

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 2, 1964

To all counties  
Immediate release

STUDY FINDS FUNGI  
MAJOR THREAT  
TO STORED GRAIN

Storage fungi have been found to be one of the major threats to commercially stored grain because of the damage they can cause through spoilage.

In a 15-year study of thousands of samples of different grains from commercial warehouses throughout the United States and other countries, storage fungi were found to be involved in every case of grain spoilage.

Conducting the study were C. M. Christensen, professor of plant pathology and physiology at the University of Minnesota, and H. H. Kaufmann, manager of the Grain Research Laboratory of Cargill, Inc., in Minneapolis.

The study also found that storage fungi are the cause and not the result of grain spoilage. The fungi can cause loss of germination, dark germs, bin burning, mustiness and heating.

Results of the research project were published recently by the Agricultural Extension Service at the University of Minnesota in a bulletin titled "Spoilage of Stored Grain."

Storage fungi were found to be caused directly by moisture content, temperature, degree of invasion by the fungi when grain is stored, and length of storage time.

Invasion of storage fungi can be prevented in wheat, barley, rice, corn and sorghum if the moisture content is below 13 percent. In soybeans the maximum is 12 percent and 10 percent in flaxseed.

Christensen and Kaufmann point out that these percentages are for moisture contents of grain in the bin, and may not necessarily apply to grain stored in warehouses.

As the moisture content rises above these levels, invasion is found to increase with temperature and time.

add 1 - study finds fungi major threat

Fungi grow very slowly at temperatures between 40-50 degrees, but increase in growing rate as the temperature rises. However, a temperature below 40 degrees is usually not desirable. If grain with a low temperature is transferred when the outside temperature and humidity are high, condensation can occur causing moisture content to increase rapidly.

Grain already invaded by fungi is a very poor storage risk, the study shows, since it develops damage and spoilage at a much lower moisture content, lower temperature and in a shorter period of time than grain that is not infected.

The research report provides detailed information on the causes of fungi and ways of detecting it. It also contains a variety of recommendations for reducing grain spoilage.

Copies of the report can be obtained by writing to the Agricultural Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101. Ask for Extension Folder 226.

# # # #

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FERTILITY PLAYS  
A MAJOR ROLE  
IN WATER USE

In a drouth year like 1964, does fertilized land attract more rain than unfertilized land?

Certainly not--but soils men and farmers nevertheless, found that fertilizer helped many a corn field pull through the drouth with far better yields than fields that went unfertilized.

Arnold Wiebusch, extension soils agent in Minnesota's Goodhue county, said the summer showed that under moisture stress conditions, the differences in previous soil management really show up markedly.

A combination of past fertilization and minimum tillage on certain fields brought high production, and a return of heavy amounts of organic matter residue.

Apparently, Wiebusch says, fertilization and minimum tillage have a cumulative effect. They create an optimum kind of physical structure of the surface soil, resulting in a loose, friable seedbed that soaks up water like a blotter.

Rain that did fall infiltrated into the soil and was therefore usable. Much rain falling on poorly managed fields ran off the hard surface.

Weed control was undoubtedly another factor, according to Wiebusch. On fields where weeds were controlled, all the available water was used by the corn. Where weeds grew unchecked, corn had to share the limited moisture with yellow foxtail.

There's a reminder here--fall is a good time to find out if you're on the right track with your fertility program.

Soil samples taken this fall for testing can give you the needed information.

# # # #

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IN BRIEF.....

Prospective tree planters are urged to send in their applications for seeds and seedlings from the State Forestry nurseries as soon as possible. Supplies of black spruce are already gone and supplies of white spruce are low. Still available but going fast are Norway, Jack, Scotch and Ponderosa pine, white cedar, silver maple, green ash, Caragana and honeysuckle seedlings and black walnut stratified seeds.

These are available in orders of 500 or more at \$1 per hundred. Applications can be obtained from county agents, SCS offices, local state foresters or by writing to the Minnesota Division of Forestry, Centennial Building, St. Paul, Minnesota 55101.

\* \* \* \*

An accurate method for gauging the water contamination of milk is to determine the freezing point, which should be about 0.546 degrees Centigrade. The freezing point of milk is slightly below that of water because of the presence of lactose and salt. V. S. Packard, extension specialist in dairy industries at the University of Minnesota, explains that the freezing point of milk varies from one section of the country to another, and that minor variations do occur because of such factors as seasonal variations, feed, breed, acidity development and morning versus evening milk.

\* \* \* \*

Hunters who intend to bag a Christmas tree as well as a deer during hunting season this fall, should remember to get the landowner's consent before cutting any trees. Anyone caught cutting a tree without permission can be held liable for a misdemeanor.

Commercial Christmas tree cutters or anyone hauling over six trees on a public highway in anything other than a common carrier, must have a **transportation** permit. Cutting and transportation permits can be obtained from the Minnesota Division of Forestry, Centennial Building, St. Paul, Minnesota 55101.

# # # #

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To all counties  
4-H NEWS  
Immediate release

#### 4-H FILLERS

The Cooperative Extension Service gives leadership to the 4-H program and is assisted by 362,000 men and women in this country who serve as unpaid volunteer leaders. Helping them are more than 130,000 older 4-H youths who have been trained in junior leadership.

\* \* \* \*

The 4-H program is spreading from country to city. Today 52 percent of the total membership in the United States comes from urban and rural non-farm homes.

\* \* \* \*

4-H girls who take the clothing project and participate in the dress revue program learn to make the right choice of pattern, fabric and accessories. Last year 387,000 girls from 50 states participated in 4-H dress revues.

\* \* \* \*

The 4-H conservation program is aimed at preserving and replenishing our forests, grasslands, soil, water and wildlife. 4-H'ers enrolled in conservation learn to identify trees and other plants, to appreciate nature through better acquaintance with the plant and animal world about them, to control insects and rodents, test soil, apply soil conservation practices on the farm and protect wildlife.

\* \* \* \*

Achievement spelled with a capital A is the aim of 4-H club work. The wide selection of projects makes it possible for young people to learn many new skills and improve their way of life. At least 30 different programs are available to 4-H'ers in cities, small towns and on farms. These include safety, health, electric, conservation, crops, food and nutrition, clothing, home improvement-family living, dog care, automotive, shop and junior leadership, to mention only a few.

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To all counties  
ATT: HOME AGENTS  
Immediate release

(First in series of  
two articles on  
budgeting)

WORKABLE BUDGET  
MAY BE ANSWER TO  
MONEY MANAGEMENT

If you're a young married couple and want to make a good start in managing your finances, a simple workable budget tailored to your income and situation may be the answer to many problems.

The sooner young couples start discussing and planning for the money they will spend as a family, the better, says Mary Frances Lamison, extension home management specialist at the University of Minnesota. Before they are married, young people need to explore each other's feelings about money, to learn what each thinks it is important to spend money for, to investigate such costs as food, housing, hospitalization.

Some young people have the knack of making ends meet, while others, apparently in the same circumstances, are already carrying heavy debt loads and are often pinched for money. The difference is that some couples are better managers of their resources; they have learned the value of planning, Miss Lamison says.

To make a plan, a couple must sit down together, talk realistically about money, face facts and work out differences about how the income is to be used. When both husband and wife take part in making a spending plan, both will work harder to make it a success.

Before making any spending plan, set some goals for the present, for the immediate future and for the distant future, the University home management specialist suggests. The more specific you are about your goals, the better. One goal, of course, is to live comfortably. Other first-year goals might be to meet the costs for a final year in college, to buy a new chair or to start saving for a better car. A five-year goal might be to accumulate a down payment on a house.

Only after deciding on some specific goals is a couple ready to work on a spending plan.  
(How to work out a spending plan will be discussed next week)

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#### MARTIN COUNTY 4-H CLUBS ARE STATE SAFETY WINNERS

Outstanding safety work by Martin County 4-H clubs has won for them top placing in the state in this year's national 4-H safety contest.

The county extension office will receive a plaque from General Motors, Detroit, Mich., as an award, according to an announcement from the State 4-H Club Office at the University of Minnesota.

Ten individual clubs in the state were also cited for their safety activities. These clubs will be awarded certificates for their safety programs: Ulen Useful Youth, Clay County; County Line 4-H, Freeborn County; Country Cousins 4-H Club, Hennepin County; Eitzen Be Square, Houston County; Blackberry 4-H, Itasca County; Riverside Rockets, Lac qui Parle County; Silverton 4-H Club, Pennington County; Sacred Heart Indians, Renville County; Burtrum Boosters, Todd County; and Lucky Aces, Washington County.

(more)

add 1 -- safety winners

Among safety activities of the 10 individual top-ranking clubs have been inspection and repair of bicycles, bicycle safety clinics, reflectorizing bicycles, home and farm hazard hunts, study of the Minnesota Drivers' Manual, purchase of first-aid kits for each family car, attic and storeroom cleanup campaigns, tagging Christmas trees with safety reminders, distributing safety literature, preparing safety booths and safety posters, promoting cleanup campaigns and showing safety films at meetings. In each of the clubs all members were enrolled in safety.

Martin County 4-H clubs invited outside speakers on safety to 4-H meetings, including safety patrol officers, members of the fire department, county nursing service, county doctors and the sheriff. Members gave safety demonstrations, built safety booths and safety window displays and took part in safety surveys. The 162 members enrolled in safety corrected 686 hazards in the home, removed 699 fire hazards, 478 traffic hazards, corrected 621 hazards in play and recreation areas.

All 19 4-H clubs in Martin County placed special emphasis on reflectorizing machinery, cars and bicycles. Members of the clubs sold reflectorizing tape to their own members and parents and to neighbors as well; then to make sure that the tape was not relegated to the shelf, they applied the tape themselves to cars, bicycles and farm machinery.

Printing fire call cards under the supervision of the fire chief and then distributing these cards to every family in Fraser township in Martin County was an important activity of the junior leaders of the Fraser 4-H Club.

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#### SIX 4-H'ERS WIN TRIPS TO NATIONAL CONFERENCE AND CAMP

Six Minnesota 4-H members have been selected as delegates to the National 4-H Club Conference in Washington, D. C., and to the American Youth Foundation Leadership Training Camp in Shelby, Mich., in 1965.

The six will receive the trips for their outstanding records in 4-H leadership and project achievement. The awards are considered among the highest honors 4-Hers can receive, according to Leonard Harkness, state 4-H club leader at the University of Minnesota.

Chosen as delegates to represent Minnesota at the National 4-H Club Conference next April are Colleen LeBlanc, 18, Little Falls; Peter Schmidt, 17, Stephen; Edward Brophy, 17, Brainerd; and Joyce Thompson, 18, Warroad.

Mary Jane Pribyl, 18, Maple Lake, and Nile Newburn, 16, Rushmore, will receive all-expense trips to the American Youth Foundation Leadership Training Camp held next summer at Camp Miniwanca in Shelby, Mich.

The Minnesota Bankers' Association sponsors the National 4-H Conference trips. Scholarships for the Michigan camp are presented by Ralston Purina Company, St. Louis, Mo.

Peter and Edward are seniors in high school; the others are enrolled in college-- Colleen as a sophomore at the College of St. Benedict; Joyce, a freshman at Bemidji State College; Mary Jane, a freshman in home economics at the University of Minnesota; and Nile, a freshman at St. Olaf College.

All of the six have demonstrated their leadership ability as officers and junior leaders of their local clubs and county councils. Joyce is presently serving as State 4-H Federation president.

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#### SOILS, FERTILIZER SHORT COURSE SCHEDULED NOV. 23-24

Changing midwest farms, nitrate problems in livestock feeds and future fertilizer practices are among the topics on the program for the 14th Annual Soils and Fertilizer Short Course to be held Nov. 23-24 at the Leamington Hotel in Minneapolis.

The course has been expanded to two days this year and will include commercial exhibits and displays, according to LaVern Freeh, head of the University of Minnesota Department of Agricultural Short Courses.

All interested persons are invited to attend either one or both days of the course, Freeh said. Fees are \$3.25 and there will be no advance registration as in past years.

Speakers will include representatives of the University, other colleges, industry and the U. S. Department of Agriculture.

On the opening day, Lester R. Brown, economist for the U. S. Department of Agriculture, will speak at a buffet luncheon at 11:30 a.m. His topic will be "Man, Land and Food."

(more)

add 1 -- short course

Other topics on the program for Monday will be changing midwest farms, corn fertility experiments under moisture stress, saline soils in Minnesota, why fertilizer responses and yields are so variable, and evaluating "fringe" soil additive products.

Tuesday's program will begin at 10:30 a.m. with a discussion of the use, development and importance of a plant analysis service. Other topics include nitrate problems in livestock feeds, fertilizer practices for tomorrow's agriculture, weeds and bugs vs. the farmer and dealer, corn rootworm invasion, how the herbicides are performing, and a discussion of pesticides, residues and the soil.

The short course will conclude with a banquet at 7:30 p.m. Tuesday. Copies of talks and data will be available to all participants.

The course is being sponsored by the Department of Soil Science and the Agricultural Extension Service in cooperation with the Minnesota Plant Food Association.

Further information can be obtained by writing to the Department of Agricultural Short Courses, University of Minnesota, St. Paul, Minnesota 55101.

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#### LEADERSHIP BRINGS \$150 SCHOLARSHIPS

Outstanding achievement and leadership has won \$150 Watkins scholarships for Donald Erickson, 18, Buffalo and Marlys Kuehn, 19, Rice.

The scholarships are awarded by the J. R. Watkins Company, Winona.

Now a sophomore at St. Cloud State College, Marlys is working her way through college majoring in elementary education. She has won awards in gardening and clothing. As an active junior leader for three years, she has assisted with enrollment, programs, tours and recreation. In community affairs, Marlys has worked for various health drives.

The Wright County youth was selected as one of two Minnesota 4-H'ers to attend the American Youth Foundation Leadership Training Camp in Michigan last year. His selection was based on his leadership and achievements in a variety of 4-H projects. A member of the Wide A Wake Club for nine years, Don has been its president, as well as president of the Wright County 4-H Federation. He has received the Minnesota 4-H Key Award, the Danforth Foundation Award and was chosen outstanding boy junior leader and champion 4-H horticulturist in Wright County.

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## VALUABLE PEAT RESOURCES SHOWN IN NORTHEASTERN MINNESOTA STUDY

A thorough inventory of more than 1,300 acres of good quality peat, worthy of commercial development, has been completed in northeastern Minnesota's St. Louis County.

The inventory is the first of a series of studies on peat deposits which may have economic potential for production of baled and bagged peat and peat products.

The inventory was done by the Iron Range Resources and Rehabilitation Commission, in cooperation with the Department of Soil Science in the University of Minnesota's Institute of Agriculture. Leader of the inventory was R. S. Farnham, soils scientist at the University.

The area covered in the inventory lies just south of the Mesabi Iron Range, and is about 50 miles north of Duluth.

Peat types having the most economic potential include sphagnum moss peat and the reed-sedge types, which are relatively undecomposed. These types are in greatest market demand. And because of their fibrous nature, they are more easily drained and readily adaptable to harvesting techniques.

The St. Louis County bog contains a considerable amount of sphagnum moss peat. The deposit of sphagnum varies from a few inches thick near the margins of the bog area to about 10 feet in thickness.

Underlying the sphagnum strata in the bog is a rather thick layer of partly decomposed and completely decomposed peat formed largely from reeds, sedges and grasses. This peat has little or no commercial value because of harvesting difficulty.

From the standpoint of commercial development, the West Central Lakes Bog has several advantages, Farnham's report indicates. The moss peat stratum is very porous and easily drained. The peat, quite uniform in quality, will dry easily and can be harvested economically. This type of peat adapts well to the milled peat process.

(more)

add 1 -- peat resources

The report indicates that the bog contains more than 12 million cubic yards or about 24 million bales. These reserves would last about 48 years at an annual production rate of about 500,000 bales annually. A bale contains 6 cubic feet of peat.

The report also points out that the state lands and reserved peat available for peat lease in the West Central Lakes Bog are subject to leasing agreements between the State Department of Conservation and any individual or corporation interested in commercial development of the land.

Conditions for leasing include an annual rent of 50 cents per acre for the first, second and third years of the lease and, after that, a dollar per acre annually.

Royalties charged by the state on peat removal amount to 2 cents per compressed 6 cubic foot bale, averaging up to 80 pounds at an average moisture content of 28 percent, or one percent of the gross price of peat, which ever is greater.

Leases may be issued for a term not exceeding 25 years, for the removal of peat from tax forfeited lands upon such terms and conditions as local county boards may prescribe.

The report also reminds persons interested in development that the state has a law governing sale of state-owned land containing peat in commercial quantities. The law states that land owned by the state, chiefly valuable because of commercial deposits of peat, are withdrawn from sale.

The IRRRC estimates that there are some five billion tons of peat reserves in Minnesota, which is about half the total supply in the U. S. More than half the United States annual consumption of one million tons of peat is imported.

The U. S. produced slightly less than 600,000 short tons of peat in 1962, of which Minnesota's production was only 12,934 tons.

About 80 percent of all peat purchased in the U. S. is used by home gardeners. Uses of peat for horticultural purposes is expected to increase considerably during the next decade.

A major intent of the peat inventories is to make it possible for industries to increase their investments in production machinery and expand their present operations.

In 1962, about 13 firms were engaged in some form of peat industry in Minnesota.

A copy of this inventory report may be obtained from the Office of Iron Range Resources and Rehabilitation, 60 State Office Building, St. Paul, Minn.

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### 32 MINN. 4-H'ERS AWARDED TRIPS TO NATIONAL CLUB CONGRESS

Thirty-two Minnesota 4-H club members have been named state winners of expense-paid trips to the 43rd National 4-H Club Congress in Chicago Nov. 29-Dec. 3.

The state awards are in recognition of their achievements in projects, demonstrations and leadership. The young people will compete for national honors, including about a hundred thousand dollars in scholarships.

The Minnesota club members are among nearly 1,500 4-H youth from all 50 states and Puerto Rico who will arrive in Chicago the weekend after Thanksgiving for one of the most important events on the 4-H calendar. The delegates are state or regional winners in 4-H projects and activities carried out under the supervision of the Cooperative Extension Service. They will receive their trips to the congress from more than 55 business firms, foundations and individuals who provide funds for 4-H programs.

One of the 32 Minnesota 4-H'ers has won her trip as a sectional award in dairy foods. She is Kathryn Haugrud, 18, Pelican Rapids, one of 18 club members in various areas of the nation to receive the regional award for achievement in the project.

Other club members who will receive trips to Chicago and the projects in which they have won their awards are: Robert Frerich, Sauk Rapids, automotive; Patricia Berglund, Scandia, clothing; Carol Nelson, Westbrook, beef; Jane Chapin, Dodge Center, foods-nutrition; Mary Fiksen, Kasson, poultry; Curtis Thumann, Goodhue, tractor; Cheryl Gingerich, Elbow Lake, home improvement; Carol Wilson, Wayzata, garden; Thomas Rollings, 620 Upton Ave. S., Minneapolis; Paul Johnson, Maple Plain, and Sharon Harvego, Breckenridge, leadership; Warren Sylling, Caledonia, agricultural; Marjorie Rossow, Windom, food preservation.

(more)

add 1 -- national club congress

Caroline Damhof, Blomkest, home economics; James Roth, Glencoe, health; Lu Ann Herrig, Slayton, bread; Robert Blasey, Ada, and Pamela Stern, Sanborn, achievement; Michael Hunter, Rochester, safety; Shirley Sundberg, Fergus Falls, dress revue; James Vacinek, Pine City, forestry; Barry Markl, Edgerton, field crops; James Mammen, Morton, livestock achievement.

Gene Rouse, Olivia, swine; Sandra Sherwood, Magnolia, clothing; Ronald Erpelding, Watkins, sheep; Daniel Spoden, St. Cloud, home yard improvement; Brian Beck, Eagle Bend, electric; David Pierson, Lake Elmo, dairy; Donald Sandborg, Butterfield, shop; Anne Fyrand, Hazel Run, entomology.

Mrs. Oscar Norman, Floodwood, a 4-H adult leader of the Halden 4-H Club for 12 years, has been selected to represent 13,000 adult leaders in Minnesota at the National Club Congress.

Accompanying the group will be state 4-H staff members Osgood Magnuson and Marian Larson; Rosella Qualey, district supervisor, extension home economics programs; Robert Jacobs, extension animal husbandman, University of Minnesota; and Ronald Seath, Austin, Mower County 4-H Club agent.

Club members who have won trips to the International Livestock Exposition in Chicago Nov. 27-30 include John and Francis Goelz, Morton, and John Gray and Dennis Hawton, Redwood Falls, members of the Redwood County general livestock judging team which won state championship, and Dennis Hooley, Stillwater; and John Gies, Route 2, Hudson, Wis.; Alden and Robin Booren, Marine-on-the-St. Croix, members of the Washington County dairy judging team, which won reserve championship in the dairy judging contest.

A get-acquainted dinner is planned for the Minnesota delegation, Friday, Nov. 27, at the Paul Bunyan Motel, St. Paul. The group will leave by train for Chicago from St. Paul Saturday morning, Nov. 28 and will return Thursday night, Dec. 3.

The Conrad Hilton Hotel will be headquarters for the 1,500 4-H delegates who represent more than 2 million members in the nation and Puerto Rico. The 4-H'ers will be joined at the congress by some 500 leading business men and women who support 4-H work, by state and country 4-H leaders, educators and international guests.

Purpose of the Congress is to offer new and stimulating experiences to club members. Delegates will serve as discussion leaders, presiding officers and participants in many educational events planned around the theme, "Citizenship in Action." They will visit Chicago art institutes and museums, hear outstanding musical groups and will be entertained by donor companies with meals, tours and special programs.

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To all counties  
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MARKET MILK SUPPLY  
CONTINUES TO EXCEED  
COMMERCIAL DEMAND

Those cartons labelled "low-fat milk" are becoming ever more common on the American breakfast, lunch and dinner table.

And non-fat dry milk and low-fat ice cream are becoming ever more popular, too. So is cheese.

Yet, even with the increased demand for certain kinds of products and the continued population growth, the dairy industry is faced with a continuing decline in over-all per capita consumption of milk fat.

With total milk production continuing to increase, even when cow and dairy herd numbers are going down, the outlook is for a heavier market supply of milk than the country demands.

Therefore, price supports purchases are likely to be needed for some time in the dairy industry, although there should be a downward trend in the quantity of price support purchases because the gap between demand and supply is likely to narrow in the future.

That is a capsule look at the outlook for dairy products and dairy supports by Martin K. Christiansen, extension dairy marketing specialist at the University of Minnesota.

The decline in per capita consumption of milk fat reflects the declining demand for butter, fluid cream and other high fat products. Milk fat consumption has dropped from 32 - 33 pounds in the early 1930's to 23.3 pounds per person in 1963. Butter consumption in 1963 was 6.8 pounds per person, the lowest on record.

-more-

add 1 - market milk supply

Offsetting, somewhat, the decline in milk fat consumption is an increase in consumption of the non-fat solids components of milk, although the main increase was from the early 1930's into the 1940's. Since then, consumption of non-fat solids in milk has stayed fairly level, except for small declines in recent years.

However, American cheese, cottage cheese, ice milk and other high non-fat milk solids products have shown consistent gains recently in per capita consumption.

Christiansen points out that U. S. milk production increased from 109 billion pounds in 1940 to 126 billion pounds in the record year of 1962. This was an increase of about 15 percent over 22 years. However, total butterfat production increased only 6 percent in this period because of the lower average butterfat content of milk produced.

Yet, because of declining farm use of milk fat, market supplies of fat increased 31 percent between 1940 and 1962.

The biggest jump of all was in marketings of non-fat milk solids, owing to the shift from delivery of cream to delivery of whole milk to receiving plants. In fact, market supplies of non-fat milk solids about doubled between 1940 and 1962, while proportion of milk produced which farmers sold increased from 51 to nearly 90 percent.

Actual production of non-fat milk solids in that same period increased by 11 percent.

Price support purchases of dairy products were comparatively small before 1949. In fact, prior to that year the purchases exceeded 1 billion pounds of milk in only one year. Since 1949, however, purchases exceeded this figure every year except one.

Purchases in 1953 and 1962 mounted to an equivalent of more than 10 billion pounds of milk. Since 1962, they have declined to about 7.7 billion pounds.

add 2 - market milk supply

Christiansen says the future is difficult to gauge, because of constantly changing technological conditions in milk production and distribution, and changing conditions of economic growth in the country.

However, if technological developments continue at about the present pace, and if prices for most dairy products and substitutes stay at about the same levels, some projections are possible. Price support purchases are likely to be required for some time, since the market supply of milk should exceed commercial demand for several years. But the trend in quantity of price support purchases should edge downward since commercial demands will probably increase at a slightly more rapid rate than farm marketings.

At any rate, the declining number of farms in the U. S. is not accompanied by declining milk sales. Cows are doing better than ever. Their declining numbers will be more than offset by the annual increase of 180-200 pounds per cow during the last ten years. Furthermore, market supplies will be bolstered by the fact that farmers will continue to use less milk for home use and for livestock.

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(second in a series  
on budgeting)

MAKE PLAN FOR  
SPENDING, YOUNG  
COUPLES URGED

A spending plan may be your answer to better money management -- but no readymade spending plan fits every couple.

Don't think you can set up a household budget and assign a set percentage to each budget category, cautions Mary Frances Lamison, extension home management specialist at the University of Minnesota. No two spending plans can be alike because no two couples or situations are alike; each couple has different standards, values, needs, wants and resources. Hence what young couples need is a spending plan that is tailored to their needs and goals.

After having set immediate and future goals of spending, the next important steps in making any spending plan are to make as accurate an estimate of your income as possible and then to estimate actual expenses. The actual expenses will fall into two categories: fixed and flexible expenses.

Before estimating actual expenses, Miss Lamison suggests keeping a record for a month or two of expenses for food, clothing, utilities, household operation, transportation, entertainment and personal items, so you will have a benchmark for estimating the cost of living for a month. Or discuss these costs with a newly married couple who live as you expect to live.

Until you have kept records for a while, it is practically impossible to make actual estimates. At first you may need to have a trial spending plan that will need adjusting to fit your particular family needs.

Under fixed expenses, you would list such items as taxes, debt payments, rent or mortgage payments, insurance, hospitalization and savings. Savings should be listed as a fixed expense if you hope to reach some of the goals you have set for the future -- such as a trip, a down payment on a house or a new car.

add 1 - make plan for spending

Flexible expenses will include items that will vary from month to month: clothing, food, household furnishings and equipment, transportation, medical care, personal care, recreation and education, gifts and contributions. Don't forget to include some personal spending money. Try to allow also a little "cushion" for unexpected expenses.

Now you're ready for the test -- comparing income with expenses for the period you've planned for. If your expenses add up to more than your income, you'll need to look critically at all parts of the plan. Are you overspending in some categories? Where can you cut down? Decide which things are most important to you and which ones can wait.

Instead of spending as much for recreation, take advantage of free community services for education and recreation. Rather than pay for some services, make use of your own skills -- make the curtains you want instead of buying them, wash your car instead of having it done. Spend less for certain items and eliminate some altogether for the time being. Another solution toward balancing the budget may be to get more knowledge and develop more skills in buymanship and money management.

Every young couple needs adequate food, safe and decent housing and clothes that give a sense of well being. For the sake of health, it's important to have well balanced meals. But many inexpensive meat cuts are as nutritious as porterhouse steak and are appetizing when well prepared. An analysis of your food buying habits may indicate some places where you can save money, yet have balanced, satisfying menus.

The solution to money problems is not necessarily more money. Rather, it is learning to get the most out of the money you have, using patience, energy and self-discipline to do it, Miss Lamison says.

Many publications have been written on buymanship -- the county extension office has a list of University of Minnesota publications from which you may select bulletins that will be of most help.

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 9, 1964

To all counties  
Immediate release

IN BRIEF.....

Peat inventory completed: The first of a series of studies on peat deposits in Minnesota has been completed by the Iron Range Resources and Rehabilitation Commission, in cooperation with the Department of Soil Science at the University of Minnesota. The area covered includes 1,300 acres of good quality peat, worthy of commercial development. It is just south of the Mesabi Iron Range, and is about 50 miles north of Duluth. It contains a considerable amount of Sphagnum moss peat--a type with maximum economic potential.

\* \* \* \*

Careful log cutting can increase profits. A gain of 12 percent in dollar value through cutting for maximum grade yield--that was found to be possible, in a study by the Central States Forest Experiment Station of the U. S. Forest Service. Marvin Smith, extension forester at the University of Minnesota, says the study offers a guide for woodland owners and timber operators. In this study, "bucking for grade" did increase the volume in 8 and 10-foot logs, over that from unplanned cutting. But it also increased the volume in 16-foot logs. Most important, when trees were bucked for maximum grade yield, 34 percent of the volume was in No. 1 logs. That's compared with only 23 percent when trees were cut according to local custom.

\* \* \* \*

Employment increases in paper industry: Minnesota's paper industry is one of three major manufacturing industries in Minnesota that have increased employment every year since 1958. According to extension foresters at the University of Minnesota, the growth in the paper industry is more directly related to population growth and the rise in consumer demand than some of the others. The other two major industries with annual employment gains in the same period are electrical and non-electrical machinery.

# # # #

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To all counties  
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**STATE SOIL TESTS  
ARE SUMMARIZED**

How does your soil stack up with the rest of the state?

Test results of 45,346 soil samples from throughout the state over a 10-year period have made it possible for soil scientists at the University of Minnesota to compare the fertility status of different Minnesota soils.

At the University's Soil Testing Laboratory, soil scientist John Grava found a definite pattern in relation to soil acidity and geographical location.

The highest percentage of acid soils is found in eastern Minnesota with the percentage decreasing gradually toward the west. Grava found soils in the Red River Valley to be predominately alkaline.

The phosphorus content of soils throughout the state appears to be related to the relative acidity. The alkaline and neutral soils of western and south central Minnesota are lowest in phosphorus availability, while the acid soils of the northeastern part of the state are relatively high.

According to the summary data, about two-thirds of Minnesota soils are relatively low in potassium content. These soils are found mainly in the eastern and north central portions of the state. Most soils of western Minnesota contain relatively high amounts of potassium.

Grava explains that the soil tests reflect the present fertility status of a soil and do not evaluate the changes brought about in native fertility by soil management factors such as liming, fertilization and cropping. The influence of these factors, he adds, could be determined accurately only by continuous testing under known conditions.

A complete summary of the results of the soils tests is now available in a report by Grava titled "Fertility Status of Minnesota Soils." The report was published by the University's Agricultural Experiment Station. Copies can be obtained from the Agricultural Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101. Ask for Miscellaneous Report 56.

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Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 9, 1964

To all counties  
4-H NEWS  
Immediate release

RADIO SPEAKING  
CONTEST AGAIN  
OPEN TO 4-H'ERS

4-H club members will again have the opportunity to enter a statewide radio speaking contest, William A. Milbrath, extension specialist, young adult program, University of Minnesota, has announced.

"What Does the Separation of Church and State Mean to Me?" will be this year's main topic. However, four sub-topics have been selected to give club members greater choice in subject matter. 4-H'ers may write their speeches on any of the sub-topics or on the main topic. The sub-topics are:

1. Does religion have a place in the public school? If so, in what way?
2. How is church-state separation related to parochial schools?
3. Is religion basic to our form of government? If so, in what way should it be expressed?
4. Freedom of religion: does this protect the freedom to have no religious belief?

Each contestant must write an original speech 5 to 7 minutes in length.

All 4-H'ers in \_\_\_\_\_ County are invited to enter their local club or county radio speaking contests if they are over 14 years of age but not over 21 on January 1, 1965. County Agent \_\_\_\_\_ urges each 4-H club to have at least one representative in the event. Former state and reserve state champions are not eligible.

The Minnesota Agricultural Extension Service and the Jewish Community Relations Council of Minnesota are co-sponsoring the competition for the 23rd year.

Further information about this year's contest and suggested sources of material are available from the county extension office.

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November 9, 1964

To all counties  
Immediate release

STUDY FINDS FUNGI  
MAJOR THREAT  
TO STORED GRAIN

Storage fungi have been found to be one of the major threats to commercially stored grain because of the damage they can cause through spoilage.

In a 15-year study of thousands of samples of different grains from commercial warehouses throughout the United States and other countries, storage fungi were found to be involved in every case of grain spoilage.

Conducting the study were C. M. Christensen, professor of plant pathology and physiology at the University of Minnesota, and H. H. Kaufmann, manager of the Grain Research Laboratory of Cargill, Inc., in Minneapolis.

The study also found that storage fungi are the cause and not the result of grain spoilage. The fungi can cause loss of germination, dark germs, bin burning, mustiness and heating.

Results of the research project were published recently by the Agricultural Extension Service at the University of Minnesota in a bulletin titled "Spoilage of Stored Grain."

Damage done by storage fungi was found to be related to moisture content, temperature, degree of invasion by the fungi when grain is stored, and length of storage time.

Invasion of storage fungi can be prevented in wheat, barley, rice, corn and sorghum if the moisture content is below 13 percent. In soybeans the maximum is 12 percent and 10 percent in flaxseed.

-more-

add 1 - study finds fungi major threat

Christensen and Kaufmann point out that these percentages are for moisture contents of grain in the bin, and that these may not necessarily be the same as the moisture contents indicated on the warehouse records.

As the moisture content rises above these levels, invasion is found to increase with temperature and time.

Fungi grow very slowly at temperatures between 40-50 degrees, but increase in growing rate as the temperature rises. However, a temperature below 40 degrees is usually not desirable. If grain with a low temperature is transferred when the outside temperature and humidity are high, condensation can occur causing moisture content to increase rapidly.

Grain already invaded by fungi is a very poor storage risk, the study shows, since it develops damage and spoilage at a much lower moisture content, lower temperature and in a shorter period of time than grain that is not infected.

The research report provides detailed information on the causes of fungi and ways of detecting it. It also contains a variety of recommendations for reducing grain spoilage.

Copies of the report can be obtained by writing to the Agricultural Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101. Ask for Extension Folder 226.

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St. Paul 55101 -- Tel. 647-3205  
November 10, 1964

Immediate release

#### INSTITUTE FOR TOWN AND COUNTRY CHURCHES NOV. 17-19

The Minnesota Institute of Town and Country Churches will be held Nov. 17-19 on the University of Minnesota's St. Paul Campus.

Sponsoring the event will be the University Department of Agricultural Short Courses, in cooperation with the Minnesota Council of Churches, the Association of Evangelicals, the Catholic and Lutheran churches in Minnesota.

The three-day meeting will open with registration at 11 a.m. Tuesday (Nov. 17) in the Student Center. Focus will be on some of Minnesota's socio-economic problems.

George Donohue, professor of sociology, will address the group on "Communities Challenge the Church" at 1:40 p.m. Tuesday. A 7 p.m. session in the Dairy Industries Building will feature a panel on civil rights with the Rev. Alton Motter, executive director, Minnesota Council of Churches, as moderator. Panel members include David Franks, teaching assistant of sociology, University of Minnesota; the Rev. Warren Sorterberg, Our Saviour's Lutheran Church, Minneapolis; and Father Edward J. Flahavan, Catholic Interracial Council, Nazareth Hall, St. Paul.

Wednesday speakers will be John R. Borchert, professor of geography, University of Minnesota, who will discuss factors affecting communities, and Eber Eldridge, agricultural economist, Iowa State University, whose subject is "Economic Realities in the Community." Arthur Johnson, University of Minnesota professor of sociology, will speak on use of leisure time at a 6:30 p.m. session in Coffey Hall Auditorium.

The meeting will close Thursday (Nov. 19) morning following a talk on implications for the church by the Rev. Karl Aho, pastor of Bethel Lutheran Church, Cherry, Minn., and the conference summary by Osgood Magnuson, assistant state 4-H club leader at the University of Minnesota.

The Institute is designed for town and country churchmen throughout the state, says Magnuson. The fee is \$6 per person.

Further information can be obtained from the Department of Agricultural Short Courses, University of Minnesota, St. Paul, Minnesota 55101.

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64-270-jbn

Department of Information  
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St. Paul 55101 -- Tel. 647-3205  
November 10, 1964

Immediate release

#### BREAD BAKING WINS SCHOLARSHIPS FOR 4-H'ERS

Holiday breads, nationality breads, coffee cakes, yeast and quick breads of all kinds hold a special fascination for three 4-H girls who have won \$100 scholarships for their achievements in the bread project.

Recipients of the awards are Mary Jane Pribyl, 18, Maple Lake; Carol Ann Dodsall, 18, Hancock; and Ilene Bremer, 21, Lake City.

The scholarships are gifts of F. H. Peavey and Company.

Mary Jane is currently enrolled at the University of Minnesota, majoring in home economics education. She has won 10 trips to the State Fair and has received blue ribbons and a purple ribbon in food preparation for her demonstrations. She was selected the top girl demonstrator for four consecutive years in McLeod County. She was valedictorian of her high school graduating class, attendant to the homecoming queen and won a "Seamstress of the Year" award.

Carol Ann has carried 4-H projects ranging from food preparation to beef steer. As an enthusiastic beginner she started her 4-H career with gardening. Demonstrating at the State Fair for three years, Carol Ann won three blue ribbons for her achievements in the bread project. Now a sophomore at the University of Minnesota, the Stevens County girl plans to graduate in home economics education.

Ilene has been an active 4-H member in Wabasha County for the past 12 years. She has won two trips to the State Fair for her demonstrations on foreign breads. She has been a delegate to the State Junior Leadership Conference and a participant in the Minnesota-Maryland Exchange program.

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64-271-smk

Department of Information  
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St. Paul 55101 -- Tel. 647-3205  
November 10, 1964

Immediate release

#### DISTRICT YAC CONFERENCES ANNOUNCED

Three district conferences of Young Adult Citizens (YAC) groups will be held in Minnesota during November and December, William A. Milbrath, University of Minnesota extension specialist for the young adult program, has announced.

Dates of the conferences are Nov. 14 at Hotel Faribault, Faribault, for the southeast district; Nov. 21, high school, Howard Lake, central district; and Dec. 5, Driftwood Supper Club, Windom, for the southwest district.

Ronald Pitzer, assistant extension family life specialist at the University of Minnesota, will speak on "Self Understanding--Marriage Readiness" at the Faribault meeting. The program will begin with registration at 1:30 p.m. A banquet, followed by a square dance, will conclude the day's activities.

Banquet speaker at the Howard Lake meeting will be Paul Cashman, associate professor of rhetoric, University of Minnesota, whose subject is "Public Opinion." Preceding the banquet Milbrath will moderate a program of informal debates between YAC members. Registration is set for 2:30 p.m.

The Windom conference will open with registration at 5 p.m., followed by a banquet at 5:30 p.m. Guest speaker will be Clayton Selberg, Worthington. The Schield Sisters, folksingers from Worthington, will be featured on the program.

A business meeting, election of district officers and a square dance will be included in each of the conference programs.

Purpose of the Young Adult Citizens is to develop, with the assistance of the University's Agricultural Extension Service, a program of study and training for young adults to make them more informed and more effective citizens.

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64-269-jbn

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## TISSUE CULTURES OFFER GREAT POTENTIAL FOR GENETIC STUDIES

Alfalfa is one of the latest plants to yield to a modern research technique designed to unlock some of the genetic puzzles of the plant kingdom.

The technique is called tissue culture, meaning the study of living cell tissue apart from the complete plant.

In alfalfa, the technique has been worked out by William Clement, Jr., U. S. Department of Agriculture geneticist at the University of Minnesota.

The technique promises to be a major help in studying mutations and the process of plant differentiation--or why some cells form conductive tissue, why others act as nourishing tissue, and why some support the plant organism.

Take the problem of mutations, for example. These sudden changes in hereditary makeup occur spontaneously in living things, but at a low rate. Detecting them in a 40-acre alfalfa field would be a nearly impossible task.

But through tissue culture, research men can grow vast numbers of single cells in the laboratory, treat them in various ways and check more systematically for mutations.

Clement's technique means removing a small amount of tissue from the alfalfa plant, sterilizing it and placing it in a culture medium that contains a small amount of 2,4-D, a widely known chemical weed killer.

The 2,4-D is a key to the technique. This chemical, an auxin, has a cancer-like effect on cells. A heavy dose of 2,4-D is fatal, but a sub-lethal dose, as Clement uses, stimulates growth of individual plant cells while throwing the plant's growth process out of gear.

So instead of forming leaves, stems and flowers, the cells multiply into a big white blob of undifferentiated tissue.

When this tissue mass is taken out of the culture and put in another that contains no 2,4-D, differentiation begins to occur. A root may take shape, emerging out of the tissue.

(more)

add 1 -- tissue culture

In alfalfa, the cells of all parts of the plants are essentially alike. The culture can be started with tissue taken from the seed embryo, the leaves, or the plant bud and the kind of cells in the tissue culture will be the same.

A single cell in a culture undergoes division and forms an embryo that may proceed through normal development stages. The way this embryo reacts to various environmental treatments tells a good deal about the cell's role in the life and function of the plant.

One problem Clement is studying is chromosome stability. A normal cell contains two pairs of chromosomes--the units containing the genes. But tissue culture techniques sometimes lead to high chromosome numbers, or polyploid situations.

Recently, Clement and his associates found ways to keep the chromosome numbers in cultures at the two pair, or diploid level.

Another problem for this research is formation of pigment, such as the purple and green coloring in alfalfa. Tissue cultures are usually colorless. Getting the tissue to produce anthocyanin (for purple) and chlorophyll (for green) so far has not been easy, but Clement believes the problem will yield to solution eventually.

What are the main control mechanisms that guide development of plant growth? Answers are not known yet, but Clement points to one thing that is quite certain: there are no magic shoot or root-forming substances.

He believes the answer to control of cell differentiation lies in the genetic make-up of the cell. Any cell carrying its complete genetic material can grow by division and enlargement as long as it is in the proper environment.

And it is a combination of environmental conditions, not any single factor, that seems to determine how the genetic mechanisms operate. Clement says there is evidence that genes of plants, such as those determining stem and leaf growth, may be "turned on and off" by some kind of genetic mechanism.

The question is what this mechanisms is--and a big question it is. It bears on the fundamental questions of life and growth.

Tissue culture is a rather new research idea. Its use in plants has lagged behind its application in animal life. Techniques were developed for cultivation of animal cells in 1948 and for plant cells in 1954.

Salk and Sabin polio vaccines were made possible through cultivation of large quantities of human and other primate tissues.

Clement discusses research on tissue cultures in the recent issue of Farm and Home Science, an agricultural experiment station publication at the University.

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64-268-pjt

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St. Paul 55101 -- Tel. 647-3205  
November 16, 1964

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\*For release \*  
\*Thursday, Nov. 19 \*  
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#### NEW RESEARCH SHEDS LIGHT ON PHOSPHORUS QUESTION IN SOIL

KANSAS CITY, MO.--Soil scientists have new evidence that helps explain why corn plants can make better use of phosphorus in some kinds of fertilizer mixtures than in others.

Two University of Minnesota research men this week reported more findings showing that ammonium in a phosphorus fertilizer leads to greater uptake of phosphorus by the corn plant.

And the reason for the greater uptake, they said, is probably due to the effect of ammonium on the plant, rather than to <sup>the</sup> effect on the availability of phosphorus in the soil.

A good deal of soil research has shown that plants will take up more phosphorus if the fertilizer also contains ammonium. This effect has been found repeatedly by scientists around the nation.

The question has been why this effect occurs. One possibility is that ammonium might increase the solubility of phosphorus in the soil. Another is that ammonium might increase the capacity of the plant to absorb phosphorus.

(more)

add 1 -- phosphorus research

R. W. Blanchar and A. C. Caldwell from the University of Minnesota reported research at the American Society of Agronomy meetings that supports the second idea.

In laboratory studies, they compared soil which had received three different kinds of fertilizer mixtures. One contained pellets of MCP alone--monocalcium phosphate. The second mixture was pellets of MCP and ammonium chloride, and the third was MCP and potassium chloride.

Blanchar and Caldwell raised corn on soil treated by each of the three kinds of fertilizer pellets. And they found that, as has been true in the past, ammonium increased the uptake of fertilizer phosphorus by plants.

Next, they made chemical measurements of water soluble phosphorus in the soil around the corn roots. And they found that the phosphorus availability was about the same regardless of the kind of fertilizer pellet that had been used.

In each case, the plant roots had an extremely high concentration of phosphorus available.

Since solubility was ruled out, the research men concluded that the effect of ammonium was probably on plant functions.

There is still some question, however, as to just which plant functions are affected. Some soil scientists have suggested that plant roots may develop more extensively where the phosphorus fertilizer contains ammonium. However, the findings of Blanchar and Caldwell indicated that phosphorus uptake could not be explained by root development.

They did find that phosphorus uptake was sometimes greater where there were higher root densities. But they also found increased root development where phosphorus uptake was not affected.

They point out that increased root development may be either a cause or an effect of increased phosphorus uptake.

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St. Paul 55101 -- Tel. 647-3205  
November 17, 1964

Immediate release

#### AGRONOMIST JOINS UM EXTENSION STAFF

Gerald R. Miller, former extension agronomist at Purdue University in Lafayette, Ind., has been named to the specialist staff of the Cooperative Agricultural Extension Service of the University of Minnesota.

Miller's appointment was approved by the Board of Regents at its October meeting. As extension agronomist and assistant professor, he will be responsible for developing extension programs in the area of weed control.

A native of Illinois, Miller received his B.S. degree in agricultural education and his M.S. degree in agronomy from the University of Illinois. In 1963 he received his Ph.D. degree in agronomic crops and weed control from Michigan State University.

Miller served with the U. S. Army in 1957-58 and taught vocational agriculture at a high school in Cisne, Ill. in 1958-59. He has been extension agronomist at Purdue University since January of 1963.

While an undergraduate student at Illinois, Miller received several honors, awards and scholarships. He held graduate assistantships at both the University of Illinois and Michigan State.

He is currently a member of a number of professional organizations and honor societies.

Department of Information  
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St. Paul, Minnesota 55101  
November 16, 1964

To all counties  
ATT: HOME AGENTS  
Immediate release

WASH YOUR  
WOODEN WARE

The old chef's tale that wooden bowls and utensils should merely be wiped after use is no longer true, according to extension specialists in home furnishings at the University of Minnesota.

They pass on some suggestions about how to treat your wooden ware.

Immerse the wooden ware in warm sudsy water but do not soak it. Soaking, the enemy of wood, may cause swelling, cracking, and warping. But if the wooden ware is left unwashed, bacteria can breed from fragments of food, and salad oils can become rancid.

Wash hardwood salad bowls quickly in sudsy water, rinse and wipe with a towel. Do not put any wooden bowl away until it is thoroughly dry. Soft wood salad bowls should be wiped out with a sponge wrung out of warm suds, rinsed in clear water and wiped air dry. Always wash salad bowls while food and oily dressings are still easy to remove.

Chopping bowls should also be washed and cleaned after use. The curved chopping knife, shaped to fit the chopping bowl, can be used to scrape the convex inner surface of the bowl clean.

Cutting boards should always be washed with detergent or soap suds. Otherwise fragments of the meat left after chopping can breed harmful bacteria. To remove knife marks that may have left ridges in the wood, rub the marks with sandpaper and follow with a quick sudsing, rinsing, and drying.

Decorative cutting boards are attractive for serving trays, but for cutting, use the undecorated side to prevent chipping or cutting marks on the hand-painted decoration.

Rolling pins, pastry boards, wooden spoons and other accessories of wood can be safely immersed in suds for washing. But don't let them soak in the water. Any doughy surface should first be washed off with cool water and then cleaned as usual.

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November 16, 1964

To all counties  
4-H NEWS  
Immediate release

MANY TRIPS  
AVAILABLE  
TO 4-H'ERS

The monetary value of a trip won by a 4-H'er may be small, but the inspirational value is great -- whether it's a trip to the National 4-H Club Congress in Chicago, the State 4-H Junior Leadership Conference, health and conservation camps or a week's stay in Washington, D. C., for the National 4-H Conference.

So says County Agent \_\_\_\_\_.

These and many other trips are awarded to Minnesota 4-H'ers every year for their achievements and leadership activities. The long-lasting benefits in education as well as inspiration on the trip winner are immeasurable, \_\_\_\_\_ adds.

More than 800 junior leaders attend the State 4-H Junior Leadership Conference at the University of Minnesota each year. There they develop leadership skills through discussions with guest speakers and other club members. 4-H'ers with a special interest in health and conservation may be selected for the state camps held every summer where they combine education and recreation as they learn more about the importance of health and conservation. Outstanding junior leaders are chosen to attend the American Youth Foundation Leadership Training Camp in Shelby, Michigan, at Camp Miniwanca.

Thirty-two Minnesota 4-H members will attend the 1964 National Club Congress representing a wide variety of projects ranging from swine to foods, from automotive to home improvement and shop. The Minnesotans join 1,500 delegates for five days of cultural tours, educational speakers, festive banquets in their honor and an opportunity to become acquainted with and share ideas with 4-H'ers from all fifty states and Puerto Rico, says Leonard Harkness, state 4-H club leader at the University of Minnesota.

add 1 - trips available

The four delegates representing Minnesota 4-H'ers at the National 4-H Conference in April spend a week in Washington, D. C., learning how the government functions, hearing talks by various legislators and touring government buildings. They realize the vital part 4-H plays in developing citizenship and preparing future leaders, relates County Agent \_\_\_\_\_.

Other conferences include the State 4-H Electric Conference, the Regional Tractor Operators' Contest, the Poultry Fact Finding Conference in Kansas City, Missouri, and the National Safety Congress in Chicago. The participants meet with men in their fields and explore possible related careers.

Many groups hold camps and meetings on a multi-county basis with particular emphasis on conservation and out-of-door living. Or, 4-H'ers may participate in exchange programs with other states.

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Note to county agents: You may wish to include paragraphs on any recent local local winners of any of these trips.

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To all counties  
Immediate release

MILK PROGRAM  
TEST EXPLAINED

While many tests for mastitis detection in milk are now in use, the Minnesota Mastitis Council has recommended the catalase test for use in the Minnesota Abnormal Milk Control Program.

Other popular tests include the Stripcup test, the Whiteside test, and the California Mastitis Test.

The Minnesota Mastitis Council represents dairy producers, processors, regulatory agencies, practicing veterinarians, milking machine distributors and educational and research institutions.

According to V. S. Packard, extension specialist in dairy industries at the University of Minnesota, the catalase test measures absolute values in a way similar to measuring the distance between two points. This gives it a distinct advantage over tests which require interpretation of results.

Catalase is an enzyme found in milk, usually at very low concentrations, Packard says. It is also found in white blood cells of milk. The greater the infection, the greater number of white blood cells and the more catalase present. In the catalase test, samples are graded 20 percent or under, or 30, 40, 50 percent or more.

Since catalases break down hydrogen peroxide to water and oxygen, the test involves adding hydrogen peroxide to a small amount of milk. The sample is then incubated at room temperature for three hours, after which the amount of oxygen released is measured with a specially designed ruler.

-more-

add 1 - mastitis

A 30 percent catalase level is being proposed as the maximum limit, according to Packard. At 30 percent reaction, the cell count can usually be expected to be one or two million.

Like other mastitis tests, the basic limitation of the catalase test is the possibility of getting false positive reactions. That is, a positive reaction may be observed where no mastitis infection is present. For example, early or late lactation milk may show positive.

Since red blood cells also contain catalase, false positive reactions can occur when blood is present in milk. Milk from cows suffering from any systemic illness will show false positive results. Also, if a cow has been treated for an infection and the infection has been killed, white blood cells will persist in the milk for some time, making for positive test results.

The Stripcup test, perhaps the oldest of all mastitis tests, has several drawbacks, according to Packard. It can detect only about 20 percent of present mastitis cases, and by the time it gives visible evidence of mastitis, the disease will already be in an acute stage.

The Whiteside test, also an older method, can identify 89 percent of individual quarters samples, 82 percent of individual cows milk samples, and 65 percent of can milk samples with mastitis. While this test is by no means fool proof, Packard points out that it is much more sensitive than the Stripcup test.

California test results are usually similar to results of the Whiteside test. But on can milk samples, the Whiteside test will likely yield a larger number of negative results on milk of high cell count. The California test, on the other hand, might be expected to show a greater number of positive tests on milk of low cell count.

Packard explains that only a limited amount of information can be obtained from a test on bulk or can milk. In order to do an adequate job of testing for mastitis, individual cows should be checked and preferably quart milk samples taken.

add 2 - mastitis

Producers should keep in mind that these tests merely indicate problems and do not indicate the specific organism causing the mastitis infection. Test results should not be used as a basis for antibiotic or other treatment. Veterinary assistance is needed for more detailed analyses.

While each of the mastitis tests vary in degree of accuracy, Packard explains that each of the testing methods makes it possible for dairymen to obtain valuable information that will not only help him meet control standards, but minimize the great losses in milk production caused by mastitis.

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To all counties  
Immediate release

IN BRIEF.....

Tissue cultures offer potential in alfalfa research: Alfalfa is one of the latest plants to yield to tissue culture techniques--the study of living tissue apart from the complete plant. It was worked out for alfalfa by William Clement, Jr., U. S. Department of Agriculture geneticist at the University of Minnesota. It allows researchers to grow vast numbers of single cells in the laboratory, and check more systematically for mutations and genetic processes in general. It is far more effective than trying to find sudden hereditary changes in a 40-acre alfalfa field.

\* \* \* \*

Rootworm eggs can survive two winters. Why can rootworm infestations appear in corn preceded by a year of non-corn crops? This old riddle now has at least one answer. Entomologist H. C. Chiang at the University of Minnesota has found that a small percent of rootworm eggs can survive one winter, stay in the ground unhatched all summer, live through the second winter and hatch the following spring. And this long-term survival was more common when eggs were below the 4-inch level in the soil. However, this percentage of eggs surviving two winters is small--around 2 percent in Chiang's studies. Therefore, it is still wise to interrupt continuous planting of corn by some other crop, to reduce overall rootworm infestations.

\* \* \* \*

Weather and soil nutrients: Uptake of soil nutrients is often reduced by weather conditions, according to C. J. Overdahl, extension soils specialist at the University of Minnesota, and W. W. Nelson, Lamberton, superintendent of the University's Southwest Experiment Station. But they add this point: If soils are cold enough to restrict rooting and organic decomposition, but not too cold to greatly inhibit growth, added fertilizer may result in large yield increases. Starter fertilizer near the plant may partially offset the difficulty in getting adequate nutrients into the plant.

# # # #

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To all counties  
Immediate release

ROW WIDTH LINKED  
TO OTHER FACTORS  
FOR SOYBEANS

Soybeans in narrower rows usually yield more per acre, University of Minnesota research has shown.

But the amount of yield increase you get from narrower soybean rows depends on the variety you plant and upon the date of planting.

Agronomists R. L. Cooper and J. W. Lambert have conducted soybean row spacing studies in southern Minnesota. They used three varieties--Acme, Merit, and Chippewa. Acme is an extremely early variety, Merit is intermediate in maturity and Chippewa is the latest, a full season variety.

They compared three dates of planting--May 18, June 18, and July 9--for each variety. Also, for each variety and each planting date, they compared spacing in rows 40 inches and 24 inches apart.

First, they found that the highest total yield was in plots where a full season variety (Chippewa) was planted early and in the narrower rows.

Regardless of the variety, and the planting date, the narrower row always gave some increase in yield, compared with wider ones.

Thirdly, the magnitude of the increase was greater for less than full season varieties and for late plantings.

For example, the early variety Acme in narrow rows produced 36 percent more in yield, averaged across all planting dates, compared with the wider rows. The increase for narrow rows was 26 percent for Merit and 17 percent for Chippewa.

-more-

add 1 - row width linked

Averaging over all varieties, Cooper and Lambert found the yield increase in narrower rows was 13 percent for May 18, 35 percent for June 18, and 33 percent for the July 9 planting dates.

In general, early planting is recommended for soybeans. But the agronomists say that if for some reason a farmer must plant late, and must use an early variety, then it is especially important to plant the soybeans in narrow rows, because the yield difference may run as much as 5-7 bushels per acre.

Narrower rows are becoming more widely used in Minnesota. One factor holding up the shift among farmers is equipment. Most farmers tend to use the same planter for corn and soybeans, and, in the past, few corn planters were made for rows narrower than 38-40 inches.

More recently, however, planters with adjustable row widths have been put on the market.

So far, 24 inches is about as narrow as soybean rows can be and still allow for adequate cultivation. Narrower rows might be possible if weeds are completely controlled with herbicides, thereby making cultivation unnecessary.

However, much more research is needed on extremely narrow rows, and agronomists are not recommending widths under 24 inches at present.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 16, 1964

To all counties  
Immediate release

QUALITY ALFALFA  
COMPETES WITH CORN  
AS LIVESTOCK FEED

"Forage quality" means different things to different people, but one thing it can mean is an alfalfa yield that produces as much feed value per acre as a 100-bushel corn crop.

W. F. Hueg, Jr., Assistant Director of the University of Minnesota Agricultural Experiment Station, says that, traditionally, research people and farmers have tended to think of grain as a more efficient supplier of many feed nutrients than forage.

But with enough attention to harvesting and handling, Hueg says, especially in the early growth stages, alfalfa can be highly competitive with grain crops.

What is meant by forage quality? Hueg says an agronomist looks more at the stage of growth of the crop. An animal nutritionist is concerned with its nutritional value for livestock, and a biochemist is concerned with the chemical structure.

A livestock producer is especially concerned with cost of production.

Hueg says forage quality may be defined in terms of a series of "maximums." This would include maximum production of feed nutrients per acre, maximum forage consumption by livestock, maximum return of product from feeding the forage, maximum labor income to the producer, and maximum family living as a result of an improved forage program.

This means, Hueg continues, looking at forage from the standpoint of the animal which converts it into milk, meat and fiber.

Hueg says that through years of research and demonstrations, the potential of forage has been shown repeatedly. Getting the most from a forage field means some careful attention to harvesting.

add 1 - quality alfalfa

Recent data from research at the University of Minnesota shows that when cut three times per year, at early growth stages, an alfalfa field can produce three and one-half tons per acre of forage which has the equivalent of 100 bushels of corn in nutrient value (TDN).

Furthermore, this forage crop contains about three times as much protein per acre as corn would produce.

Hueg sees increased interest among research people in different disciplines as contributing to long-term improvement in forage. In the past, yield of a crop has been thought of in terms of the amount of material -- such as bushels of corn or tons of hay. He saw a shifting now to thinking of yield in terms of quality and feed value from each acre of cropland.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 17, 1964

Immediate release

#### STATE 4-H WINNERS RECEIVE VARIETY OF AWARDS

Savings bonds and watches are among the awards that will go to 4-H Club members who are 1964 state winners in their 4-H projects.

Winners and the projects in which they have received top placing include Robert Engebretsen, 17, Marshall, photography; Kathryn Haugrud, 18, Pelican Rapids, dairy foods; Delores Woessner, 15, Austin, dog care; James Vacinek, 18, Pine City, forestry.

Robert's award is a \$25 savings bond from Eastman Kodak Co., Rochester, N.Y. A senior in Marshall High School this year, Robert has been a 4-H member in Lyon County for five years and is president of his club. In the two years he has taken the photography project he has won county championship ribbons on photography exhibits and on his demonstration on developing pictures.

Kathryn will receive a gold watch from the Carnation Co., Los Angeles, for her emphasis on use of dairy foods in the food and nutrition project. She is also one of 18 4-H'ers in the nation who will receive trips to the 4-H Club Congress in Chicago as regional winners in dairy foods. She has won championships at the Otter Tail County fair, as well as state awards. In 1963 she received a purple ribbon on her dairy foods demonstration at the Minnesota State Fair. Now a freshman at Concordia College, Moorhead, she is president of her 4-H club.

(more)

add 1 -- state 4-H winners

As the first state winner in the dog care project, Delores will be awarded a wrist watch from Ralston Purina Co., St. Louis, Mo. Her favorite project is dog care, she says, because "it gives members who live in town a chance to show an animal at the fair." She has shown her dog Queen at the last two Mower County fairs and has won grand championship both times. She won a trip to the State Fair this year with her demonstration on "How to Train Your Dog." She started training Queen when she was six months old; Queen is now four. Delores is a sophomore in Austin High School and vice president of her club. She says she'd like to be a veterinarian or an animal trainer.

As state forestry winner, James will receive both a pen and pencil set and a trip to National 4-H Club Congress in Chicago. His forestry achievements include helping his father clear two acres of woodland, planting 7,000 seedlings for wind-breaks, firewood and Christmas trees, sawing 870 board feet of lumber and tapping and making 7 1/2 gallons of maple syrup. He is now enrolled at the University of Minnesota in agricultural education.

The Fullerton Lumber Co., Minneapolis, provides the trip, American Forest Products Industries, Washington, D. C., the pen and pencil set.

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64-272-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 19, 1964

Immediate release

## HORTICULTURAL SOCIETY ELECTS OFFICERS

Carl J. Holst, 4225 Chowen Ave. So., Minneapolis, has been elected president of the Minnesota State Horticultural Society for 1965.

Wilbert G. Sindt of St. Paul is the retiring president.

D. Bruce Johnstone, Excelsior, succeeds Holst as vice president.

Re-elected to executive board terms of three years were Mrs. Norman Flagstad, Roseau and Mrs. I. R. Geving, Thief River Falls. Also re-elected to a one-year board term was Mrs. Edward Koempel, 702 So. Wilder, St. Paul.

Twenty-four winners of honorary awards for 1964 were announced by E. M. Hunt, secretary of the Horticultural Society. They were selected from nominees in all parts of the state and will receive special recognition for outstanding gardening achievement.

Award recipients are:

Honorary life membership -- Ben Storey, 2240 Edgecumbe Rd., St. Paul; Joseph Witmer, 255 Oakwood Rd., Hopkins.

Distinguished service certificates -- Nelson W. Barker, Rochester; Gordon C. P. Yates, LaCrescent; Mrs. H. D. VanBuskirk, 286 No. McCarron's Blvd., St. Paul; Harold Thomforde, Crookston; G. Victor Lowrie, 2107 Glenhurst Rd., Minneapolis.

Award of merit certificates--Mrs. A. M. Kessenich, 250 Interlachen Rd., Hopkins; Mrs. Frank Kilgore, Austin; Mrs. Alonzo Stiles, Lake Crystal; Mrs. William Lohman, Windom; Mrs. Clarence Trueblood and Mrs. Tom Hall, Brainerd; Mrs. J. F. Lavacot, 226 Prescott Ave. St. Paul; Mrs. Lloyd F. Hellebo, 933 Delaware Ave., West St. Paul; Rev. E. L. Rieff, Moose Lake; Mrs. Ralph Ash, Hibbing; Mrs. Charles Becklund, and Richard V. Dumas, Duluth; Mrs. Charles Rector, Ada; Mrs. Walter Nelson, Roseau; Mrs. Marie Cernousek and Robert Kloubec, Thief River Falls; Mrs. Harvey Polchow, Mankato.

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

#### WHEAT AND FLOUR TRANSPORTATION COSTS ANALYZED

Changes in the transportation cost relationship of wheat and wheat flour may affect the future of the Twin Cities as one of the nation's major flour milling centers.

But the moderate transportation cost advantage of shipping oilseeds over oilseed products is not expected to result in any decline in oilseed processing in Minnesota.

These are the predictions of J. D. Hyslop and R. P. Dahl, agricultural economists at the University of Minnesota, who recently completed a study of "The Effect of Changes in Transportation Costs on Minnesota Wheat Flour Millers and Oilseed Processors."

They explain that the continuation of milling at its present volume in this area may depend on a readjustment of the transportation cost relationship of wheat and flour.

Such a readjustment would not be necessary if railroads were the only carriers of wheat and flour, the economists say, since the rail rate structure permits flour to be shipped at the same freight cost as grain. Two features of the rail rate structure insure this equality.

(more)

add 1 -- transportation costs

The first is a transit privilege which makes it possible to store or mill wheat into flour at any point between its country origin and its final destination. A through rate is paid on the entire shipment regardless of stops for milling or storing.

The second feature of the rate structure is the system of proportional rates which applies to shipments out of Minneapolis or any of the other major western markets on the Missouri River.

The transit privilege originally applied at these markets, according to Hyslop and Dahl. But since the transit balances (the difference between the through rate to final destination and the flat rate to the milling point) varied widely depending on how far the point of origin was from the western markets, a system of proportional rates was established.

Proportional rates apply to all shipments outbound from these markets regardless of origin, and are the same for flour as wheat. The transit privilege can be used at any other milling or storage point. Thus, rail rates on wheat and flour are equal regardless of where milling occurs.

The economists point out that increasing competition from other carriers, principally water carriers, is removing this equality. These carriers base their rates on the cost of providing the basic transportation service, while railroads permit wheat and flour to be shipped at the same rate even though it costs more to handle flour.

The rates charged by water carriers are as low as half the rates charged by railroads for similar shipments. Shippers of wheat are apparently better able to take advantage of this lower cost alternative than are shippers of flour.

The volume of wheat carried by water from Minnesota between 1948-61 was much greater than the volume of flour. This increase in wheat shipments by water from Minnesota is reducing the cost of shipping wheat relative to the cost of shipping flour.

(more)

add 2 -- transportation costs

The lower rates for wheat shipments charged by carriers on the Great Lakes permitted millers in Buffalo, N. Y., for example, to deliver flour in the East at a lower cost than their competitors further west.

This made it possible for Buffalo to become the leading flour producing city in the nation during the 1920's. Production in Minneapolis fell rapidly from an annual average of 1,660,500 tons during 1911-20 to 735,000 tons in 1931. Production has remained relatively stable since.

Flour production in the state, as a percentage of the total U. S. output, increased from 11.1 percent in 1948 to 12.7 percent during the Korean Conflict. However, it has declined steadily to 9.5 percent in 1962.

These trends, the agricultural economists point out, have taken place concurrently with higher shipping costs for flour in comparison to those for wheat. This makes Minnesota a high-cost location from which to serve distant markets with flour.

Millers located closer to major consuming areas are increasingly able to deliver their products at lower transportation costs than their Minnesota competitors.

By examining the revenue-cost ratios of railroads, the economists found that rail profits are more for shipping wheat than flour. Thus, if intercarrier competition forces rail rates downward, wheat rates will be able to absorb greater decreases than will flour rates.

As a result, if railroad rates should go down, shipments of flour from Minnesota would not only continue to decrease, they explain, but could decrease at an even greater rate.

While the cost relationship of oilseeds and oilseed products is much the same as that of wheat and flour, the difference is not so pronounced. Like rail rates on wheat and flour, the difference between the rates on oilseeds and on oilseed products did not show any significant trend over time.

(more)

add 3 -- transportation costs

Unlike flour shippers, oilseed products shippers have made greater use of the lower cost water transportation relative to shippers of their raw materials. Water carriage of oilseeds increased by 95,000 tons between 1948-61, going from 319,000 tons in 1948 to 414,000 in 1961. In the same period, oilseed product shipments increased 20,000 tons, from 4,000 to 24,000 tons.

In comparison, the use of water by wheat flour shippers has been almost negligible. The 24,000 tons of oilseed products shipped by water in 1961 was about six percent of the oilseed tonnage, but the 34,000 tons of wheat flour shipped by water that year was only about one percent of the wheat tonnage.

Although there is some transportation cost advantage for shippers of oilseeds over shippers of oilseed products, the exports of oilseed products increased from 1948-60 from 487,600 tons to 799,200 tons.

There are two reasons for this, the economists explain. The first is the combination of a nearby source of raw materials and a relatively localized market for soybean meal.

Soybean production has expanded rapidly in Minnesota since World War II, and flaxseed production is concentrated in Minnesota, North and South Dakota. Also, during the period studied, over half of all rail shipments of oilseed meal originating in Minnesota had their destinations in Iowa, Minnesota and Wisconsin.

The second reason for increased exports of oilseed products from the state is the weight loss in processing associated with the extraction of oil.

The weight loss is about 80 percent in soybeans and 60 percent in flaxseeds. Thus, if the oils are extracted near the point of raw material source, there will be a reduction of transportation costs, since 80 percent of the weight of soybeans and 60 percent of the flaxseed weight is not shipped.

The revenue-cost ratio of oilseeds and their products are similar to those of wheat and flour. That is, rail profits are more for shipping oilseeds than oilseed products, but the difference is not as great.

As a result, the economists do not expect any decline in oilseed crushing in Minnesota due to the transportation cost relationship of oilseeds and their products.

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

SHEEP PRODUCTION  
RESEARCH AT UM  
IS REPORTED

Beet pulp pellets, a trace mineral problem, and possible ways to control the lambing period in sheep are among research topics reported this fall by University of Minnesota animal husbandmen.

Speaking at Chicago before the Midwestern Section of the American Society of Animal Science, H. E. Hanke from the West Central Experiment Station at Morris, and R. M. Jordan, St. Paul campus researcher, said lambs fed a starter ration containing beet pulp pellets performed about as well as lambs on two other rations.

One group of lambs received pelleted beet pulp, self-fed, and a half pound of alfalfa hay daily as a starter ration. The second received self-fed alfalfa pellets and the third received a standard starter ration of alfalfa hay, corn and protein supplement.

After 28 days on these rations, all lambs were switched to an unpelleted fattening ration.

Lambs fed pelleted hay during the first 28 days consumed more feed and gained considerably faster during that period than the other two groups. However, this same group made reduced gains during the finishing period, so there was no overall advantage for any of the starter rations for the trial as a whole.

Producers have become interested in beef pellets largely because of the favorable price, convenience and labor-saving advantages. When unpelleted, beet pulp is bulky and hard to handle.

Jordan, P. A. Boyazoglu, and R. J. Meade reported a study on sulphur, selenium, and vitamin E interrelationships in sheep.

add 1 - sheep production

Selenium, a trace mineral, and vitamin E have proven beneficial in preventing muscular dystrophy, commonly called white muscle disease, in sheep.

The Minnesota researchers studied whether high sulphur levels could interfere with the metabolism of selenium, thereby precipitating occurrence of muscular dystrophy.

Low, medium, and high levels of sulphur, with and without supplemental selenium or vitamin E, were fed to gestating ewes. All the ewes received corn and hay, which contained selenium at levels below the minimum requirements for sheep.

Five lambs from sulphur supplemented ewes indicated pathological changes similar to natural cases of muscular dystrophy. No such cases were found among lambs not receiving sulphur.

Jordan also reported on use of the hormone progesterone for synchronizing estrus in sheep.

The main idea behind this research is to find ways to get all or most of the ewes in a flock to lamb in a short period of time--even in a single day.

In a series of trials, Jordan fed ewes between 50 and 60 milligrams of progesterone daily. Progesterone prevents the animal from coming in heat. The idea then is to stop feeding the progesterone to all ewes at the same time, allowing them to all come into heat and be bred at the same time.

In three of four trials, the progesterone treatment did result in a higher proportion of ewes lambing during the first week or two of the lambing season. But in the fourth trial, more untreated ewes lambed in that period.

Furthermore, in no case did the progesterone actually shorten the period over which the lambs were born. One of the problems is conception; although estrus is synchronized, not all ewes conceive at first breeding.

These papers were among 18 papers given by Minnesota research men at the meetings.

# # # #

Department of Information  
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St. Paul, Minnesota 55101  
November 23, 1964

To all counties  
4-H NEWS  
Immediate release

SCHOLARSHIPS AVAILABLE  
FOR 4-H ACHIEVEMENTS

If you're planning to enroll in college next fall, begin to look now into the possibility of getting a scholarship.

Many scholarships are available to Minnesota 4-H'ers who have a keen interest in agriculture, forestry or home economics.

Any 4-H'er who has a good record in achievement, active participation and leadership in 4-H is eligible for a \$150 college scholarship donated by the Watkins Products, Inc. Each year scholarships are given to one Minnesota boy and one girl chosen by the state 4-H office.

An interest and accomplishments in bread baking could win you a \$100 scholarship. Peavey Company donates three \$100 scholarships to 4-H'ers in the state of Minnesota.

Foods and nutrition majors currently enrolled in 4-H in Minnesota can apply for two \$300 scholarships given by the Ball Bros. Co., Inc.

The McKerrow Scholarship of \$300 is donated by the Minnesota Livestock Breeders' Association. The applicant should have a long-time record in livestock project work in Minnesota and plan to enroll in agriculture.

Two \$800 scholarships are donated by the Edwin T. Meredith Foundation to one boy and one girl who plan to enroll in an accredited college or university. A Scholarship winner is selected from candidates in 15 states who have done outstanding work in 4-H.

-more-

add 1 - scholarships available

Any Minnesotan agriculture or agricultural business major in his junior or senior year is eligible for one \$400 scholarship given by the Chicago and Northwestern Railway Company. The Chicago and Northwestern Railway Company also donates three \$400 scholarships in eight selected states to students in agriculture or forestry.

If you have an interest and desire to learn more about the transportation of grain as it affects the economical marketing of grain with emphasis on ways and means of improving the situation in your own locality, then you will be interested in the Milwaukee Road scholarships. Two scholarship winners are selected from 12 states served by the Milwaukee Road.

Are you a major in agronomy, soils, entomology or horticulture? If so, you may be eligible for one of the two national \$800 scholarships given by the California Chemical Company. The scholarships are presented to former 4-H members enrolled as sophomores or juniors in an accredited college.

Are you planning a career as an extension worker? Look into the two scholarships offered by the Charles Pfizer and Company for \$250. Eligibility for this scholarship is a good academic standing and enrollment as a junior in a land-grant college or university.

Four scholarships in the U. S. are offered to freshmen majoring or minoring in forestry in accredited colleges. The \$1600 scholarships are donated by the Homelite and Division of Testron, Inc.

Home economics majors in the U. S. have a good chance to receive a scholarship. Three \$500 scholarships are available to girls in the junior year in home economics. These scholarships are submitted by the Pyrofax Gas Corporation.

Sunbeam Corporation makes two \$800 scholarships available to home economics juniors in the U. S. Sperry and Hutchinson and West Bend Company provide for four \$800 scholarships under the same qualifications.

A 4-H member with a long-time record in the sheep project can apply for a \$500 scholarship given by Wilson and Company, Inc. Six scholarships in the U. S. are given to freshmen enrolled in accredited colleges.

For further information on scholarships and for report forms, contact your county agent.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 23, 1964

To all counties  
Immediate release

Extension Agents: The local office of the Bureau of the Census has asked us to send this press article to agents for further distribution to community newspapers.

AGRICULTURE CENSUS  
WELL UNDERWAY  
IN MINNESOTA

The Census of Agriculture in Minnesota is now well underway and enumeration is scheduled for completion by December 15.

Census enumerators have already visited many farms and have picked up agriculture questionnaires.

Officials of the Bureau of the Census are requesting farmers, who have not yet been contacted by a Census enumerator, to complete the questionnaires which have been sent through the mail.

An agriculture questionnaire must be filled out by anyone who, during 1964, had any cattle, four or more hogs, 30 or more chickens, 20 or more fruit trees or grapevines, or who harvested any crops such as corn, hay, wheat, and vegetables for commercial sale, or any nursery or greenhouse products.

Census officials say that if there are any questions about completion of the form, the Census enumerator will provide assistance when he visits the farm.

Every five years, those ending in "4" and "9," the Census of Agriculture is taken. It is a nationwide counting and measuring of the national agricultural enterprise.

The Bureau of the Census points out that census information is confidential. Data can be used for statistical purposes only; no fact can be revealed about an individual farmer or farm.

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

IN BRIEF.....

Transportation cost relationships of wheat and wheat flour may affect the future of Minnesota as a major flour milling center. Economists J. D. Hyslop and R. P. Dahl at the University of Minnesota point out that the rail rate structure currently permits flour to be shipped at the same freight cost as grain. This equality arises from a transit privilege, which provides for a through rate on a shipment regardless of stops for milling or storing, and a system of proportional rates. However, increasing competition from other carriers, principally water carriers, is removing this equality. Water carrier rates are lower for wheat shipments. If competition pressure forces railroad rates down, wheat rates will be able to absorb greater reductions and shipments of flour from Minnesota might decrease at an accelerated rate.

\* \* \* \*

Ammonium in a phosphorus fertilizer leads to greater uptake of phosphorus by the corn plant. And University of Minnesota soils scientists say the greater uptake is probably due to the effect of ammonium on the plant, rather than the effect on availability of phosphorus in the soil. In recent studies comparing phosphate fertilizer with and without ammonium chloride, phosphorus availability in the soil was not affected. Therefore, the effect of ammonium was probably on plant functions.

\* \* \* \*

Livestock account for 10-15 percent of fatal farm work accidents, according to Glenn Prickett, extension safety specialist at the University of Minnesota. While artificial breeding has reduced the number of dairy bulls on farms, other livestock present a variety of dangers. Especially dangerous, potentially, is the female animal with her young nearby. And a number of accidents involve animals being loaded for shipment. Such accidents are a threat to humans and livestock profits as well.

# # # #

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St. Paul, Minnesota 55101  
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To all counties

Immediate release

**SHEEP THRIVE  
WHEN FED  
LESS HAY**

Sheep producers who feed each animal an average of four or five pounds of hay daily may be feeding more hay more often than necessary.

R. M. Jordan, professor of animal husbandry at the University of Minnesota, explains that under existing conditions profits can be increased and sheep will thrive just as well when fed less hay and more concentrates in three feedings per week.

Nutrition content of the feed ration is one of the major factors affecting gross returns in sheep production, Jordan says. And at present prices, shelled corn can be bought at less cost per pound of energy or nutrients than hay.

If a gestating ewe is fed four to five pounds of hay daily, the feed cost will average from five to seven cents per feeding. But studies show that the ewe will get along just as well when fed a daily average of one pound of hay plus one pound of shelled corn.

Any increase in profits from this feeding schedule would depend on the relative price of hay and shelled corn, Jordan explains. But a rule of thumb is that shelled corn is a better buy for ewe rations when it can be bought for about twice the cost of hay or less.

Studies also show that labor costs can be reduced when sheep are fed three times per week rather than at daily feedings. This plan of reduced number of feedings is advantageous not only from a labor saving standpoint, Jordan says, but from the standpoint of the general welfare of each animal as well.

When sheep are fed daily, there is a tendency for the larger, stronger animals to eat more than the smaller, weaker ones, he says. But by feeding abundant amounts of feed three times weekly, all animals in the herd are more apt to get their required amounts of feed.

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Department of Information  
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St. Paul, Minnesota 55101  
November 23, 1964

To all counties  
ATT: HOME AGENTS  
Immediate release

HOLIDAY FOODS  
IN ABUNDANCE FOR  
DECEMBER MEALS

December plentiful foods offer a wide selection for everyday and holiday meals.

Turkeys, peanuts and peanut products top the U. S. Department of Agriculture's list of plentiful, but added to these are beef, broiler-fryers, apples, cranberries, red tart cherries and canned ripe olives.

There will be plenty of turkey left from Thanksgiving for Christmas and New Year dinners. The 1964 crop is second only to the largest crop on record. Available besides whole turkeys are turkey rolls with no bone. Because the turkey rolls slice easily, they are especially adapted to buffet suppers.

Beef supplies will continue to be large -- well above those of a year ago -- with prices close to current figures.

Marketings of broiler-fryers will be heavy through December -- possibly as much as five percent larger than last year at this time. Retail prices of chicken will be unusually attractive for consumers.

Shoppers can count on plenty of high-quality apples for the fruit bowl, for salads and desserts. Since cranberry production is up 2 percent over last year and over the five-year average, there will be no lack of this plump red fruit to accompany turkey and chicken for December dinners. A record-large red tart cherry crop plus a bigger pack of frozen cherries than ever will put more cherries on the market for the always favorite cherry pie.

A crop of peanuts a fourth above average will provide ample quantities of these nuts for holiday cookies and candies.

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Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 24, 1964

Immediate release

#### FOUR MINNESOTANS HONORED FOR YOUTH WORK

Four Minnesotans active in helping 4-H members have been chosen to receive 4-H alumni recognition awards.

They are James Copp, formerly of Thief River Falls; Algene E. Peterson, Willmar; Mrs. Paul Richter, Wadena; and Mrs. Merle Michaelson, St. Cloud.

They will receive plaques from Clin Mathieson Chemical Corporation Chemicals Division - Agricultural, Little Rock, Arkansas. The awards will be presented during the State 4-H Junior Leadership Conference in June.

The awards are given annually to honor former 4-H members whose accomplishments, following 4-H club membership, exemplify effective community leadership, public service, service to 4-H club work and success in their chosen careers.

Copp is now associate professor of rural sociology at Pennsylvania State University, State College, Penn. In addition to teaching, he carries on research and is adviser to graduate students. Copp was an outstanding 4-H member in Pennington County for 11 years. In his graduate work at the University of Wisconsin, he did extensive research with the problem of drop-outs in 4-H. His study was published in the Wisconsin Agricultural Experiment Station Bulletin 195, "Factors Associated with Reenrollment in 4-H Clubs."

Algene E. Peterson, a mortician in Willmar, has been active in working with the youth in his community. For 30 years he has been associated with scouting and has started four Scout units and a Circle K Club for boys at Willmar Junior College. He has furnished a rotating loving cup for years to the best 4-H club in the county. As Kiwanis president he gave recognition at the 25th annual 4-H banquet to all county adult leaders who had worked with the youth and their projects for a number of years. As a 4-H member himself, Peterson won a number of awards and trips to the State Fair and Itasca State Park.

(more)

add 1 -- 4-H honors

As a member of the Gonvick 4-H club for seven years, Mrs. Richter participated in clothing, room furnishings, food and leadership projects. Now a homemaker in Wadena, Mrs. Richter continues to help others realize the importance of a college education in today's world. A graduate of the University of Minnesota in home economics, she has enabled many young people to obtain scholarships for higher education. After graduation from the University she taught home economics in Barnesville, was a Farm Security adviser and was in county extension work as 4-H and home agent in Wadena County and East Otter Tail County. She was a recipient of the University of Minnesota Alumni Service Award in 1963. She received an inscribed pin in appreciation of her work in helping Verndale students obtain college scholarships and has been scholarship chairman of the Wadena chapter of the University of Minnesota Alumni Association since formation of the chapter about 10 years ago. She has served on the Wadena Recreation Board for at least 13 years to assist in providing recreational facilities for youth.

Determined to find a way to get her children into 4-H work even though they lived in the city, Mrs. Michaelson organized the Mississippi Ripples 4-H Club, the only all-city club in Sherburne County. For 11 years Mrs. Michaelson was a 4-H club member and is now an active 4-H club leader and president of the Sherburne County 4-H Federation. Mrs. Michaelson is also active in many civic and charitable organizations such as church, school, League of Women Voters, recreation study committees and is block worker for a number of drives. She has been a music conductor at 4-H camp and is responsible for organizing a county 4-H band.

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Department of Information  
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St. Paul 55101 -- Tel. 647-3205  
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Immediate release

## BEEF FEEDERS DAY SCHEDULED AT MORRIS

A Beef Feeders Day will be held Thursday, Dec. 3 in Edson Hall Auditorium at the West Central School and Experiment Station in Morris, according to Leslie K. Lindor, the school's acting superintendent.

Lindor will preside over the morning session which will consist of presentations of various research reports. The session will begin at 10 a.m.

Topics to be covered include barley feeding, beef breeding herd, enzymes for beef cattle, corn silage, grain feeding ratios, hay substitutes, value of low quality silage and all-in-one corn silage rations.

Also on the program will be a report on corn silage from a Harvestore versus corn silage from a concrete stave silo, as well as a report on linseed oil meal versus urea corn supplements.

The final item on the morning program will be a discussion by Paul Hasbargen, University of Minnesota /extension specialist in economics and farm management. He will discuss the beef outlook with emphasis on the longtime future of the cattle feeding industry.

The afternoon session will begin at 1:15 p.m. with Leif Lie, Stevens County agricultural agent, presiding. A colored slide presentation of "A Livestock Man Visits South America," will be followed by reports on practical feedlot layouts and the profitability of confinement feeding.

The afternoon session, which will end about 3 p.m., will be followed by a meeting of the West Central Cattlemen's Association.

Other Feeders Days scheduled at the West Central School and Experiment Station in Morris will be a Swine Feeders Day Jan. 14, and a Lamb Feeders Day Feb. 11.

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St. Paul 55101 -- Tel. 647-3205  
November 24, 1964

Immediate release

#### FOOD PRESERVATION WINNERS RECEIVE SAVINGS BONDS

A total of more than 6,000 jars of fruits, vegetables and meats is the record two girls can claim who have won \$50 bonds for their 4-H work in food preservation.

The winners are Diana Wooner, 16, Chatfield and Patricia Flottemesch, 19, Callaway.

Donor of the awards is the Kerr Glass Manufacturing Corp., Sand Springs, Okla.

During her six years in food preservation, Diana has canned 950 quarts and 1165 pints of fruits, vegetables, meats, jams and jellies. In 1960 her fruits won a purple ribbon at the State Fair. For six years she has placed first with her food preservation records in Olmsted County and in 1959 received a top record award. As a junior leader she teaches others the techniques she has acquired through her experiences in food preservation.

Patricia has canned around 4,000 quarts of vegetables and fruits in three years in the foods project. She has entered her exhibits at the Becker County Fair each year, winning reserve and grand championships. She has also won project pins for her work in this project. As a junior leader, Patricia shows younger members the value of demonstrating. She is now a sophomore at the College of St. Scholastica, Duluth.

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#### 4-H RADIO-SPEAKING CONTEST ANNOUNCED

"What Does the Separation of Church and State Mean to Me?" is the subject of the 23rd annual statewide 4-H radio speaking contest to be held between January and March, 1965.

Four sub-topics have been selected to give club members greater choice in subject matter. They are:

1. Does religion have a place in the public school? If so, in what way?
2. How is church-state separation related to parochial schools?
3. Is religion basic to our form of government? If so, in what way should it be expressed?
4. Freedom of religion: does this protect the freedom to have no religious belief?

To be eligible to enter local or county radio speaking contests, 4-H'ers must be over 14 years of age but not over 19 on January 1, 1965, according to William A. Milbrath, extension specialist, young adult programs, University of Minnesota.

County, district and state contests will be held. County contests must be in January, district contests between Feb. 1 and 20. State finals are scheduled for March 8 and 9 on the University of Minnesota's St. Paul Campus.

The Minnesota Agricultural Extension Service and the Jewish Community Relations Council of Minnesota co-sponsor the event. Awards are given by the Jewish Council.

Last year more than 1,500 Minnesota 4-H'ers participated in county competitions arranged under the direction of county extension agents.

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November 25, 1964

\*\*\*\*\*  
\*For release \*  
\*Sat. a.m., Nov. 28 \*  
\*\*\*\*\*

## MINNESOTA 4-H'ERS AWARDED NATIONAL SCHOLARSHIPS

CHICAGO--Two Minnesota 4-H'ers are winners of \$500 college scholarships awarded today (Nov. 28) at the 1964 National 4-H Club Congress.

They are LuAnn Herrig, 19, Slayton, and David Pierson, 19, Lake Elmo. Both young people won trips to the 4-H Club Congress as state winners in the foods and dairy projects, respectively.

Miss Herrig's scholarship for achievement in the bread baking phase of the foods and nutrition program was awarded by Standard Brands Incorporated, New York. She is one of six national winners.

In her eight years in the bread project, the Murray County 4-H'er received a gold pin in the bread project and a total of \$150 in savings bonds and scholarships for her bread-making abilities. She has been a member of the Iona Lucky Aces 4-H Club for 10 years, a junior leader for five and has served as club president.

Miss Herrig puts her talents to good use by baking bread for her family and neighbors and for a local old people's home. This past year she baked a total of 87 loaves of bread, 41 dozen rolls and 15 quick breads. She has been superintendent of the food preparation exhibits at the county fair and has worked in the cafeteria at the Junior Leadership Conference. After graduation from college, the 19-year-old young lady plans to be a home extension agent or a home economics teacher.

She is the daughter of Mr. and Mrs. Ray Herrig.

Pierson, one of six national winners in the 4-H dairy program, received his scholarship from the Oliver Corporation, Chicago, Ill.

His interest in the dairy project has led Pierson to pursue a career in dairy science. He is currently a sophomore in the University of Minnesota's College of Agriculture, Forestry and Home Economics.

He is the son of Mr. and Mrs. Paul Pierson.

Academic achievement and his accomplishments in livestock projects have won for him a number of awards, including the McKerrow Scholarship, the Tozer Scholarship and the Moorman Manufacturing Scholarship.

In 1963 the Washington County 4-H'er was a member of the champion 4-H state dairy judging team and had a purple ribbon dairy demonstration at the Minnesota State Fair. Starting with one registered Holstein heifer when he enrolled in 4-H 10 years ago, he has built up a herd of 13 registered Holsteins. One of them was selected June Dairy Month cow and was on exhibit throughout the state.

He is a junior leader and has been president of his club, Green Oaks #36.  
### 64-282-jbn

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November 25, 1964

\*\*\*\*\*  
\*For release \*  
\*Mon. a.m., Nov. 30 \*  
\*\*\*\*\*

### OLMSTED COUNTY YOUTH WINS \$500 SCHOLARSHIP

CHICAGO--A Rochester youth has won a \$500 scholarship for his safety activities.

He is Mike Hunter, 17, a student in John Marshall High School in Rochester. He is one of eight young people in the nation to be awarded \$500 scholarships for outstanding 4-H records in safety. The award was presented at the National 4-H Club Congress which opened here yesterday (Nov. 29) in the Conrad Hilton Hotel.

He is the son of Mr. and Mrs. Stanley Hunter.

The \$500 scholarships are given by General Motors, Detroit, Mich.

Mike has been given the additional honor of speaking on behalf of the 1500 Club Congress delegates at the Thursday noon luncheon given by General Motors.

During the nine years he has been enrolled in the 4-H safety project, the Olmsted County youth has given 44 demonstrations on various aspects of safety. He has been active in working with other members of the Cascade Cruisers 4-H Club in making and erecting rural road hazard signs and driveway stop signs for each 4-H family, in reflectorizing machinery and making tractor warning flags, in installing home fire alarms, in taking farm and home hazard checks, in making family first aid kits and building safety booths. He has represented his local 4-H club at the National Safety Congress. His 4-H club has been cited numerous times for outstanding work in safety.

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November 25, 1964

Immediate release

#### CHIPPEWA COUNTY 4-H'ER WINS BROWN SWISS AWARD

A Montevideo youth who has built his herd up to 70 animals is the 1964 winner of the 4-H Brown Swiss Award.

Larry Dale Russell, 17, will receive a watch from the Minnesota Brown Swiss Breeders' Association. He will also be awarded a Swiss bell as champion of Canton 3. The presentation will be made at the annual meeting of the Brown Swiss Breeders' Association Friday, Nov. 27, in Sleepy Eye.

Other canton winners who will receive Swiss bells are: Carolyn Wetzstein, West Concord, Canton 1; Linda Drewitz, Faribault, Canton 2; Larry D. Russell, Montevideo, Canton 3; David Tesch, Henderson, Canton 4; and Jane Thon, Brainerd, Canton 5 and 6.

In 1962 Larry won grand championship on his Brown Swiss at the Minnesota State Fair. In 1963 he won grand champion over all at the Chippewa County Fair with his Brown Swiss animals. He has also won trips to Junior Livestock shows. Larry has learned to develop a responsibility for his animals by making sure they were ready for the county fairs, club tours and other 4-H contests.

Larry is now a freshman in the College of Agriculture, Forestry and Home Economics at the University of Minnesota. As a student of Central High School in Montevideo, Larry belonged to the band, was FFA vice president and also received the Star Chapter Farmer Award.

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64-283-smk

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Immediate release

#### COOPERATIVE EXTENSION SERVICE ANNUAL CONFERENCE SET FOR DEC. 8-11

Extension education in the future and extension programs for youth will be featured topics at the annual conference of the Cooperative Extension Service of the University of Minnesota, Dec. 8-11 at the St. Paul Campus.

Attending the conference will be some 250 agents from the 91 county extension offices and nearly 100 subject matter specialists and administrative personnel from the St. Paul Campus.

First speaker at the opening session Dec. 8 will be William G. Shepherd, vice president for academic administration at the University, whose topic will be "The Different World of Tomorrow."

Luther J. Fickrel, extension director, will discuss "Extension Programs for the Future" during the same session.

Extension youth programs will be featured in presentations and workshop sessions Dec. 9. Charles Ramsey, sociology professor from Colorado State University, will discuss "The Changing American Society and Its Effect on Youth." An address on "Serving the Needs of Youth" will be presented by Donald A. Blocher, associate professor of educational psychology at the University of Minnesota.

(more)

add 1 -- annual conference

During an afternoon session Dec. 9, a panel and workshop session will be held on "Problems Facing Youth." Appearing at various workshop sessions will be representatives from the Minneapolis Youth Development Project, the Minnesota Department of Employment Security, the University Family Study Center, the St. Paul Urban League, the Governor's Council on Children and Youth, and Volunteers of America.

Speakers Dec. 10 include Howard Dawson, retired member of the Rural Education Division of the National Education Association, Washington, D. C., who will discuss "Expanding the Outreach of Youth Education." John Banning, assistant director for 4-H and youth development, U. S. Department of Agriculture Federal Extension Service, will talk on "Expanding Extension Youth Education."

A panel session on the afternoon of Dec. 10 will feature youth programs in extension as seen by county extension agents and the state 4-H club leader. Group seminars will be held on future extension youth programs.

Morning speakers Dec. 11 include David Preus, pastor of the University Lutheran Church of Hope, Minneapolis, and Sherwood O. Berg, dean of the University's Institute of Agriculture. Preus will discuss "Developing Youth Potential--Our Greatest Challenge," and Berg will talk on "Future Programs and Activities of the Institute of Agriculture."

Extension agents association meetings will be held during the Dec. 8th afternoon session of the conference.

The conference will close Friday noon, Dec. 11, with a luncheon with the Board of Regents.

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November 30, 1964

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## UM CHANGES RECOMMENDED CROP VARIETIES FOR 1965

Seven crop varieties have been dropped and three have been added to the list of varieties recommended for 1965 by the University of Minnesota.

According to Harley J. Otto, extension agronomist, the varieties dropped include Kindred and Traill barley; Ajax, Andrew and Burnett oats; and Comet and Norchief soybeans.

The added varieties are Garland oats and A-100 and Chippewa 64 soybeans.

Kindred and Traill are both malting barley varieties and were dropped because the newer varieties, Trophy and Larker, have yielded as well as Traill and better than Kindred, have larger percentages of plump kernels and stand as well as Traill and better than Kindred.

Both Trophy and Larker have been used long enough by the malting industry to be judged acceptable.

Ajax, Andrew and Burnett oats have been replaced by newer varieties in the same maturity classification which yield better and have better disease resistance. Comet and Norchief soybeans have also been replaced by newer varieties of the same maturity but better performance.

The A-100 soybean variety was developed by a farmer. It is of the same maturity as Harosoy and Lindarin, yields as well but stands better and has higher oil content than the other two.

Chippewa 64 performs about the same as Chippewa; the main difference is that Chippewa 64 has resistance to phytophthora root rot. This disease has not been seen definitely in Minnesota, but it presents a real danger and the resistant variety provides increased insurance.

Garland oats is a medium-early variety, among the top yielders in this maturity classification in three years of tests. It is about average in standability, and has a good resistance to stem rust as any variety tested. It is moderately susceptible to crown rust, a disease to which no varieties are completely resistant. (more)

add 1 -- recommended crop varieties

Flax varietal recommendations are the same as last year. But again, Otto says, farmers are urged to plant only those varieties which are immune to flax rust. All five recommended flax varieties have this immunity.

The list of varieties recommended for 1965 includes:

Barley: Larker, Parkland (northwest area only), and Trophy.

Cats: Dodge, Garland, Garry, Goodfield, Minhafer, Portage and Rodney.

Soybeans: A-100 (for southern zone), Acme, Chippewa, Chippewa 64, Flambeau, Grant, Harosoy, Lindarin, Merit and Ottawa Mandarin.

Winter Rye: Adams, Caribou and Elk.

Millet: Turghai, Empire, White Wonder.

Flax: Bolley, B-5128, Redwood, Summit, and Windom.

Hard red spring wheat: Crim, Justin, Pembina, and Selkirk.

Spring wheat, durum: Lakota and Wells.

Winter wheat: Minter.

Sunflowers: Arrowhead and Mingren.

Dry edible peas and field peas: Chancellor and Stral.

Alfalfa: Ranger and Vernal.

Birdsfoot trefoil: Empire.

Red clover: Dollard and Lakeland.

Sweetclover: Evergreen, Goldtop, and Madrid.

Bromegrass: Achenbach, Fischer, and Lincoln.

Timothy: Climax, Itasca, and Lorain.

Kentucky Bluegrass: Park.

Sudangrass: Piper.

Recommendations are based on trials at the agricultural experiment stations at Rosemount, St. Paul, Waseca, Lamberton, Morris, Crookston, Grand Rapids and Duluth, and on farmers' fields. Plots are handled so that factors affecting yield and other characteristics are as nearly the same as possible for all varieties.

Futher information on the recommended varieties, such as rate and date of sowing, will be published in Miscellaneous Report 24 of the University's Agricultural Experiment Station, to be available in early January, 1965.

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November 30, 1964

\*\*\*\*\*  
\*For release \*  
\*Wed. a.m., Dec. 2 \*  
\*\*\*\*\*

## U OF M STUDENTS WIN NATIONAL SCHOLARSHIPS

CHICAGO--Two students in the University of Minnesota's College of Agriculture, Forestry and Home Economics are winners of national college scholarships announced today (Dec. 2) at the 1964 National 4-H Club Congress.

They are Gary Vanderwerf, 20, Sleepy Eye, and Rodney W. Sando, 23, Cgilvie.

Vanderwerf is the national winner of the Alpha Gamma Rho scholarship. He was awarded the \$200 scholarship on the basis of his scholastic record and his 4-H activities. Only one winner is selected nationally each year for this award.

Sando is one of three sectional winners of a \$400 scholarship in forestry donated by the Chicago and North Western Railway Company, Chicago, Ill.

During his nine years in 4-H, Vanderwerf participated in the garden, soil conservation, shop, agronomy, junior leadership, forestry and sheep projects. He served as president, vice president and treasurer of his local club in Brown County and received the Key Award for his leadership and achievements. In 1960 he was selected reserve champion in the state contour lines contest at Terraceville.

Chosen as star Future Farmers of America chapter crops farmer in 1962, the Brown County youth has been chapter secretary and a member of the FFA crops judging team.

He is currently a junior majoring in agricultural education at the University of Minnesota and plans to follow a career in teaching or county extension work. He is a member of the Campus Chorus and is student council chairman of the International Relations Committee.

As a senior at the University of Minnesota majoring in forest resources management, Sando has worked for the U. S. Forest Service and is historian for the University's Forestry Club. He is also an executive officer of the University of Minnesota Gun Club.

A 4-H member for six years, he was grand champion tractor driver in Kanabec County for two years and was a member of Farm Boys' Camp.

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Immediate release

#### MINN. 4-H LIVESTOCK JUDGING TEAM WINS SECOND IN NATION

CHICAGO--Minnesota's state 4-H general livestock judging team has won second place in competition with 28 other state 4-H teams at the International Livestock Exposition now in progress here.

Members of the team, all from Redwood County, are John Gray and Dennis Hawton, Redwood Falls; John and Francis Goelz, Morton. They received a total score of 1581 out of 1800 possible points. The winning team, from Mississippi, edged out Minnesota by only five points.

The Minnesota team surpassed all other teams in judging swine and in giving oral reasons for judging.

John Goelz placed first in individual judging of sheep, 10th high in overall judging in the entire contest. Hawton was eighth high individual in overall judging; Gray was third high individual in swine judging.

Coach of the team was Norlin Hein, associate agricultural agent in Redwood County. Charles Christians, extension animal husbandman at the University of Minnesota, assisted in coaching the group.

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64-287-jbn

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November 30, 1964

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\*For release \*  
\*Tues., Dec. 1 \*  
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#### HENNEPIN COUNTY 4-H'ER GETS NATIONAL AWARD

CHICAGC--The fourth Minnesotan to receive a \$500 scholarship within four days at the National 4-H Club Congress here is a Hennepin County youth, Paul Johnson, 19, Maple Plain.

The announcement was made at the Club Congress which he is attending as state winner in 4-H achievement. Johnson was one of 12 national winners to receive scholarships for achievements in 4-H leadership.

The Sears-Roebuck Foundation of Chicago, Ill., donates the award to encourage the development of leadership qualities in young people.

Now a sophomore at the University of Minnesota, Johnson is majoring in soil science. He is president of Bailey Hall and works together with the leaders of all the University dormitories on the Board of Residence Halls. He works part time at the University Soil Testing Laboratory to obtain a greater understanding of his major.

Last year Johnson was secretary of the State 4-H Federation of some 53,000 members. He has been president of his local club and president of the county 4-H federation. He has helped plan and conduct statewide 4-H events as a member of the continuation committees for Conservation Camp, State Junior Leadership Conference and Boys' Camp.

In his 10 years of 4-H work, Johnson has carried beef, garden, home yard improvement, health, conservation, dairy and junior leadership projects. He was on the State Champion Soil Judging Team in 1961.

Johnson won the 4-H Key Award in 1962 and in 1963 the Danforth Award for his leadership and 4-H achievements. He has given numerous talks on 4-H activities and has helped younger 4-H members with project work.

He is the son of Mr. and Mrs. Russell Johnson.

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To all counties  
Immediate release

SIMPLE PASTURE  
MIXTURE PAYS,  
RESEARCH SHOWS

A simple legume-grass mixture may be one of the best for pastures, research at the University of Minnesota shows.

In a 5-year grazing study at Rosemount, such a mixture, treated with light applications of nitrogen as legumes became depleted, proved the most economical of all studied.

Two experiments were conducted. In the first, researchers compared dairy and beef animal performance on two kinds of pasture--simple and complex legume-grass and heavily fertilized all-grass. The second compared nitrogen effect on legume-depleted and all-grass pastures.

In the first experiment, 1958-59, the legume-grass pastures without nitrogen fertilization were more productive the first year than all-grass pastures heavily fertilized with nitrogen. The second year, however, severe winterkilling and weakening of legumes resulted in less productivity from the legume-grass mixtures.

These were extreme weather conditions; the researchers say that normally, the legume-grass pastures would have outproduced the all-grass pastures both years.

No real benefit resulted from having several legumes and grasses in addition to alfalfa and brome grass. In the complex mixtures, alfalfa and brome grass made the only significant contributions to forage production after the first grazing year.

This doesn't mean other species should be kept out. But it does suggest that alfalfa and brome grass should predominate for areas with weather conditions similar to Rosemount.

-more-

add 1 - simple pasture

In the second experiment, 1960-62, heavy nitrogen fertilization of all-grass pastures was continued. Also, the researchers compared light and heavy nitrogen applications on the legume-grass pastures. Legumes in the mixtures, by this time, had declined.

Lightly fertilized legume-depleted pastures outproduced the heavily fertilized all-grass pastures. Also, light use of nitrogen was more profitable than heavy doses on legume-depleted land. And animal production was higher on heavily fertilized pastures--but not enough higher to pay for the extra nitrogen.

"Light" nitrogen fertilization was 40 pounds per acre annually, while the "heavy" treatment was 140 pounds per acre the first 2 years and 300 pounds the third year. Over the 3 years, the heavily fertilized pastures received 460 pounds more nitrogen than the lightly fertilized land.

In summary, then, light nitrogen fertilization of the simple legume-grass mixture was more economical. The pastures had optimum levels of potash and phosphorus fertilizer and lime.

The simple pastures contained alfalfa, ladino clover, bromegrass and orchardgrass. The complex mixture contained all the species in the simple mixture in addition to red and alsike clover, timothy, meadow fescue, and reed canarygrass. The all-grass pastures were bromegrass and orchardgrass.

The research was done by U. S. Department of Agriculture agronomists W. F. Wedin and G. C. Marten, and J. D. Donker, University dairy husbandman.

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Special to Southwest,  
Central and  
Southeast districts

WESTERN ROOTWORM  
CONTINUES MARCH  
INTO MINNESOTA

The Western corn rootworm continued its expected march into a wider area of Southwest Minnesota in 1964, leading to damaging infestations in Rock, Nobles, Jackson, Pipestone, Murray, and Cottonwood counties.

According to John Lofgren, extension entomologist at the University of Minnesota, surveys of adult beetles indicate populations high enough to cause economic infestations next summer in an area south of the Minnesota River from Lac qui Parle county on the north down to the Martin-Faribault county line on the east.

Some local fields beyond these boundaries may have damaging infestations next year, too.

Crop rotation, Lofgren says, seems to be the best way to minimize losses from Western corn rootworm. This principle was demonstrated in a dramatic way in many fields during 1964. Yet, it is possible that with extremely high beetle populations, first year corn will sometimes have rootworm infestations. Such infestations seem more likely in land which the previous year had alfalfa, weedy stubble, or soil bank land next to a heavily attacked cornfield.

Lofgren says early planted corn, with a root system established by the time rootworms begin to feed, tends to be damaged less than small, late planted corn. But there seems to be no consistent tendency for infestations to be heavier or lighter on land tilled in the fall, rather than in the spring.

Lofgren says there is usually less damage in hybrids which are known to resist lodging or which are able to regenerate roots vigorously following injury. However, there are apparently no rootworm resistant lines of corn now available.

add 1 - western rootworm

Also, the rootworm problem is tied somewhat to weather conditions. Drought at the time of heaviest root damage by the worms will result in more severe damage and more economic loss than is usually the case with adequate moisture.

Apparently, many farmers will not be able to get by for two years of corn before using chemical control. More infestations on second year corn were observed this year than in the past.

How about chemical control? Western corn rootworm is resistant to aldrin and heptachlor. So where economic infestations are expected in 1965, farmers are advised to use a phosphate insecticide on corn which is not being rotated. Treatment should start with the second year when corn is raised on the same field.

Chemical effects were rather variable in 1964. Diazinon, parathion, Thimet 4072 and Di-Syston are currently approved materials.

Current evidence suggests that these chemicals do a fairly good job with light to moderate infestations, but are not satisfactory against a heavy attack. Usually 25 or more worms per plant will cause significant economic loss. Suppose a particular phosphate gives 75 percent control, and you have a natural infestation of 50 worms per plant. Then the chemical will reduce the infestation to about 13 or less worms per plant, and some damage will occur. However, the farmer will probably get his money's worth from the chemical, other things equal.

But if you have a potential of 120 worms per plant, 75 percent control would leave 30 worms per plant, and the field might still suffer heavy damage.

Lofgren says the best way to apply the phosphate seems to be in the granular formulation in a band 4 to 6 inches wide, just covered with soil, and placed over the row at planting time. This calls for a properly calibrated and adjusted applicator mounted on the corn planter. A full pound of actual chemical per acre is needed for the job.

Other methods, such as post emergence treatment at the base of the stalks or adding chemical along with starter fertilizer, may work in some cases. But Lofgren points out that since results in these chemicals are variable anyway, a farmer would be well advised to increase his chances of getting a good job by applying the insecticide as precisely as he can with a planter attachment.

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November 30, 1964

To all counties  
Immediate release

IN BRIEF.....

In 1964 turkey production, Minnesota was second only to California--in total numbers of turkeys produced. According to W. H. Dankers, extension marketing economist at the University of Minnesota, a total of 15,285 turkeys was produced in the state, for 15.5 percent of the U. S. total. Nearly 16 percent of the heavy breeds and more than 14 percent of all light breeds were grown in the state. Since heavy white breeds make up a large share of Minnesota production, Dankers says the number of heavy white breeder hens held over to 1965 will be higher than a year ago. Numbers of breeder hens in light breeds and other heavy breeds should be down somewhat.

\* \* \* \*

At least two root rot diseases of soybeans have been known to exist in Minnesota for some time, and now a third is suspected. It is called phytophthora, according to H. G. Johnson, extension plant pathologist at the University of Minnesota. So far, the fungus that causes phytophthora has not been found. Varieties of Harosoy 63 and Chippewa 64 are known to be resistant to this disease. And yields of these varieties are usually equal to yields of older lines of Harosoy and Chippewa.

\* \* \* \*

Minnesota hay is getting the eye from out-of-state buyers, according to James R. Justin, extension agronomist at the University. Requests have come from neighboring states and from drouth-stricken northeastern states. Minnesota, itself, has areas short of hay. So Justin points out that farmers who may need hay this winter should buy now before the surplus supplies leave the state.

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November 30, 1964

To all counties  
ATT: HOME AGENTS  
Immediate release

MORE STRETCH  
APPEARS IN FABRICS  
AND READY-TO-WEAR

The comfort of stretch fabrics is making them increasingly popular for active children, for babies and for adult sportswear.

Thelma Baierl, extension clothing specialist at the University of Minnesota, says stretch fabrics are now being developed and are increasingly available in a variety of fabrics and with a variety of uses. The use for which the article is intended will determine the amount of stretch in the garment.

There'll be a greater degree of stretch-- 100 and even 200 percent--in clothes designed for active uses, particularly sportswear and infantwear. Studies are underway to measure the areas of stress and stretch in the human anatomy, such as the knee, and stretch garments will be designed accordingly.

The direction of stretch is also an important factor. Ski pants and active sportswear will have vertical stretch. Dresses, skirts, shirts and work clothes will have horizontal stretch for comfort.

Stretch clothing should never be purchased in a size smaller than one ordinarily wears and stretched to fit. Stretch garments should have the appearance that comes from a normal good fit.

Not only is there no limitations to the kinds of stretch garments, but there's really no limit in kinds of stretch fabrics. There is stretch flannel, denim, gabardine, poplin, pique, terry cloth, corduroy, shantung, sheer lawn or even delicate lace. By 1970, garment manufacturers expect 70 percent of all garments will be woven stretch.

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November 30, 1964

To all counties

4-H NEWS

1st in a series on  
4-H projects

4-H'ERS PURSUE  
VARIOUS ACTIVITIES  
IN CONSERVATION

Immediate release

What does contouring of land mean? Now does organic matter help soil structure? How does crop cover affect soil loss? Which birds migrate and why? How do insects grow?

Nearly 8,000 Minnesota 4-H'ers enrolled in the conservation project are actively pursuing the answers to these and other questions, according to Wayne Carlson, assistant state 4-H Club leader at the University of Minnesota.

The conservation project is divided into beginner and advanced phases, with programs of interest to both rural and urban 4-H'ers. Beginning conservationists explore the world of insects, birds, trees and shrubs, plants, animals and soil and water. More than 5,600 young people enrolled in this phase learn to identify and to collect and mount insects, to construct various types of bird feeders, to plant trees and shrubs for farm shelterbelts and field windbreaks, and to control destructive rodents.

4-H'ers who want to concentrate more fully in a particular area enroll in one or more phases of advanced conservation--entomology, forestry or soil and water conservation. Entomologists collect and study common insects and organize and conduct insect control programs in the home, garden, crops or livestock. Foresters may renovate a woodlot, plan and maintain fire breaks, or manage one acre of woodland as a farm crop, performing all necessary cultural work. Members in the soil and water conservation phase study what they can do to keep the soil permanently productive and prevent erosion.

The important outgrowth of this project comes when the 4-H member learns to appreciate, develop and conserve natural resources, says Carlson. Each year, many top 4-H'ers receive a trip to State Conservation Camp at Lake Itasca in June as recognition for their efforts in conservation.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 1, 1964

Immediate release

#### SPECIALIST EXPLAINS SALINE SOIL PROBLEM IN STATE

Saline and alkali soils have been known to exist in Minnesota for some time, but the seriousness or extent of this condition in the state has not yet been determined.

Lowell Hanson, University of Minnesota extension soils specialist, said recently that saline and alkali soils are not likely to affect a very large percent of the more than 18 million crop acres in the state. They may, however, affect tens of thousands of acres in western Minnesota.

Hanson was speaking to the more than 700 participants enrolled in the 14th annual Soils and Fertilizer Short Course held in Minneapolis late in November.

"Although Minnesota's climate and soils are considered to be in the sub-humid area of the country, some parts of western Minnesota have soils remarkably similar to those of the arid west," Hanson said.

"And in these areas where the surface evaporation tends to be greater than the downward movement of water over a long period of time," he continued, "soluble salts and/or sodium accumulate in the soil causing either saline, saline-alkali or non saline-alkali soils."

He pointed out that of the three types, saline soils are most likely to exist in the state, followed by the saline-alkali type. Non saline-alkali soils are the least likely to be found here.

(more)

add 1 -- saline soil problem

"It is important to understand that there is no additive available which can reduce the presence of saline or alkali in soils," the specialist added. "The only defense against these conditions is improved drainage and crop selection."

Since salts build up because of restricted drainage and net upward movement of water, any improvement in drainage will usually decrease the concentration of salts, Hanson explained.

If drainage changes are not possible, or if the salt concentration is too high, the only remaining alternative is to grow crops which have a greater tolerance for salts.

The more tolerant crops include forage crops such as alfalfa and sweet clover. Corn, sugar beets and most grain crops are moderately tolerant, while soybeans, field beans, peas and sunflowers have a low tolerance to salt.

During the past two years, George Holcomb and Orville Gunderson, extension soils agents, observed a number of cases of poor corn and soybean crops in the counties of Lyon, Lincoln, Yellow Medicine and Chippewa. These crops would not respond to fertility treatments.

Field tests for sodium and chlorides and laboratory conductivity tests confirmed the original belief that soluble salts are associated with poor crop growth, Hanson told the group.

"It is no coincidence that many fields showed salinity symptoms in western Minnesota in 1964," he pointed out, "since a salinity problem is essentially a drouth problem."

Water which has dissolved salts in it does not behave like ordinary pure water, in that it is more difficult for the individual water molecules to be separated from the solution.

Because plants have difficulty in extracting water from salty soil, drouth conditions, like many areas of the state experienced this year, will intensify any salinity problems that might exist.

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December 1, 1964

(with sketch)

Immediate release

### PLAN FOR LOW-COST HOUSE AVAILABLE

Looking for a house plan that's low cost, yet provides for three bedrooms?

Such a plan has been drawn up<sup>by</sup> the the architects and engineers of the U. S.  
Department of Agriculture's Cooperative Farm Building Plan Exchange.

The design, Plan 7170, uses masonry units for the interior partitions as well as the exterior walls. The interior is unfinished except for the insulating tile ceiling and asphalt tile floor.

This plan fits three bedrooms, a living room, a kitchen-dining room, a work area, a complete bath and an additional toilet into 1,173 square feet of living area-- well within the limits proposed by the Farmers Home Administration for construction loans.

The centrally located heating unit may be of the space heating variety or may use insulated ducts in the attic. The rear entrance opens directly into the work area. A carport may be added behind the house if desired.

Working drawings of Plan 7170 may be obtained for 75 cents from Blueprint Room, Department of Agricultural Engineering, Institute of Agriculture, University of Minnesota, St. Paul, Minn. 55101. Money must accompany the order. Specify the number of the plan you are ordering.

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64-292-jbn

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Immediate release

#### MINNESOTA 4-H'ERS TO CHICAGO DAIRY CONGRESS

Nine 4-H'ers from Minnesota have won trips to the 10th annual National 4-H Dairy Conference Dec. 3-5 in Chicago for outstanding records in the dairy project.

Selected as delegates on the basis of their accomplishments are Steve Nahrgang, Lewiston; Glen Lood, Cambridge; Loren Olson, Hutchinson; Paul Trapp, Hastings; Larry Pitzner, Faribault; Jim Vanden Bosch, Edgerton; Frank Turnock, Lawler; Paul Christianson, Kiester; and Robert Lampbrecht, Plainview.

They will be among 175 young dairymen and adult leaders from 22 states expected to attend the meeting. Patrick J. Borich, Carlton County agricultural agent, and Mrs. Borich will accompany the group.

Emphasis in meetings of the conference will be on marketing and careers in the dairy industry as well as farm financing. Cooperating in sponsoring and coordinating the conference are the Cooperative Extension Service, the National 4-H Service Committee, the International Dairy Show and a number of dairy industry groups interested in youth.

The conference is held in conjunction with the International Dairy Show to give the young men an opportunity to see cattle of high quality and to visit with breeders of dairy animals.

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64-290-jbn

Department of Information  
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December 1, 1964

Immediate release

#### UNIVERSITY PROFESSOR HEADS UN PROJECT

Thomas H. King, professor of plant pathology and physiology at the University of Minnesota, has begun a two-year assignment as project manager of the United Nations Special Funds Project to develop a rice improvement program in Thailand.

Heading a team of three, King will organize and operate a center for research and training in rice protection in Thailand for the Food and Agriculture Organization (FAO) of the United Nations.

King left St. Paul at the end of October for Rome where he underwent orientation and briefing at FAO headquarters before going on to Thailand. He is on a two year leave of absence from the University.

King first joined the Minnesota staff in 1937 when he served as Firestone Fellow and teaching assistant until 1941. From 1941 to 1948 he taught at the Alabama Polytechnic Institute, served four years in the Armed Forces, and was on the staff at the University of Ohio.

He returned to Minnesota in 1948 as assistant professor of plant pathology and physiology. From March to September of 1956 he was advisor in agriculture for the Seoul National University of Korea Cooperative Project with the University of Minnesota.

A native of North Dakota, King received his B.S. degree from North Dakota State University in Fargo. He received his M.S. and Ph.D. degrees from the University of Minnesota.

His fields of specialization are fruits and vegetable diseases, principles of disease control and virus diseases. He is the author of numerous research reports which have appeared in professional journals.

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December 3, 1964

Immediate release

## UM PROJECT GROUP LEAVES FOR CHILE

Three University of Minnesota staff members left this week for Santiago, Chile, to begin initial discussions on a project to develop an Agricultural Extension Service in that country.

John Blackmore, Roland Abraham and Charles Simkins will spend three weeks in Chile consulting with the minister of agriculture of Chile and other government officials.

Blackmore is director of the International Agricultural Programs for the Institute of Agriculture and College of Veterinary Medicine; Abraham is associate director of the University's Agricultural Extension Service; and Simkins is the newly-appointed mission chief for the project.

The project is being financed by a portion of an overall University contract negotiated this fall with the Ford Foundation. Its purpose is to train extension personnel in Chile in effective approaches to extension education programs, aimed at improvement of rural living standards and improvement in food production.

Simkins, who was named University project mission chief last month, will return to Chile next spring to direct the actual workings of the project. Plans now are for several University staff members to be based there, in addition to several other short-term consultants from the University.

Simkins served on the University staff from 1954-58 as associate professor and extension soils specialist. From 1958-62 he was in Iran serving as chief of the soils division of the Development and Resource Corporation. He spent the last two years in Cyprus working on a United Nations Food and Agricultural Organization Special Funds Project.

A native of Kansas, Simkins received his B.S., M.S. and Ph.D. degrees from Kansas State University in Manhattan. His special fields of interest are economic and agronomic developments in agriculture, and soil and agronomic extension activities.

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Immediate release

## FRUIT GROWERS TO MEET IN ROCHESTER

Minnesota and Wisconsin fruit growers will hold their 18th annual meeting in the Kahler Hotel, Rochester, Dec. 14 and 15, in conjunction with the American Pomological Society.

The meeting is sponsored by the Minnesota Fruit Growers' Association in cooperation with the Wisconsin State Horticultural Society and the American Pomological Society.

Registration will open in the mezzanine lounge of the Kahler Hotel at 9 a.m., Dec. 14, according to an announcement from J. D. Winter, secretary of the Minnesota Fruit Growers' Association.

The Universities of Minnesota and Wisconsin, the Pomological Society and the La Crescent Apple Growers' Association will have fruit variety exhibits which will be on display during the two-day session.

Speakers at the opening program at 9:30 a.m. Monday morning (Dec. 14) will be D. V. Fisher, Canada Department of Agriculture, Summerland, B.C., who will report on new developments in controlling tree size of apples, and W. A. Luce, president of the American Pomological Society, who will discuss the apple orchard of the future. Victor Leidel, president of the Minnesota Fruit Growers' Association, will bring greetings.

At the afternoon session George M. Kessler, secretary-treasurer of the American Pomological Society, will moderate a panel on fruit varieties. Panel participants will be horticulturists from Minnesota, Wisconsin, Washington, Illinois and Canada.

Awards will be presented at the annual banquet Monday evening. Banquet speakers will be Luce and Arnold Ulrich, Rochester. Roger Erickson and Maynard Speece of WCCC radio will be toastmasters.

Subjects for discussion Tuesday morning (Dec. 15) will include proper use of chemicals, fruit growing in Europe and a review of the 1964 marketing season. Speakers will be J. A. Lofgren, extension entomologist, and E. T. Andersen, horticulturist, University of Minnesota, and M. L. Schwier, Wisconsin Department of Agriculture.

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#### UM RECEIVES GRANT FOR BIOLOGY INSTITUTE

Twenty-five high school biology teachers from throughout the nation will pursue graduate studies next year at the St. Paul Campus of the University of Minnesota under a special program of the National Science Foundation.

The University recently received a \$149,200 grant from NSF to conduct a 1965-66 Academic Year Institute in Biology. The grant was approved by the Board of Regents at its November meeting.

This is the second consecutive year the University has received a grant from NSF to conduct a biology institute. Twenty-five teachers are currently enrolled in the 1964-65 program.

The objective of these institutes is to offer graduate study which may be applied toward an advanced degree in a special field of biology, according to A. J. Linck, professor of plant pathology and physiology and institute director.

The courses provide an opportunity for high school biology teachers to bring themselves up to date on developments in biology and to take courses of study which they did not receive in previous training, he added.

(more)

add 1 -- biology institute

"No special degrees are offered through the institute," Linck explained.

"Rather each participant enrolls in a special field of biology and develops his own program for the year in consultation with his advisor."

While a few special graduate courses are taught in the institute, most of the instruction is in graduate level courses regularly taught on the St. Paul and Minneapolis campuses.

The NCF funds for the program are used to provide stipends, dependency and travel and book allowances and tuition for the individuals, as well as for operational costs in providing the instruction, Linck said.

He explained that in order to be eligible for the institute, teachers must have at least three years experience in either public or nonpublic schools, and must meet the entrance requirements of the University's Graduate School.

The institute will be conducted during the Sept. 1965-June 1966 period. A limited number of participants will be permitted to continue studies on into the 1966 summer session under the institute.

Biology teachers who want further information on the institute may write to Linck at the Department of Plant Pathology and Physiology, University of Minnesota, St. Paul, Minn., 55101. Applications must be postmarked by Jan. 20, 1965.

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64-295-vak

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 7, 1964

\*\*\*\*\*  
\*For release at 10 a.m., \*  
\*Tuesday, Dec. 8 \*  
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## UM OFFICIAL RELATES SPACE PROGRAM TO CHANGING EXTENSION EDUCATION

Dramatic successes in space exploration--including the moon photographs from Ranger 7 and the Apollo manned space program--have a variety of implications for educational enterprises such as Agricultural Extension, a University of Minnesota vice president said today.

W. G. Shepherd, vice president for academic administration, told the annual conference of the University's Agricultural Extension Service that space successes "demonstrate what man can accomplish by cooperative efforts once he establishes a goal and strains to reach it."

The first men on the moon, said Shepherd, will owe their achievement to "efforts of thousands who have carried out some of the most complex and sophisticated operations ever undertaken."

"We have earthier problems which may be less dramatic but even more significant for the welfare of society," Shepherd said. One that he stressed is the need for continuing education.

The Land Grant colleges and universities, he said, introduced the concept of taking the educational enterprise to people where they are.

"Most notably, this occurred in the case of the Agricultural Extension programs," said Shepherd. "These programs brought to people throughout the land the results of research in agriculture and home management.

"The success of this program is a measure of its genius. The U. S. is the envy of the world because of our ability to produce efficiently food and fiber in abundance. American women have learned much about nutrition and the judgment of the values of the products which go into homemaking.

"On the more abstract, but at least as important side, these programs have developed an increasing awareness of the inter-relation of the individual, the family and the community."

(more)

add 1 -- Shepherd

Shepherd said it was early recognized that such programs were not simply an outward extension, nor a drain on university resources. Instead, he said, "both on-campus teaching and research greatly benefitted from the stimulation and the feedback provided by these field activities."

He noted changes in rural and urban cultures, increased agricultural productivity resulting from dissemination of research, and the social impact on the rural population.

He said that the Extension Service, "which has so clearly been an instrument for change, should itself be prepared to continue to adapt to change."

"We are now a much more interlocking and interdependent community. The task of Extension has not diminished--the scope of knowledge and research to be extended is, in fact, ever widening.

"But Extension must, in part, change its character and its clientele," Shepherd said. And he added that "this makes your task both much more difficult, but also much more rewarding and exciting."

Methods for communicating research findings to producers and consumers, he said, are not limited to agriculture and home economics. He said they are also valid and applicable to other fields of social action.

A lesson from Agricultural Extension, Shepherd said, is that "we must prepare for the changing needs of our society and not focus entirely on the near-term demands of our citizens or our communities.

"Extension activities can be a powerful force for social change," he continued. And he added that while some become uneasy when reference is made to planning of society, planning is regarded as proper and essential in many other activities.

The purpose behind establishment of Agricultural Extension, he said, was improvement of society through managed development of skills and natural resources. Research which Extension has carried to people, Shepherd continued, "was intended to develop control over the circumstances which influence productivity.

"This," he concluded, "is planning at its best."

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December 7, 1964

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\*For release at noon, \*  
\*Tuesday, Dec. 8 \*  
\*\*\*\*\*

## EXTENSION DIRECTOR REVIEWS FUTURE EDUCATION NEEDS

Importance of new extension education approaches for the home and youth, community decisions and a changing agriculture were stressed today by Luther J. Fickrel, director of the University of Minnesota's Cooperative Agricultural Extension Service.

He said Extension is "striving to create an ever-improving climate for continuing education--a climate of motivation for people to keep in touch with a changing world and a climate of opportunity for them to do so."

Fickrel addressed the opening session of the annual conference of the Extension Service, meeting on the St. Paul Campus.

He pointed out that education through the Extension structure historically has been directed toward improving the level of living of people on our farms and in our towns.

"We are in a very real sense a part and product of a national policy to provide abundant supplies of food and fiber to the people of the nation at prices which contribute in a major way to the high standards of living Americans enjoy today.

In reviewing the first 50 years of Cooperative Extension, Fickrel said this abundance of food and fiber has contributed to "our position of international strength and the image of sympathetic humanitarianism which we enjoy in much of the world."

Cooperative Extension, as a national effort, was established by the Smith-Lever Act of 1914. It involves programs developed through the Land Grant colleges and universities of various states in cooperation with county and federal governments.

(more)

add 1 -- Fickrel

Fickrel said there is nothing to suggest that agriculture is "going out of style"-- but that the structure of agriculture will continue to change.

Agriculture, he pointed out, is more than farming-- a point that will be more true in years ahead. He said agriculture refers to a) input industries that manufacture and bring to the farmer his production needs; b) the producers themselves; c) the agricultural output industries, and d) the consumers "who are asking for and may reasonably expect education relating to use of food and fiber products.

"In the earlier days," he said, "Extension attempted to bring the outside world to the homemaker. While the wife and mother of today has more contact with the outside world, the newer situation isn't without problems.

"It may be harder to watch over development and everyday concerns of the family. On the other hand, the new outside experiences of the homemaker may create the need for still further involvement in continuing education. "

Education for community decision-making, Fickrel said, has historically been a central concern of Extension. But he added that changing conditions mean changing educational demands.

"Agriculture has contributed both to abundance and affluence, but some phases of society seem to share in neither," he said. "And it isn't merely the agricultural producers who fail to share. Entire communities often find themselves in the backwash of social and economic evolution, rather than in the mainstream of progress.

"Some Extension needs are unique to certain types of changing communities, some are common to all," he said. "The community in the agricultural area is ripe for new educational ventures relating to the farm supply business, new technology for farm producers, and to explorations for new food handling and processing industries.

"A rural community on the big city fringe may have acute needs for education on certain aspects of urban and suburban growth," he said. He cited as examples needs for education in communities on taxation, property valuation, land use and public institutions.

Among the institutions which may aid communities in a transitional period, Fickrel said, Cooperative Extension has special qualifications for bringing to people, where they are, education on a broad spectrum of concepts. But he stressed that adjustment and adaptation to changing conditions is always necessary.### 64-298-pjt

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 7, 1964

To all counties  
4-H NEWS  
Immediate release

YOUTH RECEIVE  
TRAINING IN  
TRAFFIC SAFETY

Of the two million youth who reach the driving age in the United States each year, only one fourth have received any organized training in traffic safety.

The 4-H automotive project emphasizes safety through the slogan, "Responsible citizenship in a nation on wheels." Members prepare themselves for the licensing examination and learn more about automobiles and how they function.

Any girl or boy 15 years of age is eligible to participate in the automotive project. The objectives of the new program are to develop driving courtesy, skillful driving, proper car care and an awareness of vocational opportunities.

The introductory or beginner project is concerned with traffic safety. automobile owner's manual, car upkeep and cost records. The 4-H members may form a hazard hunt as a group activity for the club.

The junior phase members study care, maintenance, cost and operation of the automobile. The project teaches how the motor works, selection and care of tires and car costs.

Efficient operation of the car is the objective of members who take the advanced phase of the project. Automobile selection and operation, community safety, and career opportunities are the goals for the advanced members, who try to emphasize car safety.

The 4-H automotive project is sponsored by the Firestone Tire and Rubber Company. Individual awards for outstanding work include key chains as county awards, a trip to the National 4-H Club Congress for the state winner and \$400 college scholarships to six national winners.

Brochures, bulletins, films, programs and ideas for booths are available from the county agent's office.

Department of Information  
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St. Paul, Minnesota 55101  
December 7, 1964

To all counties  
ATT: HOME AGENTS  
Immediate release

**SPECIALIST GIVES  
TIPS ON BUYING  
CHILDREN'S TOYS**

If you're buying toys for children for Christmas or some other occasion, take time to give the matter some thought.

Many adults overlook the fact that although play is fun, it is also the way in which a child learns much of what he needs to know to grow up, according to Ronald Pitzer, assistant extension family life education specialist at the University of Minnesota. Play teaches a child about himself and helps him come to an understanding of the activities going on around him. Since toys are the tools of play -- a significant part of a child's daily living -- selection of his toys is just as important as proper choice of a mother's household tools or a father's work or hobby tools.

"When we buy toys, we are investing our money as surely as when we buy stocks. Therefore, we should expect a fair return for our dollar in terms of play interest, encouragement, improvement in skills and length of services," says the University family life education specialist.

Price is often no criterion of the toy's worth. Although a cheap toy may be worse than no toy at all, it does not follow that all expensive toys are good.

The best way to choose suitable toys for a child, Pitzer suggests, is to study him to see what his interests are, as well as the general level of his skills. To be a good plaything, a toy must fit in with a child's current interests and it must be within his level of skill to handle, otherwise he will not or cannot play with it. Its purchase therefore, represents a waste.

A toy that can be used for more than one purpose is usually a better purchase than one limited to a single use. Thus a good basic toy might lend itself to different kinds of play and be useful for several years. Blocks are an example of such flexible toys. The two-year-old piles them, the four-year-old builds with them, the seven-year-old uses them to make villages.

In addition to flexibility, consider cost, safety and durability. Above all, remember that toys should be fun for the child. Select toys for variety so they contribute to his balanced development -- physical growth, creative opportunities, dramatic play and social growth.

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December 7, 1964

To all counties  
Immediate release

IN BRIEF.....

The 1965 edition of the "Farmers Tax Guide" is now available to help farmers figure their 1964 taxes. Also available is a bulletin titled "Income Tax Management for Farmers," which deals with setting up a tax management program for the coming year. Both publications can be obtained from county agricultural agents or by writing to the Agricultural Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

\* \* \* \*

Cattle feeders are reminded to check their hay supplies to see if they will have enough hay to last through the remainder of the winter feeding season. James R. Justin, extension agronomist at the University of Minnesota, reports that surplus hay supplies are still available in the state, and feeders who will be needing more hay should buy now before these surpluses are used up.

\* \* \* \*

One way to lower the bacteria count in milk is to refrain from sweeping the dairy barn until after milking, says V. S. Packard, University of Minnesota extension specialist in dairy products. He adds that now that winter is here and cows are spending more time indoors, their hind quarters should be clipped regularly.

# # # #

Department of Information  
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December 7, 1964

To all counties  
Immediate release

HOG CHOLERA  
OUTBREAKS DROP

Hog cholera cases reported in Minnesota have continued to decline in recent years. And one contributing factor seems to be the concerted effort here and in the nation to eradicate this disease.

Numbers of hog cholera cases reported in recent years for the state include: 1960, 176 cases; 1961, 154; 1962, 214; 1963, 66 and as of November 5, 1964, 37 cases.

Minnesota is one of 21 states in Phase II of the National Hog Cholera Eradication Program. This phase provides for quarantine and supervised disposal of infected swine, according to Dr. Raymond B. Solac, extension veterinarian at the University of Minnesota.

Phase III, when a state reaches that point, is the first time when Federal indemnities can be paid for hogs destroyed because of cholera. And this phase is used to eliminate the final traces of the disease.

Current estimates are that if the downward trend in hog cholera infections continues, Minnesota may in about a year and a half reach a point where indemnity payments will be feasible.

Cholera historically has been one of the most dreaded diseases in swine. Early symptoms are depression, fever, and a tendency to go off feed. Eventually, it can lead to high mortality and loss of profits.

Two types of vaccines are used in Minnesota. They are the modified live virus with or without serum, and the inactivated virus vaccines. Only the modified live virus vaccine is acceptable for shipments of hogs into the state and for animals sold at public markets.

add 1 - hog cholera

The National Hog Cholera Eradication Program is coordinated by the U. S. Department of Agriculture. Late last summer, Vermont became the first state to gain "Hog Cholera Free" status--the eventual goal sought by all states.

Nationally, reported outbreaks of hog cholera decreased 29 percent between July 1, 1963, and June 30, 1964

# # # #

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December 7, 1964

To all counties  
(except N. E.  
district)

Immediate release

DWARF MOSAIC  
IS NAME GIVEN  
TO CORN DISEASE

A new corn disease, common in much of the corn belt but not yet identified in Minnesota, has been named "Maize Dwarf Mosaic" by a group of scientists from 32 states and Canada.

The name describes the principal symptoms of the disease and distinguishes it from corn stunt, a disease in the southern states, California, and Mexico.

Dwarf mosaic was named at an Ohio meeting in which two University of Minnesota scientists participated--plant pathologist Thor Kommedahl and entomologist Allan Peterson. This disease seems to be potentially more dangerous to the corn crop than any other experienced so far in the corn belt.

Dwarf mosaic has been reported in many states of the corn belt and farther south. Ohio has been hit hardest, and the disease has been reported in south central Iowa. It has not been found yet in Minnesota or Wisconsin.

This disease had been confused at times with corn stunt. The latter disease, however, is transmitted by a leafhopper and occurs only on corn and teosinte, a close relative of corn.

Dwarf mosaic is transmitted by corn leaf aphids and can be transmitted mechanically. It has a wide range of host grasses, including Johnson grass and many annual grasses such as barnyard grass and foxtails.

None of the hybrids, inbreds or single crosses of corn now commercially available is very resistant to dwarf mosaic. Some lines are more tolerant than others, however.

-more-

add 1 - dwarf mosaic

Yet, plant breeding seems to be the only practical method of control, since control of the aphids that carry the disease isn't feasible.

How likely is dwarf mosaic to enter Minnesota? The answer depends partly on Rhopalosiphum maidis--the corn leaf aphid. This creature is abundant enough in Minnesota in the summer, but there are some important and unanswered questions about how it lives and how it carries the virus.

The mosaic virus is nonpersistent, meaning that aphid transmittal from one plant to another must occur within a few minutes; otherwise, the virus doesn't survive.

The virus is carried on the tips of the stylets on the mouth parts of the aphid. On these stylets, and with action of salivary secretions, the virus isn't retained long. However, if the aphids are starved--as when they are transported in the upper atmosphere by winds--the virus can remain longer, perhaps an hour or more.

But the question remains whether such persistence is enough for the virus to move into Minnesota on aphids migrating with high winds.

Another unknown is the overwintering habits of the aphid. So far, there is no certainty whether the aphid lives over winter in Minnesota.

As the name suggests, one symptom of dwarf mosaic is the reduced growth. The plants may be three feet tall or less and ears may be nubbins or worse.

The other main symptom, suggested by the term "mosaic" -- is irregular spotting of yellow in the leaf, something like mosaic tile. These spots are sometimes in streaks, and may appear similar to signs of mineral deficiencies, damage from an overdose of weed chemicals, or other stresses.

In fact, symptoms are so often confused with other causes that a laboratory analysis is needed for verification.

Next summer, Kommedahl and Peterson plan a survey of river valleys in southern Minnesota, to determine occurrence of the corn leaf aphid and possible occurrence of the virus. Dwarf mosaic has been found most common and destructive in river valleys.

# # # #

Department of Information  
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December 9, 1964

Immediate release

#### EXTENSION AGENTS ELECT OFFICERS

County extension agents elected officers for the coming year at association meetings held during the annual Minnesota Agricultural Extension Service Conference on the University of Minnesota's St. Paul Campus this week.

Named to offices in the associations were:

Minnesota Association of Extension Home Economists (formerly Home Agents' Association) - president, Mrs. Ilene Naley, Long Prairie; president-elect, Arvalda Nickel, Benson; vice president, Mrs. Naomi Fruechte, Caledonia; secretary, Mrs. Audrey Blum, Ortonville; and treasurer, Genevieve Moffitt, Le Center. Retiring president was Irene Ott, Glencoe.

County Agricultural Agents' Association - president, Ray Palmby, Lakefield; vice president, Warren Liebenstein, Faribault; secretary-treasurer, Clayton Grabow, Milaca. Retiring president was Oswald Daellenbach, Moorhead.

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64-302-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 9, 1964

Immediate release

#### ENTRIES BEING ACCEPTED IN CREATIVE WRITING COMPETITION

Entries in the creative writing competition of the annual University of Minnesota's Town/Country Art Show on the St. Paul Campus are now being accepted, according to A. Russell Barton, art show coordinator.

Entries are limited to original unpublished short-short stories of not more than 2,000 words. The contest is open to amateur writers of high school age or over who are residents of Minnesota communities of 25,000 population or less.

Manuscripts will be accepted until Jan. 11, 1965.

Ten stories selected by the judges will be multilithed in a limited edition and offered to the public at the time of the annual Minnesota Town/Country Art Show in March. A writer's seminar will be held during the last week of the show to discuss problems of creative writing.

The creative writing competition is sponsored by the Department of Rhetoric of the University's College of Agriculture, Forestry and Home Economics. Judges will be Richard O. Horberg, Andrew King and William M. Marchand, members of the department.

Rules for the writing competition may be obtained from the Department of Agricultural Short Courses, University of Minnesota, St. Paul, Minn. 55101.

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December 9, 1964

Immediate release

### NEW BRONZE-ORANGE GARDEN 'MUM DEVELOPED BY U HORTICULTURISTS

A bright bronze-orange, fully double garden chrysanthemum has been developed by University of Minnesota horticulturists and is being introduced for spring planting in 1965.

Called Superior, the new 'mum produces abundant, flat-petalled 3-inch flowers atop bushy plants. It has been developed especially for northern climates where early flowering is necessary.

Stems are willowy and foliage is a clean, glossy dark green. Plants reach a height of 18 inches and a spread of 30 inches when grown in full sun. Blooming usually begins by the first week of September in the Twin Cities area.

Superior is the 45th variety of garden chrysanthemum introduced by the University of Minnesota's Department of Horticultural Science for northern climates. Work on developing the 'mum was done by University horticulturists R. E. Widmer and R. A. Phillips.

Plants will be available from many nurseries and greenhouses in the Midwest this spring.

For more information about Superior, get a copy of Miscellaneous Report 57, Superior, A Garden Chrysanthemum for 1965, from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minn. 55101. The report shows the chrysanthemum in color.

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64-300-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 9, 1964

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\*For release at noon, \*  
\*Thursday, Dec. 10 \*  
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#### UM AG ENGINEERING HEAD VIEWS FUTURE OF THE PROFESSION

NEW ORLEANS, LA.--Agricultural engineering of the future will stress computer technology and a close tie with the biological sciences, a University of Minnesota professor said here today.

Prof. Landis Boyd, head of the University's Department of Agricultural Engineering, addressed students attending the American Society of Agricultural Engineers meeting. He stressed the power of computers to magnify the engineer's ability to develop new designs with high precision--rather than on a trial and error basis.

"It is already possible," he said, "to plan a complete structural steel building with a computer."

A related trend, he continued, is the importance of combining agricultural engineering with biological science. He foresaw, as an illustration, introducing more plant physiology into the curricula of agricultural engineering students.

Eventually, he said, it should be possible to tie an electronic control system to a biological control system. As an example, he said, irrigation now is done mostly according to soil water content.

(more)

add 1 -- Boyd

In the future, however, he said the judgment to irrigate may be based on a more direct and precise analysis of the plant's water needs, and upon a more systematic monitoring of the weather.

Another illustration he used is analysis of the nervous system of, say, a chicken, which bears an analogy to an automatic control system.

Still another example is computer simulation of certain processes involving handling of agricultural products. Computers have been used to simulate storage periods for potatoes, taking into consideration every important variable.

Such simulation makes it possible to predict temperature of potatoes within storage at any time of year. It makes possible an accurate estimation of water loss and the amount to add to prevent shrinkage and quality loss.

Boyd noted two related trends in agricultural engineering. One is a tendency to raise professional standards, and a recognition of a greater need to use fundamental mathematical principles in design.

Another trend is the development of international opportunities in agricultural engineering.

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64-299-pjt

Department of Information  
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St. Paul 55101 -- Tel. 647-3205  
December 10, 1964

Immediate release

## TWO 4-H'ERS RECEIVE COLLEGE SCHOLARSHIPS

College scholarships of \$300 will be awarded to two 4-H'ers who have emphasized home preservation in their food project as a way to improve family nutrition.

Winners of the scholarships are Joanne Odenwald, 18, 2840 Brockway Lane, St. Paul and Carol Jean Scofield, 18, Cook.

Ball Bros. Co., Inc., provide the two \$300 scholarships.

Cleanliness, a pressure cooker and the two-piece jar lid are the major factors in canning, according to Joanne. A Washington County purple ribbon winner for three years in the food preparation project, Joanne was awarded a plaque in 1963 for her achievements in 4-H. She has also received purple ribbons at the Washington County Fair in the rabbit, bread and food preservation projects. She has been a delegate to the State Junior Leadership Conference and has participated in the Minnesota-Maryland Exchange. A sophomore at Concordia College, St. Paul, majoring in elementary education, Joanne plans to make 4-H a definite part of her future.

The food preservation experience helped Carol obtain a summer job at a Lake Vermilion resort. As a member of a three-generation 4-H family, Carol began her food preservation at the age of nine by winning a blue ribbon at the North St. Louis County Fair. She has canned and frozen a total of 1120 jars and 1947 pounds of food. She has exhibited at the State Fair twice with her wild berry jellies, jams and fruits. Carol is now a freshman at Hibbing Junior College majoring in home economics.

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64-303-smk

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 10, 1964

\*\*\*\*\*  
\* For release at noon \*  
\* Friday, Dec. 11 \*  
\*\*\*\*\*

## WORLD SEEKS MODEL OF ECONOMIC AND SOCIAL DEVELOPMENT, BERG SAYS

A "workable model of economic and social development " is being sought by the world, Dean Sherwood O. Berg of the University of Minnesota's Institute of Agriculture said today.

He told the Cooperative Extension Service annual conference that "what is wanted is some combination of human and natural resources--of the old and new institutions which will set free the self-generating forces of our society."

Berg said every county and home agent wants the Extension Service to play "a significant role in searching diligently for the bridge to the future."

"If knowledge is important to the decisions--or the sequence of decisions which we might call the decision-making stream--then the land-grant university as a development organization must find new ways in which it can project knowledge into that stream.

"This will mean that Extension will undoubtedly assist in planning committees and in local action and will, in certain cases, help form new organizations with new objectives."

Berg recalled that in past years, the Extension Service formed 4-H clubs, homemakers clubs and helped in formation of various farm organizations.

"Now there is a need to form other such organizations, because through them, development will take place more naturally--and the University will be able to express its purposes more effectively," said Berg.

He defined development as meaning the process whereby people of a county or region utilize available resources to bring about a sustained increase in the income or personal satisfactions, or both. "Its object is improved welfare and the improved dignity of the individual human being."

(more)

add 1--Berg

Referring to the task of Extension, Berg said it is important to remember that in terms of people, there are more non-farm than farm people in rural areas, and the difference will spread in future years.

"On the other hand, there are about a million farms in the U. S. that sell more than \$10,000 worth of products annually," he stated. These farms make up about 27 percent of the total number, but market more than four-fifths of the total product.

Furthermore, he added, these larger farms have the capacity to produce the nation's needs for agricultural products in the foreseeable future.

"Certainly a prosperous commercial agriculture is a necessary foundation for the economy of rural America," said Berg. But he saw an anomaly facing the Extension Service.

"The Service is called upon to take the lead in developing the full potential of rural communities, and with improving the opportunities of the disadvantaged part of the rural population.

"This," Berg said, "must be accomplished without neglecting responsibilities to commercial agriculture, the consumer and the farm family."

64-303-pjt

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

TAX MANAGEMENT  
MEANS LEVELING  
INCOME PEAKS, DIPS

Hard as it seems to believe, poor tax management is probably more costly to farmers in low than in higher income years.

Yet the reason is fairly simple. Once exemptions and deductions are ignored in a given year, they can never again be regained.

Extension economist Paul Hasbargen at the University of Minnesota illustrates this point by comparing two families with different income situations.

One family has an income of \$3,000 per year for two years and, with deductions for two children, pays no tax. The other family (same number of children) has no income the first year, but \$6,000 the second.

The second family paid no tax the first year, but \$500 the second.

Yet, both families had the same average annual income for the two years. The second family lost the \$3,000 allowances of the first year.

This second family probably couldn't have managed things to completely level out income, but some things might have been done. During that first year, they might have made additional sales before year's end. And they might have delayed some expenditures or payments of operating bills until after the first of the year.

Or, in a year when income seems to be unusually large, a farmer might delay some sales until after the first of the year but make some additional operating payments before turning the calendar.

Those are standard words of advice on tax management. Hasbargen also lists some important tax law changes that may reduce taxes for 1964.

add 1 - tax management

.One deals with the 7 percent investment credit law, put in effect in 1962. Now, you need not reduce the basis for depreciation on a new machine by the amount of the 7 percent credit. Also, you can add back any investment credit subtracted in 1962 and 1963.

Tax rates went down, the lowest tax rate cut from 20 to 16 percent. And it will go to 14 percent in 1965. This gives one more possible reason for delaying taxable income from this year to next.

.There are now three alternative ways of calculating deductions. They may be (a) itemized; (b) figured as 10 percent of total income; or (c) figured by the new minimum standard deduction--\$200 plus \$100 per exemption.

.A number of changes will give tax relief to farm people 65 years of age or older. One is exclusion of gain from the sale of a personal residence bringing less than \$20,000. This can be applied to that portion of a farm sale attributable to the farm house.

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Department of Information  
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St. Paul, Minnesota 55101  
December 14, 1964

To all counties  
Immediate release

IN BRIEF....

Agricultural engineering of the future will stress computer technology and a close tie with the biological sciences, according to Landis Boyd, head of the Department of Agricultural Engineering at the University of Minnesota. He points to the power of computers to magnify the engineer's ability to develop new designs with high precision--rather than on a trial and error basis. It is already possible, he says, to plan complete structural steel buildings with computers. He also sees the possibility of tying an electronic control system to a biological control system. Irrigation is now done mostly according to soil water content. But in the future, judgment to irrigate may be based on a more direct and precise analysis of a plant's water needs, and upon more systematic monitoring of the weather.

\* \* \* \*

Losses in egg production may result from environmental stresses in laying houses in winter. Ammonia fumes or wet litter may indicate such a problem, according to Robert W. Berg, extension poultry specialist at the University of Minnesota. In addition to cleaning out the pits, it may be wise in such cases to bank the house with straw, add heat, or lower the temperature inside the building, to eliminate moisture and reduce buildup.

\* \* \* \*

Carbon monoxide is a deadly killer even more common than many people think. It is a danger not only in vehicles "warming up," but also when driving; it's wise to keep a window open for circulation, advises Glenn Prickett, extension safety specialist at the University of Minnesota. Monoxide is a danger around the house; stoves, pipes, chimneys and dampers need to be in good repair so fuel gases can escape. Camping trailers and ice houses are special items for concern; their stoves need to be vented into an outlet pipe.

# # # #

Department of Information  
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St. Paul, Minnesota 55101  
December 14, 1964

To all counties  
4-H NEWS  
Immediate release

4-H'ERS GET  
EXPERIENCE IN  
ELECTRIC PROJECT

Some 1,600 boys and girls are getting practical experience in electricity for day-to-day living. They learn how to make extension cords, motors and how to check for safety hazards in the home.

These young people are enrolled in the 4-H electrical project, one of over 30 projects offered to 55,000 4-H club members in Minnesota.

What is electricity? How is it used? Can we promote safety in electrical equipment? The electrical project answers these questions and develops in the 4-H'er an inquisitiveness in exploring the science of electricity.

The project is divided into three phases - beginner, junior and advanced. Most club members should spend at least two or three years in each phase.

The beginner in the electrical project will learn to understand how electricity works, how it is used and simple electrical devices. An extension cord, electric bell system, electromagnet and electric game are projects the 4-H'er can construct.

The junior phase requires the member to make simple electrical repairs and equipment. The 4-H member studies home electric entrance boxes, meters and equipment.

The advanced phase emphasizes proper use of electric power for the home and for outside equipment. The 4-H'er should use, care for and construct electrical equipment, including electronic devices.

The county offers a medal to the 4-H'er who does superior work in the electrical project. The project member can also win trips to the National 4-H Club Congress in Chicago or to the State 4-H Electric Conference.

Donors of the project awards are North Central Electric League, Minneapolis, and Westinghouse Education Foundation in Pittsburgh.

For more information about the electrical project, contact your county agent.

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 14, 1964

To all counties  
ATT: HOME AGENTS  
Immediate release

LIGHT, MOIST, COOL  
ARE RULES FOR  
CHRISTMAS PLANTS

The special flowering plants that adorn your home for the holidays will last much longer if you satisfy their needs for light, moisture and proper temperature.

C. G. Hard, extension horticulturist at the University of Minnesota, recommends setting flowering plants of the Christmas season in bright light, preferably sunlight, during the day and keeping them in a cool room at night. Check the plants at a particular time each day to be sure they are not dry. Keep the soil moist but not excessively wet, using water of room temperature.

Here are some additional tips from the University horticulturist on care of specific gift plants:

Poinsettia. This plant is as sensitive to drafts as any human. Setting it near a window at night, near the door or a cold or hot air register will mean its quick demise. Because it is a tropical plant, it likes a room kept between 70 and 75°F. during the day, but cooler at night, if possible. Temperatures below 60°F. or above 75°F. will shorten the life of the blooms. Since leaves will turn yellow and drop if the plant is allowed to wilt, be sure to keep the soil in the pot moist at all times.

Cyclamen. Always water around the edges of the pot. Water in the crown may cause rot. Never let the soil dry out completely while the plant is in flower or leaves will turn yellow. Leaf yellowing and bud blasting may also occur if the night temperature is too high or the light intensity too low.

Jerusalem cherry. Bright light during the day and a cool room at night are essential.

Azalea. Blossoms will last longer if the plant is kept in a cool room and if there is a constant moisture supply.

Chrysanthemum. Partially opened flowers will not develop if the plant does not get sunshine. Abundant moisture, a bright location and cool night temperatures will give you long-lasting blooms.

Christmas begonia. Too little moisture will shorten life of the blooms. Keep cool at night and in sunlight during the day.

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To all counties  
Immediate release

"COOL" GENERATION  
PROVIDES CHALLENGES  
FOR YOUTH PROGRAMS

When the "twist" became fashionable among teenagers a few years ago, some adults objected violently and others took up the dance themselves.

Now, the twist has virtually disappeared among the younger set. But objections of adults had little to do with it. More accurately, adolescents rejected the dance because it became popular in adult circles.

The demise of the twist illustrates some underlying facts about modern adolescents and provides a clue to understanding their problems of growth and development.

Adolescents of the U. S. today have their own society--and it's more or less happenstance that the goals of this society agree with most goals of the adult world. The big difference today is that kids strive to succeed not because of what adults say, but because of pressure from their own society of young people.

Members of the University of Minnesota Cooperative Extension Service, during their recent annual conference, heard sociologist Charles Ramsey from Colorado State University contrast the modern "cool" generation with some bygone eras.

Before the 20th century, Ramsey points out, growth and development of a young person was largely a matter of learning behaviors, attitudes and values, and occupational and life styles of parents.

Then, the old values came into question. By the 1920's there was a full scale adolescent rebellion, continuing rampant in the 1930's and 40's.

Today, parents tend to heap on their youngsters the material rewards which the parents themselves were denied. So how do the young people react? By playing it "cool," Ramsey says.

The watchword of the cool generation is to be secure, safe, and not lose what you have. Young people are aware of world crises, but feel they can do nothing about them. The kids become safety oriented. They aspire to achieve material success but avoid failure.

-more-

add 1 - youth programs

Ramsey says young people today put a high value on education, not because of their parents, but in spite of them. As the twist shows, an idea popular among adults may lose favor among kids for that very reason.

But if young people are not critical of adult goals, they are very critical of means of achievement. A national survey showed adolescents to be extremely critical of the church for not helping them become better citizens; of schools for not teaching enough.

What about the high school dropout? Ramsey says the main problem is rejection of the individual youngster by his own society. And this is different from the days of yesteryear. Today, kids are more concerned about acceptance of others in their own society--not the rewards from adults.

Thus, if a youngster is rejected by his peers, he may lose his main reason for staying in school. The school itself may not be reinforcing enough, by itself. So he drops out. And if he also is from a family of low socio-economic status, he may get less encouragement for schooling from home. This is one reason why status background tends to be related to the dropout problem.

What are the implications of this society for youth education and organizations?

First, Ramsey says, remember that adolescents themselves are calling the shots. Therefore, the adults should turn over as much decision making to them as possible, to help them become more responsible leaders. Experience shows no basis for the fears that things will "go to pot" when adolescent groups actually take control. On the contrary, there is a danger of their becoming too rigid.

Secondly, adults should look more closely to where adolescent society is failing, to help them provide the smoother transition from childhood to adulthood.

Thirdly, Ramsey sees need for special concern over the young people who have been rejected from the organized crowd. Some youth organization should help provide these rejected kids with outlets for self expression.

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To all counties  
Immediate release

BLOAT PROBLEM  
STUDIED AT UM

The problem of how to control bloat in cattle and sheep has plagued producers for centuries.

As far back as the year 60 A.D., a Roman author wrote of how he treated animals with bloat by pouring sour vinegar through the left nostril and putting two ounces of grease in the jaws.

While present day treatments are far advanced over those of the past, bloat still results in a national annual loss of nearly \$45 million.

Dr. A. L. Good, professor of veterinary physiology and pharmacology at the University of Minnesota, points out that in addition to the large number of sheep and cattle lost each year, bloat also results in losses through decreases in feed conversion, growth gains and milk production.

He adds that since bloat has proven to be a serious problem with legumes such as alfalfa, many excellent legume pastures have been replaced by less nutritious forages.

Bloat is characterized by the abnormal accumulation of gas in the stomach. The exact cause of the condition is not known. During the past several years experiment stations throughout the North Central States have been probing into the problem of bloat in cattle, seeking a solution to this age-old problem.

Research at the University of Minnesota is aimed at studying the effects of the increased intra-ruminal pressure on the function of the animal's body.

"Through our studies, we hope to gain some insight into the cause of death of animals suffering from bloat," Dr. Good says. "But so far our results are inconclusive."

It has been suggested that the high pressure in the rumen may interfere with the animal's breathing, he adds, and that this might explain how deaths occur. While some data support this idea, it is difficult to reproduce the same conditions in a laboratory that exist in the field.

-more-

add 1 - bloat

Under normal conditions, gases produced in the rumen by fermentation of feed are eliminated by belching or eructation. If the ability of an animal to belch is interfered with, gas will accumulate in the rumen, thus causing bloat.

According to Dr. Good, a popular theory attempts to explain this condition by suggesting that bloat-producing pasture, such as alfalfa or other legumes, contains certain substances which interfere with the animal's ability to expel the fermenting gases. Current research in some states is aimed at trying to find out if such substances do exist.

Researchers in other states are studying the rumen fluids of cattle to see if there is any correlation between these fluids and the occurrence of bloat.

Some experiment stations have been concerned with trying to find effective means for preventing bloat, Dr. Good says. And some antibiotics have already been found to be effective in reducing its occurrence.

Other studies deal with surface tension reducing substances-- an approach based on the idea that increased surface tension promotes frothing of rumen contents. While definite results of these studies are not yet available, Dr. Good feels that this approach appears to be quite promising in offering a breakthrough in the problem of controlling bloat.

# # # #

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Immediate release

## RECORD FARM INCOME REPORTED FOR 1963 IN MINNESOTA

The Minnesota average income per farm reached a record high in 1963, but agricultural economists at the University of Minnesota look for a drop in this average during 1964.

Figures from the U. S. Department of Agriculture's Economic Research Service show that the total net income per farm in Minnesota was \$3,852 in 1963, compared to \$2,864 in 1962 and \$3,407 in 1961. The national average last year was \$3,580.

The average gross income per farm in the state last year was also a record at \$11,405. The national average was \$11,600. Minnesota gross income per farm figures for 1962 were \$10,951 and \$10,878 in 1963.

"The record per farm income in 1963 is especially significant in view of the low hog prices and large decreases in cattle prices during that year," said Paul Hasbargen, University extension economist in farm management.

The primary source of good farm earnings in 1963 was due to the exceptionally high crop yields, he explained. But the increase in crop yields was not enough to offset losses suffered by cattle feeders during the 1962-63 feeding season.

Consequently, the average farm earnings in Southwestern Minnesota, a heavy cattle feeding area, were actually reduced in 1963 in contrast to a general income increase for other farmers.

Regarding the farm income outlook for the current year, Hasbargen said that the widespread drought in the state, which cut crop production by over \$100 million, will result in a drop in average farm income from 1963.

At the same time, he added, the average per farm income in the nation as a whole is expected to be up over last year.

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Immediate release

### FORESTRY STUDENTS AWARDED HOMELITE SCHOLARSHIPS

Three University of Minnesota School of Forestry seniors majoring in forest resources management have been awarded Homelite Forestry Scholarships.

The announcement was made jointly by J. H. Maxwell, Jr., promotion manager of Homelite, a division of Textron, Inc., Port Chester, New York and Professor R. M. Brown, chairman of the School of Forestry Scholarship Committee.

The recipients, all seniors, are: David Anderson, 1160 Fifield, St. Paul; Herbert G. Giefer, 2016 Seabury Ave., Minneapolis; and Barry W. Welch, 1504 Traymore Rd., Minnetonka.

The objective of the scholarship is to help deserving, needy and competent forestry students complete their forestry education.

Recipients are chosen on the basis of scholarship, vocational promise, competence, leadership, character, personality and financial need.

One of the major interests of the sponsor, a manufacturer of chain saws and power tools, is to help promote the wise multiple-use of our forest resources through scientific forest management. Multiple-use forest land management produces timber, wildlife, water, recreation and grazing.

E. S. Spencer, St. Paul district manager of Homelite, made the awards.

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December 15, 1964

Immediate release

#### 4-H ELECTRIC AND AGRONOMY CONFERENCES AT U

The fourth annual State 4-H Agronomy Conference and the fifth annual 4-H Electric Conference will be held on the University of Minnesota's St. Paul Campus Dec. 28-30.

For the first time, the State 4-H Agronomy Conference will be exclusively for agronomy project leaders or other adult leaders who have been working in a leadership role with the project. Attending the Electric Conference will be selected project leaders and 36 club members, 14 years of age or older, who have participated extensively in the electric project.

Purposes of the conference are to give recognition for achievement and leadership in the projects; to provide further education in electricity and agronomy; and to explore career possibilities in the electrical field.

Scientific aspects will be emphasized throughout the Agronomy Conference. Project leaders will tour the St. Paul Campus agronomy and crop research laboratories, the Soil Science building and soil testing laboratories, the Minneapolis Grain Exchange, the Peavey Quality Control Laboratory and the Federal Reserve Bank. The conference is sponsored by the University of Minnesota Agricultural Extension Service and the Peavey Company.

Included on the electric program are tours of the Northern States Power Company's Black Dog Plant, the Northwest Airlines Main Base and the Minneapolis-St. Paul International Airport. At the closing session Keith McFarland, director of resident instruction for the College of Agriculture, Forestry and Home Economics, will speak on "Planning Your Future." His talk will be followed by a panel discussion on career opportunities.

The Electric Conference is sponsored by the Minnesota Agricultural Extension Service with the cooperation of the North Central Electrical League representing electric utilities and Minnesota cooperatives.

### 64-306-jbn

## HORTICULTURIST GIVES TIPS ON BUYING PLANTS

Buying a plant as a Christmas gift or as a decorative accent for your own home?

Here are some suggestions from C. G. Hard, extension horticulturist at the University of Minnesota, on selecting plants.

Poinsettia. Look for plants with bright red bracts and healthy looking green leaves. If the plant is already producing pollen, it has reached the peak of its maturity.

Choose a low or tall plant according to the place it is to be displayed. For a table, centerpiece you will want a low, compact plant; a larger, taller plant may be best for a low coffee table or to set on the floor. The poinsettia is always more attractive when viewed from above.

Azalea, Christmas begonia and cyclamen. These flowering plants will last for several weeks if purchased with a display of open flowers but with enough buds to provide continuing bloom.

Jerusalem cherry. Select a plant with brightly colored fruits and fresh, dark green leaves.

Chrysanthemum. Choose a plant with most of the flowers open but with some buds to extend the flowering period.

The kind of care the flowering plant is given at home will determine the length of its life, however, the University horticulturist says. Keeping the plant in bright light during the day and in a cool room at night, checking the soil each day for moisture and providing enough water of room temperature are the essentials for extending the period of bloom as long as possible. Always keep the plants away from radiators and from hot or cold air drafts.

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Immediate release

### STATE WINNERS ANNOUNCED IN JUNIOR HORTICULTURAL CONTEST

Five Minnesota young people who are members of the National Junior Horticultural Association, formerly known as the National Junior Vegetable Growers' Association, have been named state winners in the 10th annual canning crops competition.

The winners, as announced by C. C. Turnquist, extension horticulturist at the University of Minnesota and association adviser for the state, are Paul Johnson, Keith Raitz and Douglas Toreen, all of Hector; Mark Lohmann, Goodhue; and Douglas Monnier, Dexter. Johnson and Raitz were also state winners last year.

As first and second place winners, respectively, Johnson and Lohmann received silver pins and blue ribbons. Raitz, Toreen and Monnier were awarded bronze pins and red ribbons.

The youths grew crops of sweet corn or peas under contract with a nearby canner. They were judged on their general horticultural practices and techniques, on community and school activities and on the reports they submitted.

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64-308-jbn

Department of Information  
and Agricultural Journalism  
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University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 17, 1964

Immediate release

#### UM DEPARTMENT ADDS STAFF FOR EXPANDED RESEARCH AND TEACHING

Three new staff members have been added to expand the teaching and research program of the Department of Plant Pathology and Physiology at the University of Minnesota.

Part of this expansion is made possible by a grant from the U. S. Army Biological Laboratories, and part results from the Academic Year Institute for High School Biology Teachers, according to M. F. Kernkamp, head of the department.

These new staff members include Lowell P. Bush, research associate; Eduard Stadelmann, assistant professor; and Lee C. Olson, assistant professor.

Bush will do research on the physiology and biochemistry of black stem rust of wheat, under support from the U. S. Army Biological Laboratories in Fort Detrick, Maryland. The objective of this project is to attempt to determine why certain races of rust are more aggressive than others.

Solving these problems could be of great value to plant breeders in the development of rust-resistant varieties of wheat.

(more)

add 1 -- new staff

Stadelmann will continue his research on the physiology of plant cells, including the permeability of cell walls and other physiological functions inside plant cells. This research may be of value in determining what happens to an herbicide or other agricultural chemicals when they are applied to plants. Stadelmann will also teach courses in plant physiology.

Olson will spend half his time with the Academic Year Institute for High School Biology Teachers, and will conduct research on the role of nitrogen in the nutrition of plants. This involves the formation of the various kinds of amino acids and proteins in plant tissues.

Bush is originally from Marshall, Minnesota, received a B.A. degree in Biology from Macalester College, and did graduate work in plant physiology, plant-pathology and biochemistry at Iowa State University.

Stadelmann is a native of Austria. He attended the Universities of Graz, Vienna, and Innsbruck, and received the Ph.D. degree at the last institution.

He has been associated with the University of Freiberg in Switzerland, has been at Ohio State University, and during the past year was in the Department of Chemistry at the University of Minnesota.

Olson is from South Dakota, has a bachelors' degree from South Dakota State University, and a Ph.D. in biochemistry and plant physiology from the University of Wisconsin.

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64-309-pjt

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 17, 1964

Immediate release

#### WATER SHORT COURSE OFFERED FOR VO-AG INSTRUCTORS

A special Water Short Course will be offered for vocational agriculture instructors on Tuesday, Dec. 29, at the St. Paul Campus of the University of Minnesota.

Registration will begin at 8:30 a.m. in Coffey Hall, according to LaVern A. Freeh, head of the Institute of Agriculture's Department of Agricultural Short Courses.

Topics to be covered include water facts, water quality and supply, pothole drainage and deep ground water supplies, water resources management and a discussion of the Water Resources Research Center.

The speakers will be Professors L. L. Boyd, Evan Allred, Curtis Larson and Philip Manson of the Department of Agricultural Engineering; George M. Schwartz, professor emeritus of Agricultural Engineering, Geology; Deane Turner, extension educational specialist; and William C. Walton, director of the Water Resources Research Center.

"These one-day courses are offered every year during Christmas vacation to provide vocational agriculture instructors with additional opportunities for professional improvement, and to help them up-date themselves in various subject matter areas," Freeh explained.

He added that course topics differ from year to year. Last year the topic was materials handling and the year before agricultural chemicals and pesticides were discussed.

The course is sponsored jointly by the Departments of Agricultural Short Courses and Agricultural Engineering. Registration fee is \$3.

Further information can be obtained from the Department of Agricultural Short Courses, University of Minnesota, St. Paul, Minn. 55101.

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St. Paul 55101 -- Tel. 647-3205  
December 17, 1964

Immediate release

#### FILLERS FOR WOMEN'S PAGES

The clamp-on type of metal holders on strings of outdoor Christmas lights may injure the living tree on which you use them. As the wind blows, the metal will rub the bark and may cut into it, injuring living tissues. University of Minnesota extension horticulturists suggest tying the lights to the branches with plastic, twist-ems or insulated wire. Also--keep wattage of bulbs to 15 or 20 watts and arrange lights so they aren't in direct contact with the branches.

\*\*\*\*\*

Figure on 3/4 to 1 pound of turkey per serving of ready-to-cook weight if your bird weighs less than 12 pounds, advises Robert Berg, extension poultry specialist at the University of Minnesota. Allow 1/2 to 3/4 pound per serving for birds weighing 12 pounds or over. This is an estimate per serving, not per person.

\*\*\*\*\*

Turkey is highest in protein and lowest in cholesterol of all other poultry and red meats except veal, according to Cornell University tests.

\*\*\*\*\*

Keep your flowering Christmas plants near windows so they will get as much light as possible, suggests C. G. Hard, extension horticulturist at the University of Minnesota.

\*\*\*\*\*

One of the best ways to send a fragile gift by mail, a cake or cookies, is to provide special cushioning by using popcorn for packaging the items.

\*\*\*\*\*

Take special care to water cyclamen around the edges of the pot. Water in the crown may cause rot, according to University of Minnesota horticulturists.

\*\*\*\*\*

Scrape candle drippings from table linen with a dull knife, place the stained section between clean white blotters or cleaning tissues and press with a warm iron. Sponge any stain that remains with a grease solvent.

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64-311-jbn

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 17, 1964

Immediate release

## MANY GOOD FOOD BUYS FOR HOLIDAYS

Meat counters from now until Christmas will be laden with holiday meats--turkey, geese, chicken, ducks and hams--all selling at reasonable prices.

Mary Ryan, extension consumer marketing specialist at the University of Minnesota, reports that turkey supplies are especially large and prices are low.

Shoppers will find many other foods to round out holiday menus.

Shipped-in green onions and cucumbers, radishes from Florida, Texas green peppers and California celery all have low price tags this week.

Plentiful nuts for baking and candy making include peanuts, in especially large supply, walnuts, almonds and filberts.

Consumers may be able to find specials in their markets on cake mixes, canned corn, tuna, peas and tomato juice.

Fruits in abundance now are apples, bananas, oranges, tangerines, grapefruit and Emperor grapes. Most plentiful apple varieties are Winesap and Delicious for eating and Red Rome for cooking and baking.

Crops of tangerines and oranges are bigger than last year. December marks the peak of the tangerine season and the beginning of the peak of supplies of oranges. Tangerines are available as low as 2 or 3 cents apiece. Although the orange crop is still slightly smaller than average, this year's is a considerable improvement over the weather-damaged harvests of the past two seasons.

To choose good quality tangerines, Miss Ryan advises, look for fruit that is bright, clean, heavy for its size and deep yellow to deep orange. Avoid fruits showing pronounced softening at the stem end or lack of luster in appearance. Because of the looseness of their skin, these fruits are not necessarily firm to the touch. On the other hand, oranges should be both firm and heavy for their size. Some oranges are dyed on the outer peel to improve their appearance, but this coloring does not affect edible quality.

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64-312-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 21, 1964

To all counties

4-H NEWS

SAFETY MEASURES  
IMPORTANT FOR  
HAYRIDES

Hayrides can be good holiday fun -- but be sure to take proper precautions to prevent an accident that may spoil the party.

Glenn Prickett, extension safety specialist at the University of Minnesota, suggests some safety measures to take:

- . Have the vehicle lighted properly in front and rear.
- . Use red tail lights or reflectors in the rear and white headlights.
- . Provide end gates, especially on the front of the rack.
- . Place bales lengthwise on the rack to seat passengers.
- . Permit no drawbar riding.
- . If a tractor is used, have a licensed driver on the tractor.

Be sure to have the trailer hitched securely to the drawbar with locked pin.

- . Keep off heavily traveled highways.
- . Warn passengers to take special care in getting on and off the vehicle.

-jbn-

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 21, 1964

To all counties  
ATTN: HOME AGENTS

ACT QUICKLY  
TO REMOVE STAINS

Stains on table linen and clothing are frequently the aftermath of holiday festivities.

In treating those stains, prompt action is one of the keys to successful removal. Many stains that can be removed easily when they are fresh are difficult or impossible to remove later.

Proper treatment before laundering is a must to prevent permanent damage to the fabric. Since hot soapsuds and the heat of an iron will set many spots, always inspect table linens and clothing carefully for stains before washing them.

University of Minnesota extension home economists give these tips on removing some of the stains that appear during the holiday season:

Cranberries and other fruits. If the fabric is washable, pour boiling water through the spot. When any fruit juice is spilled, it's wise to sponge the spot immediately with cool water. Orange and some other juices are invisible on the fabric after they dry but turn yellow on aging or heating.

Coffee or tea. Pour boiling water through the spot if it is safe for the fabric, then wash in warm, soapy water. Sponge stain on nonwashable fabric with cool water. If cream was used in the coffee, sponge the stain with cool water, work detergent into it, then rinse thoroughly. Sponge with a grease solvent if a greasy stain remains after the fabric is dry.

Candle wax. Scrape off wax with a dull knife; then place the stain between clean white blotters or cleansing tissues and press with a warm--not hot--iron. Sponge any remaining stain with a grease solvent such as carbon tetrachloride. If a color stain remains, sponge with a solution of 2 parts water and 1 part denatured alcohol.

Gravy or meat juice. Sponge with cold or lukewarm water or soak in cool water. If the material is washable launder in warm soapy water and rinse well. Allow the article to dry. If a greasy stain remains, sponge with grease solvent. If the fabric is not washable, use an absorbent powder or a grease solvent.

-jbn-

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 21, 1964

To all counties

STUDIES SHOW SOME  
INSECTS PREFER  
DISEASED PLANTS

While it is well-known that insects are capable of transmitting plant diseases, studies conducted recently at the University of Minnesota show that certain insects thrive better on diseased plants than on healthy ones.

Entomologists A. G. Peterson, and R. S. Saini, have found that green peach aphids are able to colonize on asters infected with aster yellows virus, and on flowers of healthy plants, but that they cannot survive on foliage of healthy asters.

They also found that adult leafhoppers show a slight feeding preference for carrots infected with aster yellows, and that they show a marked oviposition preference for the diseased plants.

"Our findings are not the first to show that some insects prefer diseased plants," Peterson says. "But the results of our studies add more species of insects to the list of those that thrive better on infected plants."

The study of green peach aphids was prompted by the unusual occurrence of heavy infestations of the aphids on China asters infected with aster yellows.

Since the China aster is not a normal host plant for this aphid, the entomologists set out to determine the relative suitability of diseased and healthy asters as hosts for the aphid.

Among their findings, Peterson and Saini found that aphids that were transferred to healthy plants soon died out, while those transferred to the diseased asters managed to survive.

-more-

add 1 - insects prefer diseased plants

The number of nymphs produced by aphids on the healthy plants was negligible, the study showed, and those few that were produced, soon died out. On the other hand, aphid nymphs produced on diseased asters increased substantially during a nine-day period.

The entomologists also discovered that aphids on healthy asters were able to survive on the flowers of healthy plants and produced sufficient nymphs to increase their population. But aphids survived only five days on the non-flowering healthy plants.

In another study conducted earlier this year, Peterson and Saini found that six-spotted leafhoppers preferred lettuce, oats and asters to carrots, flax and broomgrass, both for feeding and oviposition.

The adults appeared to show a slight feeding preference for carrots infected with aster yellows as compared to healthy carrots. They also showed a marked oviposition preference for the diseased plants.

Moreover, the entomologists point out, the leafhopper nymphs had a lower mortality rate on the diseased carrots than on the healthy ones. Five times as many adult leafhoppers were produced on diseased plants than on healthy ones.

Peterson explains that "this greater increase of leafhoppers on yellows-infected plants than on healthy ones could account for a higher than expected incidence of aster yellows infections in the leafhopper vector."

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Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 21, 1964

To all counties

FALLOUT PROTECTION  
ADVICE FOR ANIMALS  
BEING DISTRIBUTED

An effort to provide every livestock owner in Minnesota with advice for last-minute fallout protection in case of nuclear attack will be launched in January.

A central part of the effort is a wall poster for barns and milkhouses providing specific suggestions for handling livestock following a nuclear emergency.

According to Clifton Halsey, extension specialist in rural civil defense at the University of Minnesota, the information materials will be distributed by county agents, representatives of the dairy industry, state milk inspectors and others.

Much of the distribution will be in January. Dairy herd owners in many areas of the state will receive the information through their local dairy plants.

The posters suggest that the best shelters for animals are, in this order, large barns with full hay mows, other large barns and pole sheds, and small buildings.

Stock which cannot be put in shelters should be crowded into small drylot pens if possible. Shelter doors and windows should be closed to the extent possible without suffocating or overheating animals.

Feed bunks should be filled if there is adequate water. But if water is short, feed should be restricted also.

Fallout protection may be improved by putting baled hay or straw, or sacked grain, dirt, or fertilizer in front of windows, doors and other openings.

Exposed feed supplies should be covered to protect them from fallout dust.

Further information on fallout protection, including the barn posters, is available from county extension offices.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota  
December 21, 1964

To all counties

IN BRIEF.....

Average income per farm in Minnesota was at a record high in 1963. Figures from the U. S. Department of Agriculture show that total net income per farm in Minnesota was \$3,852 in 1963, compared with \$2,864 in 1962 and \$3,407 in 1961. National average last year was \$3,580. Minnesota gross income per farm figures were \$10,951 for 1962 and \$10,878 in 1963. However, Paul Hasbargen, extension economist at the University of Minnesota says a drop can be expected in average farm income for 1964. The major factor will be drouth, which cut crop production by over \$100 million.

\* \* \* \*

A need for land use planning is being recognized in many areas of Minnesota. A recent seminar on this subject at the University of Minnesota's North Central Experiment Station pointed to the large number of agencies and individuals available to provide information which can aid in local planning problems. In summarizing this seminar, Tom Anding, University staff member and urban development director for the Upper Midwest Research and Development Council, stressed the need for local groups to be responsive to, and taking advantage of these sources of assistance.

\* \* \* \*

Foods grown on U. S. farms are becoming ever more familiar to people in other lands, according to the U. S. Department of Agriculture. One acre in every four is producing for export. And the effect is reflected in menus around the world, as U. S. ingredients are mixed with culinary flair to emerge as traditional "foreign" dishes.

# # # #

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 22, 1964

Immediate release

## CONSIDERATIONS GIVEN IN BUYING BEEF FOR FREEZER

Is it practical to buy a half or a quarter of beef for the freezer?

In answer to that question asked by many families, University of Minnesota extension specialists say that the actual cost of a side or quarter of beef may not be as low as you think. They point out that there are other considerations besides cost:

- . Your family's size and meat preferences.
- . The availability of meats you like.
- . Nearness of your market and the frequency of buying food.
- . Amount of freezer space.
- . Quality of meat available by the quarter or side.
- . Skill of the processor who will cut, trim and package the meat.
- . Amount of money you want to invest in one kind of meat.

A beef side will usually yield a fourth steaks, a fourth roasts, a fourth ground beef and stew meat and a fourth waste.

Although you may buy a side of beef weighing 300 pounds on the hook, remember that you will not get 300 pounds for the freezer, the specialists caution. Cutting, trimming and boning reduce the yield by 20 to 30 percent. Generally, the fatter the meat, the higher the loss. This reduction, then, must be taken into consideration in figuring the cost you are paying per pound for edible meat.

Most families overlook the cost of having meat stored in the home. Generally, it costs from 11 to 25 cents to hold a pound of food in a freezer for a year. Cost per pound can be reduced, however, by frequent turnover of food in the freezer.

Many of the questions on cost of buying a side or quarter of beef for the freezer are answered in a University of Minnesota Agricultural Extension Service Fact Sheet, Beef for the Freezer, available free from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minn. 55101. Authors of Beef for the Freezer, Home Economics Fact Sheet 12, are Verna Mikesh, extension nutritionist, Mary Ryan, extension consumer marketing specialist and Kenneth Egertson, extension economist in marketing.

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64-314-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 22, 1964

CONFIDENTIAL:

HOLD FOR RELEASE UNTIL Friday, DEC. 25, P.M.

#### MINN. 4-H GIRL GETS SPECIAL CHRISTMAS GIFT

December 25, 1964 will stand out as one of the most memorable Christmases in the life of 18-year-old Joyce Thompson, Warroad.

This morning (Dec. 25) Joyce received a letter announcing that she had been selected as the spokesman for 4-H'ers throughout the nation at the meeting of the American Institute of Cooperation next August in Columbia, Mo. The letter, accompanying a Christmas gift from the American Institute of Cooperation (AIC), was intended as a special Yuletide surprise for the Roseau County 4-H'er.

4-H delegates from 38 states attending the AIC conference at Michigan State University, East Lansing, last August elected Joyce as their official representative for 1965. The choice, however, was kept secret until this morning. Joyce was one of 30 Minnesota youth sponsored by the Minnesota Association of Cooperatives at the sessions in Michigan last summer. A similar youth delegation from Minnesota will attend the convention in Missouri.

As the 4-H VIP at the 1965 AIC meeting, the Minnesotan will chair one or more of the general sessions and will address several thousand adult and youth delegates. Before the conference she will assist with planning the youth sessions.

Honors are no stranger to the Warroad 4-H girl. As president of the Minnesota State 4-H Federation, she heads an organization of some 55,000 Minnesota club members. This fall she was chosen one of four Minnesota delegates to the National 4-H Club Conference in Washington, D. C., next April.

A 4-H club member for nine years, she has been president of the Roseau County 4-H Federation, has received county achievement awards in leadership and achievement, has been Roseau County dairy princess and state winner of the D.A.R. Good Citizenship contest.

A freshman at Bemidji State College, she plans to major in elementary education and music.

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64-315-jbn

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 22, 1964

Immediate release

## EXTENSION SERVICE TO EXPAND RESOURCE DEVELOPMENT EDUCATION

An expansion in educational efforts in resource development will be undertaken during coming months by the University of Minnesota's Cooperative Agricultural Extension Service, according to Luther J. Pickrel, extension director.

The new efforts will be facilitated by a special grant of \$28,600 from the Federal Extension Service of the U. S. Department of Agriculture.

The purpose of the expanded activity will be to develop and test educational materials and program methods and to stimulate continued increase in citizen involvement in resource development, particularly relating to problems of rural communities and agriculture in northeastern Minnesota.

Efforts will be made to integrate activities contributing to the development of human and physical resources of the region. This will involve cooperation by the Extension Service and other elements of the University with state and local governmental units and organizations such as rural area development groups, Area Redevelopment Administration, Small Business Administration, and the Office of Economic Opportunity.

The expanded project will involve three main phases:

1. A thorough study of the economy of the region, including a critical evaluation of the outlook for regional economic growth and local community development. This phase will involve collection and interpretation of available data and research findings and efforts to facilitate new research needs. Special attention will be given to goals of local people and realities of regional conditions; quantity and quality of human and physical resources; factors contributing to unsatisfactory economic conditions; and means and potential for development of human and physical resources, aimed toward improvement of the economic well-being of people in northeastern Minnesota.

(more)

add 1 -- resource development education

2. Formulation of specific educational programs to promote resource redevelopment in the region. Major emphasis will be placed on programs that enable and stimulate local citizens to recognize, plan for, and achieve the necessary reorganization of community resources and institutions. Special attention will be given to education regarding economic analysis.

3. Conducting of seminars, workshops, short courses, and other educational programs dealing with the development of human and physical resources. Special attention will be given to teaching local people how to use the analytical tools and techniques for identifying important community problems, to isolate causal factors and barriers to development, and to evaluate alternative courses of action.

Director Pickrel, says the new efforts will complement expanding programs of recent years, in which Extension has been working closely with agricultural and other leaders in dealing with community problems.

He says the rapid pace of the present-day economic and technical change has created serious problems of economic and social maladjustment which are not always understood fully, and which are especially difficult to deal with in many communities.

Extension in recent years has provided educational assistance to an increasing number of county development organizations established to provide a broad approach to problems of rural communities. More than 20 Minnesota counties, working through these organizations, have completed Overall Social and Economic Development Plans (OSEDPs).

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64-316-pjt

Department of Information  
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St. Paul 55101 -- Tel. 647-3205  
December 22, 1964

Immediate release

#### MINNESOTA FORESTRY PROFESSOR IN SOUTH AMERICA

Merle P. Meyer, professor of forestry in the University of Minnesota School of Forestry is spending several months in Argentina on a project involving the aerial photography and mapping of a vast area of undeveloped lands.

The Food and Agriculture (FAO) branch of the United Nations (UN) has engaged Meyer for this work and is administering the overall project.

He is a recognized leader and authority in the field of aerial photogrammetry and use of aerial photographs in forest management.

He was invited to Norway in 1961-62 to assist in the development of an instructional and research program in this field in that country. He also spent some time on a similar assignment in Poland.

Meyer held a Fulbright lectureship in Norway. He has served periodically since joining the School of Forestry in 1952 as an adviser to the U. S. Forest Service and forest products industries on aerial photography, mapping and forest surveying practices.

He will return to the Minnesota School of Forestry on the completion of his assignment but will make periodic visits to Argentina to observe and guide the completion of the program.

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64-317-pjt

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St. Paul 55101 -- Tel. 647-3205  
December 22, 1964

Immediate release

#### UM EXTENSION SAFETY SPECIALIST TO RETIRE

Glenn I. Prickett, who developed the agricultural extension safety program at the University of Minnesota 15 years ago, will retire from his duties Dec. 31.

His retirement comes at the end of 37 years on the staff of the University. He taught 16 years at the West Central School and Experiment Station in Morris and served six years as assistant state 4-H club leader.

Since he was appointed extension farm safety specialist in 1949, Prickett has been working with individual farmers, county extension agents, farm and civic organizations and the state and county safety councils in an effort to reduce farm accidents by bringing more safety into agriculture.

The constant objective of the extension safety program is to create a safety consciousness among rural people in the state, Prickett says. And he feels that Minnesota farmers and farm workers are becoming increasingly more safety-conscious.

As evidence he points to the notable drop in total number of farm work fatalities reported annually. There were 48 reported last year, compared to over 80 in 1949. The number dropped to 41 in 1959, but rose again in 1960. Prickett explains this rise to be partly due to a combination of bad weather and a late season that year.

"While it is true that the farm population has decreased over the past 15 years," Prickett explains, "it is also true that the number of farm power machines--the major cause of farm deaths and injuries--has increased considerably."

(more)

add 1 -- Prickett

Weather is one of the major factors in determining the number of farm accidents every year, he says. A late season often forces farmers to hurry their work and to work longer days than they should.

Dust, dirt, mud and slush make for unfavorable and dangerous working conditions. Hot weather can result in flash fires, and cold weather means wearing extra clothes which can hinder the farmer in his work and make it even more dangerous.

"The farmer is his own safety supervisor," Prickett says. "He can be as careful or as reckless as he chooses. And he has to constantly be reminded of the dangers involved in this business of farming."

Prickett likens safety programs to any other type of instructional effort. Young people come onto the scene and have to be warned of the dangers involved in farming, and new power devices and chemicals are developed, which bring with them new dangers.

Prickett has long been interested in rural safety. He was instrumental in getting safety instruction included in 4-H tractor maintenance clinics when they were first organized in Minnesota in 1945.

"Tractors are the number one farm killer," he says. "This is due to the fact that there are more tractors operated more hours than any other farm machine." He says excessive speed--driving too fast for the machine and job at hand--is usually found to be the cause of tractor accidents.

Born in Iowa in 1900, Prickett grew up on a farm in west-central Minnesota. He received his B.A. degree from Hamline University in St. Paul, and did graduate work at the University. He is a member of the American Society of Safety Engineers and the Veterans of Safety.

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64-313-vak

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 28, 1964

To all counties  
Immediate release

OFF-FARM INCOME  
IMPORTANCE SEEN

You may get a mistaken view of farm family income--if you look at figures dealing with income from farming alone.

This fact is apparent from a national look at income for farm operator families, according to extension economist Paul Hasbargen at the University of Minnesota.

For 1963, the total income for farm families, including non-money income from farm food and housing, averaged \$5,935 for the nation as a whole. That breaks down into \$3,504 in realized net income from farming and \$2,431 in off-farm income.

However, families on different size farms vary in how much they depend on income from off the farm. As the scale of operations declines, off-farm income becomes more important.

Take first the farms with sales of \$20,000 and over in 1963. These families had total incomes averaging \$12,357 for the year, and less than \$2 of every \$10 was from off-farm sources.

As sales decline, dependence upon off-farm sources increases. In the second highest sales group (\$10,000 to \$19,999) about \$2 of every \$10 is from off-farm sources; in the \$5,000 to \$9,999 group, over \$3 of every \$10 is from off-farm sources. The share from off-farm sources then increases to \$5 of every \$10 for farms with \$2,500 to \$4,999 in sales, and reaches a high of \$7.50 of every \$10 total income for farms selling less than \$2,500 worth of farm products.

So in the bottom sales category, the families earn about three times as much off the farm as from farm sales.

For all farms with sales under \$2,500 in 1963, total income was \$4,251, of which \$3,222 was nonfarm.

-more-

add 1 - off-farm income

The absolute amount of off-farm income also varies with size of operation. It averages over \$2,000 for the largest farms, drops to under \$2,000 for farms with \$5,000 to \$19,999 in sales, but rises to over \$3,000 for the smallest farms.

Many farm-operator families in the less than \$2,500 sales group have family heads who are primarily on nonfarm pursuits, or are semi-retired. But there are also some farm families in this sales group who rely primarily on farm income. These families have the lowest total income of all groups--averaging \$1,916 for 1963.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 28, 1964

To all counties  
Immediate release

URGES CAUTION  
IN PURCHASING  
PLANT FOOD

With all the new fertilizer and fertilizer products on the market, farmers are finding it necessary to be more critical than ever about the materials they buy for next spring's planting.

But not all products being sold as such are really fertilizers as most people think of them. Lowell Hanson, extension soils specialist at the University, suggests some selling points, sometimes used to promote products, that farmers should be wary of.

First, beware of a product that is said to contain a secret ingredient, with almost magical benefits. And you might raise a skeptical eyebrow over a claim that a product operates on a newly discovered or secret principal.

Secondly, watch for claims that the product is so new that most scientists haven't heard about it yet. Sometimes, the claim is made that controlled tests in laboratories and fields are not practical enough to be concerned about.

Thirdly, testimonials from unknown individuals are not always evidence that a product is worthwhile. These claims may be largely opinions, and may not be supported by findings from research by responsible investigators.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 28, 1964

To all counties  
Immediate release

IN BRIEF.....

Buying chemicals for weed control is a pretty selective business nowadays. Extension agronomist Harley Otto at the University of Minnesota lists a number of points to check on for each chemical: which crops it can be used on; what weeds it will control; application rate; when it should be applied; limitations on its use; effect on crops grown on the field the following year; hazards associated with use of the chemical. Finally, weather can have some bearing on effectiveness of the chemical.

\* \* \* \*

Christmas tree quality on sales lots continued to improve during the 1964 marketing season, according to Marvin Smith, extension forester at the University of Minnesota. Tree producers have become increasingly aware of the value of cultural practices, especially shearing. And cultured trees are taking up an increasing percentage of sales on Twin Cities lots. The big shift in species is toward Scotch pine, which captured 26 percent of the market in 1963, compared with 11 percent in 1960. Survey data from 1964 aren't complete yet, but Scotch pine promises to continue to strengthen its market position.

\* \* \* \*

Saline and alkali soils do occur in Minnesota, but at present the seriousness of the problem isn't known, according to extension soils specialist Lowell Hanson. While large acreages are not likely affected, Hanson says, the problem may be quite serious for some farmers. He says there is no additive which will correct these problems. Drainage and crop selection are the chief management tools available for dealing with salinity and alkalinity at present.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 28, 1964

To all counties

4-H NEWS

Immediate release

#### 4-H FILLERS

Seven Minnesota 4-H'ers carried off a total of \$3000 in scholarships, national and regional awards given at the National 4-H Club Congress in Chicago in early December. Four of them received \$500 scholarships: Lu Ann Herrig, Slayton, for achievements in foods; David Pierson, Lake Elmo, dairy; Mike Hunter, Rochester, safety; Paul Johnson, Maple Plain, achievement. Rodney Sando, Ogilvie, was one of three sectional winners of a \$400 scholarship in forestry; and Donald Untiedt of Edgerton won a \$400 scholarship in agricultural economics. Gary Vanderwerf, Sleepy Eye, won the Alpha Gamma Rho scholarship of \$200.

\* \* \* \*

Total value of all scholarships announced at the 43rd National 4-H Club Congress was \$123,000. The scholarships are provided by donors through the National 4-H Service Committee.

\* \* \* \*

About one of every 12 4-H club members receive an award during the year.

\* \* \* \*

Baking breads of other lands and associating them with customs of the people is one of the rewarding undertakings of youthful cooks enrolled in the 4-H foods project.

\* \* \* \*

The idea of a National 4-H Club Congress started in 1919 when a meat packing company sponsored trips to Chicago for 4-H boys and girls. For the past 43 years the Club Congress has been conducted by the Agricultural Extension Service and the National 4-H Service Committee with emphasis on education, inspiration and recognition. It is made possible through the support of 56 companies and foundations which sponsor specific award programs.

\* \* \* \*

Urban, suburban and rural boys work together in 4-H clubs. They have a choice of nearly 50 projects ranging from electricity to livestock.

\* \* \* \*

At the heart of the 4-H club program are some 400,000 men and women who serve voluntarily as leaders--in Minnesota, 13,000 men and women.

\* \* \* \*

4-H clubs build better citizens through leadership, service and achievement. Ask the county extension agent how to get into 4-H work.

\* \* \* \*

4-H'ers learn skills useful throughout their lifetime. "Learn by doing" is their motto.

\* \* \* \*

Fifty-two percent of 4-H club members now come from urban or suburban homes.

\* \* \* \*

4-H is a national program for farm and city boys and girls between 9 and 19 years of age.

-jbn-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 28, 1964

To all counties  
ATT: HOME AGENTS  
Immediate release

BETTER MANAGEMENT  
IN '65 MAY MEAN  
HAPPIER FAMILY

If you've experienced the frustration of feeling disorganized for the past few months, this New Year's resolution might be appropriate:

"I resolve to be better organized in my homemaking activities this year."

To make improvements in organization, however, it's necessary to carry through the complete management process, according to Kathleen Jeary, assistant professor of home economics at the University of Minnesota. This process involves three steps: planning, carrying out the plan and evaluating or deciding what could have been done differently.

For the homemaker who is really interested in having a better organized home, Miss Jeary has some tips. First of all, she suggests, analyze your reasons for wanting to get organized. Will a better system of management improve the home? Are you only trying to satisfy yourself, or will the rest of the family benefit? Will your methods of organization conflict with your family's way of life?

If you decide to improve your management, take a look at the way you do your daily tasks. Ask yourself such questions as:

- . Why am I doing this? Will anyone benefit from it? Is it necessary?
- . One of the best ways to improve management is to get rid of unnecessary tasks done as a matter of habit. Practice "intelligent neglect."
- . What new ways can I do my work? What steps can I eliminate? Choose easy-care fabrics that require little or no ironing. Use food mixes. Fold diapers, towels, sheets for storing the way they are to be used.

-more-

- add 1 - better management

. Where shall I do the job? Choose the place that will be easiest and most pleasant for you. For example, you may want to iron in the living room where you can watch television -- or near a window where you can watch the children outside.

. When shall I do the job? Do the most demanding jobs when you are most alert, whether in the morning, afternoon or evening.

. Who should do the job? Let individuals do certain types of work which they have interest in and ability to do. Let the children help, but don't always assign dishwashing to them.

If you have a feeling of never being able to complete a job, you can often overcome this frustration by setting for yourself an intermediate rather than an impossible goal. Cleaning one room might be your job for the day rather than trying to clean the whole house. You will then have the satisfaction of accomplishing a goal.

When there are jobs that never seem to be done, it often helps to list them and schedule one for each week, Miss Jeary says. Make use of many small segments of time normally wasted by listing little jobs to be done as 5-minute, 10-minute or 15-minute jobs. Then when you have a few spare moments, work in one of the jobs that will fit into the time segment. As you check off each job, you have the feeling of making some progress.

-jbn-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 30, 1964

Immediate release

#### SOIL CONSERVATION SPEAKING CONTEST WINNERS ANNOUNCED

Dennis Kral, 17, New Ulm and Lynnette Perrine, 14, Detroit Lakes were winners in the Senior and Junior 1964 State Soil Conservation Speaking Contest.

Dennis was winner in the senior division and received a \$150 U. S. savings bond. He is the son of Mr. and Mrs. Edwin Kral and represented district 6. Lynnette won in the junior division and received a \$50 savings bond. She is the daughter of Mr. and Mrs. James Perrine and came from district 2.

The subject of the talks was "Soil and Water Conservation--How Will it Affect my Future Recreation." About 3500 young people took part in this year's contest which was held in all seven soil conservation districts of the state.

Second place winner in the senior division (7 districts represented) was Celeste Meyers, 15, Hillman, Minnesota, district 3. She will receive a \$75 savings bond.

David Ernster, 14, Caledonia, representing district 7, placed second in the junior division of the speech contest. He received a \$25 U. S. savings bond.

State contest awards were provided by Mutual Insurance Company of St. Paul and by Midland Cooperatives in cooperation with the Minnesota Association of Soil and Water Conservation Districts.

Two winning contestants and runner-ups in the state contest will be brought to the annual meeting of the Minnesota Association of Soil and Water Conservation Districts January 4 and 5, Lowry Hotel, St. Paul, where they will present their talks and receive their awards.

Junior high class includes any school pupil enrolled in the 1964-65 school year up to and including the 9th grade. Senior high class includes any students enrolled during the year from the 10th to the 12th grade inclusive.

The judges in this year's contest were James Swan, extension soils specialist, University of Minnesota, James Hill, WCCO associate farm service director, and Ray Wolf, extension specialist in information, University of Minnesota.

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64-316-rsw

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 30, 1964

Immediate release

#### LANDSCAPE DESIGN WORKSHOP AT U

A landscape design workshop is scheduled for February 2-4 on the University of Minnesota's St. Paul Campus, La Vern A. Freeh, head of agricultural short courses, has announced.

Sponsors of the workshop are the Minnesota Association of Nurserymen and the landscape design section of the University's Department of Horticultural Science.

Planned especially for professional landscape architects and designers, the short course will give them an opportunity to have their design ideas subjected to critical analysis and to learn how to design for current landscape needs. Workshop participants will study alternative solutions to common landscape problems as well as relationship of landscape design to architecture, according to C. G. Hard, extension horticulturist at the University and program chairman.

The workshop is planned so the participants will work in small groups on separate design problems under the supervision of a landscape architect. In addition to the group sessions, lectures will be given on such topics as landscape design and plant materials, landscape design in relation to traditional and modern architecture, art in landscape design and economics of design.

The fee of \$35 for the three-day short course includes cost of instruction, materials for design and three luncheons.

Further information is available by writing Department of Agricultural Short Courses, University of Minnesota, St. Paul, Minnesota 55101, or calling 647-3211. The registration fee of \$35 must be mailed to the Department of Agricultural Short Courses by January 10.

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64-317-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 30, 1964

Immediate release

#### UM TO OFFER AGRICULTURE COURSES IN 5 CITIES

The University of Minnesota's Institute of Agriculture will offer special courses in five Minnesota cities during the 1965 Winter Quarter, according to Institute Dean S. O. Berg.

Graduate-level courses for professional people in agriculture and related fields will be conducted in Owatonna, St. Cloud, Wadena, Lamberton and St. Paul. Instructors will be faculty members in the College of Agriculture, Forestry and Home Economics.

Students must register in advance by mail no later than Monday, January 11, Berg said. Tuition is \$30 per course. Each course carries three credits which can be applied toward a master's degree.

The schedule of courses is as follows:

Owatonna -- Dairy Husbandry 124, "Dairy Cattle Nutrition," deals with application of principles of nutrition and economics of feeding dairy cattle. It will be taught Tuesdays from 4:30 to 8:30 p.m. beginning January 19 and continuing through March 23. Instructors will be Clarence Cole, professor and head of the Department of Dairy Husbandry, and assistant professor Donald Otterby.

St. Cloud -- Horticulture Science 142, "Turf Management," will cover species and varieties of grasses and cultural practices for growing turf for various landscape purposes. Conducted Thursday from 4:30 to 8:30 p.m., January 21-March 25, by Donald B. White, associate professor of horticultural science.

Wadena -- Agricultural Education 171, "Procedures in Teaching Agriculture," deals with new developments in methodology of teaching agriculture. Taught Tuesdays from 4:30 to 8:30 p.m., January 19-March 23 by Paul Marvin, associate professor of agricultural education.

add 1 - UM to offer courses

Lamberton -- Plant Pathology 119, "Principles of Plant Disease Control," is a general consideration of principles and practices utilized in the control of plant diseases. Taught by Roy Wilcoxson, associate professor of plant pathology and physiology, on Tuesdays from 4:30 to 8:30 p.m., January 19-March 23.

St. Paul -- Home Economics 172, "Current Developments in Nutrition," covers fundamental facts and techniques for solving current nutrition problems. Conducted Wednesdays from 6:20 to 8:00 p.m., February 17-June 9 by Lura Morse, professor of home economics.

The courses are being offered by the Institute of Agriculture in cooperation with the University's General Extension Division.

Further information and application materials can be obtained from the Department of Off-Campus Classes, 154 Nicholson Hall, University of Minnesota, Minneapolis, Minnesota 55455.

# # # #

64-318-vak

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 30, 1964

Immediate release

#### EXTENSION SERVICE TO CONDUCT DEALERS MEETINGS

The University of Minnesota Agricultural Extension Service will conduct 13 meetings throughout the state in January for retail dealers in seed, fertilizer and agricultural chemicals.

According to Extension Agronomist Harley J. Otto, the meetings will be held in Rochester, Owatonna, Mankato, New Ulm, Hutchinson, Cambridge, Fairmont, Slayton, Montevideo, Alexandria, Moorhead, Thief River Falls and Park Rapids.

"The purpose of these meetings," he said, "is to present and discuss the latest research findings dealing with crop varieties, seeds, soils, fertilizers and insect, weed and disease control."

Topics to be covered include the current insecticide situation, characteristics of major soil areas of Minnesota, soil fertility results by major soil areas, new crop variety recommendations, corn ear droppage and plant disease problems and control.

Conducting the sessions will be University extension entomologists, soils specialists, agronomists and plant pathologists.

The meetings will be conducted from 4:00 to 9:00 p.m. in all cities except Montevideo and Park Rapids, where the meetings will run from 1:30 to 5:00 p.m. The schedule is as follows:

Rochester, January 4, Holiday Inn; Owatonna, January 5, Inn Towne Motel; Mankato, January 6, Inn Towne Motel; New Ulm, January 7, Tropicana Club; Hutchinson, January 11, Garden Supper Club; Cambridge, January 11, Camber Restaurant; Fairmont, January 18, Hotel Augusta; Slayton, January 19, Club Royal; Montevideo, January 20, Hotel Hunt; Alexandria, January 21, American Legion; Moorhead, January 26, Holiday Inn; Thief River Falls, January 27, Legion Club; Park Rapids, January 28, American Legion.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 30, 1964

Immediate release

#### CHRISTMAS TREE GROWERS SHORT COURSE JANUARY 15

Cultured Christmas trees, flocking, and changing buyer preferences for these holiday evergreens in past weeks will get a thorough review at the University of Minnesota in January.

Some 200 commercial growers in the state will attend a Christmas Tree Growers Short Course January 15 at the St. Paul campus.

The session will feature a backward look at the 1964 market season, some legal aspects of the tree business, and a variety of ideas on plantation management and marketing.

William R. Miles, extension forester at the University, will review this year's market and John Childs, Minnesota Department of Conservation, will discuss state regulations.

The "Choose and Cut" plantation operation will be discussed by Keith Jacob, president of the Minnesota Christmas Tree Growers Association and by William Randall, an association member.

John Neetzel, forestry research associate at the University, will talk on winter landscaping as a marketing idea and John Okebo, president of Styroplastics Industries, Inc., and Holiday Sales, Inc., will speak on "magic with trees and color by flocking."

Other speakers include Merle Avery, program specialist for the U. S. Department of Agriculture Agricultural Conservation Program, Floyd Colburn, Itasca county extension forestry agent, and J. Donald Meyer, association member.

The session is sponsored by the School of Forestry and the Agricultural Extension Service of the University, in cooperation with the Department of Agricultural Short Courses.

Henry Hansen, professor of forestry, and Marvin Smith, extension forester, are in charge of the course.

# # # #

64-320-pjt

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 1, 1965

To all counties  
4-H NEWS  
Immediate release

GIVE YOUR  
HOUSE PLANTS  
TENDER CARE

House plants can brighten up a home throughout the year if given proper care.

Good care of plants means correct watering, picking off old blossoms and dead leaves, killing harmful insects and replanting when the plants become root-bound, comments C. Gustav Hard, extension horticulturist at the University of Minnesota.

House plants may or may not have flowers. Examples of flowering house plants are African violets, begonias and geraniums. Some plants are grown for their beautiful leaves, such as ivy, ferns and philodendron.

4-H'ers and others interested in indoor gardening should take note of these hints from Extension 4-H Bulletin 61, Indoor Gardening, and B 274, Care of House Plants, prepared by Hard and available from the county extension office:

- Choose plants specifically for the environment in your home -- the amount of light, heat and moisture in a room. Most house plants need plenty of light.

- Grow house plants in porous containers such as clay pots. Plants need to "breathe" through the container. Other examples of containers are glass, paper, rubber, "tin" cans, plastic and wood. Containers are preferable with a hole in the bottom used to drain off extra water.

- Provide plants with a special soil mixture made of three parts loam; one part manure, leaf mold, or peat moss; and one part coarse sand. Mixtures can be purchased all ready to be used.

add 1 - house plants

- Start plants in small pots and as they grow shift them to larger ones.
- Water plants in the morning when room temperature is rising and there is a greater need for water. Be sure to soak all the soil in the pot. Plants can be watered from the top or the bottom. At least once a week put the potted plant in the kitchen sink and let it soak 5 to 15 minutes.
- Train plants to grow in a nice shape by pruning, pinching and training them on special support. Pruning is done by using a sharp knife or pruning shears to cut back the branches. Pinching makes the side shoot develop into a branching, bushier plant. Remove the tip of the growing shoot by rolling it out with the fingers.
- Fertilize plants after they are well rooted in the pots. It is better to fertilize too little than too much. Follow the directions on the container.
- During the resting period, when plants stop active growth, don't water plants so often and don't fertilize.
- Propagate by leaf or stem cutting to start more plants from those being grown.

-smk-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 1, 1965

To all counties  
ATT: HOME AGENTS  
Immediate release

KNOW HOW TO  
CARE FOR YOUR  
STRETCH GARMENTS?

Proper care of the many wonderful garments made of stretch fabrics is essential if they are to give satisfaction.

Because stretch is now being used in women's, men's and children's clothing to provide more comfort, every family needs to know what special treatment these garments require, says Athelene Scheid, extension clothing specialist at the University of Minnesota.

As a rule, Miss Scheid suggests, follow the same procedure for washing or drycleaning that you would use for any other fabric made from the same kind of fibers. For that reason, it's important to read the label to find out the fiber content; then remember that the most sensitive fiber generally determines the kind of care necessary.

Although most stretch fabrics can be washed, the kind of fiber, the weave or knit, the color, finish and construction of the garment will affect the method and temperature of cleaning.

Tumbler drying is the best method to dry stretch fabrics, with the dryer set at the correct temperature for the fiber. It's best not to tumble dry at temperatures over 140° F. Never over dry stretch garments.

If you cannot use a dryer, lay the garment flat and block it to insure the correct size when it is dry. Never hang up an article with lengthwise stretch to dry, Miss Scheid warns. It will stretch.

-more-

add 1 - care for stretch garments

Avoid wearing a stretch garment until it is thoroughly dry; otherwise it may lose its shape.

Although ironing is usually not required, if it seems necessary, use a low iron setting, a press cloth and a light touch. Overpressing may destroy the stretch.

The best way to store stretch garments is to lay them flat in a drawer or on a shelf. Hanging lengthwise stretch garments on hangers--even when they are dry--may cause them to lengthen an inch or more.

-jbn-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 1, 1965

To all counties  
Immediate release

IN BRIEF.....

Clean Spraying Equipment: Clean spraying equipment thoroughly with hot water to remove pesticide residues before storing the equipment for winter. After washing, Neil Miles, University of Minnesota extension horticulturist, recommends filling the sprayer with a solution of one teaspoon of household ammonia to a pint of water and let stand overnight. If possible, remove and wash working parts separately. Store spraying equipment in a dry place out of the reach of children.

\* \* \* \*

Winter Mulch: Cover flower beds with a winter mulch after the ground is frozen somewhat, but before excessively cold temperatures arrive. Gus Hard, extension horticulturist at the University of Minnesota, says to use marsh hay, straw or dry leaves about six to eight inches deep for the mulch cover. The mulch will temper extreme winter temperatures, prevent recurring soil freeze and thaw, and help maintain even soil temperature.

\* \* \* \*

Turkey Crop: Minnesota is expected to replace California as the nation's number one turkey producer, according to the USDA Crop Reporting Board. The state's turkey production is expected to be up three percent and total nearly ½6 million birds in 1965. Robert Schoffner, University of Minnesota poultry science professor, says the top rank is a tribute to continuing sound organization among hatcheries, breeders, feeders, processors and merchandisers.

\* \* \* \*

Protect Raspberries: Bend raspberry canes to the ground and cover them with soil for protection against winter injury. Neil Miles, extension horticulturist at the University of Minnesota, recommends this practice even for hardy varieties like Latham. Raspberry canes protected in this way are generally more vigorous and fruitful the following year.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 1, 1965

To all counties

ATT: Elementary,  
vocational agriculture,  
and science teachers in  
area schools may appreciate hearing about this circular.

Immediate release

INSECT SCIENCE  
IS SUBJECT OF  
UM BOOK LIST

BUGS, Bugs and more bugs! Almost one million species of insects are known-- more than all other plants and animals combined, says Edmund Olson, assistant extension entomologist at the University of Minnesota.

Because adequate information is a necessity to identify and study the habits of all these important and fascinating creatures, Olson has recently prepared a circular on the subject of insects.

This circular provides a list of books and bulletins for persons interested in starting an insect study or collection. Books listed in the circular range from general and popular works to some more advanced and technical offerings.

The books would be useful for advanced study by 4-H clubs or vocational agriculture classes and include information on teaching, demonstrations and experiments with insects in nature studies and science classes.

"The best way to learn about insects is to collect and attempt to identify them and search out more information by yourself," says Olson.

For example, one interesting book on the list is Rearing Insects in Schools by R. E. Silverly, associate professor at Ball State Teachers College. The work deals with basic insect studies and is written for about seventh grade level. However, the book is designed for teachers with students of any age wanting to learn about insects.

add 1 - insect science

Insects are the most useful animals for demonstrating most of the basic principles of biology. They are small and easily handled, readily available, and cheap to maintain.

The insects selected can be easily reared indoors; are adapted to mating in captivity; are of appropriate size; non-destructive; and have interesting features of appearance, behavior or striking adaptations.

Silverly stresses that the best way to study insects is by "firsthand experience involving the living, dynamic organism." He says the study of live insects is valuable for students to improve basic scientific, mathematical and manual skills and to develop responsibility in caring for living things.

To obtain a copy of the book list, see your county agent or write to the Department of Entomology, Fisheries and Wildlife; University of Minnesota; St. Paul, Minnesota 55101.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 1, 1965

To all counties  
Immediate release

TWO NEW FRUITS  
DEVELOPED BY U  
FOR MINNESOTA

Minnesota home gardeners who are interested in fruit growing will be able to add two new fruits to their plantings next spring--both fruits developed by University of Minnesota horticulturists for this region.

They are a hybrid cherry plum called Deep Purple and a red raspberry named Itasca. Limited supplies will be available for planting from nurseries in the area.

The dark purple color of both the flesh and the medium thick, tender skin was responsible for the name of the plum. The fruits of Deep Purple are large for cherry plums, averaging  $1\frac{1}{2}$  to  $1\frac{1}{2}$  inches in cross section. They ripen about mid-August and may remain mature on the tree in good condition for up to two weeks.

The fruit is best for jams, jellies or syrups. It does not have much appeal as fresh fruit.

Deep Purple has often fruited the year after planting. In trials at Excelsior, it has been more vigorous and more productive than Sapa. It performs best when grown as a wide-spreading bush but can be trained to produce a small tree. It requires cross-pollination for satisfactory fruiting.

The new plum resulted from a cross between Sioux sand cherry and the Elephant Heart plum. Propagated as Minnesota No. 440, it has been tested in many Minnesota locations and found consistently hardy and productive.

add 1 - two new fruits

Itasca red raspberry, widely tested under the selection number 399, is being introduced for use mainly in the central and northern lakes area of Minnesota. Its performance indicates that it is especially well adapted to the cool, rather humid conditions of north-central Minnesota.

In trial plantings in north-central Minnesota, Itasca has been remarkably free of anthracnose and other diseases, according to E. T. Andersen, associate professor of horticulture at the University of Minnesota. But in trials farther south in Minnesota, it has been highly susceptible to anthracnose and moderately susceptible to mildew. Virus diseases have not been problems, however.

Fruits of Itasca are medium to large and a glossy orange-red. Harvesting is easy because canes are almost spinefree and the fruits develop close together, many of them ripening at the same time.

Since the berries are rather soft, the main value of Itasca will probably be as a home or pick-your-own commercial variety.

More information about the two new fruits is contained in Miscellaneous Report 65, Two New Fruits for 1966, available from the county extension office.

-jbn-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
St. Paul, Minnesota 55101  
November 2, 1965

Immediate release

#### 4-H'ERS WIN TRIPS IN PLANT SCIENCE PROJECTS

One girl and three boys who have worked towards conserving natural resources on the farm and in the community have been awarded trips to the National 4-H Club Congress in Chicago, Nov. 28 - Dec. 1.

Plant science project winners are Rita Wickstrom, 18, Detroit Lakes; Charles Saari, 19, Embarrass; Rick Arens, 17, Woodstock; and Richard Ahrens, 17, Lewiston.

Miss Wickstrom, state conservation winner, has carried the project for eight years. From learning the names of trees and birds, she has advanced to such activities as helping establish a roadside park in Becker County, studying winter loss of game birds and giving public talks on conservation. She has attended conservation camp and has participated in a tri-state conservation tour. Her trip is sponsored by John Deere, Moline, Ill.

Saari, state forestry winner from North St. Louis County, began eight years ago to identify trees and collect samples of different types of wood. Since then he has planted 1,250 trees, learned selective cutting, logging, planting, other forestry management and wood conservation practices, and most kinds of forestry-related measurements. A Key Award recipient, he is now planning to study agriculture at the University of Minnesota. Besides the trip, he will also receive a pen and pencil set from American Forest Products Industries, Inc., Washington D. C.

Ahrens, state agronomy winner, has increased the size of his project from 1/8 acre to 95 acres in his six years of club work in Pipestone County. He has introduced insecticides for corn rootworm control and terracing in the family's farming operation. Last year his demonstration won a blue ribbon at the State Fair. He has also attended the state agronomy conference. Arcadian Products Department, Allied Chemical Corporation, New York, sponsors his trip.

Ahrens, state entomology winner, has carried the project for five years in Winona County. He began studying insects by rearing them in a terrarium and now has a collection of 335 insects and five life cycles. His trip is sponsored by Hercules Powder Company, Wilmington, Del. # # #

65-262-smk

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
St. Paul, Minnesota 55101  
November 2, 1965

Immediate release

### THREE MINNESOTA AGENTS HONORED

Pittsburgh, Pennsylvania--Three Minnesota county agricultural agents were named recipients of the Distinguished Service Award of the National Association of County Agricultural Agents at the group's annual meeting here, October 31 -November 4.

They were John I. Ankeny, St. James, Watonwan County agent; Eugene F. Pilgram, Montevideo, Chippewa County agent on leave to the University's Ford Foundation project at Santiago, Chile; and Clayton E. Grabow, Milaca, Mille Lacs County agent. All three hold the rank of associate professor on the University of Minnesota Agricultural Extension Service staff.

Ankeny has served as Watonwan County agricultural agent since 1951. He has carried on an effective over-all economics educational program. He has worked closely with several local groups on the improvement of beef and hogs and in furthering conservation programs and watershed development. For the past three years Ankeny has carried on an expanding program on farm and home development for farm families.

Ankeny received his B.S. degree from the University of Minnesota in 1951, majoring in animal husbandry. He has taken graduate work at Colorado A and M and at the University of Minnesota. He has been a director in the Minnesota Association of County Agricultural Agents and has served in several capacities in both the national and state associations.

Pilgram, who is now in Chile, was honored for his excellent over-all program in such areas as farm and home development, 4-H Club work, and farm credit. He is a 1949 graduate of the University of Minnesota and received his M.S. degree in agricultural economics from the University in 1963. Before coming to Chippewa County as county extension agent, he served as vocational agriculture instructor at Dawson High School from 1950 to 1952.

Clayton Grabow is a graduate of the University of Minnesota and received his M.S. degree from the University of Wisconsin in 1949. He has been active in both the state and national associations of county agents.

In Mille Lacs County he has had an exceptionally strong program in dairy husbandry, rural areas development and 4-H Club work.

He served 10 years as an agriculture instructor at Pillager, Detroit Lakes, and North Dakota State University and 13 years as county agent in Mille Lacs County.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
St. Paul, Minnesota 55101  
November 2, 1965

Immediate release

#### POULTRY SPECIALIST JOINS U EXTENSION STAFF

Melvin L. Hamre has joined the staff of the University of Minnesota Agricultural Extension Service and Department of Poultry Science as assistant professor and extension poultry specialist.

His addition to the staff will enable the University to devote greater attention to Minnesota's important poultry industry, according to Luther Pickrel, director of the Agricultural Extension Service.

Hamre will provide leadership in educational programs concerned with chicken and egg production and with poultry products of all types. He will work closely with the University's other extension poultry specialist, Robert Berg, who will now devote his time largely to the state's turkey industry.

A native of Tacoma, Washington, Hamre received his B.S. and M.Ed. degrees from Washington State University, Pullman, and his M.S. and Ph. D. degrees from Purdue University.

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65-260-hbs

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
St. Paul, Minnesota 55101  
November 2, 1965

Immediate release

#### 4-H COMMUNITY BEAUTIFICATION WINNERS NAMED

Many 4-H clubs in Minnesota have responded to President and Mrs. Johnson's challenge to conserve and develop the natural beauty of the nation and to make community surroundings more attractive.

North St. Louis County 4-H clubs have been cited for having the most outstanding county-wide 4-H community beautification program and have won a \$25 cash award. Mrs. Mabel Smilanich is state 4-H club agent for North St. Louis County.

Ten clubs in other counties in the state will receive certificates in commendation of their beautification programs. They are: Lakeland 4-H Club, Aitkin County; Glen Cary Gophers, Anoka County; Mission Creek 4-H Club, Carlton County; Working Huskies, Dakota County; Silverton 4-H Club, Fennington County; Ericson Eager Beavers, Renville County; Cherry Clinton and West Cherry 4-H Clubs, North St. Louis County; Darfur North Star 4-H Club, Watonwan County; and the Silver Hill Ramblers, Wright County.

Sponsor of the 4-H program is Sears-Roebuck Foundation, Chicago, Ill.

Cleanup, constructing roadside picnic areas and planting flowers were among the projects of the North St. Louis County 4-H Clubs to win the community beautification award. The Cherry Clinton and West Cherry 4-H Clubs worked together to make a picnic area at the public approach on McQuade Lake. They built a fireplace, set up a picnic table, cut wood, set out a trash container and maintained the area. The Embarrass Birchwood 4-H Club worked for several years at creating a roadside picnic area between Embarrass and Tower on Highway 135. The Hibbing Busy Bees 4-H Club, with assistance from the Park and Highway Departments, cleaned up the triangle at the Y of a new beltline and then planted two large flower beds.

Keeping home lawns well groomed and beautifying yards with flowers kept many 4-H members of the winning clubs busy. But they also worked on such projects as cleaning up and planting trees and flowers in parks and on fair grounds, cleaning roadsides, keeping grass mowed by town halls and in cemeteries, painting fair buildings and securing oil barrels, cleaning, painting them and setting them out as trash cans.

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65-259-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
St. Paul, Minnesota 55101  
November 4, 1965

Immediate release

## PRESIDENT JOHNSON APPOINTS BERG CHAIRMAN OF FOOD AND FIBER COMM.

Sherwood O. Berg, dean of the University of Minnesota Institute of Agriculture, today (Nov. 4) was named chairman of the newly-established 30-member National Advisory Commission on Food and Fiber by President Lyndon B. Johnson.

The appointment will not affect Berg's present duties as Dean. It will require his services in Washington D. C. a few days each month.

The Commission will assist the newly-formed President's Committee on Food and Fiber made up of Orville Freeman, secretary of Agriculture, chairman, and the secretaries of State, Commerce and Labor.

The Commission has been asked to transmit to this cabinet committee its independent analysis, evaluation, and recommendations within 18 months.

The Commission will:

1. Make a comprehensive study and appraisal of the current economic situation and trends in American farming, including productivity, costs, prices, incomes, farm employment, labor standards, foreign trade, and related matters;
2. Evaluate current farm policies of the federal government as they bear upon the welfare of farmers, workers, consumers and taxpayers; upon the stability, growth, and efficiency of the American economy; and upon our foreign relations;
3. Explore and evaluate alternative policies available to American agriculture and to the federal government; and
4. Develop such recommendations for action by government or private enterprise as it deems appropriate.

Berg has been dean of the Institute of Agriculture since July, 1963. Before that he headed the University's Department of Agricultural Economics for six years.

Berg is a widely-known authority on agricultural economics, agricultural policy and foreign trade, and is a former U.S. agricultural attache in three European nations.

He was U.S. agricultural attache to Yugoslavia from 1951 to 1954 and to Denmark and Norway from 1954 to 1957 when he returned to the University of Minnesota.

He received the Superior Service Award from the U.S. Department of Agriculture in 1956 for helping Danish farm leaders to better understand U.S. farm policies.

# # #

65-267-kbs

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
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Immediate release

## ORNAMENTALS NEED WINTER PROTECTION

Recent frosts with heavier ones to come should be cues to gardeners that many ornamentals may not survive the rugged Minnesota winter without some protection.

A mulch to protect the perennial flower border can be applied now, according to C. G. Hard, extension horticulturist at the University of Minnesota. After cutting down all dead flower stalks, cover the border with dry leaves or marsh hay to a depth of 6 to 8 inches. Do not pack the mulch. Evergreen boughs also make a good mulch, especially because they trap snow, one of the best materials for winter protection. Spring-blooming bulbs need the same type of protection. Chrysanthemums will usually overwinter if they are mulched in the same way as the flower border.

The mulch serves the purpose of insulating the flower border against extreme cold and helps control the temperature in spring when alternate freezing and thawing would damage plants, Hard says.

Leaf cover is also a satisfactory mulch for roses. Dig a shallow trench into which the rose bush can be bent, bend the bush over gently, holding it down by covering the tops with soil or tying the bush to a stake. Then apply leaves over the bushes to a depth of at least 3 feet. Be sure to get leaves under the arch formed by the bent bush to eliminate air pockets. Pack leaves in the center of the bed higher to make drainage possible to the outer edge. Low fencing around the rose garden helps to hold the mulch in place.

Thoroughly soak the top layer to prevent surface leaves from blowing away and to eliminate fire hazards. Place tree branches on top to hold the leaves down.

Before mulching roses, apply a good fungicide to control diseases.

Protect ornamental shrubs against rodent damage by setting a cylinder of 1/4-inch hardware cloth an inch or two into the ground around the shrubs.

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65-266-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 4, 1965

Immediate release

#### WRAP DUCKS AND PHEASANTS WELL FOR FREEZER

Planning to freeze some of the ducks or pheasants your husband brings home? Then wrap them well. to preserve both flavor and quality.

That advice comes from extension nutritionists at the University of Minnesota who point out that as long as considerable expense has gone into bagging the game, it's certainly worth packaging it well for the freezer. Good packaging may mean the difference between a bird you will enjoy and one the family won't eat.

The first rule to remember in preparing game birds for the freezer is to clean them well so they're ready for the oven, the nutritionists emphasize. Then use a good freezer wrap such as heavy duty aluminum foil to package them. After moulding the heavy foil closely around each bird, protect the foil from puncturing by slipping the packaged bird into a polyethylene bag. Twist the top of the bag and close with a rubber band or twist-em.

When game birds are well wrapped, they will keep satisfactorily in the freezer for nine months at zero degrees Fahrenheit.

# # #

65-265-jbn

Department of Information  
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St. Paul, Minnesota 55101  
November 4, 1965

Immediate release

#### WINNERS NAMED IN 4-H HOME YARD IMPROVEMENT AND GARDEN

Three 4-H girls have won top honors in the home yard improvement and garden projects for their achievements in beautifying their family farms and introducing new garden practices.

State winners are Cheryl Schoper, 16, Jeffers, and Jeanne Fink, 18, Northfield, for their home yard improvement projects and Jane Graff, 18, Sanborn, for her work in the garden project.

The girls have been awarded trips to National 4-H Club Congress, Chicago, Nov. 28 - Dec. 1, according to Wayne Carlson, assistant state 4-H club leader at the University of Minnesota.

(more)

add 1 --Home Yard Improvement Winners

Five other 4-H'ers will receive cash awards from the Minnesota Garden Flower Society for their work in home yard improvement: Charles Garbe, 18, Hudson, Wis. (Washington County); Bruce Wuotila, 16, Eveleth; Ray Struck, 17, Bellingham; Lona Berg, 17, Welch; and Lyndell Struck, 18, St. Peter.

Cheryl has been active in 4-H for six years. Her major project, home yard improvement, has made her family's 5-1/2 acre farm yard a place of beauty. She first made a plan, then started planting trees and flowers, building fences and painting.

In addition to working on her project, Cheryl has won five blue ribbons at the State Fair with home yard improvement demonstrations, has been Cottonwood County grand champion in her project for four years and received the county horticulturist award three years. She plans a career in psychology or as a guidance counselor.

Jeanne is a nine-year member of the home yard improvement project. She has been Dakota County's reserve champion and grand champion in home yard improvement exhibits and demonstrations for a number of years. In 1963 she won second place in the National Teen Garden Contest for her work in beautification of home grounds. This year the 9-year 4-H'er was chosen one of 10 delegates to attend a Citizenship Short Course in Washington, D. C. Jeanne believes her work in the home yard improvement project has helped to increase the value of her parents' farm about 10 percent. She is a sophomore in home economics education at the University of Minnesota.

Jane has been in gardening for six years. During this time the Cottonwood County girl has added many new vegetables to the family's list and has introduced new gardening practices. She has increased the size of her project each year both in area and varieties planted. Her cultural practices have included different mulches and pest control methods. She was chosen county champion gardener for three years. She is attending Augustana College, Sioux Falls, S. D.

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St. Paul, Minnesota 55101

Immediate release

#### TRIP & SAVING BONDS AWARDED TO 4-H FOOD PRESERVATION GIRLS

A record of food preservation that would make any homemaker envious has won for a Murray County 4-H girl a trip to National 4-H Club Congress, Chicago, in November.

In seven years in the food project, Laura Kreun, 17, Iona, has canned 1,078 quarts of food - including jams and jellies - and frozen 323 quarts and 181 pints, much of the food from the family garden. In her nine years of 4-H, she has taken a variety of projects - clothing, food preparation, entomology, photography, and conservation. She is a senior in Southwestern Christian High School, Edgerton.

Five other 4-H'ers have won \$25 U.S. savings bonds: Maxine Becker, 17, Buffalo; Diane Zager, 17, Sauk Centre; Kathy Jetter, 16, Pipestone; Linda Ann Oddan, 18, Milan; and Diane Johnson, 17, Aitkin.

The trip and bonds are sponsored by the Kerr Glass Manufacturing Corp., Sand Springs, Okla.

Miss Becker has canned 484 pints and 197 quarts and frozen 534 pints of food. She is a Wright County junior project leader in foods, clothing and garden.

Miss Zager has preserved 648 quarts of food and received blue ribbons on all of her food preservation exhibits at the Todd County Fair. Last year at the State Fair she received a purple ribbon on her demonstration, "Freezing Strawberries."

Miss Jetter was so small when she began the food preservation project that she had trouble with the pressure cooker and hot water bath methods. She picked up the project again when she was older and won top awards at the Pipestone County Fair on demonstrations and exhibits.

Miss Oddan has preserved a total of 16,355 pints of fruits, vegetables, meats and preserves. The nine-year Chippewa County 4-H'er is a sophomore at University of Minnesota, Morris.

Miss Johnson has canned 908 quarts of food in six years of project work. An Aitkin County 4-H'er, she is carrying the foods, health, safety, home yard improvement and junior leadership projects.

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65-263-smk

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
November 8, 1965

To all counties  
ATT: Home Agents  
Immediate release

### BONDING GIVES BODY TO FABRIC

If you're shopping for clothing this fall and winter, you'll be hearing about and seeing bonded fabrics. What are they?

Bonded fabrics refer to those that have a lining permanently fused to woven, knitted or lace outer fabrics, explains Thelma Baierl, extension clothing specialist at the University of Minnesota. Almost any fabric can be bonded to a backing or lining.

A common bonded fabric is wool flannel that is heat locked to an acetate tricot lining. It is used for dresses, suits, jumpers, skirts, pants and bermudas. Jersey will look and behave like a firm bonded double knit when bonded to a lining. Loose novelty fabrics like lace are suitable for wider use when bonded to a taffeta backing or lining.

Spot bonding is a process that applies adhesive to the backing in a pre-determined pattern, giving a quilted, sculptured or embossed effect. This process is used in raincoats and jackets.

Bonding gives body to the fabric. Bonded fabrics are wrinkle resistant and need little ironing. There is also the advantage of a fully lined garment without the double construction method.

Care of bonded fabrics depends on the type of outer fabric used. Check labels and tags for the care and washing instructions.

A rough surface will allow the bonding agent to cling to the network of fiber ends. There is no way to determine at the time of purchase whether two fabrics will separate.

add 1 -- bonding gives body

A fabric that tends to stretch will stretch if the bonding has a tendency to give. Bonded fabrics will not stretch if the lining is rigid.

Shrinkage depends on the treatment of both fabrics. If the outer fabric has not been treated to control shrinkability it cannot be held stable by the lining fabric.

-smk-

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St. Paul, Minnesota 55101  
November 8, 1965

To all counties  
4-H NEWS  
Immediate release

CURIOUS 4-H'ERS  
LEARN THE WHYS

4-H'ers are delving deeply into the whys as well as the hows of various projects.

Included in the science-related projects are foods, entomology, agronomy, dairy, and electric.

Topics covering the chemistry of food are contained at the end of each section in the foods bulletins. Members find out why yeast reacts, the reason for removing the wrap on chicken or hamburger before storing in the refrigerator, or the reason for scalding corn before freezing.

A Kandiyohi County 4-H'er showed her State Fair audience "the wonder of a bubble," which included the effects of temperature and ingredients on yeast.

The entomology project stimulates curiosity as beginners learn to name insects and methods of insect control in the home garden. 4-H'ers in the advanced entomology project learn the life histories and control of at least five different kinds of insects.

A Murray County 4-H'er presented some research on the anatomy, social castes and behavior of ants to a State Fair audience. "Ant-y Oddities" won top honors in the 4-H entomology division.

Members enrolled in plant pathology, a new pilot project, study the effects of seed germination under different soil conditions. 4-H'ers compare soil types, learn the effect of various soil temperatures and learn to use a variety of seed treatment materials in prevention of fungus diseases.

-more-

add 1 -- science in 4-H

Other science projects, such as conservation and dairy, can motivate the 4-H'er to learn the whys and hows. A State Fair conservation demonstration by a Hennepin County sister-brother team showed two live skunks, a jar of turtle eggs and other exhibits from their project.

The mechanical projects, shop, electric and tractor, also include science.

"Learning is a continuous process. What children learn and how they learn will depend upon a multitude of circumstances, many of which will be determined by adults," comments Wayne Carlson, assistant state 4-H club leader at the University of Minnesota.

Therefore one of the responsibilities of the junior and adult leaders in 4-H clubs is to help motivate youth to obtain a good scientific background in the agriculture and home economics fields as well as in the pure sciences, he adds.

-smk-

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November 8, 1965

To all counties

Immediate release

IN BRIEF...

College Scholarships: High school seniors planning to enter the University of Minnesota, and specifically the College of Agriculture, Forestry and Home Economics, in fall 1966 are reminded the deadline for scholarship applications is December 15, 1965, says Ralph Miller, scholarship advisor for the College of Agriculture. Applications are available from high school principals or counselors. To be eligible, a student must be a Minnesota resident, in the upper one-fourth of the junior class and a graduate of an accredited high school, and meet admission requirements of the particular college.

\* \* \* \*

Book List on Insects: Insects are the subject of a recent University of Minnesota circular. Edmund Olson, assistant extension entomologist, has prepared a list of books and bulletins for persons interested in starting an insect study or collection. Information on teaching, demonstrations and experiments with insects would be valuable in nature studies, science and vocational agriculture classes and advanced study by 4-H clubs. For copies, see your county agent or write the Department of Entomology, Fisheries and Wildlife; University of Minnesota; St. Paul, Minnesota 55101.

\* \* \* \*

Success of the hog cholera eradication program in Minnesota depends on continued support from swine producers, says R. B. Solac, extension veterinarian at the University of Minnesota. With hog cholera cases decreasing, producers may want to stop vaccinating, but the decision should not be made lightly. Hog cholera kills all unprotected swine exposed to the disease. An individual swine producer can't protect his swine from all possible exposure to the disease. Thus, vaccinations should continue until hog cholera is fully eradicated and all swine in the state are protected against reinfection.

# # # #

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St. Paul, Minnesota 55101  
November 8, 1965

To all counties

Immediate release

PRECAUTIONS CAN  
REDUCE POSSIBILITY  
OF NEGLIGENCE SUITS

A farmer runs the risk of a damage suit if his animals break through a poorly-kept fence, wander onto a highway and cause a collision or if the milk he sells is contaminated and harms a customer.

A farmer may be held liable for the acts of his employees and be sued for negligence if the employees are not adequately protected from possible injury while traveling to and from work or while operating farm machinery. And the increasing use of more-complicated power machinery increases the chances of serious accidents.

These examples cover just a few specific situations which can involve a farmer in negligence suits. There is probably no available listing of all possible situations for which a farmer can be held liable. To get a more complete understanding of what he is liable for, a farmer should consult an attorney.

In most injury claims, a farmer is not held responsible unless proved negligent. However, any claim could result in a prolonged and costly court defense. Farmers, along with other property owners, face increasing possibilities of claims because of a growing "claim consciousness" among persons everywhere.

Today's larger farms have larger assets to protect and a farmer, as his own risk manager, needs a definite protection program against possible negligence suits and judgments too large to handle with available resources.

add 1 -- precautions can

Three precautions are recommended to keep risks at the lowest possible level. First, eliminate or reduce physical hazards on the farm. County agents can provide checklists to help spot unsafe practices and conditions. Hazard checklists can serve as a guide to judge present performance and the need for improvements.

Farm machinery is associated with the largest number of farm accidents, and tractors head this list. Operators should use safe speeds and handle power-driven machinery with care. Machinery should be stopped and motors shut off before any adjustments or repairs are made.

Any handling of livestock presents a potential danger on the farm. And fire is a major hazard. Defective wiring and appliances cause most farm fires. An awareness of how to recognize, eliminate or reduce potential hazards will help to prevent accidents and cut chances of negligence suits.

Second, for risks beyond his control, a farmer should consider transferring the burden of liability to someone else. For example, if a neighbor stops in to inspect construction work on a farm, is run down by a bulldozer and injured, the farmer who contracted the work can be held liable.

A recommendation to transfer liability in this situation is for the farmer to ask an independent contractor to sign a "hold-harmless" agreement or warranty protecting the farmer from injury claims. This agreement is insurable by the contractor.

Third, buy insurance to take care of personal liability on and off the farm and to cover business operations. The insurance policy will provide for court defense if a suit develops. The policy pays indemnities, including medical expenses for bodily injury and for property damage if part of the contract.

The purpose of liability insurance is to protect a farmer against the possibility of a judgment too large to handle out of his own resources. Several types of policies are available and a farmer should seek expert advice to decide on the policy and special options that best fit his operation.

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Department of Information  
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St. Paul, Minnesota 55101  
November 9, 1965

Immediate release

#### MINN. 4-H CLUBS RECEIVE CITIZENSHIP IN ACTION GRANTS

Seven Minnesota 4-H clubs will devote their efforts to a variety of community improvement programs this next year.

They are among 30 4-H groups in eight states awarded "citizenship in action" grants to conduct programs to meet recognized needs in their communities.

The clubs, amounts of their grants and their projects are:

. Mt. Morris Try-hards 4-H Club, Hillman, Morrison County, grant of \$105 to build a wayside rest stop for the use of the public traveling through Morrison County. The community is working closely with the project.

. Watab 4-H Club, Rice, Benton County, \$185 to make a public wayside tourist rest area and public access to Little Rock Lake. Underway for two years, the plans include a safe swimming area, swings and fireplaces.

. Roseau County 4-H Leaders' Council, Roseau, \$175 to construct at least three nature trails within the county park and forest area. Three 4-H junior leader groups are working in cooperation with community leaders.

. Blackberry 4-H Club, Grand Rapids, Itasca County, \$330 to provide a skating facility and a ball diamond on a site left bare from lumbering activities. 4-H'ers and clubs in the community have developed long-range plans.

. Lincoln County Leaders' Council, Ivanhoe, \$220 to provide attractive roadside rest areas.

. Normanna 4-H Club, Duluth, South St. Louis County, \$231 to develop a nature trail and wild flower sanctuary on a wooded area bordering the town hall. Included in the plans are building benches, picnic tables and fireplaces and a footbridge.

. Isanti County Junior Leaders, Isanti, \$375 to establish a public campground and recreation area in an undeveloped 80-acre County Memorial Forest. Leaders are expecting the project to take two years to complete.

The 30 recipients of the grants must submit a progress report by April, 1966 and a final report on the completion of their project in November, 1966.

The "citizenship in action" program is conducted by the National 4-H Club Foundation in behalf of the Cooperative Extension Service. Grants are given by the Reader's Digest Foundation which has cooperated with the National 4-H Club Foundation for the third year in pilot projects encouraging 4-H citizenship programs.

# # #

65-269-jbn

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
November 9, 1965

Immediate release

## HORTICULTURIST GIVES TIPS ON STORING GARDEN CHEMICALS

Do you expect to use leftover insecticides, fungicides or other garden chemicals again next year?

If so, University of Minnesota extension horticulturist Neil W. Miles urges you to take some precautions in storing them. Proper storage of these leftover chemicals will keep them from deteriorating and, more important, will prevent accidents, he says.

Miles gives these precautions in storing leftover garden chemicals:

- . Store all garden chemicals in a place where children cannot get into them--preferably under lock and key.

- . Store all chemicals in the original container--or at least identify them by the label from the original container.

- . Keep them dry and in sealed containers so oxidation of the chemicals will be minimal.

- . Store liquids where they will not be subjected to freezing. Freezing may cause breakage of the container, allowing the chemical to leak out, and may also change the characteristics of the emulsion. Many emulsions cannot be applied uniformly after they have been frozen.

- . Be aware of the hazards and use common sense in disposing of old or unwanted garden chemicals. One way to dispose of them is to dig a hole several feet deep, empty the chemical in the hole and fill the hole with soil.

- . Never re-use empty pesticide containers for any purpose. Destroy them.

Rinse out glass containers, break them and discard in the trash barrel. Puncture and flatten metal containers so they are unusable; then discard. Burn paper containers if they are empty, but be careful not to inhale any possible fumes.

Always remember, warns Miles, that leftover garden chemicals and empty containers are potential hazards.

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65-268-jbn

Department of Information  
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St. Paul, Minnesota 55101

Immediate release

## TWO NEW FRUITS DEVELOPED BY U HORTICULTURISTS

Two new fruits have been developed by University of Minnesota horticulturists and will be available for planting next spring.

They are a hybrid cherry plum called Deep Purple and a red raspberry named Itasca.

Deep Purple received its name from the dark purple color of both the flesh and the medium thick, tender skin which at times appears almost black. The fruits are large for cherry plums, averaging 1-1/4 to 1-1/2 inches in cross section. They ripen about mid-August and may remain mature on the tree in good condition for up to two weeks.

The fruit is best used for jams, jellies or syrups. It does not have much appeal as fresh fruit.

Deep Purple has been very precocious, the horticulturists report, often fruiting the year after planting. It requires cross-pollination for satisfactory fruiting. The plant performs best when grown as a wide-spreading bush but can be trained to produce a small tree.

Deep Purple resulted from a cross between Sioux sand cherry and the Elephant Heart plum. The cross was made in 1942 at the University of Minnesota Fruit Breeding Farm. In 1947, the first year it fruited, it was selected and propagated for more extensive trial as Minnesota No. 440. It has been tested in many Minnesota locations and found consistently hardy and productive.

Itasca red raspberry is being introduced for use mainly in the central and northern lakes area of Minnesota where conditions are cool and rather humid. It has been widely tested under the selection number 399.

Fruits are medium to large and a glossy orange-red. Picking is facilitated by the fact that canes are almost spinefree and the fruits develop close together, with many ripening at the same time.

Because the berry is rather soft, its main value probably will be as a home or pick-your-own commercial variety.

More detailed descriptions of the two new fruits are given in Miscellaneous Report 65, Two New Fruits for 1966, available from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minnesota 55101

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65-271-jbn

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St. Paul, Minnesota 55101

Immediate release

#### TWO TOWN AND COUNTRY INSTITUTES THIS MONTH

A Town and Country Institute on Nov. 16 in the high school in Lamberton and on Nov. 17 at the University of Minnesota, Morris, will focus on the responsibilities and opportunities of the church in rural areas.

"The Realities of the Rural Community" will be the theme of the institutes. The University of Minnesota Agricultural Extension Service is sponsoring the institutes in cooperation with the Minnesota Council of Churches, Lutheran and Roman Catholic churches in Minnesota and the National Association of Evangelicals.

George Donohue, professor of sociology at the University of Minnesota, and E. W. Mueller, secretary for the office of the Church in Town and Country, National Lutheran Council, Chicago, will be the featured speakers. Donohue will discuss "Community Realities" and "Community Prospects." Mueller will speak in the morning on "Town and Country Church Realities" and in the afternoon on "Town and Country Church Prospects."

Registration is scheduled for 9 a. m. The morning program will begin at 9:20, the afternoon session at 1:30.

Clergyman, community leaders and other interested people are invited to participate in the institutes. Registration fee is \$3.

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65-270-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
November 10, 1965

Immediate release

#### CLEAN UP GARDEN SPRAYER

Don't forget to clean the sprayer when you're doing the last-of-the season garden jobs!

Neil Miles, extension horticulturist at the University of Minnesota, says if spray residues are left in the tank, they can corrode the sprayer, making it unusable next year. On the other hand, a sprayer that's cleaned properly will serve your garden needs for many years.

First step in cleaning the sprayer is to wash out the inside of the tank with hot water to which a little detergent has been added. Next, remove as many working parts as possible and wash them separately. Clean hoses and the spraying mechanism by running water through them. Then put a solution of household ammonia and water--a teaspoonful of ammonia to a pint of water--in the sprayer and let it stand overnight. In the morning empty the sprayer, rinse it and let it drip dry.

After cleaning the sprayer, oil the working parts and the pump leathers to help keep it in working order. Then place a label on the sprayer indicating the purpose for which it was used during the gardening season--whether for insecticides, fungicides or herbicides.

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65-275-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, 55101--Tel. 647-3205  
November 10, 1965

Immediate release

#### TRIPS AWARDED TO 4-H'ERS IN VARIOUS PROJECTS

Four 4-H'ers enrolled in health, safety, dog care and training and photography will receive trips to the National 4-H Club Congress in Chicago, Nov. 28 - Dec. 1 for outstanding work which has made them state winners in their projects.

The winners and the projects in which they have excelled are Geraldine Hoblak, 19, Chisholm, health; Mary Cain, 19, Osseo, safety; Marilyn Pettis, 15, Farmington, dog care; and Donan Berg, 19, Lafayette, photography.

Miss Hablak, a seven-year 4-H'er in No. St. Louis County, was a delegate to the Minnesota Junior Leadership Conference and State 4-H Health Camp. She is a 4-H Key Award recipient and a four-year State Fair demonstrator. A co-ed at Hibbing Junior College, she is studying elementary music education.

One of Miss Cain's safety activities was organizing a Red Cross first aid class in her community. The Hennepin County 4-H'er has given nine safety demonstrations at the State Fair and has won a purple ribbon with a safety team demonstration. Last year she demonstrated at the Governor's Youth Traffic Safety Conference. A Key Award recipient and trip winner to the National Safety Congress, she is studying home economics at the University of Minnesota.

Miss Pettis has carried the dog care and training project for three years. The six-year 4-H'er has won three Dakota County purple ribbons in dog care and training demonstrations and was a purple ribbon demonstrator at the State Fair. During the summer she has been demonstrating dog care and management to interested 4-H'ers. She is a junior in Farmington High School.

Berg has steadily developed his photography skills. He has done some photography work for a southern Minnesota daily paper. Twice he has demonstrated at the State Fair, receiving blue ribbons. A 10-year 4-H'er from Nicollet County, he is enrolled at the University of Minnesota majoring in aeronautical engineering.

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65-273-smk

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 10, 1965

Immediate release

#### U PROFESSOR GIVES GUIDES ON SELECTING EQUIPMENT IN AG YEARBOOK

How can you be sure of getting a good buy in a household appliance?

An article by Florence Ehrenkranz, professor and chairman of the Division of Household Equipment in the University of Minnesota's School of Home Economics, in the 1965 Yearbook of Agriculture, Consumers All, gives some guidelines to selecting equipment.

First of all, check printed sources, she suggests--books on household equipment, bulletins, advertisements, articles in magazines, catalogs of mail-order firms, recent issues of Consumer Bulletin and Consumer Reports for articles on the type of appliance in which you are interested. Reading the entire article in a Consumer Bulletin or Consumer Reports is probably more important than the ratings assigned to different models, since it will give you information to evaluate the ratings in relation to your own needs.

(more)

add 1 --Guidelines on Selection of Equipment

Don't neglect to chat with friends who own the type of appliance you are interested in to learn what they like and do not like about a particular model.

When you visit stores to look at appliances, try to visualize different ones in your home. Ask questions of the salesperson about the main points in which you are interested, about safety seals of recognized agencies (such as Underwriters' Laboratories for electrical and other appliances, American Gas Association for gas equipment), warranties (which parts are covered and who pays for labor), arrangements for servicing, installation costs, operating costs.

Before buying any appliance, Miss Ehrenkranz points out that it's important to figure out where you will store it. The usage you give an appliance like a mixer may depend upon convenience of storage.

A point to remember, also, is the size of an appliance in relation to the way in which you are most likely to use it. If you usually make only two cups of coffee at a time, a 10-cup model is a poor choice since it is to be used for two cups regularly but for 10 cups only occasionally.

Among other points Miss Ehrenkranz suggests checking before buying equipment: the space appliance takes, ease of use, ease of cleaning and maintaining, durability, design of the appliance, availability of servicing, reputation of the manufacturer and dealer in standing behind the articles they sell and, of course, price.

# # #

65-272-jbn

UNIVERSITY OF MINNESOTA  
NEWS SERVICE-220 MORRILL HALL  
MINNEAPOLIS, MINNESOTA 55455  
TELEPHONE: 373-2137  
NOVEMBER 10, 1965

CONTINUATION STUDY  
CENTER TO BE RENAMED  
FOR DEAN J.M. NOLTE

(FOR IMMEDIATE RELEASE)

Minneapolis---The University of Minnesota and its General Extension Division will hold a ceremony at 4 p.m. Sunday (Nov. 14) to rename the Center for Continuation Study. It will be named the Nolte Center for Continuing Education in honor of Julius M. Nolte who served as its director and later as dean of the General Extension Division and who died in January 1965, two years after retiring.

The ceremony will be held at the center, University and 17th aves., S.E., on the University's Minneapolis campus. Among those present will be University Vice President William G. Shepherd, academic administration; Willard L. Thompson, dean of the extension division; Frederick E. Berger, director of the center; and extension deans and directors from throughout the United States.

A bronze plaque commemorating Dean Nolte will be unveiled, and guests will hear a talk by Lorentz H. Adolfson, chancellor of the University of Wisconsin's University Center System.

Adolfson, a professor of political science, formerly was dean of the University of Wisconsin Extension Division. He is a past president of the National University Extension Association and on the executive committee of the Association of Land Grant Colleges and Universities, has long been active in state and national organizations concerned with human rights and has been a statewide lecturer on national and international affairs.

The plaque will read: "Nolte Center for Continuing Education, Honoring Julius Mosher Nolte, Director, Center for Continuation Study, 1937-1943; Director, Then Dean, General Extension Division, 1943-1963. Named on November 14, 1965.

'We must read tomorrow by yesterday's candle.' J.M.N."

(MORE)

A native of Duluth, Nolte was graduated in 1917 from Yale university, then became a pilot for the U.S. Air Corps. After World War I he returned to Duluth, where he worked in manufacturing, real estate, insurance and lumbering, and also taught in the University Extension Division in Duluth, in the areas of English literature, Shakespeare, history and government.

In 1934 Nolte moved to Minneapolis, where he earned a law degree from the University and joined the University's Municipal Reference bureau. In 1937 he became director of the Center for Continuation Study, which conducts short courses and seminars in many different types of fields.

In 1943 Nolte became head of the General Extension Division which, under his direction, became the University's largest enrollment category. He served for years in many local, state and national organizations, was president of the National University Extension Association and a member of the League of Minnesota Municipalities, the Minnesota Historical Society executive committee, the American Bar Association, the U.S. commission for UNESCO, the Association of Evening Colleges and the Association for Adult Education. He served as consultant on educational projects all over the United States and was co-author of a textbook, "A Living Grammar", which is in its 16th printing.

Nolte's survivors include his wife, Mildred, of Woodland, on Lake Minnetonka; two sons, Richard H. of Riverside, Conn., and Charles M. of Wayzata; and two daughters, Mrs. Samuel G. McClellan of Cambridge, Mass., and Mrs. Winton Jones of Wayzata.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, 55101--Tel. 647-3205  
November 10, 1965

Immediate release

## SO YOUR HUSBAND BAGS A DEER? HERE ARE TIPS FOR THE WIFE

Many wives of enthusiastic deer hunters may be confronted this month with the problem of preparing venison for the first time.

Good advice to follow, if that's the case, is to cook it as you would low-quality beef, says Verna Mikesh, extension nutritionist at the University of Minnesota. Because most deer meat is lean, its quality will correspond to that of beef with little or no external fat. She recommends the braising or pot-roasting method for cooking venison from older deer and for the less tender cuts from younger animals. Tender cuts like the loin and rib may be broiled or oven roasted.

Because you may have trouble finding different ways of preparing the various venison cuts in your locker this winter, you may want the local meat market to grind some of the less tender cuts for "deerburger." A fourth part pork shoulder or pork butt added when grinding venison will improve the flavor.

If the gamey flavor is objectionable or very strong, soaking the meat may make it more palatable to the family. Soak the venison for an hour before cooking in a solution of two tablespoons of vinegar to a quart of water. Or, before cooking, let the meat stand in the refrigerator for a day or two in a favorite marinade, which will both tenderize and flavor the venison.

Miss Mikesh gives these further tips on preparing venison:

- . Remove all venison fat before cooking. The gamey flavor is most pronounced in the fat. Because venison fat becomes rancid quickly, be sure to trim fat closely on venison to be frozen.
- . Don't overcook venison. Deer meat has short fibers that toughen quickly when overcooked or cooked at too high a temperature.
- . Use a 300° oven when roasting venison. Cook venison to the medium to well done stage--never rare or overdone.
- . Add a moistener, since venison is a dry meat. Chunks of beef fat or salt pork may be added for self-basting or the surface covered with strips of bacon or a fat-soaked cheesecloth.
- . Always serve venison very hot on hot plates. Like lamb fat, the venison fat hardens quickly when it starts to cool and is unpleasant to eat at that stage.

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65-274-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 12, 1965

CORRECTION:

The release sent to you on November 10 headed

TRIPS AWARDED TO 4-H'ERS IN VARIOUS PROJECTS

incorrectly stated that the state winner in dog care, Marilyn Pettis, Farmington, would receive a trip to the National 4-H Club Congress in Chicago.

The award to Miss Pettis is a wrist watch, not a trip.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 15, 1965

Immediate release

#### **MINN. 4-H'ERS AWARDED TRIPS TO CHICAGO**

Thirty-two Minnesota 4-H club members have been named state winners of expense-paid trips to the 44th National 4-H Club Congress in Chicago Nov. 28-Dec. 2.

The awards are given in recognition of their achievements in projects, demonstrations and leadership. The young people will compete for national honors, including about a hundred thousand dollars in scholarships. Donors of the trips and scholarships are business firms and foundations.

The Minnesota youth are among 1,500 delegates representing 50 states, Puerto Rico and for the first time an official delegation of 10 Canadian 4-H members, one from each province. The 4-H'ers will devote two days of their Chicago stay to forums on world problems. Many of the youths will participate actively in the program by presiding at meetings or entertaining the delegation with special talent numbers. Others will appear on radio and television shows.

Club members who will receive trips to Chicago and the projects in which they have won their awards are: Robert Roseberg, Isle, tractor; Rita Wickstrom, Detroit Lakes, conservation; Pamela Berglund, Scandia, dress revue; Wayne Lepper, Hawley, swine; Jean Tobolt, Moorhead, clothing; Cheryl Schoper, Jeffers, and Jeanne Fink, Northfield, home yard improvement; Jane Graff, Sanborn, garden; Jerome Smith, West Concord, and Kathy Lohmann, Goodhue, leadership; Sandra Eisinger, Long Lake, and Donald Erickson, Buffalo, achievement; Mary Cain, Osseo, safety; Virginia Gehrman, Minnetonka, home improvement; Donan Berg, Lafayette, photography.

Thomas Tweeten, Spring Grove, swine; Jean Freeberg, Willmar, foods-nutrition; Donald Theuninck, Marshall, beef; Roger Lind, Balaton, livestock; Dennis Thiesse, Fairmont, agricultural; Steve Tuman, Hutchinson, dairy; Laura Lois Kreun, Iona, food preservation; Laurel Hoff, Perley, home economics; Gail Haney, Rochester, bread; Richard Arens, Woodstock, field crops; James Hartung, Hector, shop; Edward Smisek, Lonsdale, sheep; Charles Saari, Embarrass, forestry; Geraldine Hoblak, Chisholm, health; Cheryl Barten, Belle Plaine, poultry; David Michaelson, St. Cloud, electricity; Richard Ahrens, Lewiston, entomology. (more)

add 1 -- 4-H'ers to Chicago

Mrs. Maurice Urevig, Cannon Falls, a 4-H adult leader of the Spring Garden Jolly Juniors 4-H Club in Goodhue County for 10 years, has been selected to represent Minnesota volunteer adult leaders at the Club Congress.

Accompanying the group will be Leonard Harkness, state 4-H club leader; state 4-H staff members Mrs. Susanne Fisher and Wayne Carlson; Thelma Baierl, extension clothing specialist and James Justin, extension agronomist, University of Minnesota.

The delegation will have a get-acquainted dinner at 6:30 p.m. Friday, Nov. 26, at the Hotel Lowry, St. Paul, following an orientation session in the afternoon. Donors and parents of 4-H'ers will also attend the dinner. The group will leave by train for Chicago from St. Paul Saturday morning, Nov. 27, and will return Friday, Dec. 3.

The Conrad Hilton Hotel will be headquarters for the 1,500 delegates who represent 2 and a quarter million members in the nation and Puerto Rico. The 4-H'ers will be joined at the congress by state and county 4-H leaders, educators, international guests and leading businessmen and women from more than 55 business firms which support the program.

Purpose of the congress is to offer new and stimulating experiences for 4-H club members. Delegates will serve as discussion leaders, presiding officers and participants in the educational events planned around the theme "Young America and World Affairs." They will explore career opportunities, visit Chicago art institutes and museums, hear outstanding musical groups and will be entertained by donor companies with meals, tours and special programs.

Club members who have won trips to the International Live Stock Exposition in Chicago Nov. 26-Dec. 4 include the state winning livestock judging team from Pipestone County of Reid Merrill, Gregory Butman, Mike Gilliland and Steven Butman, alternate, and the second place dairy judging team in state competition composed of Margo Ophoven, Darlene Schwinghamer, Steve Legatt and Don Ebnet from Stearns County.

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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 15, 1965

\*\*\*\*\*  
\* For release at 10 A.M., \*  
\* Tuesday, Nov. 16 \*  
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## U DEAN EMPHASIZES RESOURCE DEVELOPMENT RESEARCH

Agricultural experiment stations in land-grant universities should place more emphasis on the development of human and natural resources which lie beyond the scope of food and fiber production, said Sherwood O. Berg, dean of the University of Minnesota Institute of Agriculture, today (Tues., Nov. 16).

Berg was appointed chairman of the National Advisory Commission on Food and Fiber earlier this month by President Johnson.

Speaking in Minneapolis to the 79th Annual Convention of the National Association of State Universities and Land Grant Colleges, Nov. 14-17, Berg told the delegates this morning that the areas urgently needing research include natural resources, human resources, human nutrition, air pollution, pesticides and animal products, disease and nutrition.

Berg cautioned the delegates not to become involved in the various facets or resource development unless they intend to develop depth or already possess special competence which would make their involvement significant.

The resources he cited as urgently in need of study are particularly suited to cooperative research between several states. They also call for cooperation and coordination among the states and federal and local government agencies.

Berg stressed that research in these areas must be carefully designed and conducted because much of this research involves conflict with vested interest groups. These groups will subject the research to intense scrutiny and challenge.

The traditional emphasis of agricultural experiment station research on the production of food and fiber has made the American agricultural capacity the envy of the world, and Berg said that this traditional approach should not be abandoned as experiment stations broaden the scope of their research.

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November 15, 1965

Immediate release

## RURAL AMATEUR WRITERS CAN ENTER SHORT-SHORT STORY CONTEST

A short-short story contest will be conducted for the second year as a special feature of the University of Minnesota's Town/Country Art Show, A. Russell Barton, Art Show coordinator, announced today.

Eligible to compete are amateur writers from Minnesota communities of 25,000 population or less. Entries will be limited to original unpublished short-short stories of not more than 2,000 words.

Entry dates are December 1 to January 10. Manuscripts should be typed double space on standard 8 1/2 by 11-inch paper and addressed to Minnesota Town/Country Art Show Creative Writing Competition, Department of Agricultural Short Courses, University of Minnesota, St. Paul, Minn. 55101. An addressed, stamped envelope should be enclosed for return of the manuscript.

Ten stories selected by the judges from entries submitted will be printed in a limited edition and offered to the public during the Minnesota Town/Country Art Show on the University's St. Paul Campus next spring.

A playwriting contest was announced earlier this year as part of the Minnesota Town/Country Art Show program.

The creative writing competition is sponsored by the University's Department of Rhetoric and presented by the Department of Agricultural Short Courses. Judges will be members of the rhetoric staff, Richard O. Horberg, Andrew King and William M. Marchand.

Further information about the short-short story competition is available from the Department of Agricultural Short Courses, Institute of Agriculture, University of Minnesota, St. Paul, Minn. 55101.

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65-278-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 15, 1965

Immediate release

#### NEW STAFF MEMBER IN U DEPARTMENT OF HORTICULTURAL SCIENCE

David W. Davis has joined the University of Minnesota's Department of Horticultural Science as an associate professor. His work will be in vegetable breeding and genetics, according to L. C. Snyder, head of the department.

Since 1963 Davis has been associated with the Agricultural Research Service of the U. S. Department of Agriculture in Beltsville, Md., doing tomato breeding and genetics research on **fruit** quality problems. He has done research on sugar cane agriculture for the Lihue Plantation Company in Lihue, Hawaii, and the Experimental Station of the Hawaiian Sugar Planters' Association in Honolulu.

Davis received his Ph. D. from Oregon State University in 1963, his M.S. from the University of Illinois and his B.S. from the University of Hawaii.

He holds memberships in the American Genetics Association, the Washington Genetics Society and the American Society for Horticultural Science.

He is the author of a number of articles published in scientific journals.

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65-277-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 15, 1965

To all counties

4-H NEWS

Immediate release

4-H KINDNESS  
THROUGH SERVICE  
AT CHRISTMAS

Throughout the year and especially at Christmas, some of the 55,000 Minnesota 4-H'ers dedicate their time to community social service projects.

Any 4-H project such as safety, health, shop, clothing, foods, conservation or junior leadership provides ideas for community service, comments William Milbrath, extension specialist, young adults program, at the University of Minnesota. One of the objectives of 4-H is to help members work towards effective citizenship.

Welfare departments, located in each of the 87 counties, often welcome volunteer workers and services. 4-H'ers may assist by providing boxes of food and clothing and decorating for Christmas. Minnesota's 24 day care centers for the retarded also invite 4-H'ers to serve in various ways. Nursing homes appreciate 4-H volunteers who assist the residents in letter writing, reading, walking, playing games and socializing, adds Milbrath. Members can also carol for the sick or shut-ins.

Through various projects, 4-H'ers can make gifts or present a program for children and adults in state hospitals or schools. The eight state hospitals for the mentally ill are located in Anoka, Hastings, Fergus Falls, Moose Lake, Rochester, St Peter and Willmar. The four state schools and hospitals for the mentally retarded are located in Faribault, Brainerd, Cambridge and Owatonna.

Each member in the Happy Hikers 4-H Club, Chisago County, chose to adopt a "grandpa" during Christmas. Administrators in the local rest home drew up a list of 23 men who seldom went away or had visitors. 4-H'ers visited their "grandpas" during Christmas, found out their birthdays, and continued to do little things for them throughout the year.

For suggestions on how to help in your community, write directly to state hospitals, county welfare departments and other institutions or agencies.

Department of Information  
and Agricultural Journalism  
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University of Minnesota  
St. Paul, Minnesota 55101  
November 15, 1965

To all counties  
ATT: HOME AGENTS

MAKE DECISIONS  
BEFORE BUYING  
NEW APPLIANCES

Another household appliance often seems the answer to the problem of finding more time for busy homemakers; yet in many homes, shiny new and expensive appliances go practically unused.

What decisions should you make before investing in a new appliance? And is it a good idea to take advantage of special sales on equipment?

Florence Ehrenkranz, professor and chairman of the Division of Household Equipment in the University of Minnesota's School of Home Economics, gives some answers to those questions in an article in the 1965 Yearbook of Agriculture, Consumers All.

"An appliance bought chiefly because it is on sale at so many dollars less than the 'regular price' may be satisfactory, but you are more likely to select equipment appropriate for you if you evaluate your needs and all the facts you can get about it," Miss Ehrenkranz says. She suggests that before buying an appliance you ask yourself these questions:

- . Do I need the appliance?
- . Will it make my homemaking tasks easier or make it possible to perform them more effectively?
- . Will it make my home safer, more livable or more enjoyable?
- . Will it save time and energy for me or for other members of the household so we can give this time and energy to more creative activities?
- . Will the appliance add excessive heat or noise in the home?
- . Will the appliance occupy space I'd rather not give up?
- . Will it complicate my way of doing things?
- . Is it better to save the money or use it for another purpose?

Unless the positive considerations outweigh the negative ones, you should not be concerned with selection of a particular piece of equipment now, Miss Ehrenkranz says.

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St. Paul, Minnesota 55101  
November 15, 1965

To all counties  
Immediate Release

BEEF PROFITS CALL  
FOR EFFICIENCY  
IN REPRODUCTION

Calf crop percentage is the biggest factor affecting profit in beef cattle production.

And since each beef cow kept through the winter represents a feed investment, cattlemen need to plan now to find the loafers and cull them from their herds.

This advice is from Charles J. Christians, extension animal husbandman at the University of Minnesota.

A trained veterinarian, he says, can make a pregnancy check of cows within 80 to 100 days after the bull has been removed from the herd. And besides adding to production efficiency, this check by the veterinarian will detect any herd sterility problems such as Leptospirosis and Brucellosis.

An 80 percent calf crop, says Christians, takes as much investment for cows, bulls, land and buildings as does a 100 percent crop.

A cattleman with the 80 percent calf crop would need to sell 400-pound calves for 31 cents per pound to take in the same dollars that he would get from a 100 percent calf crop selling at 25 cents per pound.

Reproduction, Christians concludes, is the first and most important requisite of cattle breeding.

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St. Paul, Minnesota 55101  
November 15, 1965

To all counties  
Immediate Release

IN BRIEF....

Research on how chemicals are taken up and held by soils is being expanded at the University of Minnesota. A new project is being launched to investigate the uptake of chlorinated hydrocarbons by clay and organic soils, and to learn more about the nature of soil pesticides themselves. Chlorinated hydrocarbons include the insecticides DDT, aldrin, dieldrin, and methoxychlor. Such chemicals tend to be the most persistent and raise some of the more crucial problems of soil residues.

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Importance of commercial formula feeds for livestock and poultry has increased tremendously. According to extension economist Richard Hawkins at the University of Minnesota, use of feeds in this form increased by 45 percent since 1940, and now account for nearly a third of all concentrates fed. And as numbers of animal units increase to meet greater demand for livestock products, Hawkins says, the demand for high-protein feeds will continue to expand. Commercial formula feeds will probably continue to increase--as they have in recent years--more rapidly than total concentrates fed.

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High Moisture Corn for Cattle Feed: Immature, high moisture ear corn can make good beef cattle feed. Ground ear corn silage usually is equal in feed value to crib-stored ear corn when made from the same year's crop, says R. E. Jacobs, University of Minnesota extension animal husbandman. Kernel moisture content of ear corn should range from 25 to 32 percent before grinding for ear corn silage. High moisture ears can be left on the stalks until freezing temperatures occur. With ice crystals in the cobs and kernels, grinding and ensiling will be easier because of less clogging of grinders and blower pipes.

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Department of Information  
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St. Paul, Minnesota 55101  
November 15, 1965

To all counties

Immediate Release

SPECIALISTS ADVISE:  
DON'T OVERFEED  
UREA TO RUMINANTS

Urea is useful to cattle and sheep as a substitute for protein--if used correctly.

But when fed above recommended levels, Urea can be very toxic to these ruminant animals and even cause death, warn Dr. R. B. Solac, extension veterinarian, and R. E. Jacobs, extension animal husbandman at the University of Minnesota.

Urea, a nitrogen compound produced from carbon dioxide and ammonia, is fed only to ruminant animals. Including it in a protein supplement adds no vitamins, minerals or energy. The main advantage of feeding Urea is lower cost of protein supplementation, compared to feeding natural protein from oilmeals.

In the rumen, the largest stomach of the ruminant, Urea is hydrolyzed or decomposed by absorbing water, and ammonia is given off. Microorganisms in the rumen convert ammonia to true protein which is absorbed from the intestines by the host animal.

Protein content or protein equivalence of a feed ingredient is figured by multiplying the ingredient's nitrogen content by 6.25. Urea contains 42 percent of nitrogen. Thus Urea's protein equivalence is 262 percent (42 percent Nitrogen times 6.25).

A protein supplement containing five percent Urea provides 13.10 percent of protein equivalence (262 percent times .05) from non-protein nitrogen. The feed analysis label on a bag of commercially prepared protein supplement so identifies this item.

The amount of dietary Urea animals can utilize from a ration depends on:

- \* The amount of preformed protein contained in other feed ingredients.
- \* The amount of energy in the ration.
- \* The level of Urea.

-more-

add 1 urea is effective

Jacobs says Urea is therefore most useful in a low-protein and medium- to high-energy ration which is full-fed.

Even with rations full-fed to yearling steers, consumption of Urea-containing supplements should be no more than one-quarter pound per day per animal. Even then Urea-containing supplements should be introduced into the ration gradually, probably over a two-week period, says Jacobs.

Research at the University has shown that fattening cattle can gain a pound per animal per day on a 34 percent protein supplement containing 90 pounds of ground corn and 10 percent Urea. Minerals could be added to this supplement, through substituting five percent of dicalcium phosphate for an equal amount of corn.

A high Urea supplement publicized by Iowa State University uses: 33 pounds dried molasses or ground corn, 30 pounds Urea, 20 pounds dicalcium phosphate, 12 pounds ground limestone, 2 pounds stilbestrol premix, 2 pounds vitamin A premix (2 million units per pound); and 1 pound trace mineral premix.

This supplement has 80 percent protein equivalence and the recommended feeding rate is only a half pound per animal per day. This feeding rate provides 0.4 pound of supplemental protein and gives an intake of .15 pound of Urea per animal per day--within the safety margin.

Farmers making their own protein supplements which include Urea should be certain Urea is mixed well with other ingredients, advises Jacobs.

If cattle are fed high levels of Urea or break out and help themselves to high Urea protein supplements, toxic effects could result. For animals reacting to high Urea intake, symptoms include uneasiness, muscular incoordination, bloat, prostration, convulsions, and even death.

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Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
November 17, 1965

Immediate release

#### FOUR MINNESOTA 4-H ALUMNI RECOGNIZED

Four Minnesotans who have been active in helping youth have been chosen to receive 4-H alumni recognition awards.

They are Eino A. Jyring, Hibbing; Sherwood O. Berg, 2009 N. Aldine St., St. Paul; Veda Ponikvar, Chisholm and Mrs. Leonard C. Sylling, Caledonia.

The awards are given annually to honor former 4-H members whose accomplishments, following 4-H club membership, exemplify effective community leadership, public service, service to 4-H club work and success in their chosen careers.

The four will receive plaques from Olin Mathieson Chemical Corp., New York, during the State 4-H Junior Leadership Conference next June.

Jyring, president of Jyring and Whiteman, Inc., is a registered architect and engineer who received his degree in architecture from the University of Minnesota. One of his many services to 4-H in his area was to redesign the 4-H club building and exhibit display cases at the St. Louis County Fair. Through a trust fund he established he provides a \$500 college scholarship each year to an outstanding high school graduate from a St. Louis County rural school. Besides being an active community and church leader, Jyring has received many national and state awards for his architecture.

Berg is dean of the University of Minnesota's Institute of Agriculture and a widely-known authority on agricultural economics, agricultural policy and foreign trade. Early this month he was named chairman of the National Advisory Commission of Food and Fiber by President Johnson. He is a former U.S. agricultural attache to three European nations. In 1956 he received the Superior Service award from the U.S. Department of Agriculture for helping Danish farm leaders understand U.S. farm policies better. He is author and co-author of professional articles on agricultural economics and agricultural policy. He has done much to encourage 4-H'ers to complete their education. As a Norman County 4-H'er, he held most of the offices in his club. He received a trip to the National 4-H Conference in 1940 in recognition of outstanding accomplishments in 4-H.

(more)

add 1 --4-H alumni recognition

Miss Ponkivar has been editor and publisher of the Chisholm Tribune and Free Press since 1947, when she returned from service in the WAVES. She was then the youngest publisher in the nation. As an editor, coverage of youth activities has been one of her concerns. She participated in the annual 4-H banquet sponsored by the Chisholm Chamber of Commerce, is on the board of directors for the American Field Service program and works with the Municipal Athletic Association. As a result of her work in spearheading the founding and organizing of a Range Day Care Center for mentally retarded children, she has been named to the Governor's Planning Council for the Mentally Retarded and to the President's National Committee for the Mentally Retarded. A graduate of Drake University, she holds a Master's degree in political science from Smith College.

Mrs. Sylling, a homemaker in Houston County, has been a member of the extension homemakers' group for 26 years. As a 4-H'er in Mower County she took the food preservation project for seven years and won five demonstration trips to the State Fair. After receiving a trip to the National 4-H Club Congress in Chicago, she organized a new 4-H club near Austin. She was also instrumental in founding the Caledonia Rockets 4-H Club and has been an active leader and a judge for neighboring county 4-H events. She has been hostess to an International Farm Youth Exchangee from Thailand and men and women from South and Central America. She is active in her community, school and church.

# # #

65-281-smk

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
November 17, 1965

Immediate release

## TREND TO SMALLER SLAUGHTERHOUSES SEEN

Although a steady trend to "bigness" may be continuing in many industries, there seems to be a reversal going on in the livestock slaughtering business.

Ever since Upton Sinclair wrote a novel about slaughterhouses around the turn of the century, most Americans have probably pictured the industry in terms of large integrated plants, with livestock marching in the front door and meat, leather and glue issuing out the back.

A recent study by U. S. Department of Agriculture economist W. E. Anthony and agricultural economist K. E. Egertson at the University of Minnesota indicates some significant changes in the meat industry.

Major features of the shift are slaughter near producing areas, and processing in consumption centers.

Small slaughter plants and processing facilities have grabbed an increasing share of the market in recent years and the percentage of slaughter by the top four companies in the industry has declined from over 50 percent in 1950 to less than 25 percent today.

Small slaughter plants can compete with the industry giants without advertising campaigns the economists say, and gain the cost advantages of short distance shipping and modern technological efficiency.

Growth of chain retail grocery stores has contributed to the rising number of small slaughter firms, Anthony and Egertson continue, because the chain stores are not generally anxious to retail brand name meat. Federal inspections and grading have enabled the small slaughter plants to compete profitably with the established companies without having to establish a reputation or consumer image.

(more)

## add 1--Smaller Slaughterhouses

Local processing plants are also on the rise because they too can benefit from efficient methods, limited shipping and specialized production. These small processors located near their markets can benefit too from a home town image and non-federal inspection.

Anthony and Egertson point out that the small plant need not integrate all slaughter and processing functions. Therefore, less capital investment is required to generate a successful operation.

Slaughter and processing plants which specialize as to species are generally more successful than operations which try to integrate all operations.

Many communities have failed in their attempts to establish profitable slaughter plants because they have not carefully considered all the aspects of these ventures, according to the economists. Furthermore, the fact that small plants are grabbing an increasing share of the business is no guarantee that every plant of this type will succeed. Slaughterhouses which utilize only species locally available in quantity and processors who gear for efficiency in handling one or two species are usually the most successful.

As the largest processors have declined in slaughter percentages and meat production, the smaller companies have grown more than eight times as rapidly as the larger companies. Except for the top four, large companies have at least held the line or have experienced slight increases in production over this 15 year period.

Anthony and Egertson believe this trend will continue to favor the small companies as long as the conditions responsible for it persist. There are implications here for rural communities as well as livestock producers, slaughterers and service agencies.

# # #

65-280-pjt

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St. Paul 55101--Tele. 647-3205  
November 17, 1965

Immediate release

#### WINTER STORM PREPARATIONS ADVISED

Winter storms are about to make their annual visit to the Upper Midwest. They will cause inconvenience in the cities but could be dangerous to people living in rural areas. Clifton Halsey, rural civil defense agent at the University of Minnesota, advises farmers to prepare now for winter storms.

Fuel and livestock feed can become critical when roads are drifted over. Halsey advises that a week's supply should be kept in reserve.

Most farm families have plenty of food for emergencies. However there may be a member of your family who needs special diet foods and there should be enough special diet items to feed that person for a week.

Every family should have at least one member skilled in first aid. All members of the family should be immunized against preventable diseases such as tetanus and diphtheria. If someone requires a certain medicine, there should be a week's supply on hand.

Auxiliary generators are insurance against electrical failure. Farmers who keep generators in good shape will not have problems with well pumps and milkers if lines go down in an ice storm.

Flashlights, spare batteries and camp stoves can be useful. Halsey urges rural people to plan ahead and store fuel, food and medicine. Halsey said that if these precautions are taken you may not enjoy winter but you won't have to worry about it. You will not have to ask someone to possibly risk his life because you did not plan for your own emergencies.

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65-279-car

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
November 18, 1965

\*\*\*\*\*  
\* FOR RELEASE: \*  
\* Saturday, November 20 \*  
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## MCLEOD COUNTY 4-H'ER WINS BROWN SWISS AWARD

FARIBAULT--A Hutchinson youth who has built his herd to 14 animals is the 1965 winner of the 4-H Brown Swiss Award.

Steven Tuman, 18, will receive a watch from the Minnesota Brown Swiss Breeders' Association at their annual meeting here today (Nov. 20), according to Earl Bergerud, assistant state 4-H club leader at the University of Minnesota.

Other canton winners receiving Swiss bells are: Grant Friton, 18, Sleepy Eye, Canton 2; Larry Russell, 18, Montevideo, Canton 3; Vickie Sonsteby, 17, Clearwater, Canton 4; David Anderson, 17, Chokio, Cantons 5 and 6; and Mary Rantanen, 18, Middle River, Canton 7.

As 4-H state dairy project winner, Tuman will receive a trip to the National 4-H Club Congress, Chicago, Nov. 28-Dec. 1. The trip is sponsored by the Oliver Corporation. In 1964 he was top individual dairy judge at the State Fair and was on the dairy judging team which won the state contest. He plans a career in the dairy industry.

Friton, a nine-year 4-H'er from Brown County, has won a number of county, regional and state awards with his herd of 13 animals.

Russell, a sophomore at the University of Minnesota, was the 1964 winner of the 4-H Brown Swiss Award. He has won numerous awards at the Chippewa County Fair, State Fair and Junior Livestock shows.

Miss Sonsteby is the owner of five Brown Swiss animals. As Wright County 4-H dairy project leader, she stresses improved practices and completion of records.

In 1964, Anderson, an eight-year 4-H'er, was chosen outstanding junior leader in Stevens County.

Miss Rantanen, state Canton president in 1963, has been a five-year dairy project leader in Marshall County. She is a freshman at North Dakota State University, Fargo, majoring in veterinary medicine. ### 65-283-smk

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November 18, 1965

Immediate release

## STATE HORTICULTURAL SOCIETY ELECTS OFFICERS, GIVES AWARDS

Carl J. Holst, 4225 Chowen Ave., Minneapolis, has been re-elected president of the Minnesota State Horticultural Society for 1966.

Bruce Johnstone, Route 5, Excelsior, was re-elected to the office of vice-president.

Elected to executive board terms of three years were Mrs. Lambert Klosowsky, 2105 Central Entrance, Duluth, and Mrs. W. L. Hedegard, 904 - 14th Ave. N.E., Austin.

Twenty-seven winners of honorary awards for 1965 were announced by E. M. Hunt, executive secretary of the Horticultural Society. They were selected from nominees in all parts of the state and will receive special recognition for outstanding gardening achievement.

Award recipients are:

Bronze medal--Mrs. John Larsen, 8200 Sheridan Ave. S., Bloomington.

Honorary life memberships--Wilbert G. Sindt, 1847 N. McKnight Road, North St. Paul; D. T. Grussendorf, 4022 Midway Road, Duluth; and Mrs. Joseph Sellwood, 1517 E. Superior Street, Duluth.

Distinguished service certificates--Spencer Smith, Orono Road, Wayzata; Earl H. Maffett, 6755 Harriet Ave., Minneapolis; Mrs. John R. Stoltze, Route 5, Stillwater; Robert Pettit, 1510 Lynn Ave., Detroit Lakes; and Frank L. Vleck, Lengby.

Award of merit certificates--John E. P. Morgan, 1370 Goose Lake Road, White Bear Lake; Richard E. Widmer, 1275 Raymond Ave., St. Paul; Stanley Folsom, Taylors Falls; David W. Goddard, Route 2, Elk River; Mrs. W. R. Weyer, 2616 Huntington Ave., Minneapolis; Mrs. Olive Bank, Haward; Mr. and Mrs. Carl Kumlin, R. R. 5, Austin; Rev. John W. Rossiter, 214 W. Anna Street, Fairmont; Mrs. Arthur E. Harms, Isle; John C. Kneipp, 2802 E. First Street, Duluth; Walter E. Mielke, 202 Hawkins Ave., Coleraine; Mrs. Arthur Riser, 3321 - 2nd Ave., Hibbing; Bruce C. Beresford, 322 South Ash, Crookston; Mrs. Oscar Guttormson, Georgetown; Mrs. E. R. Hall, Cass Lake; Mrs. Lester Hoganson, 2331 Calihan Ave., Bemidji; Mrs. Orlando Chervestad, Oklee; and Mrs. Albert Lokken, Newfolden.

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November 18, 1965

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## U NUTRITIONIST ANSWERS QUESTIONS ABOUT THANKSGIVING BIRD

What's the best way to thaw the Thanksgiving turkey? Is it safe to stuff it the night before? Can it be partially cooked one day and finished the next?

These are questions that come from homemakers every year, reports Verna Mikesch, extension nutritionist at the University of Minnesota.

Here are her answers:

. The refrigerator is the ideal place to thaw a turkey. Leave it in its plastic bag. Allow about three days to thaw a 20-pound bird in the refrigerator. If it thaws out a day or so earlier than you anticipate, keep it refrigerated; it will still be perfectly safe. To thaw a bird in several hours, keep it in its plastic bag and place it under cold running water. Refrigerate it or cook it as soon as it is thawed.

. It is not safe to stuff poultry the night before cooking it. There is a definite food poisoning hazard in stuffing poultry that far in advance. The turkey acts as insulation for the warm dressing, which spoils easily. But you can save time in preparing the dressing by combining the ingredients the day before and refrigerating them. Then it's a simple matter to stuff the turkey just before popping it into the oven.

. Partially roasting the Thanksgiving turkey the day before will actually not save time. The bird will still need time to heat through and to finish roasting. Because of the long warming up and cooling down period, the stuffing and interior of the turkey will stay in the danger zone, inviting the growth of bacteria. Furthermore, partial roasting beforehand may produce a drier bird and a warmed-over flavor.

Remember, too, the University nutritionist warns, that the roasted turkey should be refrigerated immediately after the festive meal. Remove any dressing and refrigerate it and the gravy. If you want to freeze some of the leftovers, do so as soon as possible after dinner. Package sliced meat for sandwiches in freezer foil or in cellophane bags. Turkey will keep longer in the freezer if it's frozen with gravy or some sauce. But don't keep it in the freezer over a month or six weeks.

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65-286-jbn

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Immediate release

## U BULLETIN GIVES TIPS ON FRAMING PICTURES

If you're wondering what type of picture frame to select for that print or oil painting you just acquired, you'll find some answers in a new University of Minnesota Agricultural Extension Service publication called Framing Pictures.

Authors of the publication are Mrs. Myra Zabel and Rachel Munson, University extension specialists in home furnishings.

The right frame will let the picture dominate and enhance its color, composition and content, they say. In both width and height it should be consistent with picture size and boldness. For example, narrow stripping is best for small, delicate artwork, although small, bold oils may require wide frames. Flat stripping or molding is suitable for most abstract oils.

The shape of picture molding should also be considered in relation to picture composition. A composition of rounded shapes and forms will be complemented by a curved molding. For a picture with sharp lines and shapes, University specialists suggest an angular molding; for a broad, open landscape, a wide, smooth but simple molding.

The fine texture and warm color of walnut, mahogany and cherry make these woods especially suitable for frames to accent warm orange, yellow and brown tones in a picture or to complement cool greens and blues. But the ready-made oak frames on the market are too heavy and coarse for most pictures, according to Mrs. Zabel and Miss Munson.

Antiqued frames are recommended for water colors or brightly colored pictures, narrow black frames for matted etchings, prints or drawings. Stark white frames, however, are difficult to use and impractical since white paint usually discolors with age.

The publication answers the question of when to mat pictures and gives illustrated step-by-step directions for matting and framing pictures.

Single copies of Framing Pictures, Extension Bulletin 324, are available from county extension offices or from Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minn. 55101.

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65-285-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 22, 1965

To all counties  
ATT: HOME AGENTS

FREEZER CAN BE  
HOLIDAY HELPER

Go on a freezing spree now if you don't want the holidays to be a hectic round of cooking and baking.

Take time to think over the type of entertaining you will be doing during the Christmas season and bake and freeze accordingly, suggests Verna Mikesh, extension nutritionist at the University of Minnesota. She suggests preparing in advance and freezing such holiday foods as these:

- . Cookies and bars of all kinds. Store these in coffee cans or other tin cans, using sheets of a saran-type film or aluminum foil between layers to prevent moisture loss. Do not frost them until you are ready to use them, since frosting tends to dry out.

- . Cookie dough. Shape dough for refrigerator cookies into a roll of the desired size. Wrap in freezer paper. When ready to use, remove from the freezer, slice with a sharp knife and bake. Pack drop cookie dough in frozen food containers. When ready to use, thaw the dough until it is soft enough to drop with a spoon on greased cookie sheets.

- . Nationality breads, fancy rolls. Package in polyethylene bags or in heavy-duty aluminum foil for freezing. Thaw in the original wrapper at room temperature. Do not frost until ready to use.

- . Baked pies. Pumpkin, mince, chiffon and fresh fruit pies all freeze well. In chiffon pies, always include egg white or whipping cream to prevent "weeping" during thawing. Do not freeze meringue toppings. Baked and unbaked pie shells and graham cracker and cookie crusts also freeze well.

When ready to use, let the baked fruit or vegetable pie stand at room temperature for half an hour; then put it in a 350°F. oven on the lowest shelf and heat until warm. Do not reheat chiffon pies, however.

add 1 - freezer can be holiday helper

. Homemade candies. Store in tin cans or use good moisture-vapor-proof wrapping over boxes to prevent damage from condensation on removal to room temperature. Do not remove the wrap until the candy has warmed to room temperature-- about 4-8 hours.

. Stuffed baked potatoes. Bake large potatoes, cut them in half. Scoop out the potato, keeping the shells intact. Mash while the potatoes are still hot with butter and cream, season and return the potato to the shells. Store in clean coffee or other cans and freeze. To serve, reheat unthawed at 400° for half an hour. Top with grated cheese before heating, for color and flavor.

. Casserole dishes and baked beans for quick, easy meals. Dishes containing macaroni, spaghetti, noodles or rice may be frozen in baking dishes or freezing containers. There is little danger of breakage in taking the baking dish directly from the freezer to the oven. Bake in 350° oven for 40 to 60 minutes to serve. In preparing combination dishes, avoid overcooking the foods to be frozen. It is better to undercook them slightly. Meat and sauce combinations for Italian spaghetti, Spanish rice and chow mein may be frozen separately. Diced or cubed potatoes become mushy and grainy when frozen in main dishes, so add them during heating.

Miss Mikesh gives this further tip: Whatever you freeze, be sure to package it well in moisture-vapor-proof wrapping or good freezer containers; otherwise the food will lose quality. Coffee cans are fine for dry foods, but do not use tin cans for moist foods unless they have a gold lining. The uncoated cans tend to rust.

-jbn-

Department of Information  
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St. Paul, Minnesota 55101  
November 22, 1965

To all counties  
4-H NEWS  
Immediate release

#### 4-H FILLERS

Thirty-two Minnesota 4-H'ers will be competing for national honors, including about a hundred thousand dollars in scholarships, as they attend the 44th National 4-H Club Congress in Chicago, Nov. 28-Dec. 2.

\* \* \* \*

For the first time an official delegation of 10 Canadian 4-H members, one from each province, will attend National 4-H Club Congress in Chicago, Nov. 28-Dec. 2.

\* \* \* \*

The national 4-H safety program enrolls 825,000 boys and girls. As a safety activity, some Minnesota 4-H clubs will be attaching fire warning tags to Christmas trees and encouraging everyone to fireproof their Christmas trees.

\* \* \* \*

Plant pathology, a new pilot project, includes science in its study. 4-H'ers compare soil types, learn the effect of various soil temperatures and learn to use a variety of seed treatment materials in prevention of fungus diseases.

\* \* \* \*

The new 4-H horticulture program in Minnesota is divided into six projects: lawn and landscape design, indoor gardening, flower gardening, vegetable gardening, fruit and potato. Members have an opportunity to develop a better understanding of the basic principles of science relating to plant growth.

\* \* \* \*

Seven Minnesota 4-H clubs are among 30 4-H groups in eight states to be awarded grants to conduct programs to meet recognized needs in their communities. Grants are given by the Reader's Digest Foundation which has cooperated with the National 4-H Club Foundation for the third year in pilot projects encouraging 4-H citizenship programs.

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To all counties  
Immediate release

RECOMMENDATIONS  
OUTLINED FOR  
FEEDER PIG PRODUCERS

Fast growing, efficient pigs that produce top quality carcasses--that should be a goal of the feeder pig industry.

And if feeder pig producers don't supply this type of feeder pig, you can look for most potential buyers to start raising their own, says R. L. Arthaud, University of Minnesota extension animal husbandman.

A successful operation, says Arthaud, means:

- \* careful selection of herd sires,
- \* close attention to nutrition and management, and
- \* a well-planned crossbreeding program.

Post weaning performance traits--growth rate, feed efficiency, and factors associated with meatiness--have medium to high heritability estimates, Arthaud says. Any permanent improvement of these traits will depend mostly on the boars used.

In selecting boars, feeder pig producers should apply the same standards as market hog producers. Purebred herds are primary sources of boars and performance records should be available for most animals in the herd. Testing station records can also be helpful.

Select boars to have a weight of 200 pounds in 150 days or less; less than 1.3 inches of backfat at 200 pounds or even less than 1.1 inches would be better; and less than 300 pounds of feed required per 100 pounds of gain, if feed efficiency data is available.

add 1--recommendations outlined for feeder pig producers

Carcass cut-out standards on littermates and other close relatives should be: 29 inches or more in length, four square inches, or more, loin eye area; less than 1.6 inches of backfat; at least 25 percent of ham based on liveweight; and at least 36 percent of loin based on carcass weight.

Feeder pig producers realize the profit potential of big litters of large pigs at weaning time. But traits associated with sow productivity--reproductive ability, milk production, litter size and number of nipples--have low heritability. Any extra work to select for these traits seems of little value, says Arthaud. This means nutrition and management should receive major emphasis in attempting to improve sow productivity.

Low heritability of sow productivity traits also points up the need for a well-planned crossbreeding program to upgrade feeder pig production. Heterosis, or hybrid vigor, obtained through crossbreeding usually has the greatest effect in improving lowly heritable traits.

Arthaud says the use of crossbred sows will be most beneficial. In the cross, include one or more breeds that are above average in litter size and mothering ability. Crossbreeding itself will also tend to increase litter size, improve liveability, and improve growth.

When sows are kept for two or more litters, cull the sows that cannot raise a heavy litter because of udder problems, bad dispositions, low milk production and other persistent factors.

Replacement gilts are usually not kept from these litters. But Arthaud says little permanent harm could be expected because of the low heritability estimates for sow productivity traits.

In selecting replacement gilts, the recommendations are to choose those heaviest at weaning, those with enough apparently good nipples and free of defects to be able to raise a big litter of heavy pigs.

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November 22, 1965

To all counties  
Immediate release

IN BRIEF....

Change in American Agriculture: One farm worker now produces enough food and fiber for himself and 32 other persons, according to the U. S. Department of Agriculture. Just 25 years ago, one farm worker provided for the food and fiber requirements of only 11 other persons.

\* \* \* \*

U. S. Land and Water Resources: The nation now has about 638,009,000 acres of non-federal land that is suitable for regular cultivation, according to Cecil H. Wadleigh, soil scientist of the USDA Soil and Water Conservation Research Division. Another 169,181,000 acres are suitable for limited cultivation. About 644,238,000 acres are generally considered unsuitable for cultivation and another 761,000,000 acres is federally-owned land which is largely in forests and range.

\* \* \* \*

Fall Fertilizer Application: Applying fertilizer in fall could allow earlier planting if fields are too wet for heavy machines in spring. Curt Overdahl, University of Minnesota extension soils specialist, says fertilizing before the ground freezes can mean less compaction and fewer ruts in spring. To increase fall sales, fertilizer companies may cut prices and give better service to farmers buying now. For more information, read Minnesota Fertility Notes No. 16. Get a copy from the Bulletin Room, University of Minnesota, St. Paul, Minn. 55101.

\* \* \* \*

Fireblight Infection: Branches with dry leaves on the tips after normal leaf drop may mean Fireblight infection. Bark of infected branches is discolored and sometimes distorted. Neil Miles, University of Minnesota extension horticulturist, recommends removing infected branches in early winter. Make pruning cuts 6-12 inches below infected areas of branches. Disinfect pruning tools between cuts by dipping in a solution of one part liquid chlorine bleach mixed with one part water.

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St. Paul 55101 -- Tel. 647-3205  
November 23, 1965

Immediate release

#### MINN. 4-H'ERS WIN TRIPS TO NAT'L. DAIRY CONFERENCE

Nine Minnesota 4-H'ers will be among the nation's top 175 young dairymen and women to attend the 11th annual 4-H Dairy Conference, Dec. 2-4 in Chicago.

The 4-H'ers were selected because of their outstanding records in the dairy project. Delegates attending are: Margo Ophoven, Kimball; Steven Foss, Kenyon; Luverne Erickson, Cosmos; Patricia Schultz, Faribault; Richard Kvasnicka, Hayfield; Joe Stransky, Jr., Owatonna; Russell Hackett, Rice; Elden Lamprecht, Plainview; and Julie Carlson, Glenville. J. R. Gute, Steele County agricultural agent, will accompany the delegates.

The three-day program will provide a better understanding of the production, processing, marketing, economics and use of dairy products, according to Earl Bergerud, assistant state 4-H club leader at the University of Minnesota. 4-H'ers will be introduced to various careers open to them in dairy industries.

Sponsoring and coordinating the conference are the Cooperative Extension Service, the National 4-H Service Committee, the International Dairy Show and a number of dairy industry groups interested in youth.

The conference is held in conjunction with the International Dairy Show to give the young men and women an opportunity to see cattle of high quality and to visit with breeders of dairy animals.

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65-289-smk

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Immediate release

#### SOILS AND FERTILIZER SHORT COURSE

The 15th Soils and Fertilizer Short Course will be held Dec. 6 and 7 in the Leamington Hotel, Minneapolis.

The two-day course is sponsored by the University of Minnesota Institute of Agriculture.

A panel of scientists and industry experts will discuss soybean production, sugar beets, alfalfa, zinc, fall fertilization, horticultural crops, sandy soils, fertilizer and fertilizing equipment.

Exhibits will be on display during the course.

About 20 representatives of universities, industry and government will deliver talks. Governor Karl Rolvaag will address the participants at the opening ceremonies.

Registration for the course will be in the lobby of the Leamington Hotel beginning at 9:30 a.m. Dec. 6. The registration fee is \$3.50. Copies of talks to be presented will be available to the registrants.

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65-287-car

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November 23, 1965

Immediate release

## INSTITUTE OF AGRICULTURE CALENDAR

### NOVEMBER

- 26 - Dec. 4            International Livestock Exposition, Chicago, Illinois  
28 - Dec. 2            National 4-H Club Congress, Chicago, Illinois

### DECEMBER

- 2 - 4                    National 4-H Dairy Congress, Chicago, Illinois  
6 - 7                    Soils and Fertilizer Short Course, Minneapolis  
7 - 10                   Annual Extension Conference, St. Paul Campus  
13 - 18                  DHIA Supervisor's Training School, St. Paul Campus  
27                        Vo-Ag FFA Workshop, St. Paul Campus  
28                        Vo-Ag Special Short Course, St. Paul Campus  
28 - 30                  Electric Conference 4-H Leaders, St. Paul Campus  
                          Agronomy Conference 4-H Leaders, St. Paul Campus  
                          Automotive Conference 4-H Leaders, St. Paul Campus  
29 - 30                  Tractor Hydraulics Short Course, Winona

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65-288-car

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Immediate release

## FREEBORN COUNTY WINS 4-H SAFETY PLAQUE

By cooperating with their community, 4-H clubs in Freeborn County were able to carry out their safety activities and win top placing in the state 4-H safety contest.

A plaque will be given to the Freeborn County Extension Office in recognition of the safety work of the 4-H clubs, according to Earl Bergerud, assistant state 4-H club leader at the University of Minnesota. General Motors, Detroit, Mich., is donor of the plaque.

Ten individual clubs were also cited for their safety activities. These clubs will be awarded certificates for their safety programs: Leavenworth Up To The Minute 4-H Club, Brown County; Preble Pioneers, Fillmore County; Becida Busy Builders, Hubbard County; Roseland Rosebuds, Kandiyohi County; Riverside Rockets, Lac Qui Parle County; Island Lake Zeps, Lyon County; Silverton 4-H Club, Pennington County; Sacred Heart Indians, Renville County; Subettes 4-H Club, North St. Louis County and the Wykeham Willing Workers 4-H Club, Todd County.

The safety project 4-H'ers in Freeborn County worked with the Albert Lea-Freeborn County Safety Council and sold 380 slow moving vehicle emblems during Farm Safety Week. The PTA and the Daughters of the American Revolution sponsored the 4-H'ers on six radio programs emphasizing safety. Ten clubs worked with pesticide safety.

The major group activity of the Leavenworth Up To The Minute 4-H Club was a 118-car safety check held in Sleepy Eye with the cooperation of the city police and the Minnesota Highway Department. The 22 4-H'ers also made floor plans of their homes and studied the best escape route to use in case of fire.

Members of the Preble Pioneers 4-H Club donated scotchlite and safety literature to a neighborhood 4-H club that didn't carry the safety project. They also stressed community service by conducting a safety checkup, cleaning and repairing a swimming hole and attaching fire warning tags to Christmas trees.

(More)

add 1 --Safety Plagues

The Becida Busy Builders 4-H Club concluded their safety year by winning grand champion at the State Fair with the booth, "4-H'ers Control Pests Safely." The club worked with the community to erect a new and safe back-stop for the town's softball field.

The first project of the Roseland Rosebuds 4-H Club was to distribute 100 fire number telephone stickers throughout Blomkest. Members also conducted a fire hazard inspection in 8 homes and 12 barns, and returned the following month to check if the hazard had been corrected.

For the twelfth year, the Riverside Rockets 4-H Club enrolled all its members in the safety project. During the monthly club meetings, a particular phase of the safety project was emphasized. As a result of a hazard hunt conducted during April, 1,364 hazards were corrected and 918 safety booklets were distributed to the public by the club members.

The Island Lake Zeps 4-H Club built a safety picnic rest area along the highway and participated in many safety workshops. Members also made traffic signs for the Lyon County School for Exceptional Children at Ghent.

Adding to their list of safety activities for the eighth year, the Silverton 4-H Club equipped cars with first-aid kits. An old-time basket social sponsored by the 4-H'ers raised enough money to buy slow-moving vehicle emblems for every combine in the community.

Members of the Sacred Heart Indians 4-H Club started their safety year by selling over 100 rural fire number plates. Their club meetings included showing safety films, conducting hazard hunts and giving safety demonstrations.

The Subettes 4-H Club joined the Virginia Safety Council to host the youth session of the District Safety Workshop. The 4-H'ers have set up a two-year safety program with the VFW, local police and fire department.

The big project of the year for the Wykeham Willing Workers 4-H Club was to organize a community safety council. Members erected a highway welcome safety sign and sold slow moving vehicle emblems.

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St. Paul 55101--Tel. 647-3205  
November 26, 1965

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\* RELEASE: After 7 p. m. \*  
\* Sunday, November 28 \*  
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## TWO MINN. 4-H GIRLS RECEIVE NATIONAL HONORS

CHICAGO--Two Minnesota 4-H girls are recipients of \$500 college scholarships awarded here today (Nov. 28) at the 1965 National 4-H Club Congress.

Winners are Laurel Hoff, 19, Perley and Mary Cain, 19, Osseo. Both young people won trips to the 4-H Club Congress as state winners in the home economics and safety projects, respectively.

Miss Hoff is one of six 4-H'ers in the nation to receive a \$500 scholarship for overall excellence and achievement in a variety of home economics projects. Skills she has learned and put to use as a 4-H'er include sewing her own clothes, baking bread, canning and freezing food, redecorating her room and refinishing furniture. During her 10 years in 4-H, the Norman County club member has been recognized for outstanding work in home economics exhibits and demonstrations.

But her talents aren't confined to homemaking. As a junior leader she has helped many younger members with their projects. She has also won awards in the sheep project, including two trips to the Junior Livestock Show.

Her 4-H career helped her decide on a home economics major at North Dakota State University, Fargo, where she is a sophomore. She is a daughter of the Falmer Hoffs, who operate a farm near Perley.

Donor of the home economics scholarships is Montgomery Ward, Chicago.

Miss Cain was chosen one of eight 4-H'ers in the nation to receive a \$500 college scholarship for her safety activities covering a period of 10 years. She has made contributions to her community through various safety projects such as organizing a Red Cross first aid class, erecting stop and yield signs at dangerous driveways, reflectorizing farm equipment, distributing safety posters and taking part in bicycle clinics. She has given nine State Fair safety demonstrations and was also chosen to demonstrate at the Governor's Youth Traffic Safety Conference. The Hennepin County 4-H'er was a delegate to the National Safety Congress in 1964 and was a 4-H Key Award recipient in 1963.

She is the daughter of Mr. and Mrs. Edmund J. Cain, who operate a farm in Hennepin County.

General Motors, Detroit, is donor of the safety scholarships.

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November 26, 1965

\*\*\*\*\*  
\* RELEASE: After 7 a.m.\*  
\* Monday, November 29 \*  
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### \$ 500 SCHOLARSHIPS GIVEN TO MINN. GIRLS

CHICAGO--Cheryl Barten, 16, Belle Plaine, has been named a national winner in the 4-H poultry program and Jean Freeberg, 18, Willmar, has won national honors in the 4-H foods-nutrition program.

Announcement of their awards of \$500 scholarships was made here today (Nov. 29) at the 1965 National 4-H Club Congress which the girls are attending as state winners.

Miss Barten received one of six \$500 scholarships given in the nation to 4-H'ers for achievements in the poultry project. Heisdorf and Nelson Farms, Inc., Kirkland, Wash., are donors of the poultry scholarships.

Miss Freeberg received one of six foods-nutrition scholarships of \$500 given by General Foods Corporation, White Plains, N. Y.

Miss Barten is the only girl among the Minnesota state livestock winners attending the 4-H Club Congress. Since she began the poultry project 10 years ago, the family poultry flock has grown from 200 pullets to 1,000. In her eight years in the poultry project she has raised 6,150 pullets, 1,100 cockerels and 227 ducks. Besides winning special pins for her poultry records in Scott County, she has won purple ribbons for exhibiting her white Leghorns and demonstrating at the State Fair. She is an active junior leader of her club and has been president, treasurer and secretary. She was one of two Minnesota delegates to the Junior Poultry Fact Finding Conference in Kansas City last year. A senior in Jordan High School, she is the daughter of Mr. and Mrs. Andrew Barten who farm near Belle Plaine.

In the last seven years of her 4-H work, Miss Freeberg has made several hundred family meals including Thanksgiving dinner, nearly 500 loaves of yeast and quick breads, has canned and frozen hundreds of quarts of food. She has received demonstration awards on cheese making at both the Kandiyohi County Fair and the State Fair. This fall her State Fair demonstration was based on two recipes from homemade cheese which she received from a 4-H specialist in home economics in Finland. Because she has shared her knowledge with younger 4-H members, she has received the Minnesota Key Award and was named top 4-H girl in her county. The daughter of Mrs. Alice Freeberg, she is now attending Willmar Junior College, preparing for a teaching career.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
November 26, 1965

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#### 4-H'ERS IN CLOTHING AND GARDEN WIN NAT'L AWARDS

CHICAGO--Minnesota 4-H'ers attending the National 4-H Club Congress here received two more scholarship awards today (Nov. 30) -- for a total of six announced thus far.

The latest 4-H'ers winning \$500 scholarships are Jean Tobolt, 18, Moorhead, for her skill in the clothing project and Jane Graff, 18, Sanborn, for outstanding work in the garden project. The girls are attending the 4-H Club Congress as state winners in their respective projects.

Miss Tobolt's \$500 scholarship was among 12 presented by Coats and Clark, Inc., New York, to 4-H'ers throughout the nation who are taking the clothing project. Miss Graff received one of the eight national \$500 scholarships provided by Allis-Chalmers Manufacturing Co., Farm Equipment Division, to 4-H gardeners

As a junior leader Miss Tobolt has received much satisfaction from teaching younger 4-H'ers how to sew. This year she has made 13 garments, many of which she designed herself, at a saving of approximately \$270. Her nine-year clothing project record shows 86 new garments made. She estimates that she has saved her family at least \$1,000 by making clothing.

She has won numerous championships in clothing in Clay County and two years ago was chosen to the State Dress Revue Court of Honor. She is a 4-H Key Award recipient and a member of the Clay County 4-H Council Board of Directors.

Her enjoyment in working with color, materials and design has been the determining factor in selected her future career--art education. She is a freshman at the University of Minnesota. She is a daughter of the Harold Tobolts.

A 4-H gardener for six years, Miss Graff has increased the size of her project each year--to more than 12,400 square feet--as well as the number of varieties grown including hybrids. During this period she has added many new vegetables to the family's list and has introduced various gardening practices such as succession planting. Besides being champion gardener for three years in Cottonwood County, she has been president of her local club and of the county 4-H council.

A student at Augustana College, Sioux Falls, S. D., she is the daughter of the Alvin Graffs who farm near Sanborn.

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
November 29, 1965

To all counties  
4-H NEWS  
Immediate release

4-H'ERS URGED  
TO ENTER RADIO  
SPEAKING CONTEST

4-H'ers will be studying the rights of the Constitution in preparation for the statewide radio speaking contest, Mrs. Sue Fisher, assistant state 4-H club leader at the University of Minnesota, has announced.

Members will analyze, in their own way, the topic, "Are the Rights Guaranteed by Our Federal Constitution Consistent With the Needs of Today's Society?" Interested members can receive background material from the county extension office.

4-H'ers are asked to consider whether current conditions in our society should dictate changes in the Constitution in part or in its entirety, states Mrs. Fisher. It is felt that the 4-H members will have a better understanding of the Constitution after doing the study necessary for a radio speech.

Each contestant must write an original speech 5 to 7 minutes in length.

\_\_\_\_\_ County 4-H'ers are invited to enter their local club or county radio speaking contest if they are over 14 years of age but not over 19 on Jan. 1, 1966, adds County Agent \_\_\_\_\_.

The Minnesota Agricultural Extension Service and the Jewish Community Relations Council of Minnesota are co-sponsoring the competition for the 24th year.

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 29, 1965

To all counties

ATT: HOME AGENTS

PLENTIFUL SUPPLY  
OF PECANS FOR  
HOLIDAY BAKING

Foods for pre-Christmas baking, for holiday foods and for budget meals are all included on the U. S. Department of Agriculture's list of plentiful for December.

In time for holiday baking is the bumper crop of pecans arriving at food stores. The new crop is estimated at about 86 million pounds more than the 1964 crop--or a third larger. Consequently, shoppers will find an abundance of these nuts at attractive prices for Christmas baking and for candies.

Peanuts, too, will continue to be plentiful for holiday confections.

There are ample stocks of turkeys left after the Thanksgiving feast for more feasting during the Christmas holidays--in fact, for good eating anytime during December.

An abundant supply of broiler-fryers will provide good eating at very low cost during the whole month. Broiler-fryer marketings are expected to be 10 percent greater than they were a year ago.

Among the best buys in vegetables in December will be onions and cabbage. A record crop of late summer onions was harvested, and the fall cabbage crop is 18 percent bigger than a year ago--and the largest since 1956. Both these versatile vegetables can be prepared in many ways to add color and variety to family meals.

Apples, oranges and orange products will be the best values in the fruit category. Count on plenty of orange juice concentrate for the party punches you'll be making at holiday time. Stocks of the frozen orange concentrate are 50 percent greater than a year ago and 13 percent above average. There will also be ample supplies of apples and oranges for nibbling, for salads and desserts, filling stockings and providing decorative edible centerpieces for the table.

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St. Paul, Minnesota 55101  
November 29, 1965

To all counties  
Immediate release

IN BRIEF. . . .

Calf Crop Percentage: Calf crop percentage is the biggest factor affecting profit in beef cattle production. Charles Christians, University of Minnesota extension animal husbandman, says each beef cow kept over winter represents a feed investment. This means cattlemen should find loafers by pregnancy checking and cull them from their herds. A trained veterinarian can pregnancy check cows within 80 to 100 days after the bull has been removed from the herd. This check will also detect any herd sterility problems, like Leptospirosis and Brucellosis.

\* \* \* \*

Bright Outlook for Beef: Beef producers can expect a bright future, according to Paul R. Hasbargen, University of Minnesota extension economist. Demand for beef has increased rapidly during the last 20 years and is expected to continue rising through the coming decade. Total demand for beef is expected to increase about three percent annually, based on increasing per capita demand for beef and annual population growth. To meet rising demand, slaughter of steers and heifers will have to increase some 800,000 to one million head per year, meaning a five percent annual increase in feeder cattle numbers. Minimum average increase in beef cow numbers will also have to be about one million head per year.

\* \* \* \*

Control Fireblight in Early Winter: Trees with dried leaves on branch tips after normal leaf drop may mean Fireblight infection. Bark of infected branches is discolored and sometimes distorted. Neil Miles, University of Minnesota extension horticulturist, recommends pruning infected branches in early winter. Cut 6-12 inches below infected area of branches. Disinfect pruning tools between cuts by dipping in a solution of one part liquid household chlorine bleach and one part water.

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St. Paul, Minnesota 55101  
November 29, 1965

To all counties

Immediate release

STATE SHEEP SCABIES  
INSPECTION PROGRAM  
BEGINS DECEMBER 6

To make sure Minnesota remains a scabies-free area, an inspection program will be conducted for sheep scabies, beginning Dec. 6, 1965, according to the State Livestock Sanitary Board.

State and federal personnel will inspect flocks at no expense to the owner. Any dippings that are needed will be done at state expense.

Minnesota was first declared a scabies-free area in June, 1963.

No general restrictions or restraining quarantine will be placed on flocks inspected this year. The only sheep quarantined will be those found infected with scabies.

This winter's inspection program in Minnesota will include:

\*100 percent flock inspection in the southern tier of counties, including Rock, Nobles, Jackson, Martin, Faribault, Freeborn, Mower, Fillmore and Houston.

\*Inspection of a third of the flocks in the second and third tiers of counties in the southern part of the state: Pipestone, Murray, Cottonwood, Watonwan, Blue Earth, Waseca, Steele, Dodge, Olmsted, Winona, Lincoln, Lyon, Redwood, Brown, Nicollet, Le Sueur, Rice, Goodhue and Wabasha.

\*10 percent flock inspection in other Minnesota counties.

\*Inspection of all sheep flocks moving through livestock auction markets and public stockyards.

There are three main reasons for organizing the inspection program in this manner:

- 1) The only sheep scabies identified in Minnesota were located in the southern part of the state.
- 2) About half of the sheep flocks are in southern Minnesota.
- 3) Iowa is the only bordering state not yet declared scabies-free.

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St. Paul, Minnesota 55101  
November 29, 1965

To all counties  
Immediate release

RECOMMENDATIONS ON  
REGISTERING BRANDS  
UNDER NEW STATE LAW

The new Minnesota law on brands and marks for cattle, horses, sheep and mules has many farmers concerned about how to register, says R. B. Solac, University of Minnesota extension veterinarian.

Registration blanks are available from your county auditor or the State Livestock Sanitary Board, 1246 University Avenue, St. Paul, Minnesota 55104. Cost for registering a brand is \$10 for 10 years.

Before the new law, brands were registered with the county register of deeds. But now, the State Livestock Sanitary Board will register brands and publish a state-wide brand book.

Solac says some farmers have asked, "Must all brands be registered?" This point is not clearly expressed in the new brand law and no opinions or regulations have been written yet.

To use an unregistered brand may not be illegal. But to duplicate a registered brand, even by mistake, could be illegal, says Solac. Only those brands appearing in the State Brand Book will be considered legal evidence of ownership. If a controversy develops, the owner of livestock having an unregistered brand must produce evidence to establish his title to the property.

To knowingly duplicate a registered brand is a felony. Solac says this should not be confused with altering or defacing a brand, which also is a felony.

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St. Paul 55101--Tel. 647-3205  
November 29, 1965

FOR RELEASE: AFTER 7 P.M. WED.,  
DECEMBER 1

#### MINNESOTANS RECEIVE 11 NATIONAL AWARDS AT 4-H CONGRESS

CHICAGO--Two Minnesotans have won national scholarships totaling \$2,400--  
Raychel Ann Haugrud, 20, Pelican Rapids, and Allan F. Kastner, 18, McGrath.

The awards, announced today (Wed., Dec. 1) at the National 4-H Club Congress here, brings to \$6,200 the amount of scholarships received by Minnesota present or former 4-H members this week. Ten Minnesota young people have received the scholarship awards in national competition.

Neither Miss Haugrud nor Kastner is attending the Club Congress.

Not previously announced is another national winner from Minnesota--making 11 national awards for Minnesota 4-H'ers-- Donan Berg, 19, Lafayette. He was one of eight in the nation to win an all-expense trip to the National 4-H Club Congress from Eastman Kodak Co. for his achievements in the photography project.

Miss Haugrud will receive an \$800 scholarship from the Sunbeam Corporation for her achievements in home economics projects. Scholarship awards are not new to Miss Haugrud. As a student at Concordia College, Moorhead, where she maintains almost an A average, she has received the college merit scholarship and several other awards. She was valedictorian of her class in Pelican Rapids High School.

During the 10 years she was a 4-H member in Otter Tail County, she won a state citizenship award, was winner of a trip to 4-H Club Congress as state champion in home economics projects, received the Key Award and was a purple ribbon winner in several State Fair demonstrations.

(more)

## add 1 --Minnesotans receive National Awards

Now a college junior, she is majoring in home economics. She is the daughter of Mr. and Mrs. Raymond Haugrud of Pelican Rapids.

Kastner's award was a \$1,600 scholarship from Homelite for his interest and activities in forestry. A freshman in the School of Forestry at the University of Minnesota, he plans to major in forest resources development. His grandfather, a pioneer forester, has been a prime influence in young Kastner's resolve to go into forestry.

A 4-H project leader in forestry, conservation and home yard improvement, Kastner has carried on such activities as planting more than 3,500 evergreen seedlings, managing and harvesting pulpwood and timber, tapping maple trees and making syrup, planting corn for pheasants and raccoons and planting wild rice for ducks. He has given hunting and fishing reports over radio and has had a newspaper conservation column.

The Aitkin County Youth is putting himself through school by doing a variety of jobs, including shearing and shaping Christmas trees and running a trapline in northern Minnesota.

In 1963 he received the Keep Minnesota Green Junior Forestry Award and this year has received the Albert Woolson Foundation Scholarship and the Chapman Forestry Scholarship.

He is the son of Mr. and Mrs. Elmer Kastner of McGrath.

Berg's interest in photography actually began only four years ago after he received a simple camera for a Christmas gift--and afterward enrolled in the 4-H photography project. His interest was stimulated further as he accompanied his mother on assignments for the New Ulm Journal and took pictures of events she covered. During summer he has worked as a full-time photographer for the Journal.

He is now a student in aeronautical engineering at the University of Minnesota.

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November 29, 1965

Immediate release

#### FARMERS SHOULD PLAN INCOME TAX DEDUCTIONS

Farmers today were advised to begin estimating their 1965 tax liability.

Paul Hasbargen, extension economist at the University of Minnesota, said increased earnings in 1965 will mean increased taxes.

Livestock producers will be particularly affected, according to Hasbargen. The USDA now estimates that the net farm income of all farmers this year will rise 10% to around 14 billion dollars.

When tax liability has been estimated, Hasbargen said that farmers should consider purchases of machinery and equipment in time to receive the depreciation allowance as well as the investment deduction. Purchases of legume seeds, shop tools and repairs can be profitable in high gross income years.

A farmer delaying sales of crops or livestock until after the end of the year should remember that he is not alone. Hasbargen said that the expected high market volume of soybeans, hogs and cattle in January could depress prices in early 1966 and offset tax gains.

Hasbargen said that the outlook for 1966 is even better than for 1965. He urged farmers to consider this projection in planning deductions.

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St. Paul 55101--Tel. 647-3205  
November 29, 1965

FOR RELEASE: AFTER 7 p. m. , WED. , DEC. 1

## TWO U STUDENTS RECEIVE AG ECONOMICS SCHOLARSHIPS

CHICAGO--Two University of Minnesota students in agricultural economics have won \$400 scholarships in national competition.

They are Maurice Wolf, 20, Sanborn, and Larry Wipf, 22, Jeffers.

Announcement of the awards was made at the National 4-H Club Congress here today, although neither of the students is attending the conference. Both of the awards are provided by Chicago and North Western Railway Co.

Wolf is one of three students selected from eight Midwest states to receive the scholarship, which is given to undergraduate students in forestry, agricultural economics or agricultural business. Wipf is one of six scholarship winners chosen from among graduate students in agricultural economics or agricultural business in eight Midwest states.

Wolf is a junior in agricultural economics. Last spring he received the Harold K. Wilson scholarship of \$200.

He has been active in both FFA and 4-H. He received the State FFA Farmer degree and the scholastic award from his chapter. As a 4-H member he received the Key Award, was Redwood County champion beef showman and agricultural demonstrator, was a delegate to the State Junior Leadership Conference and to the leadership training camp at Camp Miniwanca, Mich.

He is the son of Henry Wolfs of Sanborn. He is the second student from Sanborn to be awarded a scholarship at the 4-H Club Congress. Jane Graff has received a scholarship for her 4-H work in gardening.

Wipf is working for his Master's degree in agricultural economics, in price analysis and policy. He was graduated with high distinction from the University of Minnesota in December, 1964. Since 1963 he has been a research assistant in the University's Department of Agricultural Economics.

He is a member of Iron Wedge, senior men's honorary society; Alpha Zeta, agriculture and forestry professional honorary fraternity; and Gamma Sigma Delta, national honor society in agriculture.

As an undergraduate he received the Moorman Manufacturing scholarship, Northwest Feeds scholarship and the Continental Grain scholarship.

He has a record of active participation and achievement in both 4-H and FFA. He was regional and chapter FFA Star Farmer, district FFA president and state vice president.

His parents are Mr. and Mrs. Ernest Wipf, Jeffers.

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65-296-jbn

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 2, 1965

Immediate release

## MANY FOOD SPECIALS FOR MARKETS THIS MONTH

Look for specials on beef--particularly chuck roasts and hamburger--if you want to take advantage of good buys in meat this week.

Poultry is another good buy in the meat department, according to Mary Ryan, extension consumer marketing specialist at the University of Minnesota. An abundant supply of chicken will provide good eating at low cost during all of December, since broiler-fryer marketings are expected to be 10 percent greater than they were a year ago. The ample stocks of turkey left after Thanksgiving will provide festive fare for the Christmas holidays as well as at other times during the month.

Apples, oranges and orange products will be the best values in the fruit category during December. Since the 1965 apple crop is larger than the average of the past five years, prices are particularly attractive this year, Miss Ryan says. With stocks of frozen orange concentrate 50 percent greater than a year ago, specials on frozen orange juice should continue to be more frequent.

Abundant fruits this week, besides apples and oranges, are bananas, red Emperor and green Almeria grapes, grapefruit and tangelos.

In the fresh vegetable section look for values on carrots, dry onions, radishes, potatoes and cabbage. The big crops of onions and cabbage should make these two items among the best vegetables buys in December.

Shelled and in-the-shell nuts are also priceworthy this year, Miss Ryan says. A bumper crop of pecans is arriving at food stores in time for holiday baking, and peanuts, too, will continue to be plentiful for holiday confections.

Consumers who buy mixed nuts in the shell can be assured of getting a mixture of at least 10 percent but not more than 40 percent of almonds, pecans, filberts, Brazil nuts and walnuts if the bag is marked U.S. Fancy or Extra Fancy. These are new U.S. Department of Agriculture grade standards, Miss Ryan reports.

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University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 2, 1965

Immediate release

#### AGRICULTURAL EXTENSION SERVICE CONFERENCE DEC. 7-10

Extension's professional relationships will be the theme of the 1965 conference of the University of Minnesota's Agricultural Extension Service on the St. Paul Campus Dec. 7-10.

Some 250 extension agents from 91 county extension offices and approximately 100 subject matter specialists and administrative personnel from the St. Paul Campus will attend the meeting.

Following a welcome by Luther J. Pickrel, extension director, Sherwood O. Berg, dean of the Institute of Agriculture, will speak on "Relationships within the Institute of Agriculture" at the opening session Tuesday morning in the North Star Ballroom. Special arrangements have been made to have Lloyd H. Davis, administrator for the Federal Extension Service, speak from his desk in Washington D. C.

(more)

add 1--Ag. Extension Conference

Earl L. Butz, dean of the College of Agriculture, Purdue University, will address the group Wednesday morning on the subject, "Woe to Those Who Are at Ease." The remainder of the day will be devoted to panel discussions and workshops on Extension's relationship to other professional groups. Taking part will be representatives from agricultural industries, cooperatives, labor, vocational education, welfare, consumer industries and communications.

Bert L. Ellenbogen, professor of rural sociology, Cornell University, will discuss "Social Forces Influencing the Extension Faculty" Thursday morning (Dec. 9). Charles Ramsey, University extension sociologist, will talk on "Community Power Relationships" at the afternoon session. Workshops to consider the two presentations will follow.

Featured speakers Friday morning (Dec. 10) will be Stanley J. Wenberg, University vice president, educational relationships and development; Elmer Learn, special assistant to the President of the University; George Donohue, professor of sociology; and Pickrel. Pickrel will close the conference Friday noon with remarks on implications for the future.

Extension agent associations will hold their business meetings Tuesday afternoon. Scheduled for Tuesday noon is the annual luncheon of the Minnesota Association of Extension Home Economists. County agricultural agents will have their annual banquet Tuesday evening. Both events are at the Pick-Nicollet Hotel.

Members of Epsilon Sigma Phi, national honorary Extension Service fraternity, will banquet Wednesday evening in Coffman Memorial Union.

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65-297-jbn

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 6, 1965

To all counties  
Immediate release

AGRICULTURE  
GRADUATES  
IN DEMAND

Many students from urban areas are overlooking careers in agriculture.

Keith N. McFarland, assistant dean of the college of agriculture, forestry and home economics said that the University of Minnesota has many more jobs for graduates than graduates to fill the jobs. The starting salaries for students who graduate from agriculture courses average about \$6,000 per year.

McFarland said that only about ten percent of the graduates return to farming. The majority work in related fields which are growing at a rapid pace. The food industry and agricultural sales are among prime employers of agriculture graduates.

According to McFarland, high school graduates with biology backgrounds and interest in biology can compete successfully without ever having seen a farm. "Agriculture," he said, "is basically a biological science."

Jobs held by graduates of the agriculture courses range from agricultural attaches to jobs in conservation, recreation, forestry, education, industry, business and public service.

McFarland said that the problem in filling the jobs is the declining rural population from which the majority of ag students are drawn at the same time the need for these graduates is increasing.

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Department of Information  
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St. Paul, Minnesota 55101  
December 6, 1965

To all counties

4-H NEWS

Immediate release

COMMUNITIES  
BENEFIT FROM 4-H  
HEALTH PROJECT

The fourth H in the 4-H program is the Health H. Some 5,801 Minnesota 4-H boys and girls, enrolled in the health project, emphasize personal health habits and community service.

The ultimate aim of 4-H health education is to guide young people in making wise day-to-day personal choices in health matters, comments Mrs. Claudia Woker, assistant state 4-H club leader at the University of Minnesota. Good personal health practices will influence the health habits of the entire family and the community as well.

In community health activities, various 4-H clubs in Minnesota have collected money for health drives, made gifts for retarded children at state hospitals, distributed food to the needy and participated in clean-up campaigns.

4-H health leaders work closely with local public health departments, physicians, dentists, hospitals, and voluntary health organizations such as the Red Cross and the Heart Association.

Good 4-H junior or adult health leaders will

- see the importance of health habits and promote physical and dental checkups and immunizations in their 4-H clubs.
- select a 4-H community health activity based on a countywide health plan and work with schools and other groups.
- learn about health careers.
- invite community leaders such as a doctor, veterinarian, or school counselor to give short talks on youth health problems.
- arrange tours to study health workers in action.
- encourage 4-H members to volunteer for hospital and clinic work.

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St. Paul, Minnesota 55101  
December 6, 1965

To all counties  
ATT: HOME AGENTS  
Immediate release

#### FILLERS FOR YOUR COLUMN OR WOMEN'S PAGES

One out of every three Americans or 63 million people are 20 percent or more overweight, it is estimated.

\* \* \*

Cheese has protein of as high quality as meat. It also has most of the food values of milk. Cheese main dishes are good eating, good nutrition-wise and an aid to the family budget.

\* \* \*

Because milk is an essential food, it shouldn't be left out of weight reduction programs. Milk contributes more toward total nutrient needs for the number of calories involved than any other food.

\* \* \*

Generally, the redder the skin, the more apples cost.

\* \* \*

Loose heads of lettuce often sell for less than tight heads; yet loose heads usually have more green leaves and thus more food value.

\* \* \*

Did you know that there are more than 50 processed potato products? These processed products--shoestrings, potato pancakes, chips, puffs, frozen French fries and many others--have halted a longtime decline in per capita use of potatoes. Although hotels, restaurants, hospitals and other institutions are the largest market for processed potatoes, a third of the dehydrated mashed potatoes and nearly a third of the frozen French fries are bought by consumers at local food stores.

\* \* \*

If you want to extend the life of the Thanksgiving plant you received, remember that it needs light and water to continue blooming. University of Minnesota extension horticulturists suggest that you keep it in a south or west window for as much of the day as possible. Check the soil several times a day to see if it is dry to the touch. Keep it moist, but don't overwater.

Keeping the plant out of drafts and at a lower night temperature will also prolong its life.

Department of Information  
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St. Paul, Minnesota 55101  
December 6, 1965

To all counties  
Immediate release

IN BRIEF...

New Brand Law: Under new Minnesota law, brands and marks for cattle, horses, sheep and mules must be registered with the State Livestock Sanitary Board, 1246 University Avenue, St. Paul, Minn. 55104. Registration cost is \$10 for 10 years. Using an unregistered brand may not be illegal, says R. B. Solac, University of Minnesota extension veterinarian. But duplicating a registered brand, even by mistake, could be illegal. Only brands appearing in the State Brand Book will be considered legal evidence of ownership. In a controversy, says Solac, the owner of livestock having an unregistered brand must produce evidence to establish his title to the property.

\* \* \*

Bull Registration and Licensing: Livestock producers regularly renting three or more bulls must get a license and register each bull with the State Livestock Sanitary Board, 1246 University Avenue, St. Paul, Minn. 55104. The act requiring a license and registration of bulls becomes effective Jan. 1, 1966.

\* \* \*

Rabbit Repellents: Chemical rabbit repellents applied in right amounts with proper solvents can effectively keep rabbits from gnawing young trees during the winter season. Apply repellents in fall before freezing to make trees undesirable in taste and smell. If you wait until after freezing temperatures set in, warm the solution before painting or spraying on trunks and branches. Bill Miles, University of Minnesota extension forester, says effective commercial repellents generally include one or more of the chemical ingredients abbreviated as TNB-A, TMTD, or ZAC.

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Department of Information  
and Agricultural Journalism  
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St. Paul, Minnesota 55101  
December 6, 1965

To all counties  
Immediate release

WATER RESOURCES:  
NATIONAL CRISIS?

Water that flows so plentifully from the tap, sometimes pushes Minnesota rivers over their banks, and fills nearly 14,000 Minnesota lakes may be more scarce and precious than we think.

In fact, "Water Crisis" from a national point of view was the theme of a session of the National Association of State Universities and Land-Grant Colleges meeting recently in Minneapolis.

G. M. Browning, associate director of the experiment station at Iowa State University, explained that annual precipitation in the U. S. ranges from 5 to 140 inches, and averages 30 inches.

About 21 inches, or 70 percent, disappears into the ground, evaporates from the soil surface, or is transpired by vegetation. The remaining 9 inches of water finds its way to the ocean, mainly as streamflow. And this is available for non-agricultural uses and irrigation besides.

Curtis Larson, University of Minnesota agricultural engineer, points out how the problem varies. In the west, annual runoff is less than 9 inches; yet much water is needed for irrigation and other consumptive uses. In the East, the big problem is pollution which makes a good deal of the water unavailable for reuse.

add 1 -- water resources

Minnesota, says Larson, has a small scale image of the U. S. problem. There is as little as an inch of runoff in the western part of the state, and 8 to 10 inches available in the eastern part. But we have, of course, less of a pollution problem.

Demand on water supplies are increasing. Since 1940, Browning says, water use by agriculture jumped 60 percent and by nonagriculture uses, 190 percent.

Total agricultural use of water will continue to increase, but as a percentage of all water used, agriculture use will decrease from its present 37 percent to 19 percent by 1980.

Industrial requirements are expected to more than triple the 1960 figure by 1980, and to be 7 times the 1960 figure by the year 2000.

Nationally, Browning continues, there is no water shortage currently. But there may be trouble ahead if hard priorities are not placed on water use.

Agriculture so far has had first call on the nation's water supply, says Browning. But this won't continue indefinitely. With more pressure for industrial, recreational and urban use of water, agriculture increasingly will have to justify every acre foot of water it uses.

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Department of Information  
and Agricultural Journalism  
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University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 7, 1965

Immediate release

#### SHOP PROJECT WINNERS SHOW ENTHUSIASM IN 4-H

Eight Minnesota 4-H boys have been named state blue ribbon winners in the 4-H shop project.

Their records reveal dedication in teaching younger members, ability in designing furniture and in working with various woods.

Receiving cash awards from the Republic Steel Corporation, Cleveland, Ohio, are Harold Asleson, 18, Lake City; Rolf Naley, 16, Eagle Bend; Dale Reed, 18, Virginia; Tom Tiffany, 15, Redwood Falls; Mark Warnhoff, 16, Little Falls; James Harder, 18, Bingham Lake; Loren Hafterson, Jr., 5104 Thatland Road, Robbinsdale, and Phillip Dietz, 18, Sleepy Eye.

Asleson made a walnut bookcase with movable shelves and a cedar chest for the family living room. He also built a barbecue set, fiberglass chair, mosaic tile table and walnut desk. This year as junior leader in Wabasha County, he helps younger members with projects and their records. Because of his interest in the 4-H shop project, he plans to attend trade school and become a tool and die machinist.

Naley, enrolled in the shop project for eight years, has assisted younger members in 4-H as the president of his local club in Todd County. This past summer he poured a concrete driveway and helped build a new home for the family. He has made a set of shelves of birch plywood faced with birch molding, a picnic table with welded steel frame and a birch coffee table.

Reed believes that 4-H demonstrating has helped him the most throughout his 4-H career. The St. Louis County youth has given demonstrations on wood joints, first aid for ailing drills and proper care and use of tools. Making 12 articles in the shop project, he has worked at building a new family home, a two-car garage and a lake cabin. As junior leader of his local club he has held shop project meetings for younger members.

(more)

add 1--Shop project winners

Tiffany has taken the shop project for four of his seven years in 4-H. Articles he has made include a sheep trimming stand, turned walnut lamp and walnut chest of drawers. As vice president of his local club he assisted with clean-up of the Redwood County fairgrounds and has helped members in their projects and records. In 1964 he was named Craftsman of the Year for Redwood Falls High School.

Wamhoff has given various Morrison County fair demonstrations ranging from electric safety to constructing border fences and use of wood chisels. He has been president of his local club and has assisted with the county fair booth, records and project meetings. In his six years of 4-H, he has made a total of 39 articles.

Harder is an apprentice in a cabinet shop. During his years in the shop project, he had made a sewing cabinet, a bench, hassock, chair and a pair of vanity lamps. He has also upholstered five chairs and made a three-piece bedroom set. As president of a 4-H club in Jackson County, he helped younger members with their projects, organized programs, set up window displays and raised money for a social service project.

A senior in Robbinsdale Senior High School, Hafterson has entered his articles in the State Fair and Brookdale Industrial Fair. He has made an end table, a gun rack, formica drop leaf table and a hydroplane. As vice president of his local club, he attended the State 4-H Camp Council Workshop at Camp Ihduhapi and is now serving on the Hennepin County 4-H Club Council.

When helping build their new home, Dietz assisted with building the fireplace, cedar lining two closets, finishing doors and installing them, sealing the inside of cupboards, and finishing the ash paneling. In his shop project he has made 88 articles including a mahogany buffet, modern cherry coffee table, modern contemporary walnut chair and ottoman. He has received the Key Award and the Junior Leadership Club's Citizenship Award for Brown County. Holding various offices in the local club and county federation has given him the opportunity to work with younger members and local businessman. He plans to major in architectural engineering.

# # #

65-299-smk

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 8, 1965

Immediate release

#### OFFICERS OF EXTENSION AGENT ASSOCIATIONS ELECTED

Officers of the two county extension agents' associations were elected this week during the annual conference of the University of Minnesota's Agricultural Extension Service on the St. Paul Campus.

New officers of the Minnesota Association of Extension Home Economists are: president, Arvalda Nickel, Benson; first vice president, Mrs. Naomi Fruechte, Caledonia; second vice president, Rita Akemann, Lakefield; secretary, Eileen Anderson, Perham; treasurer, Mrs. Margueriete Green, Gaylord. Officers are elected for one year except the treasurer, who has a two-year term.

New president of the Minnesota Association of County Extension Agents is Warren Liebenstein, Faribault. Other officers are Richard Radway, Rochester, vice president and Clayton E. Grabow, Milaca, secretary-treasurer. Six new members were elected to the board of directors: Floyd H. Bellin, Jr., Fairmont; Matthias Metz, Wabasha; Burton Olson, Foley; Ernest Nelson, Detroit Lakes; Arnold Heikkila, Bagley; and Rueben M. Boxrud, Slayton.

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65-300-jbn

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 10, 1965

\* \* \* \* \*  
\* For P. M. release \*  
\* Monday, Dec. 13 \*  
\* \* \* \* \*

### 1966 FARM BILL IMPLICATIONS FOR MINNESOTA REVIEWED

University of Minnesota agricultural economists have taken a long look at the 1966 Food and Agriculture Act and how it will probably affect farmers and other citizens in Minnesota and nearby states.

They expect the new legislation to:

- \* Contribute to an increase of about \$2.3 million in gross returns to wheat farmers in Minnesota. The increase will be about \$36 million in the area including Minnesota, North and South Dakota, and Montana, and will leave wheat output at about its present level.

- \* Boost the number of farms in maximum participation in the feed grains program, through added incentives. But changes in feed grain and wheat programs will have little if any immediate effect on livestock producers costs or incomes.

- \* Improve incomes for Minnesota sheep producers in the 1966 marketing year and beyond, because of higher support levels for wool.

- \* Lead to a relatively small diversion of Minnesota land under the new Crop-land Adjustment Program.

- \* Maintain relatively stable food prices so that, with increasing average income of Minnesotans, percent of income spent for food will continue to decline.

- \* Make up a continually declining proportion of Minnesota citizens' average earnings and tax payments, since average incomes are increasing faster than farm program costs.

Although the new bill contains some new dairy legislation, the economists explain that the impact on the dairy industries depends on extent of their adoption, since none is mandatory, and the methods of administration--which are not yet stated.

Agricultural economists who prepared the statement include Vernon W. Ruttan, department head; W. K. Bryant; R. F. Dahl; K. E. Egertson; J. W. Hammond; P. Hasbargen; J. P. Houck; E. F. Koller; H. R. Jensen; M. E. Ryan and A. Waldo.

Commodity programs under the act which affect Minnesota directly include those for wheat, feed grains, dairy and wool. Observations from the economists on these programs include:

WHEAT--Most significant change for 1966 is that wheat for domestic food use will be supported at 100 percent of parity. Parity as of July 1, 1965, was \$2.57 per bushel.

(more)

add 1--farm bill

Participating farmers will receive domestic marketing certificates worth about \$1.32 per bushel--the difference between parity and the \$1.25 loan rate--on about 45 percent of their projected yield of wheat from allotted acres.

Another change is in the export certificate feature. Certificate costs to wheat exporters will be levied on a day-to-day basis rather than on a pre-determined annual value as in 1965. Exporters pay into the certificate pool when the world price is above the U.S. price, and draw from it when the world price is below the U.S. price. Any pool surplus at the end of the year would be distributed to eligible producers, but this is unlikely since the U.S. price probably will not fall much below world levels.

Participation in the wheat program, the economists say, is expected to increase for two reasons:

1) the gap between the average price received by participating and nonparticipating farmers will widen, and

2) the amount of wheat per acre on which domestic certificates are received will increase because projected rather than average yields will be used. About 76,000 Minnesota wheat acres were diverted in 1965. The 1966 diversion will go up because of increased overall participation and new authorizations for additional voluntary diversion up to half of the farm allotment.

Upper Midwest wheat production will probably stay about the same as in 1966.

The Act continues to shift farm income support for wheat away from high market price supports toward direct payments with lower loan rates. The market price, depending on quality, may not rise much above the \$1.25 loan level since the Commodity Credit Corporation still has authority to sell wheat in the market when the price is 105 percent of the loan rate plus carrying costs.

The loan rate may be reduced below \$1.25 after 1966, say the economists, to keep noncertificate wheat competitive in world markets and in domestic feed grain markets.

FEED GRAINS AND SOYBEANS--Major provisions of the current program remain in force. Participants are entitled to price-support loans and direct price support payments for diverting at least 20 percent of their feed grain acreage base.

Changes in mechanics will probably make the program more attractive to farmers who wish to participate at the maximum level.

Unclear at present is whether Minnesota's total participation in 1966 will be above or below the 2.3 million acres of 1965. Attractiveness of the program to individual farmers depends on their land's productivity, their production costs, and their opportunities to use their released labor somewhere else.

(more)

add 2--farm bill

Under the new law, the Secretary of Agriculture has more leeway in deciding how and when to apply new program provisions, which include: (1) using projected rather than average yields as a basis for payments, (2) new flexibility favoring producers making large acreage cuts, (3) a loan rate reduction which may encourage participation by permitting open market price declines and (4) possible authorization (but probably not offered until after 1966) for raising soybeans on permitted feed grain acres without losing support payments.

The "projected yields" will be higher than average past yields and should be especially attractive to growers with rising output per acre. Minnesota's statewide average yield figure used in computations was 58.6 bushels per acre in 1965. The projected state average is 70.1 bushels per acre for 1966.

Carry-over feed grain stocks now at 54 million tons, will probably continue to decline. Prices for feed grains may fall because of reduced 1966 loan rates, but net farm income from feed grains will stay about the same because of supports and diversion payments.

Nearly 61 percent of Minnesota's eligible feed grain acreage was diverted in 1965, and the average payment was \$1,193 per farm. With new incentives, the number of fully participating farms will probably go up during the next four crop years.

DAIRY--The new bill contains three additions to the current dairy program-- (1) a Class I base program for federal order milk markets, (2) extension of the federal order program to manufacturing milk producing areas, and (3) authorization for the Secretary of Agriculture to purchase dairy products in commercial markets for domestic relief, foreign distribution, or other government programs when CCC stocks are insufficient.

WOOL--Under a modified extension of the National Wool Act of 1954, wool prices continue to be supported via direct payments to producers. The support price is 65 cents per pound for 1966, compared with 62 cents in recent years. Assuming wool production about equal to the 5.6 million pound average for the past three years, the state's income from wool should increase about \$170,000.

OTHER LIVESTOCK--Changes in the feed grain and wheat programs are expected to have little, if any, immediate effect on Minnesota livestock producers' production costs or incomes.

One aspect of the wheat program may affect livestock prices. Some noncertificated wheat may move out of storage and onto the market at prices competitive with other feed grains. This may not affect overall feed costs, but may alter feed mixes. Thus, cattle and hog feeders need to consider wheat along with feed grains as a feed source. On the other hand, quality premiums usually paid here will prevent local wheat from being fed in large amounts.

(more)

add 3--farm bill

CROPLAND ADJUSTMENT PROGRAM--This part of the 1965 Act is new. It is intended to help reduce surplus agricultural production and provide more open space for outdoor recreation. It has a long-term cropland diversion plan (resembling the old Soil Bank Conservation Reserve) and authorization for government land-buying.

Under the diversion program, \$225 million is authorized annually for encouraging farmers to remove his feed grain and/or wheat base acreage from production for a 5-10 year period.

Participating farmers receive an annual payment of 40 percent of the estimated value of the crops diverted part of the cost of planting and maintaining the land in a new use. There may be an annual sum if the public is allowed free access for recreational purposes.

The economists say this diversion program will be most attractive to farmers having small wheat and feed grain allotments as part of larger tracts of land. It may also attract land now being released by the Soil Bank Conservation Reserve. Few acres in the southern part of the state will be attracted.

A protection feature for local communities limits the amount of land to be put in the program to 10 percent of county allotments in any one year and 25 percent over the program's life.

Considering 1966 payment rates for corn and wheat acreage and past program experience, the economists expect less than 1 million Minnesota acres to be diverted by the Cropland Adjustment Program. It will facilitate retirement of some farmers and provide some public land for recreation.

While effects of the land purchase program are more difficult to predict, the economists expect cropland bought for public recreation to come from areas other than the Twin Cities Metropolitan Area and places near other population centers.

(more)

add 4--farm bill

EFFECT ON PUBLIC--Intent of the new bill appears clear, say the economists. The emphasis is on stability in consumer prices and financing of farm programs through direct payments from general tax revenues.

Effect of new legislation on food and clothing prices will probably be negligible. A possible exception is in milk and dairy products, where slight retail increases might occur, depending upon measures adopted.

However, as average incomes increase, stable prices mean that the portion income spent by Minnesota families after taxes will continue to decline--below the current one fifth.

Similarly, costs of these programs will make up a continually declining proportion of Minnesota citizens' average earnings and tax payments.

Expenditures for domestic agricultural programs currently represent about 4 cents out of each federal tax dollar. The nation's citizens average about \$21 per person annually for these programs. Food expenses are about \$500 per person per year.

# # #

65-302-pjt

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 13, 1965

To all counties  
Immediate release

UM ANNOUNCES  
RECOMMENDED CROP  
VARIETIES FOR 1966

Seven field crop varieties have been added and eight have been dropped from the list of varieties recommended for 1966 by the University of Minnesota.

Harley J. Otto, extension agronomist, says the relatively new varieties added are: Tippecanoe and Lodi oats; Chris wheat; and Traverse, Portage, Harosoy 63, and Lindarin 63 soybeans.

Varieties dropped from the list were: Goodfield, Dodge, Garry, and Rodney oats; Acme, Harosoy, and Lindarin soybeans; and Adams rye.

Tippecanoe oats, an early variety, replaces Goodfield. In statewide tests, Tippecanoe showed better standing ability and higher yield and headed out three days earlier than Goodfield.

Lodi is tall, late maturing and the highest yielding oats variety tested in recent years. Lodi also has the best standing ability in this maturity class and replaces Garry and Rodney oats.

Like all other commercially grown varieties, Tippecanoe and Lodi oats are resistant to all common races of stem rust, except race 6AF, the most prevalent race in Minnesota in 1965. Tippecanoe is susceptible to crown rust and moderately resistant to smut. Lodi is resistant to smut and moderately susceptible to crown rust.

Dodge oats was dropped because it is lower in yield than Garland. Otherwise, Dodge is similar to Garland in maturity and disease resistance.

Traverse soybeans, a medium maturing variety, performs about the same as Grant, but with less lodging. Because it produces a good size, solid color bean, Traverse shows promise for use in certain Oriental food products, if export markets can be developed.

add 1 - crop varieties

Portage soybeans is a very early variety. Because of higher yield, it replaces Acme in this maturity group and is recommended for the state's northern maturity zone.

Similar in other aspects to Harosoy and Lindarin respectively, Harosoy 63 and Lindarin 63 soybeans have resistance to Phytophthora root rot, which has shown up in a few widely scattered low places in southern Minnesota. The resistant varieties offer advantages where this disease is present in destructive amounts.

Adams rye was dropped because it is less winterhardy than Caribou.

Chris is a beardless hard red spring wheat of medium height and maturity, with moderate resistance to bunt. Chris has averaged higher yields and heavier test weight than the best other recommended varieties. In 1965, it showed better resistance to leaf rust than other current varieties. Chris has satisfactory milling and baking characteristics.

Recommended varieties listed for 1966 include:

Soybeans: A-100, Chippewa, Chippewa 64, Flambeau, Grant, Harosoy 63, Lindarin 63, Merit, Ottawa Mandarin, Portage, and Traverse.

Hard red spring wheat: Crim, Chris, Justin, Pembina, and Selkirk.

Durum wheat: Lakota, and Wells.

Winter wheat: Minter.

Barley: Larker, Parkland (northwest area only), and Trophy.

Oats: Garland, Lodi, Minhafer, Portage, and Tippecanoe.

Winter Rye: Caribou, and Elk.

Flax: Bolley, B5128, Redwood, Summit, and Windom.

Millet: Turghai, Empire, and White Wonder.

Sunflowers: Arrowhead, and Mingren.

Dry Peas: Chancellor, and Strol.

Birdsfoot trefoil: Empire.

Red clover: Dollard, and Lakeland.

Sweetclover: Evergreen, and Goldtop.

add 2 - crop varieties

Bromegrass: Achenbach, Fischer, and Lincoln.

Timothy: Climax, Itasca, and Lorain.

Kentucky Bluegrass: Park.

These recommendations are based on trials conducted at agricultural experiment stations at Rosemount, St. Paul, Waseca, Lamberton, Morris, Crookston, Grand Rapids and Duluth, and on farmers' fields. Plots were handled so the factors affecting yield and other characteristics would be as similar as possible for all varieties.

For complete information about recommended varieties, read the University's Agricultural Experiment Station Miscellaneous Report 24. The report will be available in early January, 1966.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
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To all counties

4-H NEWS

Immediate release

4-H RECREATION  
DEVELOPS  
LEADERSHIP SKILLS

A necessary part of every well developed 4-H club meeting is a carefully planned recreation program.

4-H recreation provides an opportunity for members to learn, participate, and assume leadership responsibilities, says William Milbrath, extension specialist, young adults program, at the University of Minnesota.

Recreation leaders in 4-H and other groups as well need to choose activities that fit in with the group, setting, room, time, activity and program.

Games can be of several types. Pre-party games and mixers are used with early-comers and new arrivals to put them in a good frame of mind for further activities. Mixers lead to good fellowship. Singing games and musical mixers require considerable room and special arrangements but can add a great amount of fun and fellowship. Songs, stunts and stretchers are good if 4-H'ers have been inactive for a considerable time.

When leading games keep these rules in mind:

- Plan ahead the games to be played.
- Study each game thoroughly and know the games you are going to teach.
- Keep your explanation brief and clear; speak clearly and distinctly and demonstrate or walk through difficult parts.
- Stop the game when all are having a good time.
- Always finish with a game everyone knows and likes.
- Evaluate your recreation program.

After recreation leaders have gained confidence and approval in their clubs, opportunities may arise for junior leaders to serve community groups and institutions. Children's homes, hospitals, homes for the aged, church and welfare institutions welcome caroling parties, musical shows, dance and dramatic groups.

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 13, 1965

To all counties  
ATT: HOME AGENTS  
Immediate release

For use week of Dec. 20  
or after

IS YOUR CREDIT  
OVER-EXTENDED?

Credit buying provides a standard of living which most American families couldn't obtain otherwise. But the danger comes when you over-extend your credit.

"Credit is the oil in the nation's economy, but like machinery there can be too much oil or too little," Mrs. Esther Peterson, chairman of President Johnson's Consumer Affairs Council, said at a consumer clinic in the Twin Cities recently.

Credit buying has many advantages, according to Mary Frances Lamison, extension home management specialist at the University of Minnesota. It makes possible enjoyment of many goods and services while families are paying for them. The majority of families, for example, could not pay cash for a home or a car. Secondly, credit buying eliminates the need to carry cash to pay for a large number of purchases made at one time. It also helps to establish a credit rating for the family so future credit purchasing is possible.

But credit buying has disadvantages as well, Miss Lamison points out. In the first place, many people have no idea what rate of interest they pay. There's also the temptation to keep on charging blindly beyond the limits of the paycheck.

"The process by which families are drawn into over-extended credit follow a subtle, step-by-step process," Miss Lamison says. A family may be buying a new home, a new car, then household appliances, clothing, sporting goods and other items until finally it is impossible to pay all the the bills each month.

To avoid the danger of over-extended credit, each family must decide if the goods or services give enough satisfaction to warrant the cost of "renting" money to get them or whether they would rather save the cost of interest on credit payments so they could later satisfy additional needs and wants. "It is always wise," Miss Lamison says, "to set spending limits beyond which you won't go until previous spending is paid in full."

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

IN BRIEF.....

Which Gasoline for Winter? Many persons burn premium gasoline during the winter, even though their car runs well on regular in summer. They think premium gasoline has better starting characteristics. Don Bates, University of Minnesota extension agricultural engineer, says this is a false idea. If produced by the same manufacturer at the same season, premium and regular grade gasolines have essentially the same blending and starting characteristics.

\* \* \* \*

Ground Soybeans for Dairy Feed: If soybeans cost less per pound than soybean oil meal, dairymen can profitably feed ground soybeans to dairy cows. Because of high oil content, ground soybeans about equal the meal in total feeding value, says Bill Mudge, University of Minnesota extension dairyman. But ground soybeans have less protein than the meal, and one-fourth more of the ground beans should be fed in rations. As with any feeding change, substitute ground soybeans for meal gradually. In warm weather, grind soybeans frequently to prevent rancidity.

\* \* \* \*

Tip on Feeding High Moisture Corn to Dairy Cows: Unless more pounds of soft, high moisture corn are fed to make up for lower dry matter content, high producing dairy cows may be short on feed energy. Bill Mudge, University of Minnesota extension dairyman, says corn with 30 percent moisture has only 82 percent as much dry matter as corn with 15 percent moisture. To get the same feeding value, cows should be fed one-fourth more pounds of the 30 percent moisture corn than normal dry corn. Mudge offers this tip: If you're feeding soft corn and milk production is below normal, try feeding more soft corn to make up for the lower dry matter content. Then watch the milk scale to see if cows respond to the extra feed.

\* \* \* \*

Department of Information  
and Agricultural Journalism  
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University of Minnesota  
St. Paul 55101--Tel. 647-3205  
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Immediate release

## CARE FOR GIFTS OF FOOD SO THEY DON'T SPOIL

Christmas gifts of food may present the problem of spoilage unless the recipient cares for them properly.

The trouble comes because the larder is usually full at holiday time and often considerable time elapses before the gifts of food are used.

Verna Mikesh, extension nutritionist at the University of Minnesota, gives some suggestions on how to care for specific food gifts so they will not spoil:

. Ham. Remember that ham, smoked shoulder butts and picnics are all perishable and should be treated as fresh meat--refrigerating immediately and using as soon as possible. If left tightly wrapped, these meats will mold after a period of time even if they are kept in the refrigerator. If you cannot use ham within a short period, freezing will preserve it for up to two months. Be sure to wrap it in moisture-vapor-proof material to keep out the oxygen that hastens rancidity. Polyethylene bags do not provide sufficient protection.

Canned hams, 3 pounds or larger, should be refrigerated. It's best not to freeze canned hams because freezing changes the texture. In the refrigerator canned hams will keep for an indefinite period. Small cans of cured meats usually need no refrigeration--but check the label.

. Cheese. Cheese molds after a time even in refrigerator storage. Freezing will preserve it for six months or longer, although the texture may change somewhat after freezing.

Success in freezing cheese depends on variety and on freezing the cheese in small amounts. Cut the cheese into half-pound pieces or smaller and wrap in aluminum freezer foil, pressing the foil tightly against the cheese to eliminate air pockets. Small cheeses may be left in their original packages, but overwrap them with aluminum foil. When freezing a salty cheese like blue or Nuworld, use another wrap between the cheese and the foil or the salt may eat through the foil. Cheddar, Brick, Swiss, Provoloni, Port du Salut, Liederkrantz, Camembert, Parmesan, Romano and Mozzarella will freeze satisfactorily.

(more)

## add 1 --Freezing of Food Gifts

When you are ready to use the frozen cheese, thaw it in its wrapper in the refrigerator. Once it is thawed, let it stand at room temperature an hour before serving it.

. Apples. If possible, store in perforated plastic bags in the refrigerator or in a cool basement--but above freezing temperatures.

. Oranges and grapefruit. Store in a cool room (60 to 70°F.). If citrus fruits are held too long at too low temperatures, the skin becomes pitted.

. Candy. Almost all candies keep fresh for a year or longer when frozen and kept at 0°F. Spun candy chips, chocolate covered nuts and candy with hard centers may crack or split. Marshmallows freeze well. Overwrap boxes with a good moisture-proof freezer wrap to prevent damage from moisture condensation when the candy thaws. When you take the candy out of the freezer, don't remove the moisture-proof wrap until the candy has warmed to room temperature--from 4 to 8 hours.

Nuts. They may be frozen to prevent rancidity. Salted nuts will keep in the freezer about 6 months, unsalted nuts from 9 to 12 months. Package in moisture-vapor-proof freezer wrap.

. Fruit cake. When tightly wrapped or kept in a tin can and frozen, fruit cake will keep indefinitely.

# # #

65-305-jbn

Department of Information  
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December 16, 1965

Immediate release

#### 4-H'ERS PREPARE FOR RADIO SPEAKING CONTEST

Plans are under way for the 24th annual statewide 4-H radio speaking contest to be held between January and March, 1966..

Topic for this year's contest is "Are the Rights Guaranteed by Our Federal Constitution Consistent With the Needs of Today's Society?" Interested members can receive background material from their county agent.

To be eligible to enter the contest, 4-H'ers must be over 14 years of age but not over 19 on Jan. 1, 1966, according to Mrs. Sue Fisher, assistant state 4-H club leader at the University of Minnesota.

County contests will be held in January and district contests in February. State finals are scheduled for March 7 and 8 at the University of Minnesota, St. Paul Campus.

The Minnesota Agricultural Extension Service and the Jewish Community Relations Council of Minnesota co-sponsor the event. Awards are given by the Jewish Council.

Last year more than 1,500 Minnesota 4-H'ers participated in county competition arranged under the direction of the county extension agents.

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65-304-smk

Department of Information  
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University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 16, 1965

Immediate release

## HERE'S HOW TO KEEP THOSE HOLIDAY PLANTS BLOOMING

Want to enjoy the gay blooms of your poinsettia all during the holiday season?

Then keep it in bright light--preferably sunlight--during the day, in a cool room at night and water it before the soil is dry to the touch.

These rules apply to any of the flowering greenhouse plants you may have in your home at this time of year, according to C. G. Hard, extension horticulturist at the University of Minnesota. However, the poinsettia has a particular sensitivity to drafts. Setting it near a window at night, near a door or a cold or hot air register may mean it will quickly wilt and die. Since it is of tropical origin, it thrives best in temperatures between 70 and 75°. The blooms will not last if temperature is below 60° or above 75° F.

If the leaves of the poinsettia turn yellow and drop, it is probably an indication of lack of water, Hard says. He suggests checking the poinsettia and all other Christmas flowering plants at a particular time each day to be sure they are not dry. Keep the soil moist but not wet. Be sure the water you use is at room temperature.

The University horticulturist gives these additional tips on care of some of the other popular gift plants:

. Azalea. Blossoms will last longer if the plant is kept in a cool room and if there is a constant moisture supply.

. Cyclamen. Always water around the edges of the pot. Water in the crown may cause rot. Never let the soil dry out completely while the plant is in flower or leaves will turn yellow. Leaf yellowing as well as bud blasting may also occur if the night temperature is too high or if the plant is not getting enough light during the day.

. Jerusalem cherry. Bright light during the day and a cool room at night are essential. Remember that the fruits will drop naturally after they mature.

. Chrysanthemum. Partially opened flowers will not develop if the plant does not get sunshine. Sunshine during the day, cool night temperatures and sufficient moisture will give you long-lasting blooms. # # #

65-303-jbn

Department of Information  
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University of Minnesota  
St. Paul 55101--Tel. 647-3205  
December 16, 1965

Immediate release

### THREE STATE 4-H PROJECT CONFERENCES TO BE HELD

Some 125 junior and adult 4-H leaders will attend three state 4-H conferences, Dec. 28-30, on the University of Minnesota's St. Paul Campus.

The three conferences are the State 4-H Agronomy Conference for adult leaders, the State 4-H Electric Conference for junior leaders and the new 4-H Automotive Conference for adult leaders.

Purposes of the conferences are to train project leaders to assist with their assigned projects on a county-wide and club basis and to give recognition for achievement and leadership in the project, according to Leonard Harkness, state 4-H club leader at the University of Minnesota.

The electric conference will highlight information on understanding electricity, electrical safety, 4-H electric demonstrations, techniques in conducting electric project meetings and career opportunities. Tours will be conducted to an electric generating plant, airline overhaul base and an airport. The electric conference is sponsored by the North Central Electrical League.

Included in the automotive program are talks on automotive safety, care of the automobile, automotive demonstrations and ways to organize project groups. Delegates will tour the Ford Assembly Plant. The Firestone Tire & Rubber Company sponsors the automotive conference.

Topics included in the agronomy conference are science in 4-H and its relation to the agronomy project, procedures for carrying out the agronomy project, production and distribution of foundation seed, keeping the seed pure, importance of weed control and principles of soil fertility. The group will visit the soil testing laboratory, the Grain Exchange and the Federal Reserve Bank. The agronomy conference is sponsored by Peavey Company.

# # #

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Department of Information  
and Agricultural Journalism  
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University of Minnesota  
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To all counties  
Immediate release

HYBRID BARLEY  
UNDER STUDY  
BY SCIENTISTS

Although there has been much speculation about introduction of hybrid barley, commercially feasible production of hybrid barley is still several years away.

That conclusion is from D. C. Rasmusson, University of Minnesota plant geneticist, who says that interest in hybrid barley remains high in spite of slow progress in its development.

A very low percentage of cross pollination is the greatest barrier to the development of hybrid barley. Recent success in wheat, sorghum and corn hybrids--all having pollination habits similar to those of barley--are significant to the barley researchers.

Rasmusson says that he expects hybrid barley to yield about 20-30 percent more than conventional varieties. He points out, however, that obtaining satisfactory malting qualities may be a problem because many qualities of hybrids are intermediate to those of their parents.

Male sterility is the vital first step in the process which enables hybridization to occur in plants such as barley.

Two methods of producing male sterility in great numbers of plants are currently being tried.

The first method requires a gene for male sterility and a gene for sensitivity to DDT. When a plant inherits recessive genes from both parents, it is male sterile and insensitive to DDT. The remaining plants are male fertile and sensitive, and thus may be killed off by spraying the field with DDT, with only the male sterile plants surviving.

add 1 - hybrid barley

The second method involves an extra chromosome which bears a gene for male sterility. These plants can produce male sterile offspring and Rasmusson said that this method shows a great deal of promise. However, plants with the extra chromosome often lack vigor and there is some question as to what extent this lack of vigor will hinder this method.

Both of these methods differ from the methods used to produce hybrids in the past and Rasmusson said that researchers must feel their way because there are no guideposts.

The researcher's job is also compounded by mere numbers. There are about 7,000 varieties of barley and Rasmusson noted the difficulty in selecting suitable parents for a hybrid variety.

Some encouraging cross pollination figures have come from test fields in Arizona and California. Rasmusson said that it is possible that the climatic conditions in those places make greater cross pollination possible. If that is the case, he said, hybrid seed will probably come from those areas when it is developed for commercial use.

# # # #

Department of Information  
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St. Paul, Minnesota 55101  
December 20, 1965

To all counties  
Immediate release

IN BRIEF.....

Hog Performance Testing: Performance testing programs your hogs can cut feed costs and improve carcass quality, says Charles Christians, University of Minnesota extension animal husbandman. Ten top hog producers started performance testing hogs in 1957 with the Minnesota Swine Improvement Program. In 1965, records showed these 10 producers chopped 74 pounds from amount of feed usually needed to get hogs to 200 pounds, saving \$1.85 for every pig marketed. On live weight basis, ham and loin percentage rose 67 percent, adding \$5 to market value of each hog produced. Performance testing seedstock gives hog producers a better chance of predicting performance of offspring, says Christians. For more information, write Minnesota Swine Improvement Program, 101 Peters Hall, University of Minnesota, St. Paul, Minnesota 55101.

\* \* \* \*

More Grain for Top Cows: Underfeeding high-producing dairy cows lowers profits and usually happens during the first three or four months of lactation, says Bill Mudge, University of Minnesota extension dairyman. Extra grain fed to cows in high production results in one-fourth more milk than when grain is fed to produce fat that is later milked off the cows. To get more grain into better cows, Mudge recommends feeding grain three or four times a day. The extra effort can be profitable during winter with a large number of fresh cows. If loose housing limits feed consumption, try bunk feeding the grain to high producers or feed grain on top of silage.

\* \* \* \*

Using Urea: If Urea is used to make up your own protein supplements, be sure the Urea is mixed well with other ingredients, advises R. E. Jacobs, University of Minnesota extension animal husbandman. If cattle are fed high levels of Urea or break out and help themselves to high Urea protein supplements, toxic effects can result. For animals reacting to high Urea intake, Jacobs says symptoms include uneasiness, lack of muscular coordination, bloat, prostration, convulsions, and even death.

\* \* \* \*

Department of Information  
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St. Paul, Minnesota 55101  
December 20, 1965

To all counties

4-H NEWS

#### 4-H FILLERS

National 4-H scholarships representing \$6,700 were awarded to 11 present or former Minnesota 4-H members during National 4-H Club Congress, Chicago, November 28-December 2.

\* \* \* \*

The 4-H Club emblem, a four-leaf clover with a white H in each leaf, did not come into common usage until the mid-1920's. It is now symbolic of high-quality work and equally high-quality young people.

\* \* \* \*

During the past half century, 23 million alumni have been trained in 4-H. The National 4-H Alumni Recognition program is primarily intended to honor former 4-H members whose civic, business, professional and public service activities make them respected and appreciated in their communities.

\* \* \* \*

Because of the success of the 4-H program in the United States, 4-H clubs or similar movements have been formed in more than 70 countries around the world.

\* \* \* \*

4-H provides the opportunities for youth to gain a feeling of worth through volunteer service to others. Thus, 4-H contributes to the mental and emotional health of youth.

\* \* \* \*

4-H'ers who are training to be leaders can contribute to improving community life. Some 4-H projects oriented to community service include community beautification, conservation, health, safety, town and county business and junior leadership.

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December 20, 1965

To all counties  
ATT: HOME AGENTS  
Immediate release

WATCH FOR SIGNS  
OF OVER-EXTENDING  
YOUR CREDIT

What is the sign of over-extended credit?

You'd better start flying a danger flag if your family is buying more on credit than 13 to 15 percent of your total income, excluding mortgage payments or other housing costs, warns Mary Frances Lamison, extension home management specialist at the University of Minnesota.

On a monthly basis, the usual recommendation is to limit charge accounts to the equivalent of 2 weeks' or a month's pay on whatever type of charge account you carry. Then pay this amount before you charge further. For large items such as a car or furniture, credit managers ordinarily do not like to grant installment credit for more than 10 percent of the monthly income.

Overbuying is the chief cause of personal bankruptcies, which have increased more than 300 percent in the past 10 years.

Over-extending family credit often occurs when the husband and the wife buy without making joint decisions. Miss Lamison gives these tips on preventing over-extended credit:

- . Establish the habit of family decision-making on financial spending, including the setting of priorities for spending.

- . Use credit only as needed, first evaluating the satisfactions to be gained versus the cost and risk involved.

- . Learn to figure the true interest you will have to pay on every purchase made on time.

- . Exercise self-discipline in buying. Don't buy more than you can pay for easily within a month.

- . Never sign any type of contract unless you read it thoroughly -- including the fine print -- and understand it.

- . Be sure the article you buy will last as long as the payments will.

- . Make down payments as large as possible and complete payment as quickly as possible.

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St. Paul 55101 -- Tel. 647-3205  
December 22, 1965

CONFIDENTIAL:  
HOLD FOR RELEASE UNTIL SATURDAY, DEC. 25, P.M.

#### MINN. YOUTH GETS SPECIAL CHRISTMAS GIFT

The president of the Minnesota State 4-H Federation--Larry Fowler, Winnebago, received a surprise Christmas gift this morning (Dec. 25).

The present was a letter announcing that he had been selected as spokesman for 4-H'er representatives throughout the nation at the meeting of the American Institute of Cooperation (AIC) in Fort Collins, Colo., July 31-Aug. 3, 1966. The letter, accompanying a Christmas gift from the AIC, was intended as a special Yuletide surprise for the Martin County 4-H'er.

4-H delegates from 38 states attending the AIC conference in Columbia, Mo., last August elected Fowler as their official representative for 1966. The choice was made by secret ballot and was kept a secret until this morning. Fowler was one of 32 Minnesota youth sponsored by the Minnesota Association of Cooperatives at the sessions in Missouri last summer. A similar youth delegation from Minnesota will attend the convention in Colorado.

This is the second year in succession a Minnesota youth has been chosen by 4-H'ers throughout the country as their official representative. Joyce Thompson, Warroad, received the honor last year.

As the 4-H VIP at the 1966 AIC meeting, Fowler will chair one or more of the general sessions and will address several thousand adult and youth delegates.

As president of the Minnesota State 4-H Federation, Fowler heads an organization of some 55,000 Minnesota club members. He is presently a student at Mankato State College.

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December 22, 1965

Immediate release

#### 4-H LEADERS RECEIVE TRAINING DURING MEETINGS

A series of 4-H adult training meetings will be held in northwestern Minnesota between January 10 and February 2.

Counties taking part in the sessions are Kittson, Marshall, Roseau, Mahnomen, Pennington, East and West Polk, Red Lake, Becker, West Otter Tail, Clay, Norman and Wilkin.

Purpose of the meetings is to bring project leaders up-to-date in the increasingly complex subject matter included in today's 4-H projects, according to Wayne Carlson, assistant state 4-H club leader at the University of Minnesota, in charge of planning the training sessions. The project leader's responsibilities are becoming more and more important in Minnesota's 4-H program, he points out.

Adults will receive training from extension agents in such 4-H projects as horticulture, agronomy, clothing, foods, dairy, conservation, health, sheep, beef, home improvement-family living and photography.

Adult training sessions were held in East Otter Tail and Wadena Counties November 30-December 1.

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December 22, 1965

Immediate release

#### UM MEETINGS SET FOR RETAIL SEED, FERTILIZER, CHEMICAL DEALERS

Special meetings for retail dealers of seed, fertilizer and agricultural chemicals will be conducted in January by University of Minnesota specialists, according to James Justin, extension agronomist.

The meetings will present retail dealers with the latest research findings on crop varieties, seeds, soils, fertilizers and control of insects, diseases and weeds.

University soils specialists will discuss "soils, fertilizers, and changes in the fertilizer industry," Justin says. Specialists in agronomy will present talks on "new and recommended crop varieties, crop variety surveys, weed control, chemicals, and sorghum-sudan grass hybrids."

Justin says, "the current crop diseases and related problems," will be discussed by Herb Johnson, extension plant pathologist. Entomologists will speak on the "current insecticide situation."

Dates and places of the meetings include: New Ulm, Jan. 3, Tropicana Club; Mankato, Jan. 4, Inn Towne Motel; Owatonna, Jan. 5, Inn Towne Motel; Rochester, Jan. 6, Holiday Inn; Hutchinson, Jan. 10, Garden Supper Club; Isanti, Jan. 10, Rum River Country Club.

The meetings will last from 3:30-9 p.m. and the only charge will be for dinner at 6 p.m. For more information about the meetings, see your county agent.

Department of Information  
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St. Paul, Minnesota 55101  
December 27, 1965

To all counties  
4-H NEWS  
Immediate release

4-H'ERS URGE  
SAFE DRIVING  
DURING WINTER

Drivers between the ages of 15 to 24 have the highest accident rate as drivers and the highest death rate as victims. This is almost twice the average death rate for the entire population.

This accident rate is of concern to many 4-H'ers. Purpose of the 4-H automotive care and safety project is to help boys and girls, age 14-19, learn how to take care of automobiles and observe traffic safety rules while driving, explains Stanley Meinen, assistant state 4-H club leader at the University of Minnesota.

Traffic accidents can be avoided if drivers know the hazards involved and have been educated to recognize these hazards.

Simple hazards that any driver should spot are blind road intersections, soft road shoulders, blind curves, wet or icy pavements, heavy dust or fog, narrow bridges or culverts, illegible warning signs, slow-moving vehicles, playgrounds and school yards. Many 4-H clubs organize hunts to correct hazards or conduct car safety checkups.

At this time of year, driving presents special hazards during bad weather. Here are some points to keep in mind when snow or sleet add to the normal problems of safe driving:

- Reduce speed when driving in snow or on ice.
- Keep windshield and windows clear.
- Use snow tires or reinforced chains for better traction. Tires that are worn smooth should be replaced.
- Pump brakes with quick up-and-down motions when stopping on ice or snow. Sudden turns, stops or acceleration on slippery pavements all tend to cause skids.
- Watch highway signs for curves ahead and slow down as you approach them.
- Follow other vehicles at a safe distance. Other drivers may be headed for trouble.

And remember snow and ice surfaces in the thaw-freeze temperature of the upper 30-degree level are more dangerous than dry ice conditions near zero.

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December 27, 1965

To all counties  
ATT: HOME AGENTS  
Immediate release

VARIETY OF FOODS  
PLENTIFUL FOR  
JANUARY MEALS

Large supplies of pecans and a variety of fresh fruits and vegetables will be available to add interest to January meals.

On the U. S. Department of Agriculture's list of plentiful foods for January, in addition to pecans, are grapes, oranges and orange products, grapefruit, apples, canned red-tart cherries, onions, cabbage and split peas.

Because the California grape crop was a record 3.9 million tons this year, there are still heavy holdings of fresh market supplies. Emperors, in particular, should be good buys during January.

Orange production is expected to be greater than a year ago in all major producing areas. The largest crop of California-Arizona navel and other oranges is expected since 1947. Florida's early and mid-season output runs 2 percent higher than last season. An expected increase in the 1965-66 concentrated orange juice pack, plus large carryover stocks, indicate ample supplies for the year.

Just in time for after-holiday diets will be a plentiful supply of low-calorie, high quality grapefruit. Florida's production is estimated to be a record 24 million boxes, while both Texas and California report above-average crops.

Add bright color and flavor to your January menus with plenty of red tart cherries. Use them in a tangy sauce for ham or for a favorite dessert.

After last year's short supply and high prices, homemakers will welcome the ample supplies of attractively priced potatoes. There will be plenty of cabbage for cole slaw and crisp salads from the largest fall crop since 1956. You can also count on reasonably priced onions too, to add zest to winter meals. The crop of late summer onions, source of stocks from now until spring, is about a fifth larger than it was last year. The supply of split peas is above average, assuring you of plenty for soup on cold January days.

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St. Paul, Minnesota 5510,  
December 27, 1965

To all counties

ATT: HOME AGENTS

Adapt for your listening  
area. See note on  
second page.

PROGRAMS IN HOME  
TO START JANUARY 7

"It's a Jet-Age Home," a three-month series on KTCA-TV Channel 2, will begin Jan. 7 with four programs on family finances.

The series, sponsored by the University of Minnesota Agricultural Extension Service, will be seen at 9:30 to 10 p.m. Fridays. The February series features protein; March, clothing.

The first series, "Family in a Money World," will feature interviews with five families--one in each of the stages of family life. They include an engaged couple, a family with preschool children, a family with grade and high school children, a family where children are leaving home and a family planning immediate retirement. The series was developed by Mary Ryan and Barbara Killen, University extension consumer marketing specialists.

The first program, "More Fun for Your Money," helps families develop realistic goals consistent with personal values and economic resources. It includes identifying goals, evaluating resources and planning the best way to coordinate the two.

The Jan. 14 program, "Are You and Your Money Soon Parted?," shows how saving and investing can provide for future goals. Such considerations as safety, income, growth and liquidity are included.

The third program, Jan. 21, "To borrow, to borrow, to borrow..." considers the kind of expenditure for which credit is used and why one source is used rather than another. A discussion of why credit is expensive is included, as well as why more credit will probably be used in the future.

The final program, "Men, Money, and Machines," points out how the general economic situation affects a family's earning and purchasing power and how this affects ability to achieve goals.

To supplement these programs a \$2 information kit is offered giving more detail on the aspects of family finances covered in the series. In addition, it includes information on the mechanics of budgeting, types of savings and investment institutions, government and self-regulated protections for savings, investment and credit and influencing factors in the relationship of the individual to the economy.

add 1 - programs in home

Order your kit by sending \$2 to:

Jet-Age Home, Dept. M  
University of Minnesota  
St. Paul, Minnesota 55101

# # # #

NOTE TO AGENTS: This series will be telecast on KFME-TV, Channel 13, Fargo, at 8 p.m. each Thursday beginning Jan. 20, and on KDAL-TV, Channel 3, Duluth, each Sunday at 10:30 a.m. starting Jan. 16. Substitute one of these for the KTCA dates if you are in either listening area.

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St. Paul, Minnesota 55101  
December 27, 1965

To all counties  
Immediate release

MILK PROCESSING  
INDUSTRY EXPANDING,  
BUT FIRMS ARE FEWER

The fluid milk industry increased in overall size from 1950 to 1962 and now uses about half of all milk produced in the nation. But the processing plants are becoming fewer and larger.

Jerome Hammond, University of Minnesota agricultural economist, says the number of fluid milk handlers decreased about 50 percent in 70 of the nation's major fluid milk marketing areas from 1950 to 1962.

In Minnesota, the number of fluid milk distributors dropped from 266 to 127, decreasing more than 50 percent in the same period. Wisconsin fluid milk plants declined from 507 to 187, a 63 percent decrease.

And Hammond says the trend to fewer firms of larger size is likely to continue. He describes some factors causing changes in number and size of fluid milk plants:

- \* Packaging milk in paper cartons rather than glass bottles.
- \* Distribution through retail stores rather than by home delivery.
- \* More use of retailer brands and declining use of local distributor brands.
- \* Increase in number of different milk products.

Packaging milk in paper cartons rather than glass bottles has greatly expanded the distribution area in which plants operate. Today milk can be packaged and moved several hundred miles. This was unheard of with glass bottles. Paper cartons also lower distribution costs. And, says Hammond, plant size has increased to efficiently serve the enlarged distribution areas.

add 1 - milk processing industry

More and more fluid milk products are being sold through retail stores, rather than by home delivery. In 1962, a survey of federal order milk markets showed about 74 percent of all fluid milk sales moved through retail stores. In the Twin Cities in 1950, 52 percent of all fluid milk was delivered to homes. But in 1961, only 27 percent was moved through home deliveries.

Hammond says the increasing sales through retail stores has affected the number and size of plants. The stores, especially chain organizations, would rather buy from a few large distributors than many smaller distributors. Larger distributors are better able to supply the big orders of chain stores. Thus smaller distributors continue to be excluded from the market as the shift from home delivery to store sales progresses.

Retailer brands, known also as private label brands, have been developed and their use is increasing. Most retail chains carry brands of some local distributors, but will also carry milk products under their own brand.

Increased use of retailer brands has cut the effectiveness of promotional campaigns by processors for their brands. Hammond says processors will have to rely on maintaining low cost operations to compete for outlets, rather than depending on consumer preference to sell their particular product.

The fluid milk processing industry is also characterized by an expanding number of different products. Product lines which formerly had only whole milk, cream and whipping cream, now include these plus sour cream, buttermilk, low-fat milk, half and half, dips and cottage cheese.

This rise in the number of these products increases the size of firm needed for efficient production and distribution. Increased firm size may require more equipment and other capital investments. And rather than make the added investment, smaller firms choose to leave the industry.

# # # #

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December 27, 1965

To all counties  
Immediate release

IN BRIEF.....

Bright New Year Seen For Beef Feeders: Demand for beef looks strong for 1966, say University of Minnesota agricultural economists Paul Hasbargen and Ken Egertson. Continuing population growth, higher consumer incomes and increasing preference for tablecut beef will add about three to four percent to the total demand for beef. Hasbargen and Egertson expect declines in supplies of nonfed beef, pork and lamb should add another two to three percent to total demand. But poultry supplies will be up and cut into beef demand somewhat. The agricultural economists expect total demand for fed beef in the first half of 1966 to hold at least six percent above year earlier levels. And they expect no increase in the beef supply for the next nine months, unless slaughter weights increase sharply.

\* \* \* \*

Use Scales to Check Feed Weights: A scoop or bucket are very inaccurate as feed measures for heavy wet corn or dried corn which may be low in test weight. Bill Mudge, University of Minnesota extension dairyman, says you should use scales for checking feed weights to individual cows and for mixing batches of grain. If you feed with a grain scoop or bucket, check the weight of a full container often. Moisture content of the different batches of corn may cause the weight to vary greatly.

\* \* \* \*

Protein Level Important With Corn Silage: Corn silage is very low in protein, says Bill Mudge, University of Minnesota extension dairyman. So dairymen should adjust protein levels in the grain mix according to type of forage fed. Feeding more than 70 pounds corn silage and less than 10 pounds of hay per cow per day, the grain mix should have 18 percent protein. With 70 pounds of silage and no hay, the grain mix should contain 20 percent protein. If 30 to 40 pounds corn silage is fed per day with full feed of good legume hay, a 12 to 14 percent protein grain mix is needed. With 30 to 40 pounds of silage and only fair quality hay or mostly grass, the grain mix should have 15 to 16 percent protein.

\* \* \* \*

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 -- Tel. 647-3205  
December 28, 1965

\*\*\*\*\*  
\* For release \*  
\* Wednesday, Dec. 29 \*  
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## CHROMOSOME DESCRIPTION GIVES PICTURE OF AVIAN GENETICS

Some old puzzles of heredity among our feathered friends may be closer to solution as a result of a basic study in avian genetics at the University of Minnesota.

For the first time, ~~karyotypes~~ complete pictures of the chromosomes--of chickens, turkeys, pheasants, quails and even horned owls are submitting to scientific portrayal.

Chromosomes, the microscopic, thread-like bodies that carry the genes of heredity, have been studied far less in birds than in plants, humans and other mammals.

Even in the poultry industry, extensive breeding efforts have dealt more with observable, production-related characteristics than with the fundamental aspects of cytogenetics itself.

Poultry cytogeneticists Robert N. Shoffner and Awtar Krishan at the University, working with a high-powered research microscope, recently cleared the methodological hurdles that had held up the study of the avian chromosomes.

With repeated counts from microscopic photographs of cell tissue, they determined the number of chromosome pairs, relative size of these pairs, and other characteristics in text-book detail for the chicken. The picture is nearly as complete for turkeys and pheasants, and is being developed for other species.

The domestic chicken, it turns out, has 39 pairs of chromosomes and the turkey has 41. (Man has 24 pairs.) The length of the largest chicken chromosome pair is fifty times that of the shortest.

One implication is a possible explanation of why intergeneric crosses are easier to bring about between turkeys and pheasants than between turkeys and chickens.

Researchers trying the turkey-chicken cross with artificial insemination procedures have found fertility to be extremely low, less than 5 percent. Fertility is no better between chickens and pheasants, but with the pheasant-turkey cross it runs considerably higher.

Judging from gross appearances and historical background, scientists had believed the pheasant to be more like the chicken than the turkey. But the chromosome diagrams by Shoffner and Krishan show the physical characteristics of the turkey and pheasant chromosomes to be more alike than for any other pair among the three species. This similarity is a possible explanation for the greater compatibility because of ease of chromosome pairing at fertilization.

(more)

add 1 -- avian genetics

Perhaps even more significant are the findings of Shoffner and Krishan which deal with sex-linked characteristics. In avian species, the male is homogametic-- meaning that both members of the sex chromosome pair are alike. The avian female is heterogametic--with one member of the pair labelled as a "W" chromosome, which is about a fifth the size of the other member.

This arrangement is opposite of that in mammals, where the male is heterogametic.

It means that in birds, there may be certain sex-limited characteristics which can be transmitted only from mother to daughter. However, at this date no traits have been discovered which follow this pattern.

Shoffner says the knowledge of avian chromosome configurations may be especially helpful in studying the evolution of bird species and in making more refined separations among them. Most taxonomical classifications are based on appearance and habits; now a genetic basis for classification promises to be more feasible. It may help identify certain birds, whose identity is now in doubt. The sand grouse, for example, was long thought to belong to the grouse family, but biologists more recently have assigned it to the pigeon. A chromosome description for this bird may help settle the issue.

Finally, the new knowledge has implications for studies of hybridization that go far beyond the turkey-pheasant question. To date, off-spring from such inter-generic crosses have been sterile. Eventually, with knowledge of the chromosomes, it may be possible to get fertile offspring from species crosses and thus lead to further crosses, backcrosses, and other sources of experimental genetic variation.

Such research on chromosomes requires repeated observations of cells through the high-powered microscope before scientists can put full confidence in their findings.

Shoffner and Krishan used cell tissue from the tips of pin-feathers--since these may be obtained easily and repeatedly without harming the bird being studied. This cell tissue is then treated and literally squashed between two surfaces so that cells pop open and chromosomes scatter around where the microscope can zero in on them.

The key to the research was in working out the "squash" preparation for getting the cells open at the right stage of development. In mammals, this has been done with cultured white blood cells. While this same procedure is possible in birds, the feather pulp method is less time consuming and therefore more efficient.

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#### PLAYS BY MINN. WRITERS TO BE PRESENTED

Three plays by Minnesotans have been selected in the University of Minnesota Town/Country Art Show Playwriting Competition to be presented March 29-30 on the University's St. Paul Campus.

One-act plays to be produced are "Good Night, Ruth" by Henry Scholberg, 4059 Monroe St. N.E., Columbia Heights; "The Swing Tree" by Cecil Wade, Foley; and "Green Springs Eternal" by Gladys Jo Estenson, Northfield.

The plays will be performed by the PUNCHINELLO Players in the PUNCHINELLO Playhouse on the St. Paul Campus during the last week of the Town/Country Art Show. They will be directed by William Marchand, University instructor in rhetoric and adviser to the Players.

The playwriting competition was added this year as a new feature of the University's Town/Country Art Show project on the St. Paul Campus. Amateur playwrights of high school age or over who are residents of Minnesota communities of 25,000 or less were eligible to submit one original recently written one-act play.

Entries are now being accepted in the short-short story contest, another feature of the Town/Country Art Show, conducted for the second year. Closing date of this contest is Jan. 10, according to A. Russell Barton, coordinator of the show. Eligible to compete are amateur writers from Minnesota communities of 25,000 or less. Entries are limited to original unpublished short-short stories not over 2,000 words in length.

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December 28, 1965

Immediate release

#### MINN. TO SEND IFYE TO TURKEY

A former state 4-H Club president, now a social worker for the Steele County Welfare Department, Owatonna, has been named the first International Farm Youth Exchange delegate from Minnesota for 1966.

She is Jo Anne Thomas, who will leave April 11 to spend approximately six months in Turkey, living and working with farm families to obtain an understanding of their way of life and at the same time introducing them to American customs and ideals.

Miss Thomas will have a week's orientation in Washington, D.C., before leaving for Turkey. She will return to the United States in November, 1966.

A graduate of the College of St. Benedict, she received her bachelor's degree in sociology. For a year she did social work for the Catholic Charities, Winona. She has been a social worker for the Steele County Welfare Department since October, 1963.

She has been active in the American Association of University Women as chairman of community affairs and a member of the executive board.

For 13 years she was a 4-H member in Dakota County where she grew up on a farm. She was president of the Dakota County 4-H Federation and in 1958-59 was president of the State 4-H Federation. She was also state vice president of the Future Homemakers of America.

Two Minnesota International Farm Youth Exchangees in the 1965 program have returned recently from their assignments--Kent Ringkob, Jackson, from Finland, and Emmaline Schlueter, Cedar Mills, from the Philippines. A third Minnesota IFYE in the '65 program, Richard Krueger, Litchfield, will be in India until early April.

The IFYE program, a two-way exchange, is conducted by the National 4-H Foundation and the Agricultural Extension Service to increase international understanding at the family level. In the 18 years of the program, Minnesota has sent 50 of the more than 1500 American youths who have gone to live and work abroad and has been host to 128 of the 1700 young people who have come from 67 countries to live with farm families in this country.

Department of Information  
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December 31, 1965

Immediate release

### SAFE USE OF PESTICIDES TO BE FEATURED AT U SHORT COURSES

Safe and effective control of insects, diseases and other pests doing millions of dollars of damage to Minnesota crops, livestock, homes and wildlife will be featured in two special short courses on the University of Minnesota's St. Paul Campus, January 10-13.

Such currently widely discussed topics as pesticides-wildlife relationships, toxicity of pesticides, and legal aspects of pesticide use will be stressed in the program.

The 25th annual Agricultural Inspectors Short Course will be attended by 100 county weed and seed inspectors, January 10-13, according to LaVern Freeh, head of the University's Department of Agricultural Short Courses.

The second annual Pesticides Short Course, January 12-13, is expected to attract 200-300 chemical industry representatives, educators and government inspectors.

The two courses have been planned together so county weed inspectors may benefit from the detailed treatment of subjects related to pesticide use and safety at the pesticide course.

The first two days of the Agricultural Inspector's Short Course will feature presentations on the duties and job of the inspector, seed certification procedures, new recommendations on varieties of grain crops, and the explanation of governmental grain programs.

(more)

add 1 -- safe use of pesticides

The combined Inspectors and Pesticide Short Courses on January 12-13 will deal with pressing problems of pesticide use in agricultural, home and recreational areas. Among the speakers and their topics are: Frank Smith, University extension economist, "Basic Business Methods"; Russel Schwandt, Minnesota Commissioner of Agriculture, "Laws and Regulations Affecting the Pesticide Dealer"; Phillip K. Harein, University extension entomologist, "Toxicity and Hazards of Pesticides"; and Bernard Jones, Minnesota Conservation Department, "Pesticide-Wildlife Relationships".

Other University and industry representatives will discuss pesticide residue problems; grasshopper, cornborer, and corn rootworm outlook; timing of pesticide applications; livestock pest control; and the University's latest recommendations on a wide variety of pest control measures.

Both short courses are sponsored by the University of Minnesota and the Minnesota Department of Agriculture. The Minnesota Agricultural Chemicals Association has joined the University and the Department in sponsoring the Pesticide Short Course.

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