.

Scholten says that in addition to poor thinning practices, there are four basic reasons for the failure of about 50 percent of the 330 demonstration plots: 1) Poor survival following planting 2) failure to replant 3) Improper care of young plantings and 4) livestock grazing in the windbreaks.

He pointed out that twenty-five percent of the windbreaks were grazed by livestock and some of them were virtual failures.

Poultry can cause considerable damage to farm windbreaks too. Poultry damages result from removal of the lower buds on conifers, exposing roots by scratching, and increasing surface runoff by packing the soil. Heavy concentrations of poultry droppings are also harmful to trees.

Scholten indicates that unless farmers are willing to use good thinning practices, wider spacing may be recommended for farmstead windbreak planting in the future.

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To all counties
Immediate release

QUALITY TIMBER
BRINGS A PREMIUM

How much are those standing trees on your back forty worth?

The answer isn't easy to gather, but some guides suggested by an extension forester at the University of Minnesota can help you pin down the value of stumpage. Marvin Smith makes these suggestions in the current issue of the Minnesota Hardwood Forest Products Bulletin, an Agricultural Extension Service publication.

Size of trees to cut: Sell small trees only when thinning to improve the timber stand. Small trees have less volume per inch of diameter than larger ones, and products which can be cut from these trees are limited. About all a small tree can be used for is pulpwood, lath, posts, ties and a few other things. So better let them grow a few more years to sawlog or veneer log size.

Species: Don't expect too much from low value trees. Improve woodlands to grow high value species by eliminating those of low value. For instance, black walnut is ordinarily worth more than soft maple or elm.

Quality: Let trees grow until they produce quality products. Get rid of crooked and defective trees. Very little knot-free material can be cut from hardwood trees under 18 inches on the stump.

Operators and mill equipment: Sell to an efficient operator who has good equipment and knows how to use it. A makeshift or poorly-operated mill cannot turn out the best quality products, and you'll take the loss in a lower stumpage price. Also, sell to the operator who turns trees into the most valuable product which can be cut from them.

Volume of timber: Know the log rule used by the buyer of your timber. Or better still, have the timber marked for cutting by your service forester or a consulting forester. Then you can advertise a volume of timber that will be close to the mill tally of lumber which can be manufactured. Don't expect as much per unit for a small volume of timber, because it costs an operator as much to move in equipment for a small cut as for a larger one.

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To all counties
Immediate release

DHIA PROGRAM
CONTINUES GROWTH
IN MINNESOTA

The DHIA story in Minnesota is one of rapid growth, according to the annual summary for the Dairy Herd Improvement Association Program recently issued by the University of Minnesota Agricultural Extension Service.

Minnesota now has three times as many cows on DHIA test as 10 years ago. As of January 1, 1963, there were 163,001 cows in Standard DHIA and Owner-Sampler programs, tested in 89 different associations.

Serving this program were 211 supervisors.

The January figure meant that nearly 13 percent of all state cows were on test. Seven counties had more than a fifth of their cows on DHIA. These included Dakota, Winona, Goodhue, McLeod, Washington, Hennepin and Olmsted.

One part of the DHIA program which has grown especially fast is the central processing program. By January, 1963, more than 2,600 herds were on central processing, meaning that records were being handled by electronic computers.

The purpose of DHIA programs is to improve efficiency of production from each cow, and the state averages show how it's being done. The average DHIA cow in Minnesota during 1961, for example, produced 11,190 pounds of milk, compared to about 8,000 for the state as a whole.

Butterfat averaged 415 pounds for the DHIA cow, a good 130 pounds above the overall state average.

Futhermore, the average DHIA cow in 1961 returned \$2.83 for each dollar paid out for feed, and required \$1.26 in feed costs for every 100 pounds of milk. Also, this average cow brought her owner a \$208 annual labor income, based on a 1961 price of \$3.73 per hundred pounds of grade A milk.

The average cow for the state, producing 285 pounds fat, had an annual labor income of \$103.

-more-

add 1 - DHIA program

DHIA records are big helps in decision-making by herd owners. A summary of cows culled by DHIA members shows that 44 percent were sold when low production figures meant thumbs down. Low production was by far the biggest single reason for culling, and accounted for more than 11 percent of all cows on test in 1961.

Satisfaction of farmers with DHIA is indicated by the growing number of dairymen testing on a continuous basis. In 1962 alone, more than 100 members were added to the long list of farmers who have been on test for 10 or more consecutive years.

DHIA testing in Minnesota dates back to 1910, when the first testing association was set up in Freeborn county. In 1963, John Nahrgang & Son, Lewiston, were recognized as having the first herd with 40 years of consecutive DHIA testing.

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St. Paul, Minnesota 55101
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To all counties
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IN BRIEF.....

A major disease of turkeys can be kept in check by a well coordinated, industry-wide program of elimination of infected breeding flocks, according to B. S. Pomeroy, veterinary scientist at the University of Minnesota. The disease is infectious sinusitis and is transmitted mainly through eggs. No medication has been found to prevent its spread. Therefore, control must be aimed at eliminating breeding and hatchery flocks where the disease has been found, to prevent infected young poults from being sold to growers. A research project has demonstrated how effective such an eradication program can be. In fact, the eradication approach has proven so successful that on July 1 this year, Minnesota started an official, voluntary program of infectious sinusitis control through the Livestock Sanitary Board.

* * * *

Potash is one key to successful production of alfalfa in northeastern Minnesota. But for best results, it must be applied at rates of about 200 pounds per acre, according to research at the Northeast Experiment station at Duluth. There was marked uptake of potassium in leaves of alfalfa plants getting 200 pounds of potash per acre, compared to plots getting none. But rates below 200 pounds were not sufficient to affect the potassium content of leaf tissues.

* * * *

Machinery and mayhem: Accidents with machinery accounted for more than 40 percent of Minnesota's farm accidental deaths in the 1949-59 period. But many of these accidents could have been prevented by keeping shields and guards in place, shutting off power before making adjustments, keeping children away from machinery, taking lunch breaks to ward off fatigue, and wearing snug fitting clothing.

* * * *

Tomato leaf roll? It seems to be common this year, but it doesn't seem to hurt tomato yields, according to Herbert Johnson, extension plant pathologist at the University of Minnesota. It makes plants look a little sick, but that's about all.

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Department of Information
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St. Paul, Minnesota 55101
July 30, 1963

To all counties

ATT: Home Agents

Immediate release

AUGUST PLENTIFULS
ADD CONVENIENCE
TO MEAL PREPARATION

When the weather is too hot to do much cooking, you can plan simple but satisfying meals based on August plentiful foods.

Featured on the U. S. Department of Agriculture's list of plentiful foods for the month are summer vegetables, canned tuna, watermelon, peanut butter and cooking and salad oils.

With the variety of vegetables on the market and in home gardens this month, you can serve a different colorful, tasty fresh vegetable nearly every day -- sweet corn, tomatoes, snap beans, beets, carrots, cabbage or lettuce.

For maximum flavor, food value and pleasing texture, cook vegetables as quickly as possible in a small amount of water, advise extension nutritionists at the University of Minnesota. For interest, vary the seasonings and sometimes combine several vegetables.

As the new pack of vegetables comes to market, look for specials on canned and frozen vegetables.

Take advantage, too, of specials on canned tuna fish this month. A tangy, cooling salad made with canned tuna fish can provide the main dish on a hot day and eliminate cooking. A tuna sandwich can be the mainstay of noon lunch.

Another sandwich filler that's in plentiful supply this month is creamy peanut butter. Like tuna fish, peanut butter can help fulfill the body's needs for protein. In fact, 4 tablespoons of peanut butter will supply about the same amount of protein as 2 ounces of lean meat.

Icy cold, juicy watermelon is a perfect dessert or addition to fruit salads on sizzling days. Because watermelon production will be well above the 1957-61 average, prices of watermelon are reasonable. The melons are high in quality.

Stocks of cooking and salad oils are about 700 million pounds higher than normal -- so look for specials during August. These oils are in demand for outdoor cookery, for barbecuing and for salad dressings.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
July 30, 1963

To all counties
4-H NEWS
Immediate release

Releases to follow on livestock show
and judging contests and dress revue.

LOCAL 4-H'ERS
PREPARE FOR
STATE FAIR

4-H'ers from all parts of _____ County are busy putting finishing touches on their part of the Minnesota State Fair, Aug. 24 - Sept. 2.

_____ County 4-H Club members will join some 3,000 other Minnesota 4-H'ers who will take part in State Fair activities. All of them have won county honors in demonstrating, exhibiting, livestock or dairy judging, or in the dress revue or Share the Fun Festival.

Throughout the 10-day period more than 800 4-H'ers will give demonstrations on the seven platforms in the 4-H Building on the State Fair grounds. They compete in the fields of agriculture and home economics. 4-H'ers participating in demonstrations from this county are: (give name, address or club and title of demonstration).

_____ will be among the more than 200 girls (give names and addresses or clubs) taking part in the dress revue. Three public dress revues are held in Erickson Hall (auditorium, 2nd floor, 4-H Building) on Aug. 27, 28 and 29 at 3 p.m. Each day a court of honor of five girls will be chosen.

The Share the Fun Festival Wednesday evening, Aug. 28, at 8 p.m. in Erickson Hall will feature _____ local 4-H'ers. (Give names and acts.)
(no.)

More than 2,400 club members will display exhibits on home economics, livestock, electric, shop, agronomy, entomology, potatoes and gardening throughout the State Fair. Those exhibiting from _____ County are: (give names, addresses or club and type of exhibit.)

Representing _____ County in the livestock and dairy judging contests Aug. 30 are: (give names, addresses or clubs of each team).

_____ County's booth was prepared by _____ (give names of persons or clubs) and it depicts _____. It will be among 80 county booths on the first floor of the 4-H Building.
(describe exhibit)

_____ County 4-H'ers will attend the Key Award luncheon Tuesday, Aug. 27, at the Lowry Hotel, St. Paul. (Give names and addresses.)
(no.) (Name of co.)

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 1, 1963

Immediate release

SCALDING A MUST FOR QUALITY IN FROZEN CORN

Improper processing is responsible for frozen corn with a cobby taste or a strong smell of corn in the freezer.

So says Mrs. Shirley T. Munson, in charge of the food processing laboratory at the University of Minnesota.

The cobby taste of corn is due to insufficient scalding, she points out. Whole kernel corn to be cut from the cob should be scalded 4 1/2 minutes before cutting. For corn to be left on the cob, Mrs. Munson recommends that homemakers follow this schedule: scald 24 midget ears in 12 quarts of water for 8 minutes; 14 small-to-medium ears for 8 minutes; 10 medium-to-large ears 11 minutes.

The strong smell of corn some homemakers complain of in their freezers is caused by insufficient cooling of the corn once it is scalded. Immediately after scalding, the corn should be chilled in cold running water for at least the same length of time as given for scalding. Then drain the corn, package and freeze it.

Scalding is the most important step in preparing sweet corn for freezing, Mrs. Munson says. By inactivating the enzymes, scalding preserves the fresh quality of corn as well as its color and vitamin content and lengthens storage life. There is no "new" method of freezing corn without scalding it, she points out. Laboratory experiments indicate that unscalded corn stored in the freezer quickly takes on a straw-like flavor.

For scalding, Mrs. Munson recommends the use of a large kettle that will hold at least 12 to 15 quarts of water. Bring the water to a rolling boil. Place the husked corn in a wire basket or cheesecloth bag and submerge it in the boiling water. Keep the kettle covered during the scalding period and have the heat on high. Always count time from the second the vegetable is put into the boiling water.

Besides scalding, other factors in determining quality of the corn are rapid processing, once the corn is harvested, to prevent loss of flavor, harvesting at just the right stage of maturity for best eating and choice of a good freezing variety--preferably one of the Golden Bantam types.

Be sure to store frozen corn at 0°F. Freezer compartments in refrigerators are not satisfactory for long-time storage.

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63-228-jbn

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 1, 1963

Immediate release

DISTRICT CONFERENCES FOR HOME EC TEACHERS

Eight district conferences will be held this year throughout Minnesota for high school home economics teachers, beginning Aug. 18.

In addition , three conferences will be conducted for home economics teachers in adult education programs. Roxana Ford, assistant director of the School of Home Economics and professor of home economics education, University of Minnesota, is in charge of the program for the adult education conference.

The district events will replace the statewide conference held in other years, according to Lyla M. Mallough, state supervisor of home economics education. A purpose of the annual conferences is to provide stimulation for effective teaching.

Conferences will be held for the southeast district at the Kahler Hotel, Rochester, Aug. 19; southwest, Little Theater, High School, New Ulm, Aug. 20; suburban, McNeal Hall, St. Paul Campus, University of Minnesota, Aug. 20; northern, Washington High School, Brainerd, Aug. 20; central, Little Theater, South Junior High School, St. Cloud, Aug. 21; northeast, Ordean High School, Duluth, Aug. 21; western, Little Theater, Senior High School, Detroit Lakes, Aug. 22; Minneapolis-St. Paul, Central Senior High School, Minneapolis, Aug. 22.

Conferences for teachers in adult home economics programs are scheduled for the northern and northeast districts at the Junior High School, Bemidji, Aug. 19; southeast, southwest, Minneapolis-St. Paul, Science and Arts Building, Mankato State College, Aug. 21 and for western and central districts at the Jefferson Senior High School, Alexandria, Aug. 23.

High school teachers in all districts will hear a recorded talk, "Are There Tops in Your Cages?" by E. Paul Torrance, director of the Bureau of Educational Research, University of Minnesota, and author of the book, Guiding Creative Talent.

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Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 1, 1963

Immediate release

DUTCH ELM DISEASE SUBJECT OF SHADE TREE SHORT COURSE

Dutch elm disease will be the subject of the first day's sessions of the Shade Tree Maintenance Short Course in the University of Minnesota's St. Paul Campus Student Center Sept. 16.

Second day of the two-day event will be spent at the Minnesota Landscape Arboretum located on State Highway 5, 3 miles east of Chanhassen.

Sponsored by the University of Minnesota Department of Horticultural Science and the Agricultural Extension Service, the short course is planned for nurserymen, arborists and for people professionally engaged in tree maintenance in parks, on public or private grounds. The event is also open to the public. Registration fee is \$4.

Harold McNabb, associate professor of forest pathology at Iowa State University, Ames, will discuss success, failure and new approaches with Dutch elm disease. Donald Coe, director of the state Bureau of Plant Industry, will report on distribution and present situation of the disease. John A. Lofgren, University extension entomologist, will discuss control and prevention, and Herbert Johnson, University extension plant pathologist, will describe symptoms and methods of collecting samples for diagnosis. Donald White, assistant professor of horticultural science, University of Minnesota, will talk on tree culture.

The program will begin at 9 a.m., with registration at 8 a.m.

Tours of the Minnesota Landscape Arboretum are scheduled for Tuesday, Sept. 17. Demonstrations will also be given on pruning, stump removal and tree fertilization.

Coordinators of the short course are C. Gustav Hard, extension horticulturist, and Al Keating, Department of Agricultural Short Courses, University of Minnesota.

Further information is available from the Department of Agricultural Short Courses, University of Minnesota, St. Paul 55101.

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63-230-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 1, 1963

Immediate release

HAM, TURKEY GOOD FOOD BUYS

Turkey will lead the list of featured items at meat counters during August, reports Mary Ryan, extension consumer marketing specialist at the University of Minnesota.

Consumers may find canned hams, ham slices, whole and half shanks and picnics at reasonable prices, also.

Small turkeys, from 5 to 8 pounds, are available and will be offered at money-saving prices all month. Watch for specials, Miss Ryan suggests. Turkey can add variety to your menu and is a relatively inexpensive source of protein. It is also a good choice for barbecuing.

Local vegetable growers are supplying markets with green beans, cabbage, cucumbers and green onions of good quality at reasonable prices. Homegrown new round red and early Russet potatoes are in good supply, for salad making and for preparing in a variety of ways. Eggplant and green peppers are of good quality but prices are moderately high.

Supplies of shipped-in lettuce, apricots, peaches, seedless grapes and cantaloupe continue to come in. However, the season for apricots is nearing its close. Peaches are expected to become more scarce during August. Because the seedless grape crop this year is the largest on record, consumers will be able to enjoy these grapes for several more weeks. Don't look for too many pears this month, Miss Ryan cautions, because the pear crop is below average.

Peanut butter, cooking and salad oils will be in plentiful supply all month and are on the list of special features to attract the money-conscious shopper.

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63-231-jbn

Department of Information
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Institute of Agriculture
University of Minnesota
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August 1, 1963

Immediate release

INSTITUTE OF AGRICULTURE CALENDAR

AUGUST

- 1 Farm Management Workshop, Southern School and Experiment Station, Waseca
- 13 Minnesota Fruit Growers' Orchard Tour, Stillwater
- 25-28 American Farm Economics Association annual meeting, Minneapolis Campus
- 24-Sept. 2 State Fair
- 27 4-H Key award luncheon, Lowry Hotel, St. Paul

SEPTEMBER

- 7 State 4-H Invitational Horse Show, Cambridge
- 10-11 Land and People Conference, Duluth
- 10-12 Dairy Products Institute, St. Paul Campus
- 12 Cattle Feeders' Institute, Northwest School and Experiment Station, Crookston
- 13 Cattle Feeders' Clinic, Tracy, Minn.
- 16-17 Shade Tree Short Course, St. Paul Campus
- 17 Corn and Soybean Field Day, Southwest Experiment Station, Lamberton
- 17-18 Duluth 4-H Livestock Show, Duluth
- 18 Corn and Soybean Field Day, Southern School and Experiment Station, Waseca
- 18-19 Graduate Veterinarians' Conference
- 19 Beef-Cattle Grassland Field Day, Rosemount Agricultural Experiment Station
- 22-26 National Association of County Agricultural Agents, annual meeting, Hotel Leamington, Minneapolis
- 30-Oct. 3 Junior Livestock Show, South St. Paul.

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63-232-pjt

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties
Immediate release

IN BRIEF.....

Physical methods for fly control are being studied intensively by U. S. Department of Agriculture research teams. The studies include using light and other forms of radiant energy, audible and ultrasonic sound, air currents, and geometric patterns as weapons. Although complete control by physical means isn't expected in the near future, USDA scientists say their use as a supplementary method could reduce amounts of insecticide needed. Example: a combination of physical and insecticidal controls might keep the chemical from contact with livestock or food. One such combination is a lamp which might attract flies to an insecticide in a part of the barn inaccessible to cattle.

* * * *

Large yellow spots with red centers have been showing up on many apple tree leaves. They are symptoms of the late season stage of cedar-apple rust, according to Herbert Johnson, extension plant pathologist at the University of Minnesota. The lower side of the leaf has a brown, cushion-like area opposite the yellow spot on the upper side. These spots resulted from infections that occurred last May or June; no new infection has taken place since then. This leaf spot disease can be controlled by spraying with ferbam or zineb fungicide during the spring infection period. The problem is described in detail in Plant Pathology Fact Sheet No. 4, available at county extension offices.

* * * *

Whole plant corn silage could be harvested when the grain is fully dented, but when the stalks and leaves are still green, according to Harley Otto, extension agronomist at the University. Coarsely ground ear corn silage gives good feeding results at 35 to 40 percent moisture, and shelled corn silage does well at 30 percent.

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Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties
ATT: Home Agents
Immediate release

PROCESS PICKLES
FOR SAFETY

If you're making pickles or relishes, be sure to process them in the hot water bath for safety's sake.

That suggestion comes from Verna Mikesh, extension nutritionist at the University of Minnesota.

Processing in the hot water bath is now being recommended for all pickle products to destroy organisms that cause spoilage and to inactivate enzymes that may affect flavor, color and texture.

In open-kettle canning there is always danger of spoilage organisms entering the food when it is transferred from kettle to jar, Miss Mikesh says.

Pack pickles into glass jars according to directions in the recipe. Then immerse the jars into actively boiling water in the canner or a deep kettle. Be sure the water comes an inch or two over the jar tops. Cover the container tightly and bring the water back to boiling as quickly as possible. Start to count processing time and boil gently and steadily for the processing time recommended below. After processing, remove jars immediately to a wire rack, setting them several inches apart to cool. Complete the seals if closures are not self sealing.

For fermented cucumbers, fresh-pack dills and sauerkraut start to count processing time as soon as filled jars are placed in the actively boiling water to prevent loss of crispness and development of a cooked flavor. For other pickles or for relishes start counting processing time as soon as the water in the canner returns to boiling.

Follow this table for processing time: pickled peaches, 20 minutes; fresh-pack dills, 20 minutes; fermented dills, 15 minutes; corn relish, 15 minutes; sauerkraut, 15 minutes for pints, 20 minutes for quarts; sweet gherkins, crosscut pickle slices (bread and butter pickles), dilled green beans, watermelon pickles, tomato-apple chutney, piccalilli, 5 minutes.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties
ATT: Home Agents
Immediate release

RELIABLE METHOD
GIVEN FOR
DILL PICKLES

Pickles that get soft or spoil in the jar: these are some of the troubles homemakers frequently encounter in making dill pickles.

_____ County homemakers who have cucumbers in the home garden may want to try a reliable method of making fresh-pack dill pickles which has been developed by the Human Nutrition Research Division, Agricultural Research Service of the United States Department of Agriculture. The recipe is given below.

Fresh-Pack Dill Pickles (Yield: 7 quarts)

17 to 18 pounds cucumbers, 3 to 5 inches long, packed 7 to 10 per quart jar
About 2 gallons 5 percent brine ($\frac{3}{4}$ cup pure granulated salt per gal. of water)
6 cups ($1\frac{1}{2}$ quarts) vinegar
 $\frac{3}{4}$ cup pure granulated salt
 $\frac{1}{4}$ cup sugar
9 cups ($2\frac{1}{4}$ quarts) water
2 tablespoons whole mixed pickling spice
2 teaspoons whole mustard seed for each quart jar
1 clove garlic per quart jar if desired
3 heads dill plant, fresh or dried, per quart jar or 1 tablespoon dill seed per jar

Wash cucumbers thoroughly with vegetable brush; drain. Cover with the 5 percent brine ($\frac{3}{4}$ cup salt per gal. of water). Let stand overnight. Drain.

Combine vinegar, salt, sugar, water and mixed pickling spices that are tied in a clean, thin white cloth. Heat to boiling. Pack cucumbers into clean, hot quart jars. Add mustard seed, dill heads or seed and garlic to each jar; cover with boiling brine to within $\frac{1}{2}$ inch of top of jar. Adjust jar lids.

Process in boiling water for 20 minutes, starting to count processing time as soon as hot jars are placed into the actively boiling water.

Remove jars and complete seals if necessary. Set jars upright, several inches apart, on a wire rack to cool.

Top-quality pickles can be obtained only when high quality ingredients are used and the proper methods are followed, Verna Mikesh, extension nutritionist at

add 1 - method for dill pickles

the University of Minnesota, cautions homemakers. Correct proportions of vegetable or fruit, sugar, salt, vinegar and spices are of great importance. Use tested recipes and measure or weigh ingredients accurately.

Cucumbers for pickling should be fresh from the garden. Use pure granulated or pickling salt if it is available. Iodized salt may darken pickles. Use cider or white distilled vinegar of 4 to 6 percent acidity. Cider vinegar gives a better blending of flavors than white vinegar but it may darken light-colored fruits and vegetables. Be sure spices you use are fresh.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties

4-H NEWS

Immediate release

4-H'ERS EXHIBIT
LIVESTOCK AT
STATE FAIR

 4-H'ers from County will be among more than 1,200 4-H'ers
(no.)

who have been selected to exhibit livestock and poultry at the Minnesota State Fair.

Top livestock and poultry exhibitors from competition at county achievement days or county fairs will take their exhibits to the State Fair. Representing County will be (give name, address and class of competition).

All exhibits must be in place by 2 p.m. Friday, Aug. 30. Judging takes place Saturday, Aug. 31, beginning at 8 a.m. in the Hippodrome.

All judging events on Saturday, Aug. 31, are open to spectators, according to Earl Bergerud and Osgood Magnuson, assistant 4-H Club leaders at the University of Minnesota, in charge of the 4-H livestock exhibits at the fair. Sheep, poultry and rabbits will be judged in the sheep and poultry barns in the morning, and swine in the afternoon at the sheep barn.

Judging of purebred Holstein and grade Holstein will take place all day Saturday beginning at 8 a.m. at the Hippodrome. Grade and purebred Red Poll, Milking Shorthorn, Guernsey and beef heifers will be judged in the Hippodrome beginning at 8 a.m. The afternoon schedule includes Jerseys, Ayrshire and Brown Swiss, beginning at 1 p.m.

Beef heifer, sheep and swine showmanship contests will be held following judging of these classes. Selection of the champion dairy showman will be made following a dairy showmanship contest at 3:15 p.m.

Minnesota Dairy Industries prizes and purple ribbons will be awarded to the grade and purebred breed champions at the Sunday evening (Sept. 1) grandstand program. A champion herdsmanship trophy will be presented to the winning county at an assembly in the sheep barn at 11:30 a.m. on Labor Day.

Livestock exhibits will be on display at the State Fair from Friday, Aug. 30, until 6 p.m. Labor Day.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties
Immediate release

CULL COW PRICES
MAY DIP LATER ON

With a possibly heavy increase in cow slaughter this fall, it may be wise to get those cull beef and dairy cows to market before the end of August.

If you wait until the end of the pasture season, you may risk getting as much as 5 cents per hundred pounds below current prices, according to Paul Hasbargen and Kenneth Egertson, extension economists at the University of Minnesota.

On a cow weighing 1,000 pounds the difference between August and prices later this fall could amount to as much as \$50 per animal.

Prices for cows usually drop in fall, compared to other beef, but the drop could be especially sharp this year, the economists say. Marketing of slaughter cows is expected to be 12-15 percent above levels of a year ago.

Many farmers hold these cull cows until the pasture is gone at the end of the summer. But the outlook suggests that such a practice may be a questionable one for this particular year, the economists say.

The expected heavier slaughter of older cows this year is partly due to more older cows on range, more widespread drouth conditions than in recent years in western areas, and lower feeder cattle prices.

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Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties
Immediate release

CORN DAMAGED
BY HAIL, DROUTH
CAN BE PUT IN SILO

Corn damaged by hail or drouth can be salvaged as silage for feeding cattle, according to R. E. Jacobs, extension animal husbandman at the University of Minnesota.

He says that corn so damaged rarely produces enough grain to pay harvesting costs. But research at Iowa State University following the drouth of 1955 indicates that corn plants producing little or no grain can be harvested economically as silage and used for wintering or fattening beef cattle.

In the Iowa experiment, drouth-damaged corn was harvested for silage during the first two weeks of August. The yield of silage was about 5 tons per acre, and a check on corn grain in the silage indicated a yield of less than 2 bushels per acre. Four lots of cattle were fed this silage -- three on wintering rations and one on fattening rations. Yearling cattle weighing 700 pounds were fed this silage plus supplements for 141 days.

Cattle in each lot were fed 1.5 pounds of 39 percent protein supplement per head per day, along with free choice minerals. Average mineral consumption was 0.2 pound per day.

Lot 1 cattle were fed all of the drouth-damaged silage they could eat, in addition to the protein supplement and minerals. The average consumption of silage per head per day for the 141 days was 48.7 pounds. Daily gain was 1.39 pounds and feed cost per pound of gain was 17.6 cents.

Lot 2 cattle were fed protein supplement, minerals, 2 pounds of alfalfa-brome hay and a full feed of the silage. These cattle gained 1.61 pounds per day and cost of gain was 16 cents per pound.

add 1 - corn damaged

Lot 3 cattle were fed the same as the lot 2 group, except that they received 4 pounds per head daily, instead of 2. Gain was the same as for lot 2 -- 1.61 pounds daily -- but cost was 16.9 cents per pound of gain.

Lot 4 cattle received 1.5 pounds protein supplement per head daily. They ate an average of 39.7 pounds of drouth-damaged corn silage daily and, in addition, were fed 6 pounds of ground ear corn for the first 84 days and 12 pounds the last 56 days, making an average of 8.1 pounds of corn per head per day. These cattle gained 2.19 pounds per head per day with a feed cost of 17.6 cents per pound.

In computing feed costs per pound of gain, drouth-damaged corn silage was valued at \$7 per ton.

Considering the very low yield of corn grain, Jacobs says, the cattle gained very well even on the rations not supplemented with grain. This suggests that drouth or hail damaged corn silage can well be used for fattening cattle, for wintering feeder cattle, or even for brood cows.

Hail-damaged corn should substitute nicely in rations similar to those above. If damage is so severe that plants will no longer grow nor set ears it should be harvested as soon as moisture content is reduced to 65-70 percent. If the moisture is much higher than that, fermentation may be poor and the silage may be sour.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 6, 1963

To all counties
Immediate release

INSECTS PRESENT
FEW SERIOUS CASES
IN MINNESOTA CROPS

The 1963 crop year so far is getting by without any unusually severe insect damage, according to John Lofgren, extension entomologist at the University of Minnesota.

Grasshoppers and first brood corn borers are severe in some local areas, but their numbers vary widely. Corn leaf aphids are extremely abundant in some areas but aren't likely to cause much damage.

Following is a closer look at individual insects:

Corn rootworm: Larvae hatched early and finished feeding quite early in southern counties. Corn which suffered root injury is now producing healthy new root systems. Storms caused much lodging, even in uninfested corn. A few cases of failure to control rootworms with aldrin or heptachlor have been reported.

Corn leaf aphid: These insects are extremely abundant, showing up on tassels of corn in southern and western counties. But damage is not expected to be severe, although there may be some barren stalks. There is no practical control of these insects.

European Corn borer: First brood infestations were severe in some individual fields, especially in western and southwestern counties. Numbers of second brood borers, starting in mid-August, may be heavy, especially in later fields. Second brood borers may cause dropped ears. Spraying is economically feasible for the second brood when there are 100 egg masses per 100 plants.

Grasshoppers: Infestations are very local. Quite heavy numbers have been seen in some fields in central Minnesota. Most of the damage is marginal, such as when grasshoppers move into corn or soybeans from hay fields after cutting. Field margins and roadsides should be watched and sprayed to prevent such movement.

add 1 - insects present in Minnesota crops

Armyworm: There is no widespread problem. Some very isolated fields have been infested. Small grain is mostly past the stage of damage. Armyworm damage could still show up in lodged grass, forage, or in corn.

Flies: Warm wet weather in many counties has caused heavy infestations of house, stable, horn and face flies. Horn and face flies can be controlled only by treating the infested cattle. Stable flies and house flies may be controlled by using space sprays and residual sprays in barn and other buildings. A number of new cords, strips and strands treated with insecticides are available to aid in house fly control, as in barns.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 6, 1963

Immediate release

L. C. SNYDER GETS NATIONAL HORTICULTURAL AWARD

Leon C. Snyder, head of the Department of Horticultural Science at the University of Minnesota, has received the Gold Medal award of the Men's Garden Clubs of America.

The medal, awarded for outstanding achievement in horticulture, is the highest award of the organization, which comprises more than 10,000 affiliated members. The medal is awarded no more than once a year.

The award was presented to Snyder this week by William H. Hull, 6104 Oaklawn Ave., Edina, newly elected president of the Men's Garden Clubs of America. Announcement of the honor had been made earlier in Rockford, Ill., at the recently held national convention of the group, which Snyder was unable to attend.

In awarding the medal, the Men's Garden Clubs of America cited Snyder for his "personal horticultural achievements, his effect on countless youth who in turn will further influence horticulture, the effect he as an individual has had on horticulture in Minnesota, particularly in the field of ornamental shrubbery, and his leadership in establishing the Minnesota State Arboretum."

A member of the University of Minnesota staff since 1945, Snyder was promoted to head of the horticulture department and superintendent of the University Fruit Breeding Farm in 1953. In 1958 he assumed the added responsibility of director of the University of Minnesota Landscape Arboretum.

Before coming to Minnesota, he taught at South Dakota State College and the University of Wyoming. He holds a doctor of philosophy degree from the University of Washington.

He is the author and co-author of many University bulletins on horticulture.

He holds membership in the American Society for Horticultural Science; Sigma Xi, national honorary science fraternity; Gamma Sigma Delta, national honorary agricultural fraternity; and the Men's Garden Club of Minneapolis. He was named a director of the American Association of Botanical Gardens and Arboretums in 1960.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 6, 1963

Immediate release

ALFALFA DEMONSTRATIONS SHOW VALUE OF ON-FARM TRIALS

Popular as alfalfa is in Minnesota, many farmers in dry weather areas are turning to a careful analysis of their fields before staking their future on this particular forage.

To many farmers, alfalfa is queen of the forages. There's hardly a county where it won't grow--and well.

But within many counties, farmers see wide differences in how well this luscious legume prospers. Testimony to this variation comes from 30 farmers in Wadena, Otter Tail and Todd counties who compared half-acre plots of alfalfa--at two different management levels--in demonstration trials this summer.

In general, this is what happened. First-crop yields were good on most farms--many downright striking. But when dry weather hit in late June and early July, second-crop growth varied widely.

Even in dry weather, one field would have flourishing forage while another one a few miles away would be withered and worthless. In both cases, there may have been plenty of lime and fertilizer.

Why so much concern over alfalfa? If it doesn't grow, why not raise something else?

Good alfalfa tops most legumes as a producer of good feed, especially for dairy cattle. When properly harvested and stored, alfalfa can supply a good portion of the nutrients a high-producing dairy cow needs. Non-legume hay doesn't compare, either in yield or quality, to what a farmer can reap from a good alfalfa field.

What causes so much variation in alfalfa? A good deal of research is needed and much has been done in the past. University of Minnesota extension soils specialist Curtis Overdahl says the demonstrations in Wadena, Otter Tail and Todd counties suggest these two problems:

(more)

add 1 -- alfalfa demonstrations

1) On extremely sandy soils, water is the number one limiting factor. "Summer kill" in a drouth area may be as severe as "winter kill" in damage to alfalfa. Some sandy fields in Wadena County produced as much as two tons of alfalfa hay during the first cutting. But in the dry weather of late June and early July, alfalfa plants in such fields refused to grow and many even died because of lack of moisture.

2) In many soils, there seems to be a hard soil layer between 3 and 5 feet beneath the soil surface. This layer, high in clay content, apparently blocks movement of water and free growth of roots. Again, the trouble is worse in dry weather; alfalfa needs to send its roots deep to come through a drouth.

A few farms in the same counties--Todd, Wadena and East Otter Tail--had good alfalfa yields in spite of the drouth. The soils on these farms too, appeared to have the hard layer, but farther down--a good five feet--and may have interfered less with water movement and root growth.

There were more than 30 farms in the demonstrations, working in cooperation with Miles Rowe, Wadena county agent, Sherman Mandt, East Otter Tail agent and Richard Brand, agent in Todd County. Extension soils specialists from the University helped set up the demonstrations. Local fertilizer and lime dealers assisted in selecting cooperators and furnishing plant food materials.

Each farmer compared a plot receiving complete fertilizer treatment according to soil test prescriptions with another untreated plot. Any farmer can try this plan if he wants to try alfalfa on a limited scale before putting in large acreages. As did these farmers, the specialists say, others on acid sandy loams should apply about 4 tons of lime, 300 pounds 0-0-60 fertilizer worked into the soil at seeding time and some gypsum if the soil is sulfur-deficient.

Then, the field needs a topdressing of 0-12-36B or similar fertilizer either every spring or every two years. Compare a plot treated this way with one getting no treatment at all.

(more)

add 2 -- alfalfa demonstrations

Such treatment was what most farmers in the demonstrations used. John Fischer in Wadena County harvested 2.2 tons alfalfa per acre from the first cutting on the treated plot, compared to less than a ton on the untreated one. Dave Huttunen and Carl Knutson in the same county and Elvin Arvidson in East Otter Tail County had similar results.

Much evidence from the results pointed to a need for heavy potash rates, but fertility clearly wasn't the whole story--especially when dry weather came along.

The problems with the hard soil layer are now being investigated by research men in the University's soil science department and members of the Soil Conservation Service. But until more information is available on alfalfa potential on different kinds of soil-subsoil combinations, the specialists and agents urge more farmers to try the half-acre comparison plots. This approach is much cheaper than it might be to invest several hundred dollars in an alfalfa fertility program if it develops, under adverse weather, that the land isn't suited to that crop.

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63-234-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 8, 1963

Immediate release

WHAT TO DO IF YOUR FREEZER STOPS RUNNING

If your freezer stops running because power lines are damaged in an electrical storm, there are steps you can take to keep food from spoiling.

But if you come back from your vacation and find you have accidentally pulled out the plug or turned all electricity off, there's not much to do except discard the contents--unless ice crystals are still present in the food.

Meats and poultry become unsafe to eat when they start to spoil. So Mrs. Shirley T. Munson, in charge of the University of Minnesota food processing laboratory, urges householders to examine each package of thawed meat carefully. If the food still contains some ice crystals, it is safe to refreeze it, though the quality may suffer. But it is often wiser to cook food that is completely thawed than to refreeze it. Be sure to cook it thoroughly, however, Mrs. Munson cautions. If the odor of thawed food is poor or questionable, get rid of it. It will probably be unsafe to eat.

When fruits start to spoil, they usually ferment. A little fermentation will not make fruits dangerous to eat, but it may spoil their flavor. If thawed fruits taste and smell good, you can refreeze them or use them for making jams or preserves.

Mrs. Munson cautions against refreezing vegetables, shellfish and cooked foods that have thawed completely, since it is difficult to tell by the odor whether they have spoiled. Usually it is safe to refreeze these foods immediately if ice crystals are still present.

If your freezer is full of partially thawed foods, to get a quick refreeze it is best to take the food to a commercial locker plant. To refreeze food in your own freezer, rearrange the food to get the warmer packages against the refrigerated surface if possible, and pile packages so the air can circulate around them.

(more)

add 1 -- if freezer stops running

If your freezer stops running because the electricity has gone off in your area, you can take one of a number of different steps to keep food from spoiling: keep the freezer door closed; move the food to a locker plant; or add dry ice.

Food in a chest-type freezer that is full won't thaw for two days when the power is off, Mrs. Munson says. In a freezer half full, food should keep well for one day. Food in an upright freezer will thaw more quickly. If the electricity comes on in a matter of hours, your frozen food is safe. However, don't open the freezer door unnecessarily, because by doing so you will let warm air in and raise the inside temperature.

In case the power should be off for more than one or two days, dry ice can come to your rescue. The dry ice is most effective if you saw one 50-pound chunk into smaller pieces and set these on cardboard on top of the frozen food packages. Wear gloves to keep the ice from touching your skin while you are handling it.

In case you arrange with a local freezer plant to transfer frozen food there in an emergency, put crumpled newspapers around the frozen food packages and pack them in cardboard boxes.

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63-235-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 8, 1963

Immediate release

FILLERS FOR YOUR WOMEN'S PAGES

When you pour off the liquid from canned vegetables, you're losing about a third of the minerals and vitamins.

* * *

Spice up applesauce with some cinnamon or cloves and serve it with the meat course. Or make it into a dessert by adding cherries or crushed pineapple and topping with whipped cream.

* * *

Nearly 74 percent of the farms in the United States have telephone service and 90 percent of these phones are modern dial phones, reports the Rural Electrification Administration.

* * *

The entire West Coast is estimated to have 11 percent fewer Bartlett pears than produced last year by California alone.

* * *

The National School Lunch program serves one out of every three children in United States schools.

* * *

About 5 tablespoons of peanut butter will provide a third of a day's protein needs.

* * *

Canned tuna is available in three different styles: fancy or solid pack, chunk style, flake and grated style, which indicate the size of the pieces in the can.

* * *

Six out of 10 girls and four out of 10 boys have poor diets. Research on teenage diets shows that the older the child, the poorer the diet. Nutrients most often lacking in teenage diets are vitamin C, the B vitamins and calcium.

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63-236-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, 55101 -- tel. 647-3205
August 8, 1963

Immediate release

GOOD BUYS IN CHICKEN, PEACHES, CANTALOUPE

Chicken fryers, peaches and cantaloupe lead the list of values for food shoppers this week, reports Mary Ryan, extension consumer marketing specialist at the University of Minnesota.

Cut-up and whole chickens for frying, barbecuing and broiling are available at most meat counters at slightly below regular prices. Other meats being featured at some markets include beef and pork roasts.

California peaches are at their peak supply now, Miss Ryan says. This week many stores are featuring crates of peaches that may be at the best price of the season. Because of cool weather the harvest of peaches has been extended in California, with the result that Minnesotans will be able to find peaches in markets longer than expected. Consumers should remember that very few Colorado peaches will be shipped this year because a spring freeze destroyed most of the crop.

The large supply of high-quality cantaloupe keeps melons reasonably priced for desserts, salads and for breakfast eating. Cantaloupe is an excellent source of vitamin C, according to extension nutritionists at the University of Minnesota.

Fresh Minnesota vegetables in plentiful supply and reasonably priced include new potatoes, sweet corn, green beans, cabbage, cucumbers, green peppers and tomatoes.

Other good buys are canned tuna fish, peanut butter, cooking and salad oils and 25-pound sacks of flour.

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63-237-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 12, 1963

Immediate Release

3,000 4-H'ERS TO TAKE PART IN STATE FAIR

More than 3,000 4-H'ers from all parts of Minnesota will participate in a variety of ways at the Minnesota State Fair.

From August 24 through September 2 these young people will demonstrate, model clothing, display exhibits, show or judge livestock or perform in a talent festival.

All of them have won county honors which entitle them to compete for further awards at the state level, according to Leonard Harkness, state 4-H Club leader at the University of Minnesota and superintendent of 4-H Club work at the State Fair.

Beginning at 8 a.m. Saturday, Aug. 24, and continuing until 5 p.m. each day except Sundays, about 800 4-H'ers will give demonstrations on the seven platforms in the 4-H Building. Their topics include forestry, electrification, shop, dairy foods, clothing, home improvement-family living, safety, food preservation, food preparation, livestock, poultry and rabbits, crops and gardening, home yard improvement and tractor. Purple and blue ribbon winners will be announced daily.

More than 1,200 club members will exhibit livestock which will be judged on Saturday, Aug. 31, beginning at 8 a.m. in the Hippodrome. This year exhibits include: 751 dairy cattle, 150 gilts, 124 ewe lambs, 105 beef heifers, 150 pens of poultry, and 54 pens of rabbits. Sunday evening, Sept. 1, at 6:20 p.m., dairy and livestock champions will be awarded before the Grandstand. The Herdsmanship Trophy will be presented Monday morning, Sept. 2, at 11:30 a.m.

Three public dress revues with more than 200 4-H girls participating will be presented Tuesday, Wednesday and Thursday in the auditorium, 2nd floor, 4-H Building at 3 p.m. At each dress revue, a Court of Honor of five girls will be chosen. All the girls will model garments they have made.

(more)

add 1 -- 4-H'ers at state fair

Special events planned for 4-H'ers attending the State Fair include a noon luncheon Tuesday, Aug. 27, at the Lowry Hotel, St. Paul, for present and former club members who have received the 4-H Key Award for leadership and outstanding service. Another special event for all 4-H members is an International Assembly Thursday, Aug. 29. 4-H membership will be conferred on International Farm Youth Exchange (IFYE) delegates from Jamaica, Italy, Sweden, Greece, Poland and Thailand in a ceremony in the 4-H Building.

Wednesday evening, Aug. 28, the Share the Fun Festival in the 4-H auditorium will feature a variety of entertainment acts by 4-H members selected from auditions throughout the state. This talent show begins at 8 p.m. and is open to the public free of charge.

Not all the 4-H'ers entering exhibits in State Fair competition will actually attend the event, however. The 4-H young people who have the 1,200 exhibits on display in the 4-H Building throughout the 10-day period are not required to attend the Fair. The home economics displays feature clothing, food preservation, home improvement-family living. Other exhibits include electric, shop, agronomy, entomology, potatoes and gardening.

Various phases of the 4-H program will be portrayed by the 80 county booths on the first floor of the 4-H Building. Judging of these booths begins at 9 a.m. Saturday, Aug. 24. Theme of the central display in the 4-H Building is "Extending the 4-H Club Program," emphasizing 4-H around the world, the 4-H Peace Corps, the International Farm Youth Exchange program, the rural and urban aspects of 4-H, new 4-H projects and the scientific aspects of 4-H projects.

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63-238-kmr

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205

Immediate release

FACT SHEET ON 4-H AT THE STATE FAIR--1963

HOW MANY: More than 3,000 4-H boys and girls will attend the State Fair to exhibit live-stock, give demonstrations or participate in the dress revue, Share the Fun Festival, or livestock and dairy judging contests.

WHERE WILL THEY LIVE: They will eat and sleep in the 4-H Club Building on the fair grounds. Since demonstration schedules are set up for counties in three different sections, demonstrators will come and go according to the time of their demonstrations. Dormitories accommodate up to 1,500 4-H'ers at one time.

DEMONSTRATIONS: About 800 demonstrators will perform on seven platforms in the 4-H Building, beginning at 8 a. m., Saturday, Aug. 24, and continuing until 5 p. m. each day except Sundays. These will include demonstrations in forestry, electrification, shop, bread making, dairy foods, clothing, home improvement-family living, safety, health, conservation, entomology, gardening, soil conservation, food preservation, food preparation, livestock, poultry and rabbits, crops and gardening, home yard improvement, tractor. On Labor Day livestock demonstrations will be given in the sheep barn and demonstrations from other classes will continue in the 4-H Building. Purple and blue ribbon winners will be announced daily.

LIVESTOCK EXHIBITS: This year more than 1,200 club members will exhibit livestock, which will be received beginning Friday, Aug. 30, after 7 a. m. in the 4-H livestock barn. All exhibits must be in place by 2 p. m. Livestock will be judged on Saturday, Aug. 31, beginning at 8 a. m. in the Hippodrome. Livestock includes: 751 dairy cattle, 150 gilts, 124 ewe lambs, 105 beef heifers, 150 pens of poultry and 54 pens of rabbits.

BOOTH: 80 booths portraying 4-H activities in as many different counties will be on display in the 4-H Building. Booths will be judged Saturday, Aug. 24, beginning at 9 a. m.

EXHIBITS: Over 1,200 exhibits will be on display in the 4-H Building throughout the 10-day period. Exhibits and the anticipated number of entries are: 85 food preparation, 250 home improvement-family living, 115 clothing, 60 electric, 140 shop, 110 agronomy, 85 entomology, 115 potatoes and 275 garden.

DRESS REVUE: Three public dress revues featuring more than 200 girls will be presented Tuesday, Wednesday, and Thursday in the auditorium, 2nd floor, 4-H Building at 3 p. m. A Court of Honor will be chosen at each dress revue.

DAY BY DAY ACTIVITIES

Saturday, Aug. 24	
8:00 a. m. -5:00 p. m.	4-H demonstrations, 4-H Building
9:00 a. m.	Booth and exhibit judging, 4-H Building
Sunday, Aug. 25	
12:00 noon	Reunion of former National 4-H Conference delegates, 4-H Building
7:00 p. m.	Songfest, 4-H Building
Monday, Aug. 26	
8:00 a. m. -5:00 p. m.	4-H demonstrations
7:30 p. m.	Assembly--recreation, 4-H Building

- more -

Tuesday, Aug. 27

8:00 a. m. -5:00 p. m. 4-H demonstrations
12:00 noon Key award luncheon to be attended by about 500 club members who have received 4-H key awards for leadership and outstanding service--Lowry Hotel, St. Paul
3:00 p. m. Dress revue, Group I, auditorium, 2nd floor, 4-H Building. A Court of Honor (5 girls) will be selected. Two other Courts of Honor will be selected during the week. First Court of Honor available for pictures at 4 p. m.

Wednesday, Aug. 28

8:00 a. m. -5:00 p. m. 4-H demonstrations
3:00 p. m. Dress revue. Court of Honor (5 girls) available for pictures at 4 p. m., auditorium, 2nd floor, 4-H Building
8:00 p. m. 4-H Share the Fun Festival, auditorium, 2nd floor, 4-H Building

Thursday, Aug. 29

8:00 a. m. -5:00 p. m. 4-H demonstrations
8:00 a. m. Dairy and livestock judging contest, Hippodrome
3:00 p. m. Dress revue. Court of Honor (5 girls) available for pictures at 4 p. m., auditorium, 2nd floor, 4-H Building.
7:30 p. m. International Assembly. Six International Farm Youth Exchange (IFYE) delegates from Jamaica, Italy, Thailand, Greece, Sweden and Poland, will be made members of the 4-H Club at a special ceremony in the auditorium, 2nd floor, 4-H Building. All of them have been living on Minnesota farms for a number of weeks. They will be available for pictures and interviews if you make advance requests.

Friday, Aug. 30

8:00 a. m. -5:00 p. m. 4-H demonstrations
8:00 p. m. Recreation, 4-H Building
10:15 p. m. Livestock assembly, 4-H Building

Saturday, Aug. 31

8:00 a. m. -5:00 p. m. 4-H demonstrations
8:00 a. m. Livestock judging, Hippodrome

Sunday, Sept. 1

6:20 p. m. Livestock awards in front of grandstand and grandstand program

Monday, Sept. 2

8:00 a. m. -5:00 p. m. 4-H demonstrations
11:30 a. m. Assembly, Sheep Barn. Presentation of Herdsmanship Trophy

For FURTHER INFORMATION for press, radio, TV --

BEFORE the fair: Call Department of Information and Agricultural Journalism, Institute of Agriculture, University of Minnesota, St. Paul 55101 tel. 647-3205

DURING the fair: Call 4-H PRESS OFFICE, 4-H Building, State Fair Grounds, MI5-2782, Ext. 85.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 13, 1963

To all counties
Immediate release

FEEDER CATTLE
CROP LARGEST
SINCE 1955

The feeder cattle outlook for this fall points to prices ranging \$2 to \$3 below last year's levels.

This expectation is based on these facts:

- 1) The largest calf crop since 1955 is in prospect for 1963. It will be 2 percent above 1962, resulting from a 3 percent increase in cows and heifers 2 years and older as of Jan. 1, 1963.
- 2) Steer and heifer supplies will be up about 5 percent from the previous year. About a half million more steers will be available for feedlots the last half of this year, compared with 1962. Heifer supplies are also likely to exceed 1962 levels, but the amount of the increase will depend somewhat on trends in herd replacement.
- 3) Steer feeders in the Corn Belt had unusually low returns last year, leaving both feeders and creditors with dampened enthusiasm. And the outlook for returns in the coming year also suggests a need for caution.

These views are from Kenneth Egertson and Paul Hasbargen, extension marketing economists at the University of Minnesota. He says the increase in the calf crop may be entirely offset by larger holdings of heifer calves for replacements. Such a limitation on calf availability would strengthen feeder prices.

However, the larger supply of older beef animals will weaken prices. Also, ranges in western areas are in poorer condition than in 1962, leaving present cattle holders in a somewhat weakened bargaining position.

Last year, fat cattle prices in fall months buoyed up feeder prices; this year, the slaughter market price level will have less influence on feeder cattle.

add 1 - feeder cattle

Feed supplies will be up somewhat from 1962 levels, although a sharp rise is being prevented because of a higher number of participants in the feed grain program. Wheat pastures would need good rains in August and September if they were to support the number of cattle they took on last fall.

Summing up, Egertson says, the feeder cattle outlook is for increased supply in face of more cautious demand. The result is likely to be lower feeder prices than last year. Current trends bear this prediction out. Limited contracting now is for steer calves at \$28 to \$30 per hundred pounds and steers at \$24 to \$26 per hundred. Such prices are expected to hold through fall, and possibly go lower during the heavier runs in September and October.

These levels compare with \$32 for calves and \$29 for steers at this time in 1962.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 13, 1963

To all counties
ATT: Home Agents
Immediate release

PLAN CAREFULLY
WHEN BUYING
SCHOOL CLOTHES

Advance planning before shopping is one of the keys to wise spending for children's school clothes.

Such planning is most effective when the mother does some planning first, then brings the children into both the planning and the shopping, says Athelene Scheid, extension clothing specialist at the University of Minnesota.

In wardrobe planning, consider the needs of the children for the whole year ahead. Begin by taking inventory of what the children have, Miss Scheid suggests. Look over their summer clothes first and decide which of these clothes can be worn to school during warm weather this fall. By next summer these clothes may be too small.

Next, get fall and winter clothes out of storage to find out which clothes still fit the children and which ones, outgrown by the older youngsters, can be worn by younger brothers or sisters. Now you are ready to list the new clothes that will be needed. If winter coats or warm jackets are needed, they should head the list.

After taking inventory, do some planning with the children. Often by giving children certain items of clothing they want, the number of other desires decrease. Moreover, children get far more satisfaction out of the clothes they wear when they can help make the decisions.

For that reason, it's also well to take the children shopping for clothes that must be tried on to get the proper fit, such as shoes, coats, dresses or slacks. Many children have definite color preferences that can be indulged. Mothers might make a preliminary selection of a number of styles and colors from which a child can choose what appeals to him most.

But mothers also need to do some shopping alone -- when they can take time to read labels on care, to examine construction details and to buy the items of clothing that children do not need to try on at the store.

Spending the family clothing dollar wisely thus means careful planning and shopping, but it also means sales resistance to some of the cute "extras" available in children's clothing.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 13, 1963

To all counties

4-H NEWS

Immediate release

COUNTY GIRLS TO
PARTICIPATE IN
STATE DRESS REVUE

County 4-H girls will join 200 other county dress
(no.) _____ (name)

revue winners to model clothes they have made themselves for the dress revue at the Minnesota State Fair.

(Include paragraph containing names, addresses and garments to be modeled.)

Theme of the dress revue is "All Aboard--4-H World of Fashion." The girls are divided into three groups for the dress revues to be held Tuesday, Aug. 27; Wednesday, Aug. 28; and Thursday, Aug. 29 at 3 p.m. in the auditorium, 2nd floor, 4-H Building. The dress revues are open to the public.

The day before each dress revue, the girls meet with University of Minnesota home economics specialists and 4-H staff members, at which time they receive pointers and are given a chance to discuss clothing and appearance in relation to accessories, construction, fit, posture and poise. Keeping these areas in mind, the girls themselves then choose the five members of the Court of Honor which is announced daily.

Each girl participating in the dress revue is also invited to a tea at Dayton's followed by a tour of the decorator rooms and the Oval Room where the buyer will tell them about fashions and designers. The morning before each dress revue a professional model from Dayton's will give the girls modeling tips in preparation for the dress revue.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 13, 1963

To all counties

Immediate release

INSECTICIDES,
SAFETY ARE
OF CONCERN

The increasing popularity of insecticides in our nation's agricultural and food businesses has caused growing concern over the safe and proper uses of them.

L. K. Cutkomp, University of Minnesota extension entomologist, points out that the President's Scientific Advisory Committee on Insecticides has recommended certain restrictions on the use of DDT, Dieldrin, Chlordane, Aldrin, Heptachlor and other pesticides.

In addition, the Committee has recommended certain studies in the insecticide field:

- 1) The development of selectively toxic materials which would kill only certain insects.
- 2) The development of non-persistent materials which would last for a limited time and have to be replaced.
- 3) Further studies of non-chemical methods of controlling insects. For instance, the use of other insects to control undesirable species.

Cutkomp adds that the U. S. Department of Agriculture and Department of Health, Education and Welfare determine the safety of the insecticides. And, the Food and Drug Administration determines the maximum doses of these chemicals which are safe around food for human consumption.

He emphasizes the importance of the label as a safety feature on chemical containers. The red skull and cross-bones on a label indicate the high toxicity of a chemical, for instance.

A proper label has six important pieces of information: 1) Brand name, 2) listing of active ingredients, 3) net contents, 4) directions for use, 5) safety precautions and 6) the manufacturer's name and address.

add 1 - insecticides, safety

New pests are hampering agricultural crops every year. For example, entomologists have found a live Japanese beetle in Minnesota this summer. If the beetle becomes a serious threat, chemical or other means of control will have to be used.

Potato yields have increased markedly since DDT has proved highly effective as a control for leafhoppers, Colorado potato beetles, flea beetles and other harmful insects. Alfalfa seed production has become much more efficient since the advent of DDT. And cabbage is very difficult to grow without insecticides.

There have been certain safety problems involved in the insecticide application methods now in use. Airplanes are used for field crops and forested areas. And mist blowers are most popular for the treatment of orchards. Under certain circumstances, chemicals may drift when sprayed by these methods and can be dangerous to humans and wildlife in the vicinity of the treated area.

The drift problem can be reduced by several spraying methods. An example is the use of high-clearance equipment to spray corn directly in the ear zone at the onset of the second generation of corn borers.

Some insects can be controlled by applying chemicals directly to the soil, thus eliminating the drift problem completely.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 13, 1963

To all counties
Immediate release

IN BRIEF.....

A new type of fly killer is on the market for use in farm buildings, says John Lofgren, University of Minnesota extension entomologist. It's a DDVP resin strand. Vapors released by the strand will kill the flies before they even come in contact with it. If a strand is applied at a rate of 30 lineal feet per 100 square feet of enclosed area, it will usually last an entire season.

* * * *

Feed containing organic arsenicals must not be used 5 days before animals are to be slaughtered. This precaution is to permit elimination of the drug from edible tissues of the animals. Feed of this sort can be identified by the compulsory tag warning the feeder to "Discontinue use 5 days before slaughter to permit elimination of drug from edible tissues." The feeder should have non-medicated feed on hand for use the last 5 days before shipping the animals.

* * * *

"If you really care about your elm trees, better get rid of dead and dying elms and elm wood piles," says D. W. French, University of Minnesota plant pathologist. The disease is caused by fungus which is spread by the European and native elm bark beetles. French says control measures must be used before the disease arrives. If not, the disease will spread too fast to be controlled. University of Minnesota Extension Folder 211 gives information on the identification, causes and control of Dutch elm disease.

* * * *

A 200 percent expansion in the nation's soybean production between 1946 and 1960 is a major reason for that crop's fifth place rank among all cash crops. In 1946, soybeans provided 1.9 percent of all farmer's cash receipts as contrasted to a 3.2 percent share in 1960. The need for fats and oils during WW II sparked the sharp increase in soybean demand and production during the 1946-60 period. 1961 data shows the crop has replaced tobacco as the fourth place cash income crop.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 13, 1963

To all counties
Immediate release

BEEF SUPPLIES UP,
PRICES MAY WEAKEN

Prices paid to beef producers for slaughter cattle may weaken somewhat in September, but no sharp drop is in sight.

According to Kenneth Egertson and Hal Routhe, extension economists at the University of Minnesota, the average fed cattle price for the July-September period should run around \$25.50 to \$26 per hundred pounds.

As is always necessary in analyzing the beef price situation, Egertson's projections take into account the livestock market trends of recent months, supplies of beef and other meat, consumer incomes and buying trends.

Between mid-June and late July, slaughter cattle prices moved up sharply, by about \$3 per hundred pounds. The estimated July-August average price is \$26, or slightly less than \$1 below the same period for 1962.

Fed cattle supplies are above 1962 levels, by an estimated 5 to 8 percent for the July-September period. In addition, Egertson says, supplies of grass-fed cattle may be higher than a year earlier, putting increased pressure on cattle prices.

Beef demand, however, should remain strong through the end of September. Consumer incomes are expected to stay high through this period, and competition from pork will remain weak, because of expected strong prices for pork.

However, beef slaughter prices will weaken some as slaughter supplies show a seasonal rise in September.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 15, 1963

Immediate release

COURSE IN SUCCESSFUL FARM OPERATION TO BE AT WEST CENTRAL STATION

A special 40-day course in Principles for Successful Farm Operation is scheduled for this coming winter at the University of Minnesota's West Central School of Agriculture at Morris, Minn.

The course will be held Jan. 6-28 and is intended for high school graduates who are farming or are interested in farming or related agricultural careers. The course is sponsored by the West Central School and is offered through the Department of Agricultural Short Courses.

The instruction, according to Ralph Smith, superintendent of the West Central School and Experiment Station, is designed to provide information about the integral parts of a farm unit and principles of successful farm operation.

Topics will include crops, soils, horticulture, livestock production and breeding, farm records, and machinery and equipment. Each phase will be studied individually and as part of a pattern for a successful farm unit.

Persons successfully completing the course will receive certificates of accomplishment.

Instructors will be members of the research staff of the station.

The course is open to qualified persons from around Minnesota. Persons wishing for more information may contact Smith at the West Central School and Experiment Station, Morris.

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63-238-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 15, 1963

Immediate release

INSTITUTE ESTABLISHES NEW SERVICE TO SCHOOLS

The University of Minnesota Institute of Agriculture has established a program to intensify its services to secondary schools, Dean Sherwood O. Berg announced today.

This is the first program of its kind to be undertaken by an agricultural unit of a major university in this country. It will be carried on through the Institute's Agricultural Extension Service.

Deane Turner, superintendent of the University of Minnesota's Southern School and Experiment Station at Waseca since 1960, has been named education specialist to give leadership to this program.

In his new position, Turner will assist rural school leaders in gathering educational need information and in identification of problem areas relating to formal educational programs for rural people. He will lead and promote the development of teaching materials for use by high school vocational agriculture instructors, based on information available from the Institute of Agriculture.

Turner has been a staff member at the Waseca station since 1953. He was named principal of the Southern School there in 1956 and became superintendent three years ago.

Originally from Harmony, Minnesota, he received his collegiate training from the University, earning his B.S. in 1941 and his Ph.D. in agricultural education in 1958.

He taught vocational agriculture at the LeRoy, Minnesota, high school from 1941-43 and at Red Wing High School from 1946-53.

From 1951-53 Turner was vice president and then president of the Minnesota Vocational Agriculture Instructors Association and has been active in a number of other educational organizations.

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63-242-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 15, 1963

*For release at 10 a.m. *
*Tuesday, August 20 *

DON'T STORE FOOD TOO LONG IN FREEZER

A rapid turnover of food in the home freezer is necessary for both satisfaction and economy.

A freezer that's filled only once a year will not give the family as much satisfaction as a freezer that's kept nearly full the year round by frequently replacing food that has been used, Mrs. Shirley T. Munson, in charge of the University of Minnesota food processing laboratory, said today. Mrs. Munson spoke at the convention of National Institute of Locker and Freezer Provisioners at Hotel Leamington, Minneapolis.

Studies show that the higher the rate of turnover, the lower will be the cost per pound of frozen food. Moreover, a half empty freezer uses as much electricity as one that's full. A freezer that is full will hold a more constant temperature than one only partially full.

Keeping some kind of inventory of the foods in the freezer is advisable, Mrs. Munson said; otherwise many foods will be kept so long that they will lose quality.

She recommended these maximum storage periods at 0° F. for various foods: fruits and vegetables, 12-18 months; meats, 2-9 months; poultry (excluding livers), 9-12 months; eggs, butter, cheese, 6-9 months; baked foods, 2-12 months; pre-cooked foods, 3-6 months; fish and seafoods, 2-6 months.

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63-240-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 15, 1963

Immediate release

NATION'S COUNTY AGENTS TO MEET IN MINNEAPOLIS IN SEPTEMBER

The National Association of County Agricultural Agents will hold its 48th annual meeting Sept. 22-26 in the Leamington Hotel, Minneapolis.

The organization represents about 5,500 county agents from all 50 states, and some 1,000 are expected to attend the Minneapolis meeting.

Theme of the meeting is "Looking Ahead," and emphasis will be on professional improvement for extension agents. Speakers will include faculty members and administrators from several universities and representatives from industry and private organizations.

C. Meredith Wilson, president of the University of Minnesota, will address a Sept. 23 session of the meeting.

The meeting will also include a series of business meetings and election of officers of the association.

The meeting chairman is J. R. Gute, agent in Steele County, at Owatonna. Other county agent members of the meeting executive committee are Carl Ash, Polk County; George Roadfeldt, Hennepin County; Ray Palmby, Jackson County and G. J. Kunau, Goodhue County.

Several agents from each state will be named during the meetings to receive the Distinguished Service Award from the association.

The general purpose of the NACAA is to give county agents an opportunity to gather information for improvement of their programs in extension education.

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63-239-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 19, 1963

* For release at 2 p.m. *
* Tuesday, August 20 *

EGG SHELL STRENGTH UNDER STUDY OF UM RESEARCHERS

STILLWATER, Okla.--The egg shell may be one of the best natural food packages, but it's still imperfect enough to cause some continuing concern among poultry producers and researchers.

Even with up-to-date feeding and handling techniques about 8 or 9 percent of all eggs laid are cracked or broken before they are consumed. This adds up to a heavy financial loss to producers, who must accept grade C prices or less for such eggs.

A research project at the University of Minnesota, aimed at better understanding of this problem was discussed here today by F. R. Frank, R. E. Burger and M. H. Swanson, during a session of the Poultry Science Association meetings. Frank and Swanson are Minnesota poultry researchers and Burger is now at the University of California.

Previous research has shown that breaking strength of egg shells is not necessarily a matter of shell thickness. Two shells equally thick may have widely differing strengths. In general, physical characteristics of the shell have not been shown to explain the differences.

Frank, Burger and Swanson more recently studied some of the chemical characteristics of the shell. They reported today that the protein characteristics of the shell apparently aren't related to breaking strength, either. They found no difference in amino acid composition between shells of differing strengths.

An egg shell is an interlaced matrix of fibers, with the minerals, such as calcium laid down in this matrix. The matrix itself is a protein material, and it was this protein that Frank, Burger and Swanson analyzed. They separated the matrix from the rest of the shell to make the amino acid analyses.

Therefore, the final answer to the egg shell strength question hasn't been found, but the Minnesota research helps eliminate some of the possibilities.

Need for strong-shelled eggs is especially acute in Minnesota. About 70 percent of Minnesota eggs are marketed outside the state. Automation in gathering and grading has also increased the need for strong shells.

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Department of Information
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St. Paul 55101 -- Tel. 647-3205
August 19, 1963

Immediate release

VISITORS' DAY AT U FRUIT FARM

Visitors' Day at the University of Minnesota Fruit Breeding Farm near Excelsior has been scheduled for Saturday, Sept. 14, according to L. C. Snyder, head of the University's horticulture department.

Open to the public, Visitors' Day is held annually to acquaint people with the work of the 230-acre Fruit Breeding Farm, particularly in developing new varieties. Guided tours will be conducted of the experimental orchards and research plots during both morning and afternoon.

Sponsors of the event are the Minnesota State Horticultural Society and the University's department of horticulture.

The University Fruit Breeding Farm is located 5 miles southwest of Excelsior on State Highway 5.

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63-243-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101

To all counties

Immediate release

FACTS ABOUT
SILO GAS
POISONING

Silo gas poisoning, sometimes called "silo fillers' disease," is one of the more subtle hazards of the silo filling season.

The poisonous nitrogen dioxide gas is a by-product of the fermentation of forages stored in the silo. You would see it as a yellowish-orange haze when it's present in heavy concentrations. However, it isn't always visible and you may not know it's around until it strikes.

If inhaled, the gas causes a burning lung irritation and coughing. The irritation results from the formation of nitric acid when the nitrogen dioxide unites with moisture in the victim's lungs. And nausea usually accompanies these conditions.

Glenn Prickett, University of Minnesota extension safety specialist, says two silo gas poisoning cases have been reported in the state already this year.

He has this advice for silo users: During the first 7 to 10 days of storage, the forage is fermenting and generating the nitrogen dioxide gas. People and animals should be kept away from the base of the silo at this time. A snow fence will do the job. And silo doors should be kept open to provide air circulation.

Nitrogen dioxide is heavier than air and will collect around the base of the silo and on top of the silage pile.

-more-

add 1 - silo gas

In addition to the gas, there are other pointers to follow in silo filling.

- 1) Make sure that air circulation and ventilation is adequate before working in the silo.
- 2) A hard-hat and hard-toed shoes will help protect against falls and falling objects.
- 3) Be sure nobody is standing where tools or machinery could fall on them, causing injury.
- 4) Observe manufacturer's cautions and use available protective shields when working with power driven machinery.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 19, 1963

To all counties

Immediate release

In Brief.....

Pocket Gophers are again damaging field crops and tree plantations.

William Miles, University of Minnesota extension forester, says these rodents do most of their tunnel building and mound building during the spring and fall. Sure signs of pocket gopher damage are fresh mounds and dying trees. One of the most effective controls for these pests is the "burrow-building machine" with poisoned bait. For further advice on this problem, contact your county agent.

* * * *

Recommended Rye Varieties: The best three certified seed varieties are Elk, Caribou and Adams according to Robert Robinson, University of Minnesota agronomist. The Elk variety produces the highest yields in eastern and northern Minnesota where winter injury is usually no major problem. In areas like western Minnesota where winter kill frequently occurs in non-hardy varieties of rye, the Caribou or Adams variety is recommended.

* * * *

Livestock grazing and windbreaks are incompatible on the same land area. Marvin Smith, University of Minnesota extension forester, says grazing animals tend to compact the soil. The compaction interferes with root development and slows down moisture infiltration which leads to water run-off and erosion problems. In addition, grazing animals cause mechanical injury to the bark and limbs by chewing and rubbing on the trees. The final result is an ineffective windbreak.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 19, 1963

To all counties
Immediate release

PROVEN AI SIRES
ONLY 5 YEARS OLD
ARE NOW IN USE

New programs in artificial breeding are making it possible to use bulls that have proved their worth in farmers' herds by only 5 or 6 years of age.

In these "young sire" programs, breeding associations buy young bulls and give them limited service in a large number of herds. The daughters of a test bull are scattered throughout many herds and their production records serve as evaluation of their sire for use in artificial breeding.

The young sire program compares quite favorably with the program of buying and using only proven sires. A proven sire is bought at an age of about five years when he has been proved on the basis of his performance in one herd only. By the time a proved sire establishes his value for use in artificial breeding, he is 9 or 10 years old, if still alive. Therefore, dairymen can't take full advantage of his value. And if he is not of much value, he has done extensive damage in the herds where he has been used.

Charles Young, University of Minnesota dairy husbandman, says the testing of young sires by artificial breeding associations is the only sure way of developing large numbers of "AI (artificial insemination) proven sires." These sires have proven their value through offspring resulting from artificial breeding.

Testing young sires as yearlings makes it possible to evaluate them by the time they are 5 to 6 years old. Those that prove to be valuable are returned to heavy service as AI proven sires for three or more years. And they can be used with confidence since they have been successfully proven as young sires.

-more-

add 1 - proven AI sires

Advantages of Young Sire Program

The young sire program has two distinct advantages over the proven sire program:

- 1) The bulls are evaluated in time for more extensive use.
- 2) The program limits the number of services to any young bull, limiting the damage a poor bull can do to a herd.

Studies in Minnesota and in several other states have shown that the daughters of young sires used in artificial breeding have produced just as well as the daughters of bulls proven in one herd. In addition, the young sires are selected just as carefully as the proven sires. Therefore, the dairyman who uses the young sire program doesn't risk the value of his herd and, at the same time, gains information that will be valuable to him later. However, not more than 10 cows in any one herd should be bred to any young sire.

Dairymen's Objections Answered

Dairymen usually have two objections to the young sire breeding program.

First, they feel that the young sires may not be as good as naturally proven sires.

Yet records of young sire programs now in existence show that there is no substantial difference between the two types of sires.

The New York Artificial Breeding Cooperative began a young sire program in the late 1940's. They compared AI daughters in farmers' herds sired by young bulls and by natural service proven sires. Here's what they found. AI daughters of natural service proven Holstein sires averaged 427 pounds of fat while daughters of young Holstein bulls averaged 426 pounds of fat. And AI daughters of natural service proven Guernsey sires averaged 402 pounds of fat compared to an average of 424 pounds of fat for the AI daughters of young Guernsey bulls.

add 2 - proven AI sires

Clifford Wilcox, University of Minnesota extension dairyman, compared over 2,000 records which showed that the daughters of young sires averaged 12,410 pounds of milk and 446 pounds of fat, while the daughters of natural service proven sires averaged 12,170 pounds of milk and 436 pounds of fat.

The second objection is that even the best AI proven sires have a lower level of proof than do most natural service proven sires. Young says that breeding studies have established the fact that a bull with a good AI proof will improve production regardless of the level of production of the herd in which he is used.

Tips on Young Sire Program

Young also lists five major considerations in following a young sire program:

1. A program of this kind is a continuous project. To always have top AI proven sires available, you must continually help to prove new young sires.
2. You should breed about one-fifth of your cows and heifers to young sires to do your part in developing top AI proven sires for use on the other four-fifths of your herd.
3. Don't breed more than ten cows and heifers to any young sire.
4. Learn all you can about the young sires your breeding association has to offer. Insist that they use only top quality young sires in your herd.
5. If you're not currently keeping records of production, begin to do so or your program won't be effective.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 19, 1963

To all counties

ATT: Home Agents

(For use week of Aug. 26)

START WITH A GOOD
BREAKFAST TO DO
GOOD DAY'S WORK

Starting the day with a good breakfast is one of the keys to productivity and efficiency -- whatever your occupation or profession or whether you're a student or homemaker.

That's what scientists at the State University of Iowa College of Medicine found in breakfast studies they conducted over a 10-year period. They discovered that when people ate an adequate breakfast rather than merely taking a coffee break, they were generally more productive during the late morning hours, were quicker in their reactions and didn't tire as easily. Children were found to have a better attitude toward school work and were more likely to do well in their studies when they tucked away a good meal before school.

What is a good breakfast? Here's a three-point test you can use:

- . It gives you protein, vitamins and minerals needed to repair and build the body and help keep you healthy.
- . It provides fuel for body energy.
- . It tastes good.

Extension nutritionists at the University of Minnesota give some breakfast patterns you can follow, from light to hearty: fruit (citrus, preferably), cereal or bread, milk to drink, other beverage if desired; fruit, cereal or bread or both, egg, beverage; fruit, cereal or bread or both, eggs with meat, beverage.

There's no rule on how big a good breakfast should be. But nutritionists say that for most people, and particularly for children, it's sound planning to have a fourth of the day's calories at breakfast and to include a good ounce of protein such as eggs, meat or milk.

Because breakfast literally breaks a fast of 12 to 14 hours, it is the most essential meal of the day, say the nutritionists.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 19, 1963

To all counties
4-H NEWS
Immediate release

COUNTY 4-H'ERS
(no.)
IN STATE FAIR
JUDGING CONTESTS

The _____ County 4-H general livestock judging team competes in the statewide contest Thursday, August 29, in the Hippodrome on the State Fair Grounds, beginning at 8 a.m., County Agent _____ has announced.

Members of the team are: (give names, addresses, club)

Approximately 45 county teams will judge six classes of livestock at the Minnesota State Fair. Top team in the contest will earn a trip to the National 4-H Livestock Judging Contest in Chicago held during the International Livestock Exposition this fall. Second place team will represent Minnesota in the 4-H livestock judging contest at the American Royal Judging Show in Kansas City.

(Give names, addresses, clubs)

are members of _____ County 4-H dairy judging team. They will compete in the state dairy judging contest Thursday, August 29, 8 a.m. during the State Fair.

In the final part of the contest, each team member is asked to place six classes of dairy animals and to give oral reasons for two of the classes.

The winning team from the approximately 50 competing dairy teams will represent Minnesota at the national dairy judging contest at the National Dairy Cattle Congress in Waterloo, Iowa this fall.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 19, 1963

To all counties
4-H NEWS
Immediate release
(use if applicable)

4-H'ERS COMPETE
IN FIRST STATE
4-H HORSE SHOW

4-H Club members whose horsemanship has brought them blue ribbons at the _____ County Fair are eligible to compete in the State 4-H Horse Show Saturday, Sept. 7, on the Isanti County Fair Grounds at Cambridge.

Entrants must be between the ages of 11 and 21. They will exhibit in two classes: halter showmanship, in pony, pleasure or stock divisions; and saddle horsemanship, with a division for those under 14 years and a second for those who are 14 or older. Stallions one year old or older are ineligible for the competition.

Each 4-H'er may show only one animal, but if it is two years old or over, he may enter it in both classes.

A trophy will be awarded to the grand champion of each class.

Judging will begin at 10 a.m. and will be open to the public. Admission will be charged.

For further information, contact County Agent _____.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 22, 1963

Immediate release

FIRST STATE 4-H HORSE SHOW TO BE SEPT. 7

Minnesota 4-H Club members who are blue ribbon winners in county horse competition will demonstrate their knowledge and prowess at the first State 4-H Horse Show Saturday, Sept. 7.

Judging will begin at 10 a.m. on the Isanti County Fair Grounds at Cambridge, Osgood Magnuson, assistant state 4-H Club leader at the University of Minnesota, and Thomas Anderson, Cambridge, chairman of the State Horse Show, have announced.

The event is open to the public. Admission will be charged.

4-H'ers from 11 to 21 years old will exhibit in two classes: halter showmanship, in pony, pleasure or stock divisions; and saddle horsemanship, with a division for those under 14 years and a second for those 14 years or older.

A trophy will be awarded to the grand champion of each class, donated by the Arabian, Minnesota Quarter Horse, Morgan, Shetland Pony and Pony of America associations.

Since the 4-H horse project began about seven years ago, this is the first year it has been recognized as a state 4-H project. The first state horse show is being held to grant recognition to 4-H horse project members and to interest 4-H youth in good horsemanship.

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63-243-kmr

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 22, 1963

Immediate release

RUST LAB AT UM KEEPS CHECK ON WHEAT DISEASES

The Red River Valley farmer looked at his emerging wheat that spring day and felt satisfied.

Thanks to good weather and good growing practices, the crop was doing fine.

But in the next few weeks, something went wrong. Dark pustules showed up on the wheat stems. First there were a few spots, then more appeared. The fungus broke the skin of the wheat stems just under the developing heads.

Half-grown heads of wheat lost their moisture and color, stopped growing and shriveled up. Instead of a field of full, ripe wheat kernels at harvest time, the farmer had acres of pale, empty chaff.

That was in 1950, and the disease was caused by race 15B of stem rust, one of the worst of the plant diseases ever to hit this region. It meant the demise of spring wheat and durum varieties then popular. By 1953, the average yield of durum wheat had dropped to 6.2 bushels per acre, compared to more than 12 most years.

It wasn't the first such epidemic and it may not be the last. Wheat in Minnesota and the rest of the Midwest was also devastated by rust epidemics of 1916, 1935, and to a lesser extent in a few intervening years.

By 1950, however, agricultural research men were not caught without advance warning. They knew then that race 15-B existed and what it could do. And much of the credit for that awareness goes to the Cooperative Rust Laboratory on the St. Paul Campus of the University of Minnesota.

(more)

add 1 -- rust laboratory

Since 1917, this joint venture of the University and the U.S. Department of Agriculture has directed itself toward a full-scale survey and investigation of the rust problem, existing races of rust, new races of rust, and resistance of plants to rust organisms.

Such advanced warning meant that by 1950 many wheat breeders were hard at work on development of varieties resistant to race 15-B. The most successful turned out to be Canadian scientists who developed Selkirk, the most popular hard red spring wheat variety in Minnesota and North Dakota today.

An advanced warning system, such as the Cooperative Rust Laboratory provides, then, a crucial fund of information for preparation against potential rust epidemics. Briefly, this is how it works:

Plant scientists from universities, state departments of agriculture, and U.S. Department of Agriculture offices around the Mississippi Valley send rust samples to the St. Paul Campus laboratory.

The first problem is to find out what race of rust the sample represents. This identification is made by growing the organism on certain "indicator" varieties of wheat. The kind of symptoms which the wheat shows then determine the race.

So far, there is no other way to identify a race of rust. All rust spores look alike. But different races are specific to different wheat varieties and produce different kinds of symptoms.

Such rust collections flow in almost daily, providing data to help chart the development and movement of different kinds of rust organisms. With this information, the laboratory men also can detect existence of new mutations of rust. It was such information back in the 1930's that gave advance warning of a rust strain that was to wipe out Ceres wheat.

Knowing that Ceres was doomed, plant breeders at the University developed Thatcher wheat, which was then grown widely for several years.

(more)

add 2 -- rust laboratory

While the rust laboratory officially dates back to 1917, the kind of work on rust identification which led toward its establishment was started at least a decade earlier by such men as E. C. Stakman (who retired in 1953) who collected spores in a variety of ways.

Scientists had suspected before 1900 that rust spores rode on the winds. But proving it wasn't easy. Rust epidemics were known to spread from the Southwest to the Upper Midwest, but just how wasn't known. The coming airplane age helped to pin it down. One of the early projects of the rust laboratory, shortly after World War I, involved high altitude exposure of spore slides, tied to wings of airplanes. Spores were found this way at altitudes of 16,000 feet and later balloon studies by other investigators picked them up at 70,000. So there was little doubt that rust epidemics could move by high altitude winds.

In the 1920's, this laboratory produced one of the major findings in spread of rust diseases. The discovery was the final proof that new races of rust could develop through hybridization on the common barberry.

Rust was known to complete part of its life cycle on the barberry, but what hadn't been understood was that new races of rust could be produced on barberry plants. J. H. Craigie, a Canadian scientist, resolved this question in 1927. The barberry eradication drive continued, thus eliminating a source of new races of rust.

In the early years, then, the laboratory untangled the life story of wheat rust. Spores could overwinter in the South and ride the winds to Minnesota the next year. They could also overwinter on the barberry right here in Minnesota, thereby producing new spores much earlier than they could get here by wind-blown invasions. And finally, the barberry was indicted as a real villain of the piece. It could give rise to hybrids--new races that could devastate wheat varieties which had resisted previously-common races.

Since the 1930's, the laboratory has turned its major attention to rust race identification, and has been the major center of such work in the Mississippi Valley. In some years, laboratory men have identified as many as 2,000 rust spore samples.

(more)

add 3 -- rust laboratory

Since rust races can't be identified by looking at the spores, the race identification is done in the greenhouse. It takes about three weeks to put the spores on a growing wheat plant and then check the symptoms. With a small spore sample, laboratory men need to increase the spores themselves to inoculate the test plants.

The laboratory can't use just any wheat plant for these tests. If a variety resists the spores, it won't show symptoms and therefore gives no information. Over the years, the laboratory selected a dozen "indicator" varieties, among which are varieties susceptible to every rust race found to date.

With the race identification system worked out, the U. S. Department of Agriculture in recent years established a plant physiologic race survey. Rust spore collections from around the nation are sent to the laboratory for identification. The data provide new knowledge of many kinds. They tell what is in the field, and what is new in the field.

The laboratory is under the supervision of M. F. Kernkamp, head of the Department of Plant Pathology and Physiology. U. S. Department of Agriculture staff men in the lab include R. W. Romig, leader, John Rowell, William Bushnell, D. M. Stewart, B. J. Roberts, J. D. Miller, R. U. Cotter, and Miss Laura M. Hamilton.

Today, the laboratory is turning much of its attention to the fundamental genetics of the rust fungus. The research men are working closely with a laboratory at Winnipeg, trying to clarify some of the problems still remaining in the race classification system.

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63-244-pjt

Department of Information
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*For release Tues. p.m. *
*August 27 *

ARSENICAL COMPOUND CONTROLS CRABGRASS EFFECTIVELY

AMHERST, MASS.--Effective control of crabgrass, the number one pest in the home lawn, is possible for three to four years from a single application of an arsenical compound in early spring before the crabgrass germinates.

The arsenical compound also controls some other weeds.

These were among findings of special interest to home owners as well as horticulturists reported by Richard Stadtherr, University of Minnesota, at the American Society of Horticultural Science meetings sponsored by the American Institute of Biological Sciences.

In four years of tests, Stadtherr found that application of an arsenical compound at the manufacturer's recommended rate of 25 pounds per 1,000 square feet gave 95-100 percent control of crabgrass in established lawns. The application did not prevent Kentucky bluegrass and Highland bentgrass seeds from germinating and making a dense lawn. Seedlings on bare or thin spots on loamy soils typical of those in an established lawn were successful even when plantings were made just after the herbicides were applied.

Although the arsenical compound actually did reduce top growth, stands and root growth of established Kentucky bluegrass, no visual evidence of such reductions were observed at the recommended application rate of 25 pounds per 1,000 square feet. At twice this rate reductions were apparent in top growth and stands, especially during droughts. However, with ample moisture, the turf recovered and grew well. More frequent watering and nitrogen fertilizing would probably reduce the effect of the smaller root system resulting under herbicidal treatment.

An even distribution of the arsenical compound over the soil surface is necessary to assure good crabgrass control, Stadtherr cautioned. Crabgrass is prevented from developing when the germinating seedling root comes in actual contact with the arsenical compounds. When the roots did not come in contact with the arsenic, crabgrass plants grew and matured.

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Immediate release

PROPER PROCESSING IMPORTANT IN HOME CANNING

If you have canning problems, the method you use or the length of time you process the food may be at fault.

Low-acid foods such as vegetables and meat must be processed in a pressure cooker to destroy certain heat-resistant bacteria, according to Verna Mikesh, extension nutritionist at the University of Minnesota. No matter how long low-acid foods like meat or vegetables are processed in a boiling water bath, they may not keep because certain types of bacteria are destroyed only by the higher temperatures of a pressure canner.

The hot water bath method of canning, on the other hand, is recommended for fruits and tomatoes, since the latter is an acid vegetable. But in hot water bath canning as in pressure canning, it is important to follow an accurate timetable for processing, Miss Mikesh said. Reliable timetables for canning both fruits and vegetables are given in Extension Folder 100, Home Canning Fruits and Vegetables. This University publication is available from county extension offices or from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minn. 55101.

Open-kettle canning and oven canning are definitely not recommended processing methods, Miss Mikesh said. In open-kettle canning food is cooked in an ordinary kettle, then packed into hot jars and sealed without processing. When the food is transferred from kettle to jar, bacteria may get in and cause food to spoil.

As for oven canning, so many risks are involved it isn't worthwhile to take a chance on using this method of preserving, the University nutritionist says. In the first place, many people have been seriously burned and cut by flying glass from jars which explode. Then, too, heat penetration takes place so much more slowly in the oven than in steam that underprocessing may result, increasing spoilage and danger of botulism. If the temperature of the product in the jars does rise above boiling, more pressure builds up inside the jar than outside, and there's danger of the jar exploding.

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63-247-jbn

TEACH SAFE CYCLING

How old should a child be before he is permitted to ride a bicycle in traffic?

The law sets no age minimum. However, until a youngster knows, understands and obeys the rules of the road and can handle his bicycle efficiently, he is not ready to enter heavy traffic, says Glenn Frickett, extension safety specialist at the University of Minnesota.

Failure to observe traffic regulations was one of the reasons for the numerous bicycle accidents in 1962 when 541 people were injured and 12 killed in Minnesota. June this year had a record of 90 injured and 2 killed in bicycle accidents.

This fall many children will be riding to school during hours of busy traffic-- in some cases, for the first time. Strict compliance with traffic regulations will help drivers of automobiles and protect the cyclist as well, the University safety specialist points out. A bicycle rider who learns and observes traffic regulations during his cycling years will be one step on the road toward becoming a safe automobile driver.

Learning to ride a bicycle can start in the driveway at home, with practice continuing on quiet streets until the cyclist acquires skill to ride safely in traffic.

Family emphasis on safe bicycling may protect a child from injury or even save his life, Frickett said. He listed these rules for safe bicycling:

- . Ride on the right side of the road--as for automobile driving.
- . Obey all stop signs and signals--as for automobile driving.
- . Use arm signals for stopping and for turning at crossings and intersections.
- . Provide a white headlight and red tail light or reflector and a bell or horn for the bicycle.
- . Keep brakes, handle bars, sprockets, chain and tires in good repair.
- . Don't carry passengers on your bicycle.
- . Drive at speeds that will make it possible to keep the bicycle under control at all times.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 23, 1963

*For release: Monday p.m. *
*August 26 *

TEMPERATURE FLUCTUATIONS IN WINTER INJURE ARBORVITAE

AMHERST, MASS.--If the tips of branches of your arborvitae were dried out and dead this spring, don't blame Minnesota's zero and sub-zero temperatures.

In University of Minnesota experiments, rapid temperature fluctuations were found to be the principal cause of winter injury to American arborvitae, C. J. Weiser, associate professor of horticulture at the University of Minnesota, reported today at a meeting of the American Society of Horticultural Science sponsored by the American Institute of Biological Science. The Minnesota experiments on causes of winter injury to American arborvitae were conducted by Weiser and William C. White.

Winter injury is a serious problem on American arborvitae. Typically this injury involves tip killing of branches on the southwest side of the plant. Since the cause of this type of winter injury, often called winter burn, has previously not been established, the Minnesota horticulturists investigated three possible causes of injury in field, laboratory and growth chamber studies: foliage desiccation, low temperature and rapid temperature fluctuations.

Although foliage desiccation or drying has long been regarded as the primary cause of winter burn, in the Minnesota study it was found to be a result rather than the cause of winter burn.

Low temperature was also ruled out as the cause of winter injury. From late January to early March, the period when injury occurred, the foliage of American arborvitae was capable of withstanding temperatures below -125°F .

Rapid temperature fluctuations were another story. An 18°F . fall in foliage temperature can occur in nature in 60 seconds on the southwest side of an arborvitae plant when the sun moves behind an object in mid-afternoon in winter. Changes of this magnitude or less in laboratory tests caused typical winter injury.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 23, 1963

*For release Monday p.m. *
*August 26 *

HARDY AZALEAS DEVELOPED FOR MIDWEST

AMHERST, MASS.--Midwesterners may be able to enjoy the spring bloom of azaleas in their own gardens as a result of work in breeding new varieties being carried on at the University of Minnesota.

Research at the University has shown that some species and cultivars of northern origin have sufficient cold hardiness to be useful in Minnesota and other areas with a severe climate.

A. G. Johnson, associate scientist, and L. C. Snyder, head of the Department of Horticultural Science at the University of Minnesota, reported today at the meeting of the American Society of Horticultural Science that among the species tested the following have proved reliable in the Minneapolis-St. Paul area if their cultural requirements were met: *Rhododendron roseum*, *R. yedoense*, *R. polkanense*, *R. canadense*, *R. calendulaceum*.

As part of the program of breeding ornamental shrubs for Minnesota, crosses were made in 1957 between the Mollis azalea and two northeastern North American species, *Rhododendron nudiflorum* and *Rhododendron roseum*. Hybrids from the crosses, started from seed in 1958, have been outstanding for hardiness and bloom quality, the Minnesota horticulturists said. The 1962 bloom followed a cold winter with temperatures reaching -30° on March 1. Colors of the crosses are a pure deep pink in the *Rhododendron roseum* hybrid and pink to nearly white in the *Rhododendron nudiflorum*.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota, 55101
August 26, 1963

To all counties
Immediate release

County Agent: The following material is from talks given this week at the American Farm Economic Association meeting on the Minneapolis campus. Because of its general interest, we're sending it along to you for whatever local use you wish to make of it.

USDA ECONOMISTS SAY
FOOD AID PROGRAMS
HELP ECONOMIC GROWTH

Satisfying the hunger of people in underdeveloped nations is a laudable goal of food aid programs -- but not the only one.

Three economists of the U. S. Department of Agriculture say that more expansion of existing aid programs to meet dietary requirements in developing countries would fall short of the greater opportunities for such aid in years ahead.

New ways are needed, they say, to carry out enlarged programs which will erase the nutritional deficits in slow-growing areas and cope with economic deficits in rapidly-developing areas.

The economists who make these points are W. W. Cochrane, director of USDA's Agricultural Economics; A. B. Mackie and G. C. Chappell. They see the world food needs in two ways.

First, there is a nutritional deficit if the available supply of food is not up to minimum standards.

Second, there is an economic deficit when rapidly rising income increases the demand for food more rapidly than the supply of food.

And ironically, they say, once the take-off stage is passed, a country's economic food deficit tends to widen with rapid and sustained economic growth.

-more-

add 1 - USDA views of food aid

Two serious bottlenecks that must be broken to attain the necessary expansion of direct food aid are: Inadequate marketing facilities for handling and storing of increased amounts of food, and lack of qualified personnel to supervise the distribution and use of food aid.

The real needs for food aid in rapidly developing countries are two-fold: Control of inflation so that all the benefits of price stability can be captured, and increase of domestic agricultural production so that the major contributions of agriculture to general economic growth can be realized.

USDA economists point out that additional research is needed to determine: (1) most needed marketing facilities, (2) institutional and administration changes required to break existing bottlenecks to effective food distribution, (3) food products that can be used most effectively, given the developmental situation in a country, (4) desired combination of food aid and financial and technical assistance, and (4) procedures needed for financing development efforts consistent with partnership agreements.

A high level of food aid will be needed for economic development even after minimum nutritional needs are met, the economists say. But this means they conclude, that "we are nearing the end of easily formulated food aid programs based purely on hunger. We are entering a more difficult phase where food aid can contribute greatly to economic growth, or it can create serious problems, based on ill-conceived programs."

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 26, 1963

To all counties

Immediate release

First of two articles on pro-
posed changes in wheat standards

WHEAT GRADES
TO BE REVIEWED

Official U. S. wheat standards have been under review for several years, and the U. S. Department is currently proposing some changes in these standards designed to improve acceptance of American wheat on world markets.

Series of public hearings have been scheduled for this fall, one of them being set for Oct. 4 in Minneapolis. They are open to anyone interested in the wheat standards problem.

Wheat is not a major crop of Minnesota. It accounts for 3 to 5 percent of the state's total cash farm receipts; yet, it is grown on about 40,000 farms and can be found in most counties of the state. The heaviest production, of course, is in the Red River Valley.

But the recent wheat program referendum illustrated the fact that Minnesota like many other states has thousands of farmers who raise 15 acres of wheat or less as a cash crop sideline.

Every producer, large or small, has some stake in wheat quality standards, since practically all wheat grown in the U. S. is intended for human food.

The USDA points out that the purpose of standards is to constitute a measure of wheat value that can be used by the buyer and seller, whether domestic or foreign, in terms that measure end-use value.

Proponents of the revised standards say they are needed to adjust to advancements in production and handling practices and to make U. S. wheat more competitive in foreign markets.

While about seven changes are proposed, the four of most consequence to Minnesota growers are these:

- 1) Provide a maximum tolerance for total defects, to reduce the amount of unmillable material now permitted.

add 1 - wheat standards

2) Express dockage (material other than wheat which is removed readily by cleaning) by whole and half percent, instead of whole percent as at present.

3) Place wheat with more than 13.5 percent moisture in the "tough" category, since wheat with moisture exceeding this amount cannot normally be stored for long periods without going out of condition.

4) Recognize higher than normal test weights per bushel by providing for a special grade, "heavy," for all classes of wheat of grades No. 1, 2 and 3.

Other proposed changes are less applicable to Minnesota wheat, since they concern problems and kinds of wheat of other regions.

Anyone interested may attend the hearings. Or, comments may be sent to the Director, Grain Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington, D. C. 20250, before Oct. 31.

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(Next week: Importance of wheat standards in world wheat markets)

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 26, 1963

To all counties
Immediate release

IN BRIEF.....

Cattle lice and grubs can be controlled with applications of systemic insecticides before November 1. John Lofgren, University of Minnesota extension entomologist, says native cattle usually aren't grubby, but western feeders may carry grubs into the state. Co-Ral or Ruelene sprays will kill grubs and lice. They may also be used as simple "pour-on" treatments for grub control only. It's also possible to use feed mixes containing Trolene. Caution: Milk cows shouldn't be treated with Co-Ral, Ruelene or Trolene. Follow the label; adverse effects result from overdoses of the insecticides.

* * * *

Soil sampling should be done this fall for faster test results. Lowell Hanson, University of Minnesota extension soils specialist, says soil test results can be returned much faster in the fall when the Soil Testing Laboratory isn't extremely crowded with work. He adds that it's a good idea to know the fertilizer requirements of your soil soon enough to take necessary soil treatment steps before spring planting starts. Contact your county agent for more advice on soil sampling procedures.

* * * *

Electronic computers in agriculture: They may provide the individual farmer with a complete business analysis to guide him in making decisions at the end of his business year in the future, according to Charles Beer, University of Missouri agricultural economist. He told American Farm Economic Association members in Minneapolis that computers will make it possible for farm managers to receive month-to-month profit and loss statements and balance sheets in the future. L. M. Eisgruber, Purdue University agricultural economist, says although no known work has been done to explore the possibility of using computers for market forecasting in agriculture, excellent and extremely fast methods of capital investment analysis are used by industry today.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 26, 1963

*For release at noon *
*Tuesday, Aug. 27 *

ECONOMIST CITES RESEARCH NEEDS FOR RURAL RESOURCE DEVELOPMENT

MINNEAPOLIS--Research in agricultural labor economics and employment today was termed "the most shockingly underdeveloped segment" of agricultural economics research in problems of resource development in an urban world.

Philip M. Raup, University of Minnesota agricultural economist, said such research should get top priority and illustrated three problem situations. He spoke before the American Farm Economic Association annual meeting here.

The problem areas outlined by Raup were:

- 1) Minimum wages and pricing of labor to the firm.
- 2) Part-time farms and rural residential aspects related to employment and land use.
- 3) Rural employment potentials in outdoor recreation.

Raup said that with a growing trend toward vertical integration and agribusiness, the "issue of minimum wages in agriculture probably will be upon us before we have given it adequate research attention." He raised for question the principle, as sometimes stated, that a higher minimum wage for farm labor can mean greater output but lower aggregate rents. In choosing farm business combinations, he explained, an owner-operator can look upon his rewards either as labor income or returns on his land investment--that is, rent. But, especially in vertically integrated animal feeding, such as broiler production or cattle feedlots, Raup said farmers have less and less opportunity to make such a choice and the labor income question becomes critical.

Equally challenging, according to Raup, is the role of part-time farms and rural residences. "They are conventionally regarded as way-stations out of agriculture," he said, "and are relegated to the sidelines in farm policy debates." Yet, he added, in the Upper Midwest and Northeastern states part-time farmers or rural residents account for a third or more of total rural land use and the majority of the rural population.

(more)

add 1 -- Raup AFEA address

"What we often overlook," Raup said, "is that urban dominance of rural land uses is pervasive throughout the Middle West. Studies suggest that this urban demand for rural land involves over 10 percent of the total urban population.

"It is no longer valid to regard part-time farms or rural nonfarm dwellings as creations of off-farm migrants who keep one foot in agriculture as a form of unemployment insurance," said Raup. He stated that rural nonfarm residents who are making a clean break with agriculture seem likely to dominate rural land use patterns in areas that contribute a major fraction of agricultural output. Before the end of the 1960's, he predicted, full-time commercial farmers will be outnumbered two to one by rural nonfarm residents or part-time farmers.

Job-creating potentials of outdoor recreation may easily be overstated, Raup asserted. He pointed out that there are not many job opportunities in outdoor recreation for the owners of land and water. "We need to stress this limitation," he said and "shift the emphasis to qualitative aspects of employment generated by the recreation industry. What is the nature of skills required? Are they primarily technical, or managerial and entrepreneurial? Have we training programs that help qualify the manpower needed in outdoor recreation for higher skills and higher earnings?"

Raup said the question "Have we enough resources for years ahead?" isn't the right one for the social science researcher. He said the key problem in resource development is to "keep the focus squarely on the tasks of increasing human knowledge and the effectiveness with which we apply it.

"It is through education, training, research, and the social and institutional arrangements by which we mobilize them that we can operate most effectively on the resources-and people or man-and-land equation."

Even the terms "supply of resource" and "natural resources" are misleading, according to Raup. Implying a physically fixed supply is inconsistent with modern science and what is known about discovery, development and use of resources, he said. "Natural resources" is misleading because it makes an arbitrary division in a continuum of resources ranging from those least susceptible to manipulation by man to those that are almost wholly manmade.

(more)

add 2 -- Raup AFEA address

Raup stated that if resource development is at root a problem of human development, one of the most important consequences is that capital inputs become less significant in accounting for expansion of agricultural output.

For example, one national study showed that increased capital accounted for only 15 percent of the total increase in real national income from 1929 to 1957. Only 3 percent of the increase in real national income in the 1929-57 period could be accounted for by migration of labor out of agriculture and more efficient use of labor remaining in agriculture. Therefore, Raup said, waste or misuse of labor resources in agriculture cannot be as serious as alleged.

Improved use of female labor on the other hand, accounted for 4 percent of the increase in real national income, 1929-57. If these national data are reliable, Raup said, "it would have been more rewarding to be concerned about a 'woman policy' than about farm policy to the extent that wastage or misuse of human resources was concerned. Of much more importance, however, were improvements in education and training of the labor force." These improvements were three times as important as were improved use of female and agricultural labor in accounting for increases in total real national income.

The problem of comparative advantage--who should produce what--has lost much of its significance because of improvements in transportation, environmental control, and biological control, Raup said. "For affluent societies," he said, "the problem focus shifts from physical determinants of location of production to economic and cultural determinants, in terms of costs of uprooting people, destroying communities, and misusing our resources of space."

Raup noted that a characteristic feature of economics research, and also a weakness, is emphasis on productivity, as measured by improved output per man-hour. And he pointed to increases in productivity per manhour in agriculture, adding that five-eighths of this increase from 1958-62 was due to off-farm migration.

(more)

add3 -- Raup AFEA address

"Economists tend to assume implicitly that a movement of labor out of agriculture is a good thing," said Raup. "The resulting improvement in productivity per manhour is typically regarded as a net gain to the economy. Rarely is this question approached in terms of the national economy. Few attempts are made to measure the productivity of off-farm migrants in their subsequent nonfarm employment."

Raup said we maintain a dual standard in terms of a national employment policy. "We applaud men who can create new jobs in industry, or service trades," he said, but agricultural economists seem to devote their professional efforts to "devising new ways to destroy jobs in agriculture."

In conclusion, Raup said, "it begs the key question to point out that one worker in agriculture supplies the food and fiber needs for 26 persons outside agriculture. This ignores the national consequences in terms of employment, unemployment, and manpower utilization."

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63-251..pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
August 26, 1963

*For release: Tues p.m. *
*August 27 *

FARM BOYS HAVE LOW LEVEL OF VOCATIONAL ASPIRATION

LOS ANGELES--Rural high school students who are looking toward farming as their future occupation do not make use of available sources of vocational information.

As a result, they consider few occupations in the process of deciding on a vocation, are inclined to depend on biased and incomplete sources of information and consequently have poor knowledge and low levels of aspiration as far as jobs off the farm are concerned.

These are among the findings in a study conducted by Murray A. Straus, professor of sociology and home economics at the University of Minnesota, and reported today at the joint meeting of the Rural Sociological Society and the American Sociological Association.

The study was made of farmers' sons enrolled in the 11th and 12th grades in four high schools. One of the purposes of the investigation was to understand the forces underlying the low levels of non-farm occupational aspiration of farm-reared people. In the study a comparison was made of farmers' sons choosing to farm with those aspiring to white-collar or middle-class employment and those choosing blue-collar or working-class occupations.

Forty-four percent of the farmers' sons interviewed gave farming as their preferred occupation. Of those who gave non-farm occupations as their choice, more than two-thirds of the fathers and nearly a third of the mothers had done off-farm work preceding the interview, compared with less than half of the fathers and only 10 percent of the mothers in the group choosing the farm as a vocation. These figures suggest that one factor in the process leading to non-farm occupational choice is the information acquired and transmitted by the parents as a result of their participation in the non-farm occupational world, Straus said.

Boys choosing to farm came from families with greater financial resources than was the case with those deciding to cast their lot in urban employment. Hence the ability to provide financial support to help establish the son in farming is a major factor in accounting for the choice of farming as an occupation. The farm-choice boys also had fewer brothers and sisters, a fact suggesting that with fewer children the parents can better afford to help establish one of them in farming.

(more)

add 1 -- vocational aspirations

Forty percent of the parents of the boys in the study choosing to farm encouraged them to go into farming. Parents of these boys think of nonfarm work in terms of relatively low-level occupations, making farming seem more attractive. Consequently the boys choosing to farm believe higher earnings are possible for them in farming than in other occupations. The attractiveness and possibility of entering farming is further heightened by this group's perception of their parents as being willing and able to provide financial assistance in getting started in farming.

Educational aspirations of the rural boys in the study closely paralleled those of their parents, although they were somewhat higher. Almost none of the boys choosing to farm (only 2 percent) felt that their parents wanted them to attend college. But 42 percent of the parents of boys aspiring to enter white-collar occupations wanted their sons to attend college as compared to only 3 percent of the parents of boys wanting to go into blue-collar jobs. Boys desiring to farm much more often enroll in high school vocational agriculture courses than either of the other two groups. However, more of the white-collar choice group participated in 4-H Club work.

Both grade and intelligence scores show that boys choosing to farm have lower average intellectual ability than do those choosing white collar occupations but at the same time are clearly superior to those planning to enter one of the manual occupations, Straus said.

Rural boys selecting farming as their life work tend to depend on family and other local personal acquaintances for occupational information. From these sources information on the urban labor market is less adequate than that available from printed materials, school counselors and various other professional sources. Since many of the boys desiring to farm will not be able to do so, such limited knowledge concerning nonfarm occupations leads to entry into the urban labor force at the low level found to be characteristic of the farm-reared population. This inadequate knowledge may also interfere with the fulfillment of the potential of these young men in the labor force, Straus said.

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63-252-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- tel. 647-3205
August 26, 1963

* For release at noon *
* Wednesday, Aug. 28 *

POSSIBLE U. S. ACTIONS TOWARD COMMON MARKET EXPLORED AT AFEA MEETING

MINNEAPOLIS--Some of the possible U. S. actions in relation to European Common Market agricultural trade policies were explored at the American Farm Economic Association meeting this morning.

Elmer Learn, head of the University of Minnesota agricultural economics department, suggested a compromise to the Common Market plan to raise tariffs on grain and to current tariffs on poultry.

Learn suggested that the U. S. demand compensation in the form of freer trade in commodities which are economically important to the U. S., but have less political significance in Common Market nations. Such commodities include tobacco, rice and citrus fruit.

"In the event that these concessions are inadequate to offset our losses in grains and poultry," Learn said, "we would take the remaining concessions in industrial goods."

Learn recognized that such a solution is far from ideal and places a burden on U. S. agriculture to pay a higher than proportionate share of costs for the long-term--and hoped for--political and overall economic gains from European integration.

"But machinery is available," he added, "with which to compensate the agricultural community for these costs through our domestic grain programs."

Learn also mentioned two other possible reactions by the U. S. --and their limitations. "We could threaten removal of military assistance as retaliatory action by raising some of our own tariffs. But either of these actions is likely to be of as great harm to us as the Europeans, and in any case is in direct contradiction to the Atlantic Partnership idea proposed by President Kennedy."

(more)

add 1--Learn

Another approach, he said, might be to demand guaranteed sales at some negotiated level.

"This might be attainable but from the Common Market standpoint it would negate the simplicity of the variable levy as a price-supporting and supply management device. Nevertheless, it is not entirely out of the question, especially if we would offer some industrial concessions in exchange."

Learn said the U. S. -Common Market debate has highlighted a fact that, perhaps, should have been apparent long ago.

"Price and income problems for agriculture are characteristic of all developed countries. Governments have adopted a variety of programs to alleviate the consequences. Such policies are inherently in conflict with a generally expressed desire for freer world trade.

"Yet no country," Learn added, "appears willing or able to forego policies of agricultural price and income support. It would be unfortunate if we allowed animosities generated by differences in agricultural policies to rob us of the benefits of a more general free trade movement."

Learn suggested that greater effort should be made to find means to reduce the conflict between domestic policies and freer trade. For example, he said that little research has been done on how international commodity agreements might work, what their effects would be, and whether economically meaningful agreements would be politically acceptable. He urged that agricultural economists address themselves to this type of research.

Common Market agricultural policy, Learn stated, resembles in broad outline that in the U. S. "At the heart of their income protection plan is grain policy; incomes will be supported by price supports on grains. Livestock prices for the most part will be allowed to establish their own relationship to the grain prices with direct market intervention limited to operations at the border to equalize competition between domestic and foreign producers."

The major difference between Common Market and U. S. policy is that the Market intends to support prices through restricting imports. Learn outlined these effects for American agriculture.

(more)

"For a few commodities, the outlook is bright. Cotton is not considered in Common Market agricultural policies. It has duty free access and consumption will continue to grow with rising incomes. Soybeans are the other bright spot. A growing livestock industry and improved feeding practices will cause recent upward trends in European demand for high protein meal to continue, perhaps at an increasing rate." (The same is not true for soybean oil, because of pressure from European butter surpluses and Italy's olive oil industry.)

"Total wheat imports by the Common Market countries and the U. S. share of imports likely will continue their downward trend. The Common Market has a production-consumption balance in wheat for food needs. Some quality wheat will have to be imported for blending, but Canada will continue to give strong competition for this market.

"Feed grain sales are likely to be much more dependent on price levels finally decided upon. Regardless of level, the EEC plan is to make feed grains and wheat competitive in price from both the production and consumption side. Thus, the issue from the Common Market's vantage point is more one of total grain needs than is the case from our side."

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63-250-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205

Immediate release

U OF M AGRICULTURAL INSTITUTE HOSTS MINNESOTA NUTRITION CONFERENCE

The University of Minnesota will host the 1963 Minnesota Nutrition Conference for feed manufacturers and dealers on September 9 and 10.

The annual conference is sponsored by Northwest feed associations and various departments of the University's Institute of Agriculture for the purpose of summarizing the developments and status of various segments of the animal nutrition industry.

This year's two-day conference will cover feed requirements, roles of feed elements, animal nutrition, nutrition in relationship to health, and special feeding programs.

Program chairman for this year is L. E. Hanson, head of the University's Department of Animal Husbandry.

Speakers include several University of Minnesota staff members and C. R. Adams, Agricultural Division, Hoffmann-LaRoche, Inc., Nutley, New Jersey; John P. Bowland, University of Alberta, Edmonton, Alberta, Canada; H. T. Peeler, International Minerals and Chemical Corp., Skokie, Illinois; and Milton L. Scott, Cornell University, Ithaca, New York.

Registration begins at 8:00 a.m., September 9 at Peters Hall on the University's St. Paul Campus. The conference is open to all interested persons.

For further information contact Agricultural Short Courses, Institute of Agriculture, St. Paul, Minnesota 55101.

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63-254-1sr

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 26, 1963

To all counties

4-H NEWS

For use week of Sept. 1

BREAKFAST GIVES
PEP AND ENERGY
FOR THE DAY

What you eat and drink can affect the way you look and feel.

Pep and energy to keep up with the crowd, attractive skin, a good figure--these are some of the things teenagers want.

Eating a good breakfast every morning, getting the proper amount of sleep and getting enough exercise are some of the ways to reach these goals.

Yet many teenage girls and boys are notorious breakfast skippers.

Scientists at the State University of Iowa's College of Medicine have conducted research that shows that for young and old alike, a good breakfast is necessary for maximum mental and physical efficiency, especially during the late morning hours. If you get drowsy or feel fatigued by mid-morning and find it hard to concentrate, skipping or skimping on breakfast may be your trouble.

You can improve your mental alertness and all-round health by eating a good breakfast, say extension nutritionists at the University of Minnesota. Of course, you'll have to allow enough time in the morning. But by the end of the morning a good breakfast will mean more than those few extra minutes of sleep.

If you think missing breakfast is a practical way to lose weight, you're mistaken, the nutritionists say. One trouble is that the missed breakfast usually leads to in-between-meal snacking when you stack up more calories than you would get at breakfast. Remember that the bar of candy you eat to make up for breakfast may be 271 calories; a soft drink, 74; a doughnut, 135. If you've eaten a good breakfast, you'll not be hungry in the middle of the morning and won't be so tempted to snack between meals.

A good breakfast will supply many of the nutrients lacking in teenage diets --the vitamin C in fruit or juice; calcium in milk; B vitamins and iron in cereal products and eggs--all nutrients needed for strong bones, good teeth and general good health.

September, "Better Breakfast Month," is a good time to get into the habit of eating a good breakfast every morning.

-jbn-

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
August 26, 1963

To all counties
ATT: Home Agents
For use week of Sept. 1

PARENTS CAN SET
BREAKFAST PATTERN
FOR FAMILY

Parents play a vital role in establishing good breakfast eating habits among children in the family.

Mary and Johnny may learn in school what foods make up a good breakfast and why they need such a meal to start the day, but having that knowledge doesn't mean they will necessarily put it into practice at home.

That fact was brought out in a study made in a Pennsylvania town where 1,187 grade school pupils were taught over a period of five weeks which foods they need for a good breakfast and what the foods do for them. At school they saw how white rats grew--or didn't grow--when given food typical of good, fair and poor breakfasts.

At the end of the breakfast education program, 86 percent of the grade school boys and girls could select a good breakfast menu on paper. Yet only 40 percent of them had eaten a good breakfast on the day of the survey.

Why didn't the children eat as good a breakfast as they knew how to select?

From the children's answers the Pennsylvania researchers got some important clues. Whether an adult prepared breakfast for the child and was with him during the meal influenced strongly the kind of breakfast the child ate.

Over a fourth of the children in the survey got their own breakfasts--and their breakfast record was poor. The greatest number of good breakfasts was found among children whose parents regularly had a good morning meal. The children ate better breakfasts if the meal had been prepared for them or if they had helped an adult in the family prepare it. When adults supervised or ate breakfast with children, the children generally ate better than when they had breakfast alone or with other children.

Although the children could plan a good breakfast on paper, they gave such explanations as these for not eating that kind of breakfast: "No appetite," "ate what was there," "foods not there," "too little time," "had to prepare food myself."

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 2, 1963

To all counties
ATT: Home Agents
For use week of Sept. 8

MAKE BREAKFAST
BEST MEAL OF DAY

If that last wink of sleep means more to some of the family members than taking time for breakfast, perhaps it's time to wake up sluggish appetites with imaginative and different menus.

Since September is "Better Breakfast Month," start now to add sparkle to breakfast menus. Make breakfast the best meal of the day.

The same breakfast day after day can eventually become boring. But with a little imagination and some advance planning you can add variety and yet make a quick breakfast during the early morning rush.

Take advantage of convenience foods to encourage late sleepers to grab a meal before dashing to school or the office.

Verna Mikesh, extension nutritionist at the University of Minnesota, lists some foods that can be made ready to serve in a hurry:

- Canned, frozen or fresh citrus juice. Mix frozen juice the night before and store it covered in the refrigerator. For variety, combine two different juices, such as apricot and orange, or buy different juice combinations.
- A bowl of fruit in season or a wedge of cantaloupe.
- Ready-to-eat or quick-cooking cereals topped with fruit.
- Pre-cooked sausage or ham that can be heated in a few minutes.
- Instant hot beverages.
- Breads from the bakery, brown 'n' serve rolls, ready-to-eat muffins, frozen waffles that can be reheated quickly.

On Saturdays and Sundays, treat the family to a special breakfast--with French toast or pancakes, waffles or other hot breads. Packaged mixes can come to your aid in making a wide range of hot breads.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 3, 1963

To all counties
Immediate release

IMPROVING FERTILITY
IS "DIAGNOSIS" MATTER

Buy expensive medicine for a cow without first knowing the ailment?

Never! At least, not if you want to be sure of your returns.

The same thing applies with soil "health" problems. The only way to get your full measure from added plant food is to apply it by prescription -- that is, according to needs shown by soil test.

Extension soils men at the University of Minnesota say that just because a certain fertilizer works on one farm doesn't mean it will bring the same results on another. Soils vary widely in Minnesota. Like different people, they have different needs.

A good example of how adjusting a fertilizer program to the fertility level can pay off is the results on five low potassium testing fields in southeast Minnesota in 1962.

When 40 pounds of K_2O were applied on these fields, an additional \$10 worth of corn was harvested. The cost was about \$2 worth of potash. However, the yield was increased by an average value of \$4 when the same treatment was applied on medium and high testing fields.

Some fields, because of a particular low fertility situation, can be real "money makers" if soil tests are used for the diagnosis.

Fall is an ideal time to take soil samples. They're easy to get now. And by getting the samples in to the University soil testing laboratory, you'll get the results in plenty of time for fertilizer spreading, either this fall or next spring.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 3, 1963

To all counties

Immediate release
(Second of three articles
on proposed changes in
wheat grades)

PROPOSED CHANGES
IN WHEAT GRADES
LINKED TO TRADE

Proposals for changes in wheat grades have been drawn up by people who have a sharp eye on world wheat markets -- and how these markets have changed over the years.

One of a series of hearings on these grades is set for October 4 in Minneapolis. The proposed changes, briefly, have to do with maximum tolerances for total defects, more refined measures of dockage, reclassification of wheat with different moisture contents, and a special grade for wheat with higher than normal test weights.

Other changes are proposed too, but have less significance for Minnesota.

Why are wheat grades so important -- and why do they need review?

Harold Pederson, extension marketing specialist at the University of Minnesota, explains that the proposed changes are considered to help improve the competitive position of U. S. wheat in foreign markets.

Wheat is an international commodity. And in dollar value, it's our leading farm export. In the past three years, half of the U. S. wheat output has gone abroad.

How are we faring in wheat competition with other countries? The U. S. share of world wheat trade ranged from 29 to 43 percent between 1954 and 1962. In total amount of exports, U. S. foreign wheat sales hit a record 718 million in 1961 and dropped to about 630 million last year.

About seven bushels in ten of our wheat exports move through special programs, such as Food for Peace -- the rest going through commercial channels for dollars.

add 1 - wheat markets

That decline in total exports from 1961 to 1962 was largely in dollar exports, so little wonder that commercial exporters became interested in a new look at wheat standards.

Pederson says that in the last 10 years, the world wheat market has changed more from a seller's to a buyer's market. Wheat was wanted badly right after World War II. Buyers weren't fussy about quality. They paid less attention to such things as protein, mixing strength and cleanout.

The picture began to change about 1954. Wheat production increased in deficit areas. France and Italy began to produce more than enough to meet domestic requirements. The economies of Japan and Germany recovered rapidly and they became our second and third largest dollar markets. Both were now in position to buy the types and quality wheat they wanted.

Japan's annual per capita consumption of wheat in the 1950's became three times the prewar figure. Although actual per capita consumption has changed little since then, the demand has shifted from soft wheat for noodles to quality hard wheat for bread. Japanese imports of hard wheats have increased sharply year after year.

Since 1957, Japan has been the most important dollar market for U. S. wheat. But our share of the market has fallen from 68 percent in 1954 to 40 percent in 1962. During this same period, cash sales of Canadian hard wheat to Japan have risen by 30-40 million bushels.

This shift in the Japanese market took place mainly because Canada was able to deliver a consistently high-quality product from the West Coast. High quality U. S. wheat has either been used by domestic mills or too far from the West Coast to be competitive.

Can we regain a bigger share of the Japanese dollar market? Next week we'll discuss this and other competitive aspects of the present world market.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 3, 1963

To all counties

Immediate release

SUMMARY OF ALL PURPLE
RIBBON WINNERS IN 4-H
DEMONSTRATIONS AT STATE
FAIR (except livestock)

PURPLE RIBBON DEMONSTRATORS
AT MINNESOTA STATE FAIR

More than 50 4-H'ers among approximately 800 club members who vied for honors in 4-H demonstrations at the 1963 Minnesota State Fair received purple ribbons, indicating top ratings.

All demonstrators had previously received top placings in their counties.

The demonstrators gave "how to do it" information in agriculture and home-making on seven different platforms in the 4-H building during the fair.

In three different dress revues 19 girls were selected to three courts of honor from more than 200 girls who modeled clothing they had made. A Court of Honor was chosen from each revue.

Winning purple ribbons for excellence of demonstrations were:

HOME ECONOMICS DEMONSTRATIONS

Clothing - Patsy Berglund, 17, Scandia; Mary Ann Frederickson, 16, and Sandra Falk, 16, Murdock; Sally Mortenson, 15, Taopi.

Foods - Christine Larson, 16, and Susan Swanson, 16, Hopkins; Beverly Anderson, 13, Hoffman; Susan Scroggin, 15, Alpha; Sandra Hebel, 16, Kilkenny; Judy Seppanen, 16, Alexandria; Judy Halvorson, 17, Red Wing; Bonnie Erdman, 12, and Linda Holsapple, 13, Wykoff; Judy Ranbow, 18, Raymond; Claudia Schneiderman, 17, Elmer; Jean Freeberg, 17, Willmar; Caroline Damhof, 17, Blomkest; Diane Zager, 15, Sauk Centre; Marlene Pinzka, 17, Sleepy Eye; Ruth Ann Rolf, 15 and Sandra Ettel, 18, Glencoe; Kathy Haugrud, 17, Pelican Rapids.

Home improvement-family living - Virginia Gehrman, 15, 12720 Wayzata Blvd., Minneapolis.

Dress revue: 1st courts of honor - Cathy Christensen, 17, Hancock; Diane Engberg, 16, Garvin; Sandra Finney, 17, Hallock; Ruth Ann Hanson, 17, Currie; Patricia Nagel, 17, Glenville - 1st court of honor.

2nd court of honor - June Fredricksen, 17, Grove City; Mary Lipke, 18, Stewart; Nancy Olson, 17, Cosmos; Mary Jane Pribyl, 17, Maple Lake; Pamela Stern, 17, Sanborn; Marlene Thorston, 19, Springfield.

3rd court of honor - Shirley Sundberg, 18, Fergus Falls; Patsy Berglund, 17, Scandia; Linda Prail, 19, Benson; Jean Tobolt, 16, Moorhead; Bonita Hoffman, 18, Stephen; Cathy Rauk, 16, Pipestone; Gloria Lundgren, 17, Milan; Janice Lee, 16 Benson.

add 1 - purple ribbon demonstrators

AGRICULTURAL AND OTHER DEMONSTRATIONS

Agronomy - Barry Markl, 17, Edgerton.

Conservation - Shirley Erler, 16, West Concord.

Electric - Nile Newburn, 16, Rushmore.

Gardening - James Hennessey, 16, Rochester.

Health - Beverly Johnson, 14, and Elaine Svigel, 14, Chisholm.

Junior leadership -- Janice Reisdorf, 17, St. Charles; Lucia Holm, 18, Franklin and David Vandagriff, 15, Morton; Linda Holstein, 15, Tracy; Donald Untiedt, 18, Edgerton; Howard Untiedt, 15, Edgerton.

Photography - Charles Lentz, 17, Walnut Grove.

Safety - Robert Blaeser, 17, Mahnomem; Vicki Hill, 14, 6320 Eagle Lake Drive, Minneapolis and Vickie Duenow, 13, 6247 Eagle Lake Drive, Minneapolis; Andrea Passe, 16, and Yvonne Passe, 12, Wabasha; Kathryn Grewe, 15, Gibbon; Vernae Thostenson, 16, Breckenridge; Frances Somers, Avoca.

LIVESTOCK

Beef - Sharon Lindquist, 16, and Nancy Westby, 15, Dawson; Mary Chase, 16, Chatfield.

Sheep - Dorothy Hildebrand, 16, Bemidji.

Dairy - Carol Miller, 13, Northfield; David Pierson, 17, Lake Elmo; Rita Ubel, 17, Williams; Roger Sonnenberg, 18, Vergas.

Horse - Jennifer Larson, 14, Rochester.

Swine - Terry Timko, 16, Jackson.

Dog - Marilyn Pettis, 14, Farmington.

General livestock judging contest -- Renville County, first; Rock County, second; Mower and Jackson Counties, third. High individuals -- Donald Finneren, Jackson County, first; Lee Potzler, Danube, second.

Dairy judging contest -- Washington County, first; Nicollet County, second; McLeod County, third. High individuals -- Richard Stuernagel, Mahtomedi, first; David Pierson, Lake Elmo, second; Judy Tessmer, Hennepin County, third.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minn. 55101
Sept. 3, 1963

SUMMARY OF ALL PURPLE RIBBON WINNERS
IN 4-H EXHIBITS AT MINNESOTA STATE FAIR

These were covered in more detail in
releases throughout the Fair

CHAMPIONSHIPS IN 4-H EXHIBITS, BOOTHS AT STATE FAIR

Purple ribbons in 11 different 4-H exhibit classes at the 1963 Minnesota State Fair have been announced by Leonard Harkness, state 4-H Club leader at the University of Minnesota.

Exhibits and champions in each class were:

Booths - Steele, Waseca and Watonwan counties.

Clothing - Valerie Wurden, 12, East Grand Forks; Sherry Rafdal, 12, Medford; Lynn Storlie, 16, Lakeville; Linda Floetz, 17, Utica; Arlene Wilmer, 18, Drayton, N. D. (Marshall Co.); Kathy Sultze, 14, Osseo.

Corn - Howard Bremer, 16, Ceylon.

Electric - Dennis Gapinski, 20, Foley, for robot.

Entomology - Dwain Palmer, 18, Hinckley, for collection of 35 insects.

Food preservation - Jo Lene Doering, 14, Gibbon and Barbara Smith, 20, Doran, for canned vegetables; Patricia Darsaw, Hastings and Deborah Thornquist, Sauk Centre, for jams and jellies; Susan Robertson, Bigelow, and Anne Paschke, Hoffman, for canned fruit.

Garden - Steve Larson, 15, Frost, first group; Bruce Chan, 11, Alexandria, second group; James Hennessey, 16, Rochester, third group.

Grain - Jerome Flottesch, 19, Callaway, for example of durum wheat.

Home improvement-family living - Dianne Steiger, 11, Rochester, for shoe bag; Marjorie/Currie, for green tailored bedspread; Jacqueline Kniefel, 16, Medford, for appliqued quilt.

Potato - Charles Saari, 17, Embarrass, for snowflake potatoes, grand and northeast zone champion. Robert Bøatvold, East Grand Forks, zone champion, Red River Valley; Paula Tessman, 6509-85th Ave. N., Minneapolis, zone champion, south.

Shop - Dean Kern, 16, 3611 Stillwater Road, St. Paul, for 12-foot sailboat.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 3, 1963

To all counties

Immediate release

SUMMARY OF WINNERS IN 4-H LIVESTOCK EXHIBITS at State Fair
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TOP 4-H LIVESTOCK
EXHIBITORS AT FAIR

James Schroeder, 20, Rochester, was named dairy achievement winner and showed the grand champion purebred Holstein animal in Minnesota State Fair 4-H Livestock competition.

Schroeder and three other top achievement winners won the expense-paid trip to the national 4-H Dairy Conference in Chicago last year. The second, third and fourth place winners are: Clem Sammon, 21, Faribault; Floyd Hackett, 19, Rice; and John Carroll, 21, Rosemount, **respectively**. These four winners will not repeat their Chicago trip.

This year there are eight winners of trips to the National 4-H Dairy Conference in Chicago, December 5-7: Robert Blake, 17, Princeton; Floyd Marti, 19, Sleepy Eye; David Pierson, 17, Lake Elmo; Jean Fiedler, 19, Sauk Centre; Warren Sylling, 19, Caledonia; Bob Blasey, 18, Ada; Larry Henning, 18, Brewster and Roger Kurth, 19, Stewart.

Here is the list of the top livestock exhibitors at the Minnesota State Fair.

DAIRY CATTLE

Best county exhibits of Holstein dairy cattle were, in order: Dakota, McLeod, Olmsted, Nicollet, and Hennepin.

Best Dairy Showman: John Carroll, 21, Rosemount.

Champion dairy judging team: Washington County including David Pierson, Lake Elmo; Richard Stuernagel, Mahtomedi; and Judy and Sandra Rydeen, Marine-on-the-St. Croix.

High individual dairy cattle judge: Richard Stuernagel.

Herdsmanship award: Yellow Medicine County.

Holsteins

Champion purebred: James Schroeder, 20, Rochester.
Reserve purebred: John Carroll, 21, Rosemount.
Champion grade: LaDonna Bowles, 16, Becker.
Reserve grade: Shirley Ann Olson, 16, Hutchinson.

add 1 - 4-H livestock exhibitors

Guernseys

Champion purebred: Richard Stuernagel, 17, Mahtomedi.
Reserve purebred: Ronny Thompson, 19, Albert Lea.
Champion grade: Steve Nahrgana, 17, Lewiston.
Reserve grade: James Vacinek, 17, Pine City.

Jerseys

Champion purebred: Evelyn Walkow, 15, Farmington.
Reserve purebred: Mark Babcock, 15, Lonsdale.
Champion grade: Jeane Anderson, 15, Clarissa.
Reserve grade: Gene Sanford, 13, Faribault.

Brown Swiss

Champion purebred: Robert Blake, 18, Princeton.
Reserve purebred: Cassandra Schleich, 17, Caledonia.
Champion grade: Bernard Akemann, 17, New Richland.
Reserve grade: Carolyn Wetzstein, 17, West Concord.

Ayrshire

Champion purebred: Paul Steinberg, 18, Owatonna.
Reserve purebred: Richard Steinberg, 14, Owatonna.
Champion grade: Carol Holmbeck, 14, Hamburg.
Reserve grade: Keith Johnson, 14, Isanti.

Milking Shorthorn

Champion purebred: Steven Foss, 17, Kenyon.
Reserve purebred: Timothy Graham, 16, Hopkins.
Champion grade: Connie Johnson, 14, Fergus Falls.
Reserve grade: Rosemarie Peterson, 17, Plummer.

BEEF

Only beef heifers were shown. Placings were as follows:
Grand champion overall: Richard Walser, 13, Minnesota Lake.
Reserve champion overall: Patricia Burke, 11, Blooming Prairie.
Champion beef showman: Richard Walser, 13, Minnesota Lake. In addition to grand champion overall.

Breed champions follow:

Hereford

Grand champion: Danny Fear, 16, Grand Rapids.
Reserve champion: Lowell Schafer, 11, Goodhue.

Shorthorn

Grand champion: Robert Stenerson, 16, Minneota.
Reserve champion: Margaret Voss, 15, Lakefield.

Angus

Grand champion: Richard Walser, 13, Minnesota Lake.
Reserve champion: Patricia Burke, 11, Blooming Prairie.

add 2 - 4-H livestock exhibitors

HOGS

Grand champion: Karen Sjostrom, 17, Nicollet, with a Poland China.

Reserve champion: Dale Johnson, 13, Hanska, with a Spotted Poland China.

Champion hog showman: David Baker, 16, Kiester.

Breed champions: Yorkshire--James Herr, Brownsdale; Berkshire--Dan Boyce, Parkers Prairie; Chester white--Bobby Gee, Cottonwood (won last year also); Duroc--Jerry Little, Good Thunder; Hampshire--Eugene Keske, Rice; Poland China--Karen Sjostrom, Nicollet; Spotted Poland China--Dale Johnson; Other breeds--Dennis Hewitt, St. Peter; and Crossbreeds--Donald Kennen, Rush City.

SHEEP

Grand champion ewe: David Miller, Lake Park, Iowa (Jackson Co.)

Reserve champion ewe: Janet Berglund, Scandia.

Champion showman: Jerry Tilleraas, Blooming Prairie.

Breed champions: Suffolk--David Miller, Lake Park, Iowa (Jackson Co.)
Hampshire--Francis Goelz, Morton; Shropshire--Carol Olson, Middle River;
Southdown--Rita Coleman, Rochester; Other breeds--Georgia Vogt, Little Falls;
Crossbreeds--Janet Berglund, Scandia.

POULTRY

Grand champion: Cheryl Mae Wiener, Sauk Centre with chicken exhibit
(other breeds)

Champion chickens: Cheryl Mae Wiener.

Champion duck: Terry Hemming, Bloomington.

Champion geese: Donna Pasche, Donnelly.

Champion turkey: Charles Loveless, Wells.

Breed Champions (chickens): White Rock--Carol Schellin, Aitkin;
Leghorns--Cheryl Barten, Belle Plaine; New Hampshire Reds--Terry Cullen,
International Falls; and Other breeds--Cheryl Mae Wiener, Sauk Centre.

RABBITS

Grand champion: Bonnie Buck, Bethel, with English Spot, New Zealand
and California breeds.

Reserve champion: Kenneth Engberg, Duluth.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 3, 1963

To all counties

Immediate release

AG EXPENSES AFFECT
ECONOMIC GROWTH
OF COMMUNITY

A Lincoln county farmer writes a check for \$1,270 worth of fertilizer, payable to a local dealer.

The use of the fertilizer will, with good management, mean boosting the farmer's corn yields by about 10 bushels per acre in the next few years.

Question: How does this expenditure and the change in corn production affect the economy of the community--or the rest of the state or even the nation?

These are questions not easily answered. But they can't be escaped if one is to come to grips with the problems of future community development, especially in areas where agriculture is by far the major employer of people and the major industry.

An extension economist at the University of Minnesota, Hal Routhe, has taken an exploratory look at the effects of improved fertilizer and crop production practices on an individual rural community growth.

He uses as an example a farm in southwestern Minnesota, where corn production could be increased from 53 bushels per acre now to 65 bushels during the next few years. First, he considers a case where an individual farmer increases yields, but where corn prices do not change.

A generalization often used is the "multiplier effect," which says that \$1 spent in a community generates \$5 income as it flows through the hands of individuals, businesses and institutions of that community. However, you first need to know just how much of the expenditure is spent in the community and how much goes outside. Furthermore, income flow in the community varies considerably.

Suppose the farmer buys \$1,270 worth of fertilizer from a dealer who handles shipped-in fertilizer. Over 80 percent of this expenditure will probably go out of the community almost immediately because the fertilizer manufacturing plant is located outside the community.

-more-

add 1 - ag. expenses

The balance left benefits the community to the extent that it is spent for local warehouse development, wages to employees, advertising, and personal needs of the dealer and his family. Even here, some flows rather quickly out of the community.

The farmer in this case could expect a total income potential from increased yields of \$2,140, and a net return after fertilizer costs of \$870. This he might spend for machinery and equipment replacement, production expenses, interest, taxes, and family living. Again, probably over 80 percent leaves the community in a short time.

In balance, then, somewhere between 15 and 25 percent of the gross income generated by improved fertilizer practices stays in the community long enough to generate economic growth. And it is this amount that you would need to use in estimating the final benefit from the "multiplier effect." That is, the amount spent in the community may indeed turn over 5 times, but the amount that does turn over is roughly a fifth of what was spent initially. If this is the case, the community income effect is about the same as the potential additional income from increased yields as a result of the improved fertilizer practice.

Routhe then used this approach to estimate the potential income increase in a 4-county area of southwestern Minnesota--Lincoln, Lyon, Redwood and Yellow Medicine counties. He started with crops and soils data on potential yield increases per acre from increased use of fertilizer, worked out by soil specialists for that part of the state. Then he assumed that the community income effect would be about equal to the potential increase in agricultural income.

The final estimate was that the community income of these four counties could be increased by \$11-12 million. Their total agricultural income for 1951 was \$78.1 million.

Routhe emphasizes that his analysis is based upon existing data and constitutes only an exploratory look at the problem of effects of improved agricultural technology on community growth. The question requires a good deal of extensive research before more thorough analyses can be made.

add 2 - ag. expenses

This analysis, Routhe adds, must also consider the effect of increased yields on the state and national picture.

Corn is a commodity with inelastic demand. That means that if the supply of corn increases by 1 percent in the nation, the price for corn drops about 2 percent.

Of course, the increased yields of the one farmer wouldn't affect national supply and prices. As long as corn production practices on an individual farm are profitable and not limited by public programs, they should be adopted. If a farmer doesn't adopt and his neighbors do, he will fall behind.

But suppose all Minnesota farmers increased their yields--from the current average for the state of 59 bushels to 71 bushels per acre. Minnesota had 4.9 million acres in corn in the 1960-62 period, and the increased yield would increase the national corn supply by 59 million bushels or 1.7 percent of the national supply. If other areas of the nation did not change production and demand stayed the same, the 1.7 percent increase would cut the price for corn by about 4 cents per bushel.

Now suppose half of the farmers in the nation made similar increases in corn yields. Corn production for the nation would go up 10 percent and corn prices, again assuming no change in demand, would go down about 20 percent, unless public storage programs accumulated the excess supply.

A farmer, then, adopts improved cropping practices for his business because they usually lower cost of production per bushel or ton of crop produced. These practices also increase supplies of home grown feeds either for expanded livestock production or for sale. As a result, net income increases, both in total and in comparison to the neighbor who does not apply the practice as effectively.

At the same time, farmers and individual rural communities should be increasingly concerned about the problems of total supplies of agricultural products, Routhe concludes.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 4, 1963

Immediate release

4-H'ERS TO COMPETE IN HORSE SHOW

About 75 4-H'ers will vie for horsemanship honors in the first State 4-H Horse Show and judging finals Saturday, Sept. 7, in Cambridge.

Judging will begin at 10 a.m. on the Isanti County Fair Grounds and is open to the public, according to show manager Thomas Anderson, Cambridge, and event secretary Erven Skaar, Cambridge. Admission will be charged.

4-H Club members, all of whom must have received blue ratings in county competition, will exhibit in two classes: halter showmanship, in pony, pleasure and stock divisions; and saddle horsemanship, with a division for 4-H'ers under 14 years and another for those 14 years or older.

Forty to 50 percent of the entrant's score is based on his showmanship, according to E. L. Murphy, competition judge, Eau Claire, Wis.

Although the 4-H horse project was initiated seven years ago, this is the first time it has been organized as a statewide activity. Its purpose is to recognize outstanding young riders and to interest 4-H youth in good horsemanship.

Trophies for the grand champions of the two classes are being donated by the Arabian, Minnesota Quarter Horse, Morgan, Shetland Pony and Pony of America associations.

The event is sponsored by the University of Minnesota Agricultural Extension Service with the cooperation of the Cambridge Civic and Commerce Association.

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63-254-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 4, 1963

Immediate release

VERTICAL INTEGRATION IS SLOW TO DEVELOP IN HOG BUSINESS

Complete vertical integration is not becoming as extensive in the hog business as was once expected, University of Minnesota agricultural economists conclude.

And they add that vertical integration through direct ownership or the use of risk-sharing contracts is not likely to be important in hogs until:

- 1) Hog production is more adaptable to mass production, feed efficiency is improved, and greater economies result from use of capital equipment;
- 2) Disease problems are virtually eliminated;
- 3) There is more price and production stability in the hog industry, and
- 4) Major improvements are made in processing, distributing and merchandising of pork.

Vertical integration often results from scientific and technological advances, but each industry is unique. About 95 percent of the broilers and fluid milk now reach the consumer through integrated arrangements with nonfarm businesses.

However, economists Harlan J. Dirks and Darrell F. Fienup concluded that vertical integration in hogs will be important only when hog growers find that the optimum size unit calls for more managerial and capital resources than Midwest corn-hog farms have available.

Dirks and Fienup explain that nonfarm firms have more incentive to set up integration contracts when farmers are either slow in adopting new technology or lack the capital to organize and use new, cost-reducing technology.

(more)

add 1 -- vertical integration in hogs

In hogs, technology has been adopted quite rapidly in recent years, but without much increase in large-scale specialized units. Many farmers have cut their labor needs but have increased capital requirements primarily by raising hogs in confinement. Both labor and feed efficiency have been stepped up by housing and mechanization.

In the past, many farmers gained labor efficiency in feed and water handling when they put hogs into confinement, only to lose this efficiency in manure handling. Now, slatted floors and lagoons have helped overcome the manure problem and have boosted the number of hogs produced per unit of labor.

The most important limitation to expansion, the economists say, may be managerial capacity. And large units put such great demands on management and make errors so costly that smaller units may have the advantage.

A study of budgeted costs show that, under Midwest conditions, it cost \$14.78 to produce 100 pounds of pork in a one-man equivalent, corn-hog operation, where 1,500 hogs were raised annually. In comparison, the cost was \$15.44 in a large-scale, highly specialized operation with 10,000 hogs per year.

The strongest pressure for integration in hogs has come from firms supplying production inputs, such as feed and equipment. The feed industry expanded in the 1950's until there was excess feed manufacturing capacity. But although integration provided a way to expand the market to use this excess capacity, there was still less incentive to integrate hogs than poultry. One reason is that poultry demand a nearly complete manufactured feed, while hogs do not.

Another factor concerns quality and volume control. The economists say vertical integration tends to develop when existing markets don't coordinate production and marketing effectively. But with hogs, the large number of farm producers assures processors of getting hogs at or near the cost of production over time. Multiple farrowing has helped reduce seasonal variations in production.

(more)

add 2 -- vertical integration in hogs

Hog producers still bear the unfavorable aspects of a fluctuating market, but the cost of coordinating production and marketing through risk-sharing contracts might be higher than the costs of open market operations. However, the pork industry has, to date, been more concerned with volume than quality. Incentives to integrate could change if retailers start specifying more exactly the kinds and quality of pork they will accept.

Finally, vertical integration in hogs is being held back by market limitations. Pork consumption has gone down since World War II, at the rate of 0.7 percent from 1947 to 1962. There is not the expanding market which encourages new firms to enter.

Pork is a commodity with an inelastic and declining demand. This means that even a small increase in production could seriously affect prices.

Many present hog producers are likely to stay in business, say Dirks and Fienup, as long as variable costs can be covered. Their fixed assets have low salvage value and there are few if any alternative uses for them. Hogs make good use of surplus family labor and farm-produced feed grains.

The economists see little problem in the pork industry's ability to supply U.S. pork needs in 1975--even with present levels of technology. If per capita consumption should level off at 60 pounds, about 13.6 billion pounds of pork would be needed by 1975. This would require about 101 million hogs--a 20 percent increase over 1961. This increase could be produced with only minor adjustments in present facilities, the economists say.

The analysis of vertical integration in hogs is published in the current issue of Minnesota Farm Business Notes, an Agricultural Extension Service publication.

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63-255-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 6, 1963

* For release at 10 a.m. *
*Monday, September 9 *

LIMITED SWINE FEEDING DISCUSSED AT NUTRITION CONFERENCE

The idea of letting pigs eat all they want may be giving way to a more strictly limited feeding plan, according to R. J. Meade, University of Minnesota animal husbandman.

Meade spoke to members of the Minnesota Nutrition Conference this morning (Mon. Sept. 9) at the University's Institute of Agriculture.

A decade ago, free-choice feeding was quite popular in the hog business. Now swine producers are expressing growing interest in the limited feeding of market pigs to get more for their feed dollar.

Meade explained three basic reasons for the growing interest in minimum feeding systems: 1) Their long-established role in helping to improve carcass cutout, 2) The possibility that limited feeding will result in substantial feed savings, and 3) Emphasis on automatic feeding equipment to control the level of feeding and reduce labor.

Meade told nutrition conferees that limited feeding must create a marked increase in market hog quality and pay for any special equipment that is necessary. And, ideally, it must be accomplished without additional labor input.

Some of the benefits of limited feeding were found in research done as early as 1931 when N. R. Ellis and J. H. Zeller, U. S. Department of Agriculture nutritionists, reported decreases in daily gain and improved efficiency of feed utilization when pigs were limited to one-half to three-fourths the intake of full-fed pigs. In addition, they found that restricting feed intake greatly reduced the percentage of fat in the carcass.

Here's how Meade summarized the results of limited swine feeding studies in the past 32 years since the work of Ellis and Zeller.

(more)

add 1 -- limited swine feeding

The restriction of feed intake is an effective means of reducing the daily gain of growing swine. But it won't always result in a substantial saving in feed per unit of gain. Generally, feed restriction results in some reduction of backfat thickness. The limitations have no consistent influence on the dressing percentage of the animals, except when bulking agents are used--they may cause a reduction in dressing percentage. Generally, studies have shown an increase in loin eye area and some improvement in carcass leanness. And there is some indication that restricted feed intake may result in a slight increase in carcass softness.

Different breeds, lines or breed crosses of swine appear to respond differently to restricted feeding. Meade says that further study may be needed to more clearly define the response which can be expected from animals of different types.

Pigs respond differently to restricted feeding under varying environmental and seasonal conditions. And the influence of different levels of feeding on carcass quality make seasonal and environmental factors quite important when recommending restricted feeding programs or schedules.

So far, there has been no clarification as to the effect of feeding methods used in the limited feeding studies in terms of rate and efficiency of gain and carcass quality. Meade suggests studying comparisons such as dry feed versus wet feed, individual feeding versus group feeding, and one daily feeding versus multiple daily feedings.

He concluded that the adoption of sound breeding programs remains the basic factor in producing hogs that gain efficiently and yield high quality carcasses containing a high percentage of lean at slaughter.

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63-256-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
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Immediate release

PEDESTRIANS NEED TO OBSERVE TRAFFIC REGULATIONS

Pedestrians as well as drivers need to exercise caution and observe regulations to prevent traffic tragedies, Glenn Prickett, extension safety specialist at the University of Minnesota, cautioned today.

During the past year more than 100 pedestrians were killed in Minnesota, in many cases because they were violating traffic regulations. Between January 1 and July 1, 1963, the toll was 41 pedestrians killed and 942 injured in Minnesota accidents. Most frequent victims were the 5-9-year olds.

Although the pedestrian has the right of way at crossings or intersections, he does not have the right of way when crossing in the middle of the block. Nevertheless, it is dangerous for a pedestrian to insist on his right of way if the automobile driver does not intend to grant it, the safety specialist points out. For that reason, Prickett suggests that where traffic is involved people should walk "defensively."

On highways and suburban streets where there is no sidewalk, the pedestrian should walk on the left side, facing oncoming traffic. Wearing light-colored clothing or reflective materials will help give protection to anyone walking at dusk or after dark.

Parents and teachers have a special responsibility in teaching children safety and observance of traffic regulations in walking to school. Youngsters should also be taught the danger of darting from behind cars on city streets, putting the driver under a handicap to protect these children, the University safety specialist said.

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63-258-jbn

Department of Information
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Immediate release

U FRUIT BREEDING FARM OPEN HOUSE SEPT. 14

Tours of experimental orchards and research plots will be featured during the Visitors' Day at the University of Minnesota Fruit Breeding Farm near Excelsior Saturday, Sept. 14.

The annual open house is sponsored by the Minnesota State Horticultural Society and the University of Minnesota's Department of Horticultural Science to acquaint the public with the work of the 230-acre Fruit Breeding Farm, particularly in developing new varieties. The event is open to the public.

Tours of the experimental orchards and test plots are scheduled for 10 a.m. and 1:30 p.m. Visitors will see examples of the research being done in cultural methods, in breeding and development of new fruit varieties. Fruit breeding personnel will explain research in progress. Visitors will also be taken on a tour of the apple packing house.

As a result of experimental work at the University Fruit Breeding Farm, more than 60 varieties of fruit have been introduced, all of them especially adapted to the climate of this region. Included among these are Haralson, Fireside and Beacon apples, the Latham raspberry and Red Lake currant. Most recent introductions have been Moongold and Sungold apricots and the Trumpeter strawberry. All of these fruits have been developed by University horticulturists. Improvement of fruit growing practices for this area is another function of the Fruit Breeding Farm.

The University Fruit Breeding Farm is located 5 miles southwest of Excelsior on state highway 5.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 6, 1963

Immediate release

BEEF CATTLE-GRASSLAND FIELD DAY AT ROSEMOUNT SEPT. 19

The 11th annual Beef Cattle-Grassland Field Day will be held at the University of Minnesota's Rosemount Agricultural Experiment Station Thursday, Sept. 19. About 500 persons are expected to attend.

This event gives beef producers and other interested persons a close look at the past year's research in cattle feeding and pasture experiments conducted by the University.

Principal speaker will be Walter Woods, animal science professor from the University of Nebraska and noted beef cattle authority. His topic will be "Feeding Cattle on Pasture."

Research reports at the event will cover experiments with wintering calves, fattening steers and heifers and creep feeding of calves.

Pasture experiment reports will be concerned with fertilization, mixtures, renovation and management, effects of trace minerals, and a comparison between feeder calf production on pastures and in dry lots.

Reporting the research will be animal husbandmen A. L. Harvey, O. E. Kolari and J. C. Meiske and soils researcher P. M. Burson.

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63-257-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 9, 1963

*For release at 10 a.m. *
*Tuesday, Sept. 10 *

U OF M POULTRY SCIENTIST SPEAKS ON AMINO ACIDS

Amino acids which have traditionally been ignored as non-essential will probably be considered in the formulation of poultry rations in the future, according to David Snetsinger, University of Minnesota poultry scientist.

He spoke to the Minnesota Nutrition Conference this morning (Tues., Sept. 10) at the University's Institute of Agriculture.

Non-essential amino acids are those which the chicken can manufacture in its body fast enough for adequate growth. In contrast, the essential amino acids are those which animals can't synthesize fast enough for maximum performance.

He said there are two primary considerations which determine the importance of an amino acid in the diet of a specific animal: 1) The animal's relative need for a given amino acid and 2) the ability to develop rations which are very low, or lacking, in the amino acid of interest.

Until the recent development of synthetic amino acid diets, it was necessary to depend on natural protein sources to provide the amino acids for test diets. And the ability to reduce so-called non-essential amino acids such as glutamic acid and proline to low dietary levels was nearly impossible.

Snetsinger pointed out that with the development of the synthetic amino acid diets, scientists can now eliminate these amino acids from poultry feed and obtain growth responses in chicks by their dietary additions. Such studies using synthetic amino acid diets have shown that amino acids thought non-essential are actually required by chicks for optimum growth.

Recent research indicate that the ratio of essential to non-essential amino acids in proteins may be the factor which causes some proteins to perform better than others. Snetsinger said that a report in 1962 shows that the non-essential amino acids, with slight exceptions, are more slowly absorbed than essential amino acids. This indicates that excesses of non-essential amino acids may also be detrimental.

Snetsinger pointed out that as rations are constructed to have fewer excesses of essential amino acids, and as growth rates increase, the quantity of non-essential amino acids will need some consideration.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 9, 1963

*For release at noon, *
*Tuesday, Sept. 10 *

DAIRY INDUSTRIES RESEARCH DISCUSSED AT UM EVENT

How research at the University of Minnesota is approaching a wide range of problems in the dairy industry was reviewed this morning during the annual Dairy Products Institute on the University's St. Paul Campus.

Five staff members from the Department of Dairy Industries discussed research on marketing, public health problems, dairy products quality control, processing, and new product development. The speakers were S. T. Coulter, head of the department; J. C. Olson, Jr., J. J. Jezeski, E. L. Thomas and H. A. Morris.

Coulter described a study of pricing methods for fluid milk--a project being conducted in cooperation with the agricultural economics and dairy husbandry departments.

The purpose of the study is to learn to what extent the equity in distribution of net returns from sale of milk would be enhanced by pricing milk on composition factors other than fat. Milk from 80 farms in the Twin City milk shed area is being studied for a year. Tests of content of fat, total solids and protein are being run by conventional as well as by rapid analytical procedures.

Currently, fat is the compositional factor upon which pricing of milk is based. The research is intended to throw some light on how the distribution of net returns would be affected if other pricing formulas, which might include other composition factors, were used, and how the effect might vary for different farms and different dairy products.

Another research project concerns flavor stability in Vitamins A and D fortified nonfat dry milk. Vitamins A and D, research has shown are not completely stable and may break down during storage, thus giving the product a somewhat different flavor.

(more)

add 1 -- dairy industries research

Fortified nonfat milk is now being tested by taste panels and will later be tested by members of households, to determine whether the flavor change is enough to be detected.

In other research, studies completed recently have shown that fluid milk might have a better flavor if the content of nonfat solids were to be standardized at a somewhat higher level than milk has when produced. Research at Minnesota, and several other states shows that milk is more acceptable to consumers if the nonfat solids content is boosted to 9 or 9.5 percent. Ordinarily, milk varies in nonfat solids, but usually ranges between 8.3 and 8.7 percent. The studies showed that the higher nonfat solids content gives the milk a sweeter taste.

Milk is now sold with a standardized butterfat content; Coulter said similar standardization might be conceivable for nonfat solids.

Several dairy industries research projects are directed toward various public health problems. One such project, described by J. C. Olson, Jr., concerns the cost and adequacy of regulatory activities in the Twin Cities area.

Another project is aimed at further refinement of techniques to prevent the occurrence of staphylococcus organisms in cheese. Several different heat treatments of milk are being studied, as well as various characteristics of staphylococcal cultures

Minnesota dairy industries scientists are studying proposed U. S. Department of Agriculture standards for manufactured milk. Questions such as these are being approached: Is it possible to convert results from one method of estimating the bacterial population into results from another method? Are conversion factors the same in all localities? Milk supplies in three regions of the U. S. are being studied.

Still other research projects described by the dairy industries staff members included:

1) A test is being sought for determining the amount of denatured whey protein in nonfat dry milk, as well as in other milk products. Such a test would be extremely useful for estimating heat treatment in dry milk where the previous heat treatment is unknown. Much of the nonfat dry milk now being sold is classified according to heat treatment. A precise method for estimating denatured whey protein would provide a tool for specification purposes. (more)

2) Studies on quality control of fluid milk. J. J. Jezeski of the dairy industries staff is studying the role of lipase, an enzyme that splits the fat in milk, releasing free fatty acids that may give milk an off-flavor. He is studying the management factors on dairy farms that may influence the activity of this enzyme in milk supplies. Some of these factors include dairy cattle nutrition, methods of handling milk, agitation of milk in pipelines and other handling factors.

3) Quality control in sterile concentrates. Some of the sterile concentrate products have encountered flavor problems after extended storage periods. The nature of this problem and how it may be solved is now being studied.

4) Processing problems. A good deal of research is directed toward a study of the viscosity and other physical characteristics of milk. Dairy industries men have long known that heating milk increases its viscosity, but the reason for this effect isn't entirely understood. One factor may be an interaction between whey protein and casein. Viscosity is an important factor in ice cream production, and in virtually all manufactured dairy products.

These were only a few of the projects reported to persons attending the Dairy Products Institute. Others included factors influencing the rate of expulsion of whey from cheese curds; physical properties of cheese as influenced by calcium and phosphorus retention, and the heat inactivation of bacteriophages important in the growth of buttermilk cultures. Special consideration was given to new product development, with mention of low fat spreads and low fat cheese.

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63-261-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 9, 1963

*For release at 11:45 a.m. *
*Tuesday, Sept. 10 *

U OF M SCIENTIST SAYS LIGHT IS A BASIC TOOL IN POULTRY PRODUCTION

The light switch is one of the poultryman's main tools for regulating egg production.

A University of Minnesota poultry scientist said today that poultry reproduction is highly dependent on how many hours of each 24 are daylight, and how rapid the change is from light to dark.

R. N. Shoffner told members of the Minnesota Nutrition Conference, being held at the University's Institute of Agriculture, that light is a critical regulator of many body processes of poultry.

He said that off-season production can be kept close to normal-season laying if the poultry manager practices light regulation in relation to the sexual responses of the birds.

For instance, decreasing days close to physical maturity of the bird will delay sexual maturity. But, shortening day length will cut down egg or sperm production after the bird has reached sexual maturity.

On the other hand, increasing day length close to physical maturity brings on earlier sexual maturity. And the poultryman can keep egg production up if he subjects his birds to longer days after they have reached sexual maturity.

Pullets reared on short days (6-8 hours) until they are 20 to 22 weeks old will respond to stimulatory levels of light to a greater extent than those reared on long (15 to 24 hours) days.

Abrupt changes from short to long days (or vice versa) will help produce more uniform and definite egg laying and reproductive responses than if the changes are made gradually.

(more)

add 1 -- light management

Birds differ from strain to strain in their requirements for both day length and stimulatory levels of light.

Differences in light requirements of individual birds account for the fact that 50 percent lay can be maintained on almost any lighting program, providing the flock is exposed to 11 hours or more of light when they reach physical maturity.

Light requirements for the sexual stimulation of male chickens are about the same as for females, but shorter day conditioning isn't quite as critical.

Birds will increase in size at a more rapid rate if they are provided with longer days during the growing season. Shoffner recommended that birds raised for meat production should be provided with short-day rest periods when they are kept on a fast-gaining long-day schedule. And pullets removed from the broiler flock should be placed on a short-day schedule as soon as they have been selected at marketing age.

Turkeys are much more sensitive to light management than chickens and rigid light control is necessary for normal production in the off-season. In contrast to chickens, turkey females are almost entirely dark dependent. But, it's a good general rule to never darken turkey toms.

The same principles of light management apply to geese and ducks as to turkeys according to Shoffner.

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63-259-1sr

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties
Immediate release

SOIL SAMPLING
STEPS EXPLAINED

Taking a soil sample means a good deal more than merely putting a clod of earth in the sample box.

To get a sample that represents your field, you need to do several things:

Divide each field into uniform areas. Make sure each area you select has the same texture, cropping history and past fertilizer treatment.

Avoid--or sample separately--low spots, dead and back furrows, old straw piles, terraces and fence rows and fertilizer bands.

Sample each area separately. Scrape away the grass and litter. Take a core or slice of soil from the surface to plow depth. On permanent pastures and fields in sod, sample only 3 inches deep. Put the core or slice in a clean pail.

Repeat the sampling in 15 to 20 places and mix the soil. Then fill the sample box or a pint container--that's all it takes--and you have a composite sample. Label each container with the sample number and your name and address. Keep a record of where you took samples.

Fill out the information sheet as completely as possible. The state soil testing laboratory and the county agent need this information to make lime and fertilizer recommendations.

If the soil is wet, don't dry it on a stove or in an oven. Let it air dry. Package your containers together, enclose the information sheet with an envelope containing the payment, and the samples are ready to go to the University.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties
Immediate release

IN BRIEF.....

Federal gas tax refund applications must be in by September 30. Farmers who make application any later will receive no refund. Those who file before September 30, will be refunded 4¢ per gallon for gasoline purchased before July 1, 1963 and used on a farm after June 30, 1962 and before July 1, 1963 for farming purposes. Refund applications must be filed on form 2240 and sent to the District Director of Internal Revenue. Form 2240 is available at the county extension office.

* * * *

The embryo test is the best method for determining whether there's too much smut fungus growth in your barley seed according to Herb Johnson, University of Minnesota extension plant pathologist. A pint of barley seed to be tested should be sent to the Bureau of Plant Industry in St. Paul. The address is Room 670, State Office Building. The testing fee is five dollars. Make the check payable to the Minnesota State Treasurer.

* * * *

Some tips on boar management from Irvin Omtvedt, University of Minnesota extension animal husbandman: When placing boars in new surroundings, allow them to rest for a few days after their arrival and place them in a disinfected pen with an exercise area. Feed them three to four pounds of a balanced ration, but avoid over-feeding. Provide treatment for external parasites or worms but don't worm the animal within three weeks of breeding. And follow a recommended breeding schedule for your boars.

* * * *

Dairy equipment cleaners and sanitizers can corrode stainless steel when not used properly. Vernal Packard, University of Minnesota dairy^{products} extension specialist, says label instructions are extremely important when using these chemicals. Follow closely the directions for: 1) The quantity of chemical to use, 2) the temperature of the solution, and 3) the duration of exposure to equipment. See your county agent for University of Minnesota Dairy Industries Fact Sheet No. 2 on Stainless Steel Corrosion.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties
Immediate release

Last of three articles on
proposed changes in wheat
grades

WORLD WHEAT TRADE
BEARS ON PROPOSALS
FOR GRADE CHANGES

Japanese bread eaters and fanciers of other baked foods have a rather direct bearing on the current U. S. Department of Agriculture proposals for changes in wheat grades.

The reason, says Harold Pederson, extension marketing economist at the University of Minnesota, is that Japan, along with Western Europe is one of our biggest cash customers for U. S. wheat.

But the emergence of the Common Market in Europe spells a decline in future wheat sales to those countries, whereas wheat sales to Japan are on the way up. U. S. wheat exports to that country jumped 10 percent from July 1962 to June of this year. And USDA economists say we could double wheat sales to Japan if we can continue to give them the quality they want in wheat.

Japanese people, at least in their bread tastes, are becoming rather Westernized. American-style bread and baked goods are increasing in popularity there. And the Japanese bakers are making the same quality demands as do bakers in the U. S.

Lower freight rates to the West Coast last year helped account for the jump in wheat sales to Japan. Understandably enough, the grain trade and wheat producers are concerned that this development be encouraged by attention to wheat quality.

The significance of the Japanese market is heightened by the possible loss of wheat sales in Europe. During 1958-59, U. S. wheat exports to Japan equalled wheat exports to the six Common Market countries combined.

The full impact of Common Market policies on U. S. wheat exports is still unknown. But it seems fairly certain that French wheat will be used much more in Western Europe, with imports limited largely to strong bread wheats.

add 1 - wheat grades

The International Wheat Agreement sets floor and ceiling prices for commercial transactions. All major exporters, including the U. S., Canada, Australia, Russia and Argentina, are IWA cooperators. U. S. policy consistently has been to keep prices competitive without trying to take markets away from traditional suppliers. This policy through the years, has helped stabilize world wheat prices.

A major competitive aspect has become one of quality, giving the buyer what he wants. And it is to this aspect that the proposed wheat grade changes are directed. About seven changes are proposed, but the four of most consequence to Minnesota provide for:

- * A maximum tolerance for total defects.
- * Expressing dockage by whole and half percent, instead of whole percent.
- * Placing wheat with more than 13.5 percent moisture in the "tough" category.
- * Recognizing higher than normal test weights per bushel by providing for a special "heavy" grade for all classes of wheat of grades No. 1, 2 and 3.

A hearing on these proposed changes is scheduled for Oct. 4 in Minneapolis. Interested persons are invited to attend or to send their comments to the Director, Grain Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington, D. C., before Oct. 31.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties

Immediate release

MANOD, MILFORD OATS
HAVE RECEIVED
PRELIMINARY TESTS

Two varieties of oats, both from Wales, have received some preliminary testing at the University of Minnesota, but agronomists suggest caution in their use until more information is available.

The oat varieties are Milford and Manod, and they were grown in one 1963 test by University agronomist Roger Kleese. His preliminary results indicate that:

* Both Manod and Milford yielded about two-thirds as much as Minhafer, Rodney and Garry--three recommended varieties. Bushel weights of the Welsh varieties were comparable to the other three.

* Manod had about the same straw stiffness as Minhafer, while Milford was somewhat stiffer. Manod is tall; Milford is a short variety. Milford was one or two days later in maturity than Rodney, and Manod was about a week later.

* Both Milford and Manod are susceptible to prevalent races of crown and stem rust.

Harley Otto, extension agronomist at the University of Minnesota, says there is considerable interest in these two varieties, but he urges farmers to be cautious in using them. A grower wishing to try them would be well advised to do so first on a limited scale until more information is available. Research results may vary from one season to another and from one location to the next.

Certified seed of Manod and Milford was produced in Minnesota in 1963. Otto explains that certification assures that the seed in the bag is the variety given on the label, and that it has met minimum standards for mechanical purity, germination, and weed seed content. However, certification does not mean the variety is well adapted to the growing conditions of the state, and certification says nothing about performance.

Both of the varieties were developed at the Welsh Plant Breeding Station, Aberystwyth, Wales. Milford was released to growers in 1947 and Manod in 1960.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties
ATT: Home Agents
For use week of Sept. 15

TO LOSE WEIGHT
EAT BREAKFAST

Skipping or skimping on breakfast so you'll lose extra pounds?

Chances are your scales haven't registered a bit lower.

Actually, you can lose weight by eating a good breakfast, says Verna Mikesh, extension nutritionist at the University of Minnesota. That's because a good breakfast often contains fewer calories than the light snack you might have during the mid-morning coffee break to stave off fatigue.

It makes more sense, Miss Mikesh points out, to get the 200 calories in a breakfast of $\frac{1}{2}$ cup fruit juice, an egg, a piece of lightly buttered toast and black coffee than to indulge yourself in the 350-calorie or more gooey dessert you think you can have because you skipped breakfast. Even the mid-morning doughnut you allow yourself on your coffee break adds up to 135 calories.

Another argument against skipping breakfast is that you're likely to overeat at the other two meals. Breakfast serves as a regulator for the food intake for the day. An adequate breakfast is the way to any successful reducing plan, Miss Mikesh says. Sound dieting plans call for cutting calories by eating low-calorie meals that contribute necessary protein, vitamins and minerals and omitting between-meal snacks with empty calories.

If you omit breakfast, you're also at a disadvantage because you'll be fatigued during the late morning hours and consequently less efficient and productive.

An adequate breakfast includes fruit (preferably citrus), bread, milk, cereal or egg or meat.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties
ATT: Home Agents
Immediate release

HOME COUNCILORS
TO ATTEND
DISTRICT MEETING

Extension home councilors in _____ County will attend a district conference in _____ in _____ on _____.
(building) (town) (date)

The conference is one of 10 district meetings being held between September 17 and November 1 to give council members a better understanding of the Agricultural Extension Service and to discuss the changes in American homes and families that may indicate changes in the extension home program.

The one-day session will give women leaders in the district an opportunity to air problems and share ideas with others and with members of state and county Agricultural Extension Service staffs.

Speakers at the meeting in _____ will be _____, district supervisor, county extension work, and _____, district supervisor, home economics extension, University of Minnesota.

The extension home program is one phase of the educational work conducted by the University of Minnesota Agricultural Extension Service.

-jbn-

Speakers as follows:

Central District	Anoka - Glenn McCleary, Caroline Fredrickson and Minerva Jenson
	Litchfield - Glenn McCleary, Caroline Fredrickson and Mrs. Rosella Qualey
Southeast	Mankato - Eleanor Gifford, Dorothy Simmons and Wayne Hanson
	Rushford
Northwest	Detroit Lakes - Howard Newell, Arlene Barkeim and Dorothy Simmons
	Theif River Falls
Northeast	Bemidji - Edward Becker, Minerva Jenson and Dorothy Simmons
	Duluth
Southwest	Mrs. Rosella Qualey and Dorothy Simmons

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 9, 1963

To all counties
4-H NEWS
Immediate release

4-H FILLERS

While the foods program is not new to 4-H'ers, the name--foods and nutrition--is. More emphasis is being placed on the nutritive value of a balanced diet consisting of the four basic food groups: dairy foods; meat, fish and poultry; fruits and vegetables; and cereals and bread. By studying and planning well-balanced meals, the teen-agers help themselves and their families to better eating habits and better health.

* * * *

World-minded 4-H Club members in Minnesota recently donated \$920 to the CARE fund. This is the largest contribution made by a single state within the past few months.

* * * *

The 143,000 4-H Club members in the nation participating in the beef project have sole responsibility for selecting, raising, fitting and showing their animals. Many times this responsibility extends to marketing of the beef.

* * * *

Keeping pace with the nation's use of electrical power are the 4-H Club members. Now in its 29th year, the 4-H electric project covers subjects ranging from basic cord repair to complicated wiring systems and electronic devices.

* * * *

Today's 4-H Club members reside in three areas: on a national basis, 51 percent are from farms; 29 percent live in rural, non-farm homes; and 20 percent are urban and suburban dwellers. In Minnesota, 75 percent live in farm homes, 15 percent in rural, non-farm homes and 10 percent in urban homes. It is predicted that by 1970 over half the total 4-H membership will be non-farm.

* * * *

Members of 500 Minnesota 4-H Clubs planted nearly two million trees this year as part of the conservation program. Other projects included building bird and game feeding stations, raising and releasing pheasants, and erecting fireplaces for picnic areas.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 12, 1963

FOR RELEASE: 3 P.M.
*Monday, September 16 *

DUTCH ELM DISEASE DISCUSSED AT SHORT COURSE

Diseases and insects are not responsible for all tree problems, a University of Minnesota horticulturist declared today (Mon., Sept. 16).

Many tree problems can be overcome by proper cultural practices, Donald B. White told the group attending the annual Shade Tree Maintenance Short Course on the University's St. Paul Campus.

Donald Coe, director of the Division of Plant Industry, State Department of Agriculture, reported that the European elm bark beetle--which spreads the Dutch elm disease--has been found in 14 southeastern Minnesota counties. In the Twin Cities area, Dutch elm disease has been located in one tree in South St. Paul, four in Minneapolis, seven in St. Paul and 31 in Monticello. All these trees have been removed and destroyed. Coe said his division has received excellent cooperation from cities and individuals in cleaning up elmwood which may serve as breeding places for the elm bark beetle.

As replacements for the elm, L. C. Snyder, head of the horticultural science department at the University of Minnesota, recommended for Minnesota planting selected varieties of sugar, red or Norway maple, green, white or blue ash; basswood or linden, especially American, Little Leaf or Redmond varieties; Kentucky coffee tree; and the hackberry. Schwedler and Crimson King are among Norway maples suitable for Minnesota planting.

Tours of the Minnesota Landscape Arboretum are scheduled for tomorrow (Tues.). Demonstrations will be given on pruning, stump removal and tree fertilization.

Attending the short course are about 100 nurserymen, arborists and people professionally engaged in tree maintenance in parks, on public and private grounds.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 12, 1963

Immediate release

BEEF CATTLE-GRASSLAND STUDIES MORE THAN A DECADE OLD AT UM

Persons attending the 11th annual Beef Cattle-Grasslands Field Day at Rosemount next week (Thursday, Sept. 19) will hear the latest of a decade of research on how a forgotten crop can mean profitable beef production.

As a speaker at one of these events said, it's a story of "The steak in our pastures."

The project is at the University of Minnesota's Rosemount Experiment Station, and it began in 1951 as a research approach to the fact that Minnesota's 7 million pasture acres weren't being tapped to their fullest potential by livestock producers.

Pasture, the research men believed, is the economical foundation of beef production. But, they added, most beef farmers weren't appreciating the production and labor saving possibilities of this feed.

When the Beef Cattle-Grasslands project was started, however, it involved more than just grass. It soon encompassed a variety of feeding and nutritional problems. Doing this research are a number of investigators--soil scientist, Professor Paul M. Burson, chairman of Beef Cattle Grassland Committee; animal husbandmen A. L. Harvey, O. E. Kolari and J. C. Meiske; and agronomist A. R. Schmid.

(more)

add 1 -- Beef Cattle-Grassland Day

Research results from the project over the years have added to a growing fund of information for beef producers. One study showed that shifting cattle from one pasture plot to another during the summer resulted in 7.7 percent more beef per acre than when steers were given access to the same amount of pasture, but could run over the entire area at any time.

Researchers found that in the spring when all pastures are growing rapidly, a heavy stocking rate is needed in the first round of grazing for efficient use of the pasture. And pasture productivity determines the stocking rate as the season progresses.

Burson, in ten years of pasture experiments, found that pasture forage and livestock production is the best land use program for areas too rolling and steep for the production of cultivated crops. This combination land use program will maintain soil fertility, may control erosion, and can bring economical returns to the farmer.

A 1957-58 fertilizer study showed that 60 pounds of nitrogen increased pasture grass content from 3 to 24 percent in the period from May to July. And applying all the nitrogen at one time increased the percentage of grass during the season from 40 to 80 percent, whereas a split application only boosted grass content from 40 to 59 percent.

Fertilized pastures appear to be more palatable to steers than pastures receiving no treatment. Steers grazed the grasses before touching the legumes in unfertilized pastures whereas they showed no preference for grasses to legumes in pastures that had been fertilized.

A four-inch rain in late summer 1952 proved that plowed pasture will undergo severe soil erosion whereas tilled pasture will remain in place much better under such conditions. It's better to renovate old sod with a heavy field cultivator and a disk when preparing the seed bed.

(more)

add 2 -- Beef Cattle-Grassland Day

Other results from the project are these:

* Pasture fertilization and beef production. Seven years of study (1953-59) showed that fertilizing alfalfa-brome pastures increased carrying capacity by 8 percent more steers per acre, while beef production per acre went up 41 percent. Value of beef per acre increased 21 percent.

* Stilbestrol (a synthetic hormone). Stilbestrol, either oral or implanted, may be expected to increase average daily gain 10 to 15 percent and increase feed efficiency by 8 to 10 percent. And when properly used, it will not lower carcass quality when cattle are fed the same length of time.

* Feed additives. Results with antibiotics are variable. Terramycin and Oleandomycin have improved feedlot performance, but not as much, in general, as stilbestrol. Enzymes, tranquilizers, lysine and Dynafac have not improved feedlot performance of cattle in drylot.

* Silage. It takes about 20 pounds silage, 3 pounds grain and 2-3 pounds hay to produce about 1 1/2 pounds gain daily for a wintering calf. Grass silages are worth about 80 percent as much for wintering calves as corn silage. Adding beet pulp or corn as preservatives, at up to 15 percent of the total silage weight, has not improved the feeding value of silage.

The Beef Cattle-Grasslands Field Day Sept. 19 will begin at 9:30 a.m. and is open to the public. As in the past, research reports will cover a variety of feeding trials and pasture experiments. Featured speaker is Walter Woods, animal scientist from the University of Nebraska.

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63-262-pjt

Department of Information
and Agricultural Journalism
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University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 12, 1963

Immediate release

CORN AND SOYBEAN FIELD DAYS SCHEDULED AT TWO U EXPERIMENT STATIONS

Corn and Soybean Field Days will be held at three University of Minnesota experiment stations later this month.

They are scheduled for Tuesday, Sept. 17 at the Southwest Experiment Station, Lamberton; Wednesday, Sept. 18 at the Southern Experiment Station, Waseca; and Thursday, Sept. 26 at the Rosemount Experiment Station.

Each event will feature the University's latest research on production and management of these two major field crops.

Topics at the Waseca station event will include a new soybean grading system; performance trials of 80 commercial and experimental corn varieties; a display of commercial practices used in planting, fertilization, and weed control to establish 150-bushel-per-acre corn yields; a field study of single and double cross hybrids and open-pollinated corn; and row spacing comparisons of three corn varieties at three planting dates.

Featured at the Rosemount field day will be disease and weed control, the advance of the western corn rootworm to near the Minnesota border, and measures for coping with that pest. Varietal trials with corn and soybeans will also be reported. A discussion topic will be "Oriental Foods from American Soybeans."

Each event will also include tours of field plots. The Waseca and Rosemount field days will be held in the afternoon and the one at Lamberton begins at 9 a.m.

The public is invited to all three field days.

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63-261-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 16, 1963

Immediate release

UM RESEARCH SEEKS CLOVER RESISTANCE TO WEEVIL

A research attempt to find weevil resistance in sweetclover plants is meeting with marked success in Minnesota's Red River Valley.

This approach to insect control is not new, but the current studies represent the most successful application to date of this approach for this particular plant and this insect, according to University of Minnesota entomologists conducting the project.

Resistance has been found in the past, for example in corn (to borers) in alfalfa (to aphids) and in other crops to other insects. Many farmers are now raising corn with resistance to the corn borer and alfalfa with resistance to aphids.

Now, research suggests the same kind of thing may be possible in sweetclover. And if such resistance eventually can be bred into new sweetclover varieties, it could mean bringing this crop back to many farms that have discarded it because of the weevil problem.

Sweetclover in the past has been a major green manure crop in the Red River Valley, used particularly for beet production. Sugar beets require a rotation system, during which the field is seeded to grain and sweetclover one year and the sweetclover is allowed to grow and then is plowed under the next year. Beets are planted a year later.

(more)

add 1 -- clover resistance to weevil

Weevils started attacking Red River Valley sweetclover in heavy numbers about 1935. About 10 or 12 years ago they were so abundant they wiped out half the stands of sweetclover in the Valley. Their damage is greatest during the year of seeding. A farmer might seed the clover with grain and harvest the grain, but next spring find that he had either a poor stand of clover or practically none at all. Many farmers therefore quit raising sweetclover.

Insecticides can kill weevils, but still weren't the final answer. First, they are fairly expensive for use on a plow-down crop. Second, the spraying needed to be done when the sweetclover was in the seedling stage, growing under the grain. Very few farmers, if any, would want to go through a maturing grain field with spraying equipment; there would be too much grain damage as well as insecticide residue in the straw.

In earlier years, entomologist F. G. Holdaway, assisted by B. A. Haws and K. W. Tucker, had explored the possibility of finding or developing weevil-resistant varieties of sweetclover. Following these exploratory studies, E. B. Radcliffe was appointed to devote special attention to this search for weevil-resistance.

The current project is conducted by Radcliffe, working at the Northwest Experiment Station at Crookston, in cooperation with Holdaway who is project leader.

The U. S. Plant Introduction Service provided the University entomologists with 162 different samples of sweetclover--called "accessions"--from around the world. (They are "accessions" rather than "selections" since most of them are wild species while some are varieties from elsewhere.)

Radcliffe planted this clover in plots on a farm in the Valley, with each accession planted in four different places. All told, he has 8 miles of individual clover plots.

The idea then was to subject the sweetclover to heavy attacks of weevils and then see which ones survived.

(more)

add 2 -- clover resistance to weevil

Getting the weevils was no problem this year. The natural infestation on the farm was more than enough to destroy many of the accessions and to devastate the common white or yellow sweetclover that has been traditional in the area.

Next, Radcliffe worked out a system for measuring leaf feeding damage from weevils. And the differences this summer among sweetclover accessions were striking.

Just what causes this resistance isn't known. But whatever the mechanism is, it somehow makes the clover plant less attractive to the weevil. The pests would feed voraciously on one kind of clover, but completely turn up their snouts at another in the next plot.

The researchers have convincing evidence that the differences are not due to differences in infestations. Each sweetclover accession is planted in four different areas. But extent of feeding on a given accession would be nearly identical in all four; variation was much less than is often expected in such research.

Whether such resistance which Radcliffe and Holdaway are finding can be incorporated in new varieties is a question which will take years to resolve, and must be approached by plant breeders. But this early evidence is the most encouraging to date in the search for weevil-resistant sweetclover.

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Immediate release

MEMBERS OF EXTENSION HOME COUNCILS TO MEET

Ten district meetings for members of county extension home councils will be held throughout Minnesota this fall, Dorothy Simmons, state leader of extension home economics at the University of Minnesota, has announced.

Close to a thousand women are expected to attend the conferences throughout the state.

Purposes of the meetings are to discuss the organization and operation of the Extension Service and to explore the changes in American homes and families that indicate changes in the extension home program. Speakers will be district supervisors of county extension work, home economics extension supervisors and Miss Simmons.

Schedule for the meetings follows: Sept. 18, Erie Junior Cafe, Detroit Lakes; Oct. 8, Ferndale Country Club, Rushford; Oct. 8, First Lutheran Church, Litchfield; Oct. 9, Inne Towne Motel, Mankato; Oct. 9, Community Room, City Hall, Anoka; Oct. 10, Trinity Lutheran Church, Benson; Oct. 11, Chalet, Marshall; Oct. 31, First Methodist Church, Bemidji; Nov. 1, University of Minnesota, Duluth. First of the conferences was held Sept. 17 in Thief River Falls.

Meetings will begin at 9:30 a. m. with registration.

The one-day sessions, conducted each year, give women leaders of extension home programs in Minnesota counties an opportunity to meet, air problems and share ideas with others and with members of county and University Agricultural Extension Service staffs.

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63-265-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 16, 1963

To all counties
4-H NEWS
Immediate release

LOCAL 4-H'ERS
WILL EXHIBIT AT
SOUTH ST. PAUL SHOW

Many _____ County 4-H members will be among more than 700 Minnesota 4-H'ers who have won trips to the 1963 Junior Livestock Show in South St. Paul Sept. 30-Oct. 3.

* (Add a paragraph here on your winners and tell what they will exhibit)

Animals to be exhibited at the show include 318 beef steers, 195 market wether lambs, 195 barrows and 20 trios of lambs. All livestock were selected from among the best exhibits either at the county fair or a local achievement day. Counties receive a quota of trips to the Junior Livestock Show based on the number of members enrolled in the steer, barrow, wether lamb and trio projects.

Monday, Sept. 30, is entry day. Registration opens at 8 a.m. and entries must be in place and registration completed by 6 p.m., according to Osgood Magnuson, coordinator of the show and assistant state 4-H Club leader at the University of Minnesota. The opening assembly for all 4-H'ers has been set for 5 p.m. in the Livestock Pavilion.

Market barrows and lambs will be judged Tuesday morning, Oct. 1, and beef steers will be judged Wednesday morning. Showmanship contests for barrows and lambs and awarding of market barrow and market lamb championships are scheduled for Tuesday afternoon and for beef Wednesday afternoon.

One hundred and fifty-two of the top-ranking exhibits will be sold at auction on Thursday afternoon, beginning at 1:15. All other animals are sold by the commission companies to which they are consigned. Selling by commission companies starts at 8 a.m. Thursday in the livestock barn.

Exhibitors will be guests of the St. Paul area Chamber of Commerce at a banquet at the St. Paul Hotel Wednesday evening. Other activities planned for the

add 1 - 4-H'ers exhibit at show

4-H'ers include educational tours, a 4-H roundup program in South St. Paul High School and an evening of entertainment at the Cow Palace in South St. Paul. Tours are being arranged to the Capitol, Webb Publishing Co., the Coca Cola plant and several other places.

Sponsors of the Junior Livestock Show are the Minnesota Livestock Breeders' Association and the University of Minnesota Agricultural Extension Service, in cooperation with the South St. Paul Chamber of Commerce, St. Paul Chamber of Commerce and the South St. Paul Jaycees. Business men in the Twin Cities and throughout the state help support the show and sale.

-jbn-

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 16, 1963

To all counties

4-H NEWS

Immediate release

SCHOLARSHIPS
OFFERED TO
MINNESOTA 4-H'ERS

Minnesota 4-H'ers looking ahead toward a college career have many opportunities to win scholarships through the 4-H program, according to _____, _____ County extension agent.

For example, each year two scholarships are offered by Watkins Products, Inc., to a Minnesota 4-H boy and girl for their achievements, active participation and leadership in 4-H club work. Last year's winners, Kay Schwartz, Northfield, and Rodney G. Johnson, Roseau, are sophomores at Stout State College and at the University of Minnesota, respectively.

A long-time record of achievement in livestock projects qualified David Pierson, Lake Elmo, for the McKerrow scholarship which he will use this fall in the study of agriculture at the University of Minnesota. The \$300 scholarship is given annually by the Minnesota Livestock Breeders' Association.

A new awards program in the 4-H food preservation project begins in Minnesota this year. Ball Brothers Co., Inc., Muncie, Ind., is offering two \$300 scholarships to 4-H'ers enrolled in food preservation or in other foods projects. Purpose of the awards program is to relate food preservation more closely to meal planning and preparation.

4-H'ers enrolled in the 4-H foods-nutrition project who have good high school scholastic records are eligible for three \$100 scholarships in bread, donated by the F. H. Peavey & Co.

Present or former 4-H members who are juniors, seniors or graduate students, preferably in agricultural economics or agricultural business, are eligible for a \$400 scholarship given by Chicago and Northwestern Railway Company.

add 1 - scholarships

Scholarships ranging from \$200 to \$1,600 are available to 4-H'ers on a nationwide basis. Usually these are awarded only upon a student's satisfactory completion of at least a quarter of work in college.

The Charles Pfizer & Co. awards 20 scholarships to students planning a career in extension work. 4-H'ers majoring in agronomy, soils, entomology, floriculture, plant pathology or horticulture are eligible for the two scholarships given by the California Chemical Company.

The Chicago and NorthWestern Railway Company also awards three \$400 scholarships to students majoring or minoring in forestry or agricultural business. 4-H'ers who will enter college in 1964 may apply for achievement scholarships of \$600 donated by the Edwin T. Meredith Foundation.

Last year a Pine City 4-H'er, Paul Noreen, was one of four national winners of a \$1,600 forestry scholarship awarded by Homelite, a division of Textron, Inc. If you are interested in grain marketing-transportation, you may want to look into the two \$400 scholarships given by the Milwaukee Road.

Twelve scholarships in home economics are awarded on a national basis by Pyrofax Gas Corporation, Sunbeam Corporation, Sperry and Hutchinson, Whirlpool Foundation, West Bend Company and Clovia, national sorority for young women in 4-H.

Each year application forms and supplementary material are due in the State 4-H Club Office of the University of Minnesota by October 1. For further details on scholarships and for report forms, contact your county agent.

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 16, 1963

To all counties
ATT: Home Agents
Immediate release

FALL FASHIONS
EXPAND WITH NEW
STRETCH FABRICS

By 1970, 90 percent of all your clothes may be made of woven stretch fabric.

The stretch story began less than 10 years ago, according to Thelma Baierl, extension clothing specialist at the University of Minnesota. Before this, stretch was possible only in knits and elastic. Since 1961, woven stretch has been the newest thing in flannel, denim, poplin, corduroy, gabardine, hopsacking, jacquard --even shantung and velveteen.

Clothes made of woven stretch fabrics are comfortable. They have a flattering fit and slimming look since there is no need for the fullness of firmly woven goods nor the figure hugging look of knits.

Today's fabrics stretch lengthwise, crosswise or in both directions, Miss Baierl says. Even the amount of stretch can be regulated. Most of the fabrics range from as little as 8 percent to as much as 35 percent stretch, depending on your garment's use.

This controlled stretch is the key to fashion comfort, fit and freedom. Woven stretch fabrics move with your body, allowing easy action wherever needed, but you should never stretch a garment to fit, the University clothing specialist cautions. Even though stretch garments are cut to normal sizes, trying them on at the store is more important than ever.

Be sure to check care instructions. You can wash or dry-clean stretch fabrics depending on the fiber--cotton, wool, silk, nylon or rayon. Most fabrics "have memory" and spring back into shape after stretching. Others need gentle steaming.

Resilient, lightweight and durable, woven stretch fabrics have inspired designers to create the wide range of patterns and textures and the new fashions of which you'll be seeing more and more on the market.

add 1 - fall fashions

Women are already choosing bermudas, slacks and jackets in woven stretch fabrics. You'll soon see other clothing from suits to sleepwear in woven stretch, too.

Even the usually conservative men's wear has adopted woven stretch. Gabardine, tweed and classic checks are now made in all-wool worsteds with horizontal stretch. Special stretch fabrics are featured for golf, bowling and tennis. Work shirts and trousers also have elastic control woven in.

Nurses' uniforms came out this summer in all-cotton wash and wear stretch poplin. Woven stretch fabrics have become important also to the military forces.

Note to Agents: You will receive a story later on sewing techniques for stretch fabrics.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 16, 1963

To all counties
Immediate release

TURKEY INDUSTRY
GIVEN CARE STUDY
IN VERTICAL INTEGRATION

Minnesota's turkey industry has provided a good case study in how vertical integration develops in one kind of agricultural enterprise.

Two agricultural economists at the University of Minnesota, Turner Oylooe and Darrell F. Fienup, interviewed 147 turkey growers and operators of 7 hatcheries and 3 processing plants.

They found that more than 90 percent of the growers had integrated to some extent with hatcheries, processors, or feed manufacturers. And the larger the grower, the more likely he was to be totally integrated.

Integration between grower and hatchery, the economists found, has taken two forms--total hatchery-grower integration and partial integration of breeder flock and hatchery operations. About 17 percent of the growers also owned hatcheries and were therefore totally integrated. Thirty-five percent raised breeding flocks for hatcheries and were considered partially integrated.

Totally integrated growers (17 percent) marketed 32 percent of the turkeys produced by all growers in the sample.

What were the reasons for total integration? The main reasons were to get a better balance between demand and supply for poults, and to more fully use hatching capacity.

Hatchery planning precedes grower demand by about 10 months, so hatcheries have tried to minimize uncertainties by raising their own surplus poults. Turkey production is seasonal, and this means idle hatching facilities at certain periods. One way to offset this problem, at least partially, is to raise poults in the July-January off-season. This approach was used by about 55 percent of the totally integrated hatchery-grower flocks, but by only 35 percent of the others.

add 1 - turkey integration

Total integration between growers and processors was more limited. Even partial integration was limited to growers who sold their entire output of turkeys to cooperative plants. Over half of all growers were not integrated in any way with processors.

Turkey processing is highly specialized and depends upon a uniform daily volume of birds. Processors who were growing their own birds could thereby supplement the available supply.

Integration between feed manufacturing and growing was more common. Twelve percent of the growers owned feed facilities, and these growers accounted for nearly half of all the birds marketed. More than three-fifths of the growers were partially integrated with feed manufacturers.

The chief incentive for feed manufacturers to integrate growing was to diversify their investments. Turkey growing helped utilize feed mill capacity.

All major feed manufacturers were found to contract with growers. Both sides seemed to benefit. Growers received credit and help in their growing operations from servicemen. Feed companies had less uncertainty about the amount of feed they could sell. And total feed sales went up.

However, there were no indications that the major feed companies were in the turkey production business. While contracts between growers and feed manufacturers gave the feed companies many overseeing rights, the contracts did not provide for sharing of profits and losses from the growers' businesses. Instead, feed companies held first mortgage on the turkeys which guaranteed them payment.

Oyloe and Fienup believe that capital from feed companies will continue to play a major role in the state turkey industry. Increased feed company investment will allow growers to expand production.

At the time of the economists' study, some firms were attempting to integrate all four basic businesses--hatching, growing, processing, and feed manufacturing. Such coordination is quite successful in broiler production, but is likely to develop more slowly in turkeys. But whether such combined operations succeed will greatly affect the future organization and integration of the industry, the economists conclude.

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Department of Information
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St. Paul, Minnesota 55101
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To all counties
Immediate release

IN BRIEF.....

Turkey trends: Minnesota is second-place turkey state in the U. S.--with 15.1 million turkeys raised in 1962, compared to 18 million in California. The rank is the same in pounds of turkeys produced. But with numbers of birds going up in recent years, turkey production has concentrated to fewer farms in fewer counties. Number of birds per turkey farm rose from less than 10 in 1935 to over 6,000 in 1959.

* * * *

Our "Steak" in Pastures: A decade of research on the value of better pasture management for beef cattle has come from the University of Minnesota's Rosemount Agricultural Experiment Station. For example, one 7-year project showed that fertilizing alfalfa-brome pastures increased carrying capacity by 8 percent more steers per acre. Furthermore, value of beef per acre increased 21 percent. Studies showed that pasture forage and livestock production is the best use for land too rolling and steep for cultivated crops.

* * * *

Feed stinginess may pay for pigs. The idea of letting pigs eat all they want may be giving way to a more strictly limited feeding plan, according to R. J. Meade, University animal husbandman. Reason: limited feeding may bring more from the feed dollar. Specifically, limited feeding helps improve carcass cutout, it may result in feed savings, and it ties in well with use of automatic feeding equipment.

* * * *

Before planting the 1964 wheat crop: Better check your conservation reserve contract. These contracts require farmers to plant within their acreage allotments or, in the case of wheat, 15 acres, whichever is larger. Farmers must comply with their contracts to continue receiving conservation reserve payments. Overplanting any size allotment will reduce a farm's wheat acreage history and future allotments.

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Department of Information
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University of Minnesota
St. Paul, Minnesota 55101
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To all counties
Immediate release

SOIL CONDITION
MAY IMPROVE
WITH HEAVY USE

The old saying "You can't have your cake and eat it too" may be dead wrong where soil management is concerned.

The fact is that the biggest improvements in soil physical condition often come about with more intensive use of the soil.

Among the serious soil problems are poor tilth, crusting, lack of scouring when plowed, and lack of air space. Try as they might, soil scientists have not developed a simple "cure-all" treatment to correct such conditions.

Intensive use, though, seems to be the best antidote, according to Lowell Hanson, extension soils specialist at the University of Minnesota. He says one key is adequate fertilization. And that should be based on soil tests.

A common thought is that "resting" the soil through fallow or letting it lay idle will improve the soil.

But that notion is wrong says A. C. Caldwell, soil scientist. When high yielding crops are not grown, there is less residue going back into the soil for decomposition. And this decomposition process keeps the soil open and loose. Often, serious physical problems occur after a fallow year.

The trouble with many soils is that one or two nutrients are in short supply, limiting crop growth. When crop growth is slow, yields are low and over a period of time the soil becomes hard and difficult to work. So proper fertilization often gives surprising results by starting a chain reaction of improved yields, more crop residues and better soil physical condition.

Contact your county agent for soil sample supplies and tips on taking good samples so nutrient deficiencies can be corrected.

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Department of Information
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To all counties
Immediate release

AGRICULTURAL SEASONS
ARE DEFINED BY
TEMPERATURE DATA

Your wall calendar is telling you only part of the story about the seasons of the year.

A University of Minnesota soil scientist and the State Climatologist have defined six agricultural seasons--not just four--in Minnesota. They use temperature as the criterion and refer to "agricultural and minimum-temperature-free seasons."

Their data comes from long-time studies at 75 weather stations ranging from Ada in the northwest to Zumbrota in the southeast.

The investigators are Donald G. Baker at the University and the State Climatologist, Joseph H. Strub, Jr. Here is how they define the six agricultural seasons:

1. Early spring begins when 20 percent or less of the minimum temperatures are 16 degrees or lower. Cool season perennial crops, such as bluegrass, begin to grow, the cool season annuals such as spring oats, are planted during this season.
2. Late spring begins when less than 20 percent of the minimum temperatures are 32 degrees or lower. During this period warm season crops, such as dent corn and soybeans, are planted, and cool season crops grow rapidly.
3. Summer begins when less than 10 percent of the minimum temperatures are 40 degrees or lower. Warm season crops, such as soybeans, grow rapidly, and cool season annuals, such as small grains, are harvested at this time of year.
4. Early fall begins when more than 20 percent of the minimum temperatures are 40 degrees or lower. In early fall cool season crops, such as winter grains, are planted, and warm season crops, such as dent corn, mature rapidly.

add 1 - agricultural seasons

5. Late fall begins when more than 10 percent of the minimum temperatures are 32 degrees or lower. Cool season crops, such as winter grains, grow rapidly and warm season annuals, such as dent corn and soybeans, are harvested during this period.

6. Winter begins when more than 20 percent of the minimum temperatures are 16 degrees or lower. In winter, crop plants are dormant.

The warm seasons, early spring, late spring, and summer begin earliest in the extreme southeast and south-central part of the state and are progressively later as you go farther toward the northwest corner.

On the other hand, early autumn, late autumn, and winter begin earliest in the northwest and move across the state in a southeasterly direction.

Baker and Strub say the state's air mass sources and direction of movement explain for the gradual seasonal changes throughout the state. For instance, the warm air mass sources for Minnesota are the Gulf of Mexico and occasionally northern Mexico and southwestern United States. Our cold air masses originate in Canada to the northwest and occasionally directly north of us.

Some localities in the state don't follow the general northwesterly trend of spring and summer and the southeasterly trend of fall and winter. These exceptions are due to certain local features in particular areas.

Large bodies of water such as Lake Superior are capable of absorbing and storing much more heat than land surfaces.

As a result, the seasonal commencement dates for the shore area of Lake Superior are the same as for the southeastern counties of Dodge, Goodhue, Olmsted, Steele, and Waseca.

The Mississippi River urban and industrial heat sources, and building mass heat reservoirs are the chief reasons for spring and summer occurring earlier in the lower Mississippi Valley and the Twin Cities areas than any other area of the state.

add 2 - agricultural seasons

And a large area of organic (peat) soils around the Meadowlands station in southwestern St. Louis County cause that area to experience the same season commencement dates as extreme northwestern Minnesota. Organic soils are poor heat conductors and therefore absorb very little heat during the day and release even less at night, causing cooler overall temperatures.

There are a few places in Minnesota where the altitude alone may cause a late spring and summer and an early fall and winter. Baker and Strub say it's possible that there may be no summer, as defined, in the Misquah Hills of Cook County, highest spot in the state at 2,230 feet. But they're only speculating since there isn't enough data to provide proof.

The agricultural seasons also vary in length throughout the state. Generally summer is about 50 days longer in the southern one-fourth than in the northern one-fourth of the state. Minneapolis and Cloquet, communities which are separated by 120 miles, differ in the average length of their summers by 101 days.

Summer, as defined by Baker and Strub, is the season that largely determines crop distribution and major agricultural activities in the localities of the state.

The northern one-third of the state experiences almost a month more of early fall days than does the south end of the state.

The minimum-temperature-free seasons are also affected by local peculiarities throughout the state. For instance, the average "freeze-free" season (period free of temperatures of 32 degrees or below) in Minnesota varies from a maximum of 167 days at Minneapolis to minimum of 88 days at Meadowlands in southwestern St. Louis County.

The Baker-Strub report is contained in University of Minnesota Technical Bulletin No. 245, an Agricultural Experiment Station publication. It is Part II of a study titled Climate of Minnesota.

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Department of Information
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*For release at noon, *
*Thursday, Sept. 19 *

LABOR-**SAVING** SILAGE SYSTEM FOR BEEF CALVES REPORTED AT UM EVENT

ROSEMOUNT--A possible way to simplify feeding systems for beef calves was explained today at the University of Minnesota's Agricultural Experiment Station here.

The idea is "all-in-one" silage. It means putting ground shelled corn and protein supplement in the silo with regular corn silage.

Then, during the winter, the cattleman simply feeds silage and hay and doesn't need to spend extra time putting out protein supplement and shelled corn. It's all in the silage.

To a producer with a heavy number of calves, the labor saved could be important.

In feeding experiments explained to visitors at the Beef Cattle-Grassland Field Day, beef calves fed this "all-in-one" silage gained as well as calves fed the conventional way--with corn silage, shelled corn, and soybean meal fed separately. Feed intake and feed costs were about the same for the two feeding methods.

In each case, gains of calves during the 1962-63 winter averaged just under 1.9 pounds per head daily. Such gains are good under any feeding system.

The "all-in-one" silage contained 20 percent ground shelled corn and 4 percent soybean meal. It was all mixed together at silo filling time.

The research was explained by animal husbandmen O. E. Kolari, A. L. Harvey and J. C. Meiske. Their study involved wintering calves, but they said "all-in-one" silage might also work with fattening cattle.

They said farmers might ask this question: "How does mixing these feeds in silage affect the quality of the silage and the quality of the protein?" "Apparently, the effect, if any, is all to the good.

(more)

add 1 -- all-in-one silage

In the first place, adding ground shelled corn actually has preservative value for the silage. It makes good silage more of a certainty, since the added carbohydrates in the corn improve fermentation.

Secondly, the soybean oil meal protein seems to remain intact. The researchers calculated the protein content of the silage that you would expect, based on the content of what went into it. As the winter progressed, they repeatedly made chemical analyses of the silage, and found that protein content remained practically identical to their predictions. Silo fermentation, then, apparently did not damage the protein.

The idea of adding shelled corn to silage has been tried before, but this is one of the first times soybean meal has been added in a controlled experiment. Kolari said a farmer wanting to try the idea might use differing percentages of corn, and might also consider including minerals and other feed additives.

Adding these other feeds may require extra work at ensiling time, but that effort may be more than offset by the labor saving during the feeding period.

In other research on silage for beef cattle, University animal husbandmen reported:

* Corn silage treated with preservatives urea and sodium metabisulfite seemed to keep better in the silo and after removal than did untreated silage. However, calves fed untreated silage gained the most at the least cost.

* Feedlot performance was similar for cattle fed corn silage harvested by the regular system, as compared to silage harvested by the flail-chop method.

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Immediate release

MINN. 4-H'ER TO PARTICIPATE IN REGIONAL TRACTOR CONTEST

Daniel Peterson, 18, Waseca, will be Minnesota's representative in the Western United States 4-H Tractor Operators' Contest in Bismarck, N.D., Sept. 29-Oct. 1.

The Waseca County youth won the right to compete in the regional contest by winning the state contest in competition with 24 4-H'ers. In the regional meet he will vie with 25 other state winners for top honors.

The contest is sponsored by the Cooperative Extension Service and the American Oil Foundation.

Peterson acquired his operating skill on his parents' farm. He estimates that he has spent 140 hours this past year doing field work with the tractor and 30 hours in servicing the tractor.

Peterson is enrolled in agricultural engineering at the University of Minnesota. A 4-H Club member for nine years, he has taken the 4-H tractor project for three. He has won the Waseca County 4-H tractor award and in 1959 received first place in the junior division of the Waseca County Tractor Driving Contest. He has demonstrated tractor safety and care at club meetings and has helped younger members in the tractor project and taken part in county project meetings and workshops. He lists safety and maintenance as two of the most important things he has learned in the 4-H tractor project.

In the regional meet, each contestant will demonstrate his knowledge and ability in servicing and operating a tractor. Driving skill and safety will be based on handling a tractor with both a two-wheel trailer and with a four-wheel wagon attached. Knowledge of tractor care, mechanics and safety will be tested by a written quiz and daily tractor checkup.

The 4-H tractor operators will be working for the lowest score rather than the highest. Penalty points are assessed each contestant for unsafe procedures, excessive time requirements, improper checking and driving procedures.

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*For release at 2 p.m. *
*Thursday, Sept. 19 *

PASTURE RENOVATION, FERTILIZATION, BEEF RETURNS

ROSEMOUNT--More evidence of how well-managed pastures lead to higher beef profits was reported today during the Beef Cattle-Grassland Day at the University of Minnesota's Agricultural Experiment Station here.

Visitors were told that either renovating a pasture or applying a good dose of nitrogen fertilizer boosted beef returns per acre by more than 50 percent.

This was one of several experiments over the past decade which have demonstrated the potential of pasture for beef in the Corn Belt. The report was made by Paul Burson, soil scientist, on research he conducted in cooperation with A. R. Schmid, agronomist, and A. L. Harvey and O. E. Kolari, animal husbandmen.

The research men compared four types of pasture for beef steers. One pasture area was renovated in 1960 and 1961. Station workers cultivated the field three times in the fall and once in spring with a deep tiller. Then they disked the field and seeded it to a mixture of alfalfa, alsike clover, Lincoln brome grass and orchardgrass.

Steers grazed the area for 112 days between May and September, 1963. Records showed that weight gains averaged 456 pounds of beef per acre. And after deducting the lime, fertilizer, tillage and seed costs, this gain was worth \$70.09 per acre, or 63 percent more than unrenovated and unfertilized pasture.

The next most profitable pasture was one which had received 80 pounds of nitrogen annually, but had not been renovated. Here, beef gains were 444 pounds per acre during the 112-day grazing period, and returns over costs were \$67.95 per acre.

Pasture receiving 8 tons of manure per acre, but no nitrogen or renovation, brought beef gains of 387 pounds per acre and profits over fertilizer cost of \$57.69.

In comparison, those without nitrogen fertilizer, manure or renovation yielded returns of under \$44 per acre.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 18, 1963

*FOR RELEASE: *
*Thursday p.m., Sept. 19 *

CONSUMERS ADVISED TO BE ON GUARD

NORTH BRANCH--Beware of the technique of fraudulent merchandising known as the "bait switch," Joseph P. Summers, special assistant state attorney general, warned consumers today.

The "bait switch" is employed by some dealers who lure customers with attractive advertisements of a standard brand item, then try to talk them into a higher priced, off-brand article because the advertised item, they say, is out of stock. Salesmen for some encyclopedias and sewing machines are currently using the "bait switch" to sell Minnesotans higher priced articles than necessary, Summers said.

Among other frauds Summers cited the use of false job guarantees in selling correspondence courses and in attracting students to private vocational schools. High school principals, the State Department of Education and the Better Business Bureau have sound information regarding the best place to obtain education for special skills, as do potential employers, professional associations and labor unions.

(more)

add 1 -- fraudulent merchandising

Summers, who is head of the state Consumer Protection Unit, spoke on current consumer problems in Minnesota at the luncheon meeting of a special Consumer Protection Forum here. The all-day meeting for women was sponsored by the University of Minnesota's Agricultural Extension Service in cooperation with the Chisago County Extension Service. Myrna Shearer, Chisago County home agent, coordinated the program with the assistance of Mary E. Ryan, extension consumer marketing specialist, and Mrs. Carole Yoho, assistant extension specialist in public affairs, University of Minnesota.

Mrs. Shirley T. Munson, consumer consultant for the Food and Drug Administration, urged consumers to read and compare labels on all packaged goods they buy to be sure of what they are getting. Labels on all products that are toxic if taken internally must now carry a warning to that effect, she said.

In reply to questions frequently asked by consumers, she pointed out that certain products which meet definite standards set up by the Food and Drug Administration do not need to list the ingredients on the label. Among these products are fruit preserves and jellies, mayonnaise and catsup. Many homemakers, however, are urging the listing of ingredients on all products for the benefit of people with specific allergies.

The all-day meeting was the first of a number of consumer protection forums to be held throughout the state. One of the purposes of the forums is to examine the conditions necessitating more adequately informed consumers.

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63-266-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 18, 1963

*For release at noon, *
*Thursday, Sept. 19 *

TWO-PHASE SILAGE FEEDING SYSTEM HOLDS PROMISE FOR BEEF

ROSEMOUNT--A two-phase feeding system may give cattlemen a profitable way to turn corn silage into high quality beef, University of Minnesota animal scientists said today.

The plan means feeding a heavy amount of corn silage early in the fattening period, then switching to a high-grain ration for the last two or three months.

In studies reported to Beef Cattle-Grassland Field Day visitors at the University's Agricultural Experiment Station here, cattle on a two-phase plan had as good feed efficiency, cost-wise, as cattle getting no silage, and far better than those fed a constant and medium amount of silage throughout the trial.

The report was made by animal husbandmen O. E. Kolari, A. L. Harvey, J. C. Meiske and W. J. Aunan.

Corn silage, they pointed out, has been found by Corn Belt farmers to put the most economical weight gains on beef cattle. Furthermore, feeding programs built around corn silage usually produce more beef per acre than do feeding plans using grain rations.

However, feeding corn silage does have some problems. Feeding large amounts of it may lead to slower and less efficient weight gains. To offset this disadvantage, cattle men have found that corn silage rations need supplementation with protein, minerals, certain additives and some additional energy feed--such as corn.

Another problem is that cattle fed heavily on corn silage tend to finish out more slowly than those fed some grain. It is possible to fatten cattle on high corn silage rations and get high carcass grades, but the cattle must usually be fed for a long time period, and the carcasses may end up too heavy for current market demands.

(more)

add 1 -- two-phase silage feeding

In their research, the animal husbandmen compared steers on four feeding programs over feeding periods varying from 105 to 154 days. Cattle in one group received all the ground ear corn they would eat but no silage. Those in the second group, the "two-phase" plan, got 6 pounds ground ear corn and as much corn silage as they wanted for the first 9 weeks, then were shifted to ground ear corn without silage for the remaining time.

In the third group, cattle had 20 pounds corn silage daily throughout the trial and as much ground ear corn as they would consume. And in the fourth group, cattle were started on a full feed of silage and a limited amount of corn. The corn was increased by about 2 pounds per head weekly and the amount of silage was progressively reduced.

All steers received either 1.5 or 2 pounds linseed oil meal in addition to other feed.

As was expected, the cattle in the first group (ground ear corn, no silage) made the fastest gains. But the difference in three years of trials wasn't great-- 2.33 pounds daily for the ground ear corn only vs. about 2 for the two-phase system and just a fraction more for the other methods.

The cattle on ground ear corn also had the lowest feed requirement per 100 pounds of gain (851, compared with 877 for the two-phase system and 1023 for those getting silage throughout the study).

In feed costs, however, and this is critical to a beef man, the steers fed ground ear corn and those on the two-phase plan came out the best and not far apart (\$16.71 and \$16.50 per hundred pounds of gain, respectively).

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63-269-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 20, 1963

Immediate release

TWO EXTENSION APPOINTMENTS MADE AT UM

Two appointments in the Agricultural Extension Service at the University of Minnesota were approved by the Board of Regents at their recent meeting.

Harlund G. Routhe, professor and formerly extension agricultural economist at the University, was named state leader for extension programs and James R. Justin, Scranton, Pa., was named instructor and extension agronomist.

The appointments were announced by Skuli Rutford, director of the Agricultural Extension Service.

Routhe's new responsibility will be to give broad leadership to development and coordination of extension educational programs. In addition, he will have specific administrative and developmental responsibility for programs in agricultural production and management; natural resource development; marketing and utilization of agricultural products, and community and public affairs.

Justin will develop educational programs concerning field crops and their improvement, in cooperation with other specialists, county extension agents, farmers and agricultural business groups. He will place special emphasis on forages.

Routhe has been on the Minnesota Extension staff since 1952. He was field man for the Southwest Farm Management Association at Worthington for three years and was named extension economist in farm management on the St. Paul Campus in 1955.

Raised on a hog-dairy farm near Redwood Falls, Routhe was a 4-H Club member for seven years and in 1944 was named Minnesota's outstanding Junior Leader. He attended the University of Minnesota, where he earned his B.S. with distinction in 1950 and his M.S. in agricultural economics in 1954.

Justin has B.S. and M.S. degrees from Pennsylvania State University and earned his Ph.D. this summer from Texas A & M College. His research specialty as a graduate student was small grain breeding, and he taught courses at Texas A & M in forages, grain and fiber crops.

His experience also includes a year as a representative for a dairy firm in Pennsylvania.

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63-271-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 20, 1963

(With sketch)

Immediate release

HOUSE WITH CARPORT HAS AMPLE STORAGE

Ten years of test-family living helped perfect the final design of a two-bedroom farmhouse with carport designed by the U. S. Department of Agriculture.

First built at the USDA's Agricultural Research Center, Beltsville, Md., in 1952, plan no. 7156 has been revised to provide 105 square feet of interior closet space and 63 square feet of outside storage space. This increase in floor space, especially for storage, was one of the biggest improvements based on occupants suggestions, according to Mary L. Muller, extension home improvement specialist at the University of Minnesota.

A separate dining room and a good-sized living room allow ample space for family activities. The workroom is distinct from the kitchen and provides space for a freezer, sink and laundry facilities.

A flagstone terrace adjoining the rear of the house may be reached from either the workroom or the bedroom hall. A covered front entrance porch opens directly into the living room.

This house may be constructed gradually. The main part of the house with the covered porch can be completed first and the building or finishing of the bedrooms and carport deferred. In this case, the living room would serve as a combination bedroom-living room and the closets at the end of the living room would open into it. When the bedroom wing was added, the closets would open into the bedroom.

A descriptive leaflet is available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul. Copies of building plan No. 7156 may be obtained from Blueprint Room, Agricultural Engineering Department, Institute of Agriculture, University of Minnesota, St. Paul, for 75 cents. Money must accompany the order for the plan.

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63-272-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 23, 1963

To all counties
Immediate Release

County Agent: These items are based on research reported at the Beef Cattle-Grassland Field Day Sept. 19 at Rosemount.

IN BRIEF.....

Two-phase silage plan: For cheap gains and high carcass grades, it may be hard to beat this plan for fattening cattle. You feed a heavy corn silage ration early in the fattening period, then switch to a high grain ration in the last two or three months. In University of Minnesota feeding trials, cattle on a two-phase plan had as good feed efficiency, cost wise, as cattle getting no silage. And they did far better than those fed a constant and medium amount of silage throughout the trial.

* * * *

Better pastures; better beef: Renovate that pasture for beef cattle, and returns may go up by as much as 50 percent per acre--or even more. University of Minnesota researchers renovated and reseeded an area to alfalfa, alsike clover, bromegrass and orchardgrass. They fertilized it, too. Steers grazed it this summer and, after lime, fertilizer and tillage and seed costs, produced \$70.19 per acre. That was 63 percent more than unimproved pasture.

* * * *

All-in-one silage may be one answer to labor problems with beef cattle. You might save that bother of first feeding silage, then protein supplement, and then shelled corn. University beef researchers tried mixing 20 percent ground shelled corn and 4 percent soybean meal with silage at filling time. Calves fed this one-shot ration during the 1962-63 winter averaged just under 1.9 pounds per head daily. That was practically equal to other calves getting silage, corn, and protein separately.

* * * *

Regular chop or flail chop for silage? Probably makes no difference. The flail chop harvesting method has sometimes been suggested as a better way to make corn ready for the silo. But in University trials, feedlot performance for beef cattle fed silage was about the same for one kind of silage as for another.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 23, 1963

To all counties
Immediate release

(with mat)

FALLOUT SHELTER
HAS MANY USES;
PLAN OFFERED

Here's a fallout shelter that can double as a photographer's darkroom, as a storage center, and for any other uses.

You may find it a handy addition for a new house or an old one as well, according to Clifton Halsey, extension rural civil defense agent at the University of Minnesota.

The shelter accomodates six persons. Permanent storage shelves can be installed along the wall, instead of the bunks as shown. Then in case of emergency, the shelves themselves could be used as bunks.

This shelter may be built in one corner of the basement--preferably one where earth is up to the ceiling of the shelter on the outside. That will mean the most radiation protection.

With a cast concrete ceiling 8 inches thick, this shelter will reduce radiation by 99.5 percent. With a ceiling 12 inches thick, it keeps out 99.7 percent of the fallout radiation. In other words, the entire basement need not be below ground to make the shelter effective.

Air comes into the shelter through louvers in the entrance doors. A blower can be used to force air in.

The shelter has an emergency water outlet to use water in the water heater. The tank may be vented without leaving the shelter. If a tempering tank is also placed in the supply line to the water heater, the water may be enough to supply the family's emergency needs.

The plans are from the U. S. Department of Agriculture. You may get copies by writing to the State Extension Rural Civil Defense Agent, University of Minnesota, St. Paul 1. Ask for plan 7166. The cost is 25 cents.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 23, 1963

County Agent: Some editors might like
a copy of the publication itself,
to make use of local figures.

1st of two articles on
Minnesota population
changes

MINNESOTA POPULATION
SHOWS MAJOR CHANGES
IN SIZE, STRUCTURE

How Minnesota's population has changed, both in quantity and in make-up has been described in detail in a recent publication from the University of Minnesota.

The publication is titled "Population of Minnesota, 1950-1960," and was prepared by John D. Photiadis, rural sociologist.

Among the population changes which he describes are these:

1. The growth in total population between 1950 and 1960, 14.5 percent, is below that for the U. S. (18.5 percent) but higher than that for all neighboring states except Wisconsin.
2. Minnesota's population gain is not distributed uniformly through the various population segments. Of Minnesota's 87 counties, 37 lost population while 23 gained more than 10 percent.
3. Notable increases have occurred in proportions of people under 5 years of age and over 65.
4. Minnesota underwent a sharp change in the rural-urban ratio. Total rural population declined. But the rural farm group lost greater numbers than the rural non-farm group gained.
5. The number of foreign-born persons decreased in actual numbers in the 1950 to 1960 period.

The population of Minnesota, according to the 1960 census, is 3,413,864. This is an increase from just under 3 million in 1950, about 2.8 million in 1940, and 1.7 million at the turn of the century.

Minnesota's share of the U. S. population actually declined from 1950 to 1960 - from 1.97 percent in 1950 to 1.90 percent in the most recent census. Yet,

add 1 - Minnesota population shows changes

Minnesota's population growth over the last ten years has been 9.3 percent higher than Iowa's, 12.4 percent higher than North Dakota's, 10.1 percent above South Dakota's and 8 percent higher than Nebraska's.

Wisconsin and Illinois are growing slightly faster than Minnesota -- the former by .6 percent and the latter by 1.2 percent.

Urbanization has been a major factor accounting for the uneven population changes in Minnesota, Photiadis says. During the 1950-60 period, incorporated places gained 25.3 percent more than did unincorporated ones. The proportion of persons living in places of less than 2500 inhabitants increased only 2 percent, while the proportion in places of 2500 and more has increased 25.2 percent.

The largest population increase was 77.4 percent which occurred in settlements of 10,000 to 24,999. Such settlements tend to double their population about every 13 years, according to Photiadis.

Changes in county population range from a drop of 16.2 percent in Roseau county by the Canadian border, to a gain of 141.5 percent in Anoka county, near the Twin Cities. Except for Clay county, the counties which gained more than 10 percent are mostly around the Twin Cities and in the northeast and southeast.

Looking back over the previous 90 years, Photiadis noted that rural counties showed population increases between 1870 and 1910. But since World War I, he saw a fairly steady population decline, a trend closely related to farm mechanization and increased acreage per farm.

Counties in the Twin Cities area have grown steadily since 1870, but their growth has accelerated during the past decade.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 23, 1963

To all counties
4-H NEWS
Immediate release

YOUNG PEOPLE
INVITED TO JOIN
LOCAL 4-H CLUBS

A special invitation to Minnesota youth to join a local 4-H club has been issued by Leonard Harkness, state 4-H Club leader at the University of Minnesota.

Boys and girls between the ages of 9 and 21 are eligible to join. Contact a local leader, a 4-H member or the county extension office for information about joining or organizing a new club.

"Learning by doing" in a variety of projects is the heart of the 4-H program. But members also have the fun of taking part in recreational activities and of meeting young people their own age.

Taking at least one project is a requirement of 4-H members. Members may choose what they will enjoy most from a wide range of projects offered in conservation, safety, health, electric, shop, gardening, as well as in leadership, homemaking and agriculture. Foods and nutrition, clothing and home improvement-family-living are some of the choices for girls.

The 4-H club program is changing to keep in tune with the times, Harkness said. Some projects are geared to older youth and to urban young people -- for example, career exploration, town and country business, entomology, automotive care and safety. Family living and preparation for marriage, and public affairs are other areas being tested on a pilot basis in some counties.

Regardless of the project, 4-H'ers learn skills they can put to use immediately, as well as in later life.

-more-

add 1 - joining 4-H clubs

Recreation, too, is stressed through talent shows, picnics, camping, club parties and tours as well as at social hours at each monthly meeting.

The four H's on the 4-H cloverleaf emblem stand for head, heart, hands and health and imply these goals emphasized in the club program: head -- to learn the value of science through applying the latest scientific knowledge to projects; heart -- to develop wholesome character and personality and qualities of good citizenship; hands -- to acquire useful skills; health -- to cultivate good health habits which lead to happy living.

-jbn-

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 23, 1963

To all counties
ATT: HOME AGENTS
Immediate release

CHILD ACCIDENT
TOLL HIGH FROM
FARM MACHINES

Farm machines are causing death and injury to far too many children, says Glenn Prickett, extension farm safety specialist at the University of Minnesota.

Twenty-nine children were killed in Minnesota farm and home accidents during the first six months of 1963 -- 12 of them in tractor and truck accidents.

Twenty-one of the children killed were boys.

Last year tractors, trucks and other machinery took the lives of 16 children -- a fourth of them under 14 years of age.

Here are descriptions of how a few of the accidents occurred:

"Three-year-old child fell off while riding on the tractor." "Tractor ran over two-year-old." "Five-year-old fell from truck and fell under wheels." "Tractor tipped while 12-year-old was turning it." "Eleven-year-old fell off while operating the tractor."

As Child Safety Day is observed October 7, the toll of accidents to children in Minnesota should be a grim reminder to parents of the urgency not only of teaching safety but of practicing safety themselves, says Glenn Prickett, extension farm safety specialist at the University of Minnesota.

Prickett suggests some safety practices to help avoid tragic accidents to children around the farm yard:

- . Keep children off and away from tractors and other farm machines in operation.
- . Keep a watchful eye on the toddler -- especially when there are trucks or moving machinery in the farm yard. Better still, keep the toddler in the house when the milk truck arrives, or when there is any truck or moving machinery in the yard.
- . Teach and train young operators before interesting them with tractors and machines.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 23, 1963

To all counties
Immediate release

CROPPING SEQUENCE
NOT CLOSELY LINKED
TO CORN STALK ROT

Stalk rot in corn may have several causes, but whether you raise the corn in a rotation sequence with other crops or grow it continuously is probably not a critical factor.

Two plant pathologists at the University of Minnesota, Roy D. Wilcoxson and R. P. Covey, draw that conclusion after seven years of study on the corn stalk rot problem.

They had an excellent "laboratory" for their study--a set of crop sequence plots established in 1949 at the University's Rosemount Agricultural Experiment Station. Each year, they had corn on plots that had been planted to either corn, soybeans, oats, wheat or flax the previous season.

Nine different corn hybrids were grown in these plots between 1955 and 1962. The plant pathologists inoculated between 10 and 20 plants of each hybrid with stalk rot organisms, in the second internode above the ground. They made these inoculations two weeks after tassels appeared.

They checked the size of the necrotic lesions 30 days after the inoculation and determined stalk breakage in mid-October. "Necrotic lesions" are areas of dead plant tissue killed by the stalk rot organisms.

Results showed that size of the necrotic lesions in the inoculated stalks was not altered by the crop which had been grown in the plot the previous year. This was true for all hybrids and for every year of the study.

-more-

add 1 - crop sequence and stalk rot

Stalk breakage was greater in some hybrids than in others, but this was expected. In 1961, two specific hybrids appeared to differ from each other when on plots previously in wheat, flax or soybeans, but not when planted on plots following corn or oats.

Also, in 1959, there was more stalk breakage when corn followed corn than other crops. And in 1961, there was more stalk breakage when corn followed corn and soybeans than when corn followed the other crops.

During the other five years of the studies, however, there were no differences according to crops grown on the plots the previous year. The plant pathologists did find considerable differences in stalk breakage from one year to another, which suggests that environmental factors in general have a marked effect.

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Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 23, 1963

Immediate release

YACC ADVISORY COMMITTEE APPOINTED

Appointment of 10 youth and agricultural leaders to the state advisory committee of the Young Adult Citizens' Council was announced today by Skuli Rutford, director of the University of Minnesota's Agricultural Extension Service.

The Young Adult Citizens' program is an outgrowth of the Rural Youth-Young Men and Women's groups. Its purpose is to develop, with the assistance of the Extension Service, a program of study and training for young adults so they may become more informed and more effective citizens.

Named to the advisory committee were Donald Fowers, Fairmont; Alvin Henry, Foley; Russell Stansfield, Northern States Power Co., Minneapolis; Ernest Johnson, Redwood County agricultural agent; Donald Hasbargen, Mower County agricultural agent; Irene Ott, McLeod County home agent; Joe Clifford, Midland Cooperatives, Inc., Minneapolis; Marian Larson, assistant state 4-H Club leader; Mrs. Carole B. Yoho, assistant extension specialist, public affairs; and Glenn T. McCleary, district supervisor, county extension work, University of Minnesota.

The advisory committee will meet with the YAC executive committee on the University's St. Paul Campus Saturday morning, Sept. 28, to discuss purposes and objectives of the YAC program and its organizational structure. The group will also begin making plans for fall district conferences.

Charles Jensen, Glencoe, is state president of Young Adult Citizens. State advisor is William A. Milbrath, extension specialist, Young Adult Program.

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63-274-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 23, 1963

Immediate release

MC LEOD COUNTY YOUTH TO JAMAICA IN IFYE PROGRAM

The first Minnesotan to go to Jamaica under the International Farm Youth Exchange will be Darrol Bussler, 23, Brownton, who will fly from Washington to Kingston, Sept. 29.

For six months the McLeod County youth will live and work with farm families in Jamaica. Before leaving the United States he will spend a week in Washington, D. C., for orientation.

This is the second year of Jamaica's participation in the International Farm Youth Exchange. Pauline Fuller, a teacher in Jamaica, is presently in Watonwan County, Minnesota, and later this month will go to Becker County to live with several farm families.

Bussler is a graduate of Gustavus Adolphus College in speech and English. He has spent the last six months in military service. Active in dramatics and music, he has played many roles in college productions, has been organist and choir director for his local church. As a 4-H member he was awarded trips to the National 4-H Club Congress in Chicago and the National 4-H Conference in Washington, D.C., for his leadership and achievements in project work. He was state 4-H radio speaking winner in 1958.

The International Farm Youth Exchange, a 4-H Club people-to-people program, is conducted by the National 4-H Foundation and the Cooperative Extension Service to increase international understanding. Young people live and work with farm families so that they might learn to know and understand their way of life. Now in its 16th year, the IFYE program has exchanged 3,026 young people between the United States and 63 cooperating countries. Minnesota alone has sent 45 young people abroad under the exchange and has been host to 128 from other countries. Winton Nelson, Atwater, is now in the British Isles as an IFYE delegate from Minnesota.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 23, 1963

*For release at noon, *
*Tuesday, Sept. 24 *

NACAA SPEAKER VIEWS FUTURE IMAGE OF COUNTY AGENT

MINNEAPOLIS--County agents in the future might well be seen by their local people as a "front door" to all the assistance their land-grant colleges and universities can provide, the nation's county agricultural agents were told today.

The director of the Florida Extension Service, M. O. Watkins, said the image for which agents are striving is that of an educational leader, whose efforts are directed toward programs of vital concern to both rural and urban people.

Such programs, he said are those "which solve problems retarding the development of the people and the county's resources." Watkins spoke during a symposium on "The County Agent Image."

As times and rural conditions have changed, Watkins said, so has the job of the county agent. Among the changes he noted are these:

1) "Farm people are no longer isolated from the world, ignorant or uninformed. The farmer's level of education has gone up, and in many cases he has a degree from an agricultural college. Such a farmer does not want to be talked down to and he probably will not accept information from anyone who is less educated than himself."

2) "This modern, more educated farmer often no longer has to be sold on the importance of new technology. Often he is willing to take it before field trials have proven its adaptability to his farm. Often we must wholesale our information through commercial people." Services which agents once had to perform for farmers, in many instances, are now being supplied by commercial people, Watkins said.

3) "Leadership of the county agent is more important than ever, but it must be provided in exactly the right way. We used to take the farmer's side in a controversy between farmer and nonfarmer," Watkins said, "but the public might rightfully object to paying the salary of someone in their employ for defending a minority group that has the ability to defend itself if the issue really demands it."

4) "City people are no longer grateful to the county agent for increased production. The role of the agent must be seen as benefitting them in other ways."

Watkins said the enormity of extension's educational job is emphasized by the fact that about 40 percent of all employed people today are in some job related to the production, processing, servicing or marketing of farm products.

(more)

add 1 -- county agent image

"New technology is an absolute must to those who would keep up in agribusiness " said Watkins. Added to that job, he stated, is the supplying of information to urban residents on lawns, fruit trees, gardens, household insects and other problems.

Besides agribusiness, Watkins continued, the "entire public is vitally concerned with the wise use of our rural resources, public policies relating to agriculture and rural areas, community development, and the development of our youth. This public must see the county agent's image in terms of benefitting all, and not just a small minority. "

Watkins explained that in the early years of extension, the agent's main job was to help a rural people--^upeople who were, relatively speaking, poorly educated, living in isolation from their city cousins, and having a low level of productivity from their small farms, with few comforts and pleasures in life.

"Through sheer determination and perseverance, the agent began to get across new and better ways of doing things. Dressed in the traditional khaki, he often had to actually do the job for the farmer to demonstrate a new practice or an improved variety, bring in a new breed of livestock, or a more efficient system. He often furnished the leadership which farmers lacked to get a message across concerning rural problems to those in positions of authority at county, state or national levels.

"Gradually, and then with increasing speed, farm productivity began to shoot up. With the help of the home agent, farm homes began to take on some of the comforts, conveniences, and pleasures found in city homes."

Watkins asked: "Is it any wonder that with such tremendous success against terrific odds the county agent became a close friend to rural people?" He added that some things about the image of the earlier county agent are as important now as in the past. But the changes in the role of the agent and the consequences of these changes for his image must not be overlooked, Watkins said.

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63-273-pjt

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 25, 1963

Immediate release

TIPS ON SELECTING SPRING-BLOOMING BULBS

Shall I select the largest tulip bulbs I can find, or will I get the best buy if I take advantage of a so-called "bargain offer"?

These are some of the questions gardeners are asking as they consider buying spring-blooming bulbs now being shown in great variety at garden stores.

C. G. Hard, extension horticulturist at the University of Minnesota, says it's not necessary to spend the money for jumbo bulbs, though it is true that large bulbs are generally better than small ones. But be selective about quality, he urges. The outer husk should be shiny, glossy and healthy looking. Dull-looking bulbs may be dehydrated. Avoid any that are soft, moldy or discolored.

The University horticulturist gives these further tips:

- . Choose varieties for continuous bloom. Study types of tulips and other spring-flowering bulbs before buying, so you can select varieties that will give you an extended period of bloom--from early spring until other garden flowers blossom.
- . Buy the specific colors you want. It's usually best to buy bulbs individually rather than in variety packs, since the latter mixtures often contain too many of one color.
- . Choose either domestic or imported bulbs. They are equally good.
- . Be skeptical about bargain offers that seem to give you too much for your money. Remember that you get about what you pay for in quality.

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63-279-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota.
St. Paul 55101 -- Tel. 647-3205
September 25, 1963

Immediate release

PER UNIT FARM COSTS DROP AS FARM SIZE INCREASES

Increasing the size of farm operation seems to be the answer to reducing operating costs per acre in the Red River Valley.

That report can be found in a Minnesota Agricultural Experiment Station bulletin co-authored by agricultural economists L. C. Rixe and H. R. Jensen. In their report, Cost Advantages to Size of Farm in Red River Valley Farming, four alternatives are presented to farmers seeking income-improving adjustments for their cost-price farming techniques.

They are: 1) Increased efficiency of resources now existing. This may be accomplished by a higher product return from the same resources or the same product return from fewer resources.

2) The gearing of existing resources to the production of more valuable products.

3) Adding more capital and labor to the present situation. This can increase income per unit if handled in a judicious manner.

4) And a final method, which many farmers are finding more profitable, expansion of present property, either by renting or purchasing, thus making more economical use of the existing machinery, power and labor.

Seventy percent of the 148 farm operators interviewed by Rixe and Jensen said they believed it would be possible for them to operate more land with their existing inputs. And better than 70 percent felt that it would pay to add more land.

(more)

add 1 -- farm costs

This last point is where the emphasis of the report was focused. They found that trends in farm size and number in the Valley are closely aligned to national and state-wide trends. In other words, the number of farms is decreasing while the size of the farms is increasing.

In order to keep the Valley farms under study on equal comparison bases, the authors divided the farms into three groups according to their products of cash grain, cash grain and sugar beets, and cash crop farms with some livestock income.

The authors' analysis of the cash grain farms and the cash grain with sugar beets farms showed that costs per crop acre declined sharply at the smaller crop acre sizes, leveling off at the larger acre sizes.

An example might be the move from 400 to 600 crop acres. In such a move there was a reduction in costs per acre of more than two dollars for cash grain operators and \$3.75 for grain plus sugar beet operations. Also pointed up by the study was the faster decline of costs per acre in the cash grain with sugar beet farms as opposed by the straight cash grain situation. This was over most acreage levels.

For farms with cash crop plus livestock there was a different criteria used. The best method of determining cost reduction here was the use of cost per \$100 gross income. This method showed that costs per \$100 gross income in the \$40,000 to \$50,000 range for all three types of farming operations was about the same. However, the costs dropped sharply for all three farm groups at the low gross-income levels.

Since the indication is that per unit costs drop as farm crop acreage increases, Rixe and Jensen look for a continuation of the "upward pressure" on farm size. And although they expect this trend to continue for the future, there's a possibility that farmers will hold back on the sale of land in lieu of higher prices in the future. This, the authors feel, could eliminate the economical advantages outlined above in terms of costs per crop acre or per \$100 gross income.

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and Agricultural Journalism
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Immediate release

CORN SOYBEAN DAY - September 26

The Minnesota annual Corn-Soybean program at the University of Minnesota Agricultural Experiment Station, Rosemount, is Thursday, September 26.

The meeting will open at 1 p.m. in the office-auditorium with registration and a discussion of the several varietal trials with corn and soybeans. Presiding at that first session will be A. C. Heine, superintendant of the experiment station.

A discussion of the calendarization of corn will be led by Robert Peterson of the agronomy department at the University shortly after 1 p.m.

Another member of the agronomy department, Richard Cooper, will give an address on "Oriental Foods from American Soybeans." Cooper's talk will be illustrated with slides he obtained while at a symposium in Chicago on the use of soybeans in preparation of these oriental dishes.

Also on the afternoon program is extension agronomist Harley Otto. He will discuss the grading of soybeans.

The steady advance of the "western" corn rootworm to within the borders of Dakota County calls for special measures to cope with this persistent pest. John Lofgren, extension entomologist, will present views on this corn rootworm menace and methods to counter it.

The highlight of the afternoon will be an address by the assistant director of the Agricultural Experiment Station, William Hueg. Hueg will discuss the agricultural research which is taking place in Minnesota now.

Following these programs will be a tour of the several test plots at the station. These will be conducted by R. M. Dennistoun. The public is invited.

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 25, 1963

*For release at 8 p.m., *
*Thursday, Sept. 26 *

THREE MINNESOTA COUNTY AGENTS CITED FOR DISTINGUISHED SERVICE

MINNEAPOLIS--Three Minnesotans were among the 112 county agricultural agents from around the nation who this evening received their professional organization's highest award.

The Distinguished Service Award of the National Association of County Agricultural Agents went to Warren F. Liebenstein, Faribault, Rice County agent; Sherman M. Mandt, Perham, East Otter Tail County agent; and Julin O. Jacobson, Hibbing, West St. Louis County agent.

The awards were made during a banquet session of the NACAA annual meeting at the Leamington Hotel.

Liebenstein has been in the Rice County extension office since 1950 and has been agent there since 1951. He is a 1950 graduate of the University of Minnesota.

His major extension activities have been in dairy improvement, soil and fertility, livestock, 4-H, cooperatives and public affairs. Rice was the first Minnesota county to have all DHIA associations on a central data processing plan. 4-H membership in Rice County has increased 40 percent in recent years. These youths have given heavy emphasis to dairy projects and junior leadership.

Mandt has held his present position since 1951, and has initiated a variety of extension educational programs in East Otter Tail County. Among the local people he has worked with, in addition to farmers, are dairy plants, grain and elevator operators, dairy testing associations, 4-H Clubs, sportsmen's organizations, government units, bankers, veteran's organizations, vocational agriculture teachers and civic groups. He has promoted adoption of many farming practices, among them better use of forages and dairy herd improvement.

Mandt, who is press chairman for the NACAA annual meeting, is a 1951 graduate of North Dakota State University and is a native of Polk County.

(more)

add 1 -- DSA winners

Jacobson has been in the Extension Service since he graduated from the University in 1950, and has been at Hibbing since 1954. Earlier, he was Beltrami County agent at Bemidji.

Jacobson has been especially active in helping people organize and initiate Rural Areas Development programs. He has been secretary of the St. Louis County area development organization for three years and recently has been helping with the county's Overall Social and Economic Development Plan.

His other areas of activity include soil and water conservation, civil defense education, sheep and beef industry improvement, 4-H livestock projects, dairy improvement, soil testing, and forage crop improvement.

Distinguished Service Award winners from other states were:

ALABAMA: Ralph C. Hartzog, Henry County, Abbeville; William H. Johnson, Baldwin County, Bay Minette; H. Haskell Lumpkin, Lamar County, Vernon; Charles D. Rutledge, Morgan County, Hartselle.

ARIZONA: Alvin Allen, Yavapai County, Prescott.

ARKANSAS: Victor Ivy, Sevier County, De Queen; John M. Karber, Sebastian County, Ft. Smith; John D. Shults, Poinsett County, Harrisburg.

COLORADO: Charles F. Lane, Arapahoe County, Littleton; Fred A. Fitzsimmons, Montezuma County, Cortez.

DELAWARE: George K. Vapaa, Kent County, Dover.

FLORIDA: R. T. Clay, Putnam County, Palatka; J. Paul Crews, Suwannee County, Live Oak; Donald W. Lander, Collier County, Naples.

GEORGIA: J. W. Chambers, Richmond County, Augusta; R. F. Garner, Jr., Sumter County, Americus; Eston A. Harden, Glynn County, Brunswick; A. C. Holland, Bartow County, Cartersville; Charles R. O'Kelley, state staff, Athens; Ernest Wester, Cobb County, Marietta.

HAWAII: John Y. Iwane, Kona County, Kealahou.

IDAHO: Milton B. Weston, Bingham County, Blackfoot.

(more)

add 2 -- DSA winners

ILLINOIS: W. E. Myers, Macon County, Decatur; Waldemar E. Schmidt, DuPage County, Naperville; A. A. Wicklein, Will County, Joliet.

INDIANA: Lewis E. Cooper, Spencer County, Rockport; Roy Ewbank, Crawford County, English; John L. Stark, Jasper County, Rensselaer.

IOWA: Edgar W. Dorow, Mitchell County, Osage; John E. Henderson, Jackson County, Maquoketa; Frank P. Lown, Emmet County, Esterville; Warren D. Raney, Greene County, Jefferson.

KANSAS: Gerald McMaster, Norton County, Norton; M. F. Walker, Jr., Grant County, Ulysses.

KENTUCKY: J. T. Cochran, Bath County, Owingsville; William T. Hooks, Webster County, Dixon; Earl Kilbourne, South Central Kentucky Area, Glasgow; Free W. Wallace, Hart County, Munfordville.

LOUISIANA: Charles B. "Ted" Carroll, Caddo County, Shreveport; Victor Murray, Washington County, Franklinton; James J. Robert, St. Landry County, Opelousas.

MARYLAND: Francis M. Rogers, Caroline County, Denton.

MICHIGAN: Joseph L. Heirman, Delta County, Escanaba; Raymond McMullen, Otsego-Montmorency, Gaylord; Lyle E. Tompkins, West Central Michigan, Hart.

MISSISSIPPI: William L. Adams, Alcorn County, Corinth; Stanley L. Ducker, Lamar County, Purvis; John Victor Shaw, Union County, New Albany; Harold L. Stewart, Hinds County, Raymond; Leroy Thomas, Bolivar County, Cleveland.

MISSOURI: James C. Heitmeyer, Carroll County, Carrollton; John Hubbard, Barry County, Cassville; Melvin K. McLean, Buchanan County, St. Joseph; Lawrence E. Olson, Cass County, Harrisonville; Ralph W. Schaller, Oregon County, Alton.

MONTANA: Don L. Hunter, Roosevelt County, Culbertson.

NEBRASKA: Robert A. Pollard, Howard County, St. Paul; Fred M. Schmidt, Keith-Arthur, Ogallala; Loyd L. Young, Seward County, Seward.

NEW ENGLAND: Perley D. Colby, Hillsboro, New Hampshire, Milford; Russell E. Hibbard, New London, Connecticut, Norwich.

(more)

add 3 -- DSA winners

NEW JERSEY: Eric H. Peterson, Jr., Union County, Westfield.

NEW MEXICO: Austin A. Albert, San Juan County, Aztec.

NEW YORK: Ernest J. Cole, Tompkins County, Ithaca; William G. Howe, Cattaraugus County, Ellicottville; Earle A. Wilde, Sullivan County, Liberty.

NORTH CAROLINA: Ralph M. Aldridge, Caswell County, Yancyville; Everett L. Dillingham, Yancey County, Burnsville; J. R. Franck, Jones County, Trenton; W. D. Lewis, Wilson County, Wilson; George A. Stoudemire, Lincoln County, Lincolnton; Charles D. Raper, Columbus County, Whiteville.

NORTH DAKOTA: Robert W. Amstrup, Walsh County, Park River.

OHIO: Howard R. Showalter, Carroll County, Carrolton; Marion W. Wallace, Montgomery County, Dayton; Lowell O. Wilson, Union County, Marysville.

OKLAHOMA: Ralph C. Pinkerton, Pawnee County, Pawnee; Winfred N. Oswalt, Oklahoma County, Oklahoma City; Robert A. Lamar, Grady County, Chickasha.

OREGON: S. A. Jackson, Benton County, Corvallis; H. G. Smith, Tillamook County, Tillamook.

PENNSYLVANIA: S. Glenn Ellenberger, Lehigh, Allentown; R. F. Mollenauer, Crawford County, Meadville; Robert A. Powers, Jr., Chester County, West Chester.

SOUTH CAROLINA: E. C. Abrams, Marlboro County, Bennettsville; M. Alex Bouknight, Sr., Lexington County, Lexington.

SOUTH DAKOTA: Charles M. Culhane, Moody County, Flandrau; Denver R. Parks, Hutchinson County, Olivet.

TENNESSEE: Melvin H. Arnett, Wilson County, Lebanon; Everett E. Carrell, Fayette County, Sumerville; Charles F. McCall, Loudon County, Loudon; H. E. Swack, Warren County, McMinnville.

TEXAS: Ross Garrett, Madison County, Madisonville; B. T. Haws, Wichita County, Wichita Falls; Victor Joyner, Roberts County, Miami; Werner M. Lindig, Bandera County, Bandera; Herman R. Lynch, Bowie County, New Boston; L. M. Vaughn, Brazoria County, Coupeville.

UTAH: Joel C. Barlow, Iron and Utah, Provo.

(more)

add 4 -- DSA winners

VIRGINIA: John G. Rogers, Accomack County, Accomack; Ashton W. Sinclair, Washington County, Abingdon; C. Clifton Tucker, Franklin County, Rocky Mount.

WASHINGTON: J. Morrill Delano, King County, Seattle; Joseph C. Long, Island County, Oak Harbor.

WEST VIRGINIA: French L. Miles, Roane County, Spencer.

WISCONSIN: Hugh G. Alberts, Dodge and Rock counties, Janesville; John Buchholz, Manitowoc County, Manitowoc; Jerome L. Riedy, Jefferson County, Jefferson.

WYOMING: Melvin E. Lynch, Campbell County, Gillette.

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63-276-pjt

Department of Information
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Institute of Agriculture
University of Minnesota
St. Paul 55101 -- Tel. 647-3205
September 26, 1963

Immediate release

JUNIOR LIVESTOCK SHOW SEPT. 30-OCT. 3

More than 750 Minnesota 4-H Club members will show their animals at the 1963 Junior Livestock Show in South St. Paul Sept. 30-Oct. 3.

The 4-H'ers who have won trips to the show have been blue ribbon exhibitors at county fairs or local achievement days, according to Leonard Harkness, state 4-H Club leader at the University of Minnesota.

Largest class to be exhibited will be beef--with 325 steers scheduled to be shown. Other livestock will include 195 market wether lambs, 191 barrows and 21 trios of lambs.

Entry day will be Monday, Sept. 30, with registration opening at 8 a.m. The opening assembly for 4-H exhibitors is scheduled for 5 p.m. in the Livestock Pavilion.

Market barrows and lambs will be judged Tuesday morning, Oct. 1, and beef steers will be judged Wednesday morning. Showmanship contests and award of championships have been set for Tuesday afternoon for barrows and lambs and Wednesday afternoon for beef.

One hundred fifty-two of the top-ranking exhibits will be sold at auction Thursday afternoon (Oct. 3), beginning at 1:15. All other animals are sold by the commission companies to which they are consigned. Selling by commission companies starts at 8 a.m. Thursday in the livestock barn.

(more)

add 1 -- junior livestock show

A new feature of the show this year is an attempt to teach carcass evaluation through a livestock evaluation contest and carcass evaluation of 4-H'ers animals. Purpose of the contest is to educate young livestock raisers to produce the type of animal that is best adapted to marketing and that will yield cuts with the amount of finish and meatiness consumers demand.

For the first time, also, exhibitors whose animals are slaughtered at South St. Paul will get a carcass evaluation on their individual animals. In charge of the livestock and carcass evaluation phase of the program is Irvin Omtvedt, extension animal husbandman, assisted by W. J. Aunan, professor of animal husbandry at the University of Minnesota.

Exhibitors will be guests of the St. Paul area Chamber of Commerce at a banquet at the St. Paul Hotel Wednesday evening. Other activities planned for the 4-H'ers include educational tours, a 4-H roundup program in South St. Paul High School and an evening of entertainment at the Cow Palace in South St. Paul. Tours are being arranged to the Capitol, Webb Publishing Co., the Coca Cola plant and several other places.

Sponsors of the Junior Livestock Show are the Minnesota Livestock Breeders' Association and the University of Minnesota Agricultural Extension Service, in cooperation with the South St. Paul Chamber of Commerce, St. Paul Chamber of Commerce and the South St. Paul Jaycees. Business men in the Twin Cities and throughout the state help support the show and sale.

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63-280-jbn

Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 30, 1963

To all counties
(2nd of two articles
on Minnesota population)

Immediate release

MSC
9/30/63
MINNESOTA'S POPULATION
SHIFTS IN AGE GROUPS

Even though average life expectancy is increasing, Minnesota is finding an increasing proportion of its people in younger age categories.

According to a recent University of Minnesota publication, the percent of children under 5 years of age dropped from 1880 to 1940, but then grew steadily until the 1960 census. The figures were 15 percent in 1880, 8.2 in 1940, and 12.2 in 1960.

The publication is "Population of Minnesota, 1950-1960" and was issued by the University's Agricultural Experiment Station. Author is John D. Photiadis, rural sociologist.

Behind this increase in young people is the "post-war baby boom," Photiadis says. The group of youngsters between 5 and 19, for example, has gone up sharply since 1950--from 16.5 to 20.7 percent.

Persons below twenty years of age made up 34.6 percent of the Minnesota population in 1950, and 40.3 percent in 1960.

The large proportion of people in these younger age categories, Photiadis points out, could for different reasons be of interest to the planner-administrator and the businessman.

But while the number and proportion of extremely young people increased as it did, there also was a continued increase in the group of persons over 65. This group constituted 2.5 percent of the Minnesota population in 1880, 9 percent in 1950 and 10.2 in 1960.

So with increases in proportions of people in the extreme age categories, the last decade saw a decline in percent of persons in intermediate groups--those between 20 and 64.

add 1 = population

The fact that Minnesota's population increase is not shared equally by rural and urban segments is brought out clearly in the publication. In the last two decades, the rural population has decreased both in proportion to the urban population and in actual numbers. Minnesota had about 1.4 million rural people in 1940, 1.4 million in 1950 and slightly less than 1.3 million in 1960.

The rural non-farm population increased slowly between 1930 and 1950 but then dropped slightly in the last ten years. In 1960, there were 587,548 rural farm residents, 705,313 rural non-farm residents, and 2,121,003 urban residents in Minnesota. Compared to urban and rural non-farm groups, the rural farm group has proportionately fewer persons in the 20 to 39 age group, more in the 40 to 64 group, but less in the group of persons over 65.

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Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
September 30, 1963

To all counties
Immediate release

IN BRIEF.....

Shelled corn harvesting seems to be gaining in popularity, but it requires careful drying procedures. A University of Minnesota publication, Fact Sheet 12, describes several kinds of drying equipment. Batch driers, for example, will dry a certain amount of corn at one time. Continuous flow driers, however, move the corn at a constant rate and dry it to the same moisture content level throughout. Then there's the possibility of supplemental drying, for use in a round steel storage bin with a false floor. The Fact Sheet is available at the county extension office.

* * * *

Egg quality may be coming under more control through feeding. Poultry scientist Paul Waibel at the University of Minnesota says yolk color is controlled by feeding, and recent research reports indicate that yolks of deep coloration for the egg breaking industry can be produced by feeding high levels of alfalfa meal. A minimum of 10 percent good quality alfalfa meal or corn gluten meal was needed to produce optimum yolk color. Egg shell quality is also influenced by nutrition, but there are some shell problems that nutrition has been unable to counteract.

* * * *

Tractors and tragedy: Three Minnesotans, including two teenagers and one adult, were killed in one recent week in farm tractor accidents, according to Glenn Prickett, extension safety specialist at the University. He says late summer and fall is an especially dangerous time--with more hauling over highways, plowing, harvesting, and just hurrying. Accidents bring more than physical pain. They are costly in machine repairs, time lost, medical expenses.

* * * *

Farm trends in Minnesota are illustrated by a University study in the Red River Valley. Seven in 10 of the operators interviewed believed they could operate more land with existing inputs, and even more felt it would pay to add more land.

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Institute of Agriculture
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St. Paul, Minnesota 55101
September 30, 1963

To all counties
Immediate release

SOIL TEST
PAYS WELL
ON ALFALFA

Let an alfalfa seeding fail and you're stuck with a heavy cost--from \$12 to \$15 per acre for tillage and seed alone.

And the production you lose while you're starting over makes it even worse.

One key to successful alfalfa is knowing the lime and nutrient shortages of the soil from the beginning. And soil testing is the key to finding these needs and thereby protecting that alfalfa investment.

A University of Minnesota extension soils specialist, Curt Overdahl, says the test is important for more than establishing alfalfa. If you have a good stand, you want to maintain it. And that means a soil test to find the most economical fertilizer rate.

For example, research has shown that on sandy soils potassium may be the missing element. Such soils often need rates as high as 400 pounds of 0-0-60 per acre for best yields. (That means 60 pounds of potash.)

On fine textured soils, however, phosphorus may be the limiting factor.

But a soil test tells still more. The recommendation with test results gives some advice on the need for boron, and maybe even some tips on best varieties and time of cutting. Alfalfa handled properly and cut at the right time may produce an extra cutting.

Alfalfa is a hungry crop, Overdahl explains. A 4-ton yield takes out 40 pounds of phosphate, 180 pounds of potash and 130 pounds of calcium and magnesium.

Soil testing is a good job for fall. You can get results back in plenty of time for spring crop plans. The county extension office has the details.

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Department of Information
and Agricultural Journalism
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St. Paul, Minnesota 55101
September 30, 1963

To all counties
4-H NEWS
Immediate release

4-H FILLERS

National 4-H enrollment now totals nearly two and a third million members in the Head, Heart, Hands and Health program.

* * * *

Of the many projects 4-H members may carry, several dozen are as adaptable and as useful to town as to rural young people.

* * * *

Minnesota 4-H'ers remain active in their clubs for an average 3.2 years as compared with the national average of 2.7 years. The average age of Minnesota club members -- 12.8 years--is also higher than the national average of 12.6 years.

* * * *

The 4-H garden project attracts many urban and suburban teen-agers. These green-thumbed club members raise fruits and vegetables for the family table, flowers to decorate yard and home and trees and shrubs to beautify and conserve the land.

* * * *

Of the nation's 143,000 4-H Club members who are enrolled in a dairy animal project, one third are girls.

* * * *

A hundred and thirty-five U. S. 4-H'ers are living abroad this year under the International Farm Youth Exchange (IFYE) program. The 160 foreign exchangees living in the U. S. represent 49 countries including three new participants -- Jamaica, Poland and Ceylon.

* * * *

Home canning was the first 4-H project for girls introduced in the early 1900's.

-more-

add 1 - 4-H fillers

Three main groups lead as a team to carry on 4-H Club work over the nation. They are the Cooperative Extension Service of the U. S. Department of Agriculture and the state land-grant colleges and universities, the National 4-H Club Foundation and the National 4-H Service Committee, Inc. Each follows a clear-cut pattern of working together for 4-H. All help 4-H members learn to apply science in improving farming and homemaking methods and in rendering better service to their communities, their states and nation.

* * * *

The 4-H plan has been adapted and spread to more than 70 countries around the world.

-jbn-

Department of Information
and Agricultural Journalism
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University of Minnesota
St. Paul, Minnesota 55101
September 30, 1963

To all counties
ATT: Home Agents
Immediate release

CHICKEN, GRAPES
POTATOES ARE AMONG
OCTOBER PLENTIFULS

October's harvest this year will bring a bountiful supply of fresh fruits, vegetables, poultry and other foods to local markets.

This bounty includes an abundance of grapes, apples and cranberries, potatoes, broiler-fryer chicken, cheese and rice, according to the U. S. Department of Agriculture.

A bumper crop of more than 3 million tons makes grapes one of the top items on this month's list of plentiful foods. The pale green Thompson seedless grapes and the red Flame Tokays are the most abundant, but shoppers may also find some blue Concords.

Both locally grown and shipped-in apples are coming to market. Delicious, Jonathan, McIntosh and Greening are among varieties you'll find at the fruit counter. Haralson, Fireside, Prairie Spy and Redwell are some of the locally grown varieties being marketed at fruit stands, all of high quality for eating out of hand, for cooking or baking.

Producers are looking forward to the third largest crop of cranberries on record. They're the ideal accompaniment for chicken or turkey.

Tender young broiler-fryer chickens are expected to be wearing especially reasonable price tags during October. They are excellent for roasting, frying or for combining with plentiful rice in a casserole dish.

October is the big potato harvest month, and an above-average crop is expected this year. When crisp fried chicken is the main dish, mashed potatoes and gravy are a must.

Since October is Cheese Month, you should have no trouble finding your favorite cheeses in the dairy department. A tray of cheese wedges and clusters of grapes served as dessert lends a gourmet touch to any meal.