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To all counties

Immediate release

HARVEST CORN
EARLY TO AVOID
FIELD LOSSES

Farmers should harvest corn as soon as possible to avoid heavy losses from second brood of European corn borers and stalk rot.

Delaying corn harvest could result in severe losses, says John Lofgren, University of Minnesota extension entomologist. He says that later planted, later maturing varieties generally have higher infestations of the second brood corn borer and are subject to the heaviest field losses.

Lofgren encourages farmers to harvest corn as soon as possible and either dry the corn for storage, feed it or ensile it.

Extremely heavy infestations of the second brood borer are at work on ear shanks and stalks. As plants dry and break, a large number of ears are dropped to the ground where they can't be picked up by harvesting equipment.

Stalk rot could cause heavy field losses in the state—possibly up to 10 percent of the crop if high winds blow the weakened plants down, according to University plant pathologists. The dry summer presented almost ideal conditions for the fungus infection causing stalk rot. In some cases, stalk rot was introduced by the first brood European corn borer.

# # # #
Refrigerator Thawing Recommended

Plan ahead and allow plenty of thawing time for frozen turkey. If you have refrigerator space, the recommended method allows 24 hours thawing time for each 5 pounds of turkey.

If you don't have the extra space (and few do), immerse the bird in cold running water. Allow 3-4 hours for turkey under 9 pounds, 5-7 hours for larger birds. Conservationists may cringe at the trickle of water but bacteriologists are more concerned with spoilage if the turkey is thawed quickly.

Paper bag thawing can be used but back porch or garage temperatures are preferable to room temperatures during brisk autumn evenings. Place the turkey inside a heavy paper bag, tie bag closed or overlap two large bags. The closed bag keeps the outside surface temperature low enough for safety. Room temperature can be used but is the least desirable method. Thawing at 70 degrees would take from 10 hours for a small turkey to 30 hours for a large bird. Cool temperatures encourage even thawing so deterioration doesn't begin before the cavity has thawed.

In each method, the frozen turkey should be left in the sealed plastic bag. Thawed turkeys should be cooked immediately. Never stuff a turkey until just before roasting. Cook a frozen stuffed turkey without thawing.

Roast Turkey at 325 Degrees

Seems that everyone has a method for roasting turkey ... from paper bag to covered roaster. When all other methods are tried, most still return to the dry heat roasting at 325 degrees F. Place the turkey breast up on a rack in an open pan. The slow roasting gives the best flavor and appearance and less shrinkage and juice loss. Over the breast place several thicknesses of fat dipped cheese cloth or a loose tent of foil to prevent excess browning. Remove the covering during the last few minutes for a nice brown appearance, if necessary.
DOWN IN THE DUMPS?

Don't be alarmed if you feel "down in the dumps" once in a while. It happens to nearly everyone. Now is the time to start doing something about it. Here are some suggestions from Mary Frances Lamison, University of Minnesota home management specialist:

* Try to find out why you feel blue. There could be a physical reason. Don't hesitate to go or be embarrassed to tell a doctor about your feelings.

Follow his instructions after your visit.

* Take a short walk at least once a day. It's hard to feel blue when the sun is shining, the sky is bright and the air is fresh.

* Learn to do something new. It may be only a better way to peel potatoes for your family, or an easier way to make the bed or a simpler way to sew on a button. Why not try to learn one of the new crafts that are popular. Many use simple supplies and are easy to learn.

* Learn to enjoy peace and quiet. This may mean sitting in your favorite chair and reading at home. Try sitting outdoors when the weather is nice.

* Help someone else. It's hard to feel depressed if you're doing something for someone. This may be visiting, writing a note, sending a card or taking a walk with someone.

So, don't sit around feeling sorry for yourself. Believe YOU are a V.I.P. (Very Important Person).

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UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND COUNTY EXTENSION SERVICES COOPERATING
Much of the 4-H program's success in Minnesota is due to the volunteer adults who devote many hours of work each year. More than 4,000 new adult leaders joined the 4-H program last year.

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Individual projects are important in the 4-H program. Members may choose from 27 projects with over 83 phases. Most projects have beginning (9-12 years), junior (13-15 years), and advanced (16-19 years) stages. Projects with the highest enrollments are food and nutrition, horticulture, clothing, junior leader, home improvement-family living, dairy, swine, shop, safety and conservation.

* * * *

Many youth become interested in 4-H through joint programs with other agencies. For example, 2,500 retarded youth participate in 4-H because it's part of their classroom program. The youngsters have an opportunity to be a club officer, enroll in many projects and participate in a classroom fair.

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The State 4-H Federation is composed of voting delegates from each county federation. The State Federation holds its annual meeting at the Junior Leader Conference during which the state officers are elected.

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One of the main projects of the State 4-H Federation has been the 4-H Ambassador program. This project includes a communications workshop for 30 selected 4-H members who assist with district and state 4-H events and serve as 4-H representatives at various statewide functions during the year.

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The Teen Caravan has sent twenty-four Minnesota youth delegates to eleven foreign countries since the program was started in 1966. Applications for the 1972 program will be due January 15, 1972.

-11h-
NEW INSECT RESISTANT
POTATO VARIETIES SEEN

Development of a potato hybrid that will be resistant to green peach aphids may be possible in the near future, according to University of Minnesota entomologists Edward Radcliffe and Henry Nanne.

Such a plant might substantially reduce the dollar losses to insects and control costs, which reached nearly one million dollars last year on Minnesota's 96 thousand acres of potatoes.

Entomologists and horticulturists here have evaluated nearly 1,000 entries of wild potato plants and have identified some species that are extremely resistant to green peach aphids.

In laboratory experiments, some aphids reared on wild potato plants at maturity were only one-eighth to one-tenth their normal size. On other plants, aphids were unable to complete development to maturity. "But on the variety 'Norland,' we have yet to lose an aphid before maturity," the scientists said.

The next step is to incorporate resistance from wild sources to produce new varieties that are both resistant and of acceptable quality in other respects, they said.

The problem with insecticide control of aphids is that it is costly and can sometimes indirectly favor aphid reproduction. Insecticides will usually provide adequate control for aphids. But if treatment is only marginally effective, natural enemies of aphids may be destroyed, resulting in a spectacular growth of aphid populations, they said.

-more-
Some critics of projects attempting to develop potato hybrids which are insect resistant have argued that the resistant varieties must possess total immunity. But varieties with only partial resistance could reduce aphid numbers so that natural control agents such as predators and disease would provide adequate pest control, they said.

Another "plus" for insect resistant plants is that insects are less likely to develop a resistance to the plants such as they develop to insecticides.

The University project was reported in a recent issue of *Minnesota Science*, published by the University's Agricultural Experiment Station.

# # #
Southern corn leaf blight has done about all the damage it is likely to do in 1971 in most areas, including Minnesota, Herbert G. Johnson, extension plant pathologist, University of Minnesota, said.

Stalk rot not uncommon here, is present in Minnesota but generally is not, related to the blight. Husk infection by southern corn leaf blight was found on most ears in one rather heavily infected field where about 12 percent of the ears had kernel infection.

Johnson said no problem is anticipated with infected kernels on ears that are put in the crib or with shelled corn that has few infected kernels as long as the kernel moisture is below 25 percent. Most cribbed corn is within this level or will soon dry to this level.

Shelled corn must be well below 25 percent moisture content for safe storage. Cool weather also will stop the fungus growth even if moisture is higher. SCLB fungus will not grow from ear to ear or kernel to kernel below 25 percent moisture.

Research shows that there are no problems when SCLB infected corn is fed to livestock and poultry. Some other fungi may cause feeding problems, but that danger is not new to this area, Johnson said.
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IN BRIEF...  

Extension Conference Next Week. All the agents from the ________ County staff will be attending annual Extension conference in St. Paul next week, from October 11 through 14. The program will emphasize future priorities for Extension work in ________ County. We'll also talk about how we can work together with other University and government units. Over 400 county, area and state Extension workers will attend.

* * * *

Take Soil Samples Now. Now is the best time for soil sample collection and testing, says University of Minnesota soil scientist, John Grava.

Sample collection in the fall is more convenient because soils are drier. Soils in spring are often extremely wet.

Sampling and testing ahead of time also permits ordering and applying of lime in the fall. This is especially important, he says, where legume seeding is planned next spring. Road restrictions do not allow transportation of heavy lime loads in the spring, he reminds.

For information on soil testing, ask your county extension agent or the Soil Testing Laboratory, University of Minnesota, St. Paul 55101.

* * * *

Don't Cut Alfalfa Now. A University of Minnesota agronomist says cutting alfalfa in early October is not recommended.

Oliver Strand says when alfalfa is cut at this time re-growth of the plant is encouraged. This weakens the alfalfa stand by depleting food reserves and may result in winter kill.

Farmers who have a good third or fourth stand in the field and need the hay should cut in mid-October or after the first killing frost so alfalfa re-growth will not occur. The first killing frost generally occurs after October 1 in the northern half of the state and after October 15 in southern Minnesota.

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add 1--in brief

**Leave Some Growth on Field.** Farmers should leave some alfalfa growth on the field to stop and hold snow.

University Agronomist Oliver Strand says a one to two-feet wide strip of alfalfa growth can be left. Or graze the field.

Another recommended practice in fall for alfalfa growers is to have the soil tested and apply potash and phosphate if needed. Soils in western Minnesota generally need phosphate while eastern and sandy soils need potash.

* * * *

**Safety Precautions Prevent Chemical Fires.** Safety precautions can help prevent chemical storage fires which sometimes emit lethal smoke and fumes, says University of Minnesota entomologist Phillip Harein. Always store chemicals in a cool, dry place, preferably separated from other buildings. Keep buildings containing chemicals locked and identified with an easily read, suitable warning sign. Warn employees and families of the hazards of stored chemicals.

# # #
HIGH ALFALFA YIELDS REQUIRE SUFFICIENT POTASSIUM LEVELS

Considerable evidence exists to show that not enough consideration is given to the potassium levels in soils when attempting to grow high yields and long-term stands of alfalfa.

University of Minnesota extension soils specialist Curtis J. Overdahl says successful alfalfa growing requires soils either naturally high in potassium or high potash fertilizer applications.

Tests in Morrison County showed that even 400 pounds per acre of 0-0-60 at seeding time did not bring potassium content up to sufficient levels. Proof that these levels were not high enough was shown by increased yields when half the plot was fall topdressed and gave seven-tenths of a ton more alfalfa the following year.

Topdressing at Duluth increased yields a ton per acre even on plots receiving as much as 800 pounds of 0-0-60 at seeding three years earlier. Treatments much above ordinary levels in southeastern Minnesota have shown surprising responses to potassium, Overdahl reports.

Farmers in western Minnesota may not need potassium for their alfalfa, but the best way to find out is to have soil tests and consult with county extension agents. Heavy applications of manure may take care of potassium needs.

Other considerations for high alfalfa yields:

--Lime rates should not be neglected.

--Soils with low organic matter often need borated fertilizers every two or three years.

--Cutting and grazing should be timed for best production and prevention of winter kill.

# # # #
MURURE DISPOSAL
METHODS TESTED

Plowing manure into the soil may well be the best way of disposing of large amounts of feedlot manures without polluting nearby groundwaters with nitrates.

This is the assessment of a recent University of Minnesota study which found that the plowing method added less nitrate to soil profiles than disking or dumping manure on the land in a slurry, said University Soil Scientist Russell Adams.

Feedlot manures are discarded now because it is cheaper to fertilize with commercial chemicals than with manures. Much manure is now hauled out in the field and plowed under, Adams said.

For the study, researchers placed soil in greenhouse cylinders just as it was found in the field. Rainfall was simulated and turkey manure was spread on the soil at a rate equivalent to 20 tons per acre per month—a rate which might be used if a farmer were using the land to dispose of manures. Plowing and disking of manures, slurry application and a control area with no manure added were the four groups tried.

Adams expected the disking and slurry methods to allow ammonia to evaporate, and thereby lessen the amount of nitrate passing through the soil profile.

But the slurry application added the most nitrate to the soil profile. When manure was plowed, nitrates were reduced by nearly half, Adams said. There appeared to be decomposition of the nitrates by microbes, small organisms in the soil, he said.

Some 320 pounds per acre ran through a 30-inch soil profile with the slurry application. With the disked manure applications, 220 pounds per acre of nitrates ran through the soil profile; 180 pounds per acre ran through the profile when
add manure disposal

manure was plowed into soil. Some 140 pounds per acre ran through the control group which had no manure added. The control soil was kept fallow, as would be necessary if the land were used as a disposal area.

Pollution of ground water from feedlot manures has recently been called a serious problem by a University botanist, Fred Cagle. Feedlots, a sacred political issue with some, are polluting groundwater, he said.

The federally established limits of nitrates in ground water are set at 10 parts per million. A sample taken in Ihlen, Pipestone County, in October 1969 was 18 p.p.m.; at Adrian in Nobles County, samples in May 1970 ran from 12 to 15 p.p.m., according to the Minnesota Department of Health records.

According to Adams, the nitrates in these wells may be occurring "either from naturally occurring nitrates or feedlots, and probably reflect on the location or design of the well."
ORGANIC GARDENING, FARMING NOT NEW

Organic gardening and farming is catching on with some groups as a partial solution to our environmental problems, but the use of organic matter has been recommended by scientists and used by expert gardeners and farmers for years.

For example, adding compost (rotted organic matter) to the soil and mulching garden plants to conserve moisture and kill weeds are two practices which successful gardeners have long used.

But when you talk of buying organic foods for your dinner table, the only thing certain about them is that they will cost more, a University of Minnesota soils scientist says.

Defining organically grown foods as those which are "supposed to be grown" without the use of inorganic commercial fertilizers or pesticides, Curtis Overdahl says there is no difference between foods grown with inorganic commercial fertilizers or with organic manures.

"The organic manures will first break down to inorganic forms--the same as commercial fertilizers--before plants use them," Overdahl said. "So-called 'organically' grown crops are actually inorganically produced the same as from chemical fertilizers. The concept is just a myth."

Concerning pesticides, there is no certainty that organically grown foods have less pesticide residues than other foods, according to University Entomologist Dave Noetzel.

"There is no way of knowing whether pesticides have blown from farm to farm. Residues of pesticides left in the ground from years back also make it difficult to say how free of chemical residues a food might be," Noetzel stated.
A recent article in the Minneapolis Star quoted Robert W. Marrs, the acting food and drug officer of the Minneapolis district Food and Drug Administration, as saying that "there is no significant or general difference between the residues found in so-called organic foods and other foods. The only difference," he said, "is in the price."

Farmers today have unknowingly become "organic farmers," Overdahl said. On any high producing farm, chemical fertilizers, even though inorganic, produce large quantities of organic residues that are incorporated into the soil. It isn't the nutrients from organic matter that are so important, but organic matter improves the soils physically so that they hold more moisture. Then less runs off to pollute lakes or streams.

Today's farming probably puts back twice as much organic residue into the soil compared to 30 or 40 years ago, Overdahl explained.

"Proponents of a certain organic way fail to recognize our least expensive source of organic matter— that obtained indirectly through inorganic materials. The purchase of organic fertilizer is impractical unless material can be obtained for 5 to 10 dollars per ton. Usually residues will return two to four tons per acre each year and are byproducts that cost practically nothing," Overdahl said.

Standards set up by the Food and Drug Administration to monitor the amount of residues in the marketing of food products provide wide safety margins, said Mary Darling, an extension nutritionist with the University.

"The housewife has fostered the development of convenience food items. She wants the opportunity to work or participate in community activities, to be able to leave the chores of food preparation for other activities. And as consumers, homemakers have demanded a standardized product—one that you can depend on to have the same quality time after time," she said.

"So additives have been used by the food industry to maintain flavor, texture and color, to block oxidation and inhibit mold. There is no credible indication that these additives are harmful, but since they're not natural, they are suspect.

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"We have run scared as far as DDT is concerned. We did not have a full understanding of the effects of DDT--many species of birds have been victims. But the risk to human nutritional health is small.

"DDT has saved many infants' lives in the tropics where malaria formerly took the lives of many. Food additives and residues in foods have very little risk to our health compared to excess weight or bacterial contamination," the nutritionist added.

However, she pointed out that there are positive side benefits of the organic food movement. "For one thing, the susceptibility to snack on convenience foods and the sweet tooth have led many people into unhealthy eating habits, and some diet changes are needed. Organic foods are one alternative, another choice is fresh fruits and vegetables, whole grain or enriched breads and cereals, dairy products, meats and a few snacks--if you can afford the calories. We need to limit our use of simple sugars.

"Also, government and the food processing industry are examining their responsibility to consumers. Better fortification of processed foods and more nutrition information on the foods we buy should result."

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SANITARY LANDFILLS
STOPGAP MEASURE
FOR SOLID WASTES

Recycling is the ultimate answer to the solid waste problem, but sanitary landfills are the best alternative in the meantime. That's the conclusion of most environmental experts.

In Cloquet, the new sanitary landfill is working well, according to Walter Bolin, the landfill supervisor. However, there are things individual citizens can do to make the job at the landfill easier and cut down on pollution at the same time.

Bolin gives these suggestions to help make the landfill work more effectively:

--Schools could put scraps in plastic containers. Packaging this material makes it easier and cuts down on the chance of spilling.

--Package newspapers. Loose paper is a problem since it's apt to be caught by the wind on the way to the dump, or even after it gets to the landfill but before it can be covered with a layer of earth.

--Flatten and tie cardboard boxes.

The sanitary landfill is a large improvement over open dumps, Bolin says. "We haven't seen a rat around here in 4 or 5 months -- they were common at the old open dumps.

"In addition, there's hardly any burning, so air pollution problems are reduced." The sanitary landfill works like this: A layer of garbage is dumped in the landfill area, then spread and leveled. Then a layer of dirt is spread over the top.

Eventually, old sanitary landfill sites may be used for recreational purposes. "The area where we have the dump now would make a good area for a golf course after the landfill has been completed," Bolin said.

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add l--solid waste

However, despite the advantages of the landfill, it's important to note that improvements cost money. Bolin points out that the sanitary landfill costs about $2,000 more per month for the city of Cloquet than the old open dump system. This illustrates what more and more environmental specialists are saying lately--it takes money to protect and preserve our environment.

The total number of open burning dumps in Minnesota may be about 1,000, according to the Minnesota Pollution Control Agency. Experts in PCA estimate that about 200 sanitary landfills could handle the state's solid waste disposal problems. There are 134 dump sites in St. Louis County and 34 in Itasca County.

But closing a dump is easier said than done. "When we've tried to close down some small dumps, people have dumped right on top of the NO DUMPING signs," said Richard Herman, county extension agent in South St. Louis County.

His experience is echoed by Jim Sullivan, zoning officer for Itasca County. "We've tried to close some smaller dumps down and people raised so much of a ruckus it was unbelievable," he said.

Some people didn't want to go as far as 6 to 8 miles to the dump--they were used to going only 2 or 3. "But you can't have your cake and eat it too--these same people want lower taxes, but complain when you try to do some economizing," Sullivan added.

Not all experts are sold on sanitary landfills. For example, Prof. Kenneth T. Whitby, chief of the University of Minnesota's Environmental Engineering, said burying trash may cause more problems than burning it. He characterized some of the household trash now being buried as a "witches' brew of chemicals."

These chemicals from insecticides, household poisons and even tin cans could dissolve in the ground water, making it toxic, according to Whitby. Another problem with burying trash is that we may run out of land in 50 years.

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add l--solid waste

However, officials from the Solid Waste Division of the Pollution Control Agency said that sites for landfills are carefully selected to make sure they're located where soil conditions should prohibit materials from reaching into the groundwater. Also, the problem of using a lot of land for burying trash will be reduced in future years when recycling efforts are increased, although some materials "will always have to be buried."

Honest differences of opinion between experts are nothing new to the environmental issue. Whitby, who says there is "no ready solution to pollution," believes that pollution study has gone from the "stage of activism" where many people pushed the panic button to a new stage where there will be more sophisticated study and research. He thinks this new stage will help solve the problem.

# # # #
HOUSEWIVES CAN
FIGHT POLLUTION

Housewives--don't think your hands are tied when it comes to controlling pollution. Don't see yourself as an innocent bystander while the corporation giants are the main contributors to the pollution problem either.

Corporations are fast being legislated to the point where they have to meet pollution control standards--and they're moving to meet these standards, said Bob Ray, Minnesota Pollution Control Agency.

The biggest threat to lake pollution is excessive nutrient discharge from many minor sources--namely sewage from individual sewage systems that were inadequate to begin with or are operating improperly.

So, make sure the family sewage disposal system is adequate. Your county extension agent can help you. Ask for the publication entitled "Town and Country Sewage Systems."

Aside from making sure that individual sewage disposal systems are adequate, here are some other things housewives can do to help combat pollution:

--Don't put food in sink disposal systems. These are one of the biggest pollution threats coming from homes, according to Ray. He suggested putting relatively dry garbage such as bones, apple cores and orange peelings into something like an empty milk carton where it can go into the garbage.

Home garbage disposal units on sewage systems that empty into bodies of water should be banned, added Clifton Halsey, extension conservationist at the University of Minnesota.

"Garbage disposal units are a "very easy, convenient way of disposing of wastes at a high public cost. For the present, the sanitary landfill is a better way of disposing of food wastes, although it's less convenient. If we weren't so picky with our food, there'd be less waste," Halsey said.

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--Make sure the family car is tuned up. Not only will it contribute less pollution to the air, but the car will run better. Automobiles contribute more to air pollution than all other kinds of air pollution put together, according to the Minnesota Pollution Control Agency.

Have the positive crankcase ventilator valve checked and cleaned. This valve has been mandatory on cars manufactured since 1968. If it's functioning properly, it will cut down on air pollution. Also, points, plugs and rings should be checked regularly.

--You can still use an approved incinerator to burn rubbish (an approved incinerator is one with a double chamber—in effect, a second fire burns the smoke and refuse from the first fire). However, a better method than burning is simply packaging leaves, grass clippings, trimmed trees and having your garbage man haul them away. As a rule of thumb, whenever you burn five pounds of garbage, you produce four pounds of air pollution and one pound of ashes, Ray said.

--If there's a recycling center near you, have your old newspapers, plus tin cans and nonreturnable glass bottles recycled. The recycling center in Duluth is located on 16th Avenue East, just off London Road, in an old railroad depot. The hours are Monday, from 1 p.m. to 8; Friday from 5 p.m. to 8; and Saturday from 9 a.m. to 6 p.m. They will accept newspapers, tin and aluminum cans and bottles. Labels should be removed from cans and the cans should be crushed flat (remove both ends and smash them). Bottles should be washed.

Newspapers should be folded in four, then tied in bundles 2 to 3 feet high.

--Buy returnable bottles when you purchase beverages. This is the ideal solution to the waste can problem. You're going back to the grocery store anyway, so count on taking returnable bottles back with you.

--If you buy small items, don't have the clerk put them in a paper bag. Carry them. Some consumers have sewed their own shopping bags, complete with ecology symbol.
add 2—housewives

—Colored dyes which are used in tissue and toilet paper are generally biodegradable, so they're no problem. However, if you wish you can use a colored dispenser in the bathroom and use plain white tissues in it.

—Although substitute products are now listed as being worse pollution sources than phosphates by the Surgeon General's office, women are still encouraged to buy detergents with the least amount of phosphate. Soon you'll be able to tell how much phosphate is in detergents, according to the Minnesota Pollution Control Agency. A law recently passed by the Minnesota Legislature requires manufacturers to provide a listing of the phosphate content. PCA collects this information, then passes it on to retailers, who are required by law to display the phosphate content of the detergent on a sign close to the display.

# # # #
DOES YOUR SEWAGE SYSTEM POLLUTE?

What can you as an individual citizen do about pollution?

Don't make the assumption that individuals can't do much—that industry is the big environmental villain. Many specialists think it's only a matter of time until the big industrial polluters are identified and controlled either through legislation or other public demand. But controlling pollution caused by individuals may be a much bigger job.

Individual sewage systems are one of the biggest problems in our area, said Carlton County Extension Agent Dave Radford. So if you're concerned about pollution, start right in your home and make sure your sewage isn't running into a lake or directly into the road ditch, freezing up culverts in the winter. Ask your county extension agent for a copy of Extension Bulletin 304, "Town and Country Sewage Systems."

"Too many people build a $20,000 home and then try to save pennies on a sewage system. Oftentimes the result is an inadequate system which contributes to pollution," said Bruce Brown, Carlton, a member of the regional sewage commission and a former member of the Carlton County Land Use Planning Commission.

Although County Agent Radford gets many questions about sewage disposal systems (the bulletin on "Town and Country Sewage Systems" is the most popular one given out by his office), he says many people end up cutting corners.

"People will come in and inquire about building a sewage system. First I tell them they should have a tank with at least a 1,000-gallon capacity. They say sure, that's fine, but I can tell they aren't very enthused. Then I may tell them to put in a leach field which runs at least 400 feet from the tank and they get even more wary—they'd figured on only about 50 feet. When they finally get the system
add l--sewage

put in they have a 50-foot leach field and a small 500-gallon tank that will be overtaxed soon after it's installed." Going to a 1,000-gallon tank would add only about $50 above the cost of a 500-gallon tank, including installation.

However, some public officials in the Arrowhead area say most new sewage systems--those built within the past few years--are fairly well up to standards.

"Most of our recent sewer system installations have been pretty good--people want to comply with the standards since they want to protect their natural resources against pollution," says Jim Sullivan, Itasca County zoning officer located in Grand Rapids. However, some of the older sewage systems are inadequate and will need to be remedied. "But I'm confident these people will comply if we give them a reasonable time period--such as 12 to 18 months," Sullivan added.

Brown says most people living in the Western Lake Superior Sanitary District should have a complete system of mains and interceptors by 1975. The system will serve all towns and villages, although people isolated 2 or 3 miles from a population center probably won't be able to hook onto the system. "If we can get federal funding for the $40 million project, we should be able to significantly upgrade the quality of sewage disposal systems," he said.

However, the project hinges on federal grants and funds. "We must be able to get about 75 percent of the funding through federal sources or we can't afford it," Brown emphasizes. He encourages people interested in seeing the project completed to write to Representative John Blatnik.

Some people think holding tanks instead of septic tanks with a soil absorption system may be a more feasible system of sewage disposal on certain soil types. For example, heavy clay soils don't provide enough absorption for a soil disposal system, and light, sandy soils may have a percolation rate which is too great, resulting in effluent which passes through the subsoil and into ground water tables too rapidly.

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However, Roger Machmeier, extension agricultural engineer, University of Minnesota, says he thinks people haven't given septic tanks and soil absorption systems a fair chance.

"Most failures in sewage disposal systems result due to the installation of an inadequate system, or from failure to provide proper maintenance," he stated. "If people go to a holding tank, they'll have to be prepared to reduce water use, possibly doing the laundry in town and using an incinerator toilet.

"A typical family of four depositing all sewage in a 1,000-gallon holding tank would need to have the tank pumped every 3 to 5 days and the annual cost could run up to $2,000. Families would have to drastically reduce water use in order to make a holding tank feasible."

The cold weather in northern Minnesota should not hinder a properly functioning septic tank--providing there's normal bacterial action before cold weather sets in.

Regarding county zoning regulations, Machmeier said they must be adequate, and secondly, they must be enforced, "In my opinion, the minimum sized septic tank should be 1,000 gallons, and larger sizes are needed if homes have four or more bedrooms or a garbage grinder that empties into the septic tank.

"I don't think counties should approve permits for a soil absorption system unless results of at least two percolation tests establish that the soil is suitable," Machmeier added.
GOOD OLD DAYS
WEREN'T QUITE
POLLUTION FREE

Some people wishfully advocate a return to "the good old days" as the solution to our pollution problems.

But not all things were pollution free in the old days either. For example, old settlers tell stories about streams which ran yellow from buffalo manure. Buffalo also transformed many clear streams into mud holes. Settlers along the Red River in western Minnesota tell about farmers who shoved manure plus dead horses and cattle down the river banks in winter and let the river carry the refuse away next spring.

Or, switch to the air pollution. A walk outside in any medium to large size city 25 or 30 years ago risked a soot shower--courtesy of coal furnaces.

Other old timers talk about horse manure on town streets and the tremendous air pollution caused by burning strawstacks after threshing. They say forest fires in bygone days were more serious than recent ones.

However, you have to admit that pollution is caused basically by people. "All pollution is caused by man's search for comfort," said Richard D. Schein, director of environmental quality programs at Pennsylvania State University.

Charles Godfrey, the retired Itasca County land commissioner who lives in Grand Rapids, first came to Grand Rapids in 1902. "At this time there were no resorts on Lake Winnibigoshish and the lake was crystal clear. This was true of all the lakes and streams--I drank out of practically every one between here and International Falls," he said.

Although Godfrey thinks industry has contributed a good deal to the pollution problems, he thinks industrial polluters are trying to remedy past mistakes, although it will take a "while to catch up."

-more-
add l--good old days

One of our problems now is that individual consumers bring so much waste home when they return from a shopping trip. For example, when you buy a package of gum, you get more wrappings than gum. Or, compare the actual produce against the wrapping and packaging when you return from grocery shopping.

Individual consumers may feel they're powerless to reduce waste, and businessmen likely maintain that packaging promotes sales. But if you're seriously interested in cutting down on the mountain of solid waste you bring home from the store, consider organizing a letter writing campaign to manufacturers. Or, if you want to attract a few lifted eyebrows at the store, remove all the wrapping at the store and bring your produce home in a large bag.

However, most people aren't quite ready to take these steps yet, and here lies one of the problems in the pollution control effort—apathy. Too many people like to point fingers at the other guy, but aren't willing to do anything themselves. Everyone is against pollution, but when it comes to providing the dollars interest isn't as high.

People don't realize the cost in tradeoffs involved to completely eliminate certain types of pollution. "For example, do we want to close down U.S. Steel or Northwest Paper Co.? Or, do we want to shut down all of northern Minnesota except to use it as a recreational area for Twin Cities people? These are questions that most people don't bother to grapple with," says Bruce Brown, Cloquet, a member of the regional sewage commission.

But, don't become overly pessimistic about our environmental problems. Many experts say we're winning the battle against pollution. States Eugene Guccione, senior editor of Engineering and Mining Journal, "We are winning the war against pollution--this is the biggest untold story in America today...but the fact that we are effectively reducing pollution, and that predictions of environmental doomsday are unwarranted, should not lead us into premature victory celebrations."
Brown also is optimistic. "Before too long we'll have the St. Louis River cleaned up. We'll be able to meet our water quality standards, and solid wastes will be taken care of," he predicts.

"But to really do the job we need increased public awareness. Too many people contribute to pollution through careless and thoughtless acts. Witness the boy who throws chewing gum on the floor, motorists who litter, people who dump garbage along roadsides or in dumps that are clearly labeled closed. These people are only a small minority of our total population, but they spoil things for the remaining 99 percent."

# # # #
Poverty in Minnesota:

PROGRESS HAS A HIGH COST

Minnesota made progress in its fight against poverty during the 1960's, but largely, poverty remains embedded as a cancerous sore in the sides of many communities.

This is the assessment of Emiel Owens, a University of Minnesota visiting professor of agricultural and applied economics in Minnesota Science, a magazine published by the University's Agricultural Experiment Station.

In explaining what the state is doing about poverty, Owens cites figures which show that Minnesota's expenditures on Social Security benefits have risen nearly four times that of 1960. About 71 thousand recipients collected benefits of nearly five million dollars in 1960 compared to almost 300 thousand collecting $18.4 million in benefits in 1970.

Some of the poor not eligible for Social Security are granted funds from the general relief program. From 1963 to 1970, nearly $50 million was spent to assist about 22 thousand recipients for maintenance and foster care of children.

Another program, Aid to the Disabled, experienced a 309 percent increase in caseloads and about a 504 percent increase in expenditures during the past decade. A majority of the recipients suffered from mental disorders and complications of the central nervous system, Owens said.

Federal, state and local partnership is bringing increasing success in fighting poverty and associated problems. "Improved programs have increased the turnover rate among alcoholics to two and one-half times that of 1954-55. And although one-fourth more mentally ill patients enter our hospitals today, 50 percent more are released than 15 years ago," Owens explained.

- more -
Another program, Aid to Families with Dependent Children (AFDC), has been maintained at the greatest cost, he said. In 1960 the caseload was just over 10 thousand with an expenditure of nearly $20 million compared to the 1969 caseload of 22.5 thousand at a cost of nearly $61 million.

The Work Incentive program (WIN) was initiated in 1970 to assist AFDC recipients through a referral system to secure employment, on-the-job training, or to complete their education. In Minnesota, some 500 to 700 unemployed fathers are expected to enroll in the WIN programs in 1971, Owens said.

Poor families are purchasing about $2.3 million worth of food stamps monthly now, Owens said. In August 1970, some 109 thousand people in the state were participating in that program.

Other programs include daytime activity centers for the mentally retarded, Family Planning Service and the Governor's Council on Aging.

The welfare crisis is often spoken of in terms of skyrocketing expenditures and number of recipients. However, it is not misery, but social and economic advances that generate hope and raise expectations in the poor, he said.

"It has been suggested that if the thousands of Americans had stayed on the land, the problem would have stayed there out of sight. But technological changes, a declining importance of the farm labor force, World War II, and inadequate use of resources have forced both Black and white inadequately trained farm workers to urban centers, where they have multiplied. Welfare has kept many of them alive, but the price has been high, resulting in a heavy toll on those people who accept assistance, those who administer it, and those who pay for it," he said.

"The physical discomfort and indignities the poor must suffer are enormous, but the psychological damage inflicted by life in the slums is perhaps even more critical. Their personal tragedies are unrecorded, but contemporary history is writing large the price society pays for their failure," Owens said.

Copies of Minnesota Science are available from the Bulletin Room, University of Minnesota, St. Paul 55101 and from County Extension Offices throughout the state.
DECENT HOUSING ONLY A DREAM FOR POOR MINNESOTANS

Decent housing is not easy to come by if you are one of Minnesota's thousands of poor people.

Spiraling land and construction costs have priced 80 percent of the state's poor out of the new home market during the 1960's. Over 50 percent of the families in the Metropolitan area were priced out of the entire housing market, according to a University of Minnesota Visiting Professor of Agricultural and Applied Economics, Emiel Owens. His remarks appeared in a recent issue of Minnesota Science, a magazine published by the University's Agricultural Experiment Station.

For Blacks and Indian Americans, the housing problem is different. The nonwhite population was not afforded the same access to adequate housing, regardless of income. Their problem was compounded by racial and other discriminatory constraints, Owens said.

How bad is the Minnesota housing problem? In 1969, the housing supply of the two central city counties of Hennepin and Ramsey was 17 and 16 percent substandard, he said.

Owens'1960 figures show 30 percent of the over 1.1 million housing units in the state to be substandard.

"Substandard homes ranged from a high of 69 percent of the housing in Clearwater County to a low of 13 percent in Anoka County. In 17 of the state's 87 counties, 50 percent or more of the housing was rated substandard," he explained.

more--
add 1--decent housing a dream

Spiraling costs of housing included a 23 percent raise in the cost of a new one-family house from 1960 to 1966 in the Twin Cities area--from $15,550 to $19,098. Property values for existing one-family homes rose 4.9 percent during the same period, from $15,550 to $16,302, Owens said.

Just how badly the poor have been shut out of the new home market is shown by the FHA loans during the 1960's. In 1960, nearly half of all FHA loans in the Twin Cities area went for new homes priced below $14,000. By 1966 not a single FHA loan was granted in the Metropolitan area for a home below $14,000.

In 1968, the average cost of a new one-family home had risen to $22,798. By August 1969, that cost had ballooned to $25,838, he said.

Land cost also rose sharply during the 1960's. By 1966, the average site costs for a FHA one-family unit had jumped to $3,252 from the cost of $2,173 in 1960--an increase of 50 percent, Owens said.

Looking to the future, Owens said that Minnesota will need over 625 thousand new housing units from 1960 to 1980. That amounts to over 31 thousand new units needed each year on the average. Currently, however, only 24 to 27 thousand units are being constructed each year, he said.

Copies of Minnesota Science are available from the Bulletin Room, University of Minnesota, St. Paul 55101 and from County Extension Offices throughout the state.

# # #
Poverty in Minnesota:

'Living Sick' Common for State's Poor

The health status of Minnesota's white and Indian Americans improved during the 1960's. The state's Black citizens did not fare as well--their health status deteriorated using infant mortality rates as a criterion.

The 1960 infant mortality rate per 1,000 live births for Black households which was 3.4 percent increased to 3.7 percent by 1969. But infant mortality rates for whites and Indian Americans declined to 1.8 and 2.3 percent respectively by 1968, according to Emiel Owens, a University of Minnesota visiting professor of agricultural and applied economics. His remarks are reported in *Minnesota Science*, a publication of the University's Agricultural Experiment Station.

Reasons for the increase in Black infant mortality rate are unknown, he said. But there is evidence that "social and economic deprivations, along with the uneven distribution of medical care, are a large part of the problem."

"Passage of medicare legislation during the 1960's insured many older state citizens the medical care they need, but the same access has been less extensive for the young," he said.

Owens said that in talking with ghetto residents, he found that the poor man's idea of feeling good is "not being sick as usual."

Another attitude found among the poor, he said, is that while the life expectancy has been increased for most citizens, the health status of the poor is deteriorating. The Black infant mortality rate in the state during the 1960's tends to support this idea, he said.

One former sharecropper family head expressed the concern of the poor about health this way: "People didn't use to be sick as much as they are today. They died when they got sick and didn't live sick."
add 1—for state's poor

"Living sick is a strange condition to be prevalent in a state that spends $100 million annually on health care," Owens said.

"Nationwide, one household out of nine has someone who is seriously ill at this moment. Among the rural poor, the ratio is one-in-five, and among the white Appalachians, nearly one-in-three.

"Statistics are said to be palatable only in marginal quantities, but a small dose of statistics may reveal large truths about a state's tolerance of criminally inadequate health care delivery service." Owens said.

Copies of Minnesota Science are available from the Bulletin Room, University of Minnesota, St. Paul 55101 and from County Extension Offices throughout the state.

#•# •# •# BJC
Over 13 percent of Minnesota's more than one million families have something in common today: They are living in poverty.

This constitutes 22 percent of the state's population which lives at the poverty line established in 1970 by the Office of Economic Opportunity, according to a University of Minnesota visiting Professor of Agricultural and Applied Economics, Emiel W. Owens. He reported this assessment in the recent issue of Minnesota Science, a magazine published by the University's Agricultural Experiment Station.

The number of poverty families by county ranges from a low of 5.6 percent of families in the suburban county of Anoka to a high of 34.4 percent in the rural, sparsely populated Mahnomen county, he said.

In 1969, an average of 1,616 poverty families resided in each of the 87 counties of the state. In 1965 rural areas claimed 358,000 individuals living in poverty or 67.7 percent of the state's poor.

Minnesota's poor fit this stereotype, Owens said: "Picture someone with limited education and poor health. He may be a farm laborer or an operator of a small farm. He either lives on the farm or has migrated to an urban center. Make him a minority member--chances are he is among the state's poor. If this is a woman living under similar circumstances plus heading a household of dependent children, with no adult male present regularly, almost surely she is poor."

Contrary to what many people believe, Minnesota's urban and rural poor are not in that condition primarily because of ignorance or indifference, he said.

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"Being poor is often the by-product of community and working conditions over which the individual has little control. The poor, then, find themselves trapped, both within themselves and by external circumstances that grip them firmly in the jaws of poverty," he explained.

"For many of the slum dwellers, the path to productivity has been closed for reasons of poor health or the lack of job opportunities, necessary skills, education, housing, community services and protection from exploitation."

Although the roots of poverty in Minnesota are complex, Owens stated part of the problem:

In rural Minnesota, the small farmer can no longer compete with or break into the present agricultural production system which demands larger acreages, greater technology, more efficiency and less labor.

Furthermore, the once abundant timber and mining industries are declining and new industries are not replacing them.

The seasonal nature of some industries, such as tourism, has led to a high level of unemployment and underemployment during the off-season, Owens said.

Other parts of the state's poverty problem include lack of sufficient education or other training, the state's harsh climate which requires higher costs for clothing and housing, and the family environment, he said.

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# # # #
EXTENSION AGENTS TO MEET NEXT WEEK

Extension specialists from throughout Minnesota will gather in St. Paul next week (Oct. 11-14) for the annual conference of the University of Minnesota's Agricultural Extension Service.

About 250 agents from county and area extension offices throughout the state, and about 150 subject-matter specialists and administrative staff from the University's St. Paul Campus will attend. The event will be held at the St. Paul Hotel.

Theme of this year's conference is "The Extension Professional: Priorities and Personal Growth." Objectives of the conference are to identify criteria for setting program priorities and improve skills in determining the direction of Extension programs, according to Evelyn Quesenberry, conference chairman and state leader for Home Economics Extension.

Keynote speakers include two experts in personal development, Dr. Reuben Gornitzka and Dr. Otis Maxfield. Gornitzka is an author, confidential counselor to executives and leaders in the business and entertainment world, minister and radio and television personality. He is the founder and president of Direction, Incorporated, Denver, Colorado.

Maxfield is president of the American Association of Pastoral Counseling, a consultant to NASA on mental health and the director of training for the American Foundation of Religion and Psychiatry in New York.

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Other conference speakers include Marvin A. Anderson, director of the Cooperative Extension Service, Iowa State University; and William Griffith, associate professor of education, University of Chicago.

The four-day conference will begin with registration at 10 a.m. Monday, October 11, and conclude with an Honors Breakfast Thursday morning.
NEW CORN VARIETY DEVELOPED

A new high-lysine corn variety recently developed by a Minnesota based firm has been confirmed by University of Minnesota tests to contain more of the sulfur amino acids which limited the protein value in earlier high-lysine varieties for poultry feeding.

Efforts by seed corn companies to improve the nutritional value of corn have great significance for a world facing a food shortage, according to Animal Nutritionist James Nordstrom, University of Minnesota. "If our record 1971 corn crop of over five billion bushels had been high-lysine corn it could supply the protein needs of 400 million people--twice our present population--for one year.

"The contrast in protein value of regular and high-lysine corn can be illustrated by clinical tests in South America where high-lysine corn has been used to cure severe protein deficiencies in children caused by diets based on regular varieties," Nordstrom said.

Improved strains of high-lysine corn could have an impact in Africa where corn is an important staple, according to University Agricultural Economist Willard Cochrane. "In Africa and South America this type of corn won't be important as an animal feed," he said. "They can't afford the luxury of animal meat."

The new variety that was announced last week by the Trojan Seed Co. of Olivia combines two recessive genes--Opaque-2 and Floury-2--which give it a better balanced protein than is found in older lines of high-lysine corn.

Seed supplies of the new variety should be commercially available by the spring of 1973, according to company officials.
'LIVABLE' PLAN IN OFFING FOR UM ST. PAUL CAMPUS

A plan to make the University's St. Paul Campus more inviting for students, staff members and visitors will be presented this fall to the University's Board of Regents and campus groups by a Toronto planning firm.

John Andrews Architects of Toronto in early September presented a preliminary comprehensive planning report on the campus to members of the Board of Regents' Physical Plant Committee. A more specific plan with a frame of reference to guide the direction of future campus development will be presented by the firm in late October or November, Hugh Peacock, University planning director, said.

Although the planners were impressed by the esprit de corps among faculty and students, they believed that some parts of the St. Paul Campus were under-utilized, Peacock said. After working and class hours there are only limited facilities to foster activities on campus, yet student interaction out of the classroom should be a critical part of education, he added.

Only a very limited number of commercial facilities are located adjacent to the campus to serve the students, so students have to use cars when only one eating place is nearby. But a campus with more than one spot near it will be more livable, Peacock said.

The St. Anthony Park neighborhood is an asset that should not be disturbed with commercial development or by motor vehicle access to the campus. This may require commercial development elsewhere, possibly on University land, the planners said.

Commercial development should be planned for and not let happen in a haphazard way, they said. --more--
add l--livable plan for st. paul campus

Major access to the campus should be to the east, reducing the amount of traffic on Cleveland Avenue on the west. Parking should be provided for motorists making brief visits to the campus, but the bulk of the parking should be on the perimeter, the planners suggested.

Not all old buildings should be demolished, just because they are old, but some of historic note should be preserved, they said.

They stress that the campus be developed with a more even distribution of facilities. They are expected to identify areas where buildings shouldn't be constructed, such as wildlife habitations, plot lands and areas where there are existing stands of trees.

The present analysis suggests a curved north-south development connecting all the present buildings and preserving landscape features and the campus' scale which is provided by high elm trees. Buildings would be of a scale compatible with the existing campus and would be located with people in mind to allow for sunny spots and places protected from the wind.

The planners expressed concern that the giant bulbous water tower on top of the hill was surrounded mostly by asphalt rather than grass, shrubbery and flowers.

Construction projects underway on the campus will be integrated with the planning process and the architects working on some of these buildings have been furnished with preliminary planning directives, Peacock said.
SLIGHTLY BETTER EGG PRICE PICTURE SEEN

Although egg prices this coming market year are expected to average about two cents more than the preceding year, returns will be near production costs for many producers, Melvin L. Hamre, extension poultry specialist at the University of Minnesota, said.

This means producers will have to pay close attention to good management practices to maximize the number of salable eggs per bird, he added.

The rise in egg prices for the next year was predicted in the latest Poultry Survey Committee quarterly report. New York wholesale large egg prices during the next quarter are expected to average about 39 cents a dozen. During the first three quarters of 1972, these prices are expected to remain above the same quarters of a year earlier when egg prices were extremely low.

A one to two-cent a dozen lower production cost may be realized primarily due to lower feed costs, if this year's large predicted feed grain crop materializes, Hamre said.

He based his projections on the industry's continuing efforts to solve over-production problems. Increased production per bird likely will keep egg supplies about the same as levels a year earlier. The size of the nation's egg laying flock on Jan. 1 probably will be about two-percent below the size a year earlier.
LINCK NAMED DEAN OF AG COLLEGE

Albert J. Linck, assistant director of the University of Minnesota's Agricultural Experiment Station, has been named dean of the University's College of Agriculture effective Oct. 16.

He was appointed by the University's Board of Regents on Friday (Oct. 8).

The regents last year approved the creation of three separate faculties and administrations in the old College of Agriculture, Forestry and Home Economics. The former Schools of Forestry and Home Economics were elevated to colleges, resulting in a College of Agriculture, College of Home Economics and College of Forestry.

Hubert J. Sloan headed the College of Agriculture until he retired in July at which time John A. Goodding was named acting dean.

Linck joined the University of Minnesota faculty in 1955 as a researcher and teacher in plant physiology, doing studies on the translocation of organic and inorganic compounds, the mechanism of herbicide action and plant growth phenomena. He has been assistant director of the experiment station since 1966.

He was born Aug. 18, 1926, in Portsmouth, Ohio. Linck received three degrees from Ohio State University, Columbus, Ohio, including a bachelor of science in botany in 1950, a master of science in 1951 and a doctorate in 1955, both in plant physiology.

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He was director from 1964 to 1968 of the National Science Foundation Academic Year Institute in Biology; president, 1971 to 1972, Minnesota Chapter, Sigma Xi Society; national president, 1960 to 1964, Gamma Alpha; council member, 1960 to 1964, American Association for the Advancement of Science, and chapter president, 1966 to 1967, Gamma Sigma Delta, agricultural honor society.

Linck is a member of the International Society of Plant Morphologists, Botanical Society of America, Scandinavian Society for Plant Physiology, American Society of Plant Physiologists, Japanese Society of Plant Physiologists, American Institute of Biological Science and Minnesota Academy of Science.

He has been the author and co-author of more than 40 scientific papers.
LESS DUPLICATION OF RESEARCH CALLED FOR

St. Louis, Mo. -- More special emphasis programs and less duplication of research in the future were called for today by the director of the University of Minnesota's Agricultural Experiment Station.

"A certain amount of duplication is necessary, but we're at the point where we no longer can afford all state, federal and industry research in the same arena.

"We must determine who is best able to perform certain types of research and then plan accordingly," said William F. Hueg, Jr. He spoke at the annual meeting of the Agricultural Research Institute Tuesday, October 12.

"Science is entering a "not so golden era where, despite tremendous contributions by basic research to the nation's productivity and defense capability, a few congressmen are calling research a hobby too expensive for an age that calls for quick solutions to immediate problems."

This is reflected in lower research budgets while at the same time, there are increased demands on state agricultural experiment stations to move into new areas and away from more traditional programs, Hueg added.
add less duplication

"One possibility for meeting these increased demands in lieu of reduced funding might be an exchange of scientists among industry, federal and state government units. For example, what would be the benefit to industry if a state experiment station or USDA scientist worked in that industry for a year or two?"

Hueg also called for the need to achieve an appropriate balance between research on today's problems and those "appearing to be theoretical but which will be essential for the decades ahead."

# # #
To all counties

Immediate release

IN BRIEF...

Use Chemical Before Ground Freezes. Weed killers should be applied in alfalfa stands after the first killing frost when alfalfa is dormant. But apply them before the ground freezes, cautions University of Minnesota Agronomist Oliver Strand.

The first killing frost generally occurs after October first in the northern half of the state and after October 15th in southern Minnesota. MCPA amine can be used in mixed alfalfa-grass stands to control broadleaf weeds. But simazine should be used only on pure alfalfa. Strand says simazine should not be used on sands or loamy sands.

For more information, get Extension Folder 212, "Cultural and Chemical Weed Control in Field Crops."

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Used Farm Machinery. Buying used machinery with useful life remaining can be one way to reduce machinery investment. There's no strict rule to follow that shows when used machinery can be purchased to reduce machinery costs. But one rule of thumb is that farmers can justify using second-hand machines until about three-fourths of the satisfactory life is used up. At this stage repair costs and repair time increase to the point where it may be cheaper to trade. Here are some things you should consider before buying second-hand machinery: condition of the machine and how much life remains; cost of the used machine compared to new cost; availability of repairs; availability of labor; timeliness losses; and efficiency of the used machine compared to a new one.

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-more-
add 1--in brief

*Handle Chemical Fires Carefully.* Smoke and fumes from fires in chemical storage areas can be lethal. If a chemical fire occurs, keep firemen and all personnel out of the smoke, say University of Minnesota extension entomologists. Take precautions to prevent the contamination of water supplies, nearby crops or animals and stored products from indiscriminate use of water on a fire or from drainage of contaminated water from the area. Do not use pesticides left after a fire until they have been properly checked for identity, purity and usefulness.

# # # #
An informative, inquisitive shopper is his own best defense. Consumer advocates may revolutionize the business world, but buyers still have some responsibility for inquiry.

Consumer experts have suggested five simple questions you should ask about the warranty you receive with a new appliance. Consider the answers a major factor in the selection of the equipment.

1. Does the warranty or guarantee cover the entire product? Only certain parts? Is labor included?

2. Who is responsible for repairing the product? The dealer? A service agency? The manufacturer?


4. How long does the warranty or guarantee last on the entire product? On individual parts or assemblies?

5. If the product is out of use because of a service problem, or if it has to be removed from the home for repair, will a substitute product or service be provided? By whom?

In addition to reading and understanding the operating instructions, you should make sure you can find the answers to your questions about warranties or guarantees. Ask questions until you fully understand the answers.

If and when you buy an item, keep a service record of the appliance. This will help in determining the appliance’s performance and in deciding whether to buy the same brand next time.
IS CLUTTER YOUR PROBLEM?

Many experts say that good housekeeping is not the sweeping, washing and polishing. It's just "picking up the clutter." Have you ever had to get a living room presentable when unexpected company turned into the driveway? In short order you picked up, put away and polished the table tops with your apron tail. And, things didn't look too bad, did they?

Here are some suggestions from Mary Frances Lamison, University of Minnesota home management specialist, that might lessen the last minute frenzy:

* Make picking up and putting away a habit for every member of the family. The last one to read the newspaper should put it somewhere off the floor.

* Teach everyone in the family where things belong. Is it only mother who knows where the latest catalog is? Where the corn popper is kept? When a new item is put away, tell everyone where it belongs when not in use.

* Throw away items that are no longer useful. If something is broken and cannot be repaired, get rid of it. Don't put it in the basement or the attic.

* Give each family member certain housekeeping tasks. Small children can empty waste baskets into a large one. Or, decide as a family who is going to do what.

* If possible, provide everyone in the family with a place to keep his treasures. It may be his own room, his dresser or desk, a drawer of his own, a shelf, or even a box that no one else touches.

* Have a garage or porch sale. Accumulate items from entire family and perhaps a neighbor could join in. Let your friends know about the sale, and you'll be surprised what others buy.

* Remember that a certain amount of clutter is necessary for real family living. A home should look lived in, but not forgotten.
4-H'ERS CREATE SOMETHING OUT OF NOTHING

If your house is like most homes, you'll find an assortment of old jars, tin cans and plastic or cardboard boxes that merely collect dust.

A creative 4-H'er can take these seemingly worthless things and turn them into decorative and useful items for their home. 4-H'ers learn how to perform this transformation of old things into new ones through the 4-H home improvement project. More than 8,500 Minnesota 4-H'ers were enrolled in the project during 1971.

Think about the potential that 4-H'ers see in these everyday objects that often clutter up the house. An old jar can become a colorful pencil cup with the aid of a little paint, colored paper or bright fabric. A cardboard box could be the basis for a jewelry box or drawer dividers. A clever 4-H'er can coordinate her whole room with matching curtains, bedspread and dresser accessories that she's made.

Many 4-H'ers look for old furniture and other cast-offs that can be rejuvenated. An old rocking chair can be reinforced and painted or varnished. Add a new cushion and the chair will look like new for only about half the expense of buying a new rocker. Bricks and lumber from an old house might be used to create a book or hobby shelf.

The home improvement project also teaches you how to wisely buy new products. Your club may decide to visit furniture manufacturers, furniture retailers, pottery makers or museum lectures where you'll learn the various styles of furnishings and how to tell good design and workmanship. You'll also learn how to estimate the cost of your improvement project before you begin, and to judge when it will pay you to "do it yourself" and when you should buy the finished product.
UM HORTICULTURIST ADVISES GARDENERS ON FORCING BULBS

If you are "forcing" spring flower bulbs to bloom early, now may be the time to place the plants where the temperature is about 60, according to Extension Horticulturist Jane McKinnon at the University of Minnesota.

Tulips, daffodils, hyacinths, crocus, grape hyacinths, scillas and lilies-of-the-valley can be potted for flowering in late winter and spring. Use only bulbs of good quality and size and cultivars adapted to growing in pots, she advised.

They should have been planted any time from Oct. 1 to Dec. 1 after being stored at 55 to 63 degrees in a well ventilated location for several weeks. The bulbs are then potted in shallow pots called "bulb pans" containing a soil with good water holding capacity and good drainage. The pans are placed in a cool basement at 35 to 50 degrees for at least three months.

Starting in January or when the roots are well developed, place the pans where the temperature is about 60, Miss McKinnon recommended. For best results, keep the plants away from direct sunlight and keep the soil moist.

Indoor gardeners will find many helpful ideas in the new bulletin, "Care of House Plants," available from _________ County Extension Office or the Bulletin Room, University of Minnesota, St. Paul, Minn. 55101.

# # # #
GOOD MANAGEMENT
NEEDED WITH LARGE
DAIRY OPERATIONS

Increasing the size of your dairy operation isn't the only answer—you've got to be good first.

"Dairymen who do an outstanding job with a medium size herd may be perfectly rational in deciding not to expand. The added income from expansion may not be enough to cover extra labor, investment, risk and managerial stress involved," says Ken Thomas, University of Minnesota farm management specialist.

"Major expansion normally involves a large capital outlay if you're going to effectively substitute capital for labor. This places the business under considerable financial and managerial stress.

"Results of a recent research project show that the below average and average dairy farmer will reap greater rewards from improved efficiency than increased size," Thomas says. He suggests that dairy farmers considering major expansion be at least in the upper 20 percent of earnings for their present herd size.

Thomas, along with University economists Carl Pherson and Truman Nodland, recently completed a study designed to help dairy farmers decide whether to expand, keep herd size constant or quit the dairy business. They studied the competitive position of dairy farms in five size categories: less than 25 cows, 25 to 34, 35 to 44, 45 to 64 and 65 cows and over.

As expected, the study showed that labor earnings per farm increased with size, ranging from an average of $4,100 for 20 cow herds to $16,000 for herds averaging 80 cows. These increased earnings were due to more effective substitution of capital for labor as size increased.

-more-
add I--good management

Cow numbers per man increased from 17 for the 20 cow herd to 37 for the 80 cows herd and milk per man from 180,000 pounds to 430,000 pounds. Capital investment per cow remained about constant among size groups.

"But the most striking finding of the study was that differences in earnings were greater within size groups than between size categories," Thomas says. For example, the high 1/5 earnings farms in the 40 cow category had earnings comparable to the average 80 cow farm; the low 1/5 in earnings in the 40 cow category had earnings about the same as for the average 20 cow herd.

These variations in earnings were due largely to differences in volume of production from similar amounts of resources. Higher levels of production per cow and cows per worker permitted the high earnings farms to produce up to 1/4 more milk per worker than the low earnings farms. Milk prices and expenses were little different within size categories.

Copies of the study are available from the Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, Minnesota 55101. Ask for Economic Study Report S71-1, entitled "Specialized Dairy Farms in Southern Minnesota."

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Management of a high-profit forage crop is a year-round proposition that extends from fall crop selection to improved harvest and storage practices.

Farmers often can more than double their present average yields with top management, which includes adequate fertilization, selection of the best adapted varieties, full stands, proper cutting time and good storage practices.

Curtis Overdahl, University of Minnesota extension soils specialist, says low forage yields in the Midwest result from neglect of these profit producing practices. Like other crops, only high yields of top-quality forages provide maximum profits.

In planning a forage program for 1972, farmers should consider corn silage, grasses and alfalfa.

Corn for silage has high yield potentials and is an outstanding producer of energy. High yields, however, place heavy demands on soil fertility. Because the entire plant is harvested for silage, the fields must be fertilized at a higher rate than those where corn is planted for grain.

Grasses are essential for a complete forage program, Overdahl says. When properly fertilized they grow profitably on land not suited to other crops. Well-managed grass pastures provide early and late season grazing or green chop.

Well managed alfalfa also has high profit potentials. Its high protein, energy and mineral content makes it one of the best forages.

Adequate fertilization is essential for all three forage crops. Overdahl suggests that in many instances this fertilization can be done in the fall. This is especially important on fields where corn will be planted because of the advisability of early planting in the spring.

###
EXTENSION AGENT ASSOCIATIONS ELECT OFFICERS

Officers of two county extension agents' associations were elected Monday (Oct. 11) at the annual conference of the University of Minnesota's Agricultural Extension Service.

The conference began Monday at the St. Paul Hotel, St. Paul, and will end Thursday noon.

New president of the Minnesota Association of County Extension Agents is John Ankeny, St. James. Other officers are Matt Metz, Wabasha, vice president; and James Edman, Benson, secretary-treasurer.

The Extension agents elected five new members to the Association’s board of directors. They are Edmund Bernhardson, Moorhead; Gene Williams, Blue Earth; Joe Fox, St. Paul; Donald Petman, International Falls; and Robert Koehler, Worthington.

Judith Nord, Fergus Falls, was named president of the Minnesota Association of Extension Home Economists. Elected to other offices were Marjorie Hamann, Stillwater, first vice president; Diane Butzlaff, Marshall, second vice president; Judi Linder, Anoka, secretary; and Edith Pike, Park Rapids, treasurer.

# # #
LABORATORY IN GROUP PROCESS

Increasing interpersonal competence is the title of a Midwest Training Laboratory (MTL) to be sponsored by the Minnesota Adult Education Association (MAEA).

The laboratory in human relations training will be conducted at Pine Edge Inn, Little Falls, Minn., November 18-22, according to Raymond S. Wolf, extension information specialist and a member of the training lab committee.

Objectives of the laboratory are: to provide a learning experience designed to enhance competence in human relationships; to increase awareness of one's impact on individuals and groups; and to develop leadership and membership skills in order to obtain more effective group action, wherever we are.

MTL is open to all people, professional and non-professional, who work in small or large groups. "Most human relations training is available only to specialized groups, said Mrs. Walter (Mibs) Swanson, president of the sponsoring organization, so the MAFA lab is unique."

Dr. Cyril R. Mill, clinical psychologist, is lab consultant, social psychologist Dr. David W. Johnson and clinical psychologist Dr. Theodore F. Cloonan are experienced as human relations trainers.

-more-
FUTURE FOR ASPEN STUD PRODUCTION BRIGHT

The future for aspen stud production in Minnesota still looks bright with many companies closely watching initial use of the aspen studs in homes.

Also being watched closely is research by a University of Minnesota Forestry Research Assistant, Fred Hill, to check the economic feasibility of aspen stud production.

Hill is working with a computer simulation model to predict the costs of aspen stud production. Sometime this year, he hopes to be able to answer some of the questions about the economic feasibility of aspen stud production.

There is prejudice against aspen for construction lumber use because of previous misuse and lack of information regarding the species, according to University forester, Robert Thompson. As a result, timber shipped to Minnesota from the West, such as Douglas fir, larch, white pine and white fir, is used for studs, rather than the Minnesota aspen, he said.

A system for sawing marketable studs for home building from the low-valued aspen tree was developed in 1969 by researchers at the University of Minnesota's College of Forestry.
A few lumber manufacturers have shown interest in aspen studs. They have conducted sawing trials and marketing projects of their own using the College of Forestry research principles and have reported production and market acceptance, Thompson said.

Manufacturers are also watching the initial use of aspen studs in homes. Some of the studs produced during research projects at the University were used to construct homes by Pemtom, Inc. One of these homes was constructed and has been in service for over 1-1/2 years. Another was just recently completed.

Thompson believes the best solution for full use of aspen would be plants which would utilize the aspen resource most efficiently and effectively. Such a plant would produce studs, lumber for pallets or packing and crating and chips for fiber or particle products from the prime logs. Small and low quality logs would be used for chips only.

Aspen trees are now mostly used for pulpwood in the manufacture of paper, fiberboard, cardboard boxes, siding, wallboard and other products.

The state's total aspen pulpwood harvest is about one-half million cords a year, but aspen is growing faster than it is being cut. Aspen, sometimes called the "popple," is undercut by more than 300,000 cords a year, according to a report from the Agricultural Extension Service at the University of Minnesota. When a forest is undercut, trees are maturing and dying faster than they are being harvested--consequently many trees are wasted.

# # # #
ORTH NAMED EXTENSION'S OUTSTANDING YOUNG MAN

Ron Orth, associate extension agent in Waseca County, received the first Outstanding Young Man award from the Minnesota Association of County Extension Agents.

The award was presented during the Agricultural Extension Service annual conference at the St. Paul Hotel, St. Paul, Oct. 12.

First runner-up was James Lewis, assistant county extension agent in Mille Lacs County, and second runner-up was Lonnie Johnson, associate extension agent for Brown County.

Orth was cited for his outstanding work with 4-H and dairy groups in Waseca County. He also has served in leadership roles on a regional and statewide basis.

A native of Waverly, Iowa, Orth received his B.S. degree in dairy science from Iowa State University in 1965. While a student at Iowa State, he was a member of the University's dairy judging team and was secretary of the Dairy Science Club.

Following graduation, he was a county extension agent in Pocahontas, Iowa. He joined the Waseca County Extension staff in March, 1967.

To be eligible for the award, applicants were required to have completed less than six years with the Extension Service, and be less than 31 years old. The award was established to recognize younger agents in the association.
CACTUS NEEDS SUN
TO BRIGHTEN HOME
WITH CACTUS FLOWER

So your flowering cactus doesn't flower.

Place the plant in full sunlight for optimum growth and flowering. The best spot may be near a window on the south or west side of your home, Jane McKinnon, extension horticulturist at the University of Minnesota, advised.

Keep the plant relatively dry during winter, adding only enough water to keep the stems from shriveling. Contrary to popular opinion, applying fertilizer at least a few times a year will improve growth if the plant is kept in a sunny location. Maintain a minimum temperature of 65 for best growth, she recommended.

The same procedures apply to succulents, such as Century Plant, Aloe and Elephant Bush, which differ from cacti in that they don't always have spines.

A mixture of good garden soil, two parts organic matter and one part sand, is good for most house plants, but with cacti and succulents a higher proportion of sand should be used.

Also, cacti and succulents can be grown in dish gardens, which are shallow containers that seldom have drainage openings. So be careful not to overwater plants in dish gardens, Mrs. McKinnon said. If the container is deep enough, place a half inch of gravel, sand or charcoal in the bottom under the soil to improve drainage. You can place a thin layer of sand, colored gravel or pebbles on top of the soil after planting to further improve the garden's appearance, she added.

Cactus plants survive better in heated living rooms than most other house plants, Mrs. McKinnon said. Warm, dry heat from furnaces causes many house plants to fail, but cactus plants will survive if they're located in bright light or in a sunny window.

# # # #
PICK QUALITY REPLACEMENT GILTS

When picking replacement gilts, several factors should be considered, say University of Minnesota swine specialists.

A replacement gilt should have at least 12 well developed and spaced udder sections.

She should have sound feet and legs. Legs should be straight with adequate length, set well apart, squarely under the body with strong and ample bone, wide above the knees and hocks. Pasterns should be short and nearly straight with some give to them.

Gilts should be fast-gaining with a high estimated lean cut percentage. An excellent gilt reaches 200 pounds at under 160 days of age. Good gilts reach that at 160 to 169 days. Gilts that reach 200 pounds at over 170 days are considered undesirable.

If gilts are probed for backfat, they should have less than 1.3 inches.

# # # #
IN BRIEF...

Confusion Created on Fertilizer Effects. Unqualified environmentalists have created confusion over the effect of fertilizers on earthworms and soil bacteria, according to University Soil Scientist Curtis Overdahl. A fertile soil creates improved organic matter content for a good earthworm habitat. Overdahl says the earthworm is given credit for making the soil fertile since it is found there.

He says soil bacterial research shows that even with ridiculously high application rates, fertilizers such as ammonium nitrate, diammonium phosphate and potassium chloride had little undesirable effect on soil bacteria. He says other studies show that when nitrogen is applied at recommended rates it greatly enhances soil bacteria activity and numbers.

* * * *

Apply Nitrogen Late in Fall. If nitrogen fertilizer is applied in the fall, it should be applied in late fall and in ammonia form. University soil scientists say the extreme western tiers of counties in Minnesota may be able to get by with the nitrate form in late fall.

* * * *

Trend to Bulk Milk Continues. About 70 percent of the milk marketed in Minnesota is handled in bulk, and this figure will soon approach 100 percent, according to Vern Packard, extension dairy products specialist at the University of Minnesota. He points out that about half of the state's 41,000 dairy farmers are bulk producers, and they account for over two-thirds of the milk supply. Increased hauling costs will accelerate the switch to bulk, Packard says.

# # # #
MATCH VOLTS TO VOLTAGE

Bulb snatchers have their problems. Some of these problems could be resolved if they only knew some of the basic facts about light bulbs--such as, how long can you expect a bulb to last?

Most household incandescent bulbs have an average life of 750 to 1000 hours. Some long-life bulbs are warranted for 2,500 use-hours. The "snatchers" get a work out when they forget that the electrical voltage should match the voltage stamped on the bulb. Operating a 120-volt light on 125 volts causes it to burn brighter and shortens its life 40 percent. Home Economists in Business suggest you check the voltage supplied with the local utility and buy light bulbs designed for it.

Bulbs can be engineered, in theory at least, to any desired use-life. But the heavier, tougher filaments used in most long-lasting bulbs don't burn as brightly as regular filaments of the same wattage. To get the same brightness, it is necessary to use a high wattage long-lasting bulb, if it is the conventional argon-filled type. The cost of the additional electricity to produce the same amount of light may be more than the amount saved on purchase of bulbs. Long-lasting bulbs are a convenience in fixtures that are difficult to reach.

If a bulb gets too hot, a bulb will not last its rated life. In poorly ventilated fixtures and in hot areas, bulbs burn out more quickly. The hotter the filament becomes, the brighter it burns. Don't put too high wattage bulbs in enclosed fixtures. Spotlight scones or pole lamps with bullet-shaped shades require lower wattage bulbs.

Be thankful for small favors. You could run out of kerosene!

--jkm--
DON'T DO IT YOURSELF

A gravy spot on a new tie? A drop of chocolate on the front of a new blouse? Grass stain on a pair of new trousers? "Don't try to remove the stains yourself if the garments are not washable," suggests Thelma Baierl, extension clothing specialist from the University of Minnesota.

Take the stained garment to your dry cleaner or go to a self-service dry cleaning center for best results. If no attendant is on duty at the center, read and follow directions carefully for operating the dry cleaning machines.

Here are a few suggestions from Miss Baierl for helping get a spot or stain out of a garment that cannot be washed.

* Take the stained garment to be cleaned as soon as possible. Fresh spots and stains are easier to remove than old ones.

* Tell the dry cleaner what the stain is. Mark it with a safety pin or circle it with chalk if these will not damage the material. These remind him of the spot. Knowing what the stain is makes it easier for him to remove it.

* Understand that stains are hard to get out of material that is smooth and shiny such as satin, or thick such as velvet, or stretchy as some knits. Be prepared to accept some failures on these kinds of materials. Many fabrics can fade, shrink and stretch while being dry cleaned.

* Realize that some stains will not come out. So, if you've tried and the spot is still there, either accept it or do something yourself. In some cases you may be able to cover the stain on a clean garment with a pocket, an applique, some embroidery, a button, lace trim, etc. In the process you may turn a catastrophe into a new creation!
4-H'ERS PRACTICE
GOOD GROOMING

You can't judge a person by the clothes he wears, but clean clothing and personal grooming will determine whether the first impression is good or bad.

If you're a 4-H member you realize that 4-H'ers are frequently in situations where first impressions are very important. You'll want to look your best. If your grooming habits aren't quite as sharp as they should be, here are some hints that may help you.

Good grooming starts with getting enough sleep each night. The amount of sleep needed varies with the individual. Get as much as you need to feel rested and ready to take on the work and fun of the day. Good nutrition is also a must. Include foods from each of the basic four food groups every day: milk and milk products, fruits and vegetables, meats and fish, breads and cereals.

Be sure you get plenty of exercise each day. Girls frequently want a good exercise program for reducing unflattering extra pounds. Walking or riding a bike instead of asking for a lift helps anyone's exercise program. Good posture goes along with exercise. Good posture makes you look and feel better in every way--sharper, more self-confident. Keep your head up, shoulder blades flat and stomach pulled in.

Your personal grooming routine should include a shower or bath every day. You need to remove perspiration, oil and dirt. Your own sense of smell may not warn you of perspiration odor because the nose becomes insensitive to odors it encounters constantly. So use a deodorant or antiperspirant every day. Remember to wash your hair at least once a week and more frequently than that if your hair's oily or you've been exercising a lot.

A pleasant smile and well-cared-for teeth are among your best assets so brush frequently to prevent cavities and bad breath. Remember to trim your fingernails and toenails once a week and clean them thoroughly.

-llh-
AERIAL MONITORING OF TREE, CROP DISEASES FORSEEN

Dutch elm and other tree and crop diseases may be monitored by aerial photography on a day by day basis in the near future over large areas of Minnesota.

Present methods of monitoring plant diseases by ground survey parties involve much time and money and are not totally reliable because ground survey parties must sample relatively small portions of the cropland or forests, according to University of Minnesota forester Merle Meyer and plant pathologist Lucas Galpouzos.

Foresters at the University have been successful in tracing the spread of crop diseases such as sugar beet leaf spot, potato leaf blight and tree diseases such as Dutch elm disease, oak wilt and dwarf mistletoe in black spruce forests.

The infrared aerial photographic method used records only certain wave lengths of light on the film which man can't see. Just as man cannot hear certain wavelengths of sound, he can't see infrared light.

Infrared aerial photography is successful in detecting certain plant diseases because the disease causes the plant to give off different wave lengths of infrared light than the healthy plants surrounding it.
Using infrared aerial photography, the entire Minnesota and eastern North Dakota sugar beet growing areas might be sampled in a day to assess the sugar beet leaf spot condition.

"With rapid processing and photo interpretation, we envision growers throughout the region being notified of the latest disease situation in much less time than is now possible with current ground survey methods," the foresters said.

"Aerial photography might also provide more reliable survey data because it would markedly increase the total number of fields surveyed and would in addition, permit observations over entire fields rather than small portions," they said.

In University experiments, infrared aerial photography has been successful in locating nearly 100 percent of the trees with Dutch elm disease and 60 to 80 percent of the oak with oak wilt.

The apparent advantage in aerial photography over ground survey is a savings in time and money.

"In one 64 square mile community, one month was required for a complete ground survey of the elms, and the cost was approximately $5,000. We expect that an aerial survey of this area could be completed in half this time and for less money," forester Meyer and plant pathologist David French said.
SCHOLARSHIP AWARDS ANNOUNCED AT UM

Scholarship awards for students in the University of Minnesota's College of Agriculture were announced today by Albert J. Linck, dean of the College of Agriculture.

Scholarships and recipients for the 1971-72 school year include:

American Dairy Association--Food Science: Robert D. Anderson, Redwood Falls; Ronald D. Leuthner, Crystal; Beverly Felska, Hutchinson; Joan Heinrich, St. Paul. Agricultural Economics: Ben M. Sutter, Waseca; Dale D. Malnow, Minneapolis; Donald Steinke, Forest Lake; John Poulter, Clayton, Wis. Animal Science: James Harsdorf, Beldenville, Wis.;
Norman Abbe, Owatonna; Leslie Hansen, Blooming Prairie; Richard Dollerschell, Litchfield; Brian P. Hazel, Lanesboro; Charles R. Schwartau, Hastings.

Harold K. Wislon--Vandon H. Villnow, Milaca.

Food and Fiber--Arlo Thompson, Kensington.

Ford Motor Co.--Daryl Larson, Belgrade.

Minnesota Renderers Group--Allan Halvorsen, Emmons.

Minneapolis Hide and Tallow Co.--Michael Jahnke, Parkers Prairie.

Carl Hjelle Memorial--Dennis W. Rondorf, Thief River Falls.

Augustus L. Searle--Virginia Lerch, St. Paul; Mary Kuschill, Maple Plain; Barbara Johnson, Stockton; Emily Johnson, Erskine; Beverly Felska, Hutchinson.

-more-
add 1--scholarship awards

General Foods Fund--Mark E. Schmidt, Hutchinson; Jeffrey K. Kramer, North Redwood; Tom Husnik, Hugo.

Smith Douglas--Daniel C. Swenson, Waseca.

Minnesota Plant Food--Gordon W. Meyer, Richfield.

Agricultural Sophomore--Craig Kvale, Owatonna.


Moorman Manufacturing Company--Gary Raeth, Winthrop; Wayne Olhoft, Herman; Dale Janson, Wadena; Arlen Knott, Walnut Grove, Frederick Raymond, Rochester.

Grain Terminal Foundation--James Resch and David Resch, both of Spirit Lake, Iowa; Alan Walker, Aldren; Warren Anderson, Fountain; James Skogen, Easton; Susan Engelhardt, Royalton; Dennis Barta, Olivia; Steven Ladlie, Albert Lea; John Vignes, Crookston.

Continental Grain Foundation--Duane Steele, Spicer; Thomas Kopacek, Olivia; Joseph Folson, Litchfield; Paul Josephson, Stillwater; Gene Egdorf, Glenwood.

Kenneth H. Lee Sophomore Agriculture--Stephen Fagerlie, Crystal.

Northwest Feed Manufacturers--Bruce Bigalk, Harmony; David Sellman, Center City.

# # # #
STATE DISTINGUISHED SERVICE AWARD GIVEN HOME ECONOMIST

Bonnie Augst, Olmsted County extension home economist, Rochester, was awarded the Distinguished Service Award from the Minnesota Association of Extension Home Economists for her program in working with special clientele.

Since the establishment of the award, three home economists have received the citation, designed to honor those serving for seven years or less.

The June issue of Extension Service Review, national publication of the United States Department of Agriculture, described the special services in Olmsted County patterned after the Expanded Food and Nutrition program.

Due to the high income of the Rochester community, federal funds were not available to finance the offering to limited income people. Special legislation made it possible to finance the program through county funds. Miss Augst contacted various social agencies and concerned individuals to implement the program. Mrs. Sarah Boyer now supervises the homemaker consultants. The county commissioners initiated the educational endeavor.

Included in Miss Augst's extension citation was recognition of her contributions to a clothing construction boutique and participation in consumer business-relations committee for the Chamber of Commerce.
DROUGHT STRESS
NOTED BY UM
SOILS SPECIALIST

Very hard soil surface and high early season moisture resulted in shallow rooted corn in Faribault County this past season, according to University of Minnesota soil scientist James Swan.

The hard surface was not necessarily a barrier to moisture reaching the subsoil, since the subsoil was moist, Swan said. On the high ground, when the corn was green, subsoil moisture also was reasonably good.

The problem results when very fine-textured soils are compacted by working them when they are too wet. Compaction apparently can result that cannot be corrected until the next winter's frost can break it up.

Fall plowing should help this break-up process. Farmers should avoid too much tillage, especially when the soil is excessively wet, Swan said. Research at Lamberton shows that compaction below the plow layer lasts a long time.

# # # #
IN BRIEF . . .

New Sex Attractant For House Fly. House flies might be controlled with less insecticide by employing a newly identified sex attractant isolated by U. S. Department of Agriculture scientists, says University of Minnesota Extension Entomologist David Noetzel.

The house fly sex attractant called muscalure, is inexpensive to manufacture and may reduce the amount of insecticide needed if flies can be efficiently attracted to a small, selected area treated with insecticide. The chemical, which attracts only male flies, is the first sex lure chemically isolated, identified and synthesized for any of the two-winged flies.

Additional studies are needed before the material can be released for use, the scientists warn.

* * * *

Sharp Increase In Grade A Milk. We've seen a sharp increase in the amount of grade A marketed milk during the past few years. About 17 percent of the milk marketed in Minnesota was grade A in 1965, but this figure jumped to 29 percent by 1970, points out Vern Packard, dairy products specialist at the University of Minnesota. About 7,000 dairymen--one-sixth of the state's producers--were producing grade A milk last year. Over 1,000 of those producers were added in 1969.

* * * *

Don't Carry Loaded Gun. The Farm Safety Review reminds farmers not to keep a loaded gun in the barn or shed or on a tractor, combine or other vehicle just to be ready for that stray rabbit or bird. The gun may discharge accidentally or a child may find it.

# # # #
PERMITS NOW
NEEDED FOR
NEW FEEDLOTS

Farmers and feedlot operators should examine their operations to see if they have pollution problems.

Permits are required for new cattle feedlots. Pollution control plans and facilities must be approved by the Minnesota Pollution Control Agency, according to Philip Goodrich, agricultural engineer at the University of Minnesota.

Site evaluation forms are available now from the agency. Existing feedlots which are judged to be polluting or have a pollution potential will be required to obtain permits after submitting plans to control the problem.

Farmers who are recycling animal wastes as fertilizers and are handling manure without presenting pollution potential need not apply for permits at this time. However, Goodrich says this does not mean that farmers should not look for ways to improve their animal waste management. The Pollution Control Agency will work with individual existing feedlots to determine when they should conform to the state feedlot regulations.

# # # #
CORN HARVESTING
RUNS SLIGHTLY
AHEAD OF 1970

Corn harvesting in Minnesota is running slightly ahead of last season, although heavy rain in the southern part of the state could slow progress.

Area Extension Agent Erlin J. Weness at Worthington says although there were a few wet days last week, harvesting was aided by less ground moisture this year because of the July-August drought. Farmers were able to continue their cutting since the top soil was able to support last week's rains.

County Agent Pat Maher at Olivia says more than half of the corn in Renville County has been picked and the soybeans are about three-fourths done. Farmers were keeping up behind the pickers with their plowing.

Bean harvesting was heavier last week than corn picking in Mower County, according to Associate Extension Agent Ron Seath, Austin says corn in one field he checked had about 25 percent moisture, which is about average. Mower County weather this year has been more favorable for harvesting than last fall.

# # # #
PHASE II TAX CREDIT
WILL GIVE FARMERS
MOST DIRECT HELP

Tax changes proposed by President Nixon in his Phase Two economic plan, especially renewal of the investment tax credit, will give farmers the most direct help, according to a University of Minnesota agricultural economist.

Paul R. Hasbargen says the proposed tax credit, which probably will be seven percent, would have saved southern Minnesota farm management association cooperators more than $400 in individual income taxes last year. Tax credit is figured for such investments as machinery, equipment and buildings.

Hasbargen says the other tax changes proposed by the administration will increase the demand for agricultural products by increasing consumers' after-tax incomes, resulting in greater taxpayer purchasing power. If the administration meets its goal of cutting inflation two to three percent by continuing wage and price controls, the average family in the farm management associations would save $200 in living expenses next year. If the annual inflation rate increase is cut three percent, a farm with expenses of $33,000 annually would save $1,000 a year.

He says gains and losses from inflation rate changes are short-termed and temporary in nature. Farmers adjust production output to raise or lower production costs and thereby influence total supplies and subsequent farm product prices.

It may be quite some time before the impact of the president's international economic moves can be determined, he says. Due to foreign currency exchange rate adjustments, foreign countries can buy relatively more American farm commodity exports now than before the economic policy changes. This should increase demand for U. S. farm products, which will help the American farmer increase his market.

But the farm family, like other consumers, will be paying relatively higher prices for imported goods.

There is still concern that the "floating" of the dollar by the administration in mid-August may result in retaliation from other countries and this could be directed against U. S. feed grain, soybean and wheat exports, Hasbargen says.

# # # #
INSPECT CORN FOR LODGING, STALK ROT CAUSES

Minnesota farmers are again reminded that the corn crop should be harvested as soon as possible to minimize losses due to stalk rot and lodging, the most costly plant disease in the state.

Experts estimate from 5 to 10 percent of the state's corn crop will be lost—this means from 23 to 46 million bushels from the state forecast of about 458 million bushels. Several cases of moderate to severe lodging already have been reported this year.

Farmers should make plans to reduce these losses in future years, advised Herbert G. Johnson, Extension plant pathologist, University of Minnesota.

Inspect lodged plants and determine whether the problem was caused by one or more of these items: rotted roots caused by root worms followed by fungi; corn borer damage; rotting and discoloration of the interior of the stalk; breakage at the nodes or between the nodes; rotting and softening of the stalk just above the ground; and fertility problems such as low potash levels. Corn tends to lodge more at high populations than medium or low plant populations, Johnson said.

You can take corrective action for next year's crop by reducing insect damage, correcting fertility problems and adjusting plant populations. But beyond this, hybrid resistance is about the only remaining way to control stalk rot and lodging, according to Johnson.

Select hybrids with good standibility if they have other good characteristics. Although specialists do not expect we'll have good controls for stalk rot and lodging in the near future, some obvious corrections can be made to reduce unnecessary losses.

###
Renowned scientist says:

ANIMALS AID IN REPRODUCTION STUDIES

In the near future, reproduction and population control of man may be accomplished with practices developed on animals such as artificial insemination or transfer of early embryos, a world authority on comparative medicine said Wednesday night (Oct. 20).

Technical methods now available from animal studies include long-term storage of semen, production and inhibition of ovulation, sex determination, genetic engineering and reproduction of exact copies of individuals, said Dr. W. I. B. Beveridge, a consultant to the World Health Organization, and a professor at the University of Cambridge. He gave the lecture at the University of Minnesota's St. Paul Campus.

"In the brave new world of the near future, some or all of these techniques developed with animals will almost certainly be tried with man," he said.

Comparative medicine, the study of diseases common to animals and man, shows promise in finding a cure for cancer.

A form of leukemia in chickens is already being combatted by a vaccine on the commercial market; but this cure has yet to be tried on humans with the disease, Beveridge stated.

Comparative medicine also has the potential of warning man of the harmful effects of industrial materials and wastes if present testing programs are expanded, he said.

--more--
Now, only about 300 of the 20,000 man-made compounds in production are tested each year. These compounds include drugs, pesticides, additives to foods, preservatives, flavors, coloring and other industrial compounds.

Because many animals respond to poisons quicker than man, animals can be used as a watchdog to warn of pollution in the natural environment, Beveridge explained.

The sheep that died of nerve gas poisoning in Utah several years ago are one example where animal response to poison warned man, he said.

Experiments with animals may also reveal the cause of some congenital malformations, Beveridge said.

Many defects are not hereditary, but due to environmental factors yet to be identified. Comparative studies in sheep, cats, and rats have shown that virus adversely affects fetuses, he said.

Beveridge is here as a lecturer in the biennial series of Wesley W. Spink Lectures in Comparative Medicine, named for a faculty member since 1937 who is Regents' Professor of medicine and comparative medicine.
Wise shopping reduces spots and stains

"Most people think of removing a spot or stain after the garment has a stain. Actually it begins with wise shopping," advises Thelma Baierl, extension clothing specialist at the University of Minnesota.

Here are some shopping suggestions when you are buying yard goods or readymade clothing that will make spot removing easier:

* Look for the words "Stain Repellent Finish" on the label tag, or end of the bolt of material. Stain repellent finishes may be found on some children's clothes, men's trousers, men's work uniforms, sports clothes, rain coats, and other items. These words mean that the material has a special finish that will not allow stains to soak in. Many times spills will stay on the surface and can be wiped off easily.

* Choose material with a pattern if you don't want stains to show. Spots and stains are more noticeable on plain color materials.

** Choose material that is washable if stains are apt to occur. Stains are easier to get out of washable materials. This applies particularly to clothing for children.

As you learn to be a better shopper many of your housekeeping tasks will be easier. So pamper yourself, take a little extra time while shopping.

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Department of Information and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
October 22, 1971

To all counties
ATT: County Extension Home Economists
Immediate release

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University of Minnesota, U.S. Department of Agriculture, and County Extension Services Cooperating
Department of Information
and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
October 22, 1971

To all counties
ATT: Extension Home Economists
Immediate release

BREAD IS NUTRITIOUS

Bread is the staff of life but it certainly isn't an entity...or a product to be cut out of the diet completely. Ronald Richter, food scientist at the University of Minnesota, says it would be foolish to live on bread alone but it should be incorporated into a diet...even a weight reduction diet.

An average slice of bread contains 60 calories. But more than that, bread contains milk and is enriched with calcium, iron and three of the B-vitamins. It is an excellent source of carbohydrates too. Fattening? An estimated 100 grams of carbohydrate per day are necessary for good health. Three slices of bread contain 38 grams of carbohydrate.

Consumers want a soft, white bread so many vitamins are lost when the bran is removed. With enrichment most of the nutrients removed during milling are replaced with chemical nutrients. Vitamins are added as chemically synthesized vitamins that are equivalent to natural vitamins. Iron is added as a chemical compound. These chemical vitamins and iron are readily utilized by the body.

Contrary to what some believe, whole wheat bread is not better nutritionally than enriched white bread. The two are nearly nutritionally equivalent. The reason that white bread is predominate on the shelf is that consumers prefer it 9 to 1.

Bread should be incorporated into a diet that is balanced and contains food from the various food groups. In this way bread makes an important contribution to the complete diet.

-jkm-
ACRFAGE REDUCTION SEEN BY ECONOMIST IN NEW GRAIN PROGRAM

A University of Minnesota agricultural economist says Agriculture Secretary Clifford Hardin's feed grain program for 1972 will be effective in reducing the number of planted feed grain acres.

Martin K. Christiansen says research suggests that total planted acres for 1972 probably will be in line with the 1970 total, which was about 119 million acres compared to about 128 million acres in 1971.

The Administration hopes for a substantial increase in 1972 of total feed grain acres removed from production under the set aside program—38 million acres as compared to 18 million acres in 1971.

The percentage of feed grain base acreage to be set aside by individual growers has been increased under the new program to 25 percent from 20 percent under the 1971 program, but the payment per acre will be the same as 1971, Christiansen says.

For instance, this year a farmer with a 50-acre corn base will set aside 12-1/2 acres and be paid 40 cents a bushel, whereas last year he set aside 10 acres and was paid 32 cents a bushel. The increase in set aside offsets the increase in payment. So the farmer with a 50-acre corn base and a farm yield of 90 bushels would be paid $72 per acre set aside under both the 1971 and 1972 programs.

-more-
Features have been added to the new feed grain program to reduce planted acreage by increasing the number of acres to be taken out of production.

The farmer can receive 52 cents a bushel for corn on the normal yield of those acres set aside if he agrees to set aside additional acreage equal to 10 percent of his feed grain base. Beyond this a farmer also can make an offer to the secretary of agriculture to set aside either five or ten percent additional acres of his feed grain base. And later, when participation in the program is known, the secretary can accept or reject the farmer's offer, Christiansen says.

The Nixon Administration's new feed grain program was prompted by the record 5.4 billion bushel 1971 corn crop. Prospects of this crop have depressed corn prices and stocks will be carried over into next year. So the administration is aiming for a considerably smaller crop next year--about 4.5 billion bushels.

The Administration has announced that the program could raise farm subsidies by $600 million or more next year.

Hardin has said the new plan will bring higher market prices for feed grains by next fall. He has estimated the cost of the program at $1.5 billion compared with $1.2 billion this year. But if farmers decide to accept Administration plans to reduce output further, at least $250 million more could be spent in federal payments.
MINNESOTA BEEF
CATTLE FEEDERS’
DAYS ANNOUNCED

Beef cattle feeders will have an opportunity to hear summaries of the latest research findings at several Minnesota Beef Cattle Feeders’ Days to be held throughout the state this fall.

Locations and dates are:

November 23--St. Paul--Peters Hall Auditorium
November 30--Waseca--Southern Experiment Station Auditorium
December 1--Worthington--Worthington Coliseum
December 2--Morris--Morris Armory
December 3--Crookston--Northwest Experiment Station, Animal Science Auditorium

All meetings will commence with registration and coffee at 9:30 a.m.

Reports of recent research by animal scientists will start at 10:00 a.m.

Topics to be discussed include evaluation of housing systems for finishing cattle--corn silage feeding systems--old vs. new corn grain--use and handling systems of high moisture corn grains--using ground whole soybeans in cattle rations--steers vs. heifers in the feedlot--vitamin E--crossbred steers--and a comparison of hay, haylage and silage.

The afternoon program will summarize information on growing programs, health programs for feeder cattle, using corn silage in feedlot cattle rations and calculating costs and profits in feedlot operations.

A program emphasizing cow-calf production will be held on December 16 at the Grand Rapids Experiment Station. There will be presentations on cow reproduction and fertility, the role of the exotic breeds, prevention and treatment of calf disease problems and energy needs of the beef cow.

# # # #
BE CAUTIOUS WHEN
ADDING UREA TO
HIGH MOISTURE CORN

Farmers can get in trouble by adding urea to high moisture corn, said Mike Hutjens, extension dairyman at the University of Minnesota.

"Be aware that urea added to high moisture corn will result in a loss of some of the urea, which is converted to ammonia. This reduces the nitrogen, or potential protein source in the feed. In addition, cows may find the feed unpalatable due to the ammonia odor," Hutjens said.

University of Minnesota research with high moisture corn shows urea losses ranged from 4 percent with one-half percent added urea to over 22 percent loss with 3 percent added urea.

The research was done with feed samples stored in plastic air-tight containers. Urea losses could be even higher in silos due to the large breakdown of urea and possible loss into the air.

Researchers also found higher pH levels where urea was added, according to Hutjens. This pH change could cause poor fermentation and mold.

# # #
YEARLINGS BEST
FOR GRAZING
CORNSTALKS

Grazing is still the simplest and lowest cost method of harvesting corn refuse and dropped ears, and yearlings utilize corn field grazing better than most other cattle.

Although yearlings are the best suited for this type of feed, calves can also be used, say University of Minnesota animal scientists. Yearlings should be implanted with 24 to 30 milligrams of stilbesterol, and calves with 12 to 15 grams before they start to graze, unless the supplement they are fed contains stilbesterol.

Corn stalk residues are low in protein. So some additional protein should be supplied in the form of protein blocks or legume hay. Supplemental protein is most important in the ration after the first couple of weeks of grazing.

In addition to the supplement, clean water should be provided. The cattle should be checked daily to ensure that they are getting to the water.

Beef producers should not graze fields too long. After the best parts--the corn, leaves and husks--are gone, the remainder does not have enough nutritive value to warrant continued grazing.

# # # #
IN BRIEF  

Convince Yourself Before Borrowing. If you're thinking of borrowing more money for your farming operation, one of the first things you should do is convince yourself it's a good idea—even before you talk to a prospective lender. This is especially important if you're a top operator, says Ken Thomas, extension farm management specialist at the University of Minnesota. Top managers should think the situation through carefully—for their own protection. "Everyone wants to loan money to the large, well managed commercial operator," Thomas adds.

* * * *

Borrow For High Return Items. Farmers should first borrow money for those items that yield the highest returns. Items such as fertilizer, good seed and livestock usually give the highest return on borrowed money, according to Ken Thomas, extension farm management specialist, University of Minnesota. Time expansion operations carefully. For example, if you invest in expanding your dairy barn without having cows to fill the new addition, you may be short of working capital for awhile. This will create a time lag before you receive income from the early stages of the expansion and you could have serious repayment problems.

* * * *

Road Salt Damages Trees. Some trees in Minnesota have been killed as a result of winter salt applications to streets. The trees absorb the salt during the growing season. This results in varying degrees of marginal browning of leaves, and dieback may occur in trees damaged in successive years.

* * * *

-more-
In brief

Inadequate Wiring Causes Motor Failure. Replacing an electric motor several times can mean the motor isn't right for the job or wiring is inadequate. Most equipment comes with recommended motor sizes and types, but it's not easy to determine proper motor size on homemade or modified equipment. So, continued motor trouble can mean inadequate wiring, says County Extension Agent _______

An electric motor can produce more than its rated power. Continued overloading, however, causes the motor to run hot, insulation to weaken and the motor to fail. One way to determine the motor size you need is to install the motor you think is needed and have an electrician check the current or see if the motor will run with an overload protection device installed. On variable loads, an installed ammeter will tell you if the motor is overloaded.

# # #
An important part of maintaining an aquarium is providing proper filtration of the water to keep the fish healthy, according to Dr. Kenneth Johnson, a veterinarian at the University of Minnesota.

Filtration is needed because the fish change the water's chemistry by producing nitrogen-containing waste products, which become concentrated in this closed system and may eventually kill the fish.

Filtration also "aerates" the water, providing oxygen required by the fish to live.

Biological, mechanical and chemical are the three means of filtration, which may be used in the home aquarium and are often provided by a single filter unit, Johnson says.

In biological filtration, fish waste products containing nitrogen are removed by bacteria that become adapted to the aquarium and are capable of converting potentially toxic nitrogenous waste products to non-toxic or less toxic products. These bacteria become concentrated on the surface layers of the filter bed, Johnson said.

Particles are separated physically from the aquarium water in mechanical filtration by passing the water through a suitable substance or filtering material that traps the particles.

In chemical filtration, dissolved substances are removed from the water by chemical means by passing the water through substances such as activated carbon or various ion exchange resins.

Box-type and undergravel filters commonly are used together, providing all three methods of filtration—biological, mechanical and chemical, he said.
"There are many ways a homemaker can help keep spots and stains from occurring," says Thelma Baierl, extension clothing specialist. "These are little tricks that apply to all members of the family."

* Most homemakers know that a bib is a child's best friend when he is eating. A bib is used at least three times a day and so should be made of material that can be wiped clean or washed and dried easily. Bibs are easily made from nearly worn-out bath towels and wash cloths. Either tie or pin on strings to hold the bib under the child's chin.

* Underarm perspiration stains can ruin any garment. Check into the many products available to check underarm perspiration. Some are called anti-perspirants which prevent perspiration in the area of the skin where the product is applied. Other products only take out the odor and a stain usually results. There are many cosmetic products available for men. If your husband is an active man with a perspiration problem, suggest these to him. Of course, no products should be applied unless the skin is clean. Always read and follow directions carefully.

* Many women's cosmetics can ruin clothing. Make it a habit to put a cape or towel over your shoulders when applying make up. Remove the shoulder covering and shake it good after using it.

* Teach children to change to everyday clothes after school. Also, teach children to hang up their school clothes and these can be worn an extra day or two.

* Perfume belongs on your skin and not on your clothing. Many times perfume will discolor a garment. You may not notice this until garment is washed or dry cleaned. The heat of your body helps diffuse the perfume odor, so you're making better use of your perfume if you apply it directly to your skin.
4-H FILLERS

The 4-H Teen Caravan program in Minnesota has given 24 4-H'ers the chance to visit other countries. The 4-H'ers live and work with host families in one nation, look at 4-H in that country and receive an educational tour of several other countries. Applications for the 1972 program are due January 15, 1972.

***

The National 4-H Congress, Nov. 28 to Dec. 2, will be celebrating its Golden Anniversary. Scholarships available to 4-H'ers during the 4-H Congress are at an all-time high—$179,100. Nearly 300 4-H members will receive educational scholarships ranging from $300 to $1,600. Scholarships were first offered some 40 years ago. Since then donors have provided some 6,400 scholarships valued at more than $2.8 million. Donors have also funded an estimated 50,000 expense-paid trips to the National 4-H Congress and other events over the 50-year period.

***

The self-determined project is growing in Minnesota. Last year 603 4-H'ers were enrolled in the project. 4-H'ers participating in the project can expand on an already existing project or they may cover an area that's new to 4-H.

***

The International Extension 4-H Study Tour is a unique program for Extension personnel. Selected Extension personnel who are interested in 4-H and Youth Development Programs may participate in either a short term (3-6 months) or a long term (1 year) program. They see 4-H programs abroad and learn how other countries are adapting the learn-by-doing concept. They exchange ideas with people responsible for youth development programs in other lands and develop a broader understanding for the international dimension of 4-H. They also make new friends and enjoy the sights and sounds of lands abroad.

-11h-
Farmers should find enough loan money available in 1972, but interest rates probably won't go down much, according to University of Minnesota Agricultural Economist E. Fred Koller.

"Interest rates for farm loans are tied very closely to the national economy," Koller explained. "If the national economic policy should result in getting the inflation rate down to the 3 percent level, we could have lower interest rates in 1972.

"However, it will be very difficult to get inflation down to this level," the economist added. "About the most interest rates are apt to go down is another one-half percent--I don't think we'll ever see 4\% and 5 percent interest rates again unless people are convinced that inflation is radically cooled down."

But, if inflation gets out of hand, higher interest rates could result. "However, we shouldn't have a big jump in interest rates--the public won't stand for it and the President would probably put the damper on," Koller concluded.

# # # #
To all counties
Immediate release

RETAIL DEALER
MEETINGS SET
IN MINNESOTA

A series of meetings for retail dealers of seed, fertilizers and agricultural pesticides has been scheduled for 14 locations in Minnesota during January.

(Agents: select the meeting closest to your county)

<table>
<thead>
<tr>
<th>Date (1972)</th>
<th>Town</th>
<th>Meeting Place</th>
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<tbody>
<tr>
<td>January 3</td>
<td>Mankato</td>
<td>Inn Towne Central</td>
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<td></td>
<td>Willmar</td>
<td>Freda’s Bord</td>
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<tr>
<td>January 4</td>
<td>New Ulm</td>
<td>Eibner’s</td>
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<td></td>
<td>Montevideo</td>
<td>Hunt Hotel</td>
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<td>January 5</td>
<td>Rochester</td>
<td>Holiday Inn South</td>
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<td></td>
<td>Slayton</td>
<td>Club Royal</td>
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<tr>
<td>January 6</td>
<td>Owatonna</td>
<td>Eagle’s Club</td>
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<td></td>
<td>Fairmont</td>
<td>Lake Aires Supper Club</td>
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<td></td>
<td></td>
<td>(South end of Amber Lake)</td>
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<tr>
<td>January 12</td>
<td>Cambridge</td>
<td>Imperial Restaurant</td>
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<td></td>
<td>Hutchinson</td>
<td>Velvet Coach</td>
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<tr>
<td>January 17</td>
<td>Alexandria</td>
<td>Holiday Inn</td>
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<tr>
<td>January 18</td>
<td>Moorhead</td>
<td>Holiday Inn</td>
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<tr>
<td>January 19</td>
<td>Thief River Falls</td>
<td>Eagle's Club</td>
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<tr>
<td>January 20</td>
<td>Park Rapids</td>
<td>Citizen's National Bank</td>
</tr>
</tbody>
</table>

The meeting at Park Rapids will start at 1:00 p.m. and adjourn at 5:00 p.m.

All other meetings will start with coffee at 3:30 p.m. and will adjourn at 9:00 p.m. (There will be a Dutch treat dinner at about 6:00 p.m.).

The meeting for _________ County retail dealers is scheduled for _________

at the _________ in _________.

University Extension specialists will discuss the latest information on new crop varieties, soils and fertilizer technology, weed and insect control, corn blight and other plant diseases, and the status of pesticides and fertilizers.

# # # #
WASHINGTON, D.C.--The public good will suffer if corporation and large-scale farming prevails in America in an attempt to control farm prices and secure a share in higher incomes, a University of Minnesota agricultural economist told a Congressional subcommittee Friday (Nov. 5).

Professor Philip M. Raup testified before a hearing of the Subcommittee on Migratory Labor of the Senate Committee on Labor and Public Welfare. The chairman of the subcommittee is Sen. Adlai Stevenson III, D-Ill.

"If corporation and very large-scale farms take over in American agriculture it will not be due to reasons of superior efficiency in production," he said.

Farm people will bring about corporation farming, Raup said, if it does eventually dominate the rural scene. He said they will do so because "they have concluded that only in this way can they mobilize political power to control price and secure a share in higher incomes. But it is almost surely true that, if this occurs, the public good will suffer. When labor and management collude in price and market dominance, we achieve private gains and public losses."

There is still time to influence the direction of restructuring political power in agriculture as it is affected by ownership rights, but the time is fast running out, he added.
The University economist said "the single most important structural change in the American economy in the Twentieth Century" is the decline in the proportion of persons who can participate in capital gains through ownership of their farms or places of business and employment. It is possible in theory to increase opportunities to share in wealth through stock ownership in business firms and through participation in pension funds, mutual life insurance programs and retirement programs.

The migrant or transient laborer is "the typical individual who has none of these opportunities to share in increases in wealth. Not only is his share in the income stream low, but he has few if any opportunities to share in increases in the national wealth," Raup said.

Big farms often have been able to take advantage of concessionary tax policies intended to help smaller firms, he told the subcommittee. Tax laws permit costs on soil conservation practices to be deducted as current expenses up to 25 percent of the gross income from farming even though real estate improvements of this type normally would be treated in a depreciation account or added to the cost of the land to determine its base value. Land clearing expenses could be treated as current expenses up to 25 percent of taxable income. Large farms were the principal beneficiaries of these laws since it was necessary to have significant income for either of these provisions to be attractive, Raup said.

Changes in the federal income legislation in 1969 removed a part of this advantage, he added.
The continued exemption of much of agriculture from the full application of labor legislation is an advantage for large farms that was thought to be an advantage for small agricultural firms, the economist said.

"If farmers are truly interested in providing a fair competitive climate in which economic efficiency and productivity will determine the mix of farm sizes in agriculture, they will support a properly phased extension of all labor legislation to agriculture. If large or corporate farms are truly competitive and efficient we should test this under the rules that govern other similar business enterprises.

"Farm organization opposition to the extension of labor legislation to agriculture is one of the most short-sighted policies imaginable," Raup said.
SERVICE IMPORTANT  
PART OF FARM LOAN  

It makes good sense to choose your agricultural credit lender largely on the kind of service and counsel he can provide—especially if you're a large operator. "Many times there won't be much, if any, difference in the interest rate charged by competing agencies within a given area," said Ken Thomas, farm management specialist at the University of Minnesota.

"Base your selection of a lender on how he reacts to the plans and objectives you have in mind. If you're an expansion minded farmer and a lender only wants to deal with an on-going business, go elsewhere," Thomas advised.

A sharp agricultural loan officer can be extremely helpful to a farmer who's contemplating expanding his business. He'll be able to advise you on the feasibility of your program, based on his experience with farmers in similar situations.

However, plan your credit needs far enough ahead, Thomas emphasized. Credit people would like to see you make your seed and fertilizer purchases this fall. Or, at least line the credit up in fall or early winter—don't wait until March.

On large loan requests—such as for machinery, new buildings or equipment—plan from 6 months to a year ahead. You could have a hard time getting such a loan on short notice if money is tight.

###
The right herd sire can mean more dollars in a hog producer's pocket, say University of Minnesota swine specialists.

Take for example a boar which can improve the feed efficiency of his offspring by 10 pounds per 100 pounds of gain. If such a boar sired 30 litters or 240 pigs per year, the possible saving in feed costs alone can be over $125.

A good herd sire prospect, swine specialists say, should have the following attributes: Growth of at least 200 pounds within five months, back fat probe at 200 pounds a maximum of 1.2 inches, and feed efficiency of less than three pounds of feed required per pound of gain. The herd sire should also be rugged, aggressive and sound on his feet and legs.

Minnesota seed stock swine producers can make reservations and enter market pigs at a test station sponsored by the Minnesota Pork Producers' Association. These evaluation stations help locate breeding stock with superior gain, efficiency and carcass merit. To apply, see your county extension agent or write to the Minnesota Swine Improvement Program, 101 Peters Hall, University of Minnesota, St. Paul, Minnesota 55101.

# # # #
To all counties

Immediate-release

Department of Information and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
November 8, 1971

IN BRIEF . . .

Keep Your Lender Informed. Farmers should keep their lender informed of any new financial developments. If you have any difficulty, let your lender know—he may be able to help you, said Ken Thomas, extension farm management specialist at the University of Minnesota. Keeping an open line of communication strengthens the lender's evaluation of your management ability. Plan to meet with your lender at least once a year for a credit review.

* * * *

Most Tractor Mishaps Fatal. A University of Nebraska study of 100 farm tractor upsets showed that four out of 10 overturns resulted in a fatality. Persons over twenty years of age tended to be traveling at faster speeds than older drivers. The tractors tipped sideways in most of the accidents, but backward upsets resulted in more fatalities.

* * * *

Cope With Lawn Diseases. Most lawns recover from diseases in a short time with proper fertilization, watering and mowing. Raking or sweeping dead circular bleached areas in the lawn after snow melts may reduce damage from snow mold. Chemicals for preventing snow mold must be applied before the first permanent snow cover. Rust symptoms are orange to reddish-brown spots on grass blades. This rusty material rubs off on your fingers and shoes. Rust is rarely a problem where proper fertilization, watering and mowing are practiced. Read "The Home Lawn," available from the __________ County Extension Office or the Bulletin Room, University of Minnesota, St. Paul, 55101.
To all counties
ATT: Extension Home Economists
Immediate release

VITAMIN A NEEDED
EVERY OTHER DAY

You might say that Americans are nutrition conscious...but probably someone would correct you and point out that we're far more weight than diet conscious. Many can get excited over how many calories they've just consumed but they're unaware of vitamin intake.

Grace Brill, extension nutritionist at the University of Minnesota, indicates that vitamin A is needed every other day. Dark green and deep yellow vegetables and fruits supply more than one half of the vitamin A in our diets.

When you're shopping for a nutritious menu, consider vitamin A rich foods such as apricots, broccoli, cantaloupe, carrots, chard, pumpkin, spinach, sweet potatoes and winter squash. Other vegetables and fruits which make vitamin A contributions, but aren't quite as rich as those mentioned above, include asparagus, green beans, brussel sprouts, green peppers, tomatoes, peaches and prunes.

If you want beautiful, healthy skin, pay attention to your vitamin A intake. Vitamin A is needed for normal growth. It also helps prevent night blindness...so your eyes can adjust from bright to dim light.

-jkm-
It's a rare person who isn't looking for a food bargain. Grace Brill, extension nutritionist says, "instant nonfat dry milk should head your shopping list. It is one of the best food bargains today." Here are some reasons why:

* It helps stretch your grocery money. A quart of mixed dry milk costs 6 to 10 cents less than a quart carton of milk in the dairy case.

* It's easy to mix. It tastes good when properly mixed. After you've mixed it, following package directions, allow it to stand overnight in the refrigerator. Many homemakers mix half reconstituted dry milk and half regular milk as they start to wean their family away from all fresh milk.

* It's easy to store. Keep powdered milk in a jar or can with a tight-fitting cover or close to the usual flour, sugar, coffee, and tea cannisters. If you use it frequently from a large box, always close the pouring spout.

* It's a calorie bargain. A cup of mixed instant nonfat dry milk contains about the same calories as a glass of nonfat skim regular milk. But, both contain about half the calories of a cup of whole milk. And, saving a few calories here and there does make a difference for the weight watcher.

* It's nutritious. Nonfat dry milk fortified with vitamins A and D contains practically the same nutrients as fortified whole milk except for the amount of fat. All milk and milk products are rich in calcium (builds bones and teeth), protein (builds muscle, blood, and body tissue), and vitamins to help you look and feel good.

So, save on your food bill and help keep your family healthy too—put nonfat dry milk on your shopping list every time you go grocery shopping.

-lsn-
To all counties

4-H NEWS

Immediate release

4-H LEADER FORUM
PLACES FOCUS ON
HUMAN RELATIONS

The war on poverty, prejudice against welfare recipients and legalization of marijuana were some of the controversial issues Beltrami County 4-H junior leaders discussed in a forum on human relations.

The forum included meetings with from 12 to 18 junior leaders participating. The object of the forum was to give the junior leaders an opportunity to express their opinions and beliefs. They helped plan the meetings, inviting persons to speak before them on these issues so they could gather facts and opinions.

The forum helped the junior leaders express themselves in groups where they were challenged and could challenge each other.

At the first meeting, the regional program planner for the Office of Economic Opportunity stimulated discussion and provided information on current programs serving disadvantaged persons.

At another meeting, a Sioux Indian from the Indian Community Action Council discussed the Indian life style in contrast to other life styles.

The junior leaders were confronted with feelings and emotions toward Indian people that they had long held but had not understood. This session helped them to think of the Indian as an individual human being rather than a stereotyped "Indian". Attitudes on the part of the participants began to change as they were challenged to examine their attitudes toward Indians and understand why they had these feelings.

# # # 
MINNESOTA NAMES DELEGATES TO NATIONAL 4-H CONGRESS

Thirty-two Minnesota 4-H'ers have been awarded state trips to the
50th National 4-H Congress, Nov. 28 to Dec. 2 in Chicago.

The event will be attended by 1650 youth representing 4 million 4-H
members in the nation, 15 to 19 years old.

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

The Minnesota youth will compete for national honors, including scholar-
ships provided by business firms and foundations, which are also donors
of the expense-paid trips to 4-H Congress.

Nearly 300 scholarship winners will receive an all-time high of $179,100
in educational scholarships. Individual scholarships range from $300 to
$1600.

Delegates who will receive trips to Chicago as state winners, and the
projects in which they have won their awards, are: Judy Aykens, Steen,
and Marlo Johanson, Belgrade, achievement; James Takala, Iron, agriculture;
Robert Norecutt, Lucas, automotive; Kent Thiesse, Starbuck, beef; Nancy
Kennedy, Pequot Lakes, bread; Bonnie Johnson, Twin Valley, clothing;
Charlotte Dingels, Olivia, community beautification; James Simon, New
Prague, conservation of natural resources.

-more-
add 1-4-H congress

Diane Emge, Rt. 4, Faribault, consumer education; Cindy Wesely, Rt. 2, Owatonna; dairy; Claire Jo Hermes, Fairmount, N.D., dairy foods; Deborah Paulsen, Pipestone, dress revue; Dave Strand, 1776 Stanbridge, St. Paul electric; Barbara Kuschill, Maple Plain, entomology; Terry Schwartz, Rt. 1, Willmar, field crops; Kathleen Olson, Bethel, food preservation; Elaine Nesseth, Windom, foods and nutrition.

Renee Janas, 4219 Monroe N.E., Minneapolis, health; Sharon Bergman, Clearbrook, home improvement; Diane Dehart, Guthrie, home management; Mary Erickson, Rt. 3, Park Rapids, horse; Victoria Nickel, Sanborn, horticulture; Linda Diamond, Humboldt, and Kim Shaffer, Pipestone, leadership; Brenda Freeman, Starbuck, livestock.

Michael Dotzler, Aitkin, petroleum power, Richard Hoyme, 1404 Kelly Drive North, Minneapolis, photography; Raymond Strassburg, Burtrum, safety; Jim Resch, Spirit Lake, Iowa, sheep; Larry Holz, 8306 Kimbro Ave. So., Cottage Grove, shop and Dale Mathwig, Dunnell, swine.

Adult chaperones for the event include Juanita Fehlhafer and Joe McAuliffe, members of the state 4-H staff; Sharon Gilsrud, Blue Earth County extension home economist; Annalore Thierauch, extension agent in Brown County and Joe Fox, county extension agent in Ramsey County.

Darrol Bussler, Brownton, will accompany the Minnesota delegation and serve as the resource person for the delegates seminar session on communications.
MINNESOTANS WIN ALMA AWARD

A joint entry at the Association of Home Appliance Manufacturers convention resulted in the ALMA award for Mrs. Josephine (Jo) Nelson, recently retired extension information specialist, and Wanda Olson, extension housing specialist, at the University of Minnesota.

During the association's annual convention at Chicago's Pick-Congress Hotel, November 11-12, plaques were presented to the communicators throughout the country who had achieved exceptional merit.

The ALMA award is "in recognition and appreciation of service to homemakers through outstanding communication of information about home appliances-their purchase, use and care." The University entry was a comprehensive mass media coverage on appliances. Included were: KUOM's "Highlights in Homemaking" shows, consumer radio spots and state-wide network service, KTCA television segments, telelectures, newspaper and newsletter articles, bulletins.

# # # #
Semidwarf wheat varieties are here to stay in the Red River Valley—especially on higher fertility fields where weeds are adequately controlled.

That's the conclusion of growers, elevator operators and University of Minnesota Extension specialists throughout the Minnesota side of the Red River Valley.

Record breaking yields of wheat were reported—the result of almost perfect growing conditions and new, higher yielding varieties.

Estimates from elevator operators on the Minnesota side of the Red River Valley varied from 25 to 90 percent on the percentage of short strawed wheat varieties grown.

"Yields of 65 to 70 bushels with semidwarf varieties were very common in our area," said Kermit Brickson of Fisher Elevator Co. He estimated that up to 90 percent of the wheat in the Fisher area was semidwarf varieties.

World Seeds 1809 had the largest acreage of the semidwarfs in the Fisher area last year, according to Brickson. He said the protein content was generally much lower this year compared to 1970, even for tall varieties. He reported Waldron running from 11 to 13.5, Era from 9.6 to 12.7, Red River 68 about 13.6 and World Seeds about 14 percent protein.

Jay Johnson, from Farmers Co-op Elevator in East Grand Forks, said about 75 percent of the acreage in the area was planted to semidwarf varieties. He reported that growers who planted Era were well satisfied, and expects acreage of semidwarfs to increase.

-more-
add 1--semidwarf wheat

Lloyd Hill, Warren Grain & Seed Co., said farmers who planted Waldron were "very disappointed."

"Although I discouraged farmers from planting Waldron last year, about 70 percent of the seed we sold last year was Waldron. I expect this to drop to from 10 to 20 percent next year because of disappointing low yields," he said.

"I know of one farmer who averaged 76 bushels per acre with Bounty 208, 70 bushels with Era and only 32 with Waldron. Another good farmer planted 4,000 acres to Waldron and averaged 36 to 40 bushels per acre. His neighbors were getting from 60 to 80 bushels with semidwarf varieties."

Although he likes to get Waldron at the elevator because of the higher protein content, Hill said farmers "need the extra bushels from semidwarf varieties since the price isn't there."

In the southern part of the valley, elevator operators at Felton and Glyndon reported 30 to 35 percent of the wheat was semidwarf varieties. But this will go "way up next year," said Duane Amundson, Felton Farmers Elevator.

Harry Tveter, elevator operator at Glyndon, said World Seeds 1809 was the most predominant short strawed variety last year. "I expect to see a lot of Lark next year. Era won't be so popular because of the low protein content (9 to 10 percent at his elevator). The Commodity Credit Corporation discount of 20 cents per bushel on Era next year will discourage many farmers from growing it."

Victor Kath, sales manager at Red River Grain Co. in Moorhead, said the protein content of Era taken in averaged from 10.5 to 11 percent, with some running 12 to 13 percent where higher nitrogen rates were applied. He said yields of Era were averaging about 60 bushels per acre, with 72 bushels the highest reported.

Apparently Waldron, the most popular tall wheat variety, fared a little better around Glyndon than in the Warren area described by Hill.

-more-
add 2--semidwarf wheat

"Waldron averaged from 50 to 55 bushels per acre in this area, but there will still be a little less grown next," Tveter predicted. He said the highest yields reported by variety were 57 bushels for Waldron, 70 for Era, 65 for Bonanza and 65 for World Seeds 1809.

# # # #
Harvest of young aspen seen possible

Small aspen stems harvested every 12 years could yield as much wood fiber on an average annual yield basis as harvesting only mature aspen on the same site, according to a University of Minnesota study.

The short-cycle harvesting concept of aspen "opens new possibilities for reducing the cost of as well as meeting of present and predicted increased future demands for wood fiber," according to Ronald Person, research assistant, Alvin Hallgren, associate professor at the University of Minnesota and John Hubbard, a research forester for the Boise Cascade Corporation.

The short-cycle harvesting concept might make possible the use of more of the state's aspen in the manufacture of paper, fiberboard, cardboard boxes, wallboard and other products.

Harvesting of aspen stems called suckers with agricultural-type equipment such as a corn chopper might be possible which could significantly reduce harvesting costs, the researchers said.

In the aspen areas sampled near International Falls, Minn., the total yield of aspen for twelve-year rotations over a forty-year period was figured to be about 39 cords per acre or about four cords greater than would be obtained from a single cut of 40-year old aspen.

The researchers warn, however, that much more needs to be learned about the harvest of aspen suckers.

- more -
add 1--young aspen

"It is not known if an area will continue to produce fiber yields from suckers with repeated cutting. Fertilization, irrigation, and other forms of site preparation may be necessary to achieve continued high yields. Also, high among the problems which would have to be resolved are the economic and technical aspects of harvesting and making wood pulp from small sucker stems."

The state's total aspen pulpwood harvest is about one-half million cords a year, but aspen is growing faster than it is being cut. Aspen, sometimes called "popple," is undercut by more than 300,000 cords a year. When a forest is undercut, trees are maturing and dying faster than they are being harvested--consequently many trees are wasted.

Results of the research can be obtained from the College of Forestry, University of Minnesota, St. Paul 55101. Ask for Minnesota Forestry Research Notes, No. 224, "Yields From Short-Rotation Aspen Suckers."

# # # #

bjc-71
HAVE BEEF COWS CHECKED FOR PREGNANCY

Beef cow owners should have their cows tested for pregnancy so non-breeders can be culled before expensive winter feeding starts.

"The ideal time for pregnancy testing is 35 to 40 days after the breeding season ends while cows still have plenty of flesh from summer and fall pasture," said Dr. Charles Gibson, veterinarian at the University of Minnesota.

Don't wait until late December and January, when you've already fed expensive wintering feeds to some cows which should have been culled two or three months ago.

While you're having the cows checked for pregnancy, also check for conditioning plus external and internal parasites. Aside from a negative pregnancy test, you may decide to cull on the basis of mastitis, udder problems or bad mouth conditions.

A veterinarian should conduct pregnancy tests since he may also be able to spot disease problems, Gibson said.

###
STORE PESTICIDES
FOR THE WINTER

Leftover insecticides, fungicides and weed killers should be stored properly for the winter.

Take inventory of what you had, suggests County Extension Agent _______, with the University of Minnesota's Agricultural Extension Service. Make sure all pesticides you plan to keep are in their original containers with a label that can be read completely. Seal all liquid containers tightly.

Paper bags or boxes containing dry products such as dusts, granules, or wettable powders should be closed and re-sealed with tape or put in a clean plastic bag which can be sealed.

Next, put containers of pesticides in a storage room, chest or cabinet that can be locked. The storage space should be some place not subject to freezing temperatures. Some liquid pesticide formulations will freeze and break their containers, or the active ingredients may drop out of solution.

Don't store pesticides near foods or in medicine cabinets. Keep weed killers away from insecticides and fungicides, especially if you have products that contain 2,4-D or related herbicides. Store dry products on shelves or pallets so they won't absorb moisture and cake.

Now dispose of all "empty" containers, products without complete labels, and products in damaged containers. Pesticide containers are never completely empty, so don't use them for any other purpose. Excess material should be buried at least 18 inches deep, away from water supplies. Never dispose of any pesticides in drains or other plumbing.

To keep empty containers from being used again, crush them or puncture them and take them to a land-filled dump for burial.

# # #
Consumer illiteracy is disastrous. This is the observation of Virginia Knauer, special assistant to the President for Consumer Affairs. "Although we have taught some how to earn money, we have taught very few how to spend, manage or make full use of consumer laws."

Speaking recently to adult educators, she said, an effective course in consumerism should enable man to cope with the marketplace. Considering the 1970 census, she doubts whether society has the proper educational credentials for consumer capability.

Forty-five percent of those over 24 have not finished high school... accounting for 49 million people. Of that group some 16 million don't have eighth grade educations.

Educational data for those in school now doesn't present a very bright consumer picture either. According to Mrs. Knauer, only 35 percent of the high school women receive consumer information. Because this is usually in home economics courses, less than one percent of the men receive any consumerism.

Some states are taking legislative action. Illinois and Hawaii have mandated consumer courses. Oklahoma, Michigan, Wisconsin, Texas and Ohio have legislative proposals.

When you teach adults to read, teach them how to read ads, warranties and labels, she said. Let's use technology, computers and television to upgrade the levels of consumer knowledge.
Have you ever eaten rutabaga raw or cooked? Do you know what a rutabaga looks like? Grace Brill, extension nutritionist at the University of Minnesota, suggests that "vegetables are one of our most versatile foods. There are enough vegetables and ways to prepare them that you could surprise your family often with a new taste treat."

Rutabagas are large-sized relatives of turnips. Rutabaga flesh is yellow. It is a strong flavored vegetable. In the market you will recognize them as a round vegetable with a whitish-yellow bottom with a purplish top, usually coated with wax. They are in season now and are good buys.

You prepare them the same as turnips. Simply pare them, and the wax will come off with the peeling. Slice or cube them and add to boiling salted water. Cook for 20-30 minutes or until fork tender. Drain, add some butter or margarine for flavor, and serve. Or, you can mash them the same as you would mash potatoes. And, many good cooks think they cannot make good homemade soup or stew without a "baga" in it. For soup or stew, peel, cube, and add with the other vegetables.

To serve rutabaga raw, peel and cut in strips. Serve alone with your carrot and celery sticks and relishes.

Rutabagas are valuable in the diet because they provide vitamin C. Vitamin C helps cuts heal quickly and helps keep skin and gums firm.

Surprise your family with something new for dinner today. Fix rutabaga and suggest that everyone taste it. And, don't forget to taste it yourself, and look like you're enjoying it.
To all counties
4-H NEWS
Immediate release

JOB HUNTING,
INDIAN CULTURE
INTEREST TEENS

Minnesota had some unusual, interesting 4-H programs during the past year aimed at promoting greater understanding and making information available.

In four southwestern locations—Marshall, Montevideo, Ormsby and Worthington, 500 teenagers participated in a program called "The World of Work (and welcome to it)." The program was designed to encourage the youth to take an active part in the decision making processes that affect their future.

It was also aimed at informing them of what employers expect of an employee, how to interview for a job, assistance available in job hunting and the advantages of developing a marketable skill and how to get that skill.

Day-long programs were conducted in the four locations and included lectures, a slide presentation and a group discussion period. Extension Sociologist Charles E. Ramsey emphasized the importance of personal acceptance and building on one's best qualities.

In another program, Mrs. Robert Horne, a Shoshoni Indian, has been teaching 4-H members at Nay-Tah-Waush on the White Earth Indian Reservation a philosophy of Indian living through Chippewa Indian dances. She tries to make the 4-H members aware of their culture, its value and the philosophy behind the way of life expressed in the dances.

Mrs. Horne explains that many of the dances are developed through imitations of birds. There is a feeling of brotherhood toward all things because everything is a part of the total, she says.

-daz-
To all counties
Immediate release

USDA EXPORT CHIEF
SAYS DOCK STRIKES
DEPRESS FARM PRICES

U. S. grain farmers are not yet benefiting from lowered export prices because of a series of dock worker strikes at Pacific, East and Gulf Coast ports, according to the general sales manager of the USDA's Export Marketing Service, Clifford G. Pulvermacher.

Pulvermacher addressed the Crop Quality Council's 1971 Crop Production Conference this past week in Minneapolis.

"As a matter of fact, wheat exports from most parts of the country have been retarded and farm prices depressed. As the dock situation returns to normal, however, the new economic program (of the Nixon administration) should serve as a definite stimulus to grain exports," he said.

The extent to which this year's farm commodity exports are hurt will depend on the duration of these strikes, "but we have already lost a great deal of business that will never be made up. Australia, for example, has moved substantial quantities of soft wheat to Japan while our pipeline for Western White (wheat) was backed up from the dock to the elevator to the farm," Pulvermacher said, adding that Australia also made major sales to Korea and other Far East markets.

He termed "imponderable" the effect of the President's rescission of the requirement that half the sales of wheat and wheat products to Eastern Europe and the Soviet Union be shipped on United States flag vessels. Although that will improve the U. S. competitive position in this region, the Soviet Union has another good crop and has made large purchases from Canada, Australia and France for delivery through 1972, he added.

The export sales manager said the U. S. may be able to make wheat sales to the Soviet Union and mainland China in future years, but he declined to speculate on the effect on agricultural exports of the President's termination of controls on exports to mainland China. "We certainly have no indication that it will increase our exports in the near future, but there may be real opportunities down the road," Pulvermacher said.

###
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# # #
IN BRIEF...

**Shop for Farm Loans.** Shop for an entire package of services when you're looking for a farm loan. Consider factors such as the deal you can get for repaying the loan, length of time before you must start to repay and whether you can add on to the loan at a later date, advises E. Fred Koller, agricultural economist at the University of Minnesota. Some lending institutions make it possible to renegotiate the loan later. The good credit agencies can tailor individual farm loans to your specific situation.

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**Lifting Mishaps Trouble Farmers.** Farm accident studies in Michigan, Ohio and New York show that lifting accidents resulted in the most number of working days lost. An average of twenty days were lost in lifting accidents. Nearly six out of every ten accidental work injuries to farm family members or employees resulted in two days or more lost time.

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**USDA Corporate Farm Survey.** A 1968 USDA survey shows that 13,300 farming corporations operated seven percent of U. S. farm land, representing one percent of all commercial farms. California and Florida accounted for about one-third of the total number, including some of the largest corporate farming enterprises. Nearly two-thirds of the farming corporations surveyed were family corporations, while 14 percent were owned and controlled by individuals.
CONSUMERISM
CRITICAL
CONCERN

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Knauer, special assistant to the President for Consumer Affairs. "Although we
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levels of consumer knowledge.

###
SPECIAL TO RED RIVER VALLEY
(Second in series on wheat farming)

CONTROL ERGOT
IN WHEAT CROP

Wheat growers should do a good job of plowing to bury ergot bodies and help
 guard against the disease appearing in next year's wheat crop.

"Farmers using minimum tillage practices could have an ergot problem with any
 wheat variety," said Howard Bissonnette, University of Minnesota extension plant
 pathologist.

All wheat varieties may show ergot symptoms, but Waldron is by far the most
 susceptible, he added. Ergot presents a problem whether the grain is used for
 baking purposes or fed to cattle. The amount of ergot in wheat depends on two
 things—the number of ergot bodies in the soil and weather conditions just before
 the plants head.

Ergot varied widely throughout the Red River Valley last year due to
 localized weather conditions. Relatively cool, moist conditions at flowering time
 resulted in more ergot north of the Crookston area than in the southern Red River
 Valley during the past growing season, Bissonnette said.

Commenting on the possibility of ergot next year, Bissonnette stressed that
 the ergot problem varies widely according to weather conditions. "Cool, moist
 weather when the wheat is heading out could cause ergot problems on any wheat
 variety, especially if the land was only tilled, not plowed. But with hot, dry
 weather we may not have ergot, even with Waldron."

It's important for farmers to control ergot since wheat can't be sold in the
 U.S. if the ergot content is over three-tenths of one percent. And although it's
 possible for elevators to get most of the ergot during cleaning operations, some
 foreign countries are imposing extremely strict ergot limits on wheat imports—
much stiffer than U.S. standards.

-more-
There's also a health hazard if you feed grain containing ergot to cattle. Clyde Christensen, another University of Minnesota plant pathologist, said Canadian research showed that ergot levels of one-tenth of one percent (equal to one pound per thousand) resulted in sterility and abortions in pigs.

North Dakota State University scientists say that ergot levels below .06 percent (equivalent to 6 infected kernels per 10,000) are safe. Specialists give these pointers to avoid potential problems:

* Do not feed grain screenings that may contain ergot to livestock.
* Avoid feeding any grain with ergot to pregnant animals.
* If you're feeding grain with traces of ergot, dilute the infected grain with clean grain as much as possible.
* Grain infected with ergot tends to separate, so watch for concentrated spots of infected grain in the bin. Concentrated amounts should be mixed well with clean grain, fed in small amounts or kept out of the mix completely, according to Mike Hutjens, extension dairy nutritionist at the University of Minnesota.

* If animals show symptoms of ergot poisoning, get them off the infected feed immediately, Hutjens stressed. Symptoms include lameness, muscle spasms and reduced milk production in dairy cows. If animals showing poisoning symptoms are taken off the infected feed soon enough, they have a good chance of recovery.

# # # #
WILDERNESS VISITORS OPPOSE BWCA DEVELOPMENT

Between 75 and 85 percent of the Boundary Water Canoes Area (BWCA) campers interviewed in a University of Minnesota Study oppose allowing public roads, underground shaft mining, resorts and homes in the area.

Opinions were divided, however, on issues of the level of government regulations, allowing commercial logging and motor restrictions in the BWCA, according to a former University research assistant, Stephen McCool now at Wisconsin State University, and University forester Lawrence Merriam. The recently published results are based on interviews with BWCA outfitting firms and canoeists in 1968 and 1969.

The BWCA is one of the most heavily used wilderness areas in the United States and annually accounts for about one-fourth of all man-days use of wilderness areas in the nation. Between 60 and 70 percent of the groups visiting the area have been outfitted, McCool and Merriam said.

Motor restrictions in the BWCA was the management issue most likely to be talked about by outfitters and campers, the researchers said. "Outfitters volunteered this information to newcomers and oldtimers asked for it. Outfitters are also most likely to volunteer or initiate interaction on this subject when they are a large operation and when the group is completely outfitted."

BWCA outfitters may be providing the major share of information on the wilderness area for 60 to 70 percent of the visiting groups, they said.

-more-
add 1--wilderness visitors

And on all issues, campers who interacted with the outfitter on management issues showed less resistance to Forest Service policies.

Other results found by the study included:

*Completely outfitted groups talked more frequently about the subjects measured, such as travel route, campsite cleanup, camp equipment, fishing spots, management issues, and canoe country conduct than partly outfitted groups. Oldtimers talked more about management issues and less about camping skills than did newcomers.

*Large outfitters are more free from local ideas and prejudices and have more preservationist attitudes than small outfitters.

*Out-of-state outfitted groups were less interested in and knowledgeable about the BWCA than in-state non-outfitted groups.

*Outfitted groups tend to be older, slightly more educated, larger in size, less experienced, paddling canoeists, and less likely to come from Minnesota than non-outfitted groups.

"The outfitter's role will become increasingly important in the future for implementation of BWCA regulations and management policy and as a means of communication of important information," McCool and Merriam said.

# # # # 191- 71
Economists Say:

LIVING COSTS MAY BE HIGHER FOR RURALITES

Living costs may be higher in the country than in the city, according to University of Minnesota agricultural economists Arley D. Waldo and John H. Sanders.

Poverty often is thought to be less significant in rural areas than urban areas. Although housing costs are lower in rural areas, these areas often lack social services. The number and quality of health facilities and personnel, the number of institutions offering post-high school education and the range of consumer goods tend to be less in rural areas.

"...The lower cost of living may be partly due to the fact that rural inhabitants are forced to do without many of the goods and services available to urban residents," Waldo and Sanders said.

But "the cost of some consumer goods generally is higher in rural areas since many retail establishments pay higher transportation costs. Many rural stores do not have the sales volume to offer prices as low as those in city discount stores. When all goods and services, including the quality components are considered, living costs may even be higher in the country than the city," the University economists said.

Waldo and Sanders discuss poverty programs in America in a forthcoming issue of the University of Minnesota publication, Minnesota Science.
CONFINEMENT CAN
CAUSE BREEDING
FAILURE IN SWINE

Severe confinement of the breeding herd can cause failure of gilts and sows to show estrus and ovulate and may delay puberty in gilts until they are 9 to 12 months of age or older, say University of Minnesota swine specialists.

The severity of anestrus, or absence of heat, may vary with the herd, but occasionally as high as 80 percent of the herd at 10 months of age will fail to show estrus when in confinement.

Research has shown that the number of gilts per group, the severity or closeness of confinement, and the absence of a boar all contribute to the anestrus condition. For example, gilts housed in groups of 10 or more have remained in anestrus. When similar gilts were divided into groups of five each in pens with half the floor space, anestrus did not occur.

Anestrus can usually be prevented by breaking the groups into smaller, separate subgroups, providing more area per female and by introducing males into the groups.

# # # #
If your house plants look sick and are dropping their leaves it may be due to warm temperatures in the house during the evening hours.

House plants are especially vulnerable at this time of the year because furnaces are running a lot and they have less light due to shorter days.

Most plants will grow well with day temperatures ranging from 65 to 75 degrees, but night temperatures should be about 10 degrees cooler, says Jane McKinnon, extension horticulturist at the University of Minnesota.

Don't put house plants on top of radiators, hot air registers, television sets or in any other location where they're exposed to hot air blasts.

In some cases, you may need to transfer plants from a warm room to a cool place at night, Mrs. McKinnon says.

Recommended room temperatures vary from plant to plant, so check with your county extension office or local florist for exact requirements.

# # # #
STORE WINTER BULBS WITH CARE

Flower gardeners who have dug bulbs and are wondering how to store them for winter are offered some tips from Jane McKinnon, University of Minnesota extension horticulturist.

Store dahlia bulbs under slightly humid conditions—a damp fruit cellar or pump room would be ideal. Pack the bulbs in peat moss or vermiculite and store them at a temperature of 40 to 45 degrees.

Cannas should be packed in vermiculite and stored where it's dry with temperatures ranging from 40 to 50 degrees.

Gladiolus corms should be dusted with a combination fungicide-insecticide, then stored in mesh bags or onion sacks. Glads, like canna bulbs, should be stored where it's quite dry. The ideal temperature for storing glad corms is 33 to 40 degrees.

# # # #
IN BRIEF... 

Spray Cattle for Lice. Cattlemen should spray for lice before cold weather sets in. Select a mild day for spraying, but temperatures do not have to be above freezing, according to David Noetzel, University of Minnesota extension entomologist.

Several good insecticides are available as sprays. They include Co-Ral, Ciodrin, Korlan, malathion and toxaphene. Use one gallon of insecticide per animal and spray only five to eight at a time to insure a complete and uniform coverage. Spraying is the best method of louse control, but backrubbers are also used extensively, Noetzel says. To be effective, backrubbers must be available in the fall before louse population is excessive.

Read and follow label directions carefully when mixing insecticides for spraying or backrubbers. Do not mix insecticides to be used on livestock stronger than the label specifies, Noetzel cautions.

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Fall Nitrogen On Surface Boosts Yields. Leaving nitrogen fertilizer on soil surface in fall produces equal or better corn yields, compared to plowing fall fertilizer under, say University of Minnesota scientists.

In experiments covering 11 years, 40 pounds of nitrogen per acre (either as ammonium nitrate or as urea) broadcast on late fall plowed fields and left on the surface overwinter has, in most instances, produced slightly more corn than similar rates plowed down. This probably results because overwinter losses of nitrogen left on the soil surface to the atmosphere may be less than leaching of plowed nitrogen to heavy late fall and early spring rains.

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-more-
Young Trees Need Winter Mulch. Four to five inches of good winter mulch will help protect young trees by insulating the soil, preventing alternate freezing and thawing and reducing frost penetration in the root zone. Straw or hay makes the best winter mulch material—if it’s available, according to Leonard Hertz, extension horticulturist at the University of Minnesota. If you can’t get straw or hay, peat moss, ground corn cobs or granulated bark may be used. Some people use leaves, but leaves mat down and don’t give the good insulation effect needed in a winter mulch, Hertz says.

For shade trees planted this year, spread the mulch 6 inches from the base to a foot or two beyond the hole in which you planted the tree. For evergreens, extend the mulch as far as the branch tips. Be careful not to mix the mulch with soil. Mixing the two ties up nitrogen required for tree growth. A winter mulch is especially important for young evergreens, Hertz adds.

Protect Trees Against Winter Sunscald. You can avoid winter sunscald injury to smooth-barked trees by wrapping the trunks with any material that reflects sunlight. Winter sunscald appears as rough, peeling, or discolored bark on the south-southwest side of smooth-barked trees such as apple, aspen, maple, mountain ash and white pine. Winter sunscald is caused by above freezing temperatures on sunny days combined with freezing temperatures at night.
CLOTHING AS A GIFT

Giving...is the real meaning of Christmas to most of us. The spirit of sharing is repeated in each refrain of the traditional song, "The Twelve Days of Christmas." As difficult as it may be to obtain eight maids a-milking or ten lords a-leaping...sometimes it's almost as challenging to find a gift that fits the beloved.

Athelene Scheid, extension clothing specialist at the University of Minnesota, asks that we remember the purpose of giving...to please another.

Gift giving, whether clothing or other item, fits into several categories. Either you please both involved in the gift exchange, only one or neither.

An ideal gift is one that brings joy to the giver and receiver. A clothing gift needs to be right in design, color, fabric and of course, size. It ought to fit the existing wardrobe and be something the receiver really wants. Miss Scheid agrees that this takes some knowledge of the person and probably is easier for someone sharing the same household. Clothing is a successful gift to the degree the giver knows the receiver.

An over extension of the budget may please the receiver but certainly won't contribute to the holiday serenity of the giver. The same conflicting sentiments may arise when a gift giving aunt buys what she considers an "ugly" style for a mod teenager.

Many who shop for children find themselves, unconsciously perhaps, satisfying their own needs rather than the child's. Make certain that if the gift fulfills a childhood desire, your intended receiver is on the same wave length.

-more-
add 1--clothing as a gift

In gift selection, an effort should be made to find out what is suitable. Ask for a suggested list, with size and color designated. There will be fewer disappointments and exchanges.

Miss Scheid reminds shoppers to go alone and early in the day. Packages can be mailed directly from the store.

Gifts are highly personal matters and can reflect a high degree of human relations. A family studies specialist warns that the most fabulous gift from someone you don't like, falls flat. No pleasure is apparent for giver or receiver.

Make selections with care and carefully consider the dynamics of gift giving.

-jkm-
BOUNTFUL NUTRIENTS FOR THANKSGIVING

Put vitamin A on your Thanksgiving menu. Include one or more of the following: squash, pumpkin, sweet potatoes, carrots, or broccoli in your Thanksgiving dinner, and you will be providing your family and guests a good supply of vitamin A in their meal.

Mary Darling, extension nutritionist at the University of Minnesota, says that "vitamin A helps keep your skin clear and soft and helps keep your eyes healthy. Vitamin A is in deep-green and deep-yellow and orange vegetables and fruits. The intense green and orange colors are an indication of carotene content, a sign of vitamin A."

For baked squash, cut acorn squash in half and Hubbard squash in 3 to 4 inch squares. Remove the seeds. Put squash in a baking pan, cut side down. Add a little water. Bake in 350° oven until partly done, about 30 minutes for acorn, one hour for Hubbard. Turn pieces over. Season to taste. Sprinkle with salt or brown sugar and dot with butter. Continue baking until squash is just fork tender.

If you are going to be short oven space for your Thanksgiving dinner, bake your squash the day before. Remove squash from the shells, add salt, butter or margarine, and mash as you would mash potatoes. Put into baking dish, cover, and keep in refrigerator until time to heat it for dinner. Uncover and allow 20-30 minutes for reheating.

As you cook squash, pumpkin, sweet potatoes, carrots, or broccoli for your Thanksgiving dinner, remember to cook until "just done." Whether you boil, steam, bake, or fry them, over-cooked vegetables lose their taste and eye appeal, not to mention their important vitamins and minerals. Serve YOUR Thanksgiving dinner vegetables barely tender, still colorful and nutritious. Happy Thanksgiving!
TRY 4-H PROJECT
IN SNOWMOBLING
FOR WINTER FUN

The 4-H snowmobile project appeals to active 4-H'ers who are looking for outdoor winter adventures. Now's the time to get ready for a winter of fun and good snowmobiling.

But first, keep safety in mind. Many snowmobile accidents can be prevented this year if drivers know their machine, the sport and use some common sense.

Drowning is the most common cause of snowmobiling deaths. Springs, currents and heavy snow cover can produce unsafe ice on Minnesota lakes and streams even during prolonged periods of subzero temperatures.

Night riding can also be dangerous. Too many deaths are caused by hitting fences, wires, low hanging branches and cabled or chained road entrances.

Some tips on trail riding that can prevent accidents:

* If you plan a long trip into a remote or unknown area, never go alone. Use the buddy system and be sure to carry extra fuel, an extra drive belt, spark plugs, a can of gasoline de-icer, a tool kit, flashlight, matches, a first-aid kit and snowshoes.

* When traveling or maneuvering with other machines, don't "tailgate."

Many accidents are caused by ramming another machine or a fallen rider.

* Unless you are positively sure that the ice on a lake or stream is safe—stay off.

* Never ride alone at night. Be sure that head and tail lights work and travel in familiar areas and on established trails.

# # # #
REP. WINGARD TO ADDRESS AGRICULTURAL SHORT COURSE

Legislation related to pollution and agriculture will be discussed by Rep. John P. Wingard, Conservative-Champlin, during the Combined Soils, Fertilizer and Agricultural Pesticides Short Course Dec. 14-16 at the Minneapolis Auditorium.

Wingard will speak at 10:45 a.m. Dec. 14 (Tuesday) during the soils and fertilizer session. Also speaking Tuesday morning will be G.E. Smith, director, Water Resource Center, University of Missouri, Columbia, Mo., on the possibility of restricting fertilizer use.

On Dec. 15, (Wednesday), agricultural research for the future will be discussed by William F. Hueg, Jr., director, Minnesota Agricultural Experiment Station. On Dec. 16 (Thursday), speeches will be given on weed control and related issues.

The short course is being sponsored by the University's Institute of Agriculture in cooperation with the Minnesota Plant Food Association, Minnesota Agricultural Chemical Association, Minnesota Agricultural Aircraft Association, Minnesota Department of Agriculture and Minnesota Department of Aeronautics.
Computers Aid Dairy Ration Formulation

Synthia helps Minnesota dairy farmers formulate feed rations.

Agricultural extension agents are working with Synthia, a computer at the University of Michigan, Ann Arbor, Mich., that "talks" to the agents over a "touchtone" telephone.

The computer is called Synthia because the voice that the agricultural agents hear is synthesized by the computer. It's not a recording.

Extension economists at the University of Minnesota say computers, which are capable of making thousands of calculations in a fraction of a minute, enable farmers and others to do a thorough job of exploring the results of alternative actions.

The dairy feed ration program is one of about 30 computer decision aids available to farmers on Synthia.

The computer relies on programmed information fed in by agricultural economists and dairy nutritionists at Michigan State University, Lansing, Mich., to formulate dairy rations. The dairyman then supplies information on the feeds he has available and their costs. Each feed has an assigned number that can be punched into the computer through the "touchtone" telephone. The dairyman can restrict the quantity of any feed in the ration.

-more-
When the list of ingredients and feed costs has been supplied, the computer combines it with information in its memory. Within about 20 seconds, it performs over 200,000 calculations to select the lowest-cost combination of feeds to meet the dietary requirements of the herd.

Then the computer, in a mechanical voice tells the daily costs per cow for feeding at a specified milk production level, pre-mix ingredients, pounds of each feed in the concentrate to meet the batch size specified by the dairyman; pounds of concentrate to be fed per cow daily for specified levels of production, pounds of roughage, hay, haylage and/or silage per cow daily; pounds of additional concentrate required for cows producing an extra 10 pounds of milk daily and the cost of that additional feed and whether the ration contains excess energy, excess protein or both.

The computer helps the farmer formulate a ration that is nutritionally balanced at the least cost. If this was figured without the aid of the computer, it would take a tremendous amount of time and chance of error would be high.

Interstate cooperation in the use of Synthia now includes Agricultural Extension Services at the University of Wisconsin and the University of Illinois, besides the University of Minnesota and Michigan State University.

The program, now available in Minnesota's Winona County, is being expanded to include other areas of the state.
Semidwarf wheat varieties capable of yielding 25 to 35 percent more than tall varieties represent one of the most significant breakthroughs in recent years for wheat growers.

The semidwarf varieties offer a new tool for wheat growers to work with, points out Ervin Oelke, University of Minnesota extension agronomist. "With proper management, including extra nitrogen fertilization, farmers on land with potential for top yields now have the opportunity to get some extra bushels. Good weed control is essential for semidwarf wheats since weeds seem to be more of a problem with shorter varieties," he said.

Some growers in northwestern Minnesota had record yields of 75 to 80 bushels per acre with semidwarf varieties last year, and one grower had 100 bushels per acre on a small acreage. A recent spot check of wheat growers in northwestern Minnesota revealed these above average yields of semidwarf wheat:

* Armin Ross, Fisher, averaged 81 bushels per acre with a protein content of 11.6 percent on 142 acres of Era wheat on last year's beet ground. Another 160-acre field of Era averaged 75 bushels per acre. He applied liquid nitrogen at the rate of 70 pounds actual nitrogen per acre before planting, then added 175 pounds per acre of 24-6-0 at planting time with the drill for a total nitrogen application of 112 actual pounds per acre.

However, Ross reported some nitrogen burn shortly after emergence and said he was "reluctant to put that much nitrogen on at planting time again." He applied Bromoxynil and MCPA for weed control.

-more-
add 1—semidwarf wheats

* Art Howard, Warren, had 1700 acres of wheat last year. He had a 240-acre field of Era that yielded 62 bushels per acre on old beet ground. The Era averaged 11.4 percent protein. Howard applied 66 pounds of actual nitrogen in the fall, but said it "wasn't enough." Semidwarfs are here to stay, but they need a heavier seeding rate, higher fertilization levels and clean fields since they aren't good weed competitors, he said.

* Duane Godell, also from Warren, had 68 acres of Bounty 208 that yielded 75 bushels per acre on old beet ground. He applied 100 pounds of nitrogen in fall, and 170 pounds of 25-25-0 down the spout at planting for a total actual nitrogen rate of 143 pounds per acre. He sowed at the rate of one bushel per acre, and applied a combination of Bromoxynil and MCPA for weed control. A field of Bonanza went 60 to 65 bushels per acre.

* Bruce Hamnes, Stephen, averaged 69 bushels per acre with Era on 250 acres, but had one yield of 76 bushels per acre on a field which had sugar beets last year. He averaged 59 bushels per acre with World Seeds 1809 on 250 acres and 48 bushels per acre with Waldron on 250 acres. All fields had 100 pounds nitrogen—60 pounds last fall, 10 pounds down the spout and 30 pounds broadcast in the spring. He sowed at the rate of 1½ bushels per acre, but said he "thought he should be seeding heavier—perhaps 1½ bushels per acre." He applied triallate (Far-go) to control wild oats and 2,4-D for broadleaf weed control.

* James Dale, Fertile, reported 100 bushels per acre on 13 acres of Era on a farm near Beltrami. Three years ago he plowed down a sweet clover crop in the fall. He applied 100 pounds nitrogen, 80 pounds phosphorus and 80 pounds per acre of potassium to a wheat crop 2 years ago. Last spring he applied 125 pounds of nitrogen, 60 pounds phosphorus and 60 pounds per acre of potassium. He seeded 1½ bushels per acre and controlled weeds with MCPA.

*vatthover Farms, Red Lake Falls had 625 acres of Era and World Seeds 1809 with an average yield of 65 bushels. One field of Era yielded 85 bushels. All wheat were on fallow ground where 35 pounds per acre of nitrogen was applied.

# # #
CONFERENCE FOR PEST CONTROL OPERATORS SET

State rules and regulations and other issues affecting pest control operators will be discussed at a conference Dec. 20-21 at the University of Minnesota's St. Paul Campus.

The Pest Control Operators' Conference will be in the North Star Ballroom of the Student Center.

Rollin Dennistoun, administrator for Plant and Environmental Concerns for the Minnesota Department of Agriculture, will discuss rules and regulations affecting the structural pest control operator at 1:20 p.m. Dec. 20 (Monday).

Ralph Heal, Elizabeth, N.J., executive secretary of the National Pest Control Association, will discuss new developments in the restriction of pesticides by the Environmental Protection Agency at 2 p.m. Monday. Constructive criticism of pest control operators will be the topic of a panel discussion at 4:10 p.m. Monday featuring a housewife, landlord, food industry representative and pesticides supervisor for the State Agriculture Department.

The conference is being sponsored by the University's Agricultural Extension Service, Department of Entomology, Fisheries and Wildlife and the Minnesota Pest Control Operators' Association.

# # #
NUMBER OF FARMERS
IN MINNESOTA DROPS
FROM 1964-1969

The number of farm operators in Minnesota decreased 18 percent from 1964 to 1969, according to data released this year by the U. S. Bureau of Census.

In 1964, there were 131,163 farmers in the state and in 1969 there were 110,747. There were decreases in all age groups with the greatest drop in the middle age groups—35 to 44 and 45 to 54-years-old. In the four-year span, the number of Minnesota farm operators decreased 6,411 in the 35 to 44 group and 5,484 in the 45 to 54 group. The greatest number of farmers—30,521—was in the 45 to 54-year group in 1969. This same group had 36,005 members in 1964.

The average age of farmers in the state in 1969 was 49, just a few decimal points over the 1964 average.

The number of young farmers—those 34-years-old and younger, outnumbered the elderly farmers, 65-years-old and older, in 1969 by 3,063. There were 15,979 young farmers and 12,916 elderly farmers in 1969. In 1964, there were 19,530 young farmers and 15,454 elderly farmers. The margin of young-over-old farmers was 1,013 less in 1969 than in 1964.

# # # #
Pastures composed of mixed grasses produced higher average yields with or without fertilizer than pastures with predominantly Kentucky bluegrass, according to University of Minnesota 1971 research in the Red River Valley.

Yields were higher, particularly for mixed grasses containing considerable amounts of timothy, bromegrass and quack grass, University scientists reported.

Fertilizer applications containing an equivalent of 150 pounds of nitrogen, 50 pounds of phosphate and 50 pounds of potash resulted in hay yield increases of more than two tons per acre in two cuttings. Yields of pastures with this fertilizer application were nearly three times those obtained with no fertilizer application.

Application of 30 pounds of nitrogen per acre with 15 pounds of phosphate and 15 pounds of potash resulted in small yield increases in the first cutting, but produced no yield increases in the second cutting.

Although many permanent grass pastures in Minnesota need weed control, the use of weed control chemicals did not increase yields in these tests.

Increases in protein content, influenced by nitrogen fertilizer applications, often exceeded five percent. There was little difference in the protein content of the mixed grasses as compared with the stands that were predominantly Kentucky bluegrass.

The protein yield per acre was three times as much on fertilized plots as on non-fertilized areas.

# # # #
HANDLE STOCKINGS
WITH CARE

The hanging of Christmas stockings has a pretty tale. A proud but poor
nobleman was to be given a purse by St. Nicholas. Upon seeing the man's distress
at receiving charity, St. Nicholas climbed to the roof, intending to throw gold
upon the hearth through the chimney. The father's socks were hanging by the
fireplace to dry and the purse fell into one of them.

Although Holland, France and many other countries put shoes near the
fireplace, stockings are hung in most countries. Stockings upon the mantle are
bulging, stuffed to bursting with confections and toys...delighting pop-eyed
children and those not so young.

But to get to the practical side of the Christmas season, be sure the hose
you wear to holiday parties isn't bulging. Jumping down the chimney may prove Mr.
Claus's agility, but jumping into panty hose may cause unreasonable strain on the
fabric. Runs, snags and tears frequently start from such gymnastics.

No matter how late you are for the party, Athelene Scheid, extension clothing
specialist at the University of Minnesota, advises that it pays to sit down to put
on panty hose. Settle one foot at a time in the panty hose and pull them slowly to
your knees. After you've pulled the hose to your knees, stand up and pull them
slowly and gently over your hips and up to your waist. The purpose is to
distribute the stretch.

Don't tug impatiently at panty hose. You're likely to punch your nails
through the fabric. If your hands are unusually calloused or you have sharp
fingernails, wear gloves to put on hose. To insure storage safety in drawers or
suitcases, store panty hose in plastic sandwich bags.

-jkm-
IN BRIEF . . . .

Phosphorus Loss In Drainage Waters Low. Although phosphorus levels in field drainage waters are low, this element still contributes to eutrophication of lakes and rivers, say University of Minnesota soil scientists. Losses of phosphorus from soil should be maintained at the lowest possible level consistent with optimum crop production.

* * * *

Urea and Ammonium Nitrate Equivalent. Either urea or ammonium nitrate are effective and produce equivalent corn yields, say University of Minnesota soil scientists. Tests covering several years have shown that urea is a good source of nitrogen fertilizer.

* * * *

Potassium, Phosphorus May Not Be Vital To Yield. Where phosphorus and potassium levels have been built up by past fertilization, high bluegrass seed yields can probably be achieved with nitrogen alone, according to University of Minnesota soil scientists. On test plots where potassium and phosphorus levels were already adequate, the seed yield of bluegrass was increased by increasing the nitrogen rate from 60 to 120 pounds per acre. The only effect that the potassium and phosphorus fertilizer had was an increased content of phosphorus in the plant tissue, the scientists say.

* * * *

-more-
add 1--in brief

DHIA Numbers Increase. Now there are more than 200,000 cows enrolled in the Minnesota Dairy Herd Improvement program, an increase over last year. Farmers who join the Dairy Herd Improvement Association (DHIA) get a complete production, feeding, breeding and management record of all cows in their herd. Once a year they get a cow ranking sheet that lists all cows in their herd according to production and transmitting abilities.

* * * *

Yard Care Next Year. The end of the growing season is a good time to evaluate last year's yard care program and make plans for next spring. If you felt overworked from maintaining a large yard, one answer may be enclosing a smaller area close to the home for more intensive gardening practices, says Jane McKinnon, extension horticulturist, University of Minnesota. You can use a low fence, or hedges or screens. Don't feel you need a large area in order to have an attractive yard, Mrs. McKinnon says. Fencing and screening a smaller area may be the answer if you're not an avid gardener and don't want to put a lot of time into maintaining the landscape.

# # # #
USE DECEMBER
PLentiful Foods

"Use the December Plentiful Foods and you will save money on your family
food bill," advises Grace Brill, extension nutritionist at the University of
Minnesota.

Broiler-fryers and potatoes head the December Plentiful Foods along with
apples, applesauce and apple juice, rice, fresh pears, cranberries, split peas,
pork, turkey, and eggs. The Plentiful Foods List comes from the U. S. Department
of Agriculture and tells you what foods you can expect to find at reasonable
prices. Watch for the listing in the newspaper or listen for it on your radio.

How about an oven meal for your family? Oven-fry or oven-bake the chicken,
and add potatoes and apples to bake at the same time. Add a vegetable or salad,
milk to drink, and you have an easy family meal.

Or, combine two other plentiful foods in a Chicken-Rice Bake. Add a green
vegetable, raw carrot salad, applesauce or fresh pears for dessert, and milk for
everyone. Here are the directions for easy Chicken-Rice Bake: Heat oven to 350.
Cut frying chicken into pieces, and salt and pepper. Into a greased baking dish
put: 1 cup of regular rice, uncooked (not instant rice), 1 teaspoon salt and 2
cups boiling water or broth. Place seasoned chicken pieces on top of the rice.
Cover and bake until chicken is done and rice is fluffy (about 1 hour).
To all counties
Immediate release

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# # # #
More than 3,000 youngsters in special education classes in Minnesota are "learning by doing" through an informal 4-H project used by educators as a tool in reaching many youngsters who are not motivated or cannot cope with their own grade level curriculum.

Special education classes vary considerably from school to school, but generally include youth with learning difficulties. Many of the youngsters exhibit some degree of mental retardation. However, some have higher than average intelligence quotients (IQ) and are placed in a special education class for slow learners due to problems such as emotional instability or poor eyesight.

The special education teacher serves as the leader of the 4-H program in the classroom each week during regular classtime, overseeing business and project meetings. Projects include programs on food and nutrition, health, clothing, woodworking, arts and crafts and other subjects. Some teachers enlist the aid of parents and specialists in the community to help with the projects. In many communities, service clubs and county associations for retarded children sponsor the 4-H program in special education classrooms or at day activity centers.

Project work usually is done in the classroom under the supervision of the teacher or other persons from the community. Many classrooms hold a 4-H fair at the end of the school year where projects are judged by a school official or Agricultural Extension Service staff member.
UM CROPS TEAM PLACES HIGH IN TWO NATIONAL CONTESTS

The University of Minnesota Crops team placed first and second in two national judging contests in late November.

The Minnesota students took top team honors at the International Crops Contest in Chicago, Ill., and were second at the National Inter-collegiate Contest in Kansas City, Mo. Ten teams competed in the contests.

Steven Ladlie, Albert Lea, was high individual at Kansas City, and placed first in the seed analysis division. Paul Miller, Waseca, was sixth high individual and Wayne Hartman, Taopi, was 11th high individual. Alan Walker, Alden, was the alternate in both contests.

The team placed first in both crop identification and seed analysis, and second in grain grading at Kansas City.

In the Chicago contest, Wayne Hartman was high individual. Hartman placed first in crop identification, second in seed analysis and fourth in grain grading. Steven Ladlie was third high individual at Chicago. He placed third in both seed analysis and crop identification. Paul Miller was eighth high individual and placed second in grain grading.

Team placings at Chicago were first overall, first in both crop identification and grain grading and second in seed analysis.
add 1--um crops team

The Minnesota team edged Texas Tech University for top honors at Chicago by 20 points--5,233 to 5,213. The positions were reversed at Kansas City--Texas Tech scored 5,163 to 5,143 for the Minnesota team.

In the crop identification phase of the contests, students had to know the common and Latin names of 205 possible crops, varieties, plant diseases and weeds. They graded eight grain samples according to USDA standards in the commercial grain grading division, and analyzed 10 samples of grain, grass or legume seed in the seed analysis portion of the contests.

Enroute the students visited the Kansas City and Chicago Boards of Trade, Truman Library in Independence, Mo., the Agricultural Hall of Fame in Bonner Springs, Kansas, and the University of Wisconsin and headquarters of the American Society of Agronomy, both in Madison, Wisconsin.

The team was coached by Laddie J. Elling, professor of agronomy.

Additional information on students:

Alan Walker, son of Mr. and Mrs. Franklin Walker, Alden, Minnesota. Alan graduated from Alden High School and is a senior in Agronomy at the University of Minnesota.

Wayne Hartman, son of Mr. and Mrs. Robert Hartman, Taopi, Minnesota. A senior in agronomy at the University, Wayne graduated from Onsted High School in Michigan.

Steven Ladlie, son of Mr. and Mrs. George Ladlie, Rt. 3, Albert Lea, Minnesota. He is a junior at the University majoring in agronomy and graduated from Albert Lea High School.

Paul Miller, son of Mr. and Mrs. Marvin Miller, Rt. 4, Waseca, Minn. He is a junior agronomy major at the University of Minnesota, and graduated from Waseca Central High School.
FIVE HOUSING
SYSTEMS COMPARED
IN UM TRIALS

WASECA--Cattle feeders can expect improved performance for cattle housed in confinement systems, according to second-year results of a comparison of five housing systems for feedlot cattle.

Results of the study were given Tuesday (November 30) at the Southern Experiment Station's Beef Cattle Feeders' Day. The study was conducted by University of Minnesota animal scientists, agricultural engineers and agricultural economists to compare the following housing systems:

* Conventional open shed with an outside concrete lot.
* Manure pack confinement with manure scrape alley.
* Cold slot confinement.
* Warm slot confinement.
* And, open lot with dirt mound and windbreak fence.

Cattle in the warm slot building gained faster (2.59 pounds per day) than those in any other system, which also was true in last year's trial. Other weight gains for this year were 2.55 pounds per day, manure scrape; 2.51 pounds per day, cold slot; 2.44 pounds per day, conventional open shed, and 2.30 pounds per day, open lot.

Carcass data indicates that animals housed in the manure scrape, cold slot and warm slot units were fatter than those in the conventional and open lot systems.
There is a way out of this seemingly vicious circle. First, trim down your gift and card list to those persons you really care for. Then set a fairly small limit on the amount to be spent for family gifts. Finally, use some of the money you've saved to make Christmas happier for a needy family. Or, better yet, spread the generous and loving spirit throughout the year.

(Even former President Lyndon Johnson recognizes the trials and tribulations of Christmas. He took up smoking, again!)
NUTRITIOUS AND DELICIOUS COOKIES

Cookies are a part of every holiday season. There is a cookie for every occasion. They can be plain or fancy, large or small, soft or hard, sweet and not-so-sweet.

Whether you are making drop, rolled, molded, refrigerated, pressed, or bar cookies, there is usually the choice of adding "something" to the basic dough.

For a nutrition punch Grace Brill, extension nutritionist at the University of Minnesota, suggests adding one or more of the following: chopped nuts, dates, figs, or raisins.

Also, you can select cookie recipes which call for nutritious foods. For instance you can add iron to your cookies by using:

* enriched flour, whole grain, and fortified cereals
* molasses or sorghum as part of the sweetening
* brown sugar in place of all white sugar
* dried fruits

Too, you can give your family and friends an extra bonus by serving your holiday cookies with milk or fruit juice.
4-H MEMBERS PREPARE
FOR SPEAKING CONTESTS

4-H members in ______________ County are once again brushing up on their speaking skills. Speaking contests will be held on the county, district, and state levels from January--March, 1972.

This year's theme for the contest is "Brotherhood: The Humane Environment."

All speeches should be original and 5-7 minutes long. Speeches will be judged on the basis of composition, delivery and ability to answer questions.

Purposes of the program are to:

* Promote human understanding
* Provide participants with training and speaking experiences.
* Stimulate greater awareness of social issues.

County champions will be selected at the county contests to be held in January. The county champions are then eligible to participate in the district contests and attend the state educational program and contest March 12-14. Participants in the county contest must be 14, but not more than 19 on January 1, 1972.

In February, eligible county champions will broadcast their talks over radio stations cooperating in the district contests. Seventeen district champions will be selected to compete in the state contest March 13.

The program is sponsored by the Jewish Community Relations Council and the University of Minnesota Agricultural Extension Service.

For more information on the speaking program, contact your county extension agent.

# # # # #
Economic returns were highest when lots were used at full capacity and at a high density in all instances. (High density conditions were 14 square feet slotted area per head in cold and warm slot units and 17 square feet bedded area per head in conventional and manure scrape units). Under high density conditions, returns per head to labor and management favored cattle in the manure scrape unit followed by those in the cold slot, warm slot, conventional and open lot units.

Low-density conditions were 25 square feet slotted area per head in the cold and warm slot units and 30 square feet bedded area per head in conventional and manure scrape units. With low density, returns per year to labor and management favored cattle in the manure scrape unit followed by cattle in cold slot, conventional, open lot and warm slot units.

When only one lot was fed per year, returns to labor and management were greater for cattle housed in the manure scrape unit. At high density and one lot per year, the systems ranked: manure scrape, cold slot, conventional, open lot and warm slot. At low density and one lot per year, they ranked: manure scrape, open lot, conventional, cold slot and warm slot.

# # # #
To all counties
Immediate release

HEATING VALUE OF
15-YEAR-OLD CORN
DETERMINED AT UM

CROOKSTON--The results of a comparison of corn harvested in 1956 and 1970 were reported Friday (December 3) at the Beef Cattle Feeders' Day at the Northwest Experiment Station in Crookston.

The University research was conducted to determine the feeding values of corn harvested in 1970 or corn stored since 1956.

Average daily gain, amount of corn dry matter required per 100 pounds of gain and economic calculations favored cattle fed the 1970 corn. But the differences were not statistically significant between the 1970 and 1956 corn, the scientists reported.

Based on the total digestible nutrients (TDN) content, the 1956 corn was worth about 96 percent as much as the corn harvested in 1970. Feed efficiency calculations showed the 1956 corn to be worth about 93 percent as much as the 1970 corn.

# # #
UM SCIENTISTS
FIND HIGH TDN
FOR SWEET CORN

WORTHINGTON—University of Minnesota research showed that sweet corn contains more total digestible nutrients (TDN) than regular corn, animal scientists reported Wednesday (December 1) at the Beef Cattle Feeders' Day in the Worthington Coliseum.

However, the scientists said, cattle fed sweet corn grain consumed less feed than those fed dent corn grain and, thus, gained slower.

Twelve yearling steers were fed an all-concentrate ration of regular corn grain and supplement, while six other steers were fed a ration of sweet corn grain and supplement.

University animal scientists said the research showed a high energy value for the sweet corn, but cattle fed regular corn gained faster and consumed more daily feed and, thus, gained faster than those fed sweet corn. The poor performance of cattle fed sweet corn was due to the low feed intake, the scientists concluded.

The high TDN for sweet corn also suggests that it would have a high feeding value when included in a ration at a rate which would not influence feed intake, they added. Cattle fed dent corn grain gained 2.81 pounds per day and those fed sweet corn grain gained 2.05 pounds per day.

Amounts of corn dry matter required for 100 pounds of gain were 602 pounds for cattle fed regular corn and 626 pounds for cattle fed sweet corn.
MORRIS--Recent University of Minnesota research indicates that the National Research Council (NRC) recommendation of about 7.5 pounds of total digestible nutrients (TDN) per day for a 1,000-pound cow is adequate.

Results of University research were given Thursday (December 2) at the Beef Cattle Day in the Morris Armory.

Additional information will be collected on the effects of energy levels on body weight changes of cows and calves and on long-term reproduction effects.

Until additional information allows a more precise estimate of the energy needs of the cows, the scientists suggested that the energy level should not be lower than the present NRC recommendation. Lower energy intakes might reduce the weaning weight of calves or adversely affect reproduction. Birth weights of calves were not affected by the level of energy fed in 1970 and 1971 research trials. Cows fed 6.5 pounds of TDN gained more body weight during the nursing period, but weaned lighter calves than cows fed 7.8 or 9.3 pounds of TDN.

# # #
THREE-COUNTY AREA HAS HIGHEST GROWTH

Local governments in Scott, Carver and Dakota counties need to brace themselves for the fastest population and industrial growth in the state, according to a University of Minnesota professor.

The focal point of high growth in Minnesota has been Anoka county, but in the last decade the highest growth area has shifted southwesterly. This assessment is based on 1970 census data released through the Minnesota Analysis and Planning System (MAPS), said John S. Hoyt Jr., MAPS director.

The highest areas of growth in Minnesota have moved to suburban areas further from the city in the last 10 years, he said.

"Nationally, central cities such as St. Paul, Minneapolis and Duluth did not do well if positive population growth is a sign of doing well," Hoyt said.

"People are moving out of the city for a variety of reasons and one of these is job opportunities. There is a movement of light industry to the suburbs and the population is following that movement," Hoyt stated.

With the latest census data, population estimated for the Twin Cities metropolitan area have been revised downward. In the past, it was estimated that the area would reach four million by the year 2000. Now it is estimated that the area won't reach four million until perhaps 2020. Hoyt explained.
GOVERNOR APPOINTS 4-H GOOD WILL AMBASSADORS

Two Minnesota 4-H achievement winners have been commissioned good will ambassadors by Gov. Wendell Anderson.

Judy Aykens, Steen, and Marlo Johanson, Belgrade, also received an official state seal which they presented to President Richard M. Nixon on behalf of Governor Anderson, Minnesota 4-H members and alumni during the 50th annual 4-H Congress in Chicago Wednesday, Dec. 1.

"I appreciate the contributions of the 4-H educational program to the youth of Minnesota," Governor Anderson said in making the presentation. The governor asked the two 4-H'ers to convey his best wishes to all 32 members of the Minnesota 4-H delegation to National 4-H Congress.

Judy, daughter of Mr. and Mrs. Jay Aykens, Box 166, Steen, is a student at Mankato State College. "4-H has enabled me to widen my horizon and by doing so the world has a much brighter look," she said. She is a 1970 graduate of Hills-Beaver Creek High School and plans on a career as a home economics extension agent.

Marlo, son of Mr. and Mrs. Richard Johanson, Rt. 1, Belgrade, is attending Hamline University in St. Paul. He and a friend originally persuaded his parents to start a 4-H club. He eventually became president, and says it's very rewarding to work with younger 4-H members in the junior leadership project.

-more-
Mr. Nixon's visit to the golden anniversary 4-H event marked the first time that a President of the United States has addressed National 4-H Congress delegates. The President also serves as honorary chairman of the National 4-H Service Committee, a private organization serving as the liaison between government leaders and business as the two sectors work together for the advancement of the nationwide 4-H movement.
If you're thinking of planting semidwarf wheat varieties next year, you'll need to apply heavier nitrogen rates and do a good job with weed control and other management practices.

Wheat growers planting semidwarf varieties should be thinking in terms of 80 to 120 pounds of actual nitrogen per acre on land where nitrogen depleting crops such as sugar beets have been grown. But on fallow land, rates of 40 to 50 pounds per acre are more economical, said Charles Simkins, extension soils specialist at the University of Minnesota.

Research shows that the protein content of semidwarf wheats in the Red River Valley can be increased with nitrogen applications.

Bushel per acre yields increased more when the nitrogen was applied at seeding, compared to the stooling or flowering stages, Simkins said.

Research also shows that a nitrate-nitrogen test is very helpful in estimating the nitrogen fertilizer requirement of Red River Valley soils, Simkins explained. But he warned that soil tests for nitrogen fertilizer recommendations should be taken from the depth of 0 to 24 inches.

If you want a complete soil recommendation, submit samples taken from 0 to 6 inches for phosphorus and potassium recommendations and from 0 to 24 inches for nitrogen recommendations.

Farmers who have access to a mechanical soil sampling machine can still take samples on frozen ground this fall. Most fertilizer dealers have them.

"Take about 10 cores for each sampling area, then either send the sample directly to the soil testing laboratory or let the sample air dry at room temperature before sending it in. Don't put the samples in plastic bags and haul them around in the truck for a week where they will be allowed to heat," Simkins cautioned. Samples allowed to heat will gain nitrogen and the result will be an inaccurate nitrogen recommendation.

# # #
To all counties

ATT: Extension Home Economists

Immediate release

SELECT APPROPRIATE
TOYS, SANTA DOES!

Christmas is a fantasy land for the child who finds creative, imaginative
toys under his tree. A happier child will be one who uses his plaything to learn,
create and call upon his wondrous imagination. A toy that is to "old" for the
child will frustrate him—too "young" will bore him.

Select a toy that is appropriate for the child's age and development. Avoid
toys that are over advertised and simply initiate a climate of competition or
conspicuous consumption. Toys ought to be played with...not just wound up and
watched or a string pulled and the creative mind of the child superseded.
Frequently well meaning parents and friends simply satisfy their own frustrated
dreams and the child has more fun with the packing box. Many toys are designed
for the adult...as he's the buyer... and the child finds the toy pretty
unrealistic in meeting his playing needs.

The Food and Drug Administration in enforcing the Toy Protection Act,
suggests that the shopper beware of hazardous toys. With 5,000 new toys on the
market and 50 percent of the annual toy sales at this time of the year, the FDA
can barely make a dent in protecting the innocent buyer. They offer these
reminders:

Check the fabric to make certain it's nonflammable. In the case of a small
infant, test a tiny bit of the fabric. Look to see that the directions on toys
are complete...and note those requiring adult supervision. Such surveillance
isn't always practical. Excessive noise from cap pistols, etc, and dangers from
shooting games should also be avoided. Guard against an older child's toy being
used by a younger sibling and thereby creating a hazard.

-more-
If the toys are for young children, make certain they don't contain parts small enough to swallow or lodge in nose or ear. Toys should be non-toxic, without sharp edges, wires, pins or breakable parts. Avoid toys with long cords or thin plastic bags that can strangle or suffocate the child. If a toy heats, such as an iron or oven, be certain that the heat is not enough to burn. Even a light bulb can cause some unhappy moments.

Mothers will rest easier if they know that the child can't hurt himself on what was meant to be a pleasant rather than tragic experience. Be a thoughtful Santa this year and select toys which will give children hours of safe, creative, learning pleasure.

* * * *

Origin of Christmas, December 25

In the year 354 the Bishop of Rome declared December 25 to be the anniversary of the birth of Christ. Prior to that birthday festivities were pagan customs. It had been thought sacrilege to even suggest that a Divine Being had a birthday. Birth meant the assumption of original sin.

The ancient peoples of Europe had been accustomed to celebrating the victory of light over darkness...the winter solstice. This pagan feast was simply replaced by the Christian festival honoring the "Light of Life"...Christmas.

* * * *

The stern Puritans of New England, who frowned upon the celebration of Christmas as a pagan rite, enacted "blue laws" banning the making of mince pies. The pies were associated with Christmas because they were originally baked in the shape of a manger.

-jkm-
1972 CROP VARIETIES
RECOMMENDED BY UM

Changes in recommended field crop varieties for 1972 have been announced by the University of Minnesota. Changes in recommended varieties are listed by crop.

Barley: Primus II was dropped from the recommended list since it is not classified as a malting variety and does not yield enough more than varieties classified as malting varieties.

New barley varieties released from other states include Nordic and Burk. They are six row varieties with colorless aleurone.

Nordic produced yields similar to Dickson in University of Minnesota Agricultural Experiment Station trials. It was superior to Larker in resistance to leaf spotting diseases and to Dickson in resistance to Septoria leaf blotch. Nordic is taller than Larker, but similar in lodging resistance.

Burk is similar to Larker in yielding ability, maturity, height, lodging reaction and kernel plumpness. It is not a malting variety, and has less resistance to leaf spotting diseases than Dickson.

Oats: Diana and Froker were added to the list of recommended varieties. Diana is an early maturing variety which was released by Purdue University. Diana is the highest yielding, most lodging resistant variety of the early maturing group. Froker, released by Wisconsin, has the same maturity as Lodi. It is comparable to Lodi in yielding ability, but is shorter and has better test weight and groat percentage. It has the best crown rust resistance of all currently available oat varieties.

Cayuse will not be recommended in Minnesota. Test weights and groat percentage were much lower than other varieties in Minnesota tests.

-more-
add 1--crop varieties

Hard Red Spring Wheat: Two varieties, Waldron and Manitou, were removed from the list of recommended varieties. Waldron was removed due to its susceptibility to ergot, while Manitou was removed because of susceptibility to leaf rust.

Bonanza was not recommended due to lower yield potential and less leaf disease resistance than other semidwarf varieties. Newer varieties which have not been adequately tested are Bounty 208, Lark and Nordak.

Durum Wheat: Lakota was removed from the recommended list since it yields less and has poorer test weight than Wells and Leeds. Rolette, a new durum variety, was released by the North Dakota Experiment Station, but only a limited amount of seed will be available to certified seed growers.

Winter Wheat: Winoka was added to the recommended list. It has produced high yields, has winter hardiness equal to Minter and has good quality, according to Minnesota tests.

Winter Rye: Wheeler is not recommended in Minnesota because it has not proven winter hardy and shows no distinct advantage over other recommended varieties.

Soybeans: Dunn and Morsoy will not be recommended. Dunn is similar to Anoka in maturity, but has lower oil content. It does not produce as well as Anoka on irrigated sandy soils.

Morsoy is inferior to other varieties of similar maturity in lodging resistance and seed quality and has not proven superior in yielding ability.

Sunflowers: Majak, Record, Select and Saffola 120 have been tested in Minnesota but are not recommended since they offer nothing over recommended varieties.

Dry Edible Peas: Trapper was added to the recommended list and Chancellor removed since Trapper has shorter vines, earlier maturity and higher seed yield than Chancellor.

Reed Canarygrass: Frontier, Ioreed and Rise have shown similar performance and all are recommended.

-more-
add 2--crop varieties

The complete list of recommended varieties follows:

Barley: Conquest, Dickson, Larker.

Oats: Diana, Froker, Garland, Lodi, Otter, Portal, Sioux.

Rye: Cougar, VonLochow.


Winter Wheat: Minter, Winoka

Millet: Turghai, Empire, White Wonder.

Flax: Linott, Nored, Norstar, Summit, Windom.

Soybeans: Altona, Anoka, Chippewa 64, Clay, Corsoy, Hark, Merit, Norman, Portage, Rampage, Traverse.

Sunflowers: Arrowhead, Mingren, Peredovik, VNIIMK 89.31.

Pinto Beans: UI 114.

Dry Peas: Century, Trapper.

Birdsfoot Trefoil: Empire.

Red Clover: Dollard, Lakeland.

Brome grass: Baylor, Fox, Lincoln, Sac, Saratoga.

Timothy: Climax, Itasca, Lorain.

Reed Canary grass: Frontier, Ioreed, Rise.

For more detailed information, refer to University of Minnesota Miscellaneous Report 24, "Varietal Trials of Farm Crops." The publication will be available in early January from your county extension agent, or the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

# # #
UM STUDIES FIND
HIGHEST PAYING
SUGARBEET ROTATION

Fallowing crop land the year before planting sugar beets is not profitable, according to University of Minnesota research.

Out of six sugarbeet rotations tried, the rotation beets, potatoes, wheat, barley and beets gave the greatest average net income in experiments at the Northwest Experiment Station, Crookston.

The four year experiments included six rotations: the commonly used beets, wheat, barley, legume fallow, beets; beets, wheat, barley, oats, beets; beets, potatoes, wheat, barley beets; beets, wheat, barley, alfalfa fallow, beets; beets, wheat, barley, black fallow, beets; and beets, wheat, barley, soybeans, beets.

The figures included costs for the farm operation, a land cost of $20 per acre and $5 per acre for taxes, says Olaf C. Soine, soil scientist at the University.

Other results of the study included:

* Yields of beets were similar indicating no definite advantage for fallowing over continuous cropping.

* The black fallow, legume, and alfalfa fallow rotations had the lowest percent sugar.

* The three fallow rotations had the highest impurity indexes for beets while the oats and barley rotations had the lowest.

* Differences in sugar yield were not significant between the various rotations, which indicates that fallowing does not pay for itself.

# # # #
IN BRIEF . . .

Still Time for Soil Sample. Farmers can still take soil samples on frozen ground by using a mechanical soil sampling apparatus. You can take a sample even with heavy snow on the ground if you dig down through the snow first, says John Grava, University of Minnesota soils specialist. Grava encourages farmers to get samples taken before the rush of spring work starts. By having your soil tested early you get lime and fertilizer recommendations soon enough to study them over before you order from your fertilizer dealer.

Contact the county extension office for more information on soil sampling.

* * * *

Corn Nitrogen Removal Rate Found. Nitrogen removal in corn is efficient up to the 94 pounds per acre rate, say University of Minnesota soil scientists. Above this rate, nitrogen uptake by corn decreases rapidly.

For example, nearly 100 pounds of nitrogen per acre were not used where 174 lbs. were applied per acre each year on a silty clayloam soil near Lamberton, Minnesota.

Nitrogen fertilization at planting time appears to result in the most efficient combination of corn yield and corn protein, compared to the same rates applied either in late fall or late June as a sidedressing.

* * * *

When to Cull Dairy Cows. The Dairy Herd Improvement Program's monthly herd report serves as a management guide for more profit. The average cow is losing money for the dairyman when income over feed cost goes below 33 cents per day. Average overhead costs outside of feed and labor run about 33 cents per cow a day so anything over this and feed cost is labor return. Get on the DHI program and find out which cows in your herd are losing money for you.

* * * *

-more-
Evaluate Your Garden. Plan for next year's garden while the success or failures of this year are still fresh in your mind. Start by evaluating the varieties you grew—note their performance. Changing varieties could lead to an improvement in vegetable quality. Also, think back to harvesting—you may want to begin earlier or later next year. And, order your seed catalogs early. Get catalogs from several companies so you'll have a wide selection of varieties.

After seed catalogs come out, get a copy of recommended vegetable varieties for 1972 from your county extension office—or from Extension Horticultural Science, University of Minnesota, St. Paul, Minnesota 55101. Try one or two new varieties and compare them with your current ones.

Sprays for Silverfish Recommended. If silverfish become a problem in your house, changes of temperature or lighting in certain areas may offer more permanent control of silverfish than chemicals, say University of Minnesota entomologists.

If a pesticide is needed, a two or three percent solution of chlordane or a one-half percent diazinon solution is recommended. Use a coarse spray or paint with a brush behind baseboards, shelving, bookcases and storage areas. In warm basements, coarse sprays may be used on covered pipes, on areas which are warm or on surfaces where silverfish are present.

# # # #
AN APPLE FOR EVERY USE

Mary Darling, extension nutritionist at the University of Minnesota, asks:
"What tastes good, smells good, is crunchy and sweet, has about 85–95 calories, looks good and can be used to feed your family almost any hour of the day? Answer: an apple."

Minnesota apples are in good supply at reasonable prices at this time of the year. When buying apples for your family look for good color (whether pale green or bright red). Good color usually means full flavor. Look for a firm apple. Firmness means the apple is in good condition. And, buy the variety of apple according to how you are going to use it. Some apples are better for baking, others better for pies and eating out-of-hand. Ask your grocery or read the information on the bag or box of apples to tell you about the variety.

Store your apples in a cool place, near 32°. If they are in the refrigerator, keep them covered. Boxes or bushels of apples should be stored in a cool, humid place. Some growers suggest putting a slightly damp cloth on top of the apples. Most home basements today are too warm.

For the weight watcher, a small apple has about 85–95 calories. Substitute a fresh apple for a rich dessert or snack. The apple is also a snack that dentists recommend because chewing a crisp apple helps clean the teeth.

Keep apples ready for unexpected holiday guests. Simply take them out of your storage place, wash, polish, and put enough for quick eating in your prettiest dish. Let everyone help himself to health and good eating.
4-H'ERS LEARN HOW
ELECTRICITY WORKS

Electricity serves you best when you understand how it works and use it properly. 4-H members can learn about electricity and help others use it economically and safely.

By enrolling in the 4-H electric project you can learn how to build a radio, wire a lamp, care for an electric motor or replace a switch or outlet.

You'll learn about electricity basics—such as conductors and insulators. You happen to be a fairly good conductor of electricity. Electricity will pass easily through you to other conductors. When this happens you may get a shock, burn or serious injury. But this doesn't have to happen if you learn how to use electricity properly.

The electric projects are conducted on an individual basis. Some counties have five or six classes covering various aspects of electricity. Members choose one or two classes to suit their own interests and needs.

4-H members are learning that electricity plays an important part in their lives. Plan to be a part of this exciting new project area.

Contact your county extension agent for more information on electric projects.

# # # #
MACALESTER STUDENT RECEIVES NATIONAL 4-H AWARD

Kim Shaffer, 18, a Macalester College freshman from Pipestone, is one of eight outstanding 4-H members from throughout the United States to be named a Reporter-to-the Nation for 1972.

The award was presented in Chicago last week where President Richard M. Nixon addressed nearly 2,000 delegates to the 50th National 4-H Congress.

Young Shaffer and the seven other reporters will report to the nation in a year-round program to acquaint the American public with development, trends and accomplishments in 4-H.

Kim was nominated for the award by 4-H specialists from the Minnesota Agricultural Extension Service, which supervises the 4-H program in the state. Final selections were made at 4-H Congress largely on achievement, poise, personality and ability to tell the modern 4-H story.

The Pipestone youth, who won the trip to 4-H Congress for his outstanding leadership activities, says youth should "at least have a voice in making decisions that affect them. Involvement should integrate youth into the rest of the community so they aren't ignored when decisions are made."

"I'm hoping to learn more about the establishment's attitudes toward youth," he said. "The 4-H Reporter-to-the Nation responsibility gives me an excellent opportunity to tell the 4-H story to more people. I also hope to discover more about how the governmental and business structure in America functions," he added.
LOGGING METHODS INVESTIGATED

Soils disturbed by red pine logging in northern Minnesota can recover more quickly if logs are skidded tree length rather than full tree—including limbs and tops.

This is the assessment of a University of Minnesota forester, Arnett Mace, who compared the two methods in a 90 year-old pine stand that was thinned with a rubber-tired skidder.

Soils recover more quickly from compaction with the tree length system because residual slash is left and the understory vegetation is less disturbed which allows greater moisture retention. The moisture in turn causes greater degree and intensity of soil freezing which returns the soil to its original condition.

Also the amount of compaction by the tree length system was less than half that of the full tree system, Mace said.

The research is part of a series of experiments to determine the best methods of harvesting the 200,000 acres of red pine in the state that are expected to be available during the next 10 years.

Results of the research can be obtained from the College of Forestry, University of Minnesota, St. Paul, 55101. Ask for Minnesota Forestry Research Notes, No. 226, "Recovery of Forest Soils from Compaction By Rubber-Tired Skidders."
4-H MEMBERS "DO THEIR OWN THING"

We hear a lot these days about "doing your own thing." That's exactly what the new self-determined 4-H project is all about. The project is new this year and about 600 Minnesota 4-H members are enrolled.

Members are encouraged to select a project that's different from any regular 4-H project, determine their goals, plan how they will accomplish these goals, then determine how they will evaluate the project.

The self-determined projects can be an individual or a group project, although most are individual projects. One 4-H club from Waseca and Le Sueur counties did a group project on the environment.

Nathan Pederson from Pope County built a model of the church his grandparents attended. Since the building burned in 1919, Pederson had difficulty getting information on it, but he finally got five pictures of the old church. From these pictures and other historical information he constructed his model. A paper summarizing the church's history accompanied the model. Pederson began the project in September, 1970 and completed it in June, 1971.

Other examples of 4-H self-determined projects include restoring a 1949 F-3 Ford truck, a taxidermy project, a beekeeping project, an astronomy project and a welding project. Almost anything goes--use your creativity to decide what kind of project you'd like to pursue.

Members from ages 13-19 are usually involved in the projects; however, the projects are open to all 4-H members. Many projects have been shown at the Minnesota State Fair.

Project guides and planning forms are available with the project. Contact your county extension agent for more information on the 4-H "do your own thing" project.
To all counties
ATT: Extension Home Economists
Immediate release

TRY AN
OATMEAL SUNDAE!

"Dish up hot oatmeal for your family at breakfast time, and you'll be
dishing up plenty of nutrition and saving on your food bills by using a December
Plentiful Food," says Grace Brill, extension nutritionist at the University of
Minnesota. In the Bread and Cereal food group, enriched flour and rice are also
December Plentifuls.

Cereals as a group have worthwhile amounts of carbohydrate, protein, iron,
and the B vitamins. To cut down on the calories, use whole or 2 percent milk
instead of cream or half-and-half. Try sprinkling brown sugar on hot oatmeal and
let it melt.

Add iron by putting in some raisins or cut-up dates when the cereal has
nearly finished cooking. They will steam and plump up.

Add milk by cooking the oatmeal in milk instead of water. Remember to keep
the heat medium so the milk will not scorch.

Or, if you feel daring some morning, put a small scoop of vanilla ice cream
in the center of a hot bowl of oatmeal. As the ice cream melts, there is the
sweetening and the liquid. Other flavors of ice cream add interest too. It just
might coax a lazy breakfast appetite.

-1sn-
WHAT? NO CHIMNEY?

What to do when Christmas eve arrives and there's no chimney?...Or, should children be allowed to believe the Santa Claus myth?

The questions surrounding Santa and the answers concerning the quaint deception are as varied as the family's interpretation of St. Nick. Santa becomes many characters and is treated differently in practically every family, says Ron Pitzer, extension family life specialist at the University of Minnesota. Therefore, it's difficult to definitely answer, "Should children believe in Santa Claus?"

Pitzer would consider the following before answering, "Yes, Virginia's mother, there is a Santa Claus."

Probably the most ascribed to approach is that Santa is a vague symbol of loving giving. Parents should refer to him with a twinkle in their eye. The department store Santa usually frightens young children and picture taking has put the visit on a commercial level. Children should hear about Santa and have fun believing in him on a non-literal basis.

If in your family, Santa is given a literal interpretation, then exposure to ten different street corner Santas or Uncle Henry in a beard may lead to disillusionment, says Pitzer. In this case the parents may have a lot invested in insisting their children believe the unbelievable.

The most detrimental use of Santa is as a disciplinarian. A Santa that is more interested in faults than in good intentions represents a stern, withholding character to children. Use of threats, be it bogey-man, policeman or Santa, is not a wise or constructive means of controlling child behavior. Better no Santa at all, than a punishing, vindictive Santa.
Some parents are concerned that innocently perpetuating a myth with their child will cause distrust in everything they say. "There is little need to worry that your child will perceive the fantasy as an outright lie," says Pitzer. The young child constantly runs the gamut between fact and fantasy. They tend to believe what they want to believe. The first time he hears that Santa isn't real, it means nothing. Later when he does "hear" this information, he's on the verge of being ready to accept what it means. Even vigorous tearful denial of the illusion usually means that a child is on the verge of enlightenment. And, since disbelief is a gradual process, children aren't too disturbed when they discover Santa's not real.

Children are actually capable of believing two contradictory theories at the same time. If your purpose is to give a child the enjoyment of pretending, then he really won't be misled. The symbolism can be expressed during the gradual process between total belief and disbelief. Later it's important for the child to share the concept of Santa personifying love and generosity.

Pitzer quotes several child specialists when he says, "Children between five and eight can move easily from Santa as a reality to Santa as a symbol. Disillusionment doesn't leave scars. Using Santa as a punitive force does."

# # # #
EFFICIENCY MOST IMPORTANT IN CHOICE OF FORAGE SYSTEM

The choice of a forage system may not be as important as efficient management of it.

"Cost differences between many forage handling systems are small, and for many situations several forage handling systems could be desirable from a cost standpoint," maintains Charles Cuykendall, extension economist at the University of Minnesota.

Speaking at the International Silage Research Conference in Washington, D. C. December 7, Cuykendall pointed out that farmers must select forage crops, crop inputs such as fertilizer, and machinery based upon nutrients, loss and quality in addition to cost.

The farm management specialist listed these factors farmers should be aware of when choosing a forage handling system:

* Farmers who substitute capital for labor make their work easier, but will earn less profit unless labor freed by the machine is not employed elsewhere in the farm business.

* Farmers producing forages should set a crop yield goal and determine the most efficient input levels for items such as fertilizer. For example, a 10 percent increase in the price of fertilizer may require a cut back in the amount applied, depending on the production response at that level. It's also necessary to calculate the price relationship between nutrients grown and purchased.

* Examine the complete systems of harvesting, storing and feeding—all three are interrelated. Compare annual costs, labor and capital requirements of each system to see which seems most feasible for you considering your personal requirements and farm resources.

-more-
add 1--efficiency of forage systems

* Consider not only investment size, but also alternative uses of capital.
If you're limited on capital, then you may have to rule out capital intense forage systems such as concrete stave, sealed storage and mechanized feeding. However, in some cases limited labor or high labor costs may mean that you can only consider systems with a low labor requirement.

* On a given farm, one system may have an advantage over others due to availability of certain fixed assets. For example, an existing silo might reduce the short run costs of a haylage system since fixed costs for the silo are past costs which you've paid for whether the silo is used or not. You can ignore these past costs when figuring the cost of a forage system, Cuykendall said.

* When you're handling large volumes of forages, consider the ability of a forage handling system to harvest a large enough volume. If other things are equal, the system with the greatest potential capacity has the advantage since a short or unfavorable harvest season will be less apt to prevent harvest.

Since forage quality decreases rapidly as it matures, the cost of over capacity in equipment is much smaller than the penalty for undersized machinery, Cuykendall said.

# # # #
DAIRYMEN REALIZE
BENEFITS OF DHI

The Dairy Herd Improvement (DHI) program in Minnesota is expanding rapidly, reports Ralph Wayne, extension dairyman at the University of Minnesota.

A December 6 report showed 5,649 herds enrolled with over 206,000 cows. This is an increase of 434 herds and over 20,000 cows above last year.

During November there was a net increase of 4,758 cows on test. These counties led in the November growth: Stearns, Olmsted, Meeker and Morrison. Four counties—Becker, Douglas, Mower and Pope were tied for fifth, and Fillmore and Otter Tail tied for ninth.

"We expect the momentum of the program will result in 6,000 herds and 220,000 cows on test before the winter is over," Wayne stated. He said the value of the program is being realized more each day by Minnesota dairymen as they join their local associations to share in the benefits.

Proper use of DHI records returns over $14 for each dollar invested—so it's the best investment a dairyman can make. Get started in January so you'll have a complete yearly record by next December, Wayne advises.

See your county extension agent to join this valuable program which pays—but doesn't cost.

# # # #
HEATING BECOMES SERIOUS PROBLEM WITH LARGE BINS

Damage to stored corn from moisture migration and the resulting heating is becoming very serious with the trend to larger storage bins, according to Harold A. Cloud, University of Minnesota agricultural engineer.

As a result of unseasonably warm weather during Minnesota's past corn harvesting and drying season, large quantities of shelled corn went into storage at fairly warm temperatures.

If corn is dried and cooled in a high-temperature dryer, it will be delivered to storage 10 to 20 degrees above the outside temperature. Corn will be delivered to storage at 70 to 90 degrees with air temperatures of 60 to 70 degrees. If this corn is not cooled down by aeration, it can cause serious moisture migration in the bin during cold weather resulting in heating and damage to the stored corn.

Cloud says all stored corn must be periodically checked to see if any heating is developing. The best way to do this is with a temperature probe. Bin thermometers that attach to one-quarter inch iron pipe for insertion into the stored corn are available at reasonable costs, he adds.

Bin thermometers should be left in place 10 to 15 minutes to allow them to come to corn temperature before they are removed and read. Another less accurate but reasonably successful method of checking a bin for heating is to insert a small diameter pipe, leave it in the bin for 10 to 15 minutes, remove it and check the pipe's temperature with your hand, Cloud suggests.

-more-
add 1—heating problems

The bin should be aerated if heating is detected. It may be necessary to remove some of the corn from the bin if it does not have aeration equipment.

Usually heating will occur near the center top of the stored corn. In many cases, removing a load or two of corn from the center unloading hopper will solve the problem.

Heating may occur in areas where there are accumulations of fine material in the bin, but aeration may be of little help because it is difficult to move air through this fine material. It may be necessary in this case to unload some of the corn to allow these pockets of fine material to break up.

###
MILK FAT LEVELS DROP IN STATE; SOLUTIONS SOUGHT

Depressed milk fat levels have resulted from high level feeding of high moisture corn, according to Michael F. Hutjens, University of Minnesota extension dairyman.

Milk fat tests have dropped from five-tenths to one and one-half percentage points.

The most practical and economical solution to this problem is to increase roughage intake, which may require limiting the amount of high moisture shell corn fed to encourage more roughage consumption, Hutjens said.

Fat depressions are caused by low forage-concentrate rations, low fiber levels and high portions of starch in the total ration.

Hutjens suggests as a rule of thumb a minimum of 17 percent fiber in the total ration on a dry matter basis and forage intake of one to 1½ percent of the body weight. Just because every cow "on the average" receives 10 pounds of hay does not mean that the cow actually eats 10 pounds of hay, the extension dairyman added.

# # # #
Department of Information and Agricultural Journalism
Institute of Agriculture
University of Minnesota
St. Paul, Minnesota 55101
December 13, 1971

IN BRIEF . . . .

New Market Livestock News Service Offered. Minnesota livestock and hog producers can now get up-to-date market information more easily and quickly by dialing the USDA's Market Livestock News Service. For farmers who are interested in the market at South St. Paul, the number is area code 612, number 451-3692.

For farmers in the southern part of the state, the Ames, Iowa market news is at area code 515, number 294-6899.

The market news is on tape and is updated three to five times daily on supply and current price information, says University of Minnesota Agricultural Economist Ken Egertson. The market livestock news numbers are not toll free.

* * * *

Insect Populations Down From Last Year. Some insect pest populations are down from a year ago, but enough seed stock exists for high crop infestations should coming spring and summer weather permit, according to University of Minnesota Entomologist John Lofgren.

For example, corn rootworm populations are down throughout the state except in the east central district. High populations of corn rootworm often occur in areas where corn has been planted consecutively, he said.

European corn borer populations are also down except for the west central district.

* * * *

Routine Pregnancy Examinations Important. Routine pregnancy examinations should be part of the management program on every dairy farm, say dairy scientists at the University of Minnesota.

Some veterinarians have routine pregnancy examination programs and frequently visit the dairy farm to examine and treat any abnormal conditions. The veterinarian should be able to tell you which service resulted in pregnancy if the cow was bred more than once.
add 1--in brief

**Selling Fireplace Wood May Require License.** Woodlot owners who want to sell fireplace wood should investigate license and other requirements that may be needed in the market area. In many communities, including both Minneapolis and St. Paul, annual licenses are required by retailers before selling firewood.

Also, restrictions on advertising and sales, particularly in respect to dryness and volume, are often placed by communities on firewood retailers.

For more information on how to harvest and market firewood, request the *Minnesota Forest Products Marketing Bulletin*, Vol. 14, No. 3, from 206 Forest Products Building, University of Minnesota, St. Paul, Minn. 55101.

* * *

**Winter Losses to Farmers.** Winter weather can result in severe losses to livestock producers, especially when there are long power outages or when stock are caught outdoors in snowstorms. Farmers should heed the weather warnings and locate foraging stock in plenty of time and move them to feed and water supplies if possible.

Keep a three to five-day reserve supply of feed concentrates on hand in case your farm becomes snowbound. Have an alternative method for operating the well pump, milk machines, choring equipment and livestock building ventilators. Emergency electrical generators prove their value during extended electrical outages.

Dairy farmers should check with dairy plants for emergency milk storage facilities before their farms become snowbound.

# # # #
Christmas isn't always the heartfelt gratifying experience we expect it to be. For many persons, Christmas brings marked feelings of depression, says Ron Pitzer, extension family life specialist at the University of Minnesota.

Many people experience these isolated and depressed feelings yet don't recognize them as fairly "normal" reactions. Or, they fear that expressing these feelings to anyone would mark them as "strange". Because of the high expectations, we feel cheated by reality.

Depression and frustration is brought about by a variety of causes, he says. Loneliness may become acute at a season when togetherness is stressed. Family estrangements are particularly painful. Families, in fact, can't always cope with the feelings which result from being drawn together during what they feel should be a "happy"occasion. Some people are unable to accept the disparity between the stereotyped happy "Christmas card" family and their own realistic situation.

Many people spend beyond their means at Christmas. Thus, even before the gifts are given, the thought of pending bills is depressing. In some families an unfortunate spirit of competitiveness has arisen around gift giving. Perhaps you've got to spend $15 on Aunt Jean's gift because Cousin Harry will spend that much. And some are bothered by the hypocrisy of giving gifts to people they really don't feel close to.

-more-
BE WARY OF
DOOR-TO-DOOR
SALESMEN

So it's nice to stay home on a blustery, snowy day. There's no denying that... but you may pay extra for the privilege. I'm speaking in terms of shopping. You generally pay more when you buy from door-to-door salesmen, reminds Edna Jordahl, Extension home management specialist at the University of Minnesota. They must charge to compensate for business volume. A business place, whose profit on individual items is less, has a volume that compensates sufficiently.

So, to protect yourself from over spending for an item... have estimates on a similar item from several sources so you know what prices are locally. Merchandise catalogs may be one handy reference.

If a price offer is made that sounds too good to be true... it probably is... too good to be true. If the salesman is unwilling or unable to answer your pertinent questions, delay the purchase until you study the contract and can make inquiries concerning the purchase.

Don't hesitate to call the Better Business Bureau for information before you sign a contract. It may save you money and regrets. There are reliable salesmen, whose high quality products are only offered door-to-door. But its still good advice to shop around. Then if it's what you want, buy. Remember, it's snowing outside!

# # # #
IN BRIEF...

Livestock Feeders' Meeting. Health problems of new feeder cattle and cost sharing programs to comply with pollution regulations will be featured at the Minnesota Livestock Feeders' Association annual meeting January 12.

Dr. John Anderson, University of Minnesota veterinarian, will discuss health care problems with new feeder cattle during the afternoon session of the program scheduled at the Orchid Inn in Sleepy Eye.

The all day session starts with registration at 9 a.m. The association's annual meeting will conclude the event.

Potassium, Phosphorus Not Always Needed. High corn yield increases from fertilizer are primarily due to nitrogen and starter fertilizer when soil tests show potassium and phosphorus levels in the medium to high range, according to University of Minnesota soil scientists. The need for annual nitrogen fertilization is apparent, the scientists say, but annual application of potassium and phosphorus is not justified if they are at medium to high levels.

-more-
add in brief

False Aralia Has Attractive Foliage. A False Aralia house plant is one of the best foliage plants for Minnesota. It lasts well in the average home since it can stand less light and lower humidity than many plants. It has metallic, red-brown leaves and eventually develops into a large plant. For more information, see Extension Bulletin 274, "Care of House Plants." It's available from your county extension office, or the Bulletin Room, University of Minnesota, St. Paul, Minnesota 55101.

***

Herd Records Are Vital. Herd records that are complete, accurate, and up-to-date are your most reliable protections against bad luck, according to University of Minnesota animal scientists.

Properly used records can help you realize high production, good breeding efficiency, and increased profit from your herd. Records can help you correct serious problems before they cause a large dollar loss.

For more information on herd records, request Dairy Reproduction Series Five, Extension Pamphlet 225 from your county extension agent.

***

Consider Long Range Goals Before Cutting Woodlot. The landowner who desires to cut part or all of his woodlot should consider long range goals for the woodlot area, say University of Minnesota foresters.

For example, if a woodlot has never been managed, many low grade and cull trees can be identified for removal by the owner. However, if cutting beyond the obvious low grade and culls is planned, a professional forester should be consulted.
add 2--in brief

How a woodlot should be cut depends on goals such as planned roads, recreation areas, or opening areas for wildlife. The foresters warn that a poorly planned and executed cutting can leave the forest in worse shape than before the cut.

###
ADMINISTRATIVE PROBLEMS 
WILL DELAY PROGRAM 
TO RESTRICT FERTILIZERS

A University of Missouri agronomist says he believes that a program to restrict
fertilizer use will not be adopted at this time because of the difficulties of
administering such a program.

However, George E. Smith says that if Congress votes to stop all water pollution,
the program would need to be adopted nationwide to be effective.

"The farmers in a single state where such restrictions might be put in effect
would be at a serious economic disadvantage. If we were to have federal restrictions
I would expect food shortages, an increase in food imports and a rapid return to
'free enterprise' in crop production," Smith says.

It is a mistake to attempt to refute arguments and discredit data on the amount
of nitrogen and phosphorus fertilizer lost from the land, he adds.

"Instead both farmers and industry should stress the positive side of fertilizer
use to the consumer and the beneficial effects of a good soil fertility and management
program on the environment and the health of people.... Certainly fertility programs
should be followed that apply only the amount of nutrients and at a time that they
will be effectively utilized by crops," he says.

Smith spoke recently at the Combined Soils, Fertilizer and Agricultural Short
Course in Minneapolis, sponsored in part by the University of Minnesota's Institute
of Agriculture. He also serves as director of the Water Resources Research Center
at the University of Missouri, Columbus, Missouri.

###
GREEN REVOLUTION POSES POLICY CONFLICT FOR U.S.

The United States government could be torn between policies to promote the Green Revolution and to protect domestic grain prices, according to University of Minnesota agricultural economists James P. Houck and Mary E. Ryan.

Dramatic increases in farm output, called the Green Revolution, result from the use of new seed varieties and new combinations of water, fertilizer and other inputs. This sudden large farm volume is straining local grain markets in developing countries, where inadequate storage and internal transportation systems exert pressure to export excess grain supplies even through critical shortages exist elsewhere within these countries.

Houck and Ryan said lower demand for food aid and periodic exports from developing countries increase competition in world food grain markets, cutting deeply into export markets of the United States, Canada and Australia. Lower world prices reflect the dwindling international market for food grains, particularly wheat. These short-term problems could subside as per capita incomes grow in developing nations, resulting in stimulation of the demand for feed grains, soybeans and high protein, hard bread wheats.

-more-
To alleviate the apparent conflict between the Green Revolution and domestic farm income protection, the United States might devote more of its limited foreign aid and technical assistance to the establishment of stronger, more flexible markets and market institutions in nations with major grain production increases, they added.

A feasible short run policy for this country would be to continue to restrain production of food grains at home, especially low quality wheat, within the limits of politically acceptable federal budget expenditures. Also, production controls likely will be continued in some form or another in Canada and Australia, Houck and Ryan said.

Based on the experience in the United States, more expensive programs to hold acreage out of food grains or divert it to other uses will meet strong resistance from consumers, taxpayers and government fiscal agencies.

The United Kingdom’s entry into the European Economic Community (EEC) may take some pressure off the food grain surplus problem inside the expanded EEC, but it will add to the problem of narrowing markets faced by the United States and other outsiders, the economists said.
To all counties
Immediate release

STATE FARMERS
AFFlicted BY
NEW SEED LAW

The new Plant Variety Protection Act to be administered by the United States Department of Agriculture will soon affect Minnesota farmers.

Under the law, plant breeders or owners may prohibit others from reproducing a protected variety, selling it, importing, exporting or using it in commercial production of a different hybrid or variety.

In addition, owners of new varieties may choose to protect them through seed certification. This option of the law prohibits reproduction and sale of non-certified seed. The seed must be sold by variety name, and as a class of certified seed.

Purdue University has applied for variety protection of three varieties, including Amsoy 71 soybeans, a late maturing variety grown by some southern Minnesota farmers. It will be illegal to sell non-certified seed of Amsoy 71, and seed growers who produced the variety and sell registered or certified seed must label it as a protected variety.

Protected seed must be labeled accordingly, said Harley Otto, University of Minnesota extension agronomist. If variety protection has been applied for but not yet granted, the label should read "Unauthorized Propagation Prohibited--U. S. Variety Protection Applied For." After protection has been granted, the seed must be labeled "Propagation Prohibited--U. S. Protected Variety."

Additional protected varieties are apt to be introduced which will apply to farmers and seed growers throughout the state, Otto added.

# # # #
INVESTMENT CREDIT
RETURNS FOR FARMERS

The 7 percent investment credit for farmers and other businessmen applies to eligible purchases made after March 31, 1971, according to Harvey H. Bjerke, University of Minnesota area farm management specialist.

This means that for each $100 you invested in new and used equipment, you can subtract $7 from your final tax bill. However, the purchases must not have been ordered before April 1, 1971. Only machinery made in the U. S. qualifies for the investment credit.

Purchased breeding stock are also eligible for investment credit, providing you hold them for three years or more.

Useful life brackets required to qualify for investment credit have been shortened by one year. Before, four, six and eight years of useful life were necessary to qualify for one-third, two-thirds and 100 percent of credit, respectively. Now the useful life brackets have been set at three, five and seven years.

The limitation of 20 percent of the carryover credit imposed by the 1969 law has been changed to 50 percent for 1971, Bjerke adds.

# # # #
PREPARATIONS SET
FOR SWINE DAY

Here's another reminder of the swine day program scheduled for (town)
on (date).

University of Minnesota specialists will report the latest research findings for swine feeders at the all day session which begins with registration at (time) at the (Lamberton, Waseca or Morris) Experiment Station.

Robert Touchberry, head of the University's Department of Animal Science, will open the morning program with a report on swine research at the University.

Nutrition specialists will give several reports on soybean protein in swine rations. Other research reports will include effects of drying temperatures on feeding value of corn, influence of housing space and sex on rate and efficiency of gain, biotin and pyridoxine additions to diets, growth and development of different body types of swine and the status of artificial insemination in swine.

# # #

(Agents--dates and locations are as follows: Waseca, January 11 starting at 9:30 a.m; Lamberton, January 12 starting at 9:30 a.m; Morris, January 13 starting at 10 a.m. You may wish to further localize the story for the meeting in your area)
IN BRIEF . . .

**Nitrogen Loss From Fields.** Fertilizer nitrogen losses—especially from heavy fertilized fields—could increase pollution of rivers, lakes and underground water supplies. In a study of drainage waters in six south central Minnesota counties, most fields were losing over two pounds of nitrogen for every acre-inch of drainage water, say University of Minnesota soil scientists.

However, the scientists say that part of this loss results from decomposition of organic matter—a natural process.

It's possible that some of the nitrogen lost denitrifies to gaseous forms and is lost to the air before entering the larger streams. But nitrogen that remains in the streams is quickly diluted or is utilized by water plants during the growing season.

Although there's been little increase in the nitrate-nitrogen content of major rivers during the last 50 years, these amounts must be closely monitored in the future because of increasing amounts of sewage and higher nitrogen fertilizer rates, the scientists say.

* * * *

**Computerized Feed Program.** A computerized grain requirement is calculated for each cow under the Dairy Herd Improvement program, based on feed quality and production level of the cow. A dairyman can tell at a glance if he is feeding too little or too much grain for the cow's level of production. Correct feeding saves the dairyman money by avoiding waste on low-producing cows. See your county extension agent or DHI supervisor about joining.

* * * *

-more-
Long Range Returns From Firewood Cutting. Harvesting and selling firewood by landowners is not a high paying operation, but the long range returns may be substantial.

An estimated return for labor is only one to one and one-half dollars per hour, says University of Minnesota forestry graduate student, Donald Stumbo. Doing part or all of the marketing of the wood will add to the producer's return, he says.

Although immediate returns on firewood are low, firewood production as a means of improving woods for future timber production, as preparation for recreation or development alternatives, or for speculation may net long range returns that will more than offset low immediate returns.

* * * *

Good Reproduction Records Prevent Mistaken Identify. A good reproduction record includes a permanent inventory of all animals brought or born into your herd. Information should include identification, birth date, sire, dam and reasons for disposal.

University of Minnesota dairy scientists recommend that you give every animal in your herd a permanent identification such as ear tattoos or brands at the time of birth. Other helpful identifications include color sketches, photos, ear tags and neck chains.

Mistaken identity can cause many serious problems such as unplanned inbreeding, failure of purebreds to qualify for registry and unreliable evaluations of sires and cow families. In the case of registered animals, registration papers must be available to the A.I. technician at each service.

# # # #
PLAN AHEAD TO
AVOID SALES MEN

If a salesman gets his foot in the door...he's halfway home in making a sale. Traditionally we have fallen into the habit of being hospitable to anyone visiting our home. This may make us vulnerable to the "sales pitch" of a door-to-door salesman.

As stilted as this may seem, have some standard answers prepared ahead of time for door-to-door salesmen. If your refusal is well in mind, it may give you enough confidence to withstand the pressure of the pitch.

Try these statements out for size--"Thank you, but I need additional time to do comparative shopping." Or, "You may demonstrate the product and call in a few days after I've had time to think and confer with family members." Another that's simple, "Thank you, I'm not interested. "Repeated often and firmly, the statements are effective. And, if all else fails, put some humor into, "Excuse me, my dog's having puppies!"

Although the contrivance sounds strange, it may save you from getting into a binding or nuisance agreement for something you hadn't the faintest idea of buying or needing.

Of course, most high pressure salesmen will take your statements as challenges so be firm with the refusal. There's no need to be rude, but there's less need to become burdened with unwanted merchandise or time payments. Just remember that part of the sales routine is to take advantage of your gullibility.

If the salesman doesn't answer questions, be leary. If he doesn't respect your refusal, report him to the Better Business Bureau. Shop around and compare prices and quality. Your initiative is your best defense.

There are reliable salesmen, however, and some only sell their high quality products from door to door. If it's what you want, the price is right and you've read and understood the contract, buy...by all means.

(checked by Edna Jordahl, home management specialist)
CHICKEN OR
TURKEY BONE SOUP

You can use everything but the gobbler! There is good flavor in every part
of your holiday chicken or turkey.

After your family and guests have enjoyed your roast chicken or turkey for a
special occasion, it is simple to slice what is left for cold or hot sandwiches.
For the scrappy pieces which are left, use them for casserole dishes, salads,
creamed foods, or meat pies. But what about the bones and the carcass?

Mary Darling, extension nutritionist at the University of Minnesota, suggests,
"Chicken or Turkey Bone Soup can be a tasty finale for your holiday bird. This
soup can become a family favorite too." Here are some easy-to-follow directions:

Scrape meat from the bones, break them if you can, and put them into a
kettle. Cover with cold water. Add a small onion, cut up. Cover and simmer
gently for about three hours. Strain and let high heat disappear. Cover and
place in the refrigerator before it reaches room temperature. Remember to taste
and season. Use within several days.

Here are some possibilities for soup:

* Serve the clear broth hot and seasoned
* Add oysters to the hot broth
* Add noodles or dumplings and cook until done
* Add rice and cook until done
* Add carrots and celery or any combination of vegetables your family enjoys

So get your money's worth from that holiday bird. And, don't worry about
the gobbler that got away!
1971 4-H WILDLIFE IMPROVEMENT PROGRAM

Did your father ever tell you about hunting pheasants when he was a boy? If he did, he probably told you he'd seen hundreds of pheasants in one day. Those days seem to be gone—but it doesn't mean we should give up the battle for wildlife improvement.

4-H is one organization that isn't giving up the battle. Its wildlife improvement program is another attempt to save our wildlife.

Approximately 70 4-H clubs in 40 counties took part in the 1971 program. The 4-H'ers provided woody cover, planted trees, built wood duck houses and bird feeders, developed aquatic wildlife areas, salvaged pheasant eggs and established food plot plantings.

Individuals and clubs who did an outstanding job in the wildlife improvement program were recognized recently. Ten-dollar scholarships to attend the state 4-H conservation camp were awarded to the top 10 individuals and $25 cash awards were awarded to the top three clubs in the pheasant habitat improvement program. A special award of $10 was awarded to the top individual engaged in the pheasant egg salvage program. County winners from ________ county last year were ________ ________. These awards were sponsored by Minnesota Pheasants Unlimited, Inc.

Federal Cartridge Corporation sponsored a conservation field day at the Lac qui Parle Wildlife Management area last summer for 4-H'ers in western Minnesota.

For more information on the 4-H wildlife habitat improvement program contact your county extension agent.

# # # #