

Department of Information  
and Agriculture Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
October 2, 1969

For Release: Thursday, Oct. 9

#### UM PROFESSOR KNIGHTED

LaVern A. Freeh, professor and assistant director of the University of Minnesota Agricultural Extension Service, was knighted by the Finnish Government during special ceremonies Thursday (Oct. 9) in Washington, D.C.

The Insignia of Knight First Class of the Order of the Lion of Finland was bestowed upon Freeh by the President of the Republic of Finland for his "meritorious services rendered in promoting and further strengthening the ties of friendship and understanding between the people of Finland and the United States of America." The ceremony took place at the Finnish Embassy in Washington.

For the past six years Freeh has been administratively responsible for a student exchange program between Finland and the University of Minnesota, bringing a substantial number of Finnish youth to Minnesota to study and work. During the past few years students from Minnesota have worked and studied in Finland as well. In 1967 he traveled to Finland to advise the Finnish Government on agricultural education and youth programs.

add 1--professor knighted

Freeh, who is also special assistant to the dean of the University's Institute of Agriculture and head of the Office of Special Programs, joined the University faculty in 1962, after serving as assistant to the Dean of Agriculture and Coordinator of Student Programs at Michigan State University from 1959-62.

From 1965-67, he served as consultant to President Johnson's National Advisory Commission on Food and Fiber. In 1967, he visited eight countries in Europe during a six week period to study the University's work-study exchange program and to visit with officials and former exchange students. In 1968, he spent two weeks in Germany at the request and expense of the German Government to study German agricultural education and youth programs.

A native of Harvey, N. Dak., Freeh recieved his B.S. degree in 1951 from North Dakota State University in Fargo. He received his M.A. degree in 1958 and his Ph.D. in 1962, both from Michigan State University.

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Immediate release

## METABOLIC DISTURBANCES AFFECT MILK PRODUCTION, UM SCIENTISTS SAY

The feeding and management of dairy cows to maximize milk production may contribute to an increase in metabolic problems that will lower milk production, according to two University of Minnesota animal scientists.

Speaking at the 30th annual Minnesota Nutrition Conference in Minneapolis this week, D.E. Otterby and K.L. Siewert, of the University's Department of Animal Science, said that dairy cows must be free from such metabolic disorders and nutritionally related problems as ketosis, milk fever, off-feed problems, and milk fat depression if they are to attain maximum milk production.

Many of these disorders, the scientists said, occur at calving or during the initial stages of milk production.

For example, ketosis, a frequent metabolic problem in high milk-producing cows, usually occurs during the first 10 days to 8 weeks after calving. Ketosis can be controlled in part by preventing cows from becoming excessively fat prior to calving and by balancing feed intake with milk production to maintain proper sugar levels in the blood.

Low quality silage, which may contain butyric acid, a ketogenic material, should not be fed to high milk-producing cows.

The scientists also said that extremely high amounts of concentrates often lead to a lessening of milk fat production.

While feed additives may partially correct or even prevent low milk fat the scientists also recommended that the ration of dairy cows contain one-third forage or that one pound of hay equivalent be provided for each 100 pounds of bodyweight. There also should be 13-15 percent of fiber in the ration.

add 1--milk production

In discussing milk fever, Otterby and Siewert said that the incidence of this metabolic disease is exceedingly high in some herds. Milk fever, which usually occurs shortly after calving, is caused by reduction in serum calcium levels.

This disturbance generally occurs in older cows rather than first calf heifers. Calcium absorption by the intestine decreases rapidly as the cow matures. Thus aging animals have a more limited capacity for calcium absorption within the intestinal tract than first calf heifers. Older animals also excrete more calcium than do younger animals.

The mechanisms that control calcium balance in dairy cows are not understood completely. However, available evidence indicates that proper calcium and phosphorus supplementation is necessary to minimize the occurrence of milk fever. Dairymen should strive for a calcium to phosphorus ratio of about 2:1 or 1:1.

The scientists also told conference participants that milk output will decrease when off feed problems occur in high producing cattle. Frequently these off feed problems are the result of lacticacidosis--increased milk acid production within the stomach.

Avoiding changes in ration composition can help prevent off feed problems and lacticacidosis. In addition, frequency of feeding and the rate at which concentrates are increased are important in preventing cattle from going off feed.

Proper nutrition and careful feeding practices will help the dairyman avoid some of these disturbances in his dairy cattle. However, Otterby and Siewert pointed out that more research is needed in this area.

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#### FOCUS ON FUTURE FOR WOMEN SYMPOSIUM SCHEDULED

One hundred and fifty women from throughout the state have been invited to participate in a Focus on the Future for Women symposium on the University of Minnesota's St. Paul Campus Student Center Wednesday, Oct. 8.

Objectives of the symposium are to provide an opportunity for the women to communicate their concerns as well as to make them aware of educational resources available to women through the Agricultural Extension Service, the School of Home Economics and the General Extension Division of the University. Exhibits and publications will portray some of the resources of the University.

Taking part in a panel will be Barbara Thornton, director of consumer services, the Pillsbury Company; Mrs. Curtis Pietz, homemaker, Lakefield; and Charles E. Ramsey, professor of sociology, University of Minnesota. They will introduce some of the community, consumer, social and family concerns and issues. Eighteen women have been selected to lead small group discussions which will follow.

The 150 women invited to participate in the day's program were selected from a list of 600 women who have been identified as influential in communities throughout the state, according to Mrs. Rosella Qualey, chairman of the committee planning the symposium.

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#### MINNESOTA COUNCIL ON FAMILY RELATIONS MEETS OCT. 10-11

The Minnesota Council on Family Relations will hold its annual meeting Oct. 10 and 11 at Coffman Union, University of Minnesota, with several sessions open to the public.

"Partners in family life and sex education: family, church and school" is the theme of the conference. Ronald Pitzer, president of the council and extension specialist in family life education at the University, points out that the meeting provides an opportunity for Minnesotans wishing to improve family life education to confer together about current problems. Course content, teacher training and school-community relations will all be discussed at the sessions.

Richard N. Hey, acting director of the University's Family Study Center and president-elect of the National Council on Family Relations, will give the keynote address at 8 p.m. Friday evening, Oct. 10, in the Junior Ballroom of Coffman Union.

At 9:30 Saturday morning Mrs. Judy McCleery, teacher of family studies at Alexander-Ramsey Senior High School, will comment on guidelines for family life and sex education.

add 1--family relations council

Scheduled for 10:30 a.m. is a reactor panel composed of G. J. Greenwalt, superintendent of schools, Hopkins; Mrs. Sandy Logeais, teacher at Scenic Heights Elementary School, Minnetonka; David Conover, coordinator, Moundsvew School District; Scott MacStravio, Minnesota State Planning Agency; and Mrs. Betty Stein, health teacher for Minnetonka West Junior High School. Parents and students will also be on the panel.

After the Friday evening and Saturday morning sessions, opportunity will be given for questions and discussion from the floor, according to Pitzer.

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To all counties

Immediate release

BEEF TESTING CLINICS SET  
FOR WEEK OF OCTOBER 27

The week of October 27 is "On-The-Farm Beef Testing Week," announces county agent \_\_\_\_\_ . Beef performance testing clinics sponsored by the University of Minnesota's Agricultural Extension Service, the Minnesota Beef Improvement Association and various national beef breed associations are planned throughout the state.

The clinics are scheduled at 19 different locations across the state and will represent all major beef breeds. Forenoon activities will be conducted on a breeder farm and will include calf grading and weighing, bull selection and replacement heifer evaluation.

The afternoon program will include a workshop on performance record computation, record application, herd bull record selection, cow culling and heifer replacement selection.

University of Minnesota extension animal scientists will conduct the beef clinics. Keynote speakers at these meetings are the following beef breed association representatives:

Bill Durfy, Houston, Texas, American Charolais Association

Sherman Berg, Omaha, Nebraska, American Shorthorn Association

Art Linton, Kansas City, Missouri, American Hereford Association

Mack Patton, Kansas City, Missouri; and Dick Pierson, Spencer, Iowa  
American Polled Hereford Association.

Vern Kerchberger, Sioux Falls, South Dakota; and Stanley Anderson, St.  
Joseph, Missouri, American Angus Association.

-more-

add 1 -- Beef Testing Clinics

Following are scheduled locations of meetings. Contact your county extension office for detailed directions to host breeder farms.

<u>Date and Host</u>	<u>Location</u>	<u>Breed</u>
October 27 Phil Abrahamson Kelly Land & Cattle Co. Orville Birnstihl	Lanesboro Marine-on-St. Croix Faribault	Angus Hereford Charolais
October 28 Robert Sallestrom John Schmidt Chester McBroom University of Minn.	Winthrop Pipestone Princeton Morris Exp. Station	Angus Hereford Polled Hereford Charolais, Shorthorn
October 29 Eloi Stassen Eldon Weise Bill Williams Maurice Mitchell	Marshall Pequot Lakes Rochester Westbrook	Angus Hereford, Angus Polled Hereford Shorthorn
October 30 S. & W Ranch Clifford Ouse Emil Pranter Vern Michaleson	Waubun Rothsay Austin Crookston	Angus Hereford Polled Hereford Shorthorn
October 31 Clayton Carpenter Earl Schafer Donald Mertesdorf Don Kaehler	Sauk Centre Goodhue Vernon Center St. Charles	Angus Hereford Polled Hereford Polled Shorthorn

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INCREASE PROFITS BY  
GIVING SPECIAL CARE  
TO NEW FEEDER CATTLE

The management you give to feeder calves during the first two to three weeks often determines whether you'll make a profit from your feeding operation.

Profits from 5 to 10 market cattle will normally be required to pay for each calf you lose, according to R. D. Goodrich and J. C. Meiske, animal scientists at the University of Minnesota.

You can avoid potential problems by preparing the feedlot before the new cattle arrive. The animal scientists offer these guidelines when preparing for a new group of feeder cattle: Clean the feedlot, buildings and feed bunks and provide clean bedding -- drain water holes and fill with sand and gravel -- repair fences -- and spray buildings for louse control in the fall and fly control in the spring.

New cattle should not be handled roughly. Don't use electric prods, and avoid moving cattle more than is necessary. Calves especially may have been severely stressed by the time they get to the feedlot. Contact a local veterinarian before the cattle arrive so that a general health program can be outlined and followed.

Make sure cattle are moved from the market to feedlot as quickly as possible to prevent additional stress and exposure to disease. If the cattle can't be moved quickly, make arrangements for their care, feed and bedding. When moving cattle, bed the truck with sand or a combination of sand and straw to prevent slipping and possible injury to the cattle. This can prevent trampling losses and reduce the amount of stress.

add 1 -- increase profits

Keep new feeder stock away from cattle already there, Goodrich and Meiske advise. If the newly purchased cattle are in the incubation stage of a disease or are carrying a disease, this precaution may prevent other finishing cattle from being exposed. In addition, the isolation of new livestock allows them time to adapt to the new environment and feed before being exposed to other cattle.

Don't mix cattle of different sex, weight or stage of condition. Cattle in different stages of the finishing program should not be mixed since foundering, scouring and digestive disturbances may result if new cattle that aren't adapted to high grain rations are placed in a lot with cattle being fed high grain rations.

Goodrich and Meiske offer these additional pointers when caring for new cattle: Provide clean drinking water -- feed vitamin A -- feed or inject antibiotics -- provide a source of calcium, phosphorus and salt -- and feed a good quality, moderate energy ration that contains two to four pounds of grain. After the cattle have become adapted to the new feedlot environment they may be fed higher grain rations by gradually increasing the amount of grain.

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## UM RESEARCHERS STUDY BIOLOGICAL CONTROL OF CROP DISEASE

Farmers can increase both stands and yields of cereal crops through biological or cultural control methods that often have advantages over chemical controls, according to University of Minnesota plant pathologists.

This is particularly true in years when environmental conditions favor root diseases, such as cool, wet springs for corn, or hot, dry conditions for small grains.

This conclusion is one of the results of recent research by Thor Kommedahl, University of Minnesota professor of plant pathology, and graduate students I-Pin Chang, R. F. Nyvall and H. L. Warren on the ecology of soil fungi and how it is related to root diseases of cereal crops.

"Specifically our research focused on the control pathogenic (disease producing) root fungi of cereal crops through biological and cultural rather than chemical means," Kommedahl said.

Research by Kommedahl and Chang showed that pathogenic organisms on corn kernels can be controlled by coating the kernel with non-pathogenic organisms which would crowd out pathogenic organisms.

They found one fungus and one bacterium that, when placed on a corn kernel, would protect it from root disease for a month. Disease control occurs when the non-pathogenic organisms grow on the kernel and keep away the organisms that cause seedling blight, Kommedahl said.

The researchers also found that coating the seed influences other organisms around the roots. "Roots give off nutrients that attract organisms," Kommedahl said.

add 1-kommedahl

"You can protect a plant from root diseases if you can change the ecology so the nutrients attract micro-organisms that are antagonistic toward the pathogenic organisms."

In many cases biological control has advantages over chemical control, Kommedahl said.

For example chemicals protect the kernel, but the roots eventually grow away from the area of protection. When the kernel is coated with non-pathogenic organisms, however, the organisms grow with the root, thus protecting a greater amount of the root system.

Kommedahl and Warren studied the effect that crop residues and fertilizers have on the survival of pathogenic organisms, and how root diseases can be reduced by altering these cultural practices.

They found that the number of pathogens on roots of corn, oats and soybeans become abnormally high if the residues were removed and no fertilizer was added.

By adding fertilizer to plowed-down residues a better balance of soil organisms is maintained, Kommedahl said. This better balance helps control pathogens.

If residues were plowed down but no fertilizer added, or if residues were removed and fertilizer added, pathogen control was not as great as if both the residues were plowed down and fertilizer added.

Kommedahl and Nyvall found that some pathogenic organisms grow rapidly in the straw residue and quickly exclude other organisms that help maintain a balance. They also found that pathogenic organisms survive in old corn stalks that are plowed under. When new corn stalks grow through the plowed-under stocks they become infected with the pathogenic organisms.

Pathogenic organisms do not survive as well when the stalks are left on the surface as when they are plowed under, Kommedahl said. "However there are other good reasons for plowing under the residue. At this point we still need more research on biological control practices before we can apply all of our findings for the farmer's benefits."

Kommedahl and his associates have been concentrating on a fungus species called fusarium, the major root disease pathogens on cereal crops.

"Our two objectives," he said, "are to increase the knowledge of the ecology of root infecting fungi, and making information on biological control methods available to the farmer.

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238-wobn-69

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#### 4-H'ERS WIN CONSERVATION TRIP

Achievements and interest in conservation have won trips for eight 4-H members, Wayne Carlson, assistant state 4-H leader at the University of Minnesota, has announced.

Trip winners are Sally Lake, Aitkin; Debbie Christopherson, Esko; Don Slininger, Twin Valley; Clair Smith, Owatonna; Diane Stroman, Alberta; Sandra Schultz, Long Prairie; Janell Belz, Stillwater; and Charles Pribyl, Maple Lake.

The 4-H'ers are taking part this week (Oct. 6-7) in the 15th annual conservation tour sponsored by Northern States Power Company to study conservation practices in the Red Wing, Winona, Minnesota, and La Crosse, Wisconsin, areas. They will study land use, see a power generating plant, tour the Coulee Experimental Forest, visit Whitewater State Park, view soil conservation practices in Winona County and hear talks on air and water pollution.

Nearly 10,000 Minnesota 4-H'ers are enrolled in some aspect of conservation.

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#### 4-H PROGRAMS HELP MEET NEEDS OF YOUTH

More than 60,000 youths in Minnesota 9 to 19 years of age took part in one or more 4-H programs conducted by the University of Minnesota's Agricultural Extension Service during the past year, according to Leonard Harkness, state leader, 4-H youth development.

More than 58,000 of these were enrolled in the 2,166 organized clubs in Minnesota. The others took short-term programs such as arts and crafts, bicycle safety, horticultural science, automotive and small engines. More than 2,000 boys and girls enrolled in a TV Action series giving them an opportunity to do projects and experiments at home. The series was telecast on educational television stations.

Among the young people actively involved with 4-H programs, some 11,600 are teen or junior leaders. In addition, about 14,600 adults act as volunteer leaders, giving a total of a million hours of service a year helping 4-H'ers with club organization, activities and projects.

More than a third of the 4-H members are now from small towns, cities or suburban areas. Ten- 11- and 12-year-olds comprise the largest group of members.

Harkness made his report as 4-H'ers throughout Minnesota and 3 1/2 million throughout the nation are observing National 4-H Week Oct. 5-12.

4-H continues to be a "learn by doing" program, Harkness says, but many of the traditional projects are taking on a new look as emphasis is placed on both scientific and economic aspects -- the "why" as well as the "how."

add 1-4-h programs

To broaden the appeal of this educational program to more urban and suburban young people as well as rural youth, new projects are added each year. More than 8,000 youths are now enrolled in the new creative arts and crafts program. Nearly 8,000 young people took part in the camping program. Some 3,000 are engaged in a study of their own communities and doing community service projects. This past year 10 percent of the total state enrollment -- 5,500 young people -- participated in the Youth for Natural Beauty program, working in cooperation with local officials to improve the appearance of their communities. They painted town halls, made litter-bug signs, had litter drives, planted trees, shrubs and flower beds, cleaned up beaches and shorelines.

Money management, photography, dog care and training, horsemanship, conservation, entomology are among the projects that are interesting increasing numbers of urban and suburban youth.

For several summers many rural 4-H'ers and their parents have been involved in a "city to farm" program, hosting youth from the Twin Cities for a day or two to show them farm life. This past summer 13 Minnesota counties participated in the program, cooperating with social and youth agencies.

4-H programs have been set up in special education classes in schools in a number of Minnesota counties to provide an opportunity to meet basic psychological needs of retarded children.

4-H'ers are also expanding their world through international programs -- pen pal exchanges, the Teen Carvan and the International Farm Youth Exchange.

As state 4-H Federation president, Ken Walker, 17, Faribault, heads the organization of 58,000 members.

In Minnesota the 4-H program is conducted by the Agricultural Extension Service of the U. S. Department of Agriculture, the University of Minnesota and the counties in the state. Extension agents give direct supervision in the counties.

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October 6, 1969

To all counties

ATT: Extension Home Economists

Immediate release

CHOOSE YOUR WINDOW  
TREATMENTS TO BLEND  
WITH FURNISHINGS

Your choice of a window treatment will be governed by what you want it to do for the room and your family.

Mrs. Myra Zabel, extension home furnishings specialist at the University of Minnesota, suggests you consider the following before making a choice of the type of window treatment you'll use:

. How the window treatment will be cared for and by whom. This is probably the most important determining factor in the selection of a treatment for windows. Will you be doing the cleaning, will hired help or will you send window curtains to the drycleaner?

. Whether you own or rent your home.

. The other furnishings already present in the room. You will want the window treatment to blend well with other furnishings.

. The general character of the room -- whether it is formal, very informal or in between, and whether it is masculine or feminine. Formal rooms almost demand full-length draperies in quite elegant styles and fabrics. Family rooms and porches are very informal while cottages need very little window treatment.

. The style of the furnishings in the room -- whether contemporary, traditional, Early American, Provincial, eighteenth century, Victorian, Mediterranean or Oriental.

. The size and shape of the room and the number of windows and their arrangement. Small rooms will seem crowded with windows that are overdone. Short curtains and perhaps cafe or tier-type would seem right in small rooms. Windows of uniform size are more easily treated than those of varying sizes.

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October 6, 1969

To all counties  
4-H NEWS  
Immediate release

#### 4-H FILLERS

For the 18th year the Ford Motor Company Fund is sponsoring the National 4-H Achievement Program conducted by the Cooperative Extension Service. Awards consist of 12 national scholarships of \$600 each, one all-expense-paid trip per state for a delegate to the National 4-H Congress held in Chicago, and gold-plated medals for four county winners.

This program includes all phases of 4-H work ranging from animal science to home economics. In judging winners, particular attention is given to community and school activities, junior leadership and civic awareness.

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About 175,000 boys and girls are enrolled in the national 4-H horticultural program supervised by the Cooperative Extension Service and sponsored by Allis-Chalmers for the 24th year. Adults experienced in gardening serve as volunteer leaders for horticultural clubs.

Soil improvement, seed testing for germination, plant propagation and pruning techniques are some of the scientific aspects of the 4-H projects in the horticultural program. For youths living in rural areas the roadside vegetable and flower stand is a popular and profitable venture.

\* \* \* \*

4-H has an enrollment of 3½ million in all 50 states. In addition to members actually enrolled in 4-H Clubs, thousands of other boys and girls participate in various ways. Many have enrolled in a 4-H educational TV series with suggestions for doing projects at home. Others have taken part in short-term, special interest groups. Older boys and girls, for example, may enroll in 4-H money management workshops or career exploration seminars.

President Richard Nixon has accepted an invitation to serve as honorary chairman of the National 4-H Service Committee. The Service Committee is a non-profit, educational corporation headquartered in Chicago which has supported the 4-H program for 48 years. Currently some 58 corporations, foundations and individuals support the Committee's work financially.

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October 6, 1969

To all counties  
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APPLY HERBICIDES  
FOR FALL CONTROL  
OF QUACKGRASS

You can apply herbicides for quackgrass control until freeze-up this fall. Atrazine is the most effective herbicide for quackgrass control, but treated areas should be planted only to corn, according to Gerald Miller, extension agronomist at the University of Minnesota.

Atrazine has been most effective when applied as a split application -- 2 pounds per acre about 2 weeks before plowing in the fall -- then an additional 2 pounds per acre as a preemergence or early postemergence treatment after corn is planted in spring. This treatment also controls annual weeds in corn. But crops other than corn are likely to be injured, so plant corn for 2 years to avoid possible carryover injury.

If crops other than corn must be grown next year, you can apply TCA on land that has been plowed or thoroughly cultivated as long as the quackgrass is still growing this fall. TCA has given fair quackgrass control, but if the land is cropped the next year, make a second application after next year's harvest to eradicate the quackgrass.

Flax, potatoes, sugar beets, oats, corn and strawberries will show normal growth the year after TCA has been applied if rainfall has been normal. But these crops may be injured if it's dry after TCA applications.

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add 1 -- apply herbicides

Dalapon (Dowpon) is more effective than TCA when it's applied to a good growth of foliage, but gives about the same results on scanty foliage. Fall treatment of dalapon followed in a week or two by plowing or a similar soil preparation gives good control of quackgrass the following year, but repeated treatments are necessary for eradication.

Dalapon applications are most effective when there's rain between treatment and plowing. Response of spring-sown crops to residues of dalapon in the soil is similar to that of TCA.

You can also apply dalapon to quackgrass in the spring, Miller says. Apply the dalapon when quackgrass leaves are about 6 inches tall, and follow with plowing or other soil tillage in 2 to 3 weeks. Don't plant crops until 4 weeks after the application. Corn, wheat and soybeans are especially sensitive to small amounts of dalapon in the soil.

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IN BRIEF . . .

Check Corn Hybrids for Lodging. Watch for excessive lodging in corn hybrids this fall. Hybrids with severe faults like excessive lodging should be eliminated, says Herbert Johnson, extension plant pathologist at the University of Minnesota. Inspect demonstration plots of many hybrids to select new ones to add next year. In addition to susceptible hybrids, excessively high populations, low potash and soil insect injury can cause lodging. Harvesting the crop as early as possible will reduce chances of losses. For more information, ask your county extension agent for a copy of Plant Pathology Fact Sheet No. 3, "Stalk Rot and Lodging of Corn."

\* \* \* \*

Stem Blackening in Soybeans. A dark or black color of soybean stems and pods may result from at least two causes, but neither results in serious problems, according to Herbert Johnson, extension plant pathologist at the University of Minnesota. Some varieties have a dark pigment that develops late in the season, but this is normal and causes no trouble. It's a smooth, uniform coloring.

The other cause is a fungus disease called "Pod and Stem Blight." In this case, the dark color results from a series of small, black, circular bodies that occur in lines on the stems. This is not a serious disease, although it's often conspicuous late in the season.

\* \* \* \*

Lime Needs Time to Act. Don't wait until your new seeding is planted next spring before applying lime on alfalfa fields. Surface applications at that time will not benefit the immediate crop, according to Curtis Overdahl, extension soils specialist at the University of Minnesota. Overdahl says changing an acid soil to one neutral enough for alfalfa takes at least six months, even when lime is well mixed with surface soil.

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add 1 -- In Brief

Vaccinate for Lepto. Vaccinate your dairy herd for leptospirosis if you're in an affected area, or if your herd is exposed through cattle shows or by new animals brought into the herd. The vaccination for leptospirosis -- commonly called lepto -- is effective for only 6 to 12 months so it must be given annually, according to Joe Conlin, extension dairy specialist at the University of Minnesota. Animals with lepto show varying degrees of characteristic signs, including fever, depression, loss of appetite, bloody urine, bloody milk and abortion. In severe cases, abortion occurs at the height of the fever, but in mild cases abortion may be the only sign of lepto and it usually occurs during the last 3 months of gestation.

\* \* \* \*

Prepare for Safe Harvest Season. There are two requirements for a safe harvest season. First, get your equipment in good repair and second, get yourself in good shape. If you're working from daylight to dark, you'll probably be plagued with fatigue during the entire harvest season. And when you're tired, you aren't alert. Take a mid-morning and mid-afternoon coffee break to pick you up. Fifty percent of the harvest accidents happen after four o'clock in the afternoon. The time lost during a coffee break will be more than made up by your increased efficiency -- plus the possibility of avoiding an accident.

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October 7, 1969

Immediate Release

## CONSIDER PRIORITIES FOR INSURANCE

After marriage where does one place priorities for insurance?

There are so many kinds of protection which may be beneficial that some limitations must be set, according to Mrs. Edna K. Jordahl, extension specialist in home management at the University of Minnesota.

The Women's Division of the Institute of Life Insurance suggests that health and medical insurance be given top priority. A family policy should be considered, with special analysis of maternity benefits. No policy should be cancelled until a new one takes effect. Read special clauses which may not cover certain medical expense until one or two years expire.

Next, suggests the Institute, plan for coverage of household items and the home. They would be costly to replace in event of loss.

Consider also life insurance protection. A good time to check what coverage you own is right after marriage. Decide what coverage is advisable in your new situation and shop around for what is available locally. Make a comparison of at least three available sources before making a final decision, advises Mrs. Jordahl.

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October 9, 1969

Immediate Release

## DELEGATES TO NATIONAL SAFETY CONGRESS NAMED

Eight Minnesota 4-H'ers are among 10,000 delegates selected to attend the 1969 National Safety Congress in Chicago, October 26-29.

The 4-H'ers are: Debra Hollerich, Good Thunder; Beulah Frikke, Clara City; Rosann Wadding, Emmons; Fred Kaiser, Little Falls; Cindy Siems, Fergus Falls; Gary Bratsch, Renville; Michael Arnold, Duluth; and Raymond Strassburg, Burtrum.

While in Chicago the 4-H'ers will take part in workshops, discussion groups and organizational meetings, according to Earl Bergerud, assistant state leader, 4-H and youth development at the University of Minnesota. Sergeant Gordon Cleland, Safety Education Unit, Illinois State Police, will speak on traffic safety. A recreation program and tours of Chicago have been planned for the evenings.

Most of the winning 4-H'ers have taken part in all units of the 4-H safety project. Their activities in the program include the Red Cross Swimming Program, fire prevention, highway safety, bicycle safety, firearms training, and making safety signs.

Besides their activities, most of the 4-H'ers have received awards for their safety projects and have been on their local 4-H club safety committee.

The St. Paul Dispatch and Pioneer Press, Midland Cooperatives and Mutual Service Life Insurance Company are sponsoring the trips for the eight Minnesota 4-H'ers.

Included among the 10,000 youth delegates attending the congress are members of FFA, FHA, 4-H and the Youth Safety Councils.

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and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
October 9, 1969

Immediate Release

## MONEY STRATEGIES IMPORTANT FOR STATE FARMERS

The strategies Minnesota farmers use to obtain money to continue expansion of their farms will become increasingly important in the near future, according to two University of Minnesota agricultural economists.

Lyndell W. Fitzgerald and Ernesto Venegas issued a report recently entitled "Growth of Minnesota Farms," published in the September issue of "Minnesota Agricultural Economist."

Minnesota farms have grown substantially in almost every category based on information received from the Southeast and Southwest Farm Management Associations. The information from the two associations is fairly representative of growth patterns throughout the state, Fitzgerald said.

The average cost of farm capital apparently decreased from 10.5 to 8.4 percent, while interest rates have not decreased generally, Fitzgerald reported. The decrease in the cost of money can be explained by the use of more long term credit, such as land mortgages.

As long as the cost of capital is below the productive power of the resources it can purchase, a farm operator can increase his profits by employing such resources. The operator may profit by employing fixed-return capital rather than using equity financing, the agricultural economist added.

Credit financing was not necessarily the best strategy for supporting farm business expansion from 1956 through 1968. Other studies indicate that renting and leasing, particularly cash renting of land, have been successful strategies for many better than average farmers, Fitzgerald said.

Farm financial strategies will become increasingly important in the near future as the pressure for further expansion creates serious problems for farm operators, he added.

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243-daz-69

Department of Information  
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St. Paul 55101 Tel. 373-0710  
October 9, 1969

Immediate Release

## TAX SHORT COURSE TO FEATURE FIVE WORKSHOPS

Five workshops covering items of special interest to tax consultants will be held during the 27th "Farm Income Tax Short Course" Oct. 20-22 at the St. Paul Hotel, St. Paul.

The two-and-a-half-day course is being offered by the University of Minnesota's Office of Special Programs and the Department of Agricultural Economics in cooperation with the Internal Revenue Service and the Minnesota Department of Taxation Income Tax Division.

Registration for the course is open to anyone concerned with the preparation of state and federal income tax returns. The registration fee is \$15 which includes an abstract on current state and federal laws, regulation and procedures for filing tax returns.

The five workshop topics will include:

- Current and potential federal tax law changes.
- Changes in Minnesota income tax laws, forms and procedures.
- Casualty and disaster losses as credits against state tax.
- Tax planning and modifications to federal adjusted gross income.
- Farm auction sale, the installment method and the state itemized deduction.

In addition, a special problem solving service booth will be open at all times during the short course. State and federal tax experts will answer specific questions. Also, a special evening session on fundamentals of preparing Minnesota Form M-1 and a new 1040 form will be held.

For further information, contact the Office of Special Programs, Agriculture Extension Service, University of Minnesota.

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October 9, 1969

Immediate Release

#### DELEGATES TO NATIONAL SAFETY CONGRESS NAMED

Eight Minnesota 4-H'ers are among 10,000 delegates selected to attend the 1969 National Safety Congress in Chicago, October 26-29.

The 4-H'ers are: Debra Hollerich, Good Thunder; Beulah Frikke, Clara City; Rosann Wadding, Emmons; Fred Kaiser, Little Falls; Cindy Siems, Fergus Falls; Gary Bratsch, Renville; Michael Arnold, Duluth; and Raymond Strassburg, Burtrum.

While in Chicago the 4-H'ers will take part in workshops, discussion groups and organizational meetings, according to Earl Bergerud, assistant state leader, 4-H and youth development at the University of Minnesota. Sergeant Gordon Cleland, Safety Education Unit, Illinois State Police, will speak on traffic safety. A recreation program and tours of Chicago have been planned for the evenings.

Most of the winning 4-H'ers have taken part in all units of the 4-H safety project. Their activities in the program include the Red Cross Swimming Program, fire prevention, highway safety, bicycle safety, firearms training, and making safety signs.

Besides their activities, most of the 4-H'ers have received awards for their safety projects and have been on their local 4-H club safety committee.

The St. Paul Dispatch and Pioneer Press, Midland Cooperatives and Mutual Service Life Insurance Company are sponsoring the trips for the eight Minnesota 4-H'ers.

Included among the 10,000 youth delegates attending the congress are members of FFA, FHA, 4-H and the Youth Safety Councils.

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October 13, 1969

To all counties  
Immediate release

NEW FEEDER CATTLE  
NEED PALATABLE FEEDS

Low energy, unpalatable feeds can set new feeder cattle back. University of Minnesota animal scientists R. D. Goodrich and J. C. Meiske offer these tips for feeding new feeder cattle.

Cattle are tired, hungry and usually scouring when they arrive at the feedlot or at a central yard. The scours are caused by stress and fright, and usually aren't due to improper nutrition. Special feeds aren't needed to stop this kind of scouring -- it will stop by itself if the cattle are allowed to rest and become quiet.

Feed first cutting alfalfa-brome hay free-choice, the specialists advise. Don't feed second or third cutting straight alfalfa hay since it may cause scouring. Feed one-half pound of soybean meal per head daily, and rolled oats or coarsely ground corn increased to a rate of 3 pounds per head daily by the third day in the feedlot. Don't let the cattle eat large amounts of grain too early.

Corn silage is also a good feed, but avoid feeding moldy material from the top of the silo. More protein supplement is required if you feed corn silage.

Range cattle aren't used to drinking from a fountain, so provide clean drinking water in an open stock tank for the first few days.

Cattle from range areas often need phosphorus and calcium because of dry, poor quality range grasses, so keep a mixture of 60 percent dicalcium phosphate and 40 percent trace mineralized salt available. Salt will replace minerals lost due to scouring.

add 1 -- new feeder cattle

The specialists also advise feeding vitamin A at a rate of 50,000 I.U. per animal daily for three weeks. You can do this by mixing 500,000 I.U. of vitamin A into each pound of mineral mixture. But don't mix large amounts of mineral and vitamin A ahead of time, since some vitamin A products aren't stable when mixed with minerals.

Either feed a broad spectrum antibiotic for the first 2 to 3 weeks to provide 350 mg. per head daily, or inject each animal as they come off the truck with 1 gram of a broad spectrum antibiotic. The proper level of a broad spectrum antibiotic may be fed by mixing 3.5 grams of actual antibiotic into each pound of a mineral mixture of 60 percent dicalcium phosphate and 40 percent trace mineralized salt.

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St. Paul, Minnesota 55101  
October 13, 1969

To all counties  
Immediate release

GOOD YEAR AHEAD  
FOR EGG PRODUCERS

Egg prices for the last quarter of 1969 are expected to average about one cent below prices of the same period a year ago, according to the latest Poultry Survey Committee report. Prices for the next twelve months are predicted to average about three cents below this year's average.

These estimates show a relatively favorable period ahead for egg producers, according to Melvin Hamre, extension poultry specialist at the University of Minnesota. While some price decline is expected, egg prices have been higher than normal the past year due to the small size of the nation's layer flock.

The layer flock will be above year earlier levels in the fourth quarter of 1969 for the first time since mid-1968. Hatch levels are now running 5 to 6 percent above a year earlier. Increased use of forced molting in some areas of the country can also cause an upward trend in flock size.

While production costs will be slightly higher, the coming year should still be favorable for egg producers, Hamre says. With a lower income per hen predicted, attention to good management practices to maximize the number of salable eggs per bird will pay dividends.

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October 13, 1969

To all counties  
Immediate release

IN BRIEF . . .

Don't Breed Cows Back Too Soon. Wait at least 60 days after calving before breeding dairy cows back, advises Joe Conlin, extension dairy specialist at the University of Minnesota. Your conception rate will improve and the number of services per conception will decrease if you wait at least 60 days before breeding cows that are in good reproductive health. And if you breed cows that had difficult calvings, retained placentas, abnormal discharges or other abnormal reproductive conditions back before 60 days, you may be risking veterinary bills or permanent damage. Don't breed cows in poor reproductive health until your veterinarian has found them ready.

\* \* \* \*

Evergreens Show Normal Fall Needle Drop. Every fall the oldest needles on evergreens die, making the tree look like it's diseased. This is a normal condition if the oldest needles -- those toward the center of the tree -- are dying, says Herbert Johnson, extension plant pathologist at the University of Minnesota. Each year in the spring a new set of needles is produced at the ends of the branches. These needles live for three to four years on most trees, then mature and turn brown or yellow, and eventually fall. After the needles have fallen, the trees look normal and healthy again.

\* \* \* \*

Prevent Farm Chemical Fires. Chemicals are especially hazardous, so take some special precautions to avoid fires in buildings where agricultural chemicals are stored, advises Gerald Miller, extension agronomist at the University of Minnesota. Don't store these chemicals in buildings such as the granary, machine shed, garage or barn. Mark a chemical storage building with a distinctive, easily read sign that clearly designates it as a chemical storage area. Never permit smoking or fires within the building.

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St. Paul, Minnesota 55101  
October 13, 1969

To all counties

ATT: Extension Home Economists

Immediate release

PLAN THE MEALS  
YOU SERVE  
YOUR FAMILY

Planning ahead helps to insure nutritious meals, saves time in marketing and in food preparation.

Plan interesting and tasty meals to include color, flavor, texture, form, temperature and variety. Above all, make sure you plan meals which include the recommended servings from the four food groups daily.

Extension Home Economist \_\_\_\_\_ suggests  
you keep these points in mind when planning your family meals.

. Plan the meals for a day as a unit. Fit the foods which provide needed nutrients into your meals each day whether you eat three meals a day or prefer to eat four or five times. If you eat snacks between meals, plan them along with the meals because they count toward daily food needs.

. Plan meals for several days in advance. This may save time and money at the grocery store and in preparing meals. It can prevent the strain of having to decide at the last minute what to eat.

. Consider how much money you have to spend for food. The lower the food budget, the more important it is to spend time on careful planning and preparation of meals. Remember that the cost of a meal is no indication of its nutritive value.

. Determine the kind and amount of food needed by the age and activity of your family. Appetites and tastes are different for the child, teenager, adult and older member of the family. You can adapt your meals to the special needs of your family by adjusting the size of servings or the way they are prepared.

. Consider family likes and dislikes. Serve family favorites but introduce a new and different food occasionally. Try every way you know to get your family to eat a wide variety of foods.

. Remember that meal planning is only a plan, and not a binding contract. You can make changes at the last minute if they will help you and improve the meal.

Department of Information  
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October 13, 1969

To all counties

ATT: Extension Home Economists

Immediate release

**BUY THE PROPER  
SIZE DRAPERIES  
AND CURTAINS**

Buying or making the proper length and width draperies and curtains is a perplexing problem for many homemakers.

The three lengths most often used for draperies and curtains are sill, apron and floor length, says Extension Home Economist \_\_\_\_\_.

Sill-length curtains just clear the window sill. It's usually better to either cover all of the woodwork trim or expose all of it. If the trim is good looking and the window is large, you may want to keep all of the window treatment inside of the casing.

Apron-length curtains come to the bottom of the board under the sill. In this case the rest of the curtain should cover the woodwork trim, leaving none exposed. Unattractive woodwork can be hidden in this way.

Floor-length curtains come to within an inch from the floor. Hemming floor length curtains so they clear the floor keeps them clean along the lower edge.

Usually the upper edge of curtains is even with the top of the woodwork. Those hung inside of the casing begin at the casing edge. Sometimes curtains are hung at the ceiling line, especially when you want to curtain a whole wall.

To look attractive, curtains and draperies should hang in soft graceful folds. Drapery and curtain fabric should be twice to three times as wide as the window or window and wall area to be covered. Draw draperies should be two and one half times the width of the window or window and wall area to be covered. When using very soft or sheer fabrics you may need up to three or more times the width of the area to be covered. Never buy skimpy draperies or curtains; it is better to have them fuller than needed. A large amount of inexpensive fabric produces a luxurious effect.

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October 13, 1969

To all counties  
Immediate release

BANKER'S RAISE  
MONEY FOR  
NATIONAL 4-H CENTER

Minnesota bankers will give a boost to the National 4-H Foundation during late October and early November as they participate in the Foundation's annual statewide bank campaign.

Thomas E. Olson, president of the First National Bank of Starbuck, is serving as 1969 chairman of the 4-H bank campaign according to Leonard Harkness, state leader 4-H and youth development at the University of Minnesota.

Banks contribute financial support to 4-H in many ways, explained Mr. Olson. In addition to their support of the National 4-H Foundation they assist with many county and state 4-H activities. The Minnesota Banker's Association has sponsored the 4-H award trips to the National 4-H Conference for more than 20 years.

Minnesota 4-H members and leaders benefit from the many educational programs of the National 4-H Foundation. These programs are in the areas of citizenship, 4-H leadership development and 4-H international programs, such as the International Farm Youth Exchange and the 4-H Teen Caravan, explained Olson. Nearly 1,000 Minnesota 4-H members have attended citizenship short courses at the National 4-H Center in the past 5 years. Families in every one of Minnesota's 87 counties have served as host to International Farm Youth exchange delegates from over 50 countries during the past several years. The IFYE program has contributed greatly to the expansion of the 4-H ideas to some 80 countries around the world.

add 1 -- bankers raise money

Minnesota bankers have been in the forefront in their contributions to the National 4-H Foundation, according to Harkness. During the first seven or eight years of the National Bank Campaign, Minnesota bankers led all other state bank groups in their support of the Foundation and are still in the top group. Total contributions from Minnesota bankers to the National 4-H Foundation have exceeded \$46,000 during the 13-year history of the campaign.

Participation in educational programs at the National 4-H Center have expanded so rapidly in recent years that a major expansion of the facility is being undertaken. The 4-H Center will be expanded to increase its capacity from 300 to 800 persons. Presently over 20,000 4-H members and leaders from all over the United States attend conferences and workshops at the Center each year and the number will grow as the expansion program is completed.

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October 14, 1969

Immediate Release

#### EXTENSION AGENT ASSOCIATIONS ELECT OFFICERS

Officers of the two county extension agents' associations were elected Monday (Oct. 13) at the annual conference of the University of Minnesota's Agricultural Extension Service.

The conference began Monday at the Holiday Inn Central, Minneapolis, and will end Thursday noon.

New president of the Minnesota Association of County Extension Agents is Harold Rosendahl, Ada. Other officers are Ernest Johnson, Redwood Falls, vice president; and John Ankeny, St. James, secretary-treasurer.

The Extension agents elected five new members to the Association's board of directors. They are Duane Schrader, North Branch; Ken Rose, Pipestone; Bob Leary, Le Center; Floyd Jorgenson, Redlake; and Denzil Cooper, Perham.

Mrs. Sharon Gilsrud, Mankato, was named president of the Minnesota Association of Extension Home Economists. Elected to other offices were Mrs. Audrey Tolzmann, St. Peter, first vice president and president-elect; Mrs. Darlene Ellingson, Mora, second vice president; Mrs. Sharon Knutson, Ada, secretary; and Mrs. Shirley Barber, St. Paul, treasurer.

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245-vak-69

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October 14, 1969

Immediate Release

## COOPERATIVE EDUCATION URGED FOR URBAN-RURAL PROBLEMS

Universities can better serve society through problem-oriented extension education, a University of Florida administrator told members of the University of Minnesota's Agricultural Extension Service Monday.

E. T. York, Jr., agricultural provost at the University of Florida in Gainesville, addressed the Annual Extension banquet during the group's annual conference at Holiday Inn Central in Minneapolis.

"The real issue is how the university can better serve society through the unique and distinctive form of problem-oriented extension education, which has characterized efforts of cooperative extension for the past half century," he said.

Cooperative Extension has proven effective in dealing with such problems as pollution, poverty, urban blight, economic stagnation in rural areas and narcotic and drug use among young people, York added. One of the biggest challenges facing universities is to further develop and expand the cooperative extension program to use it most effectively.

York suggested that each university college develop an extension component to complement its research and resident teaching efforts, similar to what is now being done at agricultural schools.

"Each college would operate programs in areas where expertise from only that college was needed. However, a mechanism for coordination would be provided through a dean or vice president for extension or continuing education where there was a need for the involvement of resources from more than one college within the university," he added.

Contemporary problems do not lend themselves to a rural-urban separation. If the university is to address itself to major economic and social problems of its state, "then each university will have to develop its own 'program mix,' depending on the nature and priority of problems within a given state," he said.

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October 14, 1969

Immediate Release

#### AG COUNCIL HEAD DISCUSSES EXTENSION SERVICE REPORT

A joint national report has recommended nearly doubling the Agricultural Extension Service's staff by 1975 from the 1968 level, George L. Mehren, president of the Agribusiness Council, Inc., New York, said Tuesday.

Mehren reviewed the report, "A People and a Spirit," at the annual conference of the University of Minnesota Agricultural Extension Service at the Holiday Inn Central In Minneapolis.

A joint study with other groups and persons suggested by the Extension Committee on Organization and Policy after two years of study "recommended massive increase and great change in extension activity. It urged far greater federal support for social, human, youth and economic development work," Mehren said.

Continuing participation in foreign development by the extension service and an increase rather than the present decline in relative federal financing was urged by the committee.

If the joint committee's recommendations were followed, the extension service "would nearly double in size from 1968 to 1975, Agriculture would expand only one-fourth. The heaviest expansion would be in the human and resource development fields," Mehren added.

-more-

add 1--ag council

State and local sources should finance a 25 percent increase in agriculture and related industries personnel, the panel proposed. The committee recommended that "agriculture be served on a larger scale but with quite different emphasis from those now prevailing. It suggests further training and service to industrial units on a fee basis. "There is no issue or intent of dropping, cutting or crippling this work," he said.

The committee urged that the extension service increase its work with low-income farmers, offer more in-service training to public employees and expand public affairs and natural resources activities. "Extension should provide more data and analysis with respect to issues of pollution and its mitigation, waste disposal and competing resource use. There is need for help in comparing farm and non-farm work opportunities, to help those who can succeed in farming and to help train those who cannot for other employment," Mehren added.

Budgets should be tripled for resource development and doubled for work with low-income groups and natural resources, the joint committee suggested.

The report indicated that metropolitan residents should be served by the extension service. The committee urged that the service help in resolving ethnic troubles and make minority group programs prominent. "There is heavy pressure to extend youth work to all youth, as it has in fact been extended, and to shift away from skills as the major program theme," Mehren said.

There is a question whether all the projected changes in the extension service should be sought by 1975 or ever, Mehren said. "Yet the broad frame of the committee proposals does reflect the views and actions of many extension people," he concluded.

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Immediate Release

## NICOLLET CO. EXTENSION HOME ECONOMIST HONORED

A Minnesota extension home economist will receive special recognition at the annual meeting of the National Association of Extension Home Economists in Philadelphia this month.

She is Mrs. Audrey Tolzmann, who has been extension home economist in Nicollet County, with offices in St. Peter since May 1967. She will receive the Distinguished Service Award at a recognition breakfast Oct. 22.

She will be cited for an effective program in housing when little was being done elsewhere in the state, for developing a series of clothing workshops which served as the basis of a plan now used in a number of counties, for consumer education in clothing, home equipment and color and for a study of farm and home safety done under her supervision. She will be recognized also for her effective teaching of home economics subject matter and for her work in training new county extension home economists. She directs the extension home economics program in Nicollet County and works with 4-H members, particularly in the home economics projects. More than 600 women are enrolled in adult extension home economics clubs in Nicollet County.

Before joining the Nicollet County extension staff, Mrs. Tolzmann was a county home agent in Jackson County for 10 years. She was promoted in rank from instructor to assistant professor on the University of Minnesota staff in 1961. Last year she received a certificate of recognition from the U.S. Department of Agriculture for 10 years of continuous service.

-more-

add 1-nicollet co. extension

Her work in home safety won her an award of merit from the Minnesota Safety Council in 1960.

Active in the Minnesota Association of Extension Home Economists, she was elected secretary of the organization in 1968. She is also a member of the American Home Economics Association. She has served on numerous state advisory committees in developing programs for the Agricultural Extension Service.

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240-jbn-69

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October 14, 1969

Immediate Release

## GOOD MEALS EVERY DAY

Food fads come and go, but the same foods remain basic to a balanced, healthful diet each day, according to Grace Brill, extension nutritionist at the University of Minnesota.

What foods are needed each day? You need several servings every day from each of the four basic food groups -- the vegetable-fruit group, the milk group, the meat group and the bread-cereal group.

First, you need four or more servings from the vegetable-fruit group. Fruits and vegetables are valuable because of the vitamins and minerals they contain. This group is counted on to supply nearly all the vitamin C needed and over half the vitamin A.

Everyone, whether child, teenager or adult needs some milk. Children need three or more cups daily, teenagers four or more cups and adults two or more cups. Milk and milk products are excellent sources of calcium, riboflavin and protein. Cheese and ice cream may replace part of the milk as sources of calcium.

Two or more servings from the meat group are basic to a healthful diet. Foods in this group include beef, veal, pork, lamb, poultry, fish, eggs with dry beans, peas and nuts as alternates. This group is important for the amount and quality of protein. In addition, these foods provide iron, thiamine, riboflavin and niacin.

add 1--good meals

Four or more servings from the bread-cereal group contribute worthwhile amounts of iron and thiamine, riboflavin and niacin and some protein. This group includes such items as cooked cereals, breads, cornmeal, crackers, flour, spaghetti, rice, rolled oats and other baked goods made with wholegrain or enriched flour.

Whether you're an astronaut or a farmer, a housewife or a businessman, a teenager or a child, these four groups should serve as a daily food guide. For more information on planning daily meals just ask for extension bulletin 360, entitled "Good Meals Every Day." It is available from your county extension office, or write the Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul, Minnesota 55101.

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244-lah-69

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October 16, 1969

Immediate Release

#### UM RESEARCHERS DEVELOPING SEMI-DWARF WHEAT VARIETIES

New wheat varieties in the future will be shorter, higher yielding and have more lodging resistance than present varieties, especially when they're grown under high fertility conditions, according to Rober Heiner, USDA and University of Minnesota wheat breeder.

"We've studied these semi-dwarf, or short varieties for 14 years and have several lines with excellent agronomic characteristics such as short stature, disease and lodging resistance and high yielding ability," Heiner says.

"The semi-dwarfs have yielded 20 to 40 percent more than Chris in our trials, and are being tested for baking quality. Some appear to be acceptable, but many high yielding semi-dwarf varieties have not shown acceptable quality. So it's especially important that semi-dwarf varieties have adequate quality evaluations before they're released," Heiner stresses.

It used to take at least 15 years to develop a new wheat variety that was accepted commercially, but modern plant breeding methods have cut this to 8-10 years, which includes time for adequate quality testing.

-more -

add 1--um researchers

Heiner squeezes two summers into one year by growing wheat in the Yaqui Valley in the state of Sonora, Mexico during the winter months. The Mexico winter seed increase program has been useful to all small grain projects, since the plants can be grown in fertile, irrigated fields at a relatively small cost with little danger from winter injury.

With this seed increase program in Mexico and the use of greenhouse facilities at the University, Heiner can grow three crops per year and shorten varietal development time considerably.

Heiner is increasing seed supplies of the most promising semi-dwarf selections. If baking quality is satisfactory, it should be available for commercial production in 2-3 years and give farmers a high yielding, semi-dwarf wheat with good baking quality.

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Oct. 16, 1969

Immediate Release

## AGRICULTURAL EXTENSION INITIATES SPECIAL TELETEACHING SEMINARS

The Agricultural Extension Service, in cooperation with the General Extension Division and several University departments, is initiating a series of teleteaching programs that will reach 33 Minnesota locations before next spring.

Telelecture or teleteaching is not new to the University or to education. Last year, for example, 800 people participated in a series of four meetings on horse management. Dr. Robert Jordan, professor of animal science, was connected simultaneously to seven locations for his presentations. General Extension has used the method on several occasions. This year's effort, however, is the most extensive tried thus far in informal Extension education in Minnesota.

Teleteaching enables one or more faculty members to work simultaneously with several communities at a time. In Minnesota this method has reached up to seven areas at one time; in adjoining Wisconsin, teleteaching has reached up to 45 locations simultaneously.

Working with local county extension agents, the University's faculty representative in the county, seminars have been arranged on consumer education, fabrics, 4-H leadership, and horse management and nutrition. During the next few months county agents make local arrangements and provide discussion leadership. The faculty involved speak via telephone from the St. Paul Campus, providing visuals, course outlines, and reference materials to be used at the local listening stations.

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St. Paul, Minnesota 55101  
October 20, 1969

To all counties  
Immediate release

CONTROL LIVESTOCK  
PARASITES IN FALL

Begin control measures for livestock parasites when animals are put into feedlots and buildings this fall.

Chemical control measures such as dipping, spraying, dusting, back "pour on" and worming should be started at this time, according to Dr. Ray Solac, extension veterinarian at the University of Minnesota. Non-chemical measures are also important. These include keeping feeding and watering equipment clean and in good repair, and keeping feed and water free from animal droppings.

Make sure you follow label directions carefully when using chemicals. Use products only on the class of livestock for which it has been approved. For example, don't use chemicals approved only for beef cattle on dairy cattle.

Also, check labels for restrictions on time limitations for the class and age of livestock, freshening and farrowing dates, and time of slaughter.

Freezing and thawing during winter months destroys many parasitic eggs and larvae which were seeded on pastures in the fall, Solac says. So controlling parasites on livestock during fall and winter will prevent animals from bringing these parasites into clean pastures next spring.

For more information, ask your county extension agent for a copy of Extension Bulletin 263 -- Revised, "Insecticides and Their Uses in Minnesota -- 1969."

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
October 20, 1969

To all counties  
Immediate release

PLAN WINTER ROUGHAGE  
PROGRAM FOR DAIRY HERD

Dairyman should line up feed supplies before going on winter feed, then feed basically the same ration all winter. Cows may drop in production when rations are changed suddenly during the winter feeding season, cautions Ralph Wayne, extension dairy specialist at the University of Minnesota.

If you're going to be short on roughage for your dairy herd this coming season, you can buy additional hay, increase the rate of grain feeding or cull a few cows.

Wayne says dairymen who will be short on feed may want to cull lower producing cows or cows that are down in production and not due to freshen for some time. The market price for cull cows is higher now than it may be later on, he adds.

A ton of a good quality grain ration is equal to about 3600 pounds of good quality legume-grass hay as a source of energy feed. So if your grain ration costs about \$2.50 per hundred pounds and you are short of feed, you can afford to pay about \$28 for a ton of hay, less the extra cost of handling a bulkier feed.

But there's a limit to the amount of roughage that can be replaced with grain. Each cow should get at least 12 to 15 pounds of dry hay, or an equivalent amount of dry matter from silage per day. When the amount of roughage drops below this level, milk fat test may be lowered.

# # # #

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St. Paul, Minnesota 55101  
October 20, 1969

To all counties  
Immediate release

UM BEEF CATTLE  
FEEDERS DAY SET  
FOR NOVEMBER 13

The first in a series of University of Minnesota 1969 Beef Cattle Feeders Days will be held Thursday, November 13, at the Rosemount Junior High School.

The program will begin at 3 p.m., with informal tours of cattle experiments and facilities at the University's Agricultural Experiment Station at Rosemount.

Results of current research will be discussed from 4 to 6 p.m. by University of Minnesota animal scientists. Topics to be discussed include urea and biuret supplements for cattle rations--growth promotants for finishing heifers--influence of high nitrate intakes on cattle fed urea and antibiotic--silage feeding systems for finishing calves--levels of dehydrated alfalfa in cattle finishing rations -- dried rumen contents in rations for finishing cattle -- influence of a shipping fever vaccine on feeder cattle-- modified environment housing systems for finishing cattle -- and use of corn silage for growing and finishing steers.

Dinner will be served at 6 p.m., followed by discussions on housing systems for finishing cattle, feedlot pollution control, carcass quality and maximizing profits in beef feeding. The program will conclude with a question and answer session at 9 p.m.

# # # #

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October 20, 1969

To all counties  
  
Immediate release

IN BRIEF . . . .

Fall Dairy Management Tips. Fall is a time of feed changes for the dairy cow, and these changes should be made gradually to avoid digestion upsets, according to Bill Mudge, extension dairy specialist at the University of Minnesota. Challenge feed cows freshening in fall with extra grain, then check milk scales for results. Also, watch for spoilage in silage, and grind high moisture corn often to help prevent spoilage.

\* \* \* \*

Late-Fall Care of Dairy Heifers. Yearling dairy heifers still on fall pasture need some extra care. Supply hay as pasture fails to meet the heifers' needs, advises Bill Mudge, extension dairy specialist at the University of Minnesota. Springer heifers should be placed with the milking herd at least three to four weeks before calving so they can be fed extra grain and become familiar with herd routine.

\* \* \* \*

Prune Oak Trees. Prune oak trees only during the fall and winter months to help prevent infection by the oak wilt fungus, advises Herbert Johnson, extension plant pathologist at the University of Minnesota. Inspect trees now and note the branches that should be removed. Pruning can be done from about early November to late February. If trees are pruned during the growing season--especially in the spring, infection can take place on fresh wounds. The oak wilt area in Minnesota is the southeastern part of the state, west to Mankato and north to St. Cloud and Taylors Falls.

\* \* \* \*

-more-

add 1 -- in brief

Treat Lawns to Prevent Snow Mold. Now's the time to apply a chemical spray to control snow mold on your lawn. Snow mold appeared last spring on most well-grown turf, according to Herbert Johnson, extension plant pathologist at the University of Minnesota. Snow mold occurs in winter or early spring in wet, shaded areas or where snow is slow to melt. The fungicide should be applied in late October or early November, or ideally, just before a permanent snow. Repeat the treatments during a midwinter thaw, following manufacturer's directions carefully.

\* \* \* \*

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St. Paul, Minnesota 55101  
October 20, 1969

To all counties  
  
Immediate release

STEPS SUGGESTED  
BY SOILS EXPERT  
TO HALT EROSION

Fall plowing is favored by farmers for corn and soybeans on southern Minnesota's fine-textured soils, reports James Swan, extension soils specialist at the University of Minnesota.

Swan gives these advantages for fall plowing: Spring soil temperatures are higher on fall plowing--planting can generally be done earlier on fine-textured, less well drained soils, usually with a minimum of spring seedbed preparation--and clod problems are greatly reduced on such soils by fall plowing, although it creates some wind and water erosion.

Leaving fall plowing rough provides temporary protection against erosion, but by spring the rough surface benefit is gone. Parallel grass backslope terraces with tile inlets and tillage systems which allow the use of limited amounts of mulch between the rows are suggested as means of checking water erosion problems on sloping areas.

On well drained sloping soils where runoff and erosion are problems, and on coarse-textured soils which blow easily, spring plowing or other spring tillage is commonly used. The rough surface in the between row area left by minimum tillage methods used on spring plowing and by other once over minimum tillage practices helps control erosion and runoff. Tillage which leaves mulches of crop residues also can be used to protect the soil surface from raindrops and prevent or slow down surface sealing, Swan says.

Windbreaks and leaving crop residues over the winter are important control measures on coarse-textured soils which blow easily.

On well-drained, medium and coarse-textured soils, tillage which leaves crop residues on the surface should be considered because soil temperature is much less critical and residues provide protection against erosion, Swan adds.

# # # #

Department of Information  
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St. Paul, Minnesota 55101  
October 20, 1969

To all counties  
4-H NEWS  
Immediate release

PREVENT ACCIDENTS  
THIS HALLOWEEN

As you drive down the street this Halloween, you're likely to meet little goblins, white-sheeted ghosts, pirates, or witches with their broomsticks out looking for treats.

With all the pedestrians on the streets, the possibility for accidents is high, says County Agent (Extension Home Economist) \_\_\_\_\_.

That's why it's important for young people who are among the trick-and-treaters or for parents who have children in costumes on the streets to keep in mind some safety tips so Halloween will be fun - not a disaster.

\_\_\_\_\_ passes on some tips to parents and trick-or-treaters from the Minnesota Safety Council:

- . Be sure the costumes are light in color so they can be seen in the dark by motorists.
- . Decorate the costume with reflective tape or bands which will glow when a car's headlights shine on it. This is especially important for dark costumes but is also a safety device for light-colored wear.
- . Make the costume short enough to prevent tripping.
- . Have the costume loose enough to permit wearing a sweater underneath if the weather is cold.
- . Make costumes of fabric that is not highly flammable - or dip the material in a fire-retardant solution.
- . Use make-up rather than a mask or cloth that covers the face and cuts down the ability to see.
- . Wear shoes that fit - not mother's high heels that may cause a fall.
- . Use cardboard for props like swords and broomsticks.
- . Decorate the treat bag with reflectorized tape so it will show up in the dark.
- . Use flashlights rather than candles in any pumpkins that are carried.

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St. Paul, Minnesota 55101  
October 20, 1969

To all counties  
ATT: Ext. Home Economists  
Immediate release

PLANNING CAN  
LIGHTEN YOUR  
IRONING LOAD

What is your most disliked task as a homemaker? If you said ironing, you're among millions of other homemakers who feel the same.

However, with a little planning you can lighten the ironing load, say extension clothing specialists at the University of Minnesota. Here are a few tips which might decrease the time you spend ironing.

First, when you buy clothing, linens or home furnishings such as curtains and bedspreads, look for durable press. Most quality durable press articles won't require even touch-up ironing if handled properly during laundering. Just remember to hang or fold them promptly when the dryer stops.

A fabric softener added to the final rinse of the wash cycle also eases the ironing load and is necessary to take full advantage of durable press. Because fabric softener makes fabrics softer and minimizes wrinkling, many items can be folded and put away without any ironing. If an article does need ironing, it is done more quickly and easily because the iron glides over the fabric.

Another way to minimize ironing is to avoid overdrying fabrics. Some clothes dryers have an electronic control with a sensing device which automatically shuts off the dryer when the clothes are dry.

Finger pressing is all that is needed for some items. Ribbons, seams and bias binding are often the only parts of a garment which need touch-up ironing. If you smooth these out by hand when the garment is taken from the dryer, even that bit of ironing can be avoided.

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October 21, 1969

Immediate Release

#### FREDERICK NAMED DIRECTOR OF WASECA TECHNICAL COLLEGE

Edward C. Frederick, superintendent of the University of Minnesota Southern School and Experiment Station at Waseca, has been named director of the University's new Technical College there.

The Technical College will be a two-year college branch of the University, and will open for students in the fall of 1971. The appointment was announced by the Board of Regents at their meeting Saturday, Oct. 18.

The Southern School of Agriculture will be dissolved in favor of the new Technical College. Frederick will continue as superintendent of the Southern Experiment Station until a successor is found.

The Technical College at Waseca will aim to prepare semi-professional graduates for technical areas of agriculture and business. It will be a combination college and technical school.

Both technical skills and a strong general educational background will be stressed. The college will offer courses in agriculture, business and general education.

Frederick was appointed to his present position in January, 1964. Previously he served at the University's Northwest Experiment Station in Crookston. His special research field is dairy physiology and management, and he is the author of many scientific and popular articles.

A native of Mankato, Minnesota, Frederick received his B.S., M.S. and Ph.D. degrees from the University of Minnesota. As an undergraduate, he graduated with honors and won a Borden Award Scholarship and the Caleb Dorr Senior Medal for the highest ranking member of the senior class in the College of Agriculture, Forestry and Home Economics.

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250-jms-69

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October 21, 1969

Immediate Release

## CATTLE JUDGERS RECEIVE AWARDS

The University of Minnesota Dairy Cattle Judging Team received awards in three major contests this month, according to Coach Garth Miller, assistant professor of animal science and veterinary pharmacology at the University.

The Minnesota team placed third out of 33 teams competing in the National Dairy Show at Columbus, Ohio, on Oct. 13.

Dudley Thiesse of Fairmont, Minn., placed sixth in individual judging of the Ayrshires, seventh in Brown Swiss and seventh in the individual judging contest.

Oren Lorenz of Bricelyn, Minn., was ninth in Guernseys and fourth in Jerseys. Richard Heckmann, Hamburg, Minn., was third in Brown Swiss.

At the North American Dairy Show Oct. 6 at Madison, Wis., the University of Minnesota team placed fifth out of 10 teams in overall competition. The Minnesota team was first in reasons, Milking Shorthorn and Ayrshire judging and third in Guernsey and Holstein judging.

Individual team members receiving awards in the Madison event were Thiesse, first in reasons and third in Holsteins; Heckmann, second in Milking Shorthorns and Ayrshires, and Lorenz, first in Ayrshires.

The team was awarded fourth place at the Cattle Congress on Sept. 20 in Waterloo, Iowa, where eight teams competed. The Minnesota team placed second in reasons and Thiesse was second in the overall competition.

Alternates for the three events were Jerry Bartel, Kasson, Minn., and John Kvasnicka, Hayfield, Minn.

In preparation for the events, the Minnesota team spent a week judging cattle on various Minnesota dairy farms, Miller said.

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October 21, 1969

Immediate Release

## APPLY CHEMICALS FOR SNOW MOLD CONTROL ON LAWNS

Now's the time to apply chemicals to prevent snow mold on your lawn next spring.

Snow mold damage to well grown turf was extensive in the spring of 1969, but it was too late for control measures once the disease was noticed, according to Herbert Johnson, extension plant pathologist at the University of Minnesota.

Fungicides for control of snow mold should be applied in late October or early November. The ideal time would be just before the first permanent snow. If the turf is exposed during winter thaws, additional treatments should be applied.

Mercury or cadmium containing fungicides have been the most effective for controlling snow mold, but some straight organic fungicides are also recommended, Johnson advises. Check container labels carefully for directions and dosage for snow mold control.

Snow mold appears during thawing periods in late winter and early spring as a delicate webbing on the grass near the edges of receding margins of snow. The webbing is often dirty in color, but may be white or pink, Johnson says. The disease is caused by a few fungi that have the ability to grow at freezing temperatures, or even lower.

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October 21, 1969

Immediate Release

## LEAD POISONING THREATENS MALLARD POPULATION

An estimated one million mallard ducks travelling the Mississippi Flyway will die from lead poisoning long after Minnesota's hunting season closes this year, according to University of Minnesota veterinary physiologist Paul B. Hammond.

The report summarizing the effects of lead poisoning on the state's wildlife and farm animals appears in a recent issue of "Minnesota Science", a publication of the University's Agricultural Experiment Station.

"Conservationists estimate that between two and three percent of all U.S. wild waterfowl are fatally poisoned each year by lead shot," Hammond says. "Bottoms of lakes and streams that are favorite hunting haunts are heavily sprinkled with lead shot. Birds seeking underwater roots and seeds frequently pick up the shot."

"Ducks also swallow and retain small pebbles or coarse sand, which serves as grinding material to break up their food. Often the birds mistake lead shot for sand. They pick it up and the shot remains in the their gizzard. The grinding action and strong acid secretions of the gizzard then erode the shot and convert it to lead salts. The duck eventually absorbs the poisonous salts and dies," he says.

add 1--lead poisoning

"Sometimes spectacular die-offs involving hundreds and even thousands of birds occur when flocks feed in lead-infested waters. Countless individual birds are also poisoned and die unnoticed in remote places," he says. In Minnesota, the largest die-offs occurred during the 1920's and 30's at Deer Lake and Huron Lake. But conservationists maintain that the problem remains serious today.

"Efforts have been underway for several years to develop nontoxic shot," Hammond says. "Iron shot is the most promising substitute for lead, but it is costly to produce. Hunters might be willing to pay more for ammunition once they become convinced that the bird population is being seriously jeopardized by lead shot. Most conservationists feel that lead shot can be outlawed only through public pressure. And they think that the time to force the issue is now, before it's too late."

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October 23, 1969

Immediate Release

## PLAN STORAGE FOR OFTEN OVERLOOKED ITEMS

If you're planning to build or remodel your home, give careful thought to storage space.

Inadequate closet and storage space is one of the frequent complaints of householders.

Mary Frances Lamison, extension home management specialist at the University of Minnesota, says it's a good idea to make a list of all items you need to store and then plan the storage for them. She suggests including in that list such overlooked items as:

- . Sewing machine and sewing supplies
- . Outdoor clothing, especially wet boots and coats
- . Sports equipment, cameras and slides
- . Card tables and chairs
- . Outsized trays and serving dishes
- . Fireplace wood
- . Reference material, including pamphlets on stain removal, refinishing furniture, making curtains and draperies and use and care of all appliances
- . Home office supplies
- . A repair kit
- . Out-of-season furniture
- . Bicycles and tricycles

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256-lah-69

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October 23, 1969

Immediate Release

## U SCIENTIST ASSAILS DDT MYTHS

The supposed worldwide distribution of DDT raises some questions of credibility, according to University of Minnesota soil scientist Russell Adams, Jr.

The University researcher's analysis of currently popular notions concerning DDT appears in a recent issue of the Agricultural Experiment Station's quarterly magazine, "Minnesota Science".

"Pesticides such as DDT are normally used over limited areas," Adams says. "For them to be distributed all over the globe would require some means of transport, either by atmospheric or water routes."

"Most pesticides used eventually reach the soil through direct application or they are washed from plants by rain. Much of the pesticide reaching the soil is then broken down by micro-organisms or it reacts chemically with soil moisture."

"Under the right conditions, DDT may bind itself to soil particles. But because DDT doesn't dissolve easily in water or cling to soil particles too readily, it often escapes into the air as a vapor. Once it reaches the atmosphere, DDT is often destroyed by the sun's ultraviolet rays."

"If DDT is truly present in the Antarctic snowcap, the only way it could have arrived there is through the atmosphere. But neither the mechanisms of atmospheric distribution nor the stability of pesticides in the atmosphere has been studied well enough outside the laboratory to make any firm conclusions," he says.

-more-

add 1--u scientist

Adams feels that most of the current confusion over pesticide residues may be directly connected with the development of sophisticated sensing devices. Instruments such as the gas chromatograph can easily detect the presence of DDT in a substance, even though the amount may be as small as one part per trillion.

"This is like sorting through 1,280,000 bushels of wheat for one kernel of smutty grain," he says.

"Even scientists who are familiar with methods used to measure pesticides find it difficult to interpret how important these small amounts are. Also, there are many naturally occurring compounds, and some synthetic organic compounds being added to our environment that "look like pesticides" when they pass through the gas chromatograph."

"Carrots, for example, may contain natural compounds, which "mimic" aldrin and dieldrin, two chemical relatives of DDT. Gas chromatographs are sometimes unable to single out and measure natural compounds when the man-made chemicals are also present. This fact has been known for years. Yet some pesticide analysts still appear to be unaware of it," Adams says.

"A number of other compounds that are easily confused with DDT have been detected in birds and fish. These compounds are commonly used in petroleum products, rubber, coolants, and several other materials. They are reported to be toxic to wildlife and they affect the calcium metabolism of birds. Yet DDT continues to receive all the blame."

"Since these compounds resist chemical breakdown and are used extensively, some early findings that pointed to widespread DDT contamination are open to question," he says.

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October 23, 1969

Immediate Release

## PROPER PRODUCTION WOULD ELIMINATE LIVESTOCK FAT

The inefficiency of producing waste fat on livestock must be corrected through breeding, feeding and management practices, according to C. Eugene Allen, animal scientist at the University of Minnesota.

"With the increased world production of oilseeds such as soybeans, the prospects for more lucrative returns from animal fats do not appear promising.

"Barring any major new developments in the utilization of fats and oils which would increase their world market value, the livestock and meat industries face the same alternative as one who is obese and wishes to lose weight - namely to reduce the volume," Allen said.

"Ultimately, the inefficiency in producing waste fat on carcasses must be corrected at the point of production through breeding, feeding and management practices," he added.

The livestock and meat industries should evaluate and price livestock and carcasses according to their merit, which would make fat an important consideration, Allen suggested.

Consumers' concern with fat has made retailers more discriminating in their purchase of carcasses and meat. The packing industry has responded to the concern over fat through the use of yield grades and price differentials related to the merit of the carcass, he said.

add 1--proper production

"These trends will lead to more accurate methods of pricing livestock and carcasses based on their real value, "Allen said," in addition to a greater awareness of the market demand and more efficiency on the part of livestock producers."

The practice of feeding grain frequently to meat-producing animals in the United States has resulted in carcasses with excessive quantities of fat. Much of this fat must be removed and used as a by-product at a greatly reduced value as compared to lean meat.

Large quantities of fat in most areas are a problem in producing desirable cuts of meat, especially where excessive fat is difficult to remove. However, a certain amount of fat is desirable to retard dehydration of lean meat in the carcass and during dry-heat cooking of cuts such as a standing rib roast, Allen added.

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255-daz-69

Department of Information  
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St. Paul, Minnesota 55101  
October 27, 1969

To all counties  
  
Immediate release

IN BRIEF . . .

Still Time for Fall Soil Sample. Farmers who take soil samples in the fall avoid the rush in getting results back and don't have to take the chance of getting samples returned too late for spring planting. Fall testing also gives you a chance to plan what fertilizers are best to provide proper amounts of nutrients for top yields, says William Fenster, soils specialist at the University of Minnesota. With fall soil sampling, it's possible to apply these fertilizers in the fall when soils are in relatively good conditions. Oftentimes it's difficult to get into the fields to apply fertilizer before planting time in the spring if the ground is wet.

\* \* \* \*

Start Fall Calves on Performance Testing. The ideal time to start a beef performance testing program is at calving time. All calves should be identified with an ear tag and tattoo, says Charles Christians, livestock specialist at the University of Minnesota. A record of the birth date, sex, sire number and dam number should be made. At weaning time, the calves should be weighed and graded in groups between 150 and 250 days of age. See your county extension agent about joining the Minnesota Beef Improvement Program to get on a good record keeping system.

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add 1 -- in brief

Improve Surface Drainage. If you have heavy, compact soil and had surplus water standing on your cropland the past cropping season, you need to improve surface drainage. The first step is to remove excess water through drainage channels and land grading or smoothing, according to University of Minnesota agricultural engineers. Then check to see if excess water is flowing onto the field from another area. You can intercept this water and divert it into a drain or waterway. Surface drainage of flat, heavy compact soil pays off by permitting more timely crop operations -- causing warmer soil temperatures during the spring -- promoting growth of beneficial soil bacteria -- improved soil tilth and deeper root growth -- and increased crop yields. Tile drainage may also be needed on some soils. See your county extension agent or SCS representative for more information.

\* \* \* \*

Dairymen: Inventory Roughage Supplies. Dairymen should inventory the amount of roughage required by their herds this winter. Ralph Wayne, extension dairy specialist at the University of Minnesota, offers these tips: First, figure the total hay equivalents your herd will require. Each milking cow will consume at least 3 tons of roughage in terms of dry hay between now and spring grazing season. Each bred heifer will eat 1½ to 2 tons of hay, and each heifer under one year of age needs three-fourth of a ton of hay. Many dairymen are feeding more silage and less hay than a few years ago, so remember that it takes 3 pounds of 70 percent moisture silage to equal the amount of dry matter in a pound of hay. Two pounds of haylage with 45 percent dry matter provides the same amount of dry matter as a pound of hay.

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October 27, 1969

To all counties  
Immediate release

PIPELINE MILKERS  
REQUIRE DIFFERENT  
CLEANING SYSTEM

Dairy farmers who have recently switched to a pipeline milking system should follow cleaning directions carefully.

As farms become larger, dairy farmers will be making use of more efficient milking methods, including pipeline milkers. Pipeline milkers are cleaned in place, and the cleaning procedure is quite different than for manual cleaning of milking machines, explains Vern Packard, extension dairy industries specialist at the University of Minnesota.

Four mechanical methods for cleaning pipelines are currently used. They are the vacuum circulating method, pressure or pump circulation, vacuum flush and vacuum-gravity systems.

Packard says good cleaning requires proper control of circulation time, detergent concentration, solution temperature, water hardness and air admission. No step can be slighted, and cleaning must be begun immediately following milking.

Use only detergents or cleaners prepared specifically for pipelines. Stronger compounds with low foaming properties are essential.

Follow label directions on the cleaner, Packard stresses. Usually the procedure consists of these steps:

-- Preflush the system immediately after milking with a large volume of lukewarm water.

-- Prepare the cleaning solution, and measure the amount of water needed. Be sure the water is at the proper temperature (usually 160 degrees) and maintain it above 120 degrees.

add 1 -- pipeline milkers

-- Circulate from 10 to 20 minutes, as specified on the directions.

-- Rinse with a large volume of tap water.

-- Prepare acid detergent and circulate, then drain well.

-- Before using the pipeline, sanitize by circulating the recommended strength of dairy sanitizer, and drain well.

Fully automatic equipment is available for performing each of these steps, Packard adds.

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October 27, 1969

Immediate Release

ATT: Ext. Home Economics

KNOW THE KINDS OF  
BACON AND HOW TO  
COOK AND STORE IT

Bacon is a long-time American favorite, especially at the breakfast table. Since most homemakers keep bacon on hand at all times, it's important to know the different kinds of bacon available and how to cook and store it.

Several kinds of bacon are available to choose from, says Extension Home Economist \_\_\_\_\_. Thin-sliced bacon is usually packaged in 8-ounce, 12-ounce, and 1-pound and 2-pound packages and contains up to 36 slices per pound.

Regular sliced bacon is usually packaged in half, 1-pound and 2-pound packages with an average of about 22 slices per pound.

Thick-sliced bacon is packaged in 1-pound, 1½-pound and 2 pound packages with up to 18 slices per pound.

Ends and pieces are available in various size boxes containing from 1 to 5 pounds.

Pre-cooked bacon is available in cans that require no refrigeration, each containing 18 to 20 slices. This bacon requires heating for only 3-5 minutes.

Bacon crumbles or bits are completely cooked and ready to add to casseroles, sandwiches or any dish improved by bacon flavor.

Closely related is Canadian-style bacon which is a lean product made from boned, trimmed pork loin.

Extension Home Economist \_\_\_\_\_ says bacon may be pan-fried, baked or broiled. To pan-fry, place the bacon slices in an unheated skillet. Cook over low heat, turning the strips often during cooking. Don't allow the fat to smoke. When the bacon is evenly browned, drain it on absorbent paper. It isn't necessary to pour off the fat during cooking.

-more-

add 1 -- bacon

To bake bacon, arrange the slices on a wire rack in a shallow pan and bake at 450° for 10-15 minutes.

When broiling bacon, place the separated slices on a broiling rack. Broil them about 3 inches from the heat source and turn to cook evenly.

To separate bacon slices more easily, remove the package from the refrigerator about 5 to 10 minutes before using.

Buy only enough bacon for one week, \_\_\_\_\_ suggests. For peak aroma and flavor bacon should be used within five to seven days of home storage. Store the bacon in its original wrapper.

Bacon may be frozen for short periods of time, but for best flavor, long storage in home freezers is not recommended.

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St. Paul, Minnesota 55101  
October 27, 1969

To all counties  
4-H NEWS  
Immediate release

GO WHERE THE  
ACTION IS WITH  
4-H TEEN CARAVAN

If you're a teenager interested in learning to know people in other countries, the Teen Caravan may be for you.

The 4-H Teen Caravan is more than a sightseeing tour. Caravan groups consist of 10 to 15 participants interested in people and in improving international understanding. The program provides for a six weeks' stay with individual host families in one country and a 10-day educational tour of nearby countries.

During their stay Caravaners learn about their host country, its people and customs by living and working with families. They form friendships which may last a lifetime.

The Teen Caravan is conducted by the National 4-H Club Foundation in behalf of the Cooperative Extension Service. The program in the host country is arranged in cooperation with the 4-H counterpart organization. Each Caravan group is accompanied by a group leader, who assists in planning and conducting the program.

All applicants for the 1970 4-H Teen Caravan must be in good health, mature, responsible and interested in current world events. A knowledge of the host country language is also recommended. You are eligible to participate if you are between 17 and 20 years old.

-more-

add 1 -- Teen Caravan

Costs for the regular six-week program vary according to the country to which you are assigned. Tentative programs in 1970 are scheduled with Japan and the Philippines, Costa Rica, Peru, Mexico, Austria, Denmark, France, Germany, Ireland, Italy, Netherlands, Norway, Spain, Switzerland, Jamaica and St. Kitts and St. Vincent. The costs in these countries vary from \$1,275 in the Philippines to \$550 in Mexico. Each Caravan participant is responsible for financing his own way.

Most of the programs will begin during the last two weeks of June and be completed by August 25. The 10-day educational tour will be held either at the beginning or the end of the program.

More information on the Teen Caravan is available from your county extension office. Applications for the 1970 4-H Teen Caravan should be submitted to the county extension office by December 15. Country assignments will be made by March 1, 1970 by the National 4-H Club Foundation.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
October 27, 1969

To all counties  
Immediate release

BE SAFETY CONSCIOUS  
WHEN HANDLING FUELS

Make sure that fuels for your farm equipment serve their intended use instead of starting a dangerous fire.

Fuel vapors can be dangerous, says John True, extension agricultural engineer at the University of Minnesota. A flame, a spark or even extreme heat can ignite these vapors. Explosions have occurred several hundred feet from where flammable liquids were being stored or handled.

True offers these tips to protect yourself and your property.

Never refuel a tractor while the motor is running or when it is hot. Check fuel lines frequently and watch for leaky connections. Never draw or handle flammable liquids near an open flame or other possible source of ignition.

An underground tank with a pump, similar to those used by service stations, is the safest way to store supplies of farm fuel. Next best is a well-constructed steel tank located at least 50 feet from buildings, True says. If the tank is in a separate enclosure, be sure vapors can escape in case of leaks or spills.

When it's necessary to bring gasoline inside, True recommends using an approved red-labeled can. Never store gasoline in a glass container.

Always carry a five-pound dry chemical fire extinguisher on your tractor, combine or truck, he adds.

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St. Paul, Minnesota 55101  
October 27, 1969

To all counties  
  
Immediate release

CATTLEMEN ENCOURAGED  
TO USE CARCASS DATA

Beef cattle breeders and feeders who are aiming at top profits should get carcass data on a sample of the beef in their feedlots.

The USDA's Livestock Division's Meat Grading Branch makes carcass data available to producers at a nominal fee, but too few producers take advantage of this service, according to Eugene Allen, animal scientist at the University of Minnesota.

Allen says a knowledge of the product being produced is essential if cattle feeders are going to stand the pressure of decreasing margins.

Feeders who practice estimating the carcass grade and fat thickness can soon become proficient. Many competent judges of market cattle can come within 0.1 inch of predicting backfat.

The amount of backfat, rather than live weight, should be used as an indicator of the right time to market cattle. Many carcasses are marketed with excessive quantities of fat, which must be removed and used as a by-product at a greatly reduced value as compared to lean meat.

Some finish is necessary to insure enough marbling in the lean so cattle will grade a minimum of low choice, which is acceptable to today's consumer. Cattle with 0.5 inch of backfat over the rib eye will usually provide the necessary marbling score to grade low choice, so we should try to market all cattle when they reach 0.5 inch of fat over the rib and loin.

However, some cattle don't marble easily. They may look ready to grade choice or higher, but do not because of insufficient marbling. This can only be evaluated in the carcass, and emphasizes the need for getting carcass data in a breeding program, Allen states.

add 1 -- beef feeders

Potential muscle development can't be fed into the animals, so select feeder calves which have the potential for producing a high ratio of muscle to fat and bone in the carcass. These calves should have large, rugged frames but not be coarse, show good width in the chest and twist and have thickness and fullness in the rib and loin.

Calves should also exhibit width, depth and thickness in the round and have heavily muscled forearms. The width through the center of the rounds should be greater than the back. Animals which show the potential for maturing early should be avoided since these cattle become excessively fat at light weights.

For more information on getting carcass data, write to the Consumer & Marketing Service, Meat Grading Branch, USDA, P.O. Building, South St. Paul, Minnesota 55075.

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St. Paul 55101 Tel. 373-0710  
October 28, 1969

Immediate Release

#### AN-SCANNER DEMONSTRATION SCHEDULED

A space-age device called the An-scanner using ultrasonic waves to help livestock producers select cattle for breeding will be demonstrated at the University of Minnesota's Livestock Pavilion, St. Paul, Thursday through Friday. (Oct. 30-31).

The demonstrations will be conducted from 10 a.m. until noon and from 1 to 3 p.m. both days by Thomas Eckhart of Pennsylvania State University, University Park, Pa.

The An-scanner uses ultrasonic waves to produce a photograph of the interior cross-section of a living animal, Associate Professor Jay Meiske of the University of Minnesota's Animal Science Department said. The scanner takes about 10 seconds to produce a picture of the cross-section of an animal, he added.

Heavy-muscled animals, preferred in cattle breeding, can be detected more accurately by using the An-scanner, Meiske said. More meat is produced by the heavy-muscled cattle, he explained.

Some of the animals used in the demonstrations will be slaughtered and carcass data will be made available. Interested persons are invited to attend the demonstrations, Meiske added.

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October 28, 1969

Immediate Release

## HEALTH ACTIVITIES WIN MINNESOTA 4-H CLUBS CERTIFICATES

Ten Minnesota 4-H clubs have been awarded certificates for their participation in community health activities and for their learning experiences.

The 4-H clubs are: Burlington Cubs, Becker County; Benton Hilltoppers, Carver County; Game Birds, Chisago County; Hi-Lighters, Le Sueur County; Lynd Lions, Lyon County; Hendrum Hustlers, Norman County; Mighty-Mites, Redwood County; Boon Lake Orioles, Renville County; Everglad 4-H Club, Stevens County; and Wykeham Willing Workers, Todd County.

The clubs worked in groups, participating in community service activities, according to William Milbrath, assistant state leader, 4-H and youth development at the University of Minnesota. They sponsored immunization clinics, initiated many volunteer projects at state hospitals and nursing homes, took part in charity drives and scheduled discussions on smoking and alcohol.

Individual members have set goals to improve their own health habits which they feel are poor.

Speeches and demonstrations by community and club leaders, as well as the 4-H'ers themselves, on topics such as nutrition, smoking, alcohol, and posture were given at club meetings to make the 4-H'ers more aware of the importance of good health.

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258-lah-69

Department of Information  
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St. Paul 55101 Tel. 373-0710  
October 28, 1969

Immediate Release

## 'DOG'S LIFE' GETS NEW MEANING IN AFFLUENT AMERICA

Although it's still a "dog's life" for many a household pet, a growing number of canine companions in affluent American are better off now than they were a few years ago.

A booming industry catering to pets along with more extensive veterinary care are making a "dog's life" considerably more comfortable.

Although the average dog may not be treated to such luxuries, a market full of goodies awaits the perusal of his loving master. A well-kept pooch could be indulged in such fancies as a mink coat or for the lesser breeds, maybe a sweater. Dog collars need not be merely of leather. Rhinestone-covered collars selling at \$30 are very chic on many pedigrees. Fashion conscious canine buffs will want a matching collar-leash set, possibly in velvet or patent plastic.

There seems to be no end to the doggie market potential starting with three-week protection from flea sprays to rubber toys resembling fruits, vegetables and people.

Interest in canine hygiene has spawned the growth of businesses in virtually every American community that bathe, groom and de-flea all breeds. The price of the job depends on the condition of the dog. A toy poodle in good condition could be spruced up for \$6, according to a St. Paul

-more-

add 1--"dog's life"

firm. But the price increases with the ragged condition of the pet. The system stimulates owner-interest in keeping his dog fit regularly rather than face a large bill sporadically for a dog-renewing project.

There are about 26 million dogs in the United States of which more than 800,000 are registered, according to the American Kennel Club. The registered, purebred dogs are a growing elite class and no doubt receive more than the normal amount of attention from their masters.

Why is more attention being paid to dog care? With shorter work weeks, Americans have more leisure, meaning more time to hunt with, to show, to train and to enjoy their pets.

Dr. George W. Mather of Veterinary Medicine at the University of Minnesota, St. Paul, said people are retiring earlier and have more years to enjoy the invaluable companionship and comfort of a pet. More people are moving to the suburbs where dogs and other pets are a natural part of the pleasures of suburban living.

Pets generally are being treated like members of the family. Dog owners accept the obligation to guard the health and provide for the medical care of "man's best friend."

Dog owners are insisting on good canine care. More veterinary hospitals are coming into existence and veterinarians now perform services almost unheard of a few years ago, Dr. Mather said. Veterinarians are being better trained to improve service to owners of companion animals, he added.

-more-

add 2--"dog's life"

Dogs entering small animal hospitals now receive the benefits of modern medicine that their masters have known for several years. Today's veterinarians employ X-ray equipment and the latest wonder drugs in treating the ailments and injuries of household pets, Dr. Mather said.

More prime food products rather than by-products are being used in dogfoods all the time, he added. Dogfood manufacturers are emphasizing nutritious diets and gourmet foods, such as "burgundy beef in gravy" and "Swedish meatballs" are being served to dogs that used to be content with a few table scraps, according to a recent article in "Barron's," a weekly financial publication.

Total dogfood sales in 1968 were \$661 million as compared to \$455 million in 1965 and most of the growth has been in semi-moist dogfoods which often resemble ground round steak, "Barron's" said.

Three thousand different companies sell about 15,000 different petfood items, according to the Pet Food Institute. An individual spends about \$185 for approximately 700 cans of quality dogfood a year.

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October 30, 1969

Immediate Release

## MINNESOTA 4-H CLUBS WIN CERTIFICATES FOR CONSERVATION ACTIVITIES

Outstanding programs in conservation of natural resources have won certificates and state recognition for 10 Minnesota 4-H clubs.

The 4-H clubs are: Lakeside 4-H club, Aitkin County; the Burlington Cubs, Becker County; Lake Hanska Alerts, Brown County; Sky Blazers, Dakota County; Becida Busy Builders, Hubbard County; Lake Shore Cloverleaf 4-H club, Lac Qui Parle County; Hi-Lights, Le Sueur County; Swan Lake Skippers, Lyon County; Scott 4-H club, Stevens County; and the Silver Hill Ramblers, Wright County.

Working as a group, each club engaged in such community service activities as planning and caring for community flower beds, maintaining roadside parks and the grounds around town halls, cleaning up lakeshore property and constructing conservation signs. Several clubs also planted thousands of trees, built birdhouses and feeders, raised pheasants and participated in the pheasant habitat program, says Wayne Carlson, assistant state leader, 4-H and youth development at the University of Minnesota.

Individual members gave talks, wrote articles for National Wildlife Week and collected insects, leaves and plants for exhibits. Many 4-H'ers made scrapbooks, bird houses and feeders. Some members participated in overnight camping trips to learn survival techniques.

Exhibits and demonstrations at county fairs have made other clubs and the community more aware of what is being done in conservation projects, according to Carlson.

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260-lah-69

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October 30, 1969

Immediate Release

## BEEF CATTLE FEEDERS DAY SET FOR NOV. 13

The first in a series of University of Minnesota 1969 Beef Cattle Feeders Days will be held Thursday, November 13, at the Rosemount Junior High School.

The program will begin at 3 p.m., with informal tours of cattle experiments and facilities at the University's Agricultural Experiment Station at Rosemount.

Results of current research will be discussed from 4 to 6 p.m. by University of Minnesota animal scientists. Topics to be discussed include urea and biuret supplements for cattle rations--growth promotions for finishing heifers--influence of high nitrate intakes on cattle fed urea and antibiotic--silage feeding systems for finishing calves--levels of dehydrated alfalfa in cattle finishing rations--dried rumen contents in rations for finishing cattle--influence of a shipping fever vaccine on feeder cattle--modified environment housing systems for finishing cattle--and use of corn silage for growing and finishing steers.

Dinner will be served at 6 p.m., followed by discussions on housing systems for finishing cattle, feedlot pollution control, carcass quality and maximizing profits in beef feeding. The program will conclude with a question and answer session at 9 p.m.

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260-jms-69

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October 30, 1969

Immediate Release

### THREE PESTICIDE WORKSHOPS SLATED

Insecticides, herbicides, fungicides and state regulations pertaining to them will be discussed at the 1969 Regional Pesticide Workshops during November at Rochester, Mankato and St. Paul.

Sponsoring the workshops will be the Minnesota Department of Agriculture and the University of Minnesota's Agricultural Extension Service and departments of agronomy and plant genetics, entomology, fisheries and wildlife, plant pathology and agricultural engineering.

The Rochester meetings will be held from 9 a.m. to 4:30 p.m. Monday (Nov. 3) and from 8:30 a.m. to 5 p.m. Tuesday (Nov. 4) at the 4-H Building on the fairgrounds.

The Mankato sessions will be from 9 a.m. to 4:30 p.m. Wednesday (Nov. 5) and from 8:30 a.m. to 5 p.m. Thursday (Nov. 6) in the Happy Chef.

St. Paul workshop sessions will be in the Holiday Inn from 9 a.m. to 4:30 p.m. Nov. 24 and from 8:30 a.m. to 5 p.m. Nov 25.

University faculty participating in the workshops will include Phillip Harein, Department of Entomology, Fisheries, and Wildlife; Herbert G. Johnson, Department of Plant Pathology; Gerald Miller, Department of Agronomy and Plant Genetics and John True, Department of Agricultural Engineering. Rollin Dennistoun, Division of Agronomy Services, Minnesota Department of Agriculture, will also participate.

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October 30, 1969

Immediate Release

#### FOUR NAMED 4-H ALUMNI AWARD WINNERS

Four Minnesotans -- two women and two men -- have been named winners of 4-H alumni awards, according to an announcement from Leonard Harkness, state leader, 4-H and youth development, University of Minnesota.

They are Susanne A. Tjornhom, Fergus Falls; Mrs. Melvyn Molenaar, Raymond; Maynard Speece, 4833 Westbrook Lane, Minneapolis; and Donald Christensen, Twin Valley.

The 4-H alumni awards are given annually to adults, formerly 4-H members, who exemplify effective community leadership, public service, service to 4-H work and success in their chosen careers.

The four will receive plaques from Olin Mathieson Chemical Corp., New York, at the 4-H Junior Leadership Conference in June.

Miss Tjornhom is instructor and chairman of the business division at Fergus Falls State Junior College. During the last three years she has been a member of the Charter Commission in Fergus Falls and president of the local branch of the American Association of University Women. She has served on the State Welfare Committee and has been a member of the committee to revise requirements for business teacher education in Minnesota. She holds

-more-

add 1--4-h alumni award

a B.A. from St. Olaf College and M.A. and Ph.D. degrees from the University of North Dakota.

An active 4-H member herself for 10 years, Mrs. Molenaar has been a volunteer adult leader of the local 4-H club for the past four years. 4-H is a family affair for the Molenaars, since her husband has also been in 4-H work and their three sons are members. "In my homemaking career, all the things I learned in 4-H have been put into practice," Mrs. Molenaar says.

As farm director for WCCO, Speece has made promotion and coverage of state and national 4-H events and activities an important part of his broadcasts. Previously, as a county extension agent in Anoka county, he developed a progressive 4-H program. Later, as extension specialist in radio at the University of Minnesota, he gave leadership to the development of 4-H radio broadcasts on KUOM and to 4-H radio programming by extension agents in the state. He is a past president of the National Association of Television and Radio Farm Directors and is a director on a number of boards, including the University of Minnesota Alumni and Volunteers of America. He also serves as a member of the agricultural committee of the Greater Minneapolis Chamber of Commerce and of the St. Paul Area Chamber of Commerce.

A farmer for 28 years, Christensen devotes much of his leisure time to work with 4-H'ers. He has been an adult 4-H leader for 10 years and a project leader for five. He is a member of the 4-H Leaders' Council and of the county 4-H Achievement Day committee. Among his activities in community affairs are serving as president of his church and as a member of numerous local and county boards such as the Twin Valley School Board, the Norman County Fair Board, the county extension committee, the Consolidated Breeders' Association, D.H.I.A. Board, and the Norman County Farmers' Home Administration. He is also vice president of the Norman County Farmers' Union. Christensen was the candidate from Norman County for the outstanding young farmer award.

Department of Information  
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St. Paul, Minnesota 55101  
November 3, 1969

To all counties  
Immediate release

SPRAYING EQUIPMENT  
REQUIRES PROPER  
CLEANING, STORAGE

Sprayers used for insecticide applications during the past growing season should be cleaned and stored properly to maintain their usefulness.

Spraying equipment received extra-heavy duty due to the armyworm infestation, and good maintenance procedures will help keep it in good working order for another year, says Phillip Harein, extension entomologist at the University of Minnesota. He recommends this procedure:

Drain all the spray material out of the machine and flush with plain water. Then add one ounce of household ammonia per gallon of water, and rinse again to neutralize the pesticide residues.

Disassemble nozzles and store parts dry or immersed in fuel oil. Drain the pump and tank, and apply a coat of rust inhibitor to the pump and tank, if needed.

Store spraying equipment, especially the boom, in an area where it won't be damaged by other machinery, Harein advises. Hoses should be stored to prevent kinking. Either hang them straight, or coil them inside a 5-gallon pail.

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November 3, 1969

To all counties  
Immediate release

FOLLOW PROPER STORAGE  
PROCEDURES TO AVOID  
PESTICIDE ACCIDENTS

About 50 tons of insecticides were applied in Minnesota last year just to control armyworms. Many people have left-over supplies of these chemicals, which means that more insecticides than normal may be carried over winter by farmers and retail dealers, says Phillip Harein, University of Minnesota extension entomologist.

Harein offers some safety tips for the safe storage of pesticides:

Store chemicals in original containers so anyone can tell what the material is by reading the label. Make sure that containers don't leak.

Store all chemicals under lock and key. Dusts and powders should be kept in a cool, dry place, while liquid insecticides should be stored at above-freezing temperatures to keep the containers from cracking and the compound from breaking down.

The largest number of pesticide accidents are caused by improper storage of these materials, Harein says. About 33 percent of all pesticide accidents result from failure to read the label, which in many instances means that the material was stored with an illegible label.

About 25 percent of all pesticide accidents are caused by improper storage -- not keeping the chemicals under lock and key. The remainder of the accidents come from insecticides being placed in different containers so their identity is unknown, improper disposal of pesticides or containers, or runoff from storage areas.

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November 3, 1969

To all counties

Immediate release

FOLLOW APPROVED  
CLEANING METHODS  
FOR VACUUM LINES

Clean the vacuum lines in your milking set-up at regular intervals, or whenever an upset pail or broken inflation indicates that milk may have been drawn into the line.

Vacuum lines are often ignored as sources of milk contamination, observes Vern Packard, extension dairy industries specialist at the University of Minnesota. But clogged lines not only contribute to production of poor quality, but can cause vacuum changes that lead to mastitis.

Packard suggests this procedure for cleaning the vacuum line:

--Prepare a solution of 4 ounces of caustic to 2 gallons of water. Use or prepare a quantity no greater than the volume of the trap, or half the volume of the reserve vacuum tank. This precaution is necessary to prevent overflow into the vacuum pump, Packard says.

--Next, draw the solution through the stanchion hose into the line, making sure you start at the stallcock nearest the trap. Draw 1 quart through each stallcock, working away from the trap. Allow air to enter each time.

--When finished, empty the trap and discard the solution. An extremely dirty line requires a second cleaning.

--Draw 2 gallons of hot water through the line, starting at the farthest stallcock.

--Prepare an acid detergent solution according to label instructions. Draw this solution through the line from the farthest stallcock to neutralize the line.

--Draw 2 gallons of hot water through the line. Leave the stallcock open and vacuum pump running a while to dry the line.

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November 3, 1969

To all counties  
Immediate release

IN BRIEF . . .

New Calf Barn Publication. A dairy calf barn should be dry, draft free, well ventilated and reasonably warm. It should also be conveniently located so you can give the animals good care with minimum labor and constructed so as to permit a thorough yearly cleaning, says Donald Bates, extension agricultural engineer at the University of Minnesota. The barn must also have sufficient space for each animal. A new calf barn plan is available from your county extension agent which meets these requirements. Ask for M-149, "30' x 44' Insulated Calf Barn with Individual and Group Pens." You can also get a copy by writing to the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

\* \* \* \*

Armyworm Damage Extensive. Last summer's armyworm infestation was an example of the damage insects can do, and of the value of insecticides in combatting these infestations, says Phillip Harein, University of Minnesota extension entomologist. Harein says 37 Minnesota counties reported economic damage, and a total of 350,000 acres were affected by the worms. About 90,000 acres were treated, which meant that about 50 tons of insecticides were applied for armyworm control. The infestation caused an estimated crop loss of \$1,350,000 not including the cost of treatment.

\* \* \* \*

Abnormal Reproductive Conditions. Usually only one or two cows in a dairy herd will have abnormal reproductive conditions at one time, but just a few of these cases can cause heavy economic losses. Joe Conlin, extension dairy specialist at the University of Minnesota, says good management skills can help reduce these losses. Conlin recommends keeping good reproduction records, closely observing your animals and using the services of a veterinarian. For more information, ask your county extension agent for a copy of Extension Pamphlet 228, "Why Some Cows Don't Conceive."

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add 1 -- in brief

Farrowing-Finishing Profits. Farrowing pigs and feeding them out on the same farm is usually more profitable than farrowing and finishing on two unrelated farms, according to Ray Arthaud, extension livestock specialist at the University of Minnesota. Weaned pigs are subject to more stress and are more susceptible to disease when transported to new farms for finishing. There's also added market expense when selling the weaned pigs. When feeder pigs are transferred, there are times when either the feeder pig producer or the finisher may make more profit than the other, Arthaud says. Costs and returns aren't always divided proportionately.

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Beef Performance Testing Gives Useful Information. The information you get from a beef performance testing program can help you estimate the relative productiveness of each animal tested, says Charles Christians, extension livestock specialist at the University of Minnesota. Records will be useful to cull or retain cows in the herd, progeny test sires for use as herd sires, evaluate herd sires already in service, select replacement heifers and advertise to prospective buyers who are interested in the improvement of their herds. See your county extension agent about joining the Minnesota Beef Improvement Program to get on a good record keeping system.

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Department of Information  
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St. Paul, Minnesota 55101  
November 3, 1969

To all counties

ATT: Extension Home Economists

Immediate Release

WHEN YOU CHOOSE  
A SOFA CONSIDER  
SCALE AND DECOR

Before you choose that new sofa, two of the most important decisions you'll have to make are the size of the sofa and type of decor you have in your living room.

Since you'll probably place the sofa along the longest wall, its scale should be in proportion to the length of that wall. The average length sofa today is 7 feet or 84 inches. Therefore, for good proportion, the wall against which the sofa will stand should be about 15 feet long. This length allows for lamp tables on either side of the sofa and a chair near it.

If you don't intend to buy a new sofa every time you change your living room decor, buy a sofa with a conventional design. Then you can change the texture, colors and pattern of the cover to harmonize with the decor you plan. For example, if you choose a Spanish mood, there are antique or crushed velvets in deep red or golds. For the Mediterranean look, select a cover in velvet, tapestry or damask. To harmonize with 18th Century decor, choose matelassé or damask in solid colors or muted yellows, beige and gold, or green and gold. If the room has a beamed ceiling or if you prefer the country look, you can use checks or bolder stripes in a textured weave fabric.

The sectional sofa has become a classic because of its great flexibility. This type of sofa, with its many different units combined, provides many seating possibilities for the large living room. An advantage of the sectional is that it can be separated into several individual units to be placed around the room.

Department of Information  
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St. Paul, Minnesota 55101  
November 3, 1969

To all counties

4-H NEWS

Immediate Release

GOOD GROOMING IS  
IMPORTANT TO  
IMPRESSION ON OTHERS

November 6-22 has been designated as Good Grooming Weeks, a reminder that personal appearance is something each one of us is concerned about.

Good grooming is essential to the favorable impression you want to make. If you were going to apply for a job would you wear shorts, a sweatshirt and loafers? More than likely you would put on your best dress or suit and make sure you had clean hair and fingernails. Why? Because clothing and appearance are part of the basis for people's first impressions of each other.

Clothing is a symbol to communicate to others who you are and what you are, says Extension Home Economist, \_\_\_\_\_ . Your clothes have three important roles. They help you fit into important groups, help you express individuality and help you in your personal acceptance.

What kinds of things can you tell about a person, using their clothing and appearance as clues? You can usually classify them by sex. To some extent you can tell their age. Sometimes you can judge their socio-economic class. You can classify some occupational or special groups, such as the military. Some personal traits, such as neatness, taste or sloppiness can be detected. And to some extent you can judge personality, whether a person is outgoing, timid, conservative or self-confident. Even a mood may be evident such as carefree, gay, depressed or dejected.

Your clothing and the way it is arranged is important to good grooming. The fit of your clothes is one important factor. If your clothing fits well you will have a neat appearance and be comfortable.

add 1--Good Grooming

Keeping your clothes wearable is also important to good grooming. Remove stains as soon as possible. Make sure you read labels and care instructions if you're cleaning the garments at home. Or your drycleaner can remove most spots when they are still fresh.

Make sure you do any necessary mending as soon as possible. Major repairs may be necessary later if you don't take care of the problem as soon as you can.

What are your clothes saying about you? Are they saying the things you want to say? And is everyone getting the message you're trying to convey?

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November 4, 1969

Immediate Release

#### 4-H'ERS RECEIVE AWARDS FOR OUTSTANDING 4-H WORK

Five Minnesota 4-H'ers have been selected for awards of \$25 bonds for their outstanding work in the 4-H food preservation program and one girl will receive an electric clock for her work in 4-H dairy foods.

The winners of \$25 bonds are: Carol Heckmann, Norwood, Carver Co; Mary Ann Barka, Litchfield, Meeker Co; Rosanna Bronczyk, Gilbert, St. Louis Co; Janet Hanson, Owatonna, Steele Co; and Jane Dibley, Wolverton, Wilkin Co.

As a state winner in dairy foods, La Vonne Sorenson, Wadena, will be awarded an electric clock by the Miltin Schwantz Memorial Fund for her outstanding work in 4-H dairy foods. LaVonne has been enrolled in the project for six years. She has given eight dairy food demonstrations in the past five years and this year has prepared 119 meals.

The five winners in food preservation have canned fruits and vegetables, frozen meat and other foods and made jams and jellies.

Sponsor of the food preservation awards is the Kerr Glass Manufacturing Corporation, Sand Springs, Oklahoma.

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November 4, 1969

Immediate Release

#### BOISE CASCADE FORESTRY FELLOWSHIP AWARDED

The 1969-70 Boise Cascade Corp. Fellowship has been awarded to Ronald Person of Bloomington, Minn., a University of Minnesota School of Forestry graduate student.

F.T. Fredericksom, Boise Cascade's Woodlands manager at International Falls, and Frank Kaufert, School of Forestry director, announced the award which will support Person's research of the wood yield from stands of young aspen sprouts.

Person, who is working on his master's degree in forestry, was graduated from a Bloomington high school and received a B.S. degree in forestry from the University of Minnesota in 1967.

He was employed by the U.S. Forest Service in timber management and mineral rights leasing and examination of forest service land in Arizona. Person is a member of Xi Sigma Pi, a national forestry honorary society, and Gamma Sigma Delta, an agricultural honorary society.

This is the 22nd consecutive year that this fellowship has been awarded to a student at the School of Forestry of the University of Minnesota. Dr. Alvin R. Hallgren, professor of forestry, will serve as Person's advisor at the School of Forestry. The aspen yield study will be conducted in cooperation with John Hubbard, management and research forester for Boise Cascade.

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262-daz-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 4, 1969

Immediate Release

## NEW ASPEN STUD MAY BOOST TIMBER ECONOMY

A system for sawing marketable studs for home building from the low-valued aspen tree has been developed by researchers at the Division of Forest Products Utilization, Marketing and Engineering Research at the University of Minnesota, St. Paul.

The three-year research project proved that aspen studs can be manufactured and marketed, according to Robert D. Thompson, assistant professor of forest products who initiated the project. Thompson and Research Assistant Fred Hill developed the cutting and treating system for the aspen stud.

Favorable reaction to the stud was revealed at a recent seminar at the University attended by representatives of the building industry, government agencies and wood products associations, Thompson reported.

The acceptance of the aspen stud by the construction industry and building codes could give a boost to Northeastern Minnesota's timber economy.

Aspen trees mostly are used for pulpwood in the manufacture of paper, fiberboards, cardboard boxes, siding, wallboard and other products. Although some mills have manufactured a few aspen studs, the product has not been acceptable to the building industry due to a tendency to warp, Thompson said.

As a result, timber shipped to Minnesota from the West Coast, such as Douglas fir, larch, white pine and white fir, is used for studs, rather than the Minnesota-grown aspen. The state's total aspen pulpwood harvest is about a half million cords a year, but aspen is growing faster than it is being cut. The aspen, sometimes called the "popple," is undercut by more than 300,000 cords a year, according to a recent report from the Agricultural Extension Service at the University of Minnesota.

-more-

add 1--aspen stud

Aspen harvests could at least be doubled since many of these hardwood trees are going to waste, University experts said.

Although the economic advantages of marketing aspen studs have not been determined at this time, Thompson believed there would be a regional market for the product. The aspen stud would present a cost advantage for Minnesota use and a good share of the product would be absorbed by the Chicago, Des Moines and Kansas City markets, Thompson predicted.

The estimated aspen log cost is \$38 per 1,000 board feet as compared to \$100 per 1,000 board feet for the softwood logs brought from the West Coast. There is a considerable freight cost savings in using aspen studs in Minnesota because of the shorter distance between the resource and the market as compared to the West Coast timber, he said.

The forest product researchers said the next phase of the project will be to determine the economic advantages of producing and marketing the aspen stud.

If the aspen stud is successful, one mill could produce 12 million board feet of lumber a year. The Twin Cities area could supply a market for six or eight lumber mills. Aspen cutting would be increased, allowing the use of what is now considered an excess resource, Thompson said.

To test the marketability of the new studs, the forest products division distributed the product to individuals and businesses for remodeling and construction projects, mostly in the Twin Cities area.

A 12-unit dormitory at the Long Lake Conservation Camp near Aitken was being built with 13, 218 of the studs. Pentom, Inc., used aspen studs to build a home in Park Hills Addition near St. Paul. The University researchers said they would check the new construction over a period of time to determine the performance of the studs.

add 2--aspen stud

In the system developed by Thompson and Hill, the studs are sawed only from the outer part of the aspen so that the grain is flat. A new saw is on the market that will produce four (2X4) studs and chips from each aspen log.

The studs were graded, treated and bundled at the St. Paul campus. Each stud was treated with a water-repellent chemical that contained a dye to distinguish the grades of the lumber. Number 1 grades were colored green, No. 2, red, and No. 3, yellow.

# # #

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St. Paul 55101 Tel. 373-0710  
November 6, 1969

Immediate Release

#### MINNESOTA COUNTIES RECEIVE AWARDS FOR 4-H WORK

Anoka, Brown and Martin Counties have received state recognition and an award for their outstanding work in 4-H projects.

Anoka County was awarded \$25 and a traveling trophy for the most outstanding 4-H automotive program in Minnesota. The sponsor of the award was the Firestone Tire and Rubber Co., Akron, Ohio.

A total of more than 1,500 4-H'ers in 28 groups participated in the Anoka County program. Since emphasis was on preparing youth for driver training, a good deal of time was spent in inspecting cars and study of their operation. Other activities were highway hazard hunts, keeping records of car costs, judging used cars and exploring career opportunities in the automotive industry.

The automotive program was conducted by the University of Minnesota's Agricultural Extension Service in cooperation with the National 4-H Service Committee, Firestone and school districts and interested citizens in Anoka County.

Brown County 4-H'ers developed and maintained public areas around a lake, beautified and developed a small in-town park, built birdhouses for wooducks and wrens, reared pheasants, built winter feeding stations and maintained a historical cemetery and landmark. They prepared 15 4-H radio and television programs and newspaper stories on conservation and gave 52 demonstrations on conservation.

Martin County was awarded a plaque for the most outstanding county electric program in Minnesota. The donor of the award was Westinghouse Electric Corporation, Pittsburgh, Pennsylvania.

The Martin County 4-H'ers gave 15 individual 4-H demonstrations on some phase of electricity and sponsored a meeting for 4-H electric project leaders in cooperation with local organizations and power companies. They also sold kits of study lamps to county 4-H members and helped the members assemble them.

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263-lah-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 6, 1969

Immediate Release

## FARM INFLUENCE ON RURAL INCOME DECLINES

Agriculture's influence on rural Minnesota incomes seems to be declining slowly as local labor markets become urbanized and industrialized, University of Minnesota researchers reported.

A report on the factors that influence rural incomes in Minnesota was prepared by Anne Elizabeth Hammill, formerly an agricultural economist with the USDA's Economic Research Service, and Professor W. Keith Bryant of the Department of Agricultural Economics.

The report was published by the Agricultural Experiment Station at the University in cooperation with the Economic Research Service.

Hammill and Bryant found that agriculture continues to be a very important influence on rural farm incomes. However, agriculture is less important in determining rural incomes and appears to be declining in importance as local labor markets are urbanized and industrialized.

Urbanization, the changing structure of industry and the proximity of rural labor markets to metropolitan areas are becoming important determinants of rural income levels, he said

Industrial-urban growth spreads outward from the metropolitan center into the rural areas. In remote rural areas, industrial-urban growth is many years away unless it is induced, Bryant concluded.

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265-daz-69

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November 6, 1969

Immediate Release

## IRRIGATION DESIGN WORKSHOP SCHEDULED

The major technical aspects of sprinkler irrigation system design will be discussed at the Irrigation Design Workshop Dec. 16-18 at the University of Minnesota, St. Paul.

The two-day workshop primarily is intended for the personnel of irrigation equipment suppliers, although personnel of other agencies who advise irrigators and prospective irrigators are encouraged to attend.

Faculty members for the Irrigation Design Workshop include Professor Evan R. Allred and Instructor James R. Gilley, both of the Department of Agricultural Engineering; Fred G. Bergsrud, assistant professor and area extension irrigation engineer; Roger E. Machmeier, associate professor and extension agricultural engineer; Richard D. Wenberg, assistant state conservation engineer, U.S. Soil Conservation Service, and Sarah Tufford, Section of Waters, Division of Waters, Soils and Minerals, Department of Conservation.

The Dec. 16 sessions will open with an introduction of workshop topics at 9:15 a.m. and will adjourn at 4:15 p.m. The program will start at 8:30 a.m. on Dec. 18 with a sprinkler irrigation guide.

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265-daz-69

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November 6, 1969

Immediate Release

## U SCIENTISTS SEEK TO DEVELOP NEW BERRY VARIETY

An obscure wild berry, once prized by North American Indians, members of the Lewis and Clark Expedition and pioneer housewives, is stirring renewed interest among University of Minnesota horticulturists who feel it may hold rich potential for Upper Midwest fruit growers.

William Miller, a former University graduate student, and professor Cecil Stushnoff of the Department of Horticulture, say that the little known fruit was used to make pemmican, a staple of the Indian diet. The Indians mixed the berry into boiling cauldrons of pulverized buffalo or deer meat and after the mixture cooled, molded it into small cakes.

Lewis and Clark's men relied on the everpresent berry when their other provisions ran low. Early settlers also used the fruit in preserves and pies, though its mild flavor required sharpening with lemon or rhubarb juice, the horticulturists say.

Today, the fruit remains popular among a limited number of people who know where to find it, but since the berry has never been commercially developed or marketed, it remains unknown to a vast majority of Americans.

Miller and Stushnoff hope to set up a breeding program similar to the one established by Frederick Colville, a horticulturist who developed the wild blueberry into a highly prosperous industry.

add 1--new berry variety

Both men are presently studying the most promising of the 24 species, one or more of which is found in every state of the Union. Some species are better adapted to Minnesota's harsh winter climate and grow well in the high lime soils found in certain areas of the state. These two factors have prevented Minnesota fruit growers from cashing in on the \$14 million blueberry market. Cultivated blueberries, particularly the high-bush type, lack winter hardiness. Until hardy types are developed, blueberry production in Minnesota will remain limited, they say.

Canadian horticulturist Robert Harris laid the groundwork for development of four varieties of the new berry. Miller and Stushnoff hope to continue his work by developing a variety suited to Minnesota. Among the characteristics they seek are high yielding bushes that produce large, firm fruit, capable of being easily picked or shaken loose. The skin of the fruit should be durable, bright purple with a waxy coating, and should not crack easily. Bushes should be disease- and drought-resistant, late blooming, winter hardy, and below 6 feet in height.

From the 24 known species they hope to develop a variety or several varieties with commercial potential both as a fruit-bearing and an ornamental plant. At this point in time neither man envisions the day when "saskatoon berry" will be a household word. But at least the initial steps in proposing a variety development program have been taken. In years to come it will hopefully bear valuable fruit for Minnesota's commercial and home growers, they say.

State residents who are familiar with the fruit and know of superior types growing in the wild can assist the program by contacting professor Cecil Stushnoff, Department of Horticulture, University of Minnesota, St. Paul, Minnesota 55101.

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264-crf-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 10, 1969

Immediate Release

#### UM RESEARCHERS DEVELOP FROZEN CUSTARD

Milk and egg custard, like grandma used to make, soon may be available in the frozen prepared food section of grocery stores.

A method and formula for producing frozen custard have been developed at the University of Minnesota's Department of Food Science and Industries by Elmer L. Thomas, professor, Samuel T. Coulter, head of the department.

In the past, freezing custard has resulted in the same problem that plagues many housewives when they cook this tasty desert--it curdles.

By preparing the custard in a University ice cream freezer and incorporating a sufficient amount of air to stabilize it, Thomas and Coulter were able to develop a product that is physically stable with freezing and thawing.

The University innovation may mean new convenience for many housewives who have been frustrated by attempts to make stirred or baked custard at home. Two concerns are in the preliminary stages of test marketing the product.

Frozen custard, which is thawed before serving, may be an important convenience item for today's housewives who every year are introduced to more prepared foods. Making custard at home is a tricky business and for that reason many housewives may have given up serving this highly nutritious dessert.

-more-

add l--um researchers

When custards are cooked too long or at too high of a temperature, they curdle, making them rather unappetizing. With too much heat, the proteins shrink and the mixture becomes watery, according to the 1959 United States Department of Agriculture Yearbook.

Homemakers have learned that to prepare a good custard they must cook it in a pan of hot water and remove it from the oven at the proper time. The time varies depending on whether homogenized or non-homogenized milk is used.

Difficulty in making good custard was confirmed by some of the comments made by consumers in a survey connected with the test marketin of frozen custard through the Dairy Products Salesroom of the Department of Food Science and Industries.

"Excellent!" one person said who thawed the custard and ate it at room temperature. "Custard is very difficult for our modern homemaker to make as it often separates or curdles. Your custard has perfect texture, never separated and tastes just like the kind mother used to make," the consumer said.

"We enjoyed it, but it could use a little more flavor," another person who tested the product commented. Coulter suggested the possibility of putting ripples of fruit in the frozen custard during production and a University home economist said the product could be served with fresh fruit as a side dish.

Thomas and Coulter suggested that frozen custard could be used as an item for school and institutional lunches, restaurants and the home market. The product can be kept frozen until ready to use, then thawed just before serving.

add 2--um researchers

Consumer acceptance has been "excellent" based on results of the survey conducted through the Dairy Products Salesroom, they added.

The suggested formula for the frozen custard includes a nutritional mixture of whole milk, fresh or frozen whole eggs, sugar, non-fat dry milk and gelatin.

Custard can be an important addition for many diets now too low in important nutrients. One hundred grams of baked custard contains 114 milligrams of calcium, 340 International Units of Vitamin A and .2 milligrams of riboflavin (Vitamin B2) as compared to 118 milligrams of calcium, 160 I.U.'s of Vitamin A and .17 milligrams of riboflavin in an equal amount of whole milk, according to a recent USDA publication.

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266-daz-69

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November 10, 1969

Immediate Release

#### MINNESOTA DELEGATES NAMED TO 4-H CLUB CONGRESS

Thirty-three Minnesota 4-H'ers are among 1600 youth representing 3 1/2 million 4-H members nationally who have been awarded trips to the 48th National 4-H Club Congress in Chicago November 29-December 3.

Trips to Club Congress are awarded in recognition of the growth, development and achievement members have made in projects, demonstrations and leadership, says Leonard Harkness, state leader of 4-H and youth development at the University of Minnesota.

These young people will compete for national honors, including scholarships provided by business firms and foundations, which are also donors of the expense-paid trips to the Congress.

The theme of this year's Club Congress is "Make Tomorrow Happen."

Craig Bjerke, Wadena, and Daniel Deml, Owatonna, have been named sectional winners of trips to the Congress. Bjerke was one of 18 4-H'ers throughout the United States selected for an all-expense paid trip to Chicago for his excellence in the dog care and training program. Deml is one of 36 sectional winners in the U.S. chosen for his outstanding work in the dairy program.

Delegates who will receive trips to Chicago as state winners, and the projects in which they have won their awards, are: Arlie Olsen, Blooming Prairie, beef; Bernard Aronson, Ivanhoe, community beautification; Gary Bellin, Fairmont, livestock; Wayne Edwards, Bemidji, shop; Linda Hayes, Lafayette, achievement; James Harsdorf, Stillwater, achievement; Bruce Rydeen, Stillwater, agriculture; Sharon Swalboski, Watertown, automotive; Jane Ann Annis, Mapleton, bread.

add 1--minnesota delegates

Jan Ardell Wille, Kenyon, clothing; Sharon Pearson, Litchfield, conservation of natural resources; Joyce Portner, Sleepy Eye, consumer education; Joanne Prinzing, Faribault, dairy foods; Theron Salmela, Wadena, electric; Guy Griesmann, Glencoe, entomology; Steve Boman, Twin Valley, field crops; Denise Mensing, Delavan, dress revue; Judy Slinden, Atwater, food-nutrition; Carol Korista, Silver Lake, food preservation; Valorie Stavem, Stanchfield, health; Marie Damhof, Blomkest, home improvement; Deborah Nikkari, Wadena, home management; Sarah Nunn, Champlin, horse.

Bob Jamison, Borup, horticulture; Deborah Templin, Plato, leadership; Darwin Huartson, Greenbush, leadership; Jerry Haberman, Windom, petroleum power; Linda Kohl, St. Paul, photography; Brain Hasse, Cologne, safety; Glen Hoff, Perley, sheep; and Leslie Hansen, Blooming Prairie, swine.

Accompanying the group will be University of Minnesota state 4-H staff members Leonard Harkness, Marian Larson and Wayne Carlson; Eileen Anderson, extension home economist in Hennepin County; and Oliver Strand, extension agronomist at the University of Minnesota.

These adults will participate in the Congress sessions for leaders.

A send-off dinner will be given, Friday evening, Nov. 28, at the Hotel Lowry, St. Paul, for the Minnesota 4-H delegation, the trip donors and University extension specialists. The 4-H members will leave by train Saturday morning for Chicago.

# # #

265-lah-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 10, 1969

To all counties  
Immediate release

DETERMINE FEEDLOT COSTS  
BEFORE BUYING FEEDERS

The price you can afford to pay for feeder cattle is partially determined by feedlot costs, and feed costs are the largest portion of this total cost.

Feed costs vary considerably from farm to farm, but represent about 70 percent of the total feedlot costs, according to Paul Hasbargen, extension economist at the University of Minnesota. Other costs include:

- \* Building and equipment costs--10 percent
- \* Labor--10 percent
- \* Interest--5 percent
- \* And miscellaneous costs--5 percent

It requires about \$16 to \$17 of feed to gain 100 pounds of weight with an average cost structure for a typical calf feeding program. The nonfeed costs would total another \$6 or \$7, bringing the total feedlot costs to about \$23 per hundred weight of gain. So if 600 pounds of gain is to be added, total feedlot costs would be about \$138, according to Hasbargen.

But heavier animals are more costly to feed. Yearling feeders require more feed per hundred weight of gain than calves, so costs per hundred weight will be about \$2 to \$3 more.

Nonfeed costs will also be higher than for calves if only one lot of yearlings is fed each year. However, these costs will be lower if two lots are fed per year. Total feedlot costs for yearling steers will run \$25 or \$26 per hundred weight of gain, Hasbargen concludes.

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St. Paul, Minnesota 55101  
November 10, 1969

To all counties  
Immediate release

PREPARE DAIRY BARNS  
FOR WINTER WEATHER

Paying attention to some details can make your dairy barn more liveable for livestock and more pleasant to work in this winter.

Older dairy barns usually require some window maintenance, according to Donald Bates, extension agricultural engineer at the University of Minnesota. Replace window panes, and repair frames. If you don't have storm windows, you can attach a sheet of clear plastic to the inside of the window casing and hold it in place with lath. This will help eliminate wet windows and water on window sills.

Barn doors that freeze present a more difficult problem, Bates says. If storm doors aren't practical, polystyrene materials can be used on light, sliding doors with one thickness of wood. These materials are light and can be held in place easily.

Cold winter weather can mean frozen elevators on gutter cleaners and frozen parts on manure spreaders. Tractors may present starting problems in cold weather also.

A heated structure built on the end of the barn to house the gutter cleaner elevator, tractor and spreader can remedy this problem. You can pay for such a structure with the saving on machinery repairs, Bates says.

Dampness is a problem in many older barns during cold spells. A properly installed fan can help, especially with better insulated barns.

For more information, ask your county extension agent for copies of the publications M-129, "How Much Insulation Do I Need," and M-128, "How to Select and Install Electric Fans."

# # # #

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November 10, 1969

To all counties  
Immediate release

IN BRIEF . . . .

Dairymen: Feed More High Moisture Corn. High moisture corn is good feed for dairy cattle, but you must feed more of it because of the higher moisture content, cautions Bill Mudge, extension dairy specialist at the University of Minnesota. It takes about 10 pounds of 30 percent moisture corn to equal the feed value of 8 pounds of No. 2 dry corn in a dairy ration. So substitute high moisture corn for dry corn at about a 10 to 8 ratio.

# # # #

Prevent Animal Damage to Trees. Protect trees against animal damage this fall and winter by following these tips from Bill Miles, extension forestry specialist at the University of Minnesota. In tree plantations, protect against mice by keeping the planting clean. Repellents are also effective, and those recommended for rabbits will usually work against mice. Repellents are more practical than cylinders of mesh-wire or hardware cloth if you have a large number of trees to protect. If you use cylinders, place them deep enough into the ground to prevent tunneling by mice and wrap the cylinders high enough so rabbits can't get at the trees by standing on the snow. For additional information, ask your county extension agent for a copy of Forestry Fact Sheet No. 8, "Protecting Trees From Animal Damage."

# # # #

Beef Performance Testing Pays. Both commercial and purebred beef producers can make effective use of performance records, according to Charles Christians, extension livestock specialist at the University of Minnesota. The combined efforts of both purebred and commercial producers will improve growth rate, efficiency of gain and carcass value of beef cattle. See your county extension agent about joining the Minnesota Beef Improvement Program to get on a good record keeping system.

# # # #

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St. Paul, Minnesota 55101  
November 10, 1969

To all counties  
Immediate release

ANIMAL WASTE POLLUTION  
PROBLEMS CAUSED PARTIALLY  
BY POPULATION EXPLOSION

Many dairy or beef operators can prevent animal waste pollution by following a few simple procedures, says Evan Allred, University of Minnesota agricultural engineer.

First of all, make sure no runoff from water or melting snow can run across areas where cattle are housed. Divert water around these areas so there's as little contamination as possible outside of the area. Many times some grading in a few strategic spots will remedy the situation, Allred says.

Disposing of the animal wastes by distributing them on open field soils at the right time of the year will result in very limited surface runoff, provided the wastes aren't applied at such a heavy rate they overload the soil. If the wastes can't be spread on open fields, they should be diverted and held in a holding tank or pond, then pumped at required intervals.

Allred says there's slightly less animal waste now than 10 years ago, since animal populations have decreased. The waste is concentrated in fewer locations, since many large farms are now located in suburban settings, surrounded by dwellings or light industry.

The animal waste has been compounded by the human population explosion, Allred continues. Problems increase as people move out further into the country to live and farms become larger and more concentrated.

# # # #

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November 10, 1969

To all counties  
4-H NEWS  
Immediate Release

EMPHASIS ON SCIENCE  
IN 4-H FIELD CROPS  
SCIENCE PROGRAM

If you're a 4-H member, a new challenge awaits you in the 4-H Field Crops Science program. The challenge is to learn more about plants, soils and their environment.

The emphasis is on science, says County Extension Agent \_\_\_\_\_.  
Rural farm youth are encouraged to apply the knowledge of plant and soil science they gain to the field crops grown on their farms. Urban and suburban youth can also learn through practical experiences by using flowers and vegetable plants grown in boxes and terrariums.

The new 4-H educational manual, Exploring the World of Plants and Soils, is the first in a series on plant and soil science. The publication is designed to interest urban and suburban youth as well as rural youth.

The manual guides young people through experimentation and work with plants and soils. Through such experimental topics as plant reproduction, what makes plants grow and plant characteristics, youth learn about the relationship of plants, soils, their environment and growing practices.

Amchem Products, Inc., Ambler, Pennsylvania, offers four medals of honor to county winners, an expense-paid trip to the National 4-H Congress for each state winner, and six \$600 educational scholarships to 4-H'ers who show outstanding work in the 4-H Field Crops Science program.

For more information on the 4-H Field Crops Science program and other 4-H projects, contact your County Extension Office.

Department of Information  
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St. Paul, Minnesota 55101  
November 10, 1969

To all counties

ATT: Extension Home Economists

Immediate release

ORGANIZE CLEANING  
TASKS TO SAVE  
TIME, ENERGY

Keeping the house clean can be a major job for the woman with a large family, particularly if she works outside the home.

It's important to give some thought to management of your time and energy in the most efficient way possible so you will have some time left for your family, says Extension Home Economist \_\_\_\_\_ (Mrs. Beverly Lundgren, assistant extension specialist in home economics at the University of Minnesota). Remember, too, that the kind of furniture and materials you select for your home will determine the amount of work in upkeep. Therefore, if you are considering additions or replacements, be sure to choose easy-care fabrics and easy-to-clean surfaces.

She gives some suggestions that may help in organizing the work efficiently:

. Make a cleaning schedule. Take into account the kind of house you have, the type of wall finishes and floor surfaces, since they will dictate the amount of time and energy involved in their care. List the jobs you should do daily, weekly, monthly or only occasionally. Fit them into a pattern that fits your time and energy, distributing difficult tasks throughout the day, week, month or season.

. Form the habit of classifying jobs according to their importance and urgency. Decide which jobs are essential to making your home comfortable and attractive.

. Designate which tasks are the responsibility of various family members. Have them share in the work. Develop a cooperative spirit among family members.

. Straighten each room before you begin the general cleaning.

-more-

add 1 -- cleaning tasks

. Experiment with different cleaning methods and commercial cleaning aids to see which give the most satisfactory results in the shortest time and at lowest cost.

. Save steps by assembling your cleaning aids and products into a basket to carry from room to room as you clean.

. Plan uninterrupted periods for the most difficult tasks but make plans flexible enough to allow for the unexpected.

. Dress attractively in clothes comfortable for the job. Shoes especially should be comfortable.

. Don't be afraid to try out ideas new to you for better ways of doing tasks.

. Use your list to check your progress.

. Have regular periods of rest and relaxation.

-jbn-

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November 11, 1969

FOR RELEASE AFTER NOV. 12

## SOIL PROPERTIES AFFECT DDT HAZARD

DETROIT--Moderate accumulation of DDT in soils which have a high organic matter content may present no serious biological hazard to men or animals, according to recent research at the University of Minnesota.

J. R. Petersen, formerly a graduate student at the University, and R. S. Adams Jr., associate professor of soil science, determined how some soil properties affect the toxicity of DDT.

The soil properties studied included water capacity, acidity, the amount of organic matter present, the soil's capacity to hold such minerals as calcium, potassium and magnesium, the mineral content and the amount of extractable iron and aluminum that was present.

Describing the research at a recent American Society of Agronomy meeting in Detroit, Petersen said DDT activity in soil decreased in relation to an increase in organic matter, the presence of clay and an increase in the nutrient holding capacity of soil.

These three factors all contribute to the ability of the soil to bind DDT to soil particles, Petersen explained. This means that an increase in these factors increases the adsorption of DDT by the soil. The greater the adsorption of DDT in soil particles, the less harmful DDT may be on life.

However, the researchers found that the greater the amount of extractable iron and aluminum in the soil, the greater the activity of DDT.

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November 11, 1969

Immediate Release

#### MINNESOTA 4-H'ERS GIVEN RECOGNITION FOR WORK IN SAFETY PROGRAM

Carver County has been awarded \$25 for the most outstanding 4-H Safety program in Minnesota and certificates will be given to 10 other Minnesota 4-H clubs for their participation in community safety projects.

The activities which were emphasized on a county-wide basis in Carver County included fire safety programs, bicycle safety, gun safety, distributing swimming information, training school safety patrols and distributing moving vehicle emblems. Members took part in eight 4-H radio programs on safety and 65 4-H demonstrations on safety. Fifty-five youths were enrolled in a 24-hour short course in farm tractor and machinery safety, and more than 200 4-H boys and girls attended bicycle safety programs. Members sold 156 pedestrian safety reflecting kits.

The 10 4-H clubs awarded certificates are: Clover Leaf 4-H Club, Carver County; Game Birds, Chisago County; Maple Hilltoppers, Cook County; Lucky Four, Le Sueur County; Hutchinson Royal Juniors, McLeod County; O'Neil Eagles, Mille Lacs County; Cairo Sharpshooters 4-H Club, Renville County; Busy Bees, Sherburne County; Swan Lake 4-H Club, Stevens County; and Burtrum Boosters, Todd County.

add 1--4-H safety programs

Each club worked as a group participating in community service activities, according to Earl Bergerud, assistant state leader, 4-H and youth development at the University of Minnesota. Some of their activities included reflectorizing bicycles and posting signs at dangerous curves and blind spots, cleaning up glass and rubbish on town streets and on lakeshore property, promoting poison prevention week and fire prevention week through displays, handbills and spot radio announcements, and making safety booths and floats for county fairs.

Individual members have participated in such activities as the Red Cross swimming classes and the school safety patrol, given demonstrations and exhibited safety posters, and inspected their own homes for safety hazards and reported those corrected.

The 4-H'ers have also held discussions with local policemen and highway partolmen to become more aware of what they can do to promote safety in their communities.

General Motors, Detroit, Michigan, awards the \$25 and the 10 certificates to the county and 4-H clubs in each state with the most outstanding 4-H safety program.

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268-lah-69

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November 11, 1969

Immediate Release

#### LOW-FAT CHEESES DEVELOPED BY UM RESEARCHER

The University of Minnesota has developed three low-fat cheeses that are well received by consumers, according to food scientist Howard Morris, who developed the products.

The cheeses have texture and flavor similar to Port du Salut-- a soft French cheese, Brick and Swiss cheese. They have from 14 to 20 percent fat in the finished product, or from one-third to one-half the amount in the regular cheese they resemble. The low-fat products contain only one-half the calorie content of standard cheese, according to Morris.

So far, the low-fat cheeses have been test marketed by the University, but have not been accepted and manufactured by the food industry. "But there are reasons for the lack of acceptance by commercial food companies," Morris adds.

He explains that according to current Food and Drug Administration regulations, the low-fat cheeses would have to be sold commercially under the label of "imitation" cheese because of the low fat content, and this would curtail sales. Sales of natural cheese have been rising steadily of late, so the industry sees little economic potential in marketing the product.

-more-

add 1--low-fat cheeses

However, Morris expects that consumer demand for low-fat cheeses will be met in the future. He receives many inquiries about the products from people on diets who are looking for new low-fat foods.

"The purpose of the research is to provide information to the cheese industry," Morris explains. "Then commercial firms can make these cheeses when consumer demand increases and the legal situation is remedied."

"The products aren't imitation cheeses--they taste just like cheese with the standard fat content," Morris stresses. The only difference is the lower fat and calorie content.

To develop the products, Morris used existing research knowledge and developed a technique which gave flavor and soft texture to the low-fat products. Low-fat cheese made by the regular process is hard, tough and lacks flavor.

By homogenizing the milk, heating to denature or cook the whey protein, and using hydrogen peroxide and catalase treatment which changes the protein so fat is replaced with water, Morris made the cheeses softer and more palatable. And making use of optimum conditions for microbial growth and enzyme action during the aging process helped make flavor of the low-fat cheeses more desirable.

"Our research on low-fat cheeses is continuing with Camembert and Gouda cheese, and we hope to have procedures available so industry can manufacture a 'family' or group of low-fat cheeses," the researcher adds.

# # #

267-jms-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 13, 1969

Immediate Release

## DEADLY PROTEIN MAY INCREASE ANIMAL FERTILITY

University of Minnesota animal scientists have isolated a toxic protein from bat semen that in purified form is as deadly as rattlesnake venom, yet offers potential promise as a means of increasing fertility in both humans and animals.

Professor Alan G. Hunter, who heads the research project, says the protein might have several uses, but the most promising appears to be as an agent to increase fertility in animals.

"If it is possible to synthesize large quantities of the protein, it could be added to bull and dairy cattle semen. The protein might allow the semen to remain in the cow's reproductive tract longer and increase the possibility of fertilization," he says.

Last year the research team collected nine proteins from the reproductive organs of several male brown bats. Each protein was subjected to rigorous tests, which included injecting small amounts into rabbits and mice. One protein, referred to as BSV, killed the laboratory animals.

Close examination of the dead animal's organs revealed that all their smooth muscles, which normally are in a state of contraction, were relaxed. This finding led the researchers to believe that the protein, though not toxic to bats, had a similar effect on smooth muscle lining the female bat's uterus.

-more-

add 1--deadly protein

If their theory is correct, it solves the long enshrouded mystery of how certain species of bats reproduce. The mystery stems from the fact that the male bat produces sperm only during late summer or early fall--nearly seven months before the female produces a ripe egg. The bats mate in the fall and then hibernate during winter.

The Minnesota researchers believe that BSV protects and preserves the sperm, which are stored over winter in the female's reproductive tract. Then in spring, the female bat simultaneously produces a ripe egg and a strong enzyme that destroys the protein and allows fertilization to occur, they say.

Normally, sperm cells that enter the uterus are carried through the organ to a small opening at the top by muscular contractions. Here they enter one of the fallopian tubes, which extend from either side of the uterus like tiny arms. If conditions are right, fertilization takes place in a small chamber near the end of the tube.

The bat protein, according to their theory, delays the sperm's journey to the fallopian tube by relaxing the uterine muscles and somehow immobilizing the sperm.

At the same time, BSV wards off attacks from the female's white blood cells. Without their protective coating, sperm cells would be engulfed by the white cells and destroyed in a matter of hours.

BSV also drastically reduces the number of lymphocytic white cells in the female's blood. This finding suggests that the protein might someday provide a means of combatting leukemia, since its victims suffer from

add 2--deadly protein

an excess of white blood cells. "But at the present time, too many questions about how BSV affects blood remain unanswered. More research will have to be carried out before we can begin to assess the value that BSV may have for man--as well as animals," they say.

Members on the University research project besides Hunter include Professors L.D.S. Barker, Melvyn Fahning, and Richard Schultz, and research assistant Walter L. Johnson.

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269-cf f-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 13, 1969

Immediate Release

#### HARRAR RECEIVES PLANT PATHOLOGY AWARD

J. George Harrar, president of the Rockefeller Foundation, received the Elvin Charles Stakman Award in plant pathology at a dinner in his honor Thursday (Nov. 13) at the Sheraton-Ritz Hotel in Minneapolis.

Harrar is the 13th recipient of the award established in 1953 to honor E.C. Stakman, professor emeritus at the University of Minnesota. Stakman was on hand to present the award to Harrar.

Harrar received the award for his outstanding contributions to agriculture in Latin America, and for his distinguished guidance in expanding the Rockefeller Foundation's campaigns against hunger.

Featured speakers at the dinner included University President Malcolm Moos, Dean Sherwood O. Berg of the University's Institute of Agriculture, and John Martland, vice president of the Green Giant Company and former student of Harrar at Virginia Polytechnic Institute.

Harrar graduated from the University of Minnesota in 1935 with a Ph.D. degree in plant pathology under Stakman, then department head. Since 1943 he has been associated with the Rockefeller Foundation. He was with the Foundation in Mexico until 1951 when he was named deputy director of Agriculture in New York. In 1955 he was named director, in 1959 vice president, and in 1961 he became president of the Foundation.

add 1--harrar receives

As field director in Mexico for the Foundation's first operational program in agriculture, his group concentrated on developing production of corn, beans and wheat. Within a 20-year period, the program helped bring about a 300 percent increase in production of these commodities, while the country's population grew by 70 percent.

The Mexican program has also served as a springboard for regional expansion into other Latin American countries, especially Colombia and Chile. Further expansion of the Foundation's agricultural program has resulted in the establishment of several international research centers in Mexico, the Philippines, Nigeria, Colombia and recently in India and Thailand.

The Elvin Charles Stakman Award was established in 1953 by friends and former students of Professor Stakman "in recognition of his dedication of scholarly leadership in biology and agriculture, education, and the humanities." It is given annually to individuals who have made outstanding contributions to agriculture.

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270-vak-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties  
Immediate Release

KEEPING CHECK  
ON CASH FLOW  
CAN SAVE DOLLARS

A cash flow worksheet based on a correct checking account record can save tax dollars and project credit needs, according to Lawrence M. Christenson, University of Minnesota farm management agent.

Christenson, an area agent stationed at Waseca, suggests that individuals develop a cash flow worksheet from a properly kept checking account record. The worksheet shows where money came from and how it was used.

Itemize and total information from the check stubs and deposit tickets. Then record the totals on a cash flow worksheet, Christenson recommends. Indicate on each check stub who the check was made out to and for what reason.

Do not cash any small income checks to pay personal expenses. Withdraw cash for personal expenses when making deposits or write checks for personal expenses. Do not pay business expenses with cash if possible, but if it's necessary, subtract the business cash expenses from personal expenses to keep the cash flow record in balance.

Accumulated totals on the worksheet in October or November can be used to calculate approximate tax payments and income. Expenses at the end of the year can be adjusted to get a possible tax advantage, Christenson says.

With accurate cash flow information, an individual can project credit needs and determine his ability to repay loans. A borrower may be able to reduce the amount of interest he pays and the creditor may be able to offer advice on how to take advantage of opportunities when a cash flow worksheet is available, he says.

-more-

add 1 -- check on cash flow

Other financial aids include:

-- A good record book or a good computer record.

-- Annual "sell out" and "depreciated" net worth statements.

-- Projected and the previous year's "ability to repay" and profit and loss statements.

-- Analysis, plans and projections for different enterprises.

Worksheets are available from county extension agents and the extension farm management office at the St. Paul Campus of the University of Minnesota.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties  
Immediate Release

KEEP LEFT-OVER  
CHEMICALS UNDER  
LOCK AND KEY

Carelessly stored pesticides can be a menace to anyone, but the most frequent victims are the most innocent ones -- young children.

The largest number of pesticide accidents involve children under 5 years of age, and could be avoided if the chemicals were stored properly, says Gerald Miller, extension agronomist at the University of Minnesota. Proper storage of chemicals also preserves the products so they can be used another year.

Miller recommends keeping chemicals stored in a separate, locked cabinet out of the reach of children. Don't store left-over pesticides in the house since heat may cause them to give off toxic fumes. A separate storage shed is recommended.

Do not switch chemicals from the original container to soft drink bottles, jelly jars or other containers that children may mistake for a food or beverage, Miller stresses. Always store the chemical in the original container and make sure the container is in good condition and has a readable label.

Store chemicals in a cool, dry place. Liquid materials may explode if they get too hot. And if the materials freeze, the chemicals crystallize and may separate out of the formulation. Dispose of bags or boxes of powders that are broken, following recommended disposal procedures.

Miller says the best way to prevent pesticide accidents is to avoid winter storage. Buy only the amount of chemical required to do a specific job, and properly dispose of empty containers and chemicals that won't be used so they don't take up storage space.

For more information, ask your county extension agent for a copy of Agricultural Chemicals Fact Sheet No. 3, "Disposing of Empty Pesticide Containers." Or, write to the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties  
Immediate release

KEEP IN TOUCH  
WITH WEATHERMAN

Keep in touch with the weatherman and be prepared if a winter storm hits.

If bad weather is forecast, check food and fuel supplies and replenish those that won't last for a week or more, advises Clifton Halsey, extension conservationist at the University of Minnesota. He suggests keeping a battery-operated radio with extra fresh batteries in case the power goes out.

Keep food on hand that can be eaten without much cooking. People who require special diets or who must take special medicines should make sure they can get along for another week or so on what's at home.

During every snowstorm road crews are asked to open roads so sick persons can get medical attention. But some of these emergencies could be avoided if people would take the proper precautions, Halsey says.

Keep a complete supply of first aid materials at home, and make sure the entire family is immunized for preventable diseases like tetanus, smallpox, diphtheria and polio. Someone in each family should have a good working knowledge of first aid and home nursing.

Sleet and ice storms create additional problems. Many times electrical power goes off, and this is when an auxiliary generator to power milking machines, the well pump and automatic choring equipment proves its worth.

-more-

add 1 -- keep in touch

You should keep flashlights and lanterns with extra bulbs and fresh batteries on hand. Kerosene and gas lanterns with extra fuel could come in handy. Families should also have an emergency method for cooking such as a camp stove, bottled gas or wood stove. Halsey says emergency heat such as the fire place or a space heater should be available. Make sure there is plenty of warm bedding and clothing on hand.

Many home fires are caused by defective chimneys or furnaces during cold spells, so make sure your heating equipment is in good working order. Be careful with emergency heating and lighting equipment.

For more information, ask your county extension agent for a copy of RCD 11, "Be Prepared For Winter Storms." You can also write for a copy to the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties  
  
Immediate Release

AREA BEEF CATTLE  
FEEDERS DAYS SET

Four Beef Cattle Feeders Days sponsored by the University of Minnesota are scheduled throughout the state in December.

Programs will include reports of research completed during the past year and certain "in-depth" topics of interest to cattle feeders and producers. Meetings are scheduled for the following locations:

December 2 -- Southern School and Experiment Station, Waseca.

December 3 -- High School Auditorium, Lakefield.

December 4 -- West Central Experiment Station, Morris.

December 5 -- Northwest Experiment Station, Crookston.

Programs begin at approximately 9:30 and run until 3 p.m., followed by a question and answer period. The afternoon program at Morris will feature a visit to the new beef research facilities.

Research to be discussed at the events will include levels of dehydrated alfalfa in cattle finishing rations, evaluation of dried rumen contents as a ration ingredient, effect of high nitrates in cattle finishing rations fed with and without urea and an antibiotic and influence of shipping fever vaccine on steer calves.

Also, pollution control, modified environments for finishing beef steers, a comparison of four systems of feeding silage to cattle, growth promotants for finishing heifers, performance and carcass characteristics of finishing bulls, steers and heifers, and levels of silage in cattle finishing programs.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties  
Immediate Release

IN BRIEF . . .

Evaluate Corn Hybrids. Write down the good and bad points about your corn hybrids while they're fresh in your mind. This way you won't have to rely on memory when the seed salesman comes to sell seed for next year's crop, says Dale Hicks, extension agronomist at the University of Minnesota. Comparing hybrids grown on your farm is one way to get an idea of the best varieties to plant the next year. You can also ask hybrid seed salesmen for comparisons of hybrids within their company. Hybrid seed companies run replicated performance tests on their varieties, and this is the best source of yield information. Yield is the most important factor to select for, but other characteristics such as standing ability, disease and insect resistance and good shelling ability should also be considered.

\* \* \* \*

Electricity Exemption for Farmers. Farmers and tax consultants should be aware that electricity used for agricultural production may be credited against Minnesota income tax liability starting with the tax year beginning January 1, 1969. The credit is an amount equal to the 3 percent sales tax paid to an electrical retailer on purchases of electricity used for agricultural production, according to Paul Hasbargen, extension economist at the University of Minnesota. If this credit exceeds the amount of tax liability, a refund will be made to the consumer. Credit may be claimed on the Minnesota income tax return and is computed on Schedule EAC (Exempt Agricultural Credit), which must be attached to the income tax form.

\* \* \* \*

Use Only Approved Dairy Cleaners. Never use household detergents on dairy equipment, since cleaning demands are different. Vern Packard, extension dairy industries specialist at the University of Minnesota, says many household cleaners also have odors or flavors that may be imparted to milk.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties

ATT: EXT. HOME ECONOMISTS

Immediate Release

DURABLE PRESS  
REQUIRES SPECIAL  
SEWING TECHNIQUES

Welcome news to many women and girls is the increase in the variety of easy care or durable press fabric for home sewing.

Success in sewing such fabrics, however, requires some special techniques, according to Thelma Baierl, extension clothing specialist at the University of Minnesota.

Here are Miss Baierl's suggestions for sewing fabrics which are a blend of polyester and cotton with a durable press finish:

- . Check the fabric grainline. If the fabric is off grain, there is no way to straighten it.
- . Select a simple pattern with few seams and few details. Avoid set-in sleeves.
- . Pre-shrink zippers, interfacings and any trim.
- . Use an all-polyester thread or a cotton-covered polyester thread if you can get it. If not, use mercerized cotton.
- . Use the regular throat plate with a small needle hole rather than the zig-zag plate with an oval hole.
- . Use a fine, sharp machine needle.
- . Set the machine for a slightly longer stitch -- 10 to 12 stitches per inch.
- . Set and test for a relaxed -- a looser -- tension.
- . Guide the material gently with the hands at front and back of the presser foot.
- . Ease the zipper to the placket area.
- . Avoid top stitching.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 17, 1969

To all counties

4-H NEWS

Immediate Release

MKC  
JMP

PLAN NOW  
FOR COLLEGE  
FINANCIAL AID

High school seniors who are planning to attend college in the fall of 1970 should begin to apply now for financial aid through various programs.

Among the financial aids available are the Economic Opportunity grants, Work Study programs and National Defense Loans. The University of Minnesota's College of Agriculture, Forestry and Home Economics Scholarship Committee works in cooperation with the Student Financial Aids Office of the University in allocating freshman scholarships, says County Agent \_\_\_\_\_.

You can secure application blanks for financial aid from your high school counselor. These blanks, accompanied by a Parental Confidential Statement, must be submitted by December 15, 1969, according to Ralph E. Miller, secretary of the Scholarship Committee of the University of Minnesota College of Agriculture, Forestry and Home Economics.

Your high school counselor has a poster announcing scholarships available to incoming freshmen in the University's College of Agriculture, Forestry and Home Economics. You have a chance of receiving some aid if you ranked in the upper fourth of your class at the end of your junior year and have financial need.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 18, 1969

Immediate Release

#### MINNESOTA 4-H'ERS AWARDED FOR OUTSTANDING WORK

Several Minnesota 4-H'ers have been named to receive awards and state recognition for their outstanding work in 4-H projects.

Glen Hoff, 16, Perley, Norman County, will receive a \$50 savings bond along with a trip to the National 4-H Club Congress for his outstanding work in the sheep project. Glen has been enrolled in the project for eight years and owns and cares for 33 sheep. He has won several trips to the Market Livestock Show and general livestock judging contest. The award was sponsored by Wilson & Co., Inc., Chicago, Illinois.

Becki Hermes, 16, Fairmont, North Dakota, Wilkin Co., has won a \$50 savings bond for her work in the Veterinary Science project. She has participated in the livestock judging contest and several radio speaking contests and demonstrations. The Upjohn Company, Kalamozoo, Michigan sponsored her award.

Mary Ludwig, 18, Cannon Falls, Dakota County, and Fred Kaiser, 18, Little Falls, Morrison County, received certificates for outstanding projects carried out in the citizenship program. Mary was a delegate to a Citizenship Short Course in Washington D.C., has been a junior leader and vice president of the Dakota County 4-H Federation. Fred received the 4-H Key award in 1968. He was a junior leader conference delegate and vice president of the Morrison County 4-H Federation.

add 1--minnesota 4-hers

Craig Bjerke, Wadena, Wadena County, received a radio from the Ralston Purina Company, St. Louis, Missouri, along with a trip to the National 4-H Club Congress in Chicago. Craig received the awards for his outstanding projects done in the dog care and training program.

Bob Jamison, 18, Borup, Norman County, will receive a trip to the National 4-H Club Congress from Allis-Chalmers, Milwaukee, Wisconsin, and a \$5 cash award from the Federated Garden Clubs of Minnesota. Bob has been enrolled in the horticulture project for nine years and is an honorary member of the Minnesota State Horticultural Society since 1966.

A \$10 cash award was given to the following 4-H'ers by the Minnesota Garden Flower Society for outstanding projects carried out in horticulture: Sharon Simonson, Sanborn; Alan Johnson, Elmore; Lowell Thompson, Ada; Dorothy Spitzer, St. James; and Diane Calkins, Altura.

# # #

274-lah-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 18, 1969

Immediate Release

## HORTICULTURAL SOCIETY ELECTS OFFICERS

Kenneth W. Fisher, 2208 Wentworth Avenue, South St. Paul, has been re-elected president of the Minnesota State Horticultural Society for 1970.

Vincent K. Bailey, 1325 Bailey Road, Newport, was re-elected to the office of vice president. Elected to executive board terms of three years were Mrs. Wesley McGuire, Cass Lake, and Mervin Eisel, Excelsior. Election results were announced by Eldred M. Hunt, secretary of the Horticultural Society.

Twenty-two award winners for 1969 have also been selected, Hunt said. Certificates and citations for special achievement in gardening and horticulture will be presented by the society. Award recipients are:

Honorary life membership -- Mrs. Lewis Handegaard, Hendrum; Carl J. Holst, 3750 Abbott Avenue South, Minneapolis; Mrs. G.C. VanSlyke, Northfield; P. W. Young, 4544 Beard Avenue South, Minneapolis.

Distinguished service certificates -- Granville B. Gable, 2543 38th Avenue South, Minneapolis; Carl Larson, Warroad; Martin E. Linquest, 1811 Dunedin Avenue, Duluth; Robert V. Schwietz, White Bear Lake; Mrs. Wilbert G. Sindt, Stillwater.

Award of merit certificates -- Mrs. Lincoln Anderson, Tracy; Mrs. William Backen, Brainerd; Mrs. John Benda, Route 2, Mountain Lake; Mrs. Richard Ching, Roseau; Mrs. Dennis Frederickson, Austin; Mrs. Ed Heieren, Thief River Falls; Mrs. John Heins, Clara City; Mr. and Mrs. Richard Knuckey, 4715 Cooke Street, Duluth; Vance E. Markle, Winnebago, Mrs. Walter McKinnon, White Bear Lake; Mrs. Raymond Newman, 3512 West 88th Street, and Mrs. Thomas Ticen, 5400 Southwood Drive, Bloomington; Mrs. Warren Strohecker, Blackduck.

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273-jbn-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 18, 1969

Immediate Release

#### MINNESOTANS RECEIVE FELLOWSHIPS

Two University of Minnesota Institute of Agricultural professors have been honored by the American Society of Agronomy (ASA) at an ASA meeting this month.

Professor Alfred C. Caldwell of the Department of Soil Science and Professor Edwin L. Schmidt of the Department of Soil Science and the Department of Microbiology were named ASA Fellows for their professional achievements and meritorious service. The society named 36 fellows this year from nominations made by friends and society members.

Professor Caldwell received degrees from the University of Minnesota and the University of Alberta. He is a teacher of soil fertility and chemistry and has research interests in the chemistry of the essential elements in soils and plants and crop production.

Caldwell has served on ASA committees and was a senior officer for two years overseas with the International Atomic Energy Agency.

Professor Schmidt received degrees from Syracuse University and Rutgers University. His research interests are in soil microbiology and he instructs classes in soil microbiology and general microbiology.

Schmidt was a John Simon Guggenheim Fellow at the University of Louvain in Belgium from 1964 to 1965.

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272-daz-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 18, 1969

Immediate Release

## STUDENTS PLACE SECOND IN MIDWEST FORESTERS' CONCLAVE

The Forestry Club of the University of Minnesota School of Forestry placed second with 23 points in the 18th annual Midwest Forestry Conclave recently at Houghton, Mich.

Eight forestry schools were represented from Illinois, Indiana, Michigan, Minnesota and Missouri. The University of Michigan took first place with 38 points.

The 19 Minnesota students were awarded a chain saw for their second place finish. They competed in such old-style logging events as log rolling, log throwing and one and two-man bucking. Other events included running of a survey line and tree identification.

Although some of the events do not represent modern day forestry techniques, this annual conclave does provide an opportunity for forestry students from the various Midwest forestry schools to get together. Besides becoming acquainted with forestry students from other schools and competing in forestry contests, the students also receive an opportunity to gain first-hand knowledge of forestry practices and problems in other Midwest states. The conclaves also provide students from visiting schools with an opportunity to become familiar with forest tree species which are not native to their home state.

The 1970 Conclave will be held at West Lafayette, Ind., the home  
of Purdue University.

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271-vak-69

CORRECTION

In the release from the Department of Information and Agricultural Journalism dated Nov. 18, MINNESOTA 4-H'ERS AWARDED FOR OUT-  
STANDING WORK, the last sentence, paragraph 2 should have read:

"The award of the trip (for Glen Hoff) was sponsored by Central Livestock Association, Inc., South St. Paul. Wilson & Co., Inc., Chicago, gave the savings bond."

If you have not used the release, please make the above correction.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 20, 1969

Immediate Release

## CHECK DURABLE PRESS GARMENTS CAREFULLY BEFORE YOU BUY

Durable press garments have the advantage of no ironing, but they also have some disadvantages which make careful shopping important.

By 1971, more than half the sport and dress shirts, work clothes, rainwear, tablecloths, sheets and pillow cases and 90 percent of men's and boys' slacks will have an easy-care finish, according to predictions. For that reason consumers need to learn to recognize quality in the great variety of easy care or durable press garments and household linens on the market.

That's the opinion of Thelma Baierl, extension clothing specialist at the University of Minnesota. She gives consumers some suggestions on what to look for when shopping for easy-care or durable press clothing:

- . Inspect the garment. Make sure that seams, pockets and plackets are smooth and flat. Unwanted creases or puckers will not come out if they were set in the manufacturing process.

- . Check the color. It should be dyed evenly, without streaks.

- . Check the fit. Alterations will not be satisfactory because the original imprint of seamlines and hemlines cannot be removed in lengthening or letting out. When shortening, the new hems will not hold a crease.

- . Read the label for fiber content. For most satisfaction, the blend should contain at least 50 percent polyester. To date, the most satisfactory fibers have been a blend of 50 to 65 percent polyester with 50 to 35 percent cotton.

add 1--check durable press

. Read the label to see if there is a soil-release finish. Such finish is an aid to easy care, making oil- and water-borne stains easy to remove. Come-Clean, Fybrite, X-it, Soilex, Visa, Dual-Action Scotchguard are a few of the names for soil release finishes.

. Check care instructions--and then follow them exactly.

. Consider the price. Expect to pay more for durable press garments than similar items that require ironing.

# # #

275-jbn-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 20, 1969

Immediate Release

## LARGE LEAD AMOUNTS FOUND NEAR ROADS IN TWIN CITIES

Lead from automobile exhaust fumes accumulates in large amounts near roadways within the Twin Cities metropolitan area, although it does not present an apparent health hazard, according to two University of Minnesota researchers.

Lead accumulation in soil near roadways was studied by Research Assistant Michael J. Singer under the direction of Associate Professor Lowell D. Hanson, both of the Department of Soil Science.

Lead content in the air and soil has resulted from the use of tetra-ethyl lead in gasoline as an anti-knock compound for today's high compression engines, Singer said.

The research revealed that deposits were greater near roads with high traffic volumes. However, in one case, an old road had greater lead concentrations near it than a newer one with approximately the same amount of traffic, he added. The difference in the accumulation amounts was due to a build up of lead over time on the old road, Singer said.

Where farms are located near heavily traveled highways, lead concentrations may reach unusually high levels. Singer and Hanson found, however, that lead from the gasoline fumes was not being carried far enough from the highway to endanger crops.

-more-

add 1--large lead amounts

Even if the lead was carried to the nearby fields, it would not be absorbed in the edible part of the plants, Singer said. The plants generally absorb lead in their roots rather than in the edible part. Therefore, even though lead is toxic to humans, transfer of the element to persons through crops does not seem to be a likely probability.

"Further studies are needed to determine if biological or environmental hazards are possible from the lead contained in these soils," he added.

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276-daz-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 24, 1969

To all counties

Immediate release

MODERATE STAND  
LOSSES IN CORN

Early seedling diseases and stand losses due to disease, rodents, birds and insects in corn were about normal last year, according to Herbert Johnson, University of Minnesota extension plant pathologist.

Losses generally ran about 10 to 15 percent, but excessive losses due to seedling disease occurred in some localized areas. This was often caused by low soil temperature, according to Johnson. In many cases the below soil internode -- the thin strand of tissue above the initial roots shortly after germination -- rotted off, causing food reserves from the seed to be cut off.

Seed treatment was of little help in combatting this localized seedling disease, since damage occurred away from the seed. At temperatures less than 50 degrees, corn does not grow and disease-causing fungi have an advantage, Johnson says.

He advises planting at soil temperatures above 50 degrees, using corn hybrids with a history of good stands and vigorous seed and planting seed at the proper depth. Usually the seed should be placed about 2 inches deep, Johnson says. But in dry springs, it may be necessary to plant deeper in order to reach moisture.

Leaf spot diseases of corn caused scattered damage last year, Johnson says. Northern corn leaf blight, Holcus leaf spot and rust caused only minor damage. Eye spot and yellow leaf blight are two new diseases. Yellow leaf blight was found for the first time in southeastern Minnesota last year, but did not cause serious disease problems. Eye spot was found in a few southern Minnesota locations, but caused less damage than in 1968.

Losses due to stalk rot and lodging will probably be normal, or at about 10 percent of the crop. However, late harvested corn could suffer heavier losses, Johnson adds.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 24, 1969

To all counties  
Immediate release

BEEF COWS IN CORNSTALKS  
NEED MINERAL SUPPLEMENT

Beef cows turned into cornstalks require free-choice mineral and salt. They can get along without supplemental protein for a while, but weathered cornstalks and crop residue don't have enough protein to meet requirements, according to Robert Jacobs, University of Minnesota extension animal husbandman.

Cows nursing late calves should be provided with protein blocks, or fed 5 pounds of good quality hay per head daily. The protein requirement can also be met by feeding one-half to one pound of 40 percent protein supplement per day.

Protein blocks will take care of the cows' needs with little labor involved. If you use protein blocks, provide one block for each 15 cows so each cow will have access. Place the blocks where they will remain clean and dry. Jacobs suggests placing the blocks in some 2-inch lumber on the ground troughs.

If you feed hay to cows on cornstalks, Jacobs recommends hauling it out to the field. This will encourage cows to stay out in the field and eat cornstalks. If you feed the hay around the buildings, many times the cows will stay around the buildings instead of going out to the field and eating cornstalks.

If calves are already weaned, Jacobs recommends keeping cows on just cornstalks until mid-December or early January to get all you can out of the cornstalks. Then start feeding hay--you'll probably need to feed about 10 pounds per head daily at this time.

But if heavy snow stops cornstalk field grazing altogether, the hay requirement will be 18 to 20 pounds per cow daily. A daily ration of 30 pounds of corn silage plus 10 pounds of hay will also winter non-lactating cows satisfactorily, Jacobs adds.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 24, 1969

To all counties  
Immediate release

TODAY'S HOGS  
MEATIER THAN  
PREDECESSORS

Hog producers are breeding meatier hogs than ever before. Charles Christians, livestock specialist at the University of Minnesota, cites these figures from the Minnesota State Spring Barrow Show to illustrate the progress made by pork producers.

In 1945, the average loin-eye area of hogs entered in the show was 3.5 square inches. Hogs at the 1969 show averaged 5.43 square inches, and the top loin-eye evaluated at the 1969 show measured 7.6 inches.

The first carcass show was held in 1960, Christians says, and since then, the average length of hogs entered in the carcass contest has increased from 29.6 inches to over 30 inches. The loin-eye area has increased from 4 to over 5 square inches, and the percent ham and loin of a carcass weight has increased from 37 to about 43 percent. Average backfat thickness of hogs entered in the show has gone from 1.5 to 1.3 inches in the past 9 years.

Christians offers this advice to hog producers who want to breed meatier hogs and achieve top profits.

\* Carcass traits, both good and bad, are highly heritable. Make sure you use hogs from breeding stock that gives you the new, "modern" carcass.

\* Use all the records you can. Breed certification programs and test station and carcass show results will help you locate the right hogs.

\* Most hog improvement comes through the boars. Demand only the best for your sow herd. Select a boar with a background that will strengthen your herd's weaknesses.

\* Train your eye. Records and breeding are important, but you still need to use your own judgement in selecting the desirable characteristics you need.

Department of Information  
and Agricultural Journalism  
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St. Paul, Minnesota 55101  
November 24, 1969

To all counties

Immediate release

IN BRIEF . . .

Good Management Helps Prevent Calving Problems. Maintaining accurate breeding records and knowing when dairy cows and heifers are due to freshen can reduce calving problems. Joe Conlin, extension dairy specialist at the University of Minnesota, suggests placing the animal in a clean, well bedded and comfortable maternity stall a few days before the expected calving. Observe the cow closely and often at calving time for any signs of difficulty. If the calf hasn't been born within 2 hours after the membranes rupture, call your local veterinarian. Delaying calling for help when calving problems arise decreases the chance of saving the calf and increases the possibility of permanent damage to the cow.

\* \* \* \*

Thin Forest Stands in Winter. Thinning, or the removal of some trees in an immature forest stand, increases the growth rate of remaining trees and salvages trees that would otherwise be lost through overcrowding. Thinnings should be made during the winter months after the ground is frozen and before spring thaw, according to Bill Miles, extension forestry specialist at the University of Minnesota. Thinnings are most important for pure and mixed stands of red (Norway) pine, white pine, jack pine, Scotch pine and upland white spruce-balsam fir stands. Thinnings aren't recommended for pure or mixed black spruce, white cedar or tamarack stands, Miles says. Contact your local forester for more information.

\* \* \* \*

Consider Supplemental Enterprises. If you're trying to get full-time earnings from less than full-time crop farm employment, consider improved income possibilities with supplementary livestock enterprises. University of Minnesota economists say heavy demands and only light to adequate supplies during 1969 should result in favorable prices for meat, milk and eggs.

\* \* \* \*

-more-

add 1 -- in brief

\* \* \* \* \*

\* ATTENTION: This item intended \*  
\* For Agents in southeast and southwest Minnesota \*

\* \* \* \* \*

Know Your Business Returns. You can use records as a basis for making an analysis of your farm business and for improving the management of your farm. Records also help you check on the progress you've made on your financial goals. See your county extension agent about joining the local farm management association. Over 300 farmers in the Southeast and Southwest Farm Management Associations are using this service.

\* \* \* \*

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 24, 1969

To all counties

ATTN: Extension Home  
Economists

Immediate Release

**FREEZE FOOD NOW  
TO SAVE TIME LATER**

Preparing for the holidays need not be a hectic eleventh-hour race to get cooking and baking done if you go on a freezing spree, once Thanksgiving is past.

The type of entertaining you expect to do during the holiday season will help determine what you want to bake and freeze ahead.

Be sure to package whatever you freeze in moisture-vapor-proof wrapping or good freezer containers, advises Mrs. Shirley Munson, home economist in the Department of Horticultural Science food processing laboratory.

Mrs. Munson suggests some foods that can be prepared in advance and frozen now to save time later:

. Breads, plain and fancy rolls. Package in a saran-type film, or in polyethylene bags or in heavy-duty aluminum foil for freezing. You may wish to wrap some of the breads so they will be ready for gifts. One caution: do not frost until ready to use, since frosting dries out when frozen. Thaw in the original wrapper at room temperature.

. Unfrosted bars and cookies of all kinds. Store them in tin cans, with sheets of saran-type film or aluminum foil between layers to prevent drying out.

. Cookie dough. After shaping the dough for refrigerator cookies into the desired size, wrap in freezer paper. When ready to use, remove from the freezer, slice with a sharp knife and bake. Drop-cookie dough may be packed in freezer containers and frozen. To use, thaw the dough until it is soft enough to drop on cookie sheets.

## Add 1 -- freeze foods

. Baked pies, chiffon pies, baked and unbaked pie shells, graham cracker and cookie crusts. Pumpkin, mince, chiffon and fresh fruit pies freeze successfully. The pie will freeze faster if placed in the freezer unwrapped. When it is frozen, remove it from the freezer, wrap it, label and date it and store again in the freezer. When ready to use a frozen baked fruit pie, let it stand at room temperature for a half hour; then heat it until warm in a 350° F. oven on the lowest shelf.

Always include beaten egg white or whipped cream in chiffon pies to prevent "weeping" during thawing. Chiffon pies toughen when stored more than a month. Never thaw chiffon pies in the oven. Do not freeze the meringue toppings on pie.

. Casserole dishes and baked beans. It is better to undercook foods to be frozen in combination dishes. Dishes containing macaroni, spaghetti, noodles or rice freeze well, but diced or cubed potatoes become mushy. There is little danger of breakage in putting the frozen baked dish directly into the oven from the freezer. If casserole dishes become too dry, add liquid at heating time. Be sure to heat until the center is bubbly.

Meat and sauce combinations for such dishes as Italian spaghetti, Spanish rice and chow mein may be frozen separately, then added to other ingredients when reheating.

. Homemade **candies**. Store in tin cans or use good moisture-vapor-proof wrapping over boxes. Do not remove the wrap until the candy **has** warmed to room temperature -- about 4 to 8 hours -- to prevent chocolate from turning white or other damage from condensation.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
November 24, 1969

To all counties

4-H NEWS

H. S. STUDENTS  
URGED TO ENTER  
U ART SHOW

High school students, as well as older amateur painters and sculptors living in rural Minnesota or a Minnesota town of 25,000 or less, are invited to exhibit original work in the 19th Minnesota Town/Country Art Show.

The art show, March 15 - April 3, will be held in the Student Center on the University of Minnesota's St. Paul Campus. It is sponsored by the Agricultural Extension Service and the General Extension Division of the University.

"We are eager to have entries from high school students and other young people this year," says A. Russell Barton, coordinator of the show.

Each artist may enter one recent painting and one piece of sculpture, but not two in any one medium. Entries may include all types of painting, sculpture and the graphic arts but not photographs. Works must be original and not previously exhibited in former Minnesota Town/Country Art shows.

Entry dates are February 23 through February 28. Entry rules and registration labels may be obtained by writing Minnesota Town/Country Art Show, 106 Agricultural Engineering, University of Minnesota, St. Paul, Minnesota 55101.

Entries will be on exhibit in the University's St. Paul Campus Student Center Galleries March 15 - April 3. A four-day program for rural artists will climax the show during the last week of the exhibition. Art works which receive merit awards will be hung in the American-Swedish Institute in Minneapolis April 12 - May 3.

-jbn-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 25, 1969

Immediate Release

## SELECT YOUR CHRISTMAS TREE EARLY

The best looking Christmas trees are sold early, so do your shopping well before the Christmas Holidays if you're interested in getting a high quality tree.

Look for signs that the tree is fresh, advises Marvin Smith, extension forestry specialist at the University of Minnesota. The needles should be resilient, not brittle, when you bend them. They should adhere well when you run your finger down a branch. Few needles should fall off when you bump the base of the trunk on the ground, and the stump should be sticky with sap.

A top grade, or U.S. Premium tree, has fairly uniform density of foliage all around. It looks good even if placed in the center of the room. The tree must have foliage of good density with no holes or gaps in the foliage, no weak, broken or unduly long branches and no crooks in the trunk or barren lower whorls.

Scotch pine, Norway pine, balsam fir and Douglas fir hold their needles well indoors, Smith says. Spruce trees don't hold their needles as well.

When you take the tree home, keep it outside, if possible, or in a cool, shaded place inside until the time comes to trim it. Saw a fresh diagonal cut off the butt two inches above the original cut. Stand the base of the tree in a stand of water and keep water in the stand until the tree is removed after the holidays. Additives in the water do not help keep the tree fresh, Smith adds.

# # #

277-jms-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 25, 1969

Immediate Release

#### DATES OF TOWN/COUNTRY ART SHOW SET

The 1970 University of Minnesota Town/Country Art Show will be held March 15 -April 3 in the St. Paul Campus Student Center Galleries, A. Russell Barton, coordinator, has announced.

Amateur painters or sculptors, high school age and over, will be eligible to exhibit if they live in rural Minnesota or in a Minnesota town of 25,000 or less.

Entry rules and registration labels may be secured by writing Minnesota Town/Country Art Show, 106 Agricultural Engineering, University of Minnesota, St. Paul, Minn. 55101.

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278-jbn-69

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 25, 1969

Immediate Release

## FERTILIZER-LIME COURSE SET FOR DEC. 16-17

The fertilizer and lime short course and Minnesota Plant Food Association annual meeting will be held Dec. 16-17 in the Minneapolis Auditorium.

The course is being sponsored by the University of Minnesota Department of Soil Science and Office of Special Programs, Agricultural Extension Service, in cooperation with the association and the Minnesota Department of Agriculture.

Registration will open at 8 a.m., Dec. 16 followed by a discussion of the course's objectives by LaVern A. Freeh, head of the Office of Special Programs and assistant director of the Agricultural Extension Service.

Soybean and corn yields will be discussed at the Dec. 16 morning meeting and the problem of pollution of lakes and streams will be the subject of an afternoon panel discussion.

A film, "Land, Legacy and Promise," will kick-off the Dec. 17 morning session followed by a talk on the characteristics of today's top farmer by Managing Editor T. A. Doughty of "Farmer" Magazine. Soil factors that affect root growth and fertilizer results in low rainfall areas will also be discussed during the morning session.

Fertilizer law administration, agricultural financing and insect and weed control will be subjects of the afternoon session on Dec. 17.

# # #

280-daz-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
November 25, 1969

Immediate Release

#### PROPER CARE FOR DURABLE PRESS WILL SAVE IRONING

If your durable press garments have not come out of the laundry as wrinkle free as you'd like, perhaps you're not caring for them properly.

To keep the original unwrinkled appearance, the sharp creases and pleats of a durable press garment, consumers must follow exactly the care instructions on labels and hang tags, according to Thelma Baierl, extension clothing specialist at the University of Minnesota.

Miss Baierl gives some guides to follow that should give you more satisfaction with durable press and make ironing unnecessary:

- . Wash frequently. Don't let soil build up or become heavy.
- . Pre-treat spots before washing. Treat collars, cuffs and oily stains with concentrated detergent, allowing at least half an hour for the detergent to loosen the soil before washing.
- . Wash whites separately from colored clothes.
- . Turn the garment inside out to reduce abrasion and wear on crease lines.
- . Use small loads in washer and dryer. Crowding will cause wrinkling.
- . Use cool to warm water for the least amount of wrinkling. Heavy soil, of course, will require hot or warm water.

add 1--proper care

. Set the washing machine on a short cycle with slow agitation--  
either a durable press or a wash-and-wear cycle.

. For the best no-iron appearance, use a dryer. Set the controls  
on wash and wear or durable press.

. Remove articles as soon as the dryer stops and place on hangers.

If you do not have a dryer, you may need to do some touch-up  
ironing for the line-dried garments. In that case, use a steam iron or a low  
setting on a dry iron. To be sure the temperature is not too high, it's  
wise to test the iron on a hidden part of the garment, Miss Baierl says.

More information on durable press is given in a publication by  
Miss Baierl called "Durable Press." Single copies are available free of  
charge from Bulletin Room, University of Minnesota, St. Paul, Minn. 55101.

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279-jbn-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties

ATTN: EXTENSION HOME ECONOMISTS

Immediate release

FIBER IN KNITS  
DETERMINES CARE

The growing popularity and use of knits in the wardrobes of women and men, boys and girls make it important for everyone to know how to care for this type of clothing so it will retain its best appearance.

The variety of fibers and blends in knitwear makes it impossible to give blanket rules for care. In general, however, care is determined by fiber content, says Thelma Baierl, extension clothing specialist at the University of Minnesota.

Cotton knits are usually machine washable and machine dryable. But in order to prevent excessive shrinkage, they should not be dried at too high a temperature. It's also important to remove them from the dryer before they are bone dry. Then finger press and shape the garments.

Most polyester knits are machine washable and machine dryable. However, to be safe, check the hangtag or label for care instructions. Polyester knits wrinkle less when washed in warm to cool water in small loads. They need room to flex so they will give up wrinkles and not take on new ones.

Dry polyester knits with such items as bath towels to act as buffers. Set the dryer for a cool down cycle to prevent wrinkling as the garment dries. If touch-up ironing is needed on polyesters, the setting should be very low to prevent shine or damage to the garment. Usually no ironing will be necessary if you follow care instructions on the hangtag.

Wool double knits should be dry cleaned. Most of them need no blocking or sizing. They seldom need pressing. If they become wrinkled in wearing or packing, the wrinkles will usually disappear when the garment is hung near a steaming shower.

Hangtag instructions must be followed in the care of elaborate raschel knits.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties

Immediate release

IN BRIEF . . .

Tax Management Returns Dollars. With stronger cattle and grain prices this year, your income may be substantially higher than previous years. Farmers in this category should check to see if they are eligible for income averaging, advises Charles Cuykendall, extension economist at the University of Minnesota. To be eligible for income averaging, your "averagable" income for 1969 must be over \$3,000. Your "averagable" income usually is the excess of your 1969 income over 133 and one-third percent of the average of your income for the four prior years, without considering the excess of net long-term capital gain over net short-term capital loss in any of these years.

\* \* \* \*

Additional Tax Forms. Taxpayers will have some additional schedules to attach to their 1969 Federal Income Tax Forms, reports Charles Cuykendall, extension farm management specialist at the University of Minnesota. Federal Form 1040 has been changed -- the back side has been omitted where deductions, dividends and interest used to be listed. In addition to Form 1040 and Schedule F for farm income, farmers should secure Schedule A for itemizing deductions, Schedule B for reporting dividends over \$100 or interest over \$100, and Schedule C for business or self-employment income. Ask your county extension agent for the 1970 Farmer's Tax Guide for additional information.

\* \* \* \*

Farmers: Keep Good Records. Farmers must keep good records to prepare accurate income tax returns and insure that only their proper tax is paid, says Charles Cuykendall, extension economist at the University of Minnesota. Paid bills, canceled checks, deposit slips listing the income source and other items that substantiate entries in your records should be filed in an orderly manner and stored in a safe place so they'll be available when needed.

\* \* \* \*

-more-

add 1 -- in brief

Gasoline Tax Credit. Federal and state gas tax refunds must be reported on Federal Schedule F in the year the payment is received, according to University of Minnesota extension economist Charles Cuykendall. The law provides for a tax credit of 4 cents a gallon on gasoline used on a farm for farming purposes. You may also qualify for a 2 cents a gallon credit or refund on gasoline used other than as fuel in a highway motor vehicle. This includes gasoline used to operate items such as power lawn mowers, motorboats or airplanes. Ask your county extension agent for a copy of the 1970 Farmer's Tax Guide for further information.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties  
4-H News  
Immediate Release

CHOOSE SIMPLE  
PATTERNS WHEN  
LEARNING TO SEW

When you are just beginning to sew, it is important that you choose patterns and styles which are relatively simple, says Extension Home Economist\_\_\_\_\_.

If there are many small pattern pieces, it is likely that the garment will take longer and be more complicated to put together than when there are only four or five pattern pieces.

Even the type of fabric you choose determines how difficult a pattern will be to sew. For example, if you choose a stripe or a plaid, you'll have to take the time to match the fabric carefully at each seam line. You can see how much more difficult and time consuming the garment would be to put together if you had many pattern pieces and a plaid fabric.

There are also certain features in a pattern that are more difficult and time consuming than others. For instance, garments with no sleeves or with kimono or raglan sleeves are easier to make than garments with set-in sleeves. For some, a fitted neckline facing is easier than a garment with a collar. A zipper placket may be easier than buttons and buttonholes. And garments without waistline seams are easier to construct than garments with a waistline seam.

Pattern companies also aid the beginning sewer by making "easy-to-sew" patterns. Look for patterns labeled "easy-to-sew," "jiffy," "simple-to-make," "sew-easy," "quick-and-easy." Any of these will make sewing simpler and more successful for young seamstresses. After you have had experience sewing with simple patterns and fabrics, you'll be ready to move to more complicated styles and fabrics.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties  
Immediate release

SENIOR CITIZENS ELIGIBLE  
FOR INCOME TAX CREDIT

Senior citizens in Minnesota over 65 years of age may claim state tax credits through the Senior Citizens' Income Tax Credit Act, says Paul Hasbargen, extension economist at the University of Minnesota.

A claimant must meet these requirements:

- \* Be 65 years of age or over on or before January 1 of the taxable year.
- \* Must have lived in Minnesota for the entire taxable year and must have had household income of less than \$3,500.

- \* Must have been the owner of the homestead he occupied during the taxable year, or if a renter, he must have occupied the same residence for at least 6 months during the taxable year and rented the entire year.

- \* Must not owe any delinquent taxes on his homestead.

- \* Must not have received old age assistance to pay property taxes, and must not have received any cash public assistance or relief.

- \* And, a claimant must not have received title to the homestead primarily for the purpose of receiving benefits.

People meeting these requirements should complete Form M-1SC, "Senior Citizens Income Tax Return," available from the Internal Revenue Office. Only one person of a household or a homestead may claim the credit.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties

Immediate release

TAX CREDIT AVAILABLE FOR  
POLLUTION CONTROL EQUIPMENT

Farmers and other individuals may claim state income tax credits for pollution control equipment installed and operated in Minnesota.

University of Minnesota extension economists say any individual, estate, trust or corporation may qualify for an income tax credit of 5 percent of the cost of equipment which meets these requirements:

\* The equipment must be tangible personal property or other tangible property (not including buildings and their component parts).

\* It must be installed and operated in the State of Minnesota and used exclusively for the prevention of air or water pollution.

\* The engineering principles of the equipment must be approved by the Minnesota Pollution Control Agency.

\* And, the equipment must be acquired in a taxable year beginning on or after January 1, 1969.

Credit must be claimed on the income tax return. Determine the amount of credit by completing Form PC, "Computation of Pollution Control Equipment." Attach this form to the income tax return with the approval of the engineering principles of the equipment by the Minnesota Pollution Control Agency.

The maximum credit allowable in any one year is the amount of income tax liability for that year or \$50,000, whichever is less. The credit is allowed in the first year that a deduction for depreciation is allowable for the pollution control equipment.

# # # #

AGRICULTURAL EXTENSION SERVICE

UNIVERSITY OF MINNESOTA

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INSTITUTE OF AGRICULTURE  
ST. PAUL, MINNESOTA 55101

December 1, 1969

To: County Extension Agents

Subject: Tax news packet

Enclosed are a number of stories and "in briefs" on taxes. We've tried to single out timely and pertinent items, many of which you may be getting questions about. Use the packet in any way you choose -- for radio and newspaper use, or for your own reference and file.

Sincerely

  
John M. Sperbeck  
Extension Information Specialist

JMS:lfid

Enclosures

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties  
Immediate release

MOST ERRORS IN TAX  
FORMS PREVENTABLE

Carelessness and haste, not technical errors, are the main cause of most errors in income tax forms.

One of the most common errors consists of failing to complete the returns properly, says Paul Hasbargen, extension economist at the University of Minnesota. This includes joint returns not properly signed (both husband and wife must sign) -- Federal W-2 forms not attached (some people attach State M-2 forms) -- and street address or city not shown on the return. In other cases, writing or printing can't be read so refunds can't be issued, according to Internal Revenue officials.

Other incomplete returns have these errors:

- \* Exemption deductions are claimed but names of dependents are not listed.
- \* Exemption deductions for age 65 or blindness are claimed, but appropriate blocks aren't checked.
- \* Lines for overpayment are not completed or are erroneously checked. Many taxpayers carelessly check the box indicating an estimated tax credit is desired when a refund of the overpayment is wanted.

\* Schedules are not attached to the return. Many times taxpayers indicate that a "schedule attached" will explain an item, but no schedule is attached. Attach schedules firmly to the return, and make sure that all totals are brought forward to the return itself.

Many times taxpayer identification such as social security numbers or employee identification numbers is not shown on the return.

Most of these errors are simply oversights, but prove to be costly and annoying. The cost to the government is large, and taxpayers are unnecessarily annoyed by the delays due to preventable errors.

# # # #

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties  
Immediate release

MANY ADVANTAGES TO  
GOOD FARM RECORDS

Good records can save dollars, are essential for efficient farm management and are useful in preparing credit applications.

Good records can also lead to maximum social security coverage and income tax savings, says Charles Cuykendall, extension economist at the University of Minnesota.

Cuykendall says good records help you identify the source of receipts. You may receive cash or property from many sources, but unless you have records identifying your receipts, you may be unable to substantiate that some of them are from sources that make them nontaxable.

You can determine your income tax depreciation allowance from properly kept records. Since so many farm assets are subject to depreciation, it's important from a tax standpoint to record your capital expenditures in a permanent record, Cuykendall says.

Without a record of the cost, purchase date and other information concerning such assets, your depreciation allowance can't be determined. If the assets are sold, become fully depreciated or capital improvements are made to them, only a permanent record will reflect their unrecovered cost.

Ask your county extension agent for a copy of the 1970 Farmer's Tax Guide for further information.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 1, 1969

To all counties  
Immediate release

TAX MANAGEMENT PROTECTS  
HIGHER FARM PROFITS

Higher livestock or grain prices may have helped boost your 1969 income, but you'd better take some measures to protect these profits from the bite of higher income taxes.

University of Minnesota extension economist Paul Hasbargen suggests deferring some taxable income until 1970 to keep more of these profits. Added incentives for deferring some of this income are the possibility that both tax rates and the surtax may be lower in 1970.

On the returns side, any farmer who is on the cash basis can defer income by delaying sales. And on the expense side, those expenses that can be legally paid in either year can be shifted from 1970 to 1969 to give you lower total taxes for the two years.

If you need items such as additional machinery, consider buying in late 1969 to get a tax break. However, don't buy extra equipment just to gain additional depreciation, Hasbargen cautions. Use good judgment, and keep your long-range financial goals in mind.

You may want to buy and pay for necessary supplies of feed and fuel in the remainder of 1969. But you must accept delivery of these items or sign a delivery contract in order to be eligible for tax credit.

Cash expenditures for items such as repairs, business travel expenses, postage, bank charges, check printing charges and other business-related expenses can add up to a hefty sum, so don't overlook these items when figuring your tax.

-more-

Add 1 -- tax management

Get an idea of your tax picture today by bringing your expenses and sales for the 1969 year up-to-date. Hasbargen suggests following these steps:

- \* Total cash operating expenses and ordinary cash sales.
- \* Total separately your Schedule D livestock sales and estimate the taxable capital gains.
- \* For feeder cattle, add to sales the difference between your cost and the sale value. You may have bought them in the 1968 tax year.
- \* Take last year's depreciation total and adjust it for depreciation on new investments this year. Add any 20 percent first-year depreciation you want to claim on new items and deduct any first year depreciation claimed last year.
- \* If you use the accrual basis, make a rough estimate of your inventory position at the end of the year to account for any changes.

Comparing these totals with your 1968 return should give you a good idea of the amount of taxable farm income for 1969. If it's unusually high, make necessary adjustments in December to shift some tax burden into 1970, Hasbargen concludes.

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Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
December 2, 1969

Immediate Release

## FASTER GAINS FOR STEERS IN CONFINEMENT HOUSING

WASECA--Finishing steers gained faster and required less feed in confinement housing than in an open shed in a University of Minnesota study. But it's difficult to attach true cost figures because of the difference in construction costs for insulated buildings, researchers reported here today (Tuesday, December 2).

University animal scientists and agricultural engineers reported their research at the annual Beef Cattle Feeders' Day at the Southern Experiment Station.

The scientists said finishing steers raised in confinement had higher profits per head and per head of feedlot capacity per year, compared to cattle housed in an open shed when the same fixed cost figures were used for each type of housing. However, the researchers emphasized that cattle performance must be improved and savings made in other areas such as bedding costs to justify the higher costs of confined housing systems.

The performance of finishing steers was compared under three different systems--a conventional shed with a dirt lot--an insulated structure with a slatted concrete floor--and an insulated structure with a solid concrete floor and a slotted gutter for manure removal.

-more-

add 1--faster gains

Profit per head was \$49.41 with the open shed, \$58.93 with insulated confinement with slotted concrete and \$56.21 for the insulated confinement system with solid concrete with gutter.

Profit per head of feedlot capacity was \$117.10 for the open shed, \$151.45 for the insulated confinement with slotted concrete, and \$133.22 for the insulated confinement with solid concrete and gutter.

Cattle housed in the open shed ate more feed and required more feed per 100 pounds of gain than cattle confined on slotted floors or confined on solid concrete floors. The researchers reported no differences in carcass characteristics of cattle fed in the different housing systems.

Problems were encountered with the oxidation ditch disposal system due to foaming in winter. Also, freezing of exposed areas of the ditch prevented adequate circulation and inhibited the breakdown of solid wastes by aerobic microbes.

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282-jms-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
December 2, 1969

Immediate Release

#### WINNER IN ESSAY CONTEST NAMED

Calvin Schmidt, 15, Fergus Falls, is the state winner in the 1969 North Central Weed Control Conference essay contest, Wayne Carlson, assistant state leader, 4-H and youth development at the University of Minnesota, has announced.

Calvin's essay was entitled "How We Control Weeds on Our Farm." He received the \$25 state award. Calvin will now compete at the regional level for a \$300 scholarship to be awarded when the winner registers in a college curriculum related to agricultural science.

Second place went to Lucinda Hruska, 17, Waterville, Le Sueur County, and third place to Diane Goehl, 15, Lake City, Wabasha County.

Seventy-five percent of the basis for judging the essays was subject matter and 25 percent was the method of presentation.

In his essay Calvin explained the three methods which his family uses to control weeds on their farm--digging them out, mowing and using herbicides. He explained where and how they used these various methods, on what type of weed and how successful they were. Calvin also cited some values of weeds, such as controlling erosion. He named several weed control practices which his family plans to use in the future.

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281-lah-69

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St. Paul 55101 Tel. 373-0710  
December 2, 1969

Immediate Release

## TWO-PHASE CORN SILAGE FEEDING PROGRAM MOST PROFITABLE

MORRIS--Finishing steers fed corn silage in a two-phase program--  
25 pounds per head daily during the first half of the feeding period and 5  
pounds during the last half--had lowest feed costs, made fastest gains and were  
most profitable in University of Minnesota trials.

Animal scientist J. C. Meiske and R. D. Goodrich discussed their  
research at the annual Beef Cattle Feeders' Day at the West Central Experiment  
Station here today (Thursday, December 4). The researchers compared  
the effects of feeding a given amount of corn silage to finishing steers in  
four different programs.

These feeding programs were a constant amount of 15 pounds daily--  
a two-phase program of 25 pounds per head daily during the first half of the  
period and 5 pounds during the last half of the feeding period--a gradually  
decreasing amount--and a gradually increasing amount. The amount of corn  
silage averaged 15 pounds daily in all programs. Daily rations were supplemented  
with 1 pound of supplement and whole shelled corn was fed free-choice.

Finishing steers fed the constant amount received 15 pounds of corn  
silage daily during the entire 238-day feeding period. Steers in the two-phase  
program received 25 pounds of corn silage daily for the first 114 days, and  
5 pounds during the last 114 days, with a 10-day transition period in the middle.

-more-

add 1--two-phase silage feeding

The gradually decreasing ration consisted of corn silage fed at 25 pounds per head daily for the first 2 weeks and then decreased 2 pounds per head daily each 2 weeks during the next 16, 2-week periods. The final level of feeding was 5 pounds per head daily.

With the gradually increasing ration, corn silage was fed at 9 pounds per head daily for the first 2 weeks and increased 0.75 pounds per head daily every 2 weeks during the next 16, 2-week periods. The final level of feeding was 21 pounds per head daily.

Cattle in all programs produced carcasses with similar characteristics and values when weight effects were removed.

Profits per head for the constant amount were \$52.96, \$63.62 for the two-phase program, \$56.31 for the gradually decreasing, and \$46.81 for the gradually increasing program.

Profits were also calculated on a per head of feedlot capacity per year to make the results applicable to commercial feeders who keep their feedlots full throughout the year. These figures were \$82.08 for the constant amount, \$103.70 for the two-phase program, \$84.92 for the gradually decreasing, and \$65.72 for the gradually increasing program.

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Department of Information  
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St. Paul 55101 Tel. 373-0710  
December 2, 1969

Immediate Release

## UNCERTAINTY, HIGH INTEREST CAUSE STUDENT DIFFICULTIES

Haunting uncertainties in the loan market and stop gap measures taken to combat the tight money crisis make it very difficult for university and college students, Dean Sherwood O. Berg of the University of Minnesota Institute of Agriculture, St. Paul, said Tuesday.

Berg addressed an afternoon session of the 28th annual convention of the Minnesota Farmers Union in the Prom Ballroom, St. Paul.

"I think the higher interest rates and the tuition increases are a symptom of a move to a more 'elitist' kind of education, one in which students from less wealthy families have less chance to get a university education.

The federal government guarantees loans which private lending institutions make to students. Until recently, the highest interest rate which the federal government would guarantee has been seven percent. Since the prime interest rate was about 8 1/2 per cent, it has been hard to find banks willing to make student loans," he added.

A bill recently was passed allowing the federal government to pay up to 10 percent interest to make possible student loans at relatively low interest rates. "Unfortunately, however, all this came about only after the school term was well underway. Naturally this created a lot of hardship for students who were depending on loans and for institutions to try to provide other financing," Dean Berg said.

add 1--high interest

"I think the whole confused history of this 'rescue' legislation illustrates the difficulties and confusion in trying to deal with inflation and high interest rates on a piecemeal, ad-hoc federal basis," he added.

To meet the present situation, the University of Minnesota Board of Regents recently made \$4 million available from the University's endowment funds to insure that banks would make that amount available to students in loans at seven percent interest. This will undoubtedly lead to some loss of revenue on University investments, but it will help some students enter the University and some students to stay in the University. In addition, the state was expected to make \$8 million available from its trust funds to non-University college students, the dean said.

"Well, these are stopgap measures. The only way in which the situation will really become solved is for the interest-tight money squeeze to be lessened," he concluded.

Berg also pointed out that education is particularly "hard hit" by inflationary trends. "In the past five years, general inflation in our economy has been three to four percent per year; however, in the educational sector, costs have risen at the rate of seven percent per year," he said.

Another area that is affected, Berg stated, is that of construction of educational buildings. "Costs are rising at the rate of about one percent per month. Each month's delay in construction on a \$84 million classroom building at the St. Paul Campus means \$40,000 eroded away by the ugly specter of inflation," he added.

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December 4, 1969

Immediate Release

#### MINNESOTA TEAM CAPTURES CONTEST HONORS

The University of Minnesota Crops Team placed first in three areas of competition in the International Collegiate Crops Contest recently held at Chicago.

Agronomy Professor Laddie J. Elling, team coach, said the Minnesota students took first places in commercial grading, identification and individual placing. The team placed second in seed analysis. Six teams competed in the event on Nov. 29.

Dennis Fisher, son of Mr. and Mrs. Clarence Fisher, Route 2, Gaylord, Minn., properly identified and listed the Latin names for 100 items drawn from a list of over 200 crops, varieties, weeds and diseases to receive a "600" in crop identification. Fisher's perfect score contributed to the University of Minnesota taking first place for the first time in this highly competitive event, Elling said.

Placing first in commercial grading was Keith Nelson, son of Mr. and Mrs. Edwin Nelson, Route 3, Litchfield, Minn. Nelson also was second in individual placing.

-more-

add 1--minnesota team

Lowell A. Behrens, son of Mr. and Mrs. Arthur Behrens, Wilder, Minn., placed fourth in the commercial grading and identification categories. The alternate member of the team was Leon L. Carlson, son of Mr. and Mrs. C. Leslie Carlson, Pillager, Minn. All four are seniors majoring in agronomy at the St. Paul Campus.

The team placed second in overall competition at the National Intercollegiate Crops Contest on Nov. 25 in Kansas City, Mo. The Minnesota students were second in grain grading and third in seed analysis and identification, Elling added.

The group visited points of educational interest enroute to Kansas City and Chica including the University of Missouri, Columbia, Mo. the Kansas City Board of Trade, Kansas City, Mo.; the Chicago Board of Trade, Chicago, and the University of Wisconsin, and the American Society of Agronomy, both in Madison, Wis.

# # #

285-daz-69

Department of Information  
and Agricultural Journalism  
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December 4, 1969

Immediate Release

#### MINNESOTANS HAVE CHAPTER IN USDA YEARBOOK

Sugar performs many functions in cooking besides adding sweetness and enhancing flavors.

An explanation of those functions is the subject of an article by Verna A. Mikesch, extension nutritionist, and Mrs. Leona S. Nelson, assistant extension information specialist, University of Minnesota, in the 1969 Yearbook of Agriculture, Food for Us All, just published by the U.S. Department of Agriculture.

Entitled "Sugar, Sweets Play Roles in Food Texture and Flavoring," the article explains that nutritionally, sugars and such sweeteners as maple syrup, molasses, honey, jams and jellies provide the body with the fuel to release energy. Table sugar, in fact, is one of the cheapest sources of food energy. On the other hand, artificial sweeteners provide sweetness but no nutritional value.

"No one sugar or sweet is more healthful than another," the authors say. "The small amounts of minerals and vitamins in the unrefined forms are of little consequence in supplying an adequate diet."

add 1--usda yearbook

Sugar contributes to the lightness, color and fine grain of baked products. It softens the gluten strands of flour, enabling them to expand with the action of leavening to give a light product. Oven heat caramelizes the sugar, giving a flavorful, crisp brown crust. Sugar also tenderizes egg protein. With sugar in a mixture, more air can be beaten into egg whites and the foam will be more stable.

The article also discusses the qualities of brown and confectioners sugar, molasses, honey, syrups and sorghum. A number of recipes illustrate the uses of the various sugars and sweeteners.

The 1969 edition, Food for Us All, has three sections: Food from Farm to You, Buying and Cooking Food and Food and Your Life.

The 400-page yearbook tells the story of food from field to table, producer to consumer and the ways to choose and use food for good nutrition as well as for satisfaction. Included are many illustrations in color.

Copies of Food for Us All may be purchased from the Government Printing Office, Washington, D. C., 20402 for \$3.50. Members of Congress have a limited number of copies for distribution.

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284-jbn-69

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December 4, 1969

Immediate Release

#### 4-H'ERS ATTEND DAIRY CONFERENCE

Several Minnesota 4-H'ers are attending the 15th annual 4-H Dairy Conference being held in Chicago, December 4-6, in conjunction with the 17th International Dairy Show.

The 4-H delegates are: Roger Scroggins, Anoka; Mark Skogman, Cambridge; Danny Wroge, Plato; Darrell Hutton, Dundas; Kent Erickson, Badger; Dale Husefeldt, Gaylord; Norman Abbe, Owatonna; Robert Starz, Zumbro Falls; and James Rowekamp, Lewiston.

The 4-H'ers were chosen as delegates because of their outstanding records in the 4-H dairy project.

Representatives from 29 states will attend the 1969 4-H Dairy Conference held in the Conrad Hilton Hotel.

The conference will include a 4-H dairy marketing clinic, talks on processing and career exploration, tours, luncheon and dinner programs.

Sponsors of the Minnesotans' trips to the event are the Minnesota Federation of Production Credit Associations; the National Dairy Products Corporation, New York; the Midwest Breeders' Cooperative, Shawano, Wis.; American Dairy Association of Minnesota; Minnesota Valley Breeders' Association and Twin City Milk Producers' Association, St. Paul.

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285-lah-69

Department of Information  
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Institute of Agriculture  
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St. Paul, Minnesota 55101  
December 8, 1969

To all counties  
Immediate Release

RECOMMENDED FIELD  
CROP VARIETIES  
RELEASED BY UM

Five varieties were added and four removed from the University of Minnesota's list of recommended field crop varieties for 1970.

Added to the recommended list were Primus II barley, Sioux oats, Linott flax, and Rampage and Altona soybeans, announces Harley Otto, extension agronomist. Varieties removed from the list include B5128 and Bolley flax, and Grant and A-100 soybeans.

Primus II barley was developed in South Dakota. Its overall agronomic performance has been equal to Larker and is several days earlier in maturity. However, the quality status of Primus II has not been fully evaluated by the malting and brewing industries, according to Otto.

Sioux oats has been the highest yielding oat variety in Minnesota trials the past three years, but its lodging resistance, test weight and groat percentage aren't as good as other varieties. Sioux is resistant to smut and has some resistance to red leaf and Septoria, but is susceptible to both crown and stem rust.

Linott flax was developed in Canada. It is medium-early in maturity and has yielded well in comparison to other varieties. It has good pasmo tolerance, oil content and oil quality.

The flax varieties B5128 and Bolley were removed from the recommended list since they don't yield as well as newer varieties, Otto says.

Rampage is a new soybean variety from Iowa. It is intermediate between Hark and Chippewa in maturity and yielding ability. Rampage is slightly better than Hark in tolerance to "high lime" chlorosis and has good field tolerance to phytophthora root rot. Foundation seed will be distributed to seed growers in 1970.

add 1 -- recommended field crop varieties

Altona is an early maturing soybean variety and has yielded well in comparison to other varieties of the same maturity.

Grant and A-100 soybeans were removed from the recommended list since they don't yield as well as other recommended varieties of comparable maturity.

The Red River 68 variety of hard red spring wheat will not be recommended in Minnesota because of its poor baking quality. Several other wheat varieties have not been adequately tested to determine whether they should be recommended, Otto say. These include Waldron, World Seeds 1812 and Neepawa.

Waldron was released by the North Dakota Experiment Station and seed was distributed to Minnesota growers in 1969. It was seriously infected with ergot in some research trials and seed fields, and is susceptible to scab and Septoria.

World Seeds 1812 is an early-maturing semi-dwarf variety that has been tested by the Minnesota Agricultural Experiment Station only one year. It yielded 97 percent as much as Chris, had good straw strength and was resistant to stem and leaf rust. However, milling and baking qualities have not been adequately evaluated.

For more complete information, get a copy of University of Minnesota Miscellaneous Report 24, "Varietal Trials of Farm Crops," from your county extension agent. It will be available in early January. You can also write for a copy to the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

A complete list of recommended field crop varieties for 1970 follows:

Barley: Conquest, Dickson, Larker, Primus II

Oats: Garland, Lodi, Portal, Sioux

Rye: Frontier, Pearl, VonLochow

Wheat: Hard Red Spring: Chris, Manitou, Polk

Durum: Lakota, Leeds, Wells

Winter: Minter

add 2 -- recommended field crop varieties

Millet: Turghai, Empire, White Wonder

Flax: Linott, Nored, Norstar, Summit, Windom

Soybeans: Chippewa 64, Clay, Corsoy, Hark, Merit, Norman, Portage,  
Rampage, Traverse

Sunflowers: Arrowhead, Mingren, Peredovik, VNIIMK 89.31

Dry Peas: Century, Chancellor

Birdsfoot Trefoil: Empire

Red Clover: Dollard, Lakeland

Sweetclover: Evergreen, Goldtop, Madrid

Bromegrass: Achenbach, Fischer, Fox, Lincoln

Timothy: Climax, Itasca, Lorain

# # # #

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December 8, 1969

To all counties  
Immediate Release

DAIRYMEN: SELECT  
SIRES CAREFULLY

Choosing the right AI bull can mean more money for the dairyman. Profits in the next few years will be determined partially by the bulls you select for use in the coming breeding season, says Joe Conlin, extension dairy specialist at the University of Minnesota.

The Predicted Difference figure for the top bull in one dairy breed in Minnesota is a plus 1800 pounds of milk, while the Predicted Difference for the lowest ranking bull is a minus 2000 pounds of milk, or a difference of 3800 pounds of milk. Predicted Difference is the estimate of production for a sire's future daughters based on his daughters now in production, or simply a measure of genetic merit, Conlin explains.

Daughters from the bull with the low PD rating would be expected to average about 10,000 pounds of milk, while daughters of the other bull would average about 12,700 pounds. This means that selecting the top bull instead of the one with the low PD ranking would mean a dollar value of \$125 per cow in increased milk production, or from \$90 to \$100 income above feed costs.

"The bull is one-half of the future dairy herds," according to an old saying. But today the dairyman's gene jug has replaced the bull. It contains semen from several AI sires, and the quality of these sires has much to do with the dairyman's future profits, Conlin stresses.

Predicted Difference and AI provide dairymen a way to exploit sire selection for higher production and more profits than ever before. Successful dairymen no longer depend on one bull whose transmitting ability is almost unknown, Conlin adds.

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St. Paul, Minnesota 55101  
December 8, 1969

To all counties  
Immediate Release

SEED, FERTILIZER  
CHEMICAL DEALERS  
IN COUNTY TO MEET

Retail dealers of seed, fertilizer and agricultural chemicals in \_\_\_\_\_  
County will meet January \_\_\_\_\_ at the \_\_\_\_\_ in \_\_\_\_\_  
(place) (town)  
according to County Agent \_\_\_\_\_.

The program is sponsored by the University of Minnesota Agricultural Extension Service and will be presented by extension specialists in agronomy, plant pathology, soils and entomology.

Its purpose is to acquaint dealers with the latest research findings and recommendations in the areas of crop varieties, soils, fertilizers, insect, weed and disease control, and agricultural chemicals.

The complete schedule of retail dealer meetings is as follows:

- January 5--New Ulm, Tropicana Club; Willmar, Fireside Inn.
- January 6--Mankato, Inn Towne Motel; Montevideo, Hotel Hunt.
- January 7--Owatonna, Inn Towne Motel; Slayton, Club Royal.
- January 8--Rochester, Holiday Inn; Fairmont, Agricultural Center.
- January 12-- Cambridge, Imperial Restaurant; Hutchinson, Country Club.
- January 28--Alexandria, American Legion
- January 29-- Moorhead, Holiday Inn; Thief River Falls, Eagles Club
- January 30--Park Rapids, Citizens National Bank

At Park Rapids, the meeting will be from 1 p.m. to 5 p.m. All other meetings are scheduled from 3:30 until 9 p.m.

Retail dealers who would like further information on the meeting should contact their county extension agent.

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December 8, 1969

To all counties

Immediate release

IN BRIEF . . .

Keep Antibiotics Out of Milk. Milk from cows treated with antibiotics must be withheld from shipment for at least 72 hours unless the label states otherwise. Vern Packard, extension dairy industries specialist at the University of Minnesota, says any detectable antibiotic is too much, since the Federal Food and Drug Administration requires a zero tolerance on drugs in milk. Read the label on the container carefully to determine withholding times. But remember that label information usually refers to a given dosage. If the label claims that 500,000 units will clear from the milk in 72 hours, a larger dose may not clear in that length of time, Packard adds.

\* \* \* \*

Well-Grown Dairy Heifers Have Fewer Calving Problems. Dairy heifers that receive poor management and nutrition are more apt to have calving problems, says Joe Conlin, extension dairy specialist at the University of Minnesota. First-calf heifers that experience calving problems may have been bred too young, or they may have been poorly fed and undergrown. Conlin says a poorly grown heifer may be old enough to breed, but body growth has been retarded due to poor nutrition, parasites or disease. As a result, the birth canal is reduced and the likelihood of difficult calvings is increased.

\* \* \* \*

Get Professional Advice Before Pruning Hardwoods. Pruning hardwood stands is an involved problem since they usually contain several species of varying ages, so contact your local forester for advice. Some hardwood species are suited for high value products and are worth more than other species, says Bill Miles, extension forester at the University of Minnesota. Individual species also vary greatly in growth characteristics and responses to cultural practices -- some species don't respond well to pruning.

# # # #

Department of Information  
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St. Paul, Minnesota 55101  
December 8, 1969

To all counties

ATT: EXTENSION HOME ECONOMISTS

Immediate Release

FRUIT CANDIES  
TASTE GOOD,  
PROVIDE IRON

Holidays without candy for the youngsters in the family? Hard to imagine, isn't it?

Yet many mothers are concerned because the whole family indulges in too many sweets at holiday time. That's where fruit candies can come to the rescue. And the children can help make them.

Fruit candies not only are delicious but they contribute iron which is lacking in many diets. In fact, a recent food survey showed that iron was one of seven important nutrients found in insufficient amounts in family diets at all income levels.

Here are some fruit candies that children and adults will enjoy making and eating:

STUFFED DATES, PRUNES OR FIGS

Steam prunes or figs until soft. Remove pits carefully from dates and prunes. Fill with pieces of marshmallow, nuts or with fondant, flavored with peanut butter or grated orange rind.

APRICOT TIDBITS

Put apricots, raisins and nuts through food chopper. Add a pinch of salt and a teaspoon of lemon juice to moisten, mixing well. Shape in balls about  $\frac{1}{2}$  inch in diameter and roll in cocoanut.

-more-

add 1 -- fruit candies

#### FRUIT PASTE

½ lb. each or equal amounts of prunes, dates, figs and raisins

½ tsp. lemon juice and 1/8 teaspoon salt

Wash fruit. Remove pits from prunes and dates. Grind fruit in food chopper, using finest grinder. Add lemon juice and salt. Stir well. Let stand overnight. Make into small balls or squares. Roll in granulated sugar or wrap in wax paper. This paste keeps almost indefinitely in the refrigerator.

If you have trouble grinding the fruit, a few drops of salad oil helps cut down on the stickiness.

#### SURPRISES

Stone dried prunes and stuff with fruit paste mixture or peanut butter.

#### DATE SHIPS

Stuff dates with peanut butter or marshmallows and insert halves of peanuts for sails.

#### PEANUT BUTTER FRUIT SQUARES

1 cup pitted dates

½ cup seedless raisins

½ cup currants

1 cup peanut butter

½ cup sweetened condensed milk

Put all fruits through food chopper. Add peanut butter and sweetened condensed milk; mix well. Press into bottom of 8 x 8 x 2-inch buttered pan which has been sprinkled with confectioners' sugar. Smooth the surface of the candy. Sprinkle with confectioners' sugar, if desired. Chill until firm. Cut into squares.

Department of Information  
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St. Paul, Minnesota 55101  
December 8, 1969

To all counties  
4-H NEWS  
Immediate Release

4-H'ERS CAN TAKE PART  
IN 1970 CITIZENSHIP  
SHORT COURSE

Several groups of Minnesota 4-H'ers will participate in weekly 4-H Citizenship Short Courses next summer at the National 4-H Center in Washington, D.C.

A 4-H Citizenship Short Course is a week of learning, hard work and fun. Assemblies and discussions relate to a wide range of citizenship topics. And field trips to historic shrines and branches of government provide an unforgettable personal experience.

The program goals are to develop greater understanding and appreciation of American heritage, learn basic functions of national government and develop skills for practicing and teaching citizenship in local 4-H clubs.

To attend one of these short courses you must be at least 15 years old, says  
County Agent \_\_\_\_\_.

Reservations to attend the short course are due in the \_\_\_\_\_  
County Extension Office by \_\_\_\_\_. County reservations  
are due in the State 4-H Office by February 1, 1970. Then after the reservations  
are confirmed the participants from each county will be named.

Most counties participating finance about one-half of the trip and the  
delegates finance the remainder. Many times local sponsorship helps to finance  
some delegates' expenses.

The Citizenship Short Courses are offered continuously from June through  
August. Groups from several states are usually combined. This offers the  
opportunity to become more aware of others' attitudes, ideas and problems. The  
4-H'ers will be accompanied by several members of the University of Minnesota  
Extension staff.

Last summer some 240 Minnesota 4-H'ers participated in the program.

Department of Information  
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University of Minnesota  
St. Paul 55101 Tel. 373-0710  
December 9, 1969

Immediate Release

## CHRISTMAS PLANTS REQUIRE GREEN THUMB TREATMENT

Taking proper care of Christmas plants can prolong their life. Most Christmas plants should probably be considered as bouquets of flowers and discarded as soon as their full beauty has passed, but following a few simple precautions can prolong the useful life of these plants, according to Harold Wilkins, University of Minnesota horticulturist.

As soon as you get the plant, feel the soil with your thumb and water thoroughly if it is too dry. Punch holes in the bottom of the plant's container to provide for good drainage. Make sure you place a saucer at the bottom of the container to protect your furniture from the excess water.

The water should be room temperature, Wilkins says. It's also important to keep plants in a cool, sunny location. About 60 to 65 degrees at night and from 70 to 75 degrees during the daytime are ideal temperatures. Wilkins suggests moving plants to cooler locations like a porch or unused bedroom for the night, or when you leave for the day.

Also, keep plants out of drafts, and away from radiators and television sets. If plants are kept too warm or dry, the foliage will turn yellow as the soil dries out too quickly.

-more-

add 1--christmas plants

Wilkins offers some pointers on individual Christmas plants. The poinsettia should be kept in a warm, humid atmosphere. Keep it in sunlight, and do not set it near a window at night, since the temperature should not drop below 65 degrees. The poinsettia can't stand sudden drops in temperatures or drafts.

Blooms of azalea will last longer if the plant is kept at a low temperature and high humidity during the day. Greenhouse plants are grown in peat, which becomes dry very quickly. If the soil becomes extremely dry, soak the plant thoroughly, since it's difficult to get adequate moisture back into peat soil once it dries out.

Good cyclamen plants will bloom for several months if they're kept moist at all times and in a cool room where the temperature is about 65 degrees. Never allow the soil to dry out completely before watering while the plant is flowering.

Cut branches of holly should be kept in water at all times. Placing the holly in a container such as a circular fish bowl or brandy sniffer will provide an excellent effect.

# # # #

288-jms-69

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St. Paul 55101 Tel. 373-0710  
December 9, 1969

Immediate Release

## FOREST PRODUCTS INDUSTRY OFFERS MANY CAREER OPPORTUNITIES

"Engineers and technicians are the modern lumberjacks," a group of high school students and counselors were told here Thursday, December 4.

Speaking at a forest products career's day at the University of Minnesota's St. Paul Campus, Jack Koellisch, editor and publisher of Wood and Wood Products magazine, said careers in the wood products field haven't been glamorized as much as many occupations such as plastics and electronics.

"But the employment opportunities for trained wood products specialists are tremendous," Koellisch stressed. The requirement for new housing developments alone calls for a substantial growth in the wood products industry. During the next decade 26 million new housing units will be required, and an 80 percent growth in the housing industry is forecast from 1962 to the turn of the century."

The 1970's will bring an intense concentration on the environment, and the intelligent use of forest products to preserve recreational facilities provides many challenges for today's youth, Koellisch pointed out.

The greatest opportunities in the forest products industry are found in the engineering and development and marketing fields, Koellisch said. But many career opportunities in government service, trade associations and education are also available.

The University of Minnesota's School of Forestry offers a program in Forest Products Marketing and Engineering. For more information on careers in the forestry products industry, write to the School of Forestry, University of Minnesota, St. Paul, Minnesota 55101.

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285-jms-69

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and Agricultural Journalism  
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St. Paul 55101 Tel. 373-0710  
December 9, 1969

Immediate Release

#### DDT REGISTRATION CANCELLED

Registration of DDT by USDA for most uses will be cancelled effective December 20, 1969, announces Phillip Harein, extension entomologist at the University of Minnesota.

Harein says DDT registration will be cancelled for use on shade trees--including control of Dutch elm disease. And except when it's necessary to control disease causing organisms, DDT will be cancelled for uses in and around the home and for use in marshes and wetlands.

Regarding DDT for all other uses, including other insecticides containing DDT, Harein says there will be a publication of intent from USDA to cancel these other uses. Exceptions may be made where DDT is needed for the prevention or control of human diseases, and for other uses for which there is no alternative. This action will be completed by December 31, 1970. After that date, use of DDT will be permitted only in these special cases.

Starting March 1, 1970, further restrictions may be taken by USDA on other persistent pesticides using the same criteria and procedures that were applied to DDT. So it's possible that registration of these pesticides will be cancelled, Harein adds.

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286-jms-69

Department of Information  
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St. Paul 55101 Tel. 373-0710  
December 12, 1969

Immediate Release

## USING HEAD TO SAVE HEELS GOOD ADAGE FOR CAREER WOMEN

The employed woman who has the triple role of job, home and community service may feel frustrated in trying to cope with all three, particularly as the holiday season multiplies her duties.

"Use your head to save your heels" is a sensible adage that will save wear and tear on family relations as well as your own mental health, says Mary Frances Lamison, extension home management specialist at the University of Minnesota.

Systematizing the care of the home by careful planning is one of the best means of avoiding frustration, Miss Lamison points out. She gives these suggestions:

- . List all household jobs that must be done and put them into a planned schedule.

Decide whether they need doing once a day, once a week, once a month or even less often. Make a schedule, including a listing of the jobs, when they're to be done and by whom.

- . Find a place for everything to eliminate clutter.

You may need more shelves, drawer dividers and extra storage boxes to store items.

add 1--using head to save

- . Reduce the number of decorative objects so there will be fewer items to care for and clean.

Don't buy items you haven't time to care for. If you enjoy having bric-a-brac around the house, you must weigh your pleasure in seeing it against the time and energy it takes to keep it clean and attractive. Why not, instead, use one or two decorative objects at a time and change them frequently?

- . Review your housekeeping standards.

Every employed woman must adjust her standards of what has to be done into something she can realistically handle. Studies show that although women not employed outside the home spend 8 hours a day in housework, the amount of time employed women spend decreases only slightly. The woman working 30 or more hours a week outside the home still spends about 5 hours a day doing housework. She may have to lower some of her standards, omitting some tasks, such as ironing sheets.

- . Involve family members in helping with household tasks. One of the basic considerations in deciding if the wife and mother should take a job outside the home should be the willingness of others in the family to share home care and maintenance tasks. Instead of carrying guilt feelings over what must be left undone, accept what doesn't get done after every member in the family has been involved in helping. It is their home, too.

- . Plan for time to be together as a family. Blocking out some time each week for family time might be a good way to get re-acquainted with busy family members.

# # #

288-jbn-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
December 12, 1969

Immediate Release

## RESEARCHERS PLAN AERIAL FOREST SURVEY

A high-flying reconnaissance airplane of the National Aeronautics and Space Agency (NASA) Earth Resources Division will be used next summer to study tree diseases in Northeastern Minnesota in a project with the University of Minnesota's School of Forestry.

University forestry researchers are no strangers to the NASA aircraft. Professors Arnett C. Mace, Jr. and Merle P. Meyer utilized the camera- and instrument-laden NASA aircraft late last August to gather information on a forest watershed study area in Itasca county.

Last summer's work was part of the world-wide preparation for the launching of the Earth Resource Technology Satellite (ERTS) in 1972. Meyer said the satellite would provide information on broad forest, cropland and rangeland conditions and changes.

Mace and Meyer were expecting to go to the NASA Manned Space Center in Houston, Texas to review the aerial photographs and other data produced by last summer's flight.

Meanwhile, Meyer and Professor David W. French of the University Department of Plant Pathology are making plans for flights this coming summer. Meyer and French said the aerial detection studies of the "dwarf mistletoe" disease in black spruce will be done in Northeastern Minnesota. A grant from NASA will help finance the project.

-more-

add 1--researchers plan

Dwarf mistletoe exists in other valuable coniferous trees besides black spruce. The University researchers will be using panchromatic, color and infrared films and thermal heat sensors in the aerial surveys to detect the disease and study its characteristics. Information from the flights will be used to design detection and control programs both in Minnesota and in other parts of the United States and the world.

Some of the initial low altitude tree disease aerial photographic surveys will be done by the University but NASA aircraft and equipment will be needed for the medium and high-altitude work, Meyer and French said.

# # #

289-daz-69

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710

FOR RELEASE: Friday P.M., Dec. 12

## UM NAMES NEW HORTICULTURAL SCIENCE HEAD

Andrew A. Duncan, horticultural professor at Oregon State University in Corvallis, has been named head of the Department of Horticultural Science at the University of Minnesota, according to Sherwood O. Berg, dean of the Institute of Agriculture.

Duncan's appointment was approved by the University's Board of Regents at their meeting today (Dec. 12).

Duncan will begin his duties here in March, succeeding Leon C. Snyder, who was named director of the University's Landscape Arboretum in July. Snyder had served as Department head since 1953, and continued to direct the programs of the Department until a replacement was found.

During the past 10 years as extension specialist in vegetable crops at Oregon State, Duncan has directed educational programs aimed at helping farmers adopt optimized cropping systems for vegetables.

Before that he was extension specialist in vegetable crops at the University of Maryland from 1952-1958.

A native of Scotland, Duncan studied at the University of Maryland where he received his B.S. degree with first honors in 1950, his M.S. degree in 1952, and his Ph.D. degree in 1956. His major area of specialization was vegetable crops production, with secondary interests in plant physiology, genetics and statistics.

He is the author of over 100 publications, has served on a number of state, local and national committees, and is the member of horticultural societies. He is married and has four children.

287-vak-69

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 15, 1969

To all counties  
4-H News  
Immediate release

4-H'ERS LEARN  
ADVENTURE WITH  
SNOWMOBILES

Snowmobiling has become one of the most popular winter sports in Minnesota, and the 4-H snowmobile project offers you the chance to become a competent and safe snowmobiler.

Late in the last legislative session, legislation was passed requiring certification of youthful operators of snowmobiles between the ages of 14 and 18. Training programs will therefore be offered by the Department of Conservation for this age group. Unless you are certified as having completed this training program, you may not cross any state or county highway with a snowmobile. Young people under 14 are not permitted to cross a highway at any time, **points out** County Agent \_\_\_\_\_.

At the completion of the safety training, a written test and a performance test are given by a certified instructor. A list of certified instructors can be obtained from conservation officers and snowmobile dealers.

A television series for youth on snowmobiling is being offered now over educational TV stations. \_\_\_\_\_ County 4-H'ers may watch this series over Station \_\_\_\_\_ at (insert time and day). In January, educational TV stations in St. Paul, Appleton, Fargo, Duluth, Walker and Alexandria will offer a second series on snowmobiling.

Through this training program and the 4-H project it is hoped that young people will develop interest and enthusiasm for the out-of-doors in winter, skills in handling and maintaining a snowmobile, appreciation for the necessity of laws governing snowmobiling, consideration for others, says \_\_\_\_\_.

An important part of the project is information on the best ways to transport and store your machine, appropriate clothing and accessories required for snowmobiling.

- Add 1 -- snowmobile project

In the first year of the project in the winter of 1969, 4-H'ers used snowmobiles for trail rides and overnight camping. Some of them participated in intensive short-term programs of one or two weeks in which they learned snowmobile care, safety and maintenance.

-lah-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 15, 1969

To all counties  
ATT: Extension Home  
Economists  
Immediate release

SOME GIFTS OF FOOD  
WILL FREEZE WELL

Freezing some of the gifts of food you receive will keep them fresh until you want to use them, says Extension Home Economist \_\_\_\_\_.

Such gifts of food may have much more appeal after the feasting of the holiday season is past.

Mrs. Shirley Munson, home economist in the food processing laboratory in the Department of Horticultural Science at the University of Minnesota, gives these directions for freezing some of the foods you may receive:

. Fancy breads and rolls. Be sure to re-wrap in aluminum foil or saran-type wrap, or slip them into a polyethylene bag for freezing.

. Fruit cake. When tightly wrapped or kept in a tin can and frozen, fruit cake will keep indefinitely. It will also keep well in the refrigerator.

. Nuts. Package in moisture-vapor-proof freezer wrap or keep in a tin can. Salted nuts will keep in the freezer about 6 months, unsalted nuts from 9 to 12 months.

. 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. 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 wrap until the candy has warmed to room temperature--from 4 to 8 hours.

-more-

Add 1 -- freeze gifts of food

. Cheese. Cheese will keep for awhile in the refrigerator, but molds after a time. Freezing will preserve it for six months or longer, although the texture may change somewhat after freezing.

For freezing, cut the cheese into half-pound pieces or smaller and wrap in aluminum freezer foil or saran-type wrap, pressing the wrap tightly against the cheese to eliminate air pockets. Small cheeses may be left in their original packages, but overwrap them. 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.

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.

. Hams, other smoked and processed meats like sausage and smoke turkey and smoked fish. They are all perishable and should be treated like fresh meat, refrigerating immediately and using as soon as possible. If you cannot use them within a short period, freezing will preserve them. It is best to use ham and some of the sausages by the end of two months since quality begins to deteriorate after that time, although they are perfectly safe to eat. Smoked fish and smoked turkey will keep in the freezer longer than ham without losing quality. Be sure to wrap these meats and fish in moisture-vapor-proof material such as saran-type or freezer foil to keep out the oxygen that hastens rancidity. Polyethelene bags do not provide sufficient protection.

Canned hams, 3 pounds or larger, should be stored in the refrigerator, where they will keep for an indefinite period. It's best not to freeze canned hams, since freezing will change the texture and may cause the container to burst.

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 15, 1969

To all counties  
Immediate release

IN BRIEF . . .

Prevent Early Seedling Disease in Corn. Some Minnesota farmers in localized areas suffered heavy losses from early seedling disease in corn last year, reports Herbert Johnson, University of Minnesota extension plant pathologist. These losses were often caused by low soil temperatures. Seed treatment doesn't help prevent all seedling diseases, since the damage sometimes occurs away from the seed, Johnson says. He recommends these steps to help prevent seedling disease.

\* Plant corn when the soil temperature is above 50 degrees.

\* Use corn hybrids that have a history of good stands and vigorous seed.

\* And, plant at the proper depth. Usually the seed should be placed about 2 inches deep. However, in dry springs it may be necessary to plant deeper in order to reach moisture.

\* \* \* \*

Mix Urea Thoroughly. If you're using urea or other nonnitrogen feeds in your dairy rations, make sure the ration is mixed thoroughly, cautions Ralph Wayne, extension dairy specialist at the University of Minnesota. Each cow should not receive more than about 1/3 pound of urea in her daily ration, or 20 to 30 percent of the protein requirement of the ration. If you added about 10 pounds of urea to each ton of corn silage at ensiling time, don't use urea protein supplements in the grain mixture if the treated corn silage is the only roughage fed. But if 15 pounds of hay or hay equivalent as low moisture hay crop silage is fed daily, the grain mixture may contain up to 1 percent urea per cow.

\* \* \* \*

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add 1 -- in brief

Many Advantages to Thinning Forest Stands in Winter. There are many advantages to thinning forest stands when the ground is frozen, says Bill Miles, extension forestry specialist at the University of Minnesota. There is less damage to remaining trees in the falling and skidding operations because the trees are dormant. And in winter the bark is tight, branches snap rather than tear off, and the frozen ground reduces the possibility of compaction or mechanical damage to roots. Also, access is possible to stands in winter which might be inaccessible in summer, reduced foliage allows better visibility, there is less fire hazard and insects and excessive heat are not a problem. Finally, winter is usually a slack period for the farm woodland owner. Contact your local forester for more information on thinning forest stands.

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Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 15, 1969

To all counties  
Immediate Release

PLANT ONLY CERTIFIED SEED  
OF RECOMMENDED VARIETIES

Planting top-quality seed is the first step in a good crop production program, and farmers should consider planting certified seed of recommended varieties, says Harley Otto, University of Minnesota extension agronomist.

Seed cost is only a small fraction of the total cost of producing a crop, so you can't afford to take a chance on planting poor seed.

Recommended field crop varieties have demonstrated superior performance, compared to other varieties tested. But you must plant seed of known varietal purity to receive the benefits incorporated into these varieties, and planting certified assures you that the variety is pure. Certified seed is not more than three generations removed from foundation seed, and is known to be pure for variety. The Minnesota Crop Improvement Association supervises the production and processing of certified seed, Otto says.

In addition to varietal purity, certified seed must be high in germination and meet high standards for freedom from weeds, other crop seeds and inert material. A tolerance for these factors is allowed within certified seed. For example, the minimum germination allowed in small grains is 85 percent, but individual lots may have higher germination.

This means that some certified seed is better than others, so study the analysis tag to determine the quality factors for each individual lot.

For more information, ask your county extension agent for a copy of University of Minnesota Miscellaneous Report 24, "Varietal Trials of Farm Crops." It will be available in early January.

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Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 15, 1969

To all counties  
Immediate Release

DEDUCT ALL LEGAL  
BUSINESS EXPENSES

Don't overlook any deductible business expenses when you estimate and record your tax liability. Overlooking legal tax deductible items makes them more costly if they aren't deducted from the income they generate, according to Charles Cuykendall, University of Minnesota extension economist.

Some commonly overlooked business management expenses include farm and breed organization dues--fees for record keeping associations--tax consultants--management help--and accountants.

Livestock producers especially should remember to deduct exhibiting expenses--expense of an office or office space in the home--farm business advertising--and business postage and stationery.

Many people forget that farm magazine subscriptions, record books, business safe deposit boxes and business telephone calls are deductible, Cuykendall says.

For a more complete list of deductible farm business expenses, consult the Farmer's Tax Guide, available from the county extension office, or a competent tax practitioner. And remember that the services of tax consultants are deductible.

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Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 15, 1969

To all counties  
Immediate Release

FEED ADDITIVES  
IMPORTANT IN  
CATTLE RATIONS

Beef cattle receiving a growing ration of corn silage should have it properly fortified with minerals, vitamins, hormones and possibly antibiotics.

A mineral mix for a 600-pound yearling should be about 25 percent ground limestone, 25 percent dicalcium phosphate or bonemeal and 50 percent trace salt, says Robert Jacobs, extension animal husbandman at the University of Minnesota. The animal also needs 10,000 international units of vitamin A daily on a silage ration, and double the amount if he's on feed during the winter months.

Diethylstilbestrol, approved for feeding at a level of 10 milligrams per head per day, increases average daily gains by 10 to 15 percent and results in a 6 to 8 percent feed saving, Jacobs says. Antibiotics, approved for use at a level of 70 to 90 milligrams per head daily, are usually most effective in high-roughage, growing rations of young cattle.

Jacobs says a good system of feeding corn silage in a wintering ration is to feed 1½ pounds of 40 percent protein supplement daily or its equivalent, plus a full feed of corn silage.

An acceptable system of feeding corn silage in a finishing ration is to feed 3 pounds of corn grain or barley and 2 pounds of 40 percent protein supplement or its equivalent daily plus a full feed of silage for two-thirds of the feeding period. Feed a high grain ration for the last third of the finishing period. Cut the supplement to 1 pound of 40 percent protein daily, and eliminate protein supplement entirely in a barley finishing ration.

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Department of Information  
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University of Minnesota  
St. Paul 55101 Tel. 373-0710  
December 16, 1969

Immediate Release

## MISTLETOE PRESENTS PROBLEMS AND PLEASURES

Mistletoe -- a pest or a pleasure? It all depends on the kind of mistletoe you are referring to, according to Frank H. Tainter, an instructor in the Department of Plant Pathology at the University of Minnesota, St. Paul.

Now take the Christmas leafy variety -- popular this time of year when hung in a conspicuous spot to allow amorous exchanges between the sexes, in other words, kissing.

Then there is the dwarfmistletoe -- a member of the same family as the leafy mistletoe, but an unwelcomed intruder who causes the death of the black spruce and other coniferous trees. It is considered one of the most serious forest enemies in the west.

The mistletoe tradition was known in England and brought to the United States. Botanist Isaac H. Hall in 1873 recalled a British businessman's version of the mistletoe legend:

"It is a fungus, you know -- a thing that grows on the branches of trees... and particularly among the lower classes, good to kiss the ladies under at Christmas, you know -- a sort of harmless bounce, a pious deceit that does very well...".

Although the Britisher referred to mistletoe as a "fungus," it is actually a flowering plant, Tainter said.

Mistletoe was held in awe by ancient people and had mystical significance for other groups. The Navajo Indians in the Southwest used dwarfmistletoe in childbirth and for warts. If the leafy mistletoe was found on the sacred willow tree, the Japanese used it to promote conception and as a fertilizer

-more-

add 1--mistletoe presents

in the fields. In Malaysia, leafy mistletoe was used in aiding childbirth and treating ringworm and beri-beri.

The leafy mistletoe and dwarfmistletoe are both parasites, depending on life from a "host" tree. The leafy mistletoe grows on hardwood trees such as oaks in the southern United States, Tainter said. The leafy mistletoe depends on the tree only for water, whereas the leaf-less dwarf variety takes both food and water from its "host," usually softwood trees such as spruces, pines and firs. The trees' branches infected by the dwarfmistletoe grow into abnormal "witches' brooms" that become larger than the healthy branches. Eventually the trees die, Tainter said.

As a pleasant holiday decoration, the leafy mistletoe is in demand while scientists seek a means to eradicate its dwarfish brother. One is cultivated and the other is cursed.

The dwarfmistletoe generally is not associated with mid-winter festivities, yet in the 1900s in the St. John and St. Lawrence valleys women were seen at a ball with the dwarfmistletoe twigs in their hair. It was not known whether the women realized the traditional significance of the parasite.

Control problems generally are associated with the dwarfmistletoe, although infected areas are cut off trees when the leafy mistletoe interferes with fruit-growing, a common occurrence in Southern California, Tainter added.

Burning the trees is the most economical measure to control the growth of the dwarfmistletoe, according to a study by University of Minnesota Professor David W. French, of the Department of Plant Pathology. Pruning infected branches to control mistletoe growth has been tried, but it is uneconomical. Herbicides have been used with some success in Australia to control the leafy variety, Tainter said.

Research was underway in California, Idaho and Colorado using fungi and insects to control the growth of dwarfmistletoe.

The leafy mistletoe seeds are transferred from tree to tree by birds who pick up the sticky seed on their feet and bills. The dwarfmistletoe is actually an "explosive" plant that reproduces by shooting out seeds about 60 miles per hour. Researchers estimate that the seeds may travel horizontally for as much as 50 feet, but the average distance is 10 to 15 feet.

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and Agricultural Journalism  
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December 16, 1969

Immediate Release

## STATE SOIL, WATER CONSERVATION GROUP ELECTS NEW HEAD

Frank Crippen was elected chairman of the State Soil and Water Conservation Commission (SS&WCC) at its annual meeting held recently on the St. Paul Campus of the University of Minnesota.

Crippen is a Cottonwood County farmer and has been a board member since 1958. He was a district supervisor in Cottonwood County from 1949 to 1963.

Sherwood O. Berg, dean of the University of Minnesota, Institute of Agriculture, was elected vice-chairman. He is an ex-officio member of the Commission. Lincoln Paulson, a Rice County farmer and Rice Soil and Water Conservation District supervisor, was appointed last month to the Commission by Governor Harold LeVander, to replace Arnold Onstad, Houston County, whose term expired.

The State Soil and Water Conservation Commission is officed on the St. Paul Campus of the University. It has nine members. Five are farmers appointed by the governor, four are ex-officio members, who are heads of natural resource agencies, and two are advisory members.

The Commission is responsible for administering the State Soil Conservation Districts Law which includes working with the 91 soil and water conservation districts and 455 district supervisors throughout Minnesota and with other state and federal agencies in the field of natural resources.

With the organization of Cook and Hubbard Districts in 1969, all Minnesota counties now have soil and water conservation districts except Ramsey, which is mostly urban. A district is a legal subdivision of the government and has a five-man elected board.

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291-vak-69

Department of Information  
and Agricultural Journalism  
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St. Paul 55101 Tel. 373-0710  
December 16, 1969

Immediate Release

## U. S. MILK CONSUMPTION TO CONTINUE DECLINE

United States dairy products consumption by 1980 will decline 5 to 10 percent below the 1968 total of 116 billion pounds, according to a report issued by the Department of Agricultural Economics, University of Minnesota, St. Paul.

The report, "Prospects for U.S. Consumption of Dairy Products," was prepared by Professor Marguerite C. Burk.

"By 1980 total U.S. consumption of milk in all forms appears likely to fall 5 to 10 percent below the 1968 total of 116 billion pounds. In addition, substantial changes in the utilization of milk in various forms of dairy products are to be expected," Professor Burk said.

"These prospective changes raise two critical issues for the dairy industry. First, the marketing revolution in the form of the need to tailor products to meet the specific wants and requirements of consumers is overtaking milk producers and processors. They must discover how to produce and market the foods consumers want, not those the dairy industry prefers to offer and has offered for many years.

"Second, the dairy industry must prepare to accept changes in institutional arrangements for marketing and pricing milk because of tremendous pressures coming from shifts in milk use, the marketing revolution and the current rise in urban consumer's political power," she added.

add 1--milk consumption

The decline in the consumption of milk fat--principally butter, cream, farm and home use of fluid whole milk and evaporated milk--has been the most critical change in dairy products consumption. When viewed from the standpoint of their roles in the meals of non-farm people, dairy products apparently have increased in importance as beverages, desserts and side dishes, such as yogurt and cheese. But their uses as baby foods and as a spread, since there is less bread eaten, have fallen sharply.

Per capita consumption of evaporated milk is less than half the average 1947-49 rate, but use of non-fat dry milk has increased significantly in the past 15 years.

Consumption has increased for cheeses made from whole and partially skimmed milk, cottage cheese and most strikingly for frozen dairy products such as ice milk, mellorine and sherbet.

Professor Burk and consultant James A. Bayton suggested that the dairy industry continue its program of consumer education and promotion of dairy products. "Without such efforts, even the projected rate of fluid milk consumption, for example, probably could not be achieved. Milk may appear to be a sacred food to dairy producers but it is only one among many foods for consumers," they added.

The dairy industry is discussing the need for and ways to expand research. With the critical importance of the changes in consumer attitudes to the dairy industry, Professor Burk questioned "why the leaders in the industry have not sponsored research to develop scientific knowledge of how food attitudes can be changed."

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290-daz-69

## NEW BULLETIN SUGGESTS DAIRY PRODUCTION MERGERS

Minnesota dairy manufacturers should consider mergers to increase plant size and to allow more economical operation, Professor E. Fred Koller and James Gruebele of the University of Minnesota's Department of Agricultural Economics recommended.

Organizational and operational changes in Minnesota's dairy manufacturing industry were examined by Koller and Gruebele in a new Minnesota Agricultural Experiment Station Bulletin entitled, "Changing Market Structure of the Minnesota Dairy Manufacturing Industry."

A trend toward fewer but larger dairy manufacturing firms was noted by the two researchers. "In 1938, 43.2 percent of the specialized butter plants received less than 200,000 pounds of butterfat and in 1963 only 11.2 percent of the plants received less than that amount," they reported.

The increased concentration of plants results in increased efficiency and improved financial positions allowing the firms to adopt new production methods. In the Minnesota industry, which consists primarily of cooperatives, "these results are desirable from the producers point of view," Koller said.

"Management in Minnesota should consider mergers or consolidations to increase plant size" to further plant operating efficiency, Koller added. Overlapping of milk procurement areas, which is wasteful, emphasizes the need for mergers or consolidations, he said.

"Actually few creameries have merged in Minnesota because few could agree on the merger terms. Also, commercial clubs and local

add 1--new bulletin

businesses often oppose mergers if it means closing the local creamery, which could mean less business for the community," Koller added.

Production of butter and dried, non-fat skim milk in the same plant paid higher returns to producers than did butter production alone.

"Management should consider changing to a butter-powder operation wherever possible. However, large additional supplies of milk are needed to warrant making this change," the agricultural economist said.

Although it is possible that new technology, such as a continuous churn, could make the butter-only plants more advantageous than the butter-powder plant. "Further research is needed to ascertain the continuous churn's effects on the structure of the Minnesota dairy manufacturing industry," Koller added.

Where firms are few in number, price leadership often exists in an industry for raw materials. A study of the baking industry revealed that the large plants were price leaders because they could determine margins need to establish a satisfactory price policy for the entire group of firms in the market.

In the Minnesota dairy manufacturing industry, the price must be satisfactory to the large plants, but not necessarily to the fringe of small and medium size plants. In general, the smaller plants are not in a position to begin open price competition for milk used in manufacturing dairy products, he said.

As plants become fewer and larger, there may be more price agreement and few price wars for milk. Twenty of 57 plants managers in a Minnesota sample area said there had been either a period of extreme price competition or a price war, Koller said.

He predicted an increase in the concentration of firms with butter-powder plants as price leaders because of their increasing number and results.

"The number of price wars or aggressive price competition is expected to decrease. Managers will realize soon that price wars are costly," Koller concluded.

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291-daz-69

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 22, 1969

To all counties  
Immediate Release  
4-H NEWS

READ INSTRUCTIONS  
BEFORE USING  
CHRISTMAS CAMERA

If you're one of the fortunate ones who found a gift of a new camera under the Christmas tree, the first step in learning to use it effectively is to read the instruction book carefully. That suggestion comes from Gerald R. McKay, extension visual aids specialist at the University of Minnesota.

Find out what kind and size of film the camera uses, whether it will make color slides, black and white or color pictures. If the camera takes slides, find out what size slides.

Is the camera the automatic type? There are different degrees of automation in cameras; so find out what features are automatic and which ones must be set by hand.

The next step in getting acquainted with your new camera is to learn the adjustments, since they will determine how good your pictures will be.

The three basic adjustments are:

. Lens setting. The lens setting controls amount of light much like a window shade. This setting is adjustable so that the lens can be opened on dark days to let in more light or closed on bright days. If the camera is automatic, the photo electric cell adjusts the amount of light that gets into the camera.

. Shutter speed. This is adjustable so you can stop motion in the subject or prevent blur when you take pictures from a moving vehicle.

. Focusing - setting the lens for the distance from the subject. Most cameras have this device. If you pay no attention to focusing, your pictures are likely to be fuzzy.

add 1 -- using Christmas camera

Camera settings are probably even more important in winter than at other seasons because of the cold weather and less intense light.

Cold weather may present mechanical problems, slowing up moving parts. For example, if the shutter fails to close as quickly as it should, the film might be overexposed. The cold also causes batteries to get weak. Batteries should be changed at least once a year, but every six months if the camera is used often.

When you take pictures on crisp winter days, McKay suggests that you prevent the camera from getting too cold when not in use by keeping it under your coat. If moisture forms on the lens when you take the camera into a warm room, let the lens dry rather than wipe it. Otherwise you may scratch the lens.

Remember that snow makes the light more intense; hence it's easy to overexpose a picture, especially if you are taking people or trees against bright snow.

McKay gives three simple rules for care of your new camera: keep it in its case when it's not in use, keep it clean and in good repair and use it frequently.

If you're a 4-H member, you'll want to enroll in the photography project to learn more about taking good pictures.

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Department of Information  
and Agricultural Journalism  
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St. Paul, Minnesota 55101  
December 22, 1969

To all counties

ATT: Extension Home  
Economists

Immediate Release

FOOD PRICES  
FAIRLY STABLE  
FOR A TIME

Homemakers who have been trying desperately to keep their food budgets in line are asking what will happen to food prices in 1970.

The prediction from the U.S. Department of Agriculture is that food prices will probably stay fairly stable into the new year. More markups may occur next spring, but you can look for considerably less of a rise than was the case in 1969. Gains in food prices for all of 1970 may range around 3 percent.

The hike in food prices in 1969 amounted to nearly 5 percent, though the boost in the overall cost of living was even higher.

Total food spending went up less than food prices -- about 4 to 4½ percent -- because of consumer thriftiness. American consumers bought less expensive cuts of meat and shaved the dining-out costs.

For 1969 food spending may total \$104 billion, according to the USDA. This would represent about 16.5 percent of total disposable personal income -- a lower percentage than the year before. A decade ago Americans spent 20 percent of their total incomes for food. In spite of high food prices, Americans in 1969 spent the lowest percentage of their income for food on record -- well below the percentage spent in other countries. For most Americans, incomes have gone up faster than food bills.

But for those who feel the need of holding down the amount spent for food, extension nutritionists at the University of Minnesota give these tips:

. Read the food advertisements in your newspaper and shop for the weekly specials. Stock up on food items you can use while they are marked down.

add 1 -- food prices fairly stable

. When the price of one food rises a great deal, substitute a food more reasonably priced.

. Buy foods that are in plentiful supply, since they will usually be good buys. The U.S. Department of Agriculture issues a list of plentiful each month. Foods in generous supply for January include fresh grapefruit, oranges and orange products, apples, fresh winter pears, canned pears, canned tomatoes and tomato products, dry beans, dry peas and broiler-fryer chickens.

. Make a shopping list before you go marketing to avoid impulse buying.

-jbn-

Department of Information  
and Agricultural Journalism  
Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 22, 1969

To all counties  
Immediate Release

DAIRYMEN NEED GOOD  
QUALITY FORAGE FOR  
TOP MILK PRODUCTION

The quality of your forage can well determine whether you'll make a profit from your dairy operation, according to Oliver Strand, University of Minnesota extension agronomist.

Strand says time of cutting is the greatest factor in producing high quality hay. Alfalfa should be cut before one-tenth bloom, and this means cutting hay by the first week in June in most of Minnesota.

Each day that you delay cutting after alfalfa is in first bloom results in a higher fiber content and lower intake and digestibility by livestock. Strand says recent Minnesota research has shown a 400 pound milk production decrease for each percentage of fiber increase in hay. High fertility and an adequate lime level are also essential for a good alfalfa crop.

For good corn silage, Strand suggests selecting a full season variety that has a high corn-grain yield potential and waiting until corn is in the early to mid-dent stage before cutting and ensiling. Moisture content of the crop will be about 65 to 70 percent at this stage. It's also important to chop fine, distribute evenly in the silo, and cover the top to exclude air.

Corn grown for silage needs as much fertility as corn grown for grain, Strand points out.

He encourages farmers to take representative samples of hay and silage and have them tested for protein, moisture and fiber content so that digestible protein and total digestible nutrients of the forage can be evaluated. This can be a big aid in determining the amount of protein and energy provided by the forage, then the amount of additional grain and supplement feed needed can be calculated.

add 1 -- dairymen need

If your forage quality is poor this year, make plans to correct the situation for next year. This may require cutting hay earlier, or part of the problem may be low soil fertility. Take soil tests to determine lime and fertilizer needs.

See your county extension agent for details on forage and soil tests.

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St. Paul, Minnesota 55101  
December 22, 1969

To all counties  
Immediate release

IN BRIEF . . .

Beef Feeders: Select for Daily Gain. Although average daily gain is largely a management factor, it is partly due to the genetic make-up of feeders. And when you select for daily gain, you can increase profits by lowering nonfeed costs and increasing the volume of business per unit, says Paul Hasbargen, extension economist at the University of Minnesota. As an example, Hasbargen points out that putting out 600 pounds of gain instead of 400 per unit of feedlot capacity reduces the \$12 overhead facility cost from \$3 per hundred weight of gain to \$2. Hasbargen encourages both cattle breeders and feeders to make use of performance testing records and to select animals with the proper body type and the ability to gain rapidly.

\* \* \* \*

Use Sow Productivity Records. Consider more than the record of one litter when you analyze your sow productivity records, advises Charles Christians, extension livestock specialist at the University of Minnesota. A sow's production record for one litter often doesn't indicate what her next litter will be like. Sow productivity is a measure of reproductive ability, milking ability and mothering ability, Christians says. Number of pigs farrowed and weaned and individual pig and litter weights at weaning are the most common measures of sow productivity. Litter weaning weight is probably the best single measure.

\* \* \* \*

-more-

add 1 -- in brief

Plan Ahead for Drainage. Do some preliminary planning if you need tile drainage, says Philip Manson, agricultural engineer at the University of Minnesota. Consult a good drainage engineer or contractor to have a drainage system designed for your farm. But don't wait until spring or summer -- the demand for drainage means that "late-comers" won't find a drainage contractor who's available.

\* \* \* \*

Dairymen: Take Representative Roughage Sample. The most important step in the chemical analysis of dairy cattle roughages is taking a representative sample of the forage, says Ralph Wayne, extension dairy specialist, University of Minnesota. Use a core sample for hay bales -- you may be able to borrow one from the county extension office. Take a random sample of about 12 bales as they come out of the mow. Mix the sample thoroughly and send about 1 pint to the sampling laboratory. Be sure you take a separate sample for each cutting of hay. To sample silage, take a few handfuls as the silage comes down the chute. Seal the silage sample in an airtight container such as a pint or quart jar or plastic bag to prevent it from drying so the sample will have the same moisture content when it's tested as when the sample was taken.

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St. Paul, Minnesota 55101  
December 22, 1969

To all counties  
Immediate Release

LONG RANGE PROSPECTS  
FOR CORN AND SOYBEANS  
DEPEND ON MANY FACTORS

Your success with corn and soybeans over the next several years will depend on your ability to produce each crop at a competitive cost, and on the demand growth of these crops.

The most important question concerns which crop you can produce at a competitive cost to earn an adequate living, according to University of Minnesota extension economists Paul Hasbargen and Charles Cuykendall.

Your ability to compete depends largely on your management skills, the location of your farm and the resource mix, or different combinations of land and labor you have available to produce the crop.

Government programs will also have an important influence on future profits. In the past, government programs have encouraged more rapid expansion of soybean production than would have occurred without them, the economists say. Government programs calling for reduced acreages of feed grains, wheat, and cotton have freed some of this reduced acreage for soybean production.

But in the future, there will probably be less of a "one way" influence on crop shifts, the economists agree. Current farm policy appears to call for allowing farmers maximum flexibility in choosing their crops, and this would result in a shift of crops to where they can be most economically produced.

If soybeans are brought into a direct price protected program some production controls are apt to result. Change in government programs may also cause corn to gain back some of the acreage lost to soybeans in Minnesota during the past decade.

add 1 -- long range prospects

Demand for corn will probably increase, but not as fast as yields, which means total acres will have to be reduced. Soybean demand is expected to increase slightly faster than yield increases.

The management ability of individual farmers to apply new technology will be a determining factor influencing the decisions of farmers to grow soybeans. Farmers who have broken the soybean yield barrier may continue to find beans a profitable crop.

The economists encourage keeping a good set of records and analyzing costs and returns each year for every crop grown in order to determine the most profitable crop for your farm.

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St. Paul, Minnesota 55101  
December 22, 1969

To all counties  
Immediate Release

(Editor's Note: This is the first of a three-part series from the University of Minnesota Agricultural Extension Service explaining the live beef cattle futures market.)

CATTLE FEEDERS COULD  
USE FUTURES MARKET  
TO REDUCE RISKS

Minnesota cattle feeders might use the live beef futures market to protect their investment if they know more about it, Agricultural Economist Kenneth Egertson of the University of Minnesota says.

Cattle feeders can protect themselves against unfavorable price changes by "hedging," -- the shifting of most of the price risk to people not directly involved in handling cattle. A hedge involves the selling of a futures contract at the exact time feeder cattle are purchased.

Price level changes make cattle feeding a risky business. Between the time that cattle are purchased and marketed, projected profits can be wiped out by slumping prices.

"Several times in the past few years prices of slaughter cattle have been below farmers' expectations. Many cattle feeders have incurred losses despite their technical and managerial efficiency because they were unable to forecast the direction and magnitude of price change," Egertson says.

The futures market deals with promises to deliver or receive a commodity at some future time. These promises are made in the form of a legal contract. Futures contracts are bought and sold on an organized market in much the same way that stocks and bonds are exchanged in the financial markets.

The people who deal on the futures market are called "speculators" and "hedgers."

add 1 -- cattle feeders

Speculators are interested in dealing with the futures contract to make short term financial gains as the prices of futures rise and fall. The speculators accept the price risk that the hedgers are attempting to avoid.

A cattle feeder becomes a hedger when, through his broker, he sells a futures contract that sets a price for his cattle which he will market at a later date. The futures contract is a standardized agreement. It specifies the price, grade, quantity, place and time of delivery and costs involved.

The contract also lists what substitutions may be made. A hedger would have to pay a penalty for substitutions if a lower grade was delivered than is stipulated in the contract.

Futures markets have evolved through time. With the development of early agricultural marketing systems in 19th century America, it became apparent that one of the most serious problems facing a firm handling agricultural commodities was the risk of financial loss due to price declines of commodities held in inventory, Egertson observes.

The Chicago Board of Trade established the first commodity futures exchange in 1859 in response to the need for a more reliable market for contract trading of agricultural commodities.

A futures market provides a meeting place for buyers and sellers to transact business. It eliminates the time consuming searches for buyers and sellers to negotiate a contract trade. Admittance to trading in most exchanges is by membership with members required to meet financial and other requirements. Members set rules for trading and through membership fees provide trading facilities.

The Commodity Exchange Authority supervises and enforces all federal laws pertaining to the operation of the market and regulates the activities of all commodity brokerage firms.

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St. Paul 55101 Tel. 373-0710  
December 23, 1969

Immediate Release

## UM RELEASES RECOMMENDED FIELD CROP VARIETIES

Five varieties were added and four removed from the University of Minnesota's list of recommended field crop varieties for 1970.

Added to the recommended list were Primus II barley, Sioux oats, Linott flax, and Rampage and Altona soybeans, announces Harley Otto, extension agronomist. Varieties removed from the list include B5128 and Bolley flax, and Grant and A-100 soybeans.

Primus II barley was developed in South Dakota. Its overall agronomic performance has been equal to Larker and is several days earlier in maturity. However, the quality status of Primus II has not been fully evaluated by the malting and brewing industries, according to Otto.

Sioux oats has been the highest yielding oat variety in Minnesota trials the past three years, but its lodging resistance, test weight and groat percentage aren't as good as other varieties. Sioux is resistant to smut and has some resistance to red leaf and Septoria, but is susceptible to both crown and stem rust.

Linott flax was developed in Canada. It is medium-early in maturity and has yielded well in comparison to other varieties. It has good pasmo tolerance, oil content and oil quality.

The flax varieties B5128 and Bolley were removed from the recommended list since they don't yield as well as newer varieties, Otto says.

-more-

add 1--um release recommended field crop varieties

Rampage is a new soybean variety from Iowa. It is intermediate between Hark and Chippewa in maturity and yielding ability. Rampage is slightly better than Hark in tolerance to "high lime" chlorosis and has good field tolerance to phytophthora root rot. Foundation seed will be distributed to seed growers in 1970.

Altona is an early maturing soybean variety and has yielded well in comparison to other varieties of the same maturity.

Grant and A-100 soybeans were removed from the recommended list since they don't yield as well as other recommended varieties of comparable maturity.

The Red River 68 variety of hard red spring wheat will not be recommended in Minnesota because of its poor baking quality. Several other wheat varieties have not been adequately tested to determine whether they should be recommended, Otto says. These include Waldron, World Seeds 1812 and Neepawa.

Waldron was released by the North Dakota Experiment Station and seed was distributed to Minnesota growers in 1969. It was seriously infected with ergot in some research trials and seed fields, and is susceptible to scab and Septoria.

World Seeds 1812 is an early-maturing semi-dwarf variety that has been tested by the Minnesota Agricultural Experiment Station only one year. It yielded 97 percent as much as Chris, had good straw strength and was resistant to stem and leaf rust. However, milling and baking qualities have not been adequately evaluated.

add 2--recommended field crop varieties

For more complete information, get a copy of University of Minnesota Miscellaneous Report 24, "Varietal Trials of Farm Crops," from your county extension agent. It will be available in early January. You can also write for a copy to the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

A complete list of recommended field crop varieties for 1970 follows:

Barley: Conquest, Dickson, Larker, Primus II

Oats: Garland, Lodi, Portal, Sioux

Rye: Frontier, Pearl, VonLochow

Wheat: Hard Red Spring: Chris, Manitou, Polk

Durum: Lakota, Leeds, Wells

Winter: Minter

Millet: Turghai, Empire, White Wonder

Flax: Linott, Nored, Norstar, Summit, Windom

Soybeans: Chippewa 64, Clay, Corsoy, Hark, Merit, Norman,

Portage, Rampage, Traverse

Sunflowers: Arrowhead, Mingren, Peredovik, VNIIMK 89.31

Dry Peas: Century, Chancellor

Birdsfoot Trefoil: Empire

Red Clover: Dollard, Lakeland

Sweetclover: Evergreen, Goldtop, Madrid

Bromegrass: Achenbach, Fischer, Fox, Lincoln

Timothy: Climax, Itasca, Lorain

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291-vak-69

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Institute of Agriculture  
University of Minnesota  
St. Paul 55101 Tel. 373-0710  
December 23, 1969

Immediate Release

## RESIN COW MATS TESTED AT UNIVERSITY FACILITY

Making a comfortable, easily cleaned stall surface for cows to stand on is the result of research conducted at the University of Minnesota by Donald W. Bates, professor of agricultural engineering, in cooperation with a manufacturer.

The problem of providing comfortable and sanitary conditions with a minimum of bedding was resolved by using poured-in-place resin cow mats that bond directly to the concrete stall surface. Liquid resin was poured in a form braced against the stall's gutter edge resulting in a tight seal at posts and other obstructions.

No fitting or trimming is necessary in the installation which was made in several stall dairy barns including one at the University of Minnesota Northwest Experiment Station in Crookston. Bedding in the 60 stalls that are five feet wide and 6 1/2 feet long was reduced from "belly-deep" to less than three pounds per stall, Bates reported. With proper management, two pounds or less bedding are adequate, Bates said.

"Limited experience indicates a practical place for these mats in in warm, free stall dairy barns. They appear to be highly desirable for use in slat floor, free stall structures. While earth has been widely used as a floor structure in either type, it is not very satisfactory," Bates said.

The mats are available in Minnesota and Wisconsin, installed at about \$2.75 a square foot. Development of poured-in-place resin mats began in 1965. They were found to be more sanitary than those which are mechanically held in place, Bates said, since contamination cannot get under them.

-more-

add 1--resin cow mats

Two layers of resin form the mats. The base layer compensates for irregularities in the concrete surface while providing insulation between the cow and the concrete. The top layer is about 3/16th of an inch thick, resembles rubber and forms a soft, smooth black surface.

Bates said installation must be done by trained technicians on clean, dry concrete surfaces. Twenty or more mats can be installed a day under favorable conditions.

Few wearing problems were noted on the surface during the development process, but where small amounts of moisture remained on the concrete when the base coat was applied, deterioration of the base coat occurred. A base coat now has been developed that is not affected by deterioration, Bates said.

Four poured-in-place mats installed in 1967 in a 108-cow, free stall dairy barn show no appreciable evidence of wear. Both the cows and the dairy farm operators prefer the resin mat stalls over the earth floor stalls, the University researcher reported.

The resin surface yields under weight but gives firm footing. The surface may be somewhat slippery when wet and without bedding for men tending the stalls, he said.

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292-daz-69

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 29, 1969

To all counties  
4-H NEWS  
Immediate Release

PUT YOURSELF  
INTO GIFT GIVING

Are the gifts you give to others a bit of you or are they simply purchased items? Perhaps you can make someone feel your personal interest and affection through the gifts you give during 1970.

The beginning of a new year is a good time to make a personal commitment to action that will ease problems even nearer to you than the ghettos or Vietnam, but still urgent. Perhaps it's the exchange student you know from Germany. Is he happy? Is there anything you could do to help ease his problems while he's away from home?

Mary Frances Lamison, extension home management specialist at the University of Minnesota, suggests some ideas as ways you can give of yourself this year.

- . Make a new friend -- perhaps the boy or girl who seems to have no friends at school.
- . Do some grocery shopping or letter writing for some elderly people or take them sightseeing.
- . Do some baking for someone who can't.
- . Help the sick, handicapped or elderly with housework.
- . Mend or adjust hems for the friend who hates to sew.
- . Do the snow shoveling at your house -- and for an elderly neighbor.

With a little thought you can think of many more ideas which will be giving of yourself rather than simply buying gifts.

Department of Information  
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Institute of Agriculture  
University of Minnesota  
St. Paul, Minnesota 55101  
December 29, 1969

To all counties

ATT: EXTENSION HOME ECONOMISTS

Immediate Release

SHOP SALES  
WITH CARE

January sales can be an asset to the budget -- and even fun -- if you shop carefully and creatively.

That's the opinion of Mrs. Edna Jordahl, extension home management specialist at the University of Minnesota.

January is one of the big sales months, Mrs. Jordahl points out. At after-Christmas sales held to dispose of unsold merchandise, you can save up to 50 percent on wrappings, ornaments, Christmas lights, even toys and sports equipment. But, remember, you will have to store most of this merchandise a whole year -- so consider your storage space before you buy.

Winter clothing may be on sale, too. Keep in mind the fact that high fashion items may be out dated next year. When buying clothing, consider the upkeep, the serviceability of the item, quality and workmanship. Simple, straight lines that can be changed with belts, scarves and jewelry are often the best buys. Much sales shopping demands immediate decisions; so try to recall accessories which you have to go with what you are buying.

You may find sales in January on bags, gloves, shoes and lingerie. Often there is a better selection in these items than in such larger items as coats, dresses and suits. But look for defects, since merchandise is handled a good deal during the Christmas shopping season.

January is the month for white sales -- a good time to replenish your stock of sheets, pillowcases and towels.

-more-

add 1 -- shop sales

If you're in the market for furs, January may be a good time to take advantage of a price reduction.

In furniture departments and stores, floor samples and decorator-room pieces may be greatly reduced but examine each piece carefully for defects, tears or breaks, scratches and spots. Consider the price, your needs and wants. In any sales shopping you do, don't overspend, Mrs. Jordahl advises. Even spending at sales must fit the family or personal spending plan.

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December 29, 1969

To all counties

Immediate Release

IN BRIEF . . .

Three-Step Method of Pruning Recommended. Prune forest trees in three different steps for most economical results, advises Bill Miles, extension forester, University of Minnesota. Prune pine or hardwood stands the first time when trees are 20 to 25 feet tall, or 3 to 5 inches in diameter. Prune no more than the lower one-third of the total tree height, or to a height of no more than 8 feet. As the tree grows, increase pruning height to 12 feet and then to a one-log length of 17 feet. Pruning above this height isn't recommended. Miles cautions that pruning injures the tree and usually causes a 1 to 3 year "shock" period with reduction in diameter growth. For this reason and since it's not economically feasible, annual pruning isn't recommended.

\* \* \* \*

Swinemen: Select for Highly Heritable Traits. Genetic progress is slow, but you can make faster improvement by selecting swine breeding stock for highly heritable traits. Carcass merit, structural soundness and growth rate are medium to high in heritability estimates, according to Charles Christians, extension livestock specialist at the University of Minnesota. Reproductive traits such as litter size and birth weight are relatively low. Christians suggests concentrating on traits that have major economic importance. And when you select several traits, expect slower improvement in each trait. Research shows that when two traits are selected, selection for either of the two can be only 70 percent as intensive as when you select for only one trait.

\* \* \* \*

Good Timing and Design Necessary for Tile Drainage. Good planning helps insure a wise investment in a tile drainage system, says Philip Manson, agricultural engineer at the University of Minnesota. Consult a drainage system engineer or contractor to have the drainage system designed, and insist on high quality tile. A tile system that's properly designed and installed will give many years of satisfactory and profitable service, Manson says.

# # # #

Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55101  
December 29, 1969

To all counties  
Immediate Release

TRADING IN BEEF  
FUTURES CAN HELP  
REDUCE UNCERTAINTY

(Editor's Note: This is the second of a three-part series from the University of Minnesota Agricultural Extension Service explaining the live beef cattle futures market.)

Futures trading of live cattle may not solve all the cattle feeder's problems, but can help to stabilize prices and reduce uncertainty, Agricultural Economist Kenneth Egertson of the University of Minnesota says.

Cattle feeders became involved in the futures market as hedgers to protect themselves against losses due to fluctuating prices during the time cattle are on feed.

By selling a futures contract, a cattle feeder is forward pricing his product at the time he begins the feeding operation.

A cattle feeder who becomes a "short" hedger sells a futures contract when he buys feeders to minimize price risk on his cattle. He sells the contract through an organized commodity exchange to another party for delivery of the cattle in the future, but at a price specified in advance of delivery.

A hedge is placed when the feeder buys a given number of head of cattle. At the same time, he sells a futures contract for the same number of head to protect against substantial price declines.

Egertson says futures contracts are different from other contracts since they can be fulfilled in two ways. They can be closed by either delivering the cattle in Chicago according to the contract, or making an offsetting futures trade before the contract date.

In the latter case, the hedger who sold a contract for delivery in October can "offset" the obligation to make delivery simply by buying an October futures contract. In a sense, he buys back his contract, but not necessarily at the same price for which he sold it.

-more-

add 1 -- trading in beef futures

The established price for cattle feeders in Minnesota is lower than the Chicago futures price because local prices generally run lower than Chicago prices due to costs of moving live cattle from Minnesota to Chicago. So if a cattle feeder actually delivers on his contract, the "locked in price" is the Chicago price less costs associated with getting them there.

"Localizing" futures price to reflect either transport costs or price difference is essential and can be done in one of two ways, Egertson says. First, a cattle feeder can determine a normal price difference between his location and Chicago, and add on brokerage fees and interest on margin. Second, he can localize it by adding up all costs of getting the cattle delivered to Chicago if he decided to do so.

Cattle feeders who establish a localized choice steer futures price should subtract transportation, shrinkage, marketing, brokerage and margin deposit from the Chicago futures price.

Transportation costs from the farm to the local market should be compared with shipping costs to Chicago. It's the difference which is important to the cattle feeder.

Additional weight loss -- shrink -- should be calculated and added to the transport costs. Hedgers entering the futures market must pay brokers a fee which in some cases is 9 cents per hundredweight, or \$36 per 40,000 pound contract in the futures market.

If delivery is made, the cattle feeder must cover commission fees, feed, yardage and other expenses encountered at the terminal market.

A margin deposit of approximately \$450 is required for each contract bought or sold. Deposit requirements of individual brokers may be higher. A price drop may cause cattle feeders who sold a contract to deposit additional funds. It's the interest on the margin which constitutes a cost. The margin cost has been estimated at 8 cents per hundredweight, but will vary depending how long the money has been on deposit and the interest rate used.

add 2 -- trading in beef futures

When the cattle feeder has estimated when his cattle will be ready for market, he will then know what futures contract month to use and the planning price to use.

After localized costs are subtracted from the futures price, the cost of the feeders and feeding costs should be estimated to determine the outcome of a hedging operation.

The cattle feeder may decide whether to enter the futures market by comparing the estimated returns with and without a hedge. Cattle feeders could hedge if prices are expected to decline drastically, and if the futures contract price is higher than indicated by outlook forecasts.

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Department of Information  
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St. Paul, Minnesota 55104  
December 29, 1969

To all counties  
Immediate Release

PROPERLY CLEANED  
BULK TANK ESSENTIAL  
FOR QUALITY MILK

You can clean your bulk milk tank either mechanically or manually, but do it each time the tank is emptied.

The fact that grade I milk can be produced some of the time without cleaning after each use is no reason for neglecting this task, says Vern Packard, extension dairy industries specialist at the University of Minnesota. Quality problems with finished products are apt to arise if you do a poor job of cleaning the bulk tank.

Quality milk production is an investment in the future of dairying, and clean, sanitary milking equipment is basic to the production of high quality milk, Packard says.

Manual cleaning requires use of a concentrated solution of bulk tank cleaner prepared in the tank or in a plastic pail placed in the tank. When preparing solutions in stainless steel equipment, always add water first and then detergent, Packard advises. This will help prevent corrosion. Scrub the entire surface with a hard bristled, long-handled brush and use an acid rinse to eliminate milkstone deposits.

Solution temperatures for bulk tank cleaning are usually held below 115 degrees.

Packard suggests these steps for mechanical cleaning:

--Rinse with cool water immediately after emptying (the hauler usually does this).

--Prepare the detergent solution according to directions.

--Spray the solution for 10 to 15 minutes.

--Drain and rinse thoroughly with tap water.

--Finish with an acid rinse using foamless organic acid.

--Drain well, then sanitize just before using the tank.

Fully automatic equipment is available for carrying out these steps, Packard adds.

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St. Paul, Minnesota 55101  
December 29, 1969

To all counties  
Immediate Release

NARROW ROWS RESULT  
IN HIGHER YIELDS

Consider all the factors before making a decision to plant corn and soybeans in narrow rows. That's the advice of Dale Hicks, extension agronomist at the University of Minnesota.

Many farmers could increase yields of both corn and soybeans by planting in narrower rows. Research shows a yield advantage of 5 to 7 percent for corn and 10 to 15 percent for soybeans when going from 40 to 30 inch rows, according to Hicks.

Soybean yields have increased further in 20 inch rows. But if you plant much narrower than 20 inches, you're more apt to have weed problems since it's hard to cultivate rows this narrow.

Hicks advises farmers to analyze their corn and soybean programs during the winter. This way, there will be time to order equipment and get it before the rush of spring planting if you decide to go to narrow rows.

Consider your acreage, the condition of your present machinery and the cost of a new line of equipment when deciding whether to use narrow rows. For example, narrow rows also require a slightly higher input cost since more seed per acre is required and there's a higher herbicide cost, Hicks adds.

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St. Paul 55101 Tel. 373-0710  
December 30, 1969

Immediate Release

## SHOP SALES CAREFULLY

If sales intrigue you, January is a good month for you.

After-holiday sales of unsold Christmas merchandise, white sales, inventory sales of many different kinds--these are all opportunities to buy goods at a considerable discount.

However, Mrs. Edna Jordahl, extension home management specialist at the University of Minnesota, warns shoppers to remember that what appears to be a bargain is not a bargain unless it meets a real need.

Mrs. Jordahl gives 10 rules to keep in mind as precautions when you shop the sales.

1. Know your stores and the kinds of merchandise they handle. Shop the sales for worthwhile items. For example, take advantage of January white sales if your stock of sheets, pillow cases and towels is low.
2. Go early in the sale--and early in the day. If you wait till the last afternoon of the sale, goods will be picked over.
3. Go when you are rested and feel well. You'll do a better job of making wise decisions.
4. Know the going price of merchandise. If you shop regularly at a store you'll recognize the true markdown.
5. Buy only what you can use. Useless items clutter up the home.

-more-

add 1--shop sales carefully

6. Have a charge account. Often the charge clientele gets early notices of sales.

7. Buy simple straight-line merchandise. It will remain in good taste longer.

8. Don't satisfy all your wants and wishes. Remember there are many sales during the year.

9. Don't make yourself obnoxious. Have you ever watched women at sales?

10. Don't overspend. This kind of spending must fit the family or personal spending plan.

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292-jbn-69

Department of Information  
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St. Paul 55101 Tel. 373-0710  
December 30, 1969

Immediate Release

## COMPUTERS AID UM AGRICULTURAL ENGINEERS

Agricultural engineers at the University of Minnesota are making increasing use of computers in their research, and now have the complicated machine doing such things as controlling crop growth and simulating the effects of water runoff.

In his computerized plant growth project, Associate Professor M. Ray Smith expects a computer to be able to control the growth of plants. The project is somewhat similar to the principle behind today's "electric eye" automatic cameras. A photo cell in the automatic camera receives light signals which are fed back electronically to a unit that sets the camera's shutter speed and lens opening for the "correct" exposure.

Rather than dealing with light as the automatic camera's computer does, the computer assigned to the plants mainly will be concerned with carbon dioxide. The computer will receive information from a monitoring device concerning the plants' life processes. Information will be stored in the computer during the growth process concerning temperature, humidity and more importantly, the rate at which the plants use carbon dioxide--a life-giving substance for plants.

From the information the computer receives, Smith hopes to program the computer to indirectly control the growth of the plants by automatically regulating the switches and valves that allow humidity, heat, light and carbon dioxide to reach the plants in a closed unit. Although the types of plants

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used in the experiment are not critical to the project's success, corn and soybeans have been monitored in past experiments.

At least partially automatic control of certain aspects of crop growth and conventional crop production equipment could result if Smith's project proves that computer control of plant growth and production is feasible.

In another University research project, a computer mathematically traces the path of water as it falls on soil and runs off. The project, conducted by Curtis L. Larson, professor of agricultural engineering, utilizes a mathematical model because it is difficult to work with the real-life situation.

Specific information on rainfall and terrain for the area under study are fed into the computer, which serves as a tool rather than a technique in arriving at the answers the researchers are seeking. The research, underway for the past three years, has revealed that some methods used in flood control planning to predict peak water flows are oversimplified, Larson said.

Accurate prediction of runoff is important in designing flood control projects and in planning erosion control. Larson's research provides a means for predicting what areas are subject to flooding and what size dam spillways, channels, bridges, culverts and storm sewer lines are needed to handle the runoff.

Larson said he was convinced that the mathematical model is giving meaningful results. The model can give runoff information for different conditions including rain storms that are possible, but never have occurred, he added.

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293-daz69

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St. Paul 55101 Tel. 373-0710  
December 31, 1969

11-17-69  
Immediate Release

#### NEW SOYBEAN VARIETY RELEASED BY UM

Anoka, a new soybean variety that gives high yields especially on sandy soils, has been released to registered and certified seed growers effective January 1, 1970.

Designated M54-160 before its release, Anoka averages about one day later than Chippewa 64 in maturity. It yielded considerably more than Chippewa 64 on sandy soils, and somewhat more on ordinary soils, according to Jean Lambert, University of Minnesota agronomist who developed the new variety.

Anoka lodges a little more than Chippewa 64, is shorter, has larger seed and has a much higher oil content. It has dark green foliage, rather large leaflets and a "full" canopy. On high-lime soils, Anoka has shown high susceptibility to chlorosis, and should not be planted on such soils, Lambert says.

The new variety was released by the Agricultural Experiment Stations in Minnesota, Michigan, North and South Dakota plus the Agricultural Research Service, USDA. Seed will be available to registered and certified seed growers in the four states.

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