

May 7, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## EXCESS LOSS OF SPRUCE NEEDLES COULD SIGNAL DISEASE PROBLEM

If your blue or white spruce trees have been losing an excessive number of needles, you may have trouble with *Rhizosphaera* needlecast.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, says this fungal disease can seriously damage blue, and occasionally white, spruce. The disease attacks the needles, turning them reddish-brown. Infected needles remain attached to the tree for a year or two before they fall.

Ash says, "New needles become infected in May and June and the symptoms appear later in the growing season or, more often, the following spring. Generally, infected needles don't become discolored until the following spring.

"The fungus produces fruiting structures on infected needles and these can be seen with a magnifying glass or hand lens. These structures are black and fuzzy and replace the white stomata (minute pores) on the needles. Needlecast develops on the lower branches first. In severe cases, the disease may

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

The University of Minnesota, including the Minnesota Extension Service and the Minnesota Agricultural Experiment Station, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age or veteran status.

affect the entire tree."

Ash advises applying a registered fungicide such as chlorothalonil (sold as Daconil 2787, Bravo 500 and Ortho Multi-Purpose Fungicide) when the new needles are half elongated and again when they are fully elongated. She says two years of treatment should help most trees to recover fully. However, severely infected trees may need to be treated longer.

# # #

I,V4,V7

NAGR2046

# news

Communication Resources  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

MES  
A27P

May 7, 1987

Source: Mary Darling  
612/624-6286

Writer: Deedee Nagy  
612/625-0288

## **WOMEN'S CALCIUM INTAKE IS INCREASING, BUT IT'S STILL NOT ENOUGH**

Like the old good news-bad news jokes, consumption of calcium-rich foods is on the rise, but, unfortunately, it still falls short of recommended levels for women ages 19 to 50.

Mary Darling, nutritionist with the University of Minnesota's Extension Service, says a U.S. Department of Agriculture survey on women's eating habits done in 1977 and again two years ago suggests some major changes in calcium intake.

"Calcium consumption by the 19- to 50-year-old women increased from an average of 69 percent of the recommended dietary allowance in 1977 to 78 percent in 1985," Darling says. "But many authorities think the recommended levels are too low. They think the recommended levels of 800 milligrams of calcium per day should be raised to 1,000 milligrams for premenopausal women and 1,500 milligrams daily for postmenopausal women."

Darling explains a woman accumulates calcium in her bones during the first 30 to 35 years of her life, making them more dense. This bone density reduces the risk of osteoporosis, the

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

The University of Minnesota, including the Minnesota Extension Service and the Minnesota Agricultural Experiment Station, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age or veteran status.

thinning of the bones that often results in hip fractures and crushed vertebrae among elderly women.

"This survey suggests that calcium consumption is improving, but on the day of the survey only about half of the women drank milk. One-third ate cheese, 25 percent ate cream- or milk-based desserts and fewer than 5 percent consumed yogurt," Darling says.

Dieting plays a role in women's food choices, Darling suspects. "Women may want to avoid calories in dairy products, especially those high in fat. But a lifetime of such dieting may contribute to osteoporosis," she adds.

The survey revealed that women have decreased their use of whole milk by 35 percent in eight years while they increased their consumption of low-fat milk by 60 percent. Eight ounces of any type of milk contain 300 milligrams of calcium, which is about one-third of the current recommended daily consumption.

Despite weight-consciousness, women's consumption of such desserts as ice cream has increased by 21 percent. Darling says women's tastes for gourmet ice creams and cheeses may contribute to their enjoyment of eating. Still, switching to lower-fat dairy products would be wiser if they hope to increase calcium without adding unwanted calories to their diets.

The flurry of interest in calcium consumption has prompted some food manufacturers to add it to bread and cereal products. However, Darling isn't convinced that calcium in this form is as

readily available to the body as it is in dairy foods. She says, "We do know that the body's absorption of calcium is aided by the presence of vitamin D and lactase, the simple sugar in milk."

Similarly, calcium supplements are finding eager buyers. Darling says the cost of these is often excessive. And as is the case with calcium-fortified foods, absorption of supplemental calcium is improved by taking it with meals, with milk and at several times during the day rather than all at once.

# # #

CEO,D,H,V1,V4,V7

NHEC2067

# news

Communication Resources  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 7, 1987

Source: Mary Darling  
612/624-6286  
Writer: Deedee Nagy  
612/625-0288

## FOR BETTER OR WORSE, WOMEN ARE EATING DIFFERENTLY

It may not be a conscious effort, but American women are eating differently today than they did a decade ago. This is the finding of a survey of about 1,500 women ages 19 to 50 completed by the U.S. Department of Agriculture.

Mary Darling, nutritionist with the University of Minnesota's Extension Service, says surveys done in 1977 and again in 1985 show that fat now provides fewer calories in women's daily diets and carbohydrates provide more. Despite that good news, food intakes still fail to provide recommended levels of such nutrients as calcium, iron, magnesium and vitamin B6.

Increased awareness and concern about diet may be partly responsible for the dietary improvement. Darling says, however, that it's difficult to know if the government's seven dietary guidelines are responsible for any of the altered eating habits. These recommendations, published about five years ago, were for Americans to eat a variety of foods, maintain a healthy weight, avoid fat and cholesterol, eat foods with adequate fiber and starch, and limit intake of sugar, sodium and alcohol.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

The University of Minnesota, including the Minnesota Extension Service and the Minnesota Agricultural Experiment Station, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age or veteran status.

The 1985 survey showed that about 90 percent of women are selecting at least one food from the food groups that include fruits and vegetables, grain products such as bread and pasta and meat or fish. Milk or milk products were consumed by only about 75 percent of those surveyed. Calcium consumption increased, but still averages only 78 percent of the recommended daily allowance.

More than half of those surveyed took a vitamin or mineral supplement regularly. In 1977, only about one-third took such supplements, according to Darling. "Clearly, more women in 1985 than in 1977 were concerned that the foods they ate might not provide enough nutrients," she added.

Weight consciousness was a factor, although only one respondent in 10 claimed to be on a weight-loss diet. Despite the prevalence of obesity in this country, the survey found that the survey's average of 1,660 calories daily was near the bottom of the recommended range.

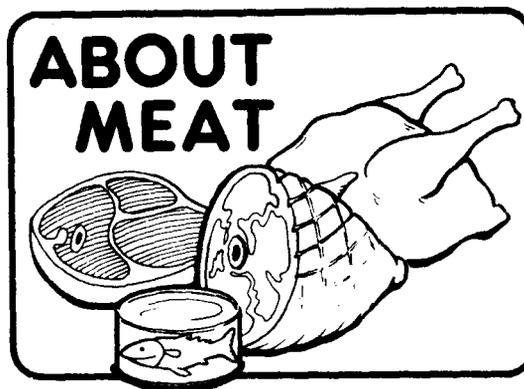
Carbohydrate consumption was up nearly 20 percent, some of this due to our appetite for sweet foods, according to Darling. Consumption of sugary soft drinks increased by 28 percent.

"On balance, it appears women are eating differently now than they did about a decade ago," Darling said. "We're eating more lowfat and skim milk, more grain products and more meat mixtures such as casseroles and processed luncheon meats. At the same time, we're shying away from whole milk, beef, pork and eggs. Clearly, women are eating more of their meals and snacks away from home now than they did a few years ago. That reflects the growing number of employed women today."

# # #

MSC  
2 A21p

Communication Resources  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 373-0710



May 7, 1987

Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** Salmonella contamination of chicken has received publicity recently. How should chicken be handled to avoid problems from bacterial contamination?

**A:** Raw chicken may contain Salmonella organisms. Heat destroys these bacteria, so it's unlikely that you will suffer any harmful effects from eating properly cooked chicken. However, bacteria from raw chicken can contaminate your hands, utensils and kitchen work area and be transferred to your mouth or to other foods that will not be cooked. Wash your hands, utensils and counter thoroughly with hot, soapy water after cutting or handling raw chicken to avoid ingesting the organisms or contaminating other foods.--Melvin Hamre, extension animal scientist, poultry

**Q:** Some of my friends got sick last summer after they ate ham salad at a picnic. What should I do to keep this from happening?

**A:** Your friends probably became ill from staphylococcal poisoning. Staphylococcus bacteria are present in cuts and other healing

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, or veteran status.

wounds, so make sure there are no cuts on your hands and avoid placing your fingers in your nose when you make ham salad. Also, keep ham salad cold--never allow it to sit in the hot sun for any length of time before it is eaten--and refrigerate leftover ham salad immediately.--**Richard Epley, extension animal scientist, meats**

**Q:** I'm confused by the terms "organic" and "natural." Do these words mean that meat is better?

**A:** The U.S. Department of Agriculture does not allow the term "organic" on meat labels because "organic" means many things to people, so the term can be misinterpreted. "Natural" can be used on fresh beef that has not been treated with preservatives or additives. However, in Minnesota, beef steaks, roasts and ground beef cannot be treated with additives or preservatives, so the term "natural" doesn't really tell you anything new. Claims on meat regarding growth promotants and antibiotics are subject to strict USDA regulation of livestock production practices--**Richard Epley, extension animal scientist, meats**

Send questions about red meats, poultry or fish to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

X

# news

Communication Resources  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

MSC  
A211

May 7, 1987

Source: John True  
612/625-9733

Editor: Mary Kay O'Hearn  
612/625-2741

## LIGHTNING CAN KILL

Electrical storms, while exciting to watch, can be extremely dangerous--damaging property and even killing.

Lightning can appear to be a random blast from the sky, but bolts really follow a predictable path to the ground while seeking tall objects and good conductors.

John True, agricultural engineer with the University of Minnesota's Extension Service, suggests these defensive tactics approved by the National Safety Council:

--Equip your home and outbuildings with an approved lightning protection system and inspect it annually. (Have professionals install the equipment.)

--If you are inside during a storm, unplug the television set and don't use the telephone--lightning can travel through powerlines.

--Lightning can cause blackouts, so keep several flashlights with fresh batteries in the house.

--A battery-powered radio can keep you apprised of developing weather conditions.

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

--If caught outdoors in a thunderstorm, avoid trees, fences, hilltops and all metal objects. Get out of, and away from, the water.

--About one-third of all lightning-related deaths occur in open areas. Don't be the tallest object in a flat expanse. Seek shelter in a lightning-protected or steel-framed building if possible.

# # #

AEA,BSS,CEO,V1,V4,V7

NAGR2063

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 14, 1987

Source: William Schafer  
612/624-4793  
Writer: Deedee Nagy  
612/625-0288

## **JELLY INSTRUCTIONS IN PECTIN PACKAGES COULD ALLOW MOLD GROWTH**

New jam- and jelly-making instructions included in one manufacturer's fruit pectin products don't conform with safe canning techniques endorsed by the U.S. Department of Agriculture (USDA) and the Minnesota Extension Service.

William Schafer, food technologist with the University of Minnesota's Extension Service, cautions that the "inverted jar method" of sealing jars may allow the growth of yeast and mold in home-canned jam and jelly. Processing jars of jam and jelly in a boiling water bath is the only method recommended by the USDA.

The inverted jar method involves filling the jars with hot, liquid jelly, screwing on the lids and resting the jars on their lids for at least five minutes. The heat from the liquid inside acts on the lid and completes the seal.

Problems arise, Schafer says, when the jelly is not hot enough to promote a complete seal and to kill any yeasts and molds that may be present in the product. This can allow the microorganisms to grow, producing off-flavors and the potential for illness among persons who eat the jam or jelly.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Only processing in a boiling water bath for times recommended by the USDA and the Minnesota Extension Service assures a safe home-canned jam or jelly. The once-popular method of sealing jam or jelly with a layer of paraffin is also considered inadequate and potentially unsafe.

Schafer says the pectin products whose package instructions include the inverted jar method also give water bath directions as an alternative. He urges home jam and jelly makers to follow the recommendations of the Minnesota Extension Service, which are available in publications from their county extension offices.

# # #

V1,V4,V7,H

NHEC2071

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 14, 1987

Source: Kathy Sperry  
612/625-9700  
Writer: Russ Vogel  
612/625-3725

## 4-H TEENS READY TO 'MAKE A DIFFERENCE' AS CAMP COUNSELORS

More than 170 Minnesota teenaged 4-H'ers recently completed counselor training programs and are ready to 'make a difference' in the lives of the 10,000 youths who will attend county 4-H camps in Minnesota this summer.

The workshops, held last month in three Minnesota locations, offered intensive training in counseling skills through programming centered around the theme "We Can Make a Difference."

The volunteer 4-H counselors learned about understanding youth, building self-esteem, teamwork, leadership and much more, says Camping Workshop Coordinator Kathy Sperry. "We train them to be camp counselors," Sperry says, "but they also develop people skills they will use for the rest of their lives--in their careers and in their communities."

The teen leaders, who ranged in age from 14 to 19, attended regional workshops at Camp Ihduhapi, near Loretto; at Camp Shetek, near Slayton; and at Itasca State Park. Each three-day workshop served as a model camp and was led by Minnesota Extension Service 4-H staff from surrounding counties.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Last year, nearly 10,000 youths aged 8 to 12 attended 4-H camping programs supported by 81 counties and staffed by 1,200 4-H Junior Leaders, adult volunteers and extension service personnel. The camps, which are open to all youth, stress self-esteem and social skills--but fresh air and fun are featured, too.

For more information about 4-H camping programs, contact your county extension office.

# # #

CEO,G,Q,V1,V4,V7

N4-H2081

---

# News and Information

---

1730  
7/27p

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 14, 1987

Source: Kenneth R. Ostlie  
612/624-9272  
Writer: Mary Kay O'Hearn  
612/625-2741

## SOFTWARE GIVES INSECTICIDE RECOMMENDATIONS FOR FIELD CROPS

INSREC, short for "insecticide recommendations for Minnesota field crops," is a new computer program developed by the University of Minnesota's Extension Service.

The new computer program is based on "Insecticide Suggestions to Control Insect Pests of Field Crops in 1987." "What it does," says Kenneth R. Ostlie, one of the authors of that publication, "is put information from this publication right at your fingertips. Information in the computer program is tailored to growers' questions; it is unbiased; and it offers management information."

Authors of INSREC are Ostlie and fellow extension entomologists Penelope M. Ives and David M. Noetzel.

Useful for those who are well-versed in the subject as well as for those who need information only occasionally, Ostlie calls INSREC "a valuable resource for those who discuss insect management problems with farmers one-on-one." Ostlie says INSREC is more flexible in its use than the publication, and it should be very useful to people who give information or advice to farmers, such as extension agents, vocational agriculture instructors, chemical dealers, aerial applicators and crop

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

consultants.

INSREC gives answers to specific field crop situation questions. It stores information in three categories: by crop, insect and insecticide. Choosing from any two lists gives an output tailored to farmers' questions. An example: Mark and Joan are having cutworm problems in corn. They choose corn from a list of crops and cutworms from a list of insects, and the program provides a list of recommended insecticides for their situation. The program also gives management information, including scouting tips; determines if an insecticide is needed; and gives recommended rates and safety concerns.

INSREC is a copyrighted program. It will work with any IBM-compatible hardware, and it has been tested in many Minnesota counties. The publication will still be distributed newly each year, as will an annual update to INSREC. There will be a manual with the disk for easy operation.

INSREC will be available in June from the Distribution Center, 3 Coffey Hall, 1420 Eckles Ave., St. Paul, MN 55108 as item number AG-CS-2934. Cost to the public is \$50, which includes the program disk, data disk, user's manual, publication and one program revision. Annual updates may be ordered at the same time for \$10 per year. Checks should be made payable to the University of Minnesota.

# # #

AEA,BSS,CEO,F,V1

NAGR2082

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 14, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## TACKLE UNDERLYING PROBLEMS TO RID LAWN OF MOSS

Moss is a problem in many Minnesota lawns. Although everyone is looking for an easy way to get rid of the moss, homeowners really need to tackle the underlying problems that allow moss to grow better than turf, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"People associate moss with acidic soil, but before using lime to 'sweeten' the soil, be sure to run a soil test to determine the pH," Brown advises. "Most of our soil is not acidic enough to warrant amending it for the sake of avoiding moss."

Brown says shade is the most obvious and perhaps toughest problem associated with moss, although it is possible to have trouble with moss in a sunny area as well. When there isn't enough sunlight for grass to grow vigorously, moss tends to move in and take over, being very shade tolerant.

"Pruning trees and shrubs might allow enough additional light to reach the grass that growth will improve," Brown says. "In many instances, though, shade results from buildings or from

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

large trees that can't be pruned sufficiently.

"Soil compaction and poor drainage are equally troublesome when it comes to moss problems. Periodic aerification using the type of machine that takes cores out of the soil may be of some help."

Brown says that moss frequently flourishes on nutrient-poor soil, where grass has not been maintained well or fertilized regularly. This problem is easily remedied.

She says, "The more you're able to work on these underlying problems, the better your chances of success will be in ridding your lawn of moss. In some cases, however, there's simply no solution other than learning to live with it."

# # #

I,V4,V7

NAGR2042

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 14, 1987

Source: David M. Noetzel  
612/624-9272

Editor: Mary Kay O'Hearn  
612/625-2741

## KEEP ALERT TO WOOD TICKS

If the preceding summer and fall have been seasons with a lot of moisture, keep an eye out for wood ticks, especially in wooded, grassy areas.

"Although this spring has been very dry in Minnesota, last summer and fall were wet," says Dave Noetzel, entomologist with the University of Minnesota's Extension Service. The wood tick potential is there, but so far Noetzel hasn't encountered an unusual number of them in his travels throughout the state, nor has he had any reports of an influx. "Oh, I've picked off a few," he says, referring to the parasites that can carry Rocky Mountain spotted fever and the bacteria that cause tularemia. Wood ticks reach people from the grass, they don't drop down from trees.

"If it's dry this summer when wood tick eggs are laid on the soil, the hatch this year and the adult numbers next year could be smaller," Noetzel says.

Ticks should be removed carefully and quickly from humans and animals--before they have a chance to burrow into the flesh with

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

their mouthparts. It is well to protect hands with a paper towel or to use a tweezers when removing a tick. Grasp the tick close to the skin, then pull straight out with steady pressure. Twisting or jerking may leave tick mouthparts in the skin. Don't crush or puncture the tick when removing it.

It is NOT a good idea to use a hot match or lighted cigarette to remove a tick. Heat may cause the tick to burst and spotted fever can be acquired when infected tick body fluids come in contact with broken skin, mouth or eyes.

After removing a tick, disinfect the bite site with rubbing alcohol and wash your hands with soap and water.

Flea and tick collars are not effective against ticks, but there are tick repellents available for dogs and cats. Consult a veterinarian or pet supply store.

# # #

AEA,BSS,CEO,R,V4,V7

NAGR2080

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 14, 1987

Writer: Sam Brungardt  
612/625-6797

Note to the news media: Please include any of these events that you feel will be of interest to your readers, listeners or viewers in your calendar of coming events, and feel welcome to attend them yourself.

## MINNESOTA AGRICULTURAL EXPERIMENT STATION ANNOUNCES 1987 EVENTS

The public is invited to attend the following events which will be held this year by the University of Minnesota's Agricultural Experiment Station:

June 23--**Crops and Soils Field Day** at the Southern Experiment Station, Waseca. 8:30 a.m.-3:30 p.m. For more information, contact Richard H. Anderson, Southern Experiment Station, Waseca, MN 56093 (phone 507/835-3620).

June 24--**Crops and Soils Field Day** at the Southwest Experiment Station, Lamberton. 9 a.m.-2 p.m. For more information, contact Wally Nelson, Southwest Experiment Station, Box 428, Lamberton, MN 56152 (phone 507/752-7372).

July 8--**Annual Field Day** at the Sand Plain Experimental Farm, Becker. 9 a.m.-noon. For more information, contact Glenn Titrud, Sand Plain Experimental Farm, Becker, MN 55308 (phone 612/261-4063).

July 9--**Summer Crops and Soils Day** at the West Central Experiment Station, Morris. 9 a.m.-2:30 p.m. For more information, contact Sam Evans, West Central Experiment Station, Morris, MN 65267 (phone 612/589-1711).

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

July 9--**Horticulture Night** at the West Central Experiment Station, Morris.

6 p.m.-9 p.m. For more information, contact Wes Gray, West Central Experiment Station, Morris, MN 65267 (phone 612/589-1711).

July 15--**Crops and Soils Day** at the Northwest Experiment Station,

Crookston. 7:45 a.m.-3 p.m. For more information, contact Larry J. Smith, Northwest Experiment Station, Crookston, MN 56716 (phone 218/281-6510 ext. 462).

July 16--**Visitors Day** at the North Central Experiment Station,

Grand Rapids. 9 a.m.-3 p.m. For more information, contact the North Central Experiment Station, 1861 Highway 169 East, Morris, MN 55744 (phone 218/327-4490).

Aug. 20--**Annual Field Day** at the Staples Irrigation Center, Staples AVTI.

9:30 a.m.-3:30 p.m. For more information, contact Norm Krause, Staples Irrigation Center, Staples AVTI, Staples, MN 56479 (phone 218/894-1053).

Aug. 26--**Horticulture Night** at the North Central Experiment Station,

Grand Rapids. 4 p.m.-dark. For more information, contact the North Central Experiment Station, 1861 Highway 169 East, Morris, MN 55744 (phone 218/327-4490).

Sept. 8--**Fall Crops and Soils Day** at the West Central Experiment Station,

Morris. 9 a.m.-2:30 p.m. For more information, contact Sam Evans, West Central Experiment Station, Morris, MN 56267 (phone 612/589-1711).

Sept. 10-11--**Country Harvest Retreat** at the West Central Experiment Station, Morris. For more information, contact Sharon Ehlers, West Central Experiment Station, Morris, MN 56267 (phone 612/589-1711).

Sept. 16--**Corn and Soybean Day** at the Southwest Experiment Station, Lamberton. 9 a.m.-2 p.m. For more information, contact Wally Nelson, Southwest Experiment Station, Box 428, Lamberton, MN 56152 (phone 507/752-7372).

Sept. 17--**Corn and Soybean Day** at the Southern Experiment Station, Waseca. 9 a.m.-3 p.m. For more information, contact Richard H. Anderson, Southern Experiment Station, Waseca, Minn 56093 (phone 507/835-3620).

Dec. 2--**Dairy Day** at Edson Hall, University of Minnesota, Morris. 10 a.m.-3 p.m. For more information, contact Dennis Johnson, West Central Experiment Station, Morris, MN 56267 (phone 612/589-1711).

Dec. 10--**Beef Feeders Day** at Edson Hall, University of Minnesota, Morris. 10 a.m.-3 p.m. For more information, contact Richard Vatthauer, West Central Experiment Station, Morris, MN 56267 (phone 612/589-1711).

# # #

AEA,BSS,CEO,IAC,V1,V3,V4,V7

NEXP2078

May 21, 1987

TO: Editors, farm broadcasters

FROM: Sam *SB* Brungardt, news coordinator

RE: Corrections to "MINNESOTA AGRICULTURAL EXPERIMENT STATION  
ANNOUNCES 1987 EVENTS" news release of May 14, 1987

Two of the coming events listed on page two of this release included the wrong city in the address. I regret any inconvenience or confusion this may have caused you. The correct versions follow; please change your listings of these coming events accordingly.

July 16--**Visitors Day** at the North Central Experiment Station,  
Grand Rapids. 9 a.m.-3 p.m. For more information,  
contact the North Central Experiment Station, 1861  
Highway 169 East, Grand Rapids, MN 55744 (phone  
218/327-4490).

Aug. 26--**Horticulture Night** at the North Central Experiment  
Station, Grand Rapids. 4 p.m.-dark. For more  
information, contact the North Central Experiment  
Station, 1861 Highway 169 East, Grand Rapids, MN 55744  
(phone 218/327-4490).

AEA,BSS,CEO,IAC,V1,V3,V4,V7

NEXP2079

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Jeffrey Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## ROSE CHAFERS ARE MOST TROUBLE DURING LATE MAY, EARLY JUNE

It's the time of the year when roses and many other plants come under attack by rose chafers.

"This beetle is about 1/3 inch long, tan, and somewhat leathery," says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service. "Rose chafers are most active the end of May and early June, showing a preference for plants that are growing in sandy soil."

Hahn says a cheesecloth barrier, taller than the plant that is to be protected, can be erected to keep rose chafers out. It's not necessary to have a top on the barrier; the beetles will fly over the barrier, but will not land inside. An alternative control, Hahn says, would be to use the insecticide carbaryl (Sevin).

# # #

I,V4,V7

NAGR2084

Page 1 of 1

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

Note to the news media: Do not use this release after June 15.

## **JUNE'S NOT TOO LATE TO PLANT SOME VEGETABLES**

"Just because we had an extra early start in the garden this year, don't think it's too late to plant vegetables," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "There are quite a few vegetables that, if planted in June, will mature before frost...assuming we don't have an abnormally early autumn."

Brown says that tomatoes, peppers and eggplants that are transplanted outdoors the first half of June should grow rapidly and produce a decent crop in all but the cooler regions of Minnesota.

She adds, "Plant dill in June so it will mature at the same time that cucumbers are harvested for pickling. Green beans, summer squash, beets and even sweet corn can be planted also. Be sure, though, to check corn varieties and choose only those with relatively short maturity times."

# # #

I,V4,V7

Page 1 of 1

NAGR2085

---

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## **"DUSTY" LAWN COULD BE SIGN OF DISEASE PROBLEM**

The white substance that's being seen now on some lawns, especially in shady areas, is from powdery mildew.

"This is not snow mold," says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service. "That is an entirely different disease which occurs in early spring."

Ash explains that the powdery mildew fungus produces a delicate web of thread-like growth and spores, which create a white, dusty coating on grass. Heavily infected leaves turn yellow and die, resulting in sparse turf.

"The powdery mildew fungus prefers high humidity, low light and cool temperatures," she says. "For this reason, powdery mildew is more of a problem in the spring and fall and in shady areas. In addition, excess nitrogen induces succulent growth, which is very susceptible to attack by the fungus."

According to Ash, the best way to control powdery mildew in a home lawn is to use shade-tolerant and mildew-resistant grass cultivars. Techniques to modify the environment, such as proper

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

fertilization and careful landscaping, can also help. Generally, chemical control is neither recommended nor necessary.

"Nugget, Glade and Touchdown are Kentucky bluegrass cultivars that tolerate powdery mildew," says Ash. "A seed mixture of 40 percent mildew-tolerant bluegrass and 60 percent creeping red fescue grows well in shade and resists this disease. Use this mixture when seeding shady areas. Adequate water and fertilizer is also helpful as is opening shaded areas to increase light and air circulation. Keep these ideas in mind when considering control of powdery mildew. All are methods which are inexpensive, easy and will attack a powdery mildew problem at its source."

# # #

I,V4,V7

NAGR2086

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Wanda Olson  
612/624-3780  
Writer: Mary Kay O'Hearn  
612/625-2741

## **NEW LAW SAYS APPLIANCES MUST USE LESS ENERGY**

Federal legislation passed this year requires that all large appliances--refrigerators, freezers, air conditioners, gas furnaces, gas boilers and domestic water heaters--manufactured on or after Jan. 1, 1990 be designed to use less energy.

"It is something to be aware of if you will be replacing one of these large appliances in your home within the next few years," says Wanda Olson, household equipment specialist with the University of Minnesota's Extension Service.

Called the National Appliance Energy Conservation Act, the new law aims at reducing the consumption of gas and electricity. Federal legislation was mandated when states began setting their own energy regulations and the benefit of one law governing all 50 states became obvious, says Olson. The American Council for an Energy Efficient Economy, one of more than 40 supporters of the legislation, estimates the new law, when it becomes effective, will net savings of \$28 billion or nearly \$300 per household over the lifetime of the appliances. The council estimates the benefits from reduced operating costs will be nearly three times the increased first cost (the higher purchase cost of the more efficient new appliance).

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Appliance costs are based on the availability of a national market, mass production and distribution efficiencies tied to this market, according to Robert L. Holding, president of the Association of Home Appliance Manufacturers.

Given appliance manufacturers' competitiveness, it is thought that energy reductions required by the act may even be exceeded. Operating cost reductions of about 18 percent are expected for refrigerators, 22 percent for freezers and 17 percent for room air conditioners in the 1990 models, compared to 1985 models. Actual savings depend on specific models chosen, how they are used and local electric rates.

The act also requires dishwashers, washers and gas dryers manufactured on or after Jan. 1, 1988 to have energy-saving options such as an "air dry" cycle on dishwashers, a cold rinse setting on washers and electric ignition systems on gas dryers. Gas ranges and ovens manufactured on or after Jan. 1, 1990 will have to have the electric ignition systems if the range has an electric power supply. "This has been the state law since 1979 in Minnesota," Olson says.

The kilowatt hour energy ceilings on appliances will require redesign of about 75 percent of current refrigerator and freezer models and about 60 percent of room air conditioner models.

For instance, the most energy-efficient 15-cubic-foot, manual-defrost refrigerators available now use about 711 kilowatt hours of electricity annually; the 1990 manual-defrost models will use no more than 525 kilowatt

hours. Higher kilowatt-hour ceilings are allowed for refrigerator-freezers and freezers with automatic defrost than for manual defrost. Higher kilowatt-hour ceilings are allowed for refrigerator freezers that are side-by-side or bottom freezer models than for top freezer models.

The water heater efficiency requirements depend on size. A water heater with a larger storage tank has a lower minimum efficiency requirement than a heater with a smaller tank.

Energy labels on new appliances currently must list appliance operating costs, Olson says. Household energy use is about 23 percent of all energy used in Minnesota. Of that 23 percent, home heating takes the bulk or 71 percent; water heating, 14 percent; clothes drying, 4 percent; cooking, 4 percent; refrigeration, 3 percent; lighting, 3 percent; and other appliances, 1 percent.

Olson says in the extension publication "Consumer Appliances: Energy Labeling and Consumption" that more efficient appliances usually have higher purchase costs and lower yearly operating costs than appliances which are less expensive and less efficient (that is, that require more kilowatt hours of electricity to operate).

With some appliances, shifting the demand from peak demand hours (electricity usually is most expensive from 5-9 p.m.) will lower the cost per unit of electricity. Water heaters are often on off-peak heating.

Ask to see a copy of the publication on consumer appliances, item number HE-F0-0709, at your local county extension office.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Earl Fuller  
612/625-6760  
Writer: Jack Sperbeck  
612/625-4730

## RIGHT EQUIPMENT CAN REDUCE COST OF TRUCKING HAY

It costs a lot to truck hay. The tab is nearly \$30 a ton to move a 13-ton load of string-tied bales 250 miles on a 40-foot trailer. The same rig could haul 19 tons for \$20.60 a ton if bales were wire tied.

The analysis was done in New York, but applies to Minnesota and other states, says Earl Fuller, farm management economist with the University of Minnesota's Extension Service.

It takes at least 5.5 tons of dry forage per dairy cow yearly (8.5 tons if you include young stock). "At these rates, hauling hay could easily add \$200 per animal to annual feed costs," Fuller says. On paper, that's far more than the cost of moving the herd to the feed and hauling the milk instead.

But if producing hay for sale is part of your business and the market is more than 150 miles away, trucking high-density, wire-tied bales is more economical. "The New York study showed it was more economical to invest \$25,000 in a wire-tie baler and automatic bale-handling wagon," Fuller says.

# # #

AEA,BSS,CEO,D,F,V1,V4

Page 1 of 1

NAGR2102

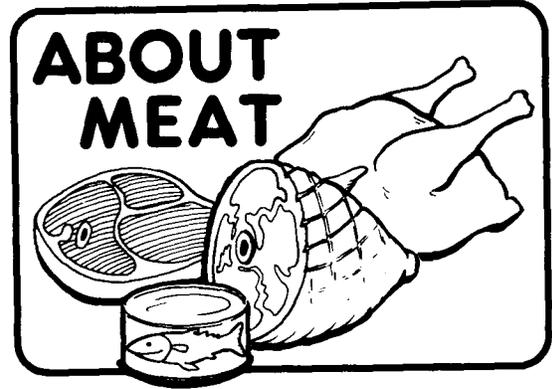
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

MSC  
1/2/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744  
May 21, 1987



Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** Fish frozen in a block is a good buy, but what can I do if I can't use the whole block at one time?

**A:** One option is to cut the frozen block of fillets into smaller blocks with a meat saw or sharp knife. The smaller blocks should be wrapped tightly with cling wrap, overwrapped with freezer paper and placed back in the freezer. You may also want to consider thawing and cooking the entire block and freezing any that you cannot use; cooked fish can be frozen for three months if it's properly wrapped. A third option is to wrap the thawed, unused portion, place it in a bowl of ice in your refrigerator and use within two or three days.--**Jeffrey Gunderson, area extension agent, marine fisheries**

**Q:** I'd like to know why it's bad to refreeze meat, such as hamburger. My husband says you can refreeze meat. I was told you may not.

**A:** Freezing meat stops bacteria on the meat from growing. When meat

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

is thawed, bacteria resume growth and, if not stopped by either freezing or cooking, eventually result in spoilage. However, freezing meat in a home freezer results in the formation of large ice crystals in the meat. When a home-frozen meat item is thawed, it will lose juices, and when it is cooked, it will be less juicy than a product which has never been frozen. Nonetheless, it is better to refreeze meat than to let it spoil.--**Richard J. Epley, extension animal scientist, meats**

**Q:** Is it necessary to clean smelt before you cook them?

**A:** Yes. Smelt are normally eaten with the backbone, rib bones and scales intact but without the entrails. Smelt can be cleaned easily with a pair of scissors. Snip off the head, snip open the belly and scrape out the entrails with your thumb or an old toothbrush.--**Jeffrey Gunderson, area extension agent, marine fisheries**

If you have questions about red meats, poultry or fish, send them to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

-30-

X

X052187

(page 2 of 2)

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Tom Zurcher  
612/625-4228  
Writer: Russ Vogel  
612/625-3725

Editors, farm directors: Contact county extension agents for the names of participants from your circulation area.

## **4-H ANIMAL SCIENCE EXTRAVAGANZA WILL FEATURE LEARNING, FUN**

More than 200 Minnesota 4-H Junior Leaders will gather June 15 at the University of Minnesota in St. Paul for five days of learning and fun at the 1987 4-H Animal Science Extravaganza. The delegates, who range in age from 13 to 18, will participate in hands-on training and practical demonstrations in any of eight species areas: beef, dairy, dairy goat, dog, horse, poultry, rabbit, sheep and swine.

"It's an event for young people who want training and education beyond the showing," says University of Minnesota Animal Science Professor and Extravaganza Co-chairman Ray Arthaud. "It offers exposure to what we're doing here at the St. Paul campus and to new developments out in the ag industry."

Sessions will include the use of computers in beef cattle selection and poultry nutrition; cloning and genetic engineering in dairy; observation of a dog undergoing surgery and measurement

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

of swine backfat with a sonoray. Tours will be offered in nearly every species area, including trips to the North Central Wool Marketing Cooperative's facilities, a leading goat farm, a large rabbitry and Canterbury Downs.

Co-chairman Tom Zurcher, 4-H extension specialist for animal science, says the extravaganza also emphasizes ag career education and the development of leadership skills, global awareness and self-esteem. After-hours events will include a pork barbecue and an evening at the Chanhassen Dinner Theater.

The species units are planned and produced by 4-H program development committees, extension personnel, university faculty and selected Junior Leaders. Sponsors are the Minnesota 4-H Foundation, the Minnesota Livestock Breeders Association, the Minnesota Pork Producers Association and the Cenex Foundation.

# # #

A,B,D,K,N,O,P,Q,V1,V4

N4-H2104

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 21, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## WATERING FICTION AND FACTS

How a person waters his or her garden, turf and landscape plants is always important, but it's especially so in years such as this, when spring rains have been inadequate.

However, there are myths about watering that ought to be disposed of, once and for all, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Almost everyone has heard that it's bad for grass and other plants to be watered during the heat of the day," she says. "In fact, it actually helps, by cooling the plants as well as supplying moisture to their roots. Just be sure to water long enough so the soil is soaked thoroughly to a depth of 6 inches or so."

People are often warned not to water grass at night. Brown says this is good advice, because grass is more likely to become diseased if it remains wet overnight. "But if you can begin watering very early in the morning--4 a.m. or so--and keep the sprinklers on until 8 or 9 a.m., when the sun will dry the grass rapidly, you shouldn't be risking disease. Furthermore, less moisture will evaporate into the atmosphere than when you water

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

in the hotter part of the day."

Brown says that large, established trees rarely require watering other than what they receive when the lawn is watered. However, young trees and shrubs will probably benefit from a weekly soaking during hot, dry weather, and it may be necessary to water them twice a week in extreme heat or when they are planted in very sandy soil. Don't water as long as the soil is still moist, though. Keeping the ground constantly wet simply encourages root rot.

"Mulch flowers and vegetables with grass clippings or straw, if possible, to reduce the amount of moisture that is lost from the soil through evaporation," Brown advises. "Young trees will benefit from a thick mulch of woodchips, as will shrubs and foundation plantings. When you water, lay the hose on the mulch and let the water soak into the soil. That way, very little moisture will evaporate, and the more water you conserve, the better."

# # #

I,V4,V7

NAGR2090

---

# News and Information

---

MSC  
9A270

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 28 1987

Source: William Breene  
612/624-4959  
Writer: Jennifer Obst  
612/625-1978

Editors: Call David Hansen (612/625-7290) to obtain a photo to use with this story.

## U OF M FOOD SCIENTIST STUDIES NEW USES FOR SOYBEANS

As every economist knows, one way to deal with surplus is to find new markets. Since there is rarely a surplus for a versatile product, William Breene, a food scientist with the University of Minnesota's Agricultural Experiment Station, is looking at ways to make the soybean more versatile.

One product he has been testing is a soybean powder called Soy Supreme that is produced by the St. Peter Creamery in St. Peter, Minn. The powder can be reconstituted into many potential products, such as yogurt-type and frozen dessert products. "They have developed a new method to process soybeans into a powder," Breene explains. "The beans are heated as they are ground up, which results in a product with a less 'beany' taste. The hulls are also ground up and added back so no part of the soybean is wasted. Then, they add water to it to 19 percent solids, spray dry it and grind it back into a powder. The result is a full-fat

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

soybean product with all the fiber in it. They make another version which is dehulled and we are looking at both."

Breene, whose research is supported by the Minnesota Soybean Research and Promotion Council, is helping develop specifications to find the best uses for the product. The advantage to the dry powder is it can be stored without refrigeration, Breene points out. "For smaller companies, this product might be ideal because not only is the powdered product simpler to store but it doesn't require a lot of equipment to produce it. You can make a soft-serve dessert with it, for example, with a soft-serve machine; you just add water and whey solids. Whey is cheap and cheese processors would welcome another use for it."

Breene is looking forward to the arrival of a Chinese food scientist, Shan Wen Lin, to help in this research. Lin, who just received his Ph.D. from Reading University, England, will work on soybean utilization research for a year.

Another part of Breene's research evaluates the methods used to test protein content of soybeans. "There has been some concern among growers whether testing is fair, accurate and uniform," he says. "Soybeans in Minnesota tend to test lower in protein content. We examined the data and they indicate that our soybeans are lower in protein; however, it probably has something to do with varieties we grow, our soil types and growing season

temperatures. As there is more and more talk of tagging price of soybeans to protein content, this becomes increasingly important."

Breene has been working with University of Minnesota agronomists Leland Hardman and James Orf, studying the analytical methods used to determine protein content. "Once we look at the methodology that is being used in the industry to determine protein content, we can look at recommendations for the grower," Breene says. "Should we go for a higher protein variety, or go for a higher yield variety to make up the difference?"

# # #

BSS,F,H,V1,V4

NAGR2100

---

# News and Information

---

MCS  
7/1/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 28, 1987

Source: Jeffrey D. Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## WHITE GRUBS HAVE ALREADY DONE MOST OF THEIR DAMAGE

If you are finding dead patches of grass in your lawn, you might want to check whether white grubs are the culprit.

Jeffrey D. Hahn, entomology educator with the University of Minnesota's Extension Service, says white grubs are the immature larvae of May beetles (June bugs). The C-shaped larvae, which are less than an inch long, feed on the roots of grass, loosening the turf as they feed. Look for them by lifting suspect patches of grass. If they are present, the grubs will be visible on top of the soil.

"White grubs require three years to develop into adults," Hahn says. "In their first year, they grow up to 1/2 inch long but the damage they do is slight and usually not noticed. The second summer is when their damage is usually noticed. By this time, they are 1/2 to 3/4 inch long. By the third summer, they will have grown to over 3/4 inch in length, and their damage is mostly completed."

Page 1 of 2

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Hahn says most white grubs are in their third season of development this summer. "Although control will be more effective during the second summer of their development, some of the damage might be minimized by prompt treatment this summer," he says. "Areas that are infested with at least three to five white grubs per square foot can be treated effectively with diazinon or isofenphos (Oftanol)."

# # #

I,V4,V7

NAGR2089

---

# News and Information

---

MSS  
2 A/1P

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

May 28, 1987

Source: David Pace  
612/625-3736  
Writer: Russ Vogel  
612/625-3725

Editors: County extension agents can supply local participants' names.

## 4-H TEENS TO ATTEND STATE JUNIOR LEADER CONFERENCE IN ST. PAUL

More than 800 teen delegates from throughout Minnesota will gather in St. Paul on June 15-19 for the 1987 4-H Junior Leader Conference. The theme for this year's conference, "Life--What's To Be Is Up to Me," reflects the enrichment and personal growth that are the focus of the five-day event.

Guest speakers and workshops will address three main topics within the conference theme: change, choices and concerns. Through such programs and interaction with fellow junior leaders, delegates develop a positive self-image that enables them to be better leaders in their clubs and county. The 4-H teens also develop enthusiasm and pride that carry into their local programs--and their lives.

The conference will be held in the 4-H building at the state fairgrounds. Highlights of the week include career and job tours in the Twin Cities, a college fair, a picnic at Baldwin Park, a

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

night on the town at the Chanhassen Dinner Theater and a closing banquet and dance.

The Minnesota 4-H Federation's annual meeting will run in conjunction with the Junior Leader Conference. The Federation, which consists of delegates from each county, works toward the promotion and growth of 4-H in Minnesota. During the annual meeting, it will choose 16 candidates--4 each for statewide president, vice president, secretary and treasurer--from among its ranks. An election at the Junior Leader Conference will decide the coming year's officers; the remaining candidates are invited to become state 4-H ambassadors.

The Junior Leader Conference is planned and coordinated by the 32 current state ambassadors. The Minnesota 4-H Foundation provides partial funding for the conference.

# # #

Q,V1

N4-H2093

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Juanita Reed  
612/625-9231  
Writer: Russ Vogel  
612/625-3725

## **MINNESOTA 4-H MEMBERS TO ATTEND CO-OP YOUTH LEADERSHIP CONFERENCE**

Two Minnesota 4-H'ers will join 600 other outstanding young people from the Midwest for a week of leadership workshops and hands-on training in the working of a cooperative at the Co-op Youth Leadership Conference this month in Liberty, Mo.

Shelly Hoff of Underwood and Barbara Van Zomeren of Alexandria will attend one of three week-long sessions scheduled in June at William Jewell College in Liberty.

During the week, the youth delegates will be involved in workshops on leadership and peer pressure and will operate their own cooperative to give them a first-hand look at the operation of such an organization.

Hoff is the daughter of Mr. and Mrs. Selvin Rovelstad of Underwood. Van Zomeren's parents are Mr. and Mrs. Bernie Van Zomeren of rural Alexandria. Both girls are sponsored at the

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

conference by the Minnesota 4-H Foundation.

The youth leadership conference is sponsored by Farmland Industries, Inc., Kansas City, Mo. A regional agricultural manufacturing and marketing cooperative, Farmland Industries provides farm supplies and services to some 500,000 farmers and ranchers primarily through its 2,300 member cooperatives.

# # #

AEA,CEO,V1,21,56

N4-H2109

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2741

## **KNOW RULES OF OPERATING ALL-TERRAIN VEHICLES**

If you are a new or repeat operator of a three- or four-wheel all-terrain vehicle (ATV), you should become familiar with the rules and regulations of operation.

From 1982 to 1986 there were 22 ATV-related deaths reported in Minnesota and 644 in the nation. In 1986, 6 deaths were attributed to ATV accidents in Minnesota; there was 1 death in 1985, 4 in 1984, 10 in 1983, and 1 in 1982.

John True, agricultural engineer with the University of Minnesota's Extension Service, learned at an informational session conducted by the Minnesota Department of Natural Resources Division of Enforcement that nationwide in those five years 47 percent of ATV-related deaths struck persons under age 16 and 21 percent of the victims were under age 10.

In 1986, 68 percent of the ATV-related accidents were attributed to driving on irregular ground and 28 percent to cornering (turning right or left).

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

In Minnesota, anyone younger than 16 who is operating an ATV on public lands must wear a helmet. Those younger than 12 can't cross any public roadway as the operator of an ATV. Those aged 12 and 13 may make a direct crossing of a highway if they have an ATV safety certificate and if accompanied by someone over 18 who is on another ATV. Those 16 and older must have a driver's license to operate along the road right-of-way.

There is a four-hour ATV course of instruction which the DNR gives throughout the state, True says. Complete information on regulations and registration can be obtained from the DNR's Division of Enforcement, 500 Lafayette Rd., Box 47, St. Paul, MN 55155-4047, or from the Minnesota State Patrol, 107 Transportation Bldg., St. Paul, MN 55155.

# # #

AEA,BSS,CEO,V1,V4

NAGR2104

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Juanita Reed  
612/625-9231  
Writer: Russ Vogel  
612/625-3725

Editors, broadcasters: County agents can supply the names of participants from your circulation or coverage areas.

## **4-H MEMBERS SEEK STATE HONORS AT RECORD JUDGING EVENT**

The achievements of 4-H members from throughout Minnesota will be compared June 15-17 at the State 4-H Record Judging event to determine delegates to national conferences, scholarship winners and state 4-H ambassadors for the coming year.

There are two areas of competition: achievement records and project records. Judging and interviews will take place at the Radisson University Hotel in Minneapolis. Winners will be announced June 17 at the state 4-H Junior Leaders Conference at the University of Minnesota's St. Paul campus.

Some 45 state teens submit leadership, citizenship or achievement records at the state level and are eligible to become delegates to the National 4-H Congress or the National 4-H Conference as well as state 4-H ambassadors. In addition to submitting records detailing their 4-H work in specific achievement areas, they must undergo an interview before a

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

panel of judges. The 140 competitors in the project records submit records from specific 4-H project areas, along with other documentation of their 4-H experiences, and are eligible to represent the state in national project records competition at 4-H Congress. The 185 outstanding 4-H youths who compete at the state level have successfully competed in records judging at club, county and district levels.

Minnesota has long been among the leaders nationally in records judging events, says Juanita Reed, coordinator of state record judging. Reed, a University of Minnesota 4-H Extension specialist, says the event would not be possible without the help of some 70 volunteers who read and compare the hundreds of records submitted. "Though such cooperation is in keeping with long-standing 4-H tradition, it is especially positive in this, the Minnesota Year of the Volunteer," Reed says.

Funding for the state records judging event comes in part from the Oscar "Bud" Kern 4-H Endowment. Kern, who died last September, attributed part of his business success to knowledge he gained through keeping 4-H records and was a faithful supporter of this event. His generosity touched the lives of many Minnesota 4-H members and will continue to do so through this endowment.

# # #

---



# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2741

## **CAUTION, HELMETS ADVISED FOR ATV DRIVERS**

The helmet not being worn, left at home, won't help save the brains of those unlucky enough to be in a three- or four-wheel all terrain vehicle (ATV) accident.

According to a U.S. Consumer Product Safety Commission safety alert, helmets could have saved the lives of about a fourth of the people who died from head injuries in ATV accidents, says John True, agricultural engineer with the University of Minnesota's Extension Service. Three-fourths of the drivers with head injuries were not wearing an approved helmet, which doubles the risk of head injury. More than half wore no protective equipment, such as helmets, gloves and heavy boots.

According to the safety commission, there were 696 ATV-related deaths from 1982 through March 2, 1987. Of those killed, 313 were under age 16 and 139 were under age 12. The commission estimates that ATV-related injuries needing emergency room treatment rose from 8,600 in 1982 to 86,400 in 1986. Injury risk is high for ATV operators; over its estimated seven-year life, an ATV has a one-in-three chance of being involved in an accident resulting in injury.

In Minnesota, ATVs must be registered if they are operated on public

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

lands. They may not be operated on designated snowmobile trails. Operation on public lands and roadways is regulated by law. ATV safety certificates are required for young drivers. Information and training are available from the Minnesota Department of Natural Resources, Division of Enforcement, 500 Lafayette Rd., Box 47, St. Paul, MN 55155-4047.

True says these are things to remember about ATVs:

--ATVs are designed for a driver only, no passenger. Having a passenger seriously impairs the driver's ability to shift weight to control and steer the vehicle.

--ATVs are designed for off-road use and are difficult to control on paved roads, where over a fourth of the deaths happened.

--Four-wheelers are more stable than three-wheelers, so the risk of accident on a four-wheeler is less.

--Fully suspended ATVs handle better than front-only or tire-only suspended ATVs.

"Remember," says True, "no ATV should be considered a toy and children under age 12 should not operate them." Children ages 12-15 should not operate adult-size (greater than 90 cc) ATVs. Risk of injury in these ages operating adult ATVs is nearly twice the average risk of injury on ATVs, the safety commission says.

Inexperienced drivers in their first month of using an ATV have 13 times the average risk of injury. True says beginning drivers should receive a hands-on training course from certified instructors, and basic maneuvers taught in training should be practiced regularly on safe terrain.

# # #

MSC  
2 A270

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## RAIN, IRRIGATION CAN ENCOURAGE LEAFSPOT

The last few years there have been an abundance of fungal leafspots on trees, shrubs and other plants in Minnesota.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, says, "The fungi that cause leafspots need extended periods of moisture and cool temperatures to infect and develop within leaf tissue. Up until this spring, free moisture had been plentiful and severe leaf spotting and defoliation occurred on many plants."

What should we expect this year?

"The shortage of moisture this spring should drastically reduce the amount of infection by leaf pathogens," Ash says.

"Unless we get a prolonged, cool, wet period, we should not have any significant problems. But remember, irrigation water can have the same effect as rain. To minimize this effect, water early in the day and use sprinklers that do not get the foliage wet."

# # #

I,V4,V7

NAGR2087

Page 1 of 1

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

MCC  
2-4-87

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Jeffrey D. Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## ASH PLANT BUG DAMAGE LOOKS WORSE THAN IT IS

Homeowners may become concerned when they find whitish or yellowish mottling on the upper surface of the leaves of their ash trees. This is caused by the feeding of the ash plant bug, says Jeffrey D. Hahn, entomology educator with the University of Minnesota's Extension Service.

"The ash plant bug is one of several insects that feed on ash trees during the summer, he says. "However, none of these pests does significant damage."

Hahn says people usually notice ash plant bug damage before they see the insect itself. If the small, brown-and-yellow insect is present, it can be found on the undersides of the leaves along with the black specks that are produced as it feeds.

"The ash plant bug does not usually cause leaf drop," Hahn says. "If you are just concerned about the tree's health, control is not necessary. However, if you are concerned about its appearance, carbaryl (Sevin) or diazinon can be sprayed when the insects are first noticed."

# # #

I,V4,V7

Page 1 of 1

NAGR2088

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

MSC  
9/27/87

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2741

## CAUTION, HELMETS ADVISED FOR ATV DRIVERS

The helmet not being worn, left at home, won't help save the brains of those unlucky enough to be in a three- or four-wheel all terrain vehicle (ATV) accident.

According to a U.S. Consumer Product Safety Commission safety alert, helmets could have saved the lives of about a fourth of the people who died from head injuries in ATV accidents, says John True, agricultural engineer with the University of Minnesota's Extension Service. Three-fourths of the drivers with head injuries were not wearing an approved helmet, which doubles the risk of head injury. More than half wore no protective equipment, such as helmets, gloves and heavy boots.

According to the safety commission, there were 696 ATV-related deaths from 1982 through March 2, 1987. Of those killed, 313 were under age 16 and 139 were under age 12. The commission estimates that ATV-related injuries needing emergency room treatment rose from 8,600 in 1982 to 86,400 in 1986. Injury risk is high for ATV operators; over its estimated seven-year life, an ATV has a one-in-three chance of being involved in an accident resulting in injury.

In Minnesota, ATVs must be registered if they are operated on public

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

lands. They may not be operated on designated snowmobile trails. Operation on public lands and roadways is regulated by law. ATV safety certificates are required for young drivers. Information and training are available from the Minnesota Department of Natural Resources, Division of Enforcement, 500 Lafayette Rd., Box 47, St. Paul, MN 55155-4047.

True says these are things to remember about ATVs:

--ATVs are designed for a driver only, no passenger. Having a passenger seriously impairs the driver's ability to shift weight to control and steer the vehicle.

--ATVs are designed for off-road use and are difficult to control on paved roads, where over a fourth of the deaths happened.

--Four-wheelers are more stable than three-wheelers, so the risk of accident on a four-wheeler is less.

--Fully suspended ATVs handle better than front-only or tire-only suspended ATVs.

"Remember," says True, "no ATV should be considered a toy and children under age 12 should not operate them." Children ages 12-15 should not operate adult-size (greater than 90 cc) ATVs. Risk of injury in these ages operating adult ATVs is nearly twice the average risk of injury on ATVs, the safety commission says.

Inexperienced drivers in their first month of using an ATV have 13 times the average risk of injury. True says beginning drivers should receive a hands-on training course from certified instructors, and basic maneuvers taught in training should be practiced regularly on safe terrain.

# # #

---

# News and Information

---

17.7  
2/23/87  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Juanita Reed  
612/625-9231  
Writer: Russ Vogel  
612/625-3725

Editors, broadcasters: County agents can supply the names of participants from your circulation or coverage areas.

## **4-H MEMBERS SEEK STATE HONORS AT RECORD JUDGING EVENT**

The achievements of 4-H members from throughout Minnesota will be compared June 15-17 at the State 4-H Record Judging event to determine delegates to national conferences, scholarship winners and state 4-H ambassadors for the coming year.

There are two areas of competition: achievement records and project records. Judging and interviews will take place at the Radisson University Hotel in Minneapolis. Winners will be announced June 17 at the state 4-H Junior Leaders Conference at the University of Minnesota's St. Paul campus.

Some 45 state teens submit leadership, citizenship or achievement records at the state level and are eligible to become delegates to the National 4-H Congress or the National 4-H Conference as well as state 4-H ambassadors. In addition to submitting records detailing their 4-H work in specific achievement areas, they must undergo an interview before a

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

panel of judges. The 140 competitors in the project records submit records from specific 4-H project areas, along with other documentation of their 4-H experiences, and are eligible to represent the state in national project records competition at 4-H Congress. The 185 outstanding 4-H youths who compete at the state level have successfully competed in records judging at club, county and district levels.

Minnesota has long been among the leaders nationally in records judging events, says Juanita Reed, coordinator of state record judging. Reed, a University of Minnesota 4-H Extension specialist, says the event would not be possible without the help of some 70 volunteers who read and compare the hundreds of records submitted. "Though such cooperation is in keeping with long-standing 4-H tradition, it is especially positive in this, the Minnesota Year of the Volunteer," Reed says.

Funding for the state records judging event comes in part from the Oscar "Bud" Kern 4-H Endowment. Kern, who died last September, attributed part of his business success to knowledge he gained through keeping 4-H records and was a faithful supporter of this event. His generosity touched the lives of many Minnesota 4-H members and will continue to do so through this endowment.

# # #

---

# News and Information

---

1702  
3/5/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2741

## **KNOW RULES OF OPERATING ALL-TERRAIN VEHICLES**

If you are a new or repeat operator of a three- or four-wheel all-terrain vehicle (ATV), you should become familiar with the rules and regulations of operation.

From 1982 to 1986 there were 22 ATV-related deaths reported in Minnesota and 644 in the nation. In 1986, 6 deaths were attributed to ATV accidents in Minnesota; there was 1 death in 1985, 4 in 1984, 10 in 1983, and 1 in 1982.

John True, agricultural engineer with the University of Minnesota's Extension Service, learned at an informational session conducted by the Minnesota Department of Natural Resources Division of Enforcement that nationwide in those five years 47 percent of ATV-related deaths struck persons under age 16 and 21 percent of the victims were under age 10.

In 1986, 68 percent of the ATV-related accidents were attributed to driving on irregular ground and 28 percent to cornering (turning right or left).

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

In Minnesota, anyone younger than 16 who is operating an ATV on public lands must wear a helmet. Those younger than 12 can't cross any public roadway as the operator of an ATV. Those aged 12 and 13 may make a direct crossing of a highway if they have an ATV safety certificate and if accompanied by someone over 18 who is on another ATV. Those 16 and older must have a driver's license to operate along the road right-of-way.

There is a four-hour ATV course of instruction which the DNR gives throughout the state, True says. Complete information on regulations and registration can be obtained from the DNR's Division of Enforcement, 500 Lafayette Rd., Box 47, St. Paul, MN 55155-4047, or from the Minnesota State Patrol, 107 Transportation Bldg., St. Paul, MN 55155.

# # #

AEA,BSS,CEO,V1,V4

NAGR2104

---

# News and Information

---

MSA  
9/1/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Jeffrey D. Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## ASH PLANT BUG DAMAGE LOOKS WORSE THAN IT IS

Homeowners may become concerned when they find whitish or yellowish mottling on the upper surface of the leaves of their ash trees. This is caused by the feeding of the ash plant bug, says Jeffrey D. Hahn, entomology educator with the University of Minnesota's Extension Service.

"The ash plant bug is one of several insects that feed on ash trees during the summer, he says. "However, none of these pests does significant damage."

Hahn says people usually notice ash plant bug damage before they see the insect itself. If the small, brown-and-yellow insect is present, it can be found on the undersides of the leaves along with the black specks that are produced as it feeds.

"The ash plant bug does not usually cause leaf drop," Hahn says. "If you are just concerned about the tree's health, control is not necessary. However, if you are concerned about its appearance, carbaryl (Sevin) or diazinon can be sprayed when the insects are first noticed."

# # #

I,V4,V7

Page 1 of 1

NAGR2088

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

MSC  
y A 11

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Tom Zurcher  
612/625-4228

Writer: Russ Vogel  
612/625-3725

Editors, broadcasters: County agents can provide the names of bowl participants from your circulation or coverage area.

## 4-H MEMBERS TO COMPETE IN STATE ANIMAL SCIENCE PROJECT BOWL

What is the fluid by-product of cheesemaking called?\*

What are the two most common external parasites in swine?\*

Where is the carpal joint located?\*

More than 200 4-H'ers from throughout Minnesota will face such questions in competition at the State 4-H Animal Science Project Bowl June 17 on the St. Paul campus of the University of Minnesota.

The state bowl offers intermediate- and senior-level competition in dairy, livestock and horse project areas with a format similar to that of college bowls. The four- or five-member teams earned a berth in the state contest with their performance at regional bowls, which were held recently in Waseca, Cambridge, Mankato and Mahnomon.

Questions for bowl competition are drawn from 4-H project materials and Minnesota Extension Service publications and focus on five areas: selection and judging, fitting and showing, feeds and feeding, management practices, and health and reproduction.

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

Individual and team awards are presented at both the regional and state levels and top senior dairy and horse teams go on to represent Minnesota at national project bowls.

While keen competition is a part of the event, the main aims are increasing participants' knowledge and self-confidence and developing their teamwork and decision-making skills.

Administered by coordinating committee members from throughout the state, the project bowls are sponsored by the Minnesota Livestock Breeders Association, the Minnesota Quarter Horse Association and the Minnesota 4-H Foundation.

\*Answers to the above questions: whey; lice and mange; the knee.

# # #

V1,V4

N4-H2106

MSC  
2/2/87

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## **RAIN, IRRIGATION CAN ENCOURAGE LEAFSPOT**

The last few years there have been an abundance of fungal leafspots on trees, shrubs and other plants in Minnesota.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, says, "The fungi that cause leafspots need extended periods of moisture and cool temperatures to infect and develop within leaf tissue. Up until this spring, free moisture had been plentiful and severe leaf spotting and defoliation occurred on many plants."

What should we expect this year?

"The shortage of moisture this spring should drastically reduce the amount of infection by leaf pathogens," Ash says. "Unless we get a prolonged, cool, wet period, we should not have any significant problems. But remember, irrigation water can have the same effect as rain. To minimize this effect, water early in the day and use sprinklers that do not get the foliage wet."

# # #

I,V4,V7

NAGR2087

Page 1 of 1

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 4, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2741

## **CAUTION, HELMETS ADVISED FOR ATV DRIVERS**

The helmet not being worn, left at home, won't help save the brains of those unlucky enough to be in a three- or four-wheel all terrain vehicle (ATV) accident.

According to a U.S. Consumer Product Safety Commission safety alert, helmets could have saved the lives of about a fourth of the people who died from head injuries in ATV accidents, says John True, agricultural engineer with the University of Minnesota's Extension Service. Three-fourths of the drivers with head injuries were not wearing an approved helmet, which doubles the risk of head injury. More than half wore no protective equipment, such as helmets, gloves and heavy boots.

According to the safety commission, there were 696 ATV-related deaths from 1982 through March 2, 1987. Of those killed, 313 were under age 16 and 139 were under age 12. The commission estimates that ATV-related injuries needing emergency room treatment rose from 8,600 in 1982 to 86,400 in 1986. Injury risk is high for ATV operators; over its estimated seven-year life, an ATV has a one-in-three chance of being involved in an accident resulting in injury.

In Minnesota, ATVs must be registered if they are operated on public

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

lands. They may not be operated on designated snowmobile trails. Operation on public lands and roadways is regulated by law. ATV safety certificates are required for young drivers. Information and training are available from the Minnesota Department of Natural Resources, Division of Enforcement, 500 Lafayette Rd., Box 47, St. Paul, MN 55155-4047.

True says these are things to remember about ATVs:

--ATVs are designed for a driver only, no passenger. Having a passenger seriously impairs the driver's ability to shift weight to control and steer the vehicle.

--ATVs are designed for off-road use and are difficult to control on paved roads, where over a fourth of the deaths happened.

--Four-wheelers are more stable than three-wheelers, so the risk of accident on a four-wheeler is less.

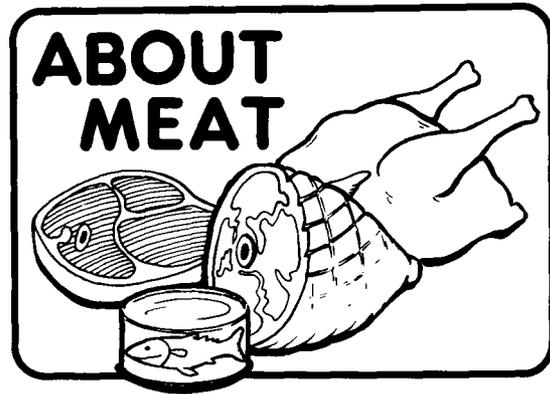
--Fully suspended ATVs handle better than front-only or tire-only suspended ATVs.

"Remember," says True, "no ATV should be considered a toy and children under age 12 should not operate them." Children ages 12-15 should not operate adult-size (greater than 90 cc) ATVs. Risk of injury in these ages operating adult ATVs is nearly twice the average risk of injury on ATVs, the safety commission says.

Inexperienced drivers in their first month of using an ATV have 13 times the average risk of injury. True says beginning drivers should receive a hands-on training course from certified instructors, and basic maneuvers taught in training should be practiced regularly on safe terrain.

# # #

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744



June 4, 1987

Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** I'm confused by the terms "light" and "lite." How much fat is in meat with this labeling?

**A:** Terms such as "light," "lite" and "lightly" may be used on the label for a meat or poultry product if it contains either (a) less than 10 percent fat or (b) at least 25 percent less fat than the average for that particular product found in the marketplace.--**Richard Epley, extension animal scientist, meats**

**Q:** How much fat is in pork breakfast sausage?

**A:** The average fat content of pork breakfast sausage found in the marketplace is 40 percent. If a pork breakfast sausage contains at least 25 percent less fat than this average (that is, it contains 30 percent or less fat), it may be labeled "light."--**Richard Epley, extension animal scientist, meats**

**Q:** Should I take fish oil capsules?

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

**A:** Research has indicated that the omega-3 fatty acids found in fish may discourage heart disease and may help to prevent or alleviate bronchial asthma, psoriasis, arthritis, breast cancer, migraine, hypertension and diabetes. As more is learned, better capsules are sure to be developed, but currently some fish oil capsules may contain harmful levels of vitamins A and D and high levels of cholesterol. There's little information on the amount of omega-3 fatty acids necessary to obtain health benefits. The best suggestion is to obtain omega-3s by eating a variety of fatty fish until more information is available. If you want to try fish oil capsules, look for those with labels that indicate the source, composition, vitamin and cholesterol content, or purification procedures used.--**Jeffrey Gunderson, area extension agent, marine fisheries**

If you have questions about red meats, poultry or fish, send them to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

-30-

X

X060487

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 11, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## **VERTICILLIUM WILT CAN AFFECT MANY TREES, SHRUBS**

Verticillium wilt is a common disease of many trees and shrubs. It's considered serious because it spreads internally, or systemically, throughout a plant, says Cynthia Ash, assistant plant pathologist with the Minnesota Extension Service.

Verticillium wilt is caused by a soil-borne fungus that parasitizes living plant tissue and survives on organic matter in the soil, Ash explains. The fungus enters the vascular (water-conducting) system through wounds on the roots, then spreads upward through the sapwood, interfering with water movement and other plant functions and causing the plant to wilt.

Ash says, "Generally, the first external symptom is a sudden wilting of the foliage on one or several twigs of a branch. This may not be detected until a large portion has wilted or leaves have fallen off. A general yellowing of the foliage may precede the wilting. Most plants show wilt in early July; however, the symptom may occur any time during the growing season."

The Verticillium wilt fungus discolors the outer sapwood rings of trees. In maples, the discoloration is light to olive

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

green and may be difficult to see. Discoloration in elm is usually brown. Positive confirmation of the disease is made by isolating the fungus from the infected tissue in a laboratory.

"Trees and shrubs that show partial wilt one growing season may wilt further and die the following year," Ash says. "Others may recover and not wilt in succeeding years. The pattern depends on the extent of root infection and the severity of other stresses. When most of its roots are infected, a tree may wilt and die before the end of the first summer. Large trees usually die slowly; small ones may die quickly.

"Trees showing general and severe wilt cannot be saved; they should be replaced with a nonsusceptible species. Trees with some symptoms may be saved or their life prolonged for some time if they are watered, fertilized with nitrogen, and pruned of dead and wilting branches. Pruning does not eliminate the fungus, but removes weakened limbs, which may be infected by other fungi."

Ash lists these species as being especially susceptible to Verticillium wilt: ash; azalea; Japanese barberry; Korean boxwood; catalpa; cherry; Kentucky coffeetree; dogwood; elm (American and slippery); American and littleleaf linden; black locust; maple; pin and red oak; pagoda tree; plum; rose; Russian olive; smoketree; sumac; and Viburnum species.

# # #

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Deborah Brown  
612/624-7491  
Writer: Sam Brungardt  
612/625-6797

Note to editors, broadcasters: Please use this release as soon as possible if you are in an area which has received much less rain than usual.

## **KEEP WATERING THAT GRASS OR DON'T WATER AT ALL**

Phew, it's hot and dry! Some municipal water systems are having a hard time keeping up with demand, and towns and cities are beginning to announce bans on lawn sprinkling. What can a homeowner do?

"You have two choices," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "The first is to water your lawn regularly and thoroughly to keep the grass green and growing. But if your city or town has placed restrictions on sprinkling so that you can't water once a week or so, it's better to not water at all. The grass will turn yellow and go dormant, but it will probably resume growth once it begins to rain again."

Brown says the worst thing one can do is to wait until the grass is going dormant and then water it. Each time you do that, the nutrient reserves in the roots are depleted further. Eventually, those reserves will run out and the grass will die.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

"Most bluegrasses have the ability to go dormant during hot, dry weather and green up again once it begins to rain," Brown says. "Some of the 'elite' bluegrasses, such as those that are used on golf courses, are highly bred and do not have that ability. So, there's no guarantee, but the chances are good that the grass in your lawn will recover once it begins to rain."

Brown urges homeowners, even those who live in cities that have placed a ban on sprinkling, to not forget newly planted trees and shrubs. She says, "With the weather we've been having, these plants won't go dormant if they're stressed unduly for water-- they'll die. Newly planted trees and shrubs should be watered with a hose thoroughly each week or even more often if your soil is sandy and it's real hot. And, if you haven't already mulched them, do so. A 6-inch-deep mulch of wood chips will help get them through this hot, dry spell by moderating soil temperatures and reducing surface evaporation of moisture."

# # #

AEA,CEO,I,V4,V7

NAGR2128

---

# News and Information

---

17  
2/21/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Ronald L. Phillips  
612/625-1213  
Writer: Jennifer Obst  
612/625-1978

Editors: Call David Hansen (612/625-7290) to obtain a photo to use with this feature.

## SCIENTISTS FIND CLUES TO HIGH MUTATION RATE IN TISSUE CULTURE

Scientists who work with tissue culture have puzzled over the unusual number of mutations seen in regenerated plants or their progeny. Now Minnesota Agricultural Experiment Station cytogeneticist Ronald L. Phillips has developed an hypothesis to explain the mystery. He and his students have shown a relationship between chromosome breakage during tissue culture and "jumping genes." The hypothesis not only helps describe cell behavior in tissue culture, but also offers plant breeders a new way to induce variability.

Phillips is part of an interdisciplinary team of researchers from the University of Minnesota's Colleges of Agriculture and Biological Sciences that has been studying the molecular biology of plants since 1973, with the goal of introducing improved traits, such as disease resistance. The team has grown from 5 to 14 scientists, and the scope of their research, begun with corn, now includes oats.

Tissue culture has been part of their research since the early 1970s, when they were the first to regenerate a corn plant from

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

cultured cells. Since then, Phillips has been studying the stability of the cell culture system. "We wanted to see if it is really a cloning system," he says. "We thought it would be, because it's basically a vegetative reproductive system. But it wasn't long until we knew we were getting variability."

Plants regenerated from tissue culture or their progeny had many more mutations than the originals. For example, their seeds were mottled or shrunken, or the plants were dwarf, albino or had striped leaves. The researchers have identified at least 45 easily identifiable mutations that trace back to a single gene.

And, the longer the cells were in tissue culture, the more likely regenerated plants were to show mutations. Phillips says, "Our estimates are that if you grow these tissues in culture for four months, for every two plants brought out of tissue culture, you will get one plant exhibiting mutations in its progeny. If you leave the cells in culture for eight months, that rate goes up to 1.3. That means for every plant you will see a new mutation, and these are just types that are controlled by a single gene and can be easily observed. So, for every one you can see, there are many that don't express themselves visibly."

Something else was being observed as well. The cells showed a surprising number of broken chromosomes, something not very common in a normal plant. With both oats and corn, the researchers found 20 to 30 percent of the plants regenerated from culture or their progeny had broken chromosomes.

Investigating this, Phillips discovered that the breakage

Page always involved the same type of site on the chromosomes, where there is DNA that replicates late in the cell cycle, just before the chromosomes separate. About half of a cell's replication and division cycle is devoted to replicating its DNA. Phillips "When the chromosomes separate, a break sometimes occurs in these specific chromosomes with late-replicating DNA. In other words, if the DNA replicates a little too late, then the chromosomes are already starting to pull apart before they are duplicated in that region."

But how are breaking chromosomes related to the frequency of mutation? The links, Phillips and graduate student Virginia Peschke discovered, are genetic elements called "jumping genes," which have been intriguing researchers. These genes can, under some activating event, move around and--depending on their new placement in the DNA--express a previously unexpressed trait. Phillips suspected that the breaking of chromosomes activated the jumping genes. He says, "We're presuming that tissue culture somehow perturbs the cell cycle, does something that makes these chromosomes form bridges and break, and that is a shock to the system, which activates these jumping genes."

To test that hypothesis, Phillips and graduate research assistants took half an ear off corn plants, brought them into the lab, and started tissue cultures from immature embryos. They left the other half of the ear on the plants to produce seed. "We obtained cells from tissue cultures that gave rise to plants with a specific transposable element; we decided to test for only

one transposable element type because it had been thoroughly studied and the DNA sequenced. Then, we went back to the seed on that same plant to determine if the donor plant carried the transposable element. We've made 45 tests of those seed and not one of them carries the element, so it wasn't there to start with," Phillips says. But they did find transposable element activation in 54 of 1,200 regenerated corn plants or their first-or second-generation progeny. "That was only one element; other transposable elements conceivably also could have been activated," he says. "They are probably rather rampant in of the material."

The ability of the DNA to rearrange in tissue culture offers researchers an opportunity as well as a challenge. "Plant breeding is based on achieving variability that you can capture," Phillips says. "So, it's exciting in that sense, as this is a new mutagenic method. A lot of seed companies are taking their good inbred lines, putting them into tissue culture and evaluating the new plants.

"But, on the other hand, if you want to select for resistance for disease or some other trait through the tissue culture method, you don't want everything else moving around. So, our goal is to understand and control the variability. Varieties of plants with less of the late-replicating DNA might handle tissue culture better. Or it may be possible to add certain chemicals to the cells in culture that aid DNA replication and therefore avoid the late replicating that sets off the chain of events."

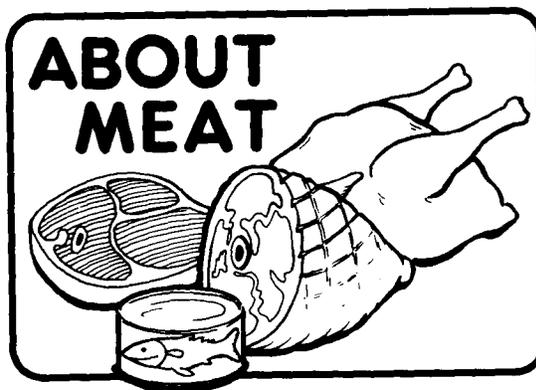
Meanwhile, Phillips and his students' findings have been receiving considerable international interest among researchers. Linking jumping genes to variability in tissue culture has intrigued many. Progress in biotechnology begins at this level, in the laboratory, as researchers carefully piece together the subtle and complex process of cell growth.

# # #

AEA,BSS,CEO,F,L,I,V1,V4

NAGR2120

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744



June 18, 1987

Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** I'm on a low-fat diet and have been advised not to eat pork.

However, I read somewhere that farmers are raising leaner hogs.

Who's right?

**A:** Lard production per hog was 30 pounds in 1960. Today, it's about 10 pounds. So, hogs are leaner. However, the important thing for you to do is to select pork that is low in fat since the fat content of retail cuts can vary. A 3-ounce, broiled, trimmed serving from a pork center loin chop has 9 grams of fat, of which 3 grams are saturated.--**Richard Epley, extension animal scientist, meats**

**Q:** Can I eat crayfish from Minnesota lakes, and how does one prepare and eat them?

**A:** The crayfish from clean Minnesota lakes are edible and as delicious as those used in the popular Louisiana crayfish boil. To cook, wash live crayfish thoroughly in salted water and let soak 5 to 8 minutes. Stir gently to get rid of any grit. In a large kettle, bring 3 gallons of water, 1 pound of salt and 1

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

tablespoon of ground red pepper (or 4 ounces of crab boil) to a boil. Drop 2 pounds of live crayfish into the water and cook 8 minutes after the water returns to a boil. Remove the crayfish from the boiling water and let cool until they're cool enough to handle. Break off the tail and remove the meat, being careful to pull out the veins. Large claws can be cracked for an additional morsel of meat. The fat from the head end is a real delicacy. It is generally bright orange and can be removed with a small knife or fingernail. Reportedly, a boiled crayfish whose tail is not curled was dead when it was cooked, and therefore should not be eaten.--**Jeffrey Gunderson, area extension agent, marine fisheries**

**Q:** What is added to the fresh hamburger that's sold in retail stores?

**A:** Fat may be added when hamburger is ground to bring the percentage of fat up to the legal maximum of 30 percent. Ground beef is limited also to 30 percent fat, but the fat cannot be added during the grinding.--**Richard Epley, extension animal scientist, meats**

If you have questions about red meats, poultry or fish, send them to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

X

-30-

X061887

---

# News and Information

---

17  
2A27P

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Joel Nelson  
612/625-3746  
Writer: Jennifer Obst  
612/625-1978

## **GROWING SERVICE INDUSTRY MEANS GROWING WAGE INEQUALITY**

The service industry is the most rapidly growing sector of the U.S. economy. Growing with it, according to University of Minnesota Agricultural Experiment Station researcher Joel Nelson, is wage inequality between men and women.

"Two out of every three jobs are in the service sector," says Nelson, a rural sociologist. "Nearly two out of every three dollars of the gross national product can be traced to service activity. And there is every indication that the service sector will continue to grow."

In the service sector, Nelson says, "men appear to be assigned to high-status jobs and high earnings and women to low-status jobs and low earnings. In this sense, these services appear to be economically more profitable for men than women." Nelson analyzed 1980 census data from 130 U.S. metropolitan areas with populations greater than 250,000. Statistics showed that on the average, female workers earn 60 percent of the income of male workers.

Further analysis showed that men are employed more often than women in the higher-paying parts of the service sector--in the

producer services such as finances, insurance, advertising and auditing. Women, on the other hand, are more frequently employed in the lower-paying positions of the service economy, such as the distributive sector with many workers in retail trade, and in social services, with many women in health services.

# # #

AEA,BSS,CEO,V1,V4,V7

NEXP2117

---

# News and Information

---

June 18, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Donald McTavish  
612/625-3190  
Susan Meyers  
612/625-1250  
Writer: Deedee Nagy  
612/625-0288

## **NURSING HOME RESEARCH TAPS INTO 'GRAYING' OF MINNESOTA**

If you could corner the market on birthday candles for a few years, you might turn a tidy profit. Indeed, our birthday cakes are glowing brighter every year as the number and proportion of Minnesotans over the age of 65 outpaces any other age group.

What does this "graying" of the population mean to Minnesota families? University of Minnesota Agricultural Experiment Station rural sociologist Donald McTavish and Minnesota Extension Service family life specialist Sue Meyers are working on answers to this question. They are concerned about both aging trends and the institutions that serve primarily the elderly.

McTavish recently completed a study of management, staff and residents of 13 nursing homes in the Twin Cities area. He found considerable differences in the way that the three groups describe a nursing home. Also, despite the diversity of homes included in the study, the "distance" or distinct viewpoint of each group was consistently evident.

For example, McTavish says that nursing home administrators tend to be more pragmatic and traditional and less emotional than

Page 1 of 4

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

their staff or residents in describing the home. Residents' descriptions are more emotional, but McTavish also found that they spoke of the home as a guest might, emphasizing the good and cutting short any criticism or suggestions for improvement. Staff members' discussions of the homes were closer to the residents' views than those held by administrators, but still different from either of the other groups.

These distinct viewpoints for each of the three groups interviewed held true for all of the homes, which ranged from very large public nursing homes to small, privately owned and church-affiliated facilities. McTavish suggests that these differences may thwart communications among the three groups and even lead to the remoteness that was evident when residents spoke of their facilities in such polite, guestlike terms.

He adds that efforts to lessen the perceptual gap could make for smoother operations and more satisfied nursing home residents. Residents who have more control over their daily routines and the activities and policies in the home would probably feel more content and in tune with the "community" created there.

Although only about 5 percent of the elderly live in nursing homes at any one time, McTavish says that about one-fourth of the elderly population will need such long-term care at some time in their lives.

Census data on the elderly provide some clues on how families, communities and health care professionals should begin planning for the projected growth in the older population. For example,

Meyers emphasizes in her extension teaching that the elderly comprise a wide range of individuals and needs. She says, "For the vast majority in the later years, the need will not be for specific services to help them in their frailties, but for help in determining the roles and contributions that they can make to society."

In small communities particularly, Meyers says growth among the elderly will have implications for community services, the tax base and political processes. Health care institutions and professionals need to devise ways to help maintain the elderly in their own homes and support family members who care for them.

In a new extension publication, "Profile of Older Adults," Meyers says family members may feel the greatest impact of our increased longevity. She adds, "Most of us will have at least one elderly parent in the later years....A corollary of a parent becoming quite old is that the adult children are likewise becoming older, and not all adults in the middle years (or older) are willing to accept that fact."

She advises family members to become informed about the aging process so they can determine what is normal and what is atypical for their elderly family members. Increased opportunities for contacts between the generations will also be beneficial, as will contact between adult siblings. She says, "After years of growing separately as independent adults, older siblings often renew contacts with each other, both because of concern over parents and for mutual support in their own later years."

McTavish and Meyers hope that research into aging such as that funded by the Minnesota Agricultural Experiment Station will continue. Soon after the year 2000, there will be a particularly large surge in the number of older persons, caused by the aging of the post-World War II "baby boom." They conclude, "If we anticipate and plan for this momentous social event now, individuals and families can be realistic in their own expectations and plans for their futures."

# # #

AEA,BSS,CEO,E,G,S,V1,V4,V7

NHEC2119

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Bob Appleman  
612/624-4995  
Writer: Jack Sperbeck  
612/625-4730

## **NEUTRAL ISOLATORS PREVENT STRAY VOLTAGE, ADD TO PROFITS**

Minnesota dairy farmers who installed neutral isolators to prevent stray voltage problems increased milk production by 700 pounds per cow over a 12-month period.

"With an average of 57 cows per herd, gross farm income was increased \$5,000 a year," says Robert Appleman, dairy scientist with the University of Minnesota's Agricultural Experiment Station. Cost of a neutral isolator is about \$500.

Appleman and coworkers studied 395 dairy farms in a four-county area. The farms had all installed neutral isolators by October 1986 to eliminate off-farm sources of stray voltage. And 84 farms had complete records available starting 24 months before the neutral isolators were installed through 12 months following installation.

Average annual production increased from 15,300 pounds per cow immediately preceding installation to 16,008 a year later. After isolation, average milk production increased more rapidly than regional averages. However, there were no differences in mastitis, measured by SCC counts, or in reproduction performance as a result of the neutral isolators being installed.

Page 1 of 2  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

"Isolation of the primary neutral from the farmstead's secondary neutral has become a commonly used procedure for eliminating off-farm sources of stray voltage," Appleman says. Installation of the neutral isolators was generally limited to farms with voltages exceeding 1.0 volt at the barn service neutral at milking time; and to farms where screening tests determined that isolation would remove most of the voltage present.

Stray voltage can cause serious problems in dairy operations and other confinement livestock systems. Dairy farmers may lose production and experience cow behavior problems due to small electrical currents passing through the cows' bodies.

More information is available in a new, 26-page publication, "Stray Voltage Problems with Dairy Cows." Minnesota residents may obtain the publication at county offices of the Minnesota Extension Service. Or, the publication may be purchased for \$1.50 (Minnesota residents add 6% sales tax) from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108. Ask for AG-BU-1359. Checks should be made payable to the University of Minnesota.

Appleman's coworkers on the project included Robert Gustafson, T. M. Brennan and Harold Cloud. The results were presented at the annual meeting of the American Dairy Science Association June 22-24 at the University of Missouri, Columbia.

# # #

AEA,BSS,CEO,D,S,V1,V4

NAGR2124

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Ronald L. Phillips  
612/625-1213  
Writer: Jennifer Obst  
612/625-1978

Editors: Call David Hansen (612/625-7290) to obtain a photo to use with this feature.

## SCIENTISTS FIND CLUES TO HIGH MUTATION RATE IN TISSUE CULTURE

Scientists who work with tissue culture have puzzled over the unusual number of mutations seen in regenerated plants or their progeny. Now Minnesota Agricultural Experiment Station cytogeneticist Ronald L. Phillips has developed an hypothesis to explain the mystery. He and his students have shown a relationship between chromosome breakage during tissue culture and "jumping genes." The hypothesis not only helps describe cell behavior in tissue culture, but also offers plant breeders a new way to induce variability.

Phillips is part of an interdisciplinary team of researchers from the University of Minnesota's Colleges of Agriculture and Biological Sciences that has been studying the molecular biology of plants since 1973, with the goal of introducing improved traits, such as disease resistance. The team has grown from 5 to 14 scientists, and the scope of their research, begun with corn, now includes oats.

Tissue culture has been part of their research since the early 1970s, when they were the first to regenerate a corn plant from

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

cultured cells. Since then, Phillips has been studying the stability of the cell culture system. "We wanted to see if it is really a cloning system," he says. "We thought it would be, because it's basically a vegetative reproductive system. But it wasn't long until we knew we were getting variability."

Plants regenerated from tissue culture or their progeny had many more mutations than the originals. For example, their seeds were mottled or shrunken, or the plants were dwarf, albino or had striped leaves. The researchers have identified at least 45 easily identifiable mutations that trace back to a single gene.

And, the longer the cells were in tissue culture, the more likely regenerated plants were to show mutations. Phillips says, "Our estimates are that if you grow these tissues in culture for four months, for every two plants brought out of tissue culture, you will get one plant exhibiting mutations in its progeny. If you leave the cells in culture for eight months, that rate goes up to 1.3. That means for every plant you will see a new mutation, and these are just types that are controlled by a single gene and can be easily observed. So, for every one you can see, there are many that don't express themselves visibly."

Something else was being observed as well. The cells showed a surprising number of broken chromosomes, something not very common in a normal plant. With both oats and corn, the researchers found 20 to 30 percent of the plants regenerated from culture or their progeny had broken chromosomes.

Investigating this, Phillips discovered that the breakage

Page always involved the same type of site on the chromosomes, where there is DNA that replicates late in the cell cycle, just before the chromosomes separate. About half of a cell's replication and division cycle is devoted to replicating its DNA. Phillips "When the chromosomes separate, a break sometimes occurs in these specific chromosomes with late-replicating DNA. In other words, if the DNA replicates a little too late, then the chromosomes are already starting to pull apart before they are duplicated in that region."

But how are breaking chromosomes related to the frequency of mutation? The links, Phillips and graduate student Virginia Peschke discovered, are genetic elements called "jumping genes," which have been intriguing researchers. These genes can, under some activating event, move around and--depending on their new placement in the DNA--express a previously unexpressed trait. Phillips suspected that the breaking of chromosomes activated the jumping genes. He says, "We're presuming that tissue culture somehow perturbs the cell cycle, does something that makes these chromosomes form bridges and break, and that is a shock to the system, which activates these jumping genes."

To test that hypothesis, Phillips and graduate research assistants took half an ear off corn plants, brought them into the lab, and started tissue cultures from immature embryos. They left the other half of the ear on the plants to produce seed. "We obtained cells from tissue cultures that gave rise to plants with a specific transposable element; we decided to test for only

one transposable element type because it had been thoroughly studied and the DNA sequenced. Then, we went back to the seed on that same plant to determine if the donor plant carried the transposable element. We've made 45 tests of those seed and not one of them carries the element, so it wasn't there to start with," Phillips says. But they did find transposable element activation in 54 of 1,200 regenerated corn plants or their first-or second-generation progeny. "That was only one element; other transposable elements conceivably also could have been activated," he says. "They are probably rather rampant in of the material."

The ability of the DNA to rearrange in tissue culture offers researchers an opportunity as well as a challenge. "Plant breeding is based on achieving variability that you can capture," Phillips says. "So, it's exciting in that sense, as this is a new mutagenic method. A lot of seed companies are taking their good inbred lines, putting them into tissue culture and evaluating the new plants.

"But, on the other hand, if you want to select for resistance for disease or some other trait through the tissue culture method, you don't want everything else moving around. So, our goal is to understand and control the variability. Varieties of plants with less of the late-replicating DNA might handle tissue culture better. Or it may be possible to add certain chemicals to the cells in culture that aid DNA replication and therefore avoid the late replicating that sets off the chain of events."

Meanwhile, Phillips and his students' findings have been receiving considerable international interest among researchers. Linking jumping genes to variability in tissue culture has intrigued many. Progress in biotechnology begins at this level, in the laboratory, as researchers carefully piece together the subtle and complex process of cell growth.

# # #

AEA,BSS,CEO,F,L,I,V1,V4

NAGR2120

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Glenn Titrud  
612/262-4063  
Writer: Jennifer Obst  
612/625-1978

## **SAND PLAIN EXPERIMENTAL FARM FIELD DAY WILL BE JULY 8**

The annual summer field day at the University of Minnesota's Sand Plain Experimental Farm near Becker will be July 9. The event offers both farmers and home gardeners a chance to see the latest in crop and horticultural research, says Glenn Titrud, research plot coordinator. The 9 a.m.-to-noon event is free and open to the public.

Two tours of research plots will be conducted, one focusing on commercial and home horticultural crops, the other focusing on field crops.

The horticultural tour will include a look at the university's new blueberry varieties for Minnesota. It will also include discussions on fertility problems in horticultural crops such as sweet corn, potatoes and cauliflower, and a discussion on weed control and herbicides for small fruits and vegetables.

The field crop tour will include stops on alfalfa varieties and management studies, corn fertility management, and effects of multiple insect pests on alfalfa and potatoes. "New this year will be a stop at our weather station to talk about weather issues and impacts" says Titrud.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

University of Minnesota extension specialists will conduct plant pest, weed identification and soil nutrient deficiency clinics during the field day. The public is invited to bring samples of insects, diseased and nutrient-deficient plants, and weeds to these clinics for identification and advice. "There will also be a water quality clinic with extension specialists available to answer your questions," Titrud says.

The Sand Plain Experimental Farm is off Minnesota Highway 10, just outside Becker.

# # #

AEA,BSS,CEO,I,V1,V3,Se1Med

NAGR2125

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Sources: Kevin Janni  
612/625-3108  
Larry Jacobson  
612/625-9733  
Writer: Jack Sperbeck  
612/625-4730

## **MINNESOTA RESEARCH SEEKS TO DEVELOP BETTER HOVERS FOR BABY PIGS**

Hovers in farrowing facilities help keep baby pigs warm and protect them from being crushed by the sow. Researchers at the University of Minnesota are working on developing design criteria for hovers in farrowing rooms.

"Hovers prevent drafts and keep baby pigs from being exposed to cold surfaces," says Kevin Janni, agricultural engineer with the university's Agricultural Experiment Station, whose research on hovers was partially funded by the Minnesota Pork Producers Association through the university's Swine Center.

Janni and Hoff recommend a five-sided or "box" hover instead of one with only a solid top and no sides. A disadvantage of box hovers with one small opening is that it's hard to see the baby pigs without lifting the top. Janni thinks the best solution may be a box hover with one side open that can be closed to catch the baby pigs for treatment. Some type of solid flooring is also needed--such as part of the crate floor, a fiberglass heating pad or sheet of plywood.

Janni and Hoff tried painting plywood hovers to help reduce

Page 1 of 2  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

heat loss. "Based on our data thus far, it doesn't pay to paint the hovers," he says.

Hovers in a crate or pen give the best of two worlds-- temperatures as low as 65 degrees for the sow and 80 to 90 degrees around the baby pigs. This saves energy costs for heat. The sow is more comfortable and more apt to eat more, resulting in better reproductive performance after she weans the pigs.

"Producers who have used hovers report less crushing death loss of baby piglets after farrowing," says Larry Jacobson, extension agricultural engineer at the University of Minnesota.

Jacobson says a major disadvantage is extra management time spent during the first day of farrowing to make sure the baby piglets find the hover. A producer also needs to regulate supplemental heat in the hover so it's neither too cool nor too hot for the size and age of piglets. With enclosed hovers, one can probably turn down the supplemental heat or remove it completely one to two weeks following farrowing.

# # #

AEA,BSS,CEO,P,S,V1

NAGR2123

---

# News and Information

---

June 18, 1987

Minnesota  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: W. Burt Sundquist  
612/625-5733  
Editor: Jennifer Obst  
612/625-1978

Editors: Call David Hansen (612/625-7290) to obtain a photo to use with this story.

## **EMERGING BIOTECHNOLOGIES HOLD PROMISE FOR U.S. AGRICULTURE**

Vaccines to protect animals from diseases, plants bred to withstand stress induced by herbicides, and animal growth hormones made in laboratories are only a few agricultural applications of emerging biotechnological research.

"Emerging biotechnologies will eventually have major economic impacts on the agriculture industry, on farm production and on food manufacturing and processing," says W. Burt Sundquist, agricultural economist with the University of Minnesota's Agricultural Experiment Station.

U.S. agriculture has moved through several major technological eras, according to Sundquist, who studies the history of technological progress in agriculture and its economic effects. The mechanical era, 1920 to 1950, saw the transition from horsepower to mechanical power. Agricultural production increased while farm labor requirements decreased.

Then came the chemical era, 1950 to 1980. Chemical fertilizers, pesticides, and livestock feed additives further increased agricultural productivity. Since the late 1920s and the

beginning of hybrid corn, conventional breeding technologies have made major improvements in the genetic stocks for crops and livestock, and these technologies are expected to have a continuing effect on germ plasm improvement.

But, in the 1980s, American agriculture is entering a new technological era called "biotechnology." Biotechnology includes genetic engineering, but it is more than that. It offers the potential for new diagnostic tools for agricultural research. It uses living organisms to make or modify products, improves plants and animals, and develops microorganisms for specific uses.

A new biotechnology product, for example, is used to treat calf scours induced by E. coli bacteria. Calves are treated with the new product at birth to create an immunity to the disease. Sundquist is working with graduate student Marie Walsh to do a benefit-cost analysis of the product "to get a little better feel of how broad based an impact these new biotechnology products are likely to have and how profitable they will be."

"Some economic impacts of research conducted by scientists today will be felt within the next 5 to 10 years," Sundquist says, but, "far greater impacts will happen beyond the year 2000."

One concern is that biotechnology will benefit the larger farms more than the smaller, thus creating a larger "technology gap." Sundquist says this might not necessarily happen: "For example, the benefits of improved seed corn or animal vaccine developed through biotechnology would be much more size neutral than the mechanical advances of the earlier period. Some

applications of biotechnology, however, will give additional economic advantage to larger, better-financed producers."

According to Sundquist, biotechnology research promises U.S. agriculture more productive gains through lower costs. "A greater variety of nutritious, wholesome and safe foods is expected to become available," he says. "A more stable supply of agricultural products, new commodities and products for industrial markets, and a greater ability to compete in national and international markets can be part of the results of biotechnology research."

However, biotechnology will also raise important public policy issues. In the future, emerging biotechnologies will probably have an impact on environmental, health and safety, and food supply issues. Sundquist says the resolution of these issues will be important determinants of the future of agricultural biotechnology.

# # #

AEA,BSS,CEO,S,V1,V4

NAGR2118

---

# News and Information

---

June 18, 1987

1409  
5-21-87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Dan Svedarsky  
218/281-6510  
Writer: Jennifer Obst  
612/625-1978

## **SHELTERBELTS ARE HAVENS FOR WILDLIFE**

Farmers know the benefits of shelterbelts in shielding farmsteads from the elements, and the value of windbreaks in helping prevent cropland soil and wind erosion. A two-year study at the University of Minnesota's Northwest Experiment Station, Crookston, shows that many species of wildlife, especially birds, also benefit from shelterbelts and windbreaks.

Dan Svedarsky, who does wildlife research for the Minnesota Agricultural Experiment Station, recorded the amount and kinds of wildlife on several types of windbreaks, including Siberian elm, green ash, hybrid poplar and cottonwood. He also looked at the effect pruning methods had on wildlife use of the windbreaks.

"Thirty-one species were regularly observed during the study, with 15 species nesting in at least one windbreak type," Svedarsky says. The species most frequently observed were vesper sparrows, red-winged blackbirds, brown-headed cowbirds, American goldfinches, robins, mourning doves, eastern kingbirds, clay-colored sparrows, northern orioles and bobolinks.

"Birds use windbreaks for attaching nests, as singing perches,

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

as a food source, and as a resting place during migration," Svedarsky says. Siberian elms, especially those which were not pruned, were the clear favorite of birds because of their food and cover value.

Svedarksy spotted a surprising amount of deer sign along the windbreaks. "We noted fresh tracks on 30 percent of the site visits and these tracks tended to parallel windbreaks, indicating that they were being used as travel cover," he says. "A network of single-row windbreaks in the intensively-farmed Red River Valley probably increases the summer use of larger farmstead shelterbelts as deer fawning areas due to this travel cover value."

Single-row windbreaks benefit wildlife in an intensively farmed landscape, Svedarsky concludes, but "to maximize wildlife values of windbreaks, the height and width of tree cover needs to be increased. Double tree rows could further increase wildlife use."

# # #

AEA,BSS,CEO,C,R,S,V1,V4

NAGR2115

---

# News and Information

---

MCS  
3/12/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Richard J. Sauer  
612/624-4777  
Writer: Sam Brungardt  
612/625-6797

## **MARY E. HELTSLEY WILL BE NEW U OF M HOME ECONOMICS DEAN**

Mary E. Heltsley, an administrator with the U.S. Department of Agriculture's Cooperative State Research Service (CSRS), will become dean of the University of Minnesota's College of Home Economics July 1. Heltsley fills the position vacated by Keith McFarland, who is now temporary dean of the university's General College.

Richard J. Sauer, University of Minnesota vice president for agriculture, forestry and home economics and director of its Agricultural Experiment Station, said, "Dr. Heltsley has an outstanding set of experiences and skills which equip her to provide strong leadership for the College of Home Economics. She also understands the future role of the educational, research and extension programs in the college as is appropriate for a major international, land grant university."

At CSRS, Heltsley is responsible for planning, coordinating and conducting reviews of research in agricultural economics, food science, home economics, nutrition and rural sociology at land grant universities, including the University of Minnesota. She also reviews and approves proposals for research projects funded

Page 1 of 2  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

under the Hatch Act and proposals for regional research projects involving more than one institution.

Heltsley was on the faculty of Iowa State University for 13 years before she joined CSRS. From 1979 until 1982, she was assistant dean for research and graduate education, associate director of the Home Economics Research Institute, assistant director of the Iowa Agricultural and Home Economics Experiment Station, professor of family environment, professor of home economics studies and acting head of the Department of Institutional Management. Before that, she was professor of family environment and coordinator of graduate studies.

A native of Clifty, Ky., Heltsley began her career as a home economics teacher in Greenville, Ky. Before joining the faculty of Iowa State University, she had been on the faculty of Georgia Southern College, Western Illinois University and Northern Illinois University. She has a Ph.D. degree in individual and family studies from Pennsylvania State University, a M.S. in family relations-child development from the University of Tennessee and a B.S. degree in home economics from Western Kentucky University.

During her career, Heltsley has held many offices and appointments, including ones with the National Council on Family Relations, the Iowa Council on Family Relations, the Iowa Home Economics Association, the Gerontological Society and the American Home Economics Association.

# # #

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Marion-Ortolf Bagley  
612/624-9705  
Writer: Jennifer Obst  
612/625-1978

## LOOKING AT COLOR: DO YOU SEE WHAT I SEE?

Color is more than a pleasant add-on to the natural world. It's serious business for designers of buildings, packaging, clothing and furniture. Color has enormous impact on everything from what we choose to buy to how comfortable we feel in an environment.

But color is difficult to study. It changes based on light conditions and other colors around it. One of color's most elusive aspects--the visual impression called an "afterimage"--is the subject of research by Marion-Ortolf Bagley, a professor in the University of Minnesota's Department of Design, Housing and Apparel.

Everyone has experienced afterimages. They occur most vividly if you look at a white surface after you've looked at a well-lighted, colored object for 10 to 20 seconds. "You see a negative afterimage color," Bagley says. "It is the perceptual complement of the color first observed." What happens is your eyes, fatigued by one color, need and supply it's complement, the color that is essentially its opposite."

Bagley's interest in the perception of colors began in the

Page 1 of 4

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

classroom. "When I taught afterimages in my color classes, I'd say to my students, 'Stare at this yellow and you will see a blue afterimage.' But some of them said, 'No, we don't.'" Bagley decided that the existing theories needed another look.

Past studies of color afterimage have been based on the reports of surprisingly small numbers of observers. "Nobody has tested this empirically with a large group," Bagley says. So, she set out to find out exactly which afterimages were perceived under controlled lighting conditions, using standardized colors.

Her research, which was sponsored by the university's Agricultural Experiment Station, showed that not only were the reported afterimages different from what the books predicted, but they showed a range of hues. Not everyone saw the same afterimage hue for a given color; some reported afterimages spanned as many as four hue families, although most responses for a single color did belong to one hue family. Afterimages generated by yellow-red ranged from blue-green to purple-blue. Looking at purple, people see afterimages ranging from red to yellow.

Not only did her subjects see different afterimages, their responses also showed that the reversibility of stimulus colors and afterimage colors is not exact. It works for some colors: looking at red, for example, will produce a blue-green afterimage, while looking at blue-green will produce a red afterimage. On the other hand, yellow and purple-blue are not as consistent. "The research offers a new approach to complimentary color contrasts," Bagley says.

Her findings may be frustrating information to designers, for they reveal that color balance and color choices may be quite subjective. However, it may also explain some puzzles about color. For example, some people may find purple a color difficult to like because it is frequently combined with colors that are not afterimage-balanced and therefore feel unstable. Commonly accepted color theory combines red with green, purple with yellow. "And yet, we don't find some of those color combinations particularly agreeable," Bagley says. "You don't find many marching bands in purple and yellow, for example. You see more of them in blue (the purple-blue of the American flag), with yellow braid, which this research shows is closer to most people's afterimage."

With experiment station support, graduate student Margaret Sathre Maxfield has helped in the research. Both Maxfield and Bagley have used the afterimage findings in their own design work: Maxfield's quilted liturgical textiles and Bagley's watercolors have been shown in national and regional exhibitions.

Bagley sees many applications for her afterimage findings. "Color balance clues suggested by afterimage colors might be used to provide more predictability and control for color decisions for packaging, display and exhibition design, costume and fashion design, photography and television production," she says.

Afterimage clues could help predict or control simultaneous color contrast, which is the way colors influence each other as we view them simultaneously. "When two colors are seen side by side,

each color adds its negative afterimage color to the other color," Bagley says. "For example, strawberries in a bright green package will look darker and a little older. They would look fresher and more appealing if packaged in a more accurate afterimage color--blue-green.

"This work helps design students and practitioners to realize that people have different color balances. But you can be objective about this subjectivity," Bagley says. She believes that afterimage is more than an optical curiosity; it provides a perceptual basis for making color decisions, instead of relying on conventional color formulas or trial and error.

# # #

AEA,BSS,CEO,G,S,V4,V7

NHEC2116

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 18, 1987

Source: Carol Shields  
612/625-8715  
Writer: Russ Vogel  
612/625-3725

## **CAMBRIDGE GIRL WINS STATE 4-H PUBLIC SPEAKING CONTEST**

Lanette Shaffer, Cambridge, won top honors in public speaking at the State 4-H Public Speaking and Communication Arts Contest June 15 at the Talmud Torah of St. Paul. Jamie Friesen, Fergus Falls, won the interpretive reading event, and first place in the photojournalism segment went to Gary Sansness of rural Pope County.

The contest is the culmination of competition at club, county and district levels. Contestants in all three areas of this year's contest addressed the theme "The Richness of Heritage."

Shaffer's speech, "I Have a Dream," compared the dreams of those from the past who, in pursuing individual dreams, built America and defined 'American dream,' with those today, who must continue to build America. "I challenge you to dream," she said. "Develop your dream--America's dream." Sigrud Nelson of Rock County was second, and Jon Olson of Grant County placed third among 16 public speakers.

Friesen's interpretive reading, "What to Say to a Hungry World," was from a book of the same name by Stanley Mooneyham. Heidi Palm of Meeker County won second, and Michelle Taylor of

Page 1 of 3  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

Roseau County placed third among the six competing interpretive readers.

Sansness' photojournalism piece featured a portrait of heirlooms, such as a clock, a lamp, and a photo album, as well as an original story entitled "Heritage Treasures Encourage Fifth Generation to Visit Norway." Two other promising photojournalists also entered the competition: Beth Sather of Lac Qui Parle County (who placed second) and Jana Bohnsack of Becker County (who placed third). This was the first year in which the state contest offered competition in interpretive reading and photojournalism.

The state public speaking and communications arts contest is sponsored by Minnesota 4-H and the Jewish Community Relations Council, Anti-Defamation League of Minnesota and the Dakotas. Besides offering experience in communications skills, a main aim of the contest is to foster cross-cultural appreciation between the state's diverse rural and metro communities. Contestants stayed in the homes of Jewish families and participated in Jewish cultural and religious activities the weekend before the contest.

At an awards luncheon following the competition, Russell Bragg, vice president of the Minnesota 4-H Foundation, and James Lewis, foundation executive director, presented the Jewish Community Relations Council with a plaque in appreciation of its "full financial sponsorship and enthusiastic leadership support" of the event.

Minnesota Department of Education Commissioner Ruth Randall presented the awards to the winners. Shaffer, daughter of Gary

and Norma Shaffer, will leave in mid-July for 10 days in Israel. During her trip, she will stay at an agricultural kibbutz and tour the country. Friesen, daughter of Ronald and Deloris Friesen, and Sansness, son of Lauren and Irene Sansness, were awarded savings bonds.

In proclaiming June 15 State 4-H Public Speaking and Communication Arts Day, Lt. Gov. Marlene Johnson told the group that "4-H was the first place I ever had to stand up in front of people and speak." Johnson said she has always valued such 4-H experiences.

Judges for the state contest were Linda Thrane, editorial writer for the Minneapolis Star and Tribune; Maureen Reeder, KMSP-TV reporter; Gail Fuchtinger of KTCA-TV outreach; Ev Stransky, educator and 4-H volunteer; Bonnie Wilson, curator of sound and visual collections for the Minnesota Historical Society; and Robin Girgen of the Mankato State University theater arts department.

# # #

V1, V4

N4-H2126

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 25, 1987

Source: C. Ford Runge  
612/625-9208  
Writer: Anne G. Lewis  
612/625-9251

## **RUNGE NAMED SPECIAL ASSISTANT FOR GATT TALKS IN GENEVA**

C. Ford Runge, an agricultural economist whose research on the political economy of North American grain production has gained wide recognition, will serve as special assistant to the U.S. ambassador to the General Agreement on Tariffs and Trade (GATT) negotiations in Geneva, Switzerland, starting in August.

Runge is a researcher for the University of Minnesota's Agricultural Experiment Station and associate professor of agricultural economics at the university.

The negotiations, which are scheduled to be completed over several years, are held periodically in Geneva. Since World War II, numerous GATT "rounds" have led to major reductions in tariff barriers. Countries that participate in GATT negotiations, including Japan and all the European Community member countries, are bound by the agreements reached until the next round of negotiations.

Runge anticipates that the upcoming GATT negotiations may be a boon to Midwest farmers: "I think greater trade liberalism will be of great benefit to farmers in this part of the country because we have inherent production advantages and more liberal

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

trade laws can build on those advantages."

His duties during the GATT meetings will include reporting on the status of trade negotiations for the ambassador, Michael Samuels, preparing internal and external memoranda and briefing members of Congress and other official visitors to the negotiations.

Runge notes that his assignment to the GATT talks places the university and the experiment station at the very heart of decision-making that will affect the U.S. agricultural economy for the next few years.

"Without the commitment to research by the experiment station, neither the research leading up to it nor the assignment itself would ever have been possible," he explains.

Runge's position is funded by the Bush Foundation, which awarded him a Bush Leadership grant; the Northwest Area Foundation; and the Council on Foreign Relations in New York, which granted him an International Affairs Fellowship.

Runge is a native of Wisconsin. He was educated at the University of Wisconsin and the University of North Carolina and was a Rhodes Scholar at Oxford University. He joined the faculty of the University of Minnesota in 1983.

# # #

V1,V4,Se1Media

NAGR2140

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: John True  
612/625-9733  
Editor: Mary Kay O'Hearn  
612/625-2741

## **GUARD AGAINST POWER TAKEOFF ACCIDENTS**

Power takeoff (PTO) drivelines are extremely powerful and can cause serious and even fatal injuries.

"PTO lets farmers harness tractor engine power to drive other farm machinery, but this power must be used carefully," warns John True, agricultural engineer with the University of Minnesota's Extension Service.

The National Safety Council advice he quotes includes updating first aid knowledge, including cardio-pulmonary resuscitation (CPR). Everyone should keep a well-stocked first aid kit handy and make sure that workers are trained in first aid procedures. Emergency telephone numbers should be posted at all telephones.

True and the National Safety Council suggest the following for PTO safe operation:

--Keep all PTO shielding, including the mater shield, in place when the machine is operating. Repair or replace any damaged or missing shields.

--Stay a safe distance away from unshielded moving parts and keep children and non-workers out of the area.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

--Wear well-fitted work clothing--loose clothing can get caught in moving machinery parts. Don't wear jewelry.

--Turn off the PTO when dismantling the machinery to attend to operating problems.

Accidents can happen in a split second so it is well to familiarize yourself and your family with what to do in an emergency. Plan your own safety drill before that happens.

# # #

AEA,BSS,CEO,V1,V4

NAGR2103

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Tom Zurcher  
612/625-4228  
Writer: Russ Vogel  
612/625-3725

Editors: County extension agents can supply names of winning team members.

## **4-H PROJECT BOWL WINNERS HEADED FOR NATIONAL COMPETITION**

Teams from Blue Earth, Steele and Hennepin counties took top honors in the three senior divisions at the State 4-H Animal Science Project Bowl June 17 at the University of Minnesota's St. Paul campus.

The Blue Earth County team won first in the Senior Livestock Division, Hennepin County's team won the Senior Horse Division and the team from Steele County won the Senior Dairy Division. The Hennepin and Steele county teams, along with the second-place senior horse team, Todd County, will advance to national quiz bowls in November.

The state 4-H project bowl, run on a format similar to college bowl competition, tests and enriches youth's animal science knowledge. State competition at both senior and intermediate levels involved more than 200 4-H'ers from throughout Minnesota. County teams, which are made up of four or five members, advanced from county and regional competition to reach the state contest.

Results by division and species area of the state project bowl follow. Winning county teams are listed in order of finish, first

Page 1 of 2  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

to third.

**Senior Horse:** Hennepin, Todd, Washington. (Intermediate Horse: Dakota, Itasca, Carver.)

**Senior Dairy:** Steele, Rice, Morrison. (Intermediate Dairy: Morrison, Rice, Redwood.)

**Senior Livestock:** Blue Earth, Carlton, Dodge. (Intermediate Livestock: Isanti, West Ottertail, Watonwan.)

Matches often were decided by a margin of only a few points and the level of competition was high, according to Tom Zurcher, 4-H youth development specialist, Minnesota Extension Service. Zurcher, who coordinates the project bowls, added, however, that everyone who reached the state project bowl is a winner, since development of self-confidence and teamwork and decision-making skills actually are the main aims of the event.

The Minnesota Livestock Breeders Association, Minnesota Quarter Horse Association and Minnesota 4-H Foundation sponsored the event.

# # #

AEA,CEO,Q,V1,V4

N4-H2138

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Tom Zurcher  
612/625-4228  
Writer: Russ Vogel  
612/625-3725

## **4-H YOUTHS STUDY LATEST IN ANIMAL SCIENCE AT STATE EXTRAVAGANZA**

After a week of hands-on workshops in leading-edge technologies at the State Animal Science Extravaganza June 15-19 at the University of Minnesota's St. Paul campus, 200 Minnesota 4-H'ers are headed home with increased knowledge of animal production and management, career opportunities and leadership skills they can share in their clubs and counties.

Among highlights in the nine species areas were:

**Beef:** Sessions on computer ration analysis, parasite control and growth promotion, artificial insemination (AI) management, calving problems and carcass evaluation.

**Dairy:** Presentations on reproductive physiology, body condition scoring and cloning/genetic engineering and a tour of the university's new dairy facilities.

**Dairy goat:** Workshops on goat management, resources and judging and a tour of Poplar Hill Dairy Goat Farm, Scandia.

**Dog:** Observation of surgery procedures, sessions on care and showmanship and a tour of Armstrong Ranch Kennels, Anoka.

**Horse:** Sessions on hoof care, vital signs and wrapping legs, and tours of Canterbury Downs and the University of Minnesota vet

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

med center and anatomy lab.

**Poultry:** Sessions on egg production, carcass and egg grading and computerized nutrition.

**Rabbit:** Workshops on tanning hides and rabbit cookery and a tour of a large rabbitry in Faribault.

**Sheep:** Presentations on the objectives and future of the industry, sessions on milking, nutrition and merchandising and a tour of the North Central Wool Growers' Cooperative.

**Swine:** Sessions on AI; using a sonoray in pregnancy testing and to measure backfat and the loin eye area, evaluation of swine lungs and liver, using computers to rank carcasses and a tour the university's new swine research facilities.

Participants from several species areas toured the university's Rosemount Agricultural Experiment Station and Red Owl's meat facilities. Special workshops in activities and contest leadership, the bond between humans and their animals and career assessment and planning were offered also.

The participants' hunger for knowledge was not the only one filled: the Minnesota Pork Producers Association served up the "fruits" of modern swine production at a barbeque the first evening. The pork producers were represented at the grill by long-time 4-H parent, volunteer and supporter Jim Grass of Owatonna. Among other social events were a dance, a banquet and an evening at the Chanhassen Dinner Theater.

University faculty and 4-H volunteers also helped make the extravaganza possible. Donors for this year's event were the

Minnesota 4-H Foundation, Minnesota Livestock Breeders  
Association, Cenex Foundation, St. Paul Union Stockyards,  
University of Minnesota Department of Animal Science, professor  
Ray Arthaud, Joe and Donna Speltz and Cindy Grass Martin.

# # #

Q,V1,V4

N4-H2136

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Carol Shields  
612/625-8715  
Writer: Russ Vogel  
612/625-3725

## **CHINESE EDUCATORS SHARE CULTURES, ACTIVITIES AT 4-H ARTS CAMP**

Two esteemed Chinese educators touring the United States as part of a national arts exchange program shared ideas and compared cultures recently with youths at a Minnesota 4-H Expressive Arts Camp at Itasca State Park.

Hou Ling, an elementary school teacher of fine arts in the nation's capital, Beijing, and Chen Shoupeng, who teaches fine arts at Fangua Nong Elementary School in Shanghai, spent two days and nights at the camp in mid-June, instructing youngsters in paper cutting, calligraphy and painting as they teach it in China. The youths, in turn, shared their visual and performing arts projects as well as samplings of American culture and Minnesota's north woods.

"It's a thrilling experience for the kids to think of other kids across the world doing the same things they're doing," says Carol Shields, state 4-H coordinator for the arts camps. "It really stimulates their awareness of our world as a global community."

Hou, the editor of an arts curriculum publication and a nationally recognized artist, worked with visual arts students on his specialty, oil painting. Chen, who was voted Model Teacher

Page 1 of 2  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

and Special Class Teacher in Shanghai and a national People's Teacher, taught students the Chinese art of paper cutting.

The men are in the United States to study teaching methods and fine arts curricula under the sponsorship of the Center for United States-China Arts Exchange. They have visited several sites on the East Coast and will travel to Los Angeles after their tour of the Midwest. Their visit to Minnesota was sponsored by the Midwest China Center, St. Paul.

4-H Expressive Arts Camps offer children ages 11-15 an opportunity to participate in a week of activities in either visual or performing arts. The camps, which are open to all youths, are held annually at the University of Minnesota's Lake Itasca Forestry Station and at the university's Waseca campus.

The young people participate in a variety of activities, including sketching, painting, sculpture, puppetry, song, dance and theater. Highlights of the camps are a mounted show and final-night performance before parents and the public. Selections from "Mary Poppins" will be featured this year.

While the Itasca camp emphasized the environment in art, the Waseca camp, which will be June 22-26, offers the atmosphere and arts facilities of a full university campus, Shield says. In addition to arts skills, the camps emphasize development of self-esteem and a sense of individual accomplishment. "We encourage exploring and trying new things," Shields says. "No one ever fails at this camp."

# # #

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: David Pace  
612/625-3736  
Writer: Russ Vogel  
612/625-3725

## STATE 4-H OFFICERS CHOSEN AT JUNIOR LEADER CONFERENCE

Kurt Moreland, 17, of Two Harbors was elected president of the State 4-H Federation June 18 by delegates to the State 4-H Junior Leader Conference. Steven Brandt, 18, of Ada was chosen state vice president for the coming year; Chris Schuler, 18, of Granite Falls is the new secretary; and John Hanson, 18, of Slayton will be treasurer.

The officers were installed June 19 at closing ceremonies for the week-long youth development conference at the 4-H Building on the State Fairgrounds in St. Paul. They will preside over the statewide organization and represent 4-H at the state fair and other events.

The election capped a week of speeches, workshops, field trips and other activities focusing on the theme "Life--what's to be is up to me."

Byron Schneider, state 4-H head, welcomed the 700 delegates at opening ceremonies Monday. Later, in a presentation entitled "I Think! I Can!" Darroll Bussler, community services director for South St. Paul Public Schools, told them of the importance of thinking for oneself and taking responsibility for, and control

Page 1 of 3  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

of, one's life.

Activities Tuesday focused on "choices," and included a career ✓ fair and tours and a talk, "Grow deep, not just tall," by John Ivan Palmer, a Minneapolis mind/memory expert. Palmer also encouraged the teenagers to make their own, positive life decisions.

Wednesday's activities, which focused on "concerns," were highlighted by a frank and informative presentation on sexual responsibility by Libby Welsh, a Duluth public health nurse. Afternoon workshops on leadership and self-protection were followed by a trip to the Chanhassen Dinner Theater.

"Self-concept" was stressed Thursday. In an inspirational talk by Carol Harder of Mountain Lake, on her daughter's struggles with self-esteem after a disfiguring auto accident, Harder told the group that one could depend only on oneself for a positive self-concept. That evening, 4-H supporters and alumni were honored and the new officers were announced at the 65th Annual 4-H Banquet at the Hyatt Regency Hotel in Minneapolis.

After the event, David Pace, 4-H coordinator of the conference, commended the 30 state ambassadors for conducting an exciting conference--and the delegates generally for choosing outstanding new officers.

Moreland has been president of his club five times, is Lake County 4-H Federation president and is an award-winning exhibitor and leader. Brandt has held county office and earned state and national 4-H honors. Schuler has held county office and earned

the FFA State Farmer Degree and national scholarships. Hanson has held county office, is a Key Award winner and has earned trips to the state fair six straight years.

Support for the conference was provided by Patricia Morreim, Anoka; Dean Von Bank, Clara City; Susan and Gary Carlson, Litchfield; Babcock Swine, Inc.; Interstate Seed Company; Payco Seeds, Inc.; Pioneer Hi-Bred International, Inc.; Southern Minnesota Sugar Cooperative; and Cashman Seed and Fertilizer, Inc.

# # #

V1,V4,V7,Q

N4-H2139

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Glenn Titrud  
612/261-4063

Writer: Jennifer Obst  
612/625-1978

Editors, broadcasters: This release was sent to you on June 18, 1987 but had errors in it. Please note that the telephone number for the information source and date of the field day is correct in this version of the release. We regret any inconvenience the errors may have caused you.

## **SAND PLAIN EXPERIMENTAL FARM FIELD DAY WILL BE JULY 8**

The annual summer field day at the University of Minnesota's Sand Plain Experimental Farm near Becker will be July 8. The event offers both farmers and home gardeners a chance to see the latest in crop and horticultural research, says Glenn Titrud, research plot coordinator. The 9 a.m.-to-noon event is free and open to the public.

Two tours of research plots will be conducted, one focusing on commercial and home horticultural crops, the other focusing on field crops.

The horticultural tour will include a look at the university's new blueberry varieties for Minnesota. It will also include discussions on fertility problems in horticultural crops such as sweet corn, potatoes and cauliflower, and a discussion on weed control and herbicides for small fruits and vegetables.

The field crop tour will include stops on alfalfa varieties and management studies, corn fertility management, and effects of multiple insect pests on alfalfa and potatoes. "New this year

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

will be a stop at our weather station to talk about weather issues and impacts" says Titrud.

University of Minnesota extension specialists will conduct plant pest, weed identification and soil nutrient deficiency clinics during the field day. The public is invited to bring samples of insects, diseased and nutrient-deficient plants, and weeds to these clinics for identification and advice. "There will also be a water quality clinic with extension specialists available to answer your questions," Titrud says.

The Sand Plain Experimental Farm is off Minnesota Highway 10, just outside Becker.

# # #

AEA,BSS,CEO,I,V1,V3,Se1Med

NAGR2125

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## SUMMER HORTICULTURAL TIPS

Pick vegetables once they ripen, even if you have no use for them, advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "By allowing fruits to become over-mature on the plants, the plants get the message that they can slow down. Besides, there's usually someplace in the community where that produce would be welcomed."

# # #

"Trim off faded flowers whenever possible," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Your plants will look nicer, and they will continue to bloom for as long a time as possible. When you allow seeds to mature, the plants tend to slow down in their production of new flower buds."

# # #

"If crabgrass is becoming noticeable in your lawn, you probably didn't put down a preemergent herbicide early enough this spring. And you're in good company," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Soils warmed so fast, with our unusual weather, many

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

people were caught short."

Brown does not recommend spraying crabgrass now. She says, "It probably won't be very effective, and it may burn your regular grass. Instead, try to apply the preventer-type herbicide next spring, usually early in May."

# # #

For longer lasting bouquets, pick flowers in the evening, when the sun is no longer beating on them, or early in the morning, advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. These are the two times of the day when flowers are most filled with moisture.

Brown says, "Strip the stems of leaves, except the very top. Recut each stem, and plunge them into warm water. Ideally, this water will contain a floral preservative, the type you can get at a florist's or at the flower department of a supermarket.

"Harden' the flowers by keeping them in a cool place several hours or overnight. Then they will be ready to arrange in a vase or container. Choose a location out of direct sunlight, as sun will fade flowers and shorten their vase life, even with a preservative."

# # #

I,V4,V7

NAGR2134

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 25, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## **ONLY FEMALE FLOWERS OF VINE CROPS CAN DEVELOP INTO FRUIT**

Every year, horticultural specialists at the University of Minnesota get many calls from people asking, "Why isn't my squash vine getting fruit?"

"You could just as well substitute the words 'cucumber', 'melon', 'pumpkin' or 'gourd' for 'squash' in that question," says Deborah Brown, horticultural specialist with the Minnesota Extension Service. "Any of these vine crops may be slow to set fruit. Part of the problem is simply a matter of maturity. The vine crops have separate male and female flowers on the same plant. Only the female flowers will develop into fruit, providing they are pollinated. But the first several flowers on most plants are always males--a device thought to protect the vine from bearing fruit too early, when it hasn't yet got enough energy to make a good job of it.

"Once female flowers appear alongside the male flowers, bees usually take care of the pollinating, and fruit begins to develop. Sometimes, though, the little melons, squash or pumpkins start to grow, then turn yellow and shrivel. This is a sign that pollination did not take place."

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Brown says that wet, cloudy weather, lots of shade and excessive use of insecticides can all interfere with the pollination process that is needed for fruit to form.

"If you're having poor luck with your vine crops," Brown says, "try hand pollinating with a cotton swab or child's paintbrush. Remove pollen from the stamens of the male flower and brush the pollen gently on the tip of the centrally located stigma of the female flower. The female flower is the one that has a swelling directly behind it, in the form of the fruit that will later grow there. There's no guarantee this will work, but it's fun to try, anyway."

# # #

I,V4,V7

NAGR2121

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## IT'S BEEN A ROUGH YEAR FOR LANDSCAPE PLANTS

The unusual, extreme weather that Minnesota has had since last fall has severely damaged many trees and shrubs, according to Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service.

Ash says, "Mild temperatures and abundant rain last fall may have kept many woody plants from hardening off for the winter. In November, a sudden drop in the temperature damaged trees and shrubs, but the damage was not apparent at that time. An unusually warm winter, with little or no snow cover, increased the amount of moisture lost from the above-ground portions of plants, especially evergreens. Top that off with a very dry spring accompanied by unusually high temperatures, and the result is many severely damaged trees and shrubs."

Symptoms of injury, according to Ash, include branch dieback, trees which were slow to leaf out and smaller-than-normal leaves. Ash says, "Some trees will leaf out or flower and then collapse. Injured evergreens show an off-color green, followed by browning, and eventually needle drop.

"Weakened trees are subject to attack by disease pathogens and

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

insects. Prevent further problems by taking a close look at your landscape plants now. Check for dead branches. Small-diameter branches will be brittle with brown inner bark. The inner bark of larger branches that were damaged will be brown also. Remove these branches, unless you are dealing with elms or oaks, which are best pruned in the winter. Severely damaged plants may have to be replaced.

"Encourage the trees and shrubs to return to a vigorous state by watering during dry periods. Cut back on watering late this summer to encourage winter readiness and wrap the trunks of young, smooth-barked trees to prevent sunscald. Application of a balanced fertilizer early next spring may be helpful."

Ash says that fungicides are neither necessary nor effective in preventing problems caused by the environment. "Increasing the vigor of your landscape plants with proper care and a little extra tender, loving care is the best prescription," she concludes.

# # #

I,V4,V7

NAGR2131

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## **CAREFUL WATERING, FUNGICIDES HELP KEEP TOMATO LEAFSPOT IN CHECK**

About the time those first few tomatoes begin to form, the Septoria leaf spot fungus may play havoc with your tomato plants. Circular spots about an eighth of an inch in diameter with dark margins and light gray centers will begin to appear on the lower leaves. Unless something is done, the spots will appear on more and more leaves and the entire plant eventually will be reduced to shriveled-up, brown leaves.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, has these suggestions for dealing with Septoria leafspot:

--Avoid overhead sprinkler irrigation. If this is the only way to water, water early in the day so the plants dry quickly.

--Apply a recommended fungicide as soon as leaf spots appear or start spraying about the time the first fruits set. Use a fungicide that has the active ingredient chlorothalonil or maneb. Zineb is also effective, but may be difficult to obtain.

--This fall, remove from the garden and destroy all tomato plant refuse.

--Next spring, try a different variety if you've had trouble

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

with Septoria leafspot; varieties vary in their susceptibility to the disease.

--Space plants properly to allow for good air circulation.

--Avoid planting tomatoes in shady locations. Septoria leafspot and other foliage diseases are less likely to be a problem in sunny locations.

# # #

I,V4,V7

NAGR2135

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Jeffrey D. Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## **APPLE MAGGOTS START THEIR DIRTY WORK ABOUT JULY 1**

It's time to brace ourselves again for apple maggot season, says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service.

"Apple maggots have been living in the ground since last fall as pupae--the resting stage," Hahn says. "However, about July 1, apple maggot adults begin emerging from the soil. The adults are small, black-and-white flies that resemble houseflies. They do not all come out at the same time, but will emerge throughout the summer.

"Soon after they emerge, the adults will lay eggs in the apples. Once the larvae or maggots hatch from these eggs, they will feed and tunnel into the flesh of the fruit. These tunnels turn brown and may eventually rot. Maggot-infested apples will show small, pock-like marks where the eggs were deposited, and sunken, discolored areas where the maggot has done its tunneling."

Hahn says the maggots will remain in the apples for three to four weeks. The apples must then drop from the tree for the apple maggot to complete its life cycle. Once the apple has fallen, the maggot will burrow into the ground and turn into a pupa. It will

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

remain there until next July, when it will emerge as an adult.

"Picking up fallen apples and eliminating them as soon as possible after they've dropped will disrupt the apple maggot's life cycle and help minimize damage," Hahn says. "However, if there are neighboring trees with apples left on the ground, it will negate your efforts as the adult maggots fly readily."

According to Hahn, sprays can be applied, starting July 1, to kill the adults. He says, "One approach would be to spray two days after it rains 1/2 inch or more. The adults are more likely to emerge when the ground is wet. Some flies may emerge between rains or even if the ground is watered, so this method will not get every fly. If you prefer to take fewer chances, trees can be treated once every 7 to 10 days. Treatments can be applied up to 7 days before the apples are harvested. Sevin (carbaryl) is an insecticide that is effective against apple maggots."

# # #

I,V4,V7

NAGR2133

---

# News and Information

---

June 25, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## SUMMER HORTICULTURAL TIPS

Pick vegetables once they ripen, even if you have no use for them, advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "By allowing fruits to become over-mature on the plants, the plants get the message that they can slow down. Besides, there's usually someplace in the community where that produce would be welcomed."

# # #

"Trim off faded flowers whenever possible," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Your plants will look nicer, and they will continue to bloom for as long a time as possible. When you allow seeds to mature, the plants tend to slow down in their production of new flower buds."

# # #

"If crabgrass is becoming noticeable in your lawn, you probably didn't put down a preemergent herbicide early enough this spring. And you're in good company," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Soils warmed so fast, with our unusual weather, many

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

people were caught short."

Brown does not recommend spraying crabgrass now. She says, "It probably won't be very effective, and it may burn your regular grass. Instead, try to apply the preventer-type herbicide next spring, usually early in May."

# # #

For longer lasting bouquets, pick flowers in the evening, when the sun is no longer beating on them, or early in the morning, advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. These are the two times of the day when flowers are most filled with moisture.

Brown says, "Strip the stems of leaves, except the very top. Recut each stem, and plunge them into warm water. Ideally, this water will contain a floral preservative, the type you can get at a florist's or at the flower department of a supermarket.

"Harden' the flowers by keeping them in a cool place several hours or overnight. Then they will be ready to arrange in a vase or container. Choose a location out of direct sunlight, as sun will fade flowers and shorten their vase life, even with a preservative."

# # #

I,V4,V7

NAGR2134

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 25, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## 'WATER AND WAIT,' U OF M HORTICULTURIST ADVISES

Ample moisture is the key to keeping gardens and landscape plantings in good shape during the hottest part of the summer.

"You need to water thoroughly on a regular basis, but it doesn't hurt to water lightly or 'syringe' plants during the heat of the day, just to cool them off," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

Brown says that moisture-stressed plants should not be fertilized. She says, "This means that unless you have a sprinkler system, lawn fertilization should probably be put off until late August or early September, when temperatures drop, days grow shorter and rainfall becomes more plentiful.

She adds, "Flower and vegetable gardens usually need fertilizing in midsummer, but it should always be accompanied by a regular and thorough watering program."

Mulching, Brown says, will help conserve moisture in the garden by reducing surface loss through evaporation. It also cuts down on fluctuating moisture levels in the soil and helps keep plant roots from overheating by insulating soil from sunlight.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

"If weeds are a problem, the only good solution in hot weather is to dig them out or to wait until autumn to use a weedkiller," Brown says. "Herbicides don't work as effectively in heat, and there's far more risk of fumes drifting and damaging surrounding plants. Even grass is vulnerable to spray damage when it's hot and dry.

"To sum it up, the best advice for plant care in hot weather is water and wait!"

# # #

I,V4,V7

NAGR2132

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 26, 1987

Source: Theron Salmela  
612/679-3010  
Writer: Sam Brungardt  
612/625-6797

## **MINNESOTA FORAGE TOUR TO BE HELD IN KANABEC COUNTY JULY 7**

Dairy, beef, sheep and hay producers are urged to attend the Minnesota Forage Tour on Tuesday, July 7. This year's tour will look at aspects of forage production on two Kanabec County farms.

Registration for the tour will begin at 9 a.m. at the Kanabec County Fairgrounds in Mora. Cost of registration, lunch and the tour is \$5. The tour buses will depart at 9:40 and 9:50 a.m.

The tour of the Richard LeCocq beef and dairy farm, which begins at 10 a.m., will deal with aspects of grass production. The LeCocq farm is 14 miles north of Mora on Highway 65. Tour participants will see summer direct-seeded Palaton reed canarygrass in a pure stand and mixed with red clover and alfalfa. At the second stop, results of three nitrogen fertilization regimes for reed canarygrass, smooth brome and timothy will be discussed. Another stop will feature establishment of Norcen birdsfoot trefoil and use of the herbicide Poast. Control alternatives for tall buttercup and other broadleaf weeds in pastures will be shown and discussed at the last stop. Tour participants will also be able to examine a high-tensile power fence on the LeCocq farm.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

During lunch, University of Minnesota extension forage agronomist Neal Martin will discuss forage alternatives for 1987.

The group will be bused to the farm of Dean, Gary and Robert Heald, 1-1/2 miles south of Ogilvie and Highway 47, to look at aspects of alfalfa production and harvesting after lunch. Stops will feature comparison plantings of Nitro--the University of Minnesota's new annual alfalfa, five dormant alfalfa varieties and red clover, and the results of using drying agents and propionic acid preservative to speed hay drying. The tour will end with a demonstration of new hay harvesting machinery by implement companies.

The forage tour is sponsored by the Minnesota and East Central Forage Councils, the University of Minnesota's Extension Service and Department of Agronomy and Plant Genetics, and private parties. For more information, call the Kanebec County Extension Office at (612) 679-3010.

# # #

V1,V3,V4

NAGR2147

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Robert Busch  
612/625-1975  
Deon Stuthman  
612/625-3709  
Writer: Mary Kay O'Hearn  
612/625-2728

## **MAGGOTS, HEAT, MOISTURE STRESS AFFECTING WHEAT YIELDS AT LAMBERTON**

The wheat stem maggot may be causing economic damage in wheat planted April 7 at the Southwest Experiment Station, Lamberton. Heat and moisture stress are the major causes of possibly lower yields in 1987.

Results from trials of hard red spring wheat and oats were described by Robert Busch, USDA wheat breeder, and Deon Stuthman, University of Minnesota agronomist and plant geneticist, who head the Minnesota Agricultural Experiment Station's wheat and oat improvement efforts, during the Lamberton station's Summer Field Day June 24.

Busch said that Marshall accounts for 60-70 percent of the 2.7 million acres of spring wheat grown in Minnesota. "It has medium to low protein and high performance," he said. "Its protein is a half percent better than Era."

Wheaton, another University of Minnesota release, occupies 15 to 20 percent of Minnesota acreage and has been the highest yielding wheat in the trials over a three-year period. Guard, an early wheat, is rated a couple of tenths higher in protein than Marshall and has some Hessian fly resistance. Stoa has performed

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

well with good protein if planted early, but can have lodging problems. Len showed good protein level, moderate yield and good rust resistance, as did Butte 86. Butte 86, with intermediate protein, is earlier than Len but is more susceptible to lodging.

Busch noted that Celtic and Nordic have potential: Celtic has good leaf and stem rust resistance and intermediate protein content while Nordic, although as high yielding as Wheaton, is quite low in protein, almost 1 percent less than Era.

Stuthman named Starter, Preston and Ogle as three of the six oat varieties recommended for the Lamberton area. Red leaf (also known as barley yellow dwarf virus) has affected oat plots each of the last three years, he said.

"Don and Hazel, Illinois varieties both in their third test years in Minnesota, are having excellent yields," Stuthman said. Don is the highest yielding in tests now. "It is an exception--an early variety that is a good yielder. It's short and likely to lodge. You'd better harvest it as soon as it becomes ripe," Stuthman cautioned. Hazel has excellent straw strength and its susceptibility can be managed with seed treatment. Hytest and Sandy, two South Dakota varieties, are in their first year of statewide testing (three years are required before the Minnesota Agricultural Experiment Station makes firm recommendations). At this point, Stuthman thinks only Hytest has potential for Minnesota.

For all the Minnesota Agricultural Experiment Station's field crop recommendations, consult the 1987 revision of "Varietal Trials of Farm Crops" (item no. AD-MR-1953), available from Minnesota county extension offices.

# # #

---

# News and Information

---

July 2, 1987

EDUC  
EXT  
SERV  
UNIV  
MINN  
ST. PAUL  
MINN  
55108

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mark Seeley  
612/625-4724

Writer: Mary Kay O'Hearn  
612/625-2728

## **HOT WEATHER OFFSETS ADVANCES MADE BY EARLY PLANTING**

Advantages of early planting have been diminished by dry weather, Mark Seeley, University of Minnesota soil scientist, told those on tours during Summer Field Day at the Southwest Experiment Station, Lamberton, June 24.

"Every meteorologist is staying with above-normal temperature predictions during July and below-normal rainfall," Seeley said. "Rain gets used up very fast under high temperatures."

Based on 100 years of record keeping, weather has reversed itself in August and September in 7 of 10 years--going wet, he said. This won't help the 1987 crop, but it should "be good for holdover next year."

If this year's corn crop is well enough established to draw on the 5 to 7 inches of soil moisture reportedly available in the state, that should help considerably.

Dryness affected soil-applied herbicides, said Charlotte Eberlein, weed scientist at the University. Preplant-incorporated herbicides did better than preemergents, which need rain to wash the ingredients in.

Seeley said plants in the hot weather seemed to go from the

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

emergence stage to six-leaf almost overnight.

Eberlein said more postemergence weed control was required this year. There was more escaped foxtail, for instance, which is harder to control than broadleaves with available chemicals.

# # #

AEA,BSS,CEO,V1

NAGR2156

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Richard Goodrich  
612/624-1205

Writer: Sam Brungardt  
612/625-6797

## **R. N. SHOFFNER AWARD TO ENCOURAGE CAREERS IN AVIAN GENETICS**

He retired officially last year, but poultry scientist Robert N. Shoffner isn't loafing; he's continuing to build on his 45 years at the University of Minnesota, doing research on embryo manipulation and DNA transvection. Shoffner's family has established a fund for the R. N. Shoffner Award in Avian Genetics, and the university has matched the \$5,000 donation.

Interest from the fund will be used each year for awards to attract graduate students into the study of avian genetics at the university, to recognize graduate students' accomplishments and encourage further excellence in avian genetics, and to encourage undergraduate students who have demonstrated outstanding ability and a career interest in avian genetics.

"Bob Shoffner has been an outstanding role model for students," Richard Goodrich, head of the Department of Animal Science, said. "He not only contributed significantly to our academic program, but kept our avian genetics research program modern, maintaining a commitment to it as it evolved and as the needs of the poultry industry changed.

"Dr. Shoffner continually updated his expertise and urged his

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

students to do the same. He started as a quantitative geneticist; later trained himself in cytogenetics with the help of a Fulbright Scholarship; and most recently, acquired expertise in molecular genetics and gene transfer. His achievements in avian cytogenetics and his international reputation in the field were recognized in 1982, when he was given the Merck Award."

Goodrich said that fewer universities now offer training in poultry breeding and genetics. Some poultry breeding organizations as well as poultry geneticists in federal and state institutions are concerned that there will not be enough adequately trained scientists to satisfy industry and university needs for people to do basic research in avian genetics in the near future.

He said, "A common misconception is that the poultry industry is doing all the necessary basic genetic research. In truth, almost all energies are devoted to achieving short-term goals. Basic research and training for the future will clearly come from the universities, as it has in the past.

"We hope that poultry breeding interests will contribute to the Shoffner Award fund. That would make it possible for us to increase the amount of the award or to give more awards each year. The award could play a major role in attracting outstanding students into careers in poultry genetics."

Contributions to the R. N. Shoffner Award in Avian Genetics may be sent to the University of Minnesota Foundation, 120 Morrill Hall, University of Minnesota, Minneapolis, MN 55455.

# # #

---

# News and Information

---

EDUC 877  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Paul Rosenblatt,  
Cynthia Meyer  
612/625-3120  
Writer: Deedee Nagy  
612/625-0288

## CARDS SHOW COMPLEXITY OF MOTHER-DAUGHTER COMMUNICATION

When you selected a Mother's Day card for dear old mom, did you take pains to make it a hearts-and-flowers love message? A humorous one depicting yourself as a less-than-perfect offspring? Or a tribute to mom as a woman of the '80s, juggling home, family and career?

Whatever your message, chances are you selected the card carefully and sent it off with a feeling of obligation along with a mixture of love, good humor and, possibly, a gentle reminder of your independence from her. This is the finding of a University of Minnesota study of 23 women who evaluated 52 best-selling Mother's Day cards.

Cynthia Meyer, family social science graduate student, and Paul C. Rosenblatt, professor in the same department, asked women about their reactions to greeting card messages and the things they sought or avoided when selecting cards for their mothers. The study, funded by the university's Agricultural Experiment Station, revealed that sending a Mother's Day card was not a task the women took lightly. All but two of the women had sent a

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Mother's Day card every year for the past five years. Most said they felt both societal pressure and family obligation to remember their mothers on the designated day.

The women had definite ideas about what would be appropriate messages to send to their mothers. Meyer and Rosenblatt said many of the women rejected such themes as "you are perfect" or "I want to be exactly like you" because they said they would feel dishonest sending them. "It seems to be important that the message of the card rings true to the daughter's feelings," the researchers commented. There was little agreement about the cards' messages. "A card that was seen as mushy and flowery in the context of one relationship was viewed as simple and honest in another," according to Meyer and Rosenblatt.

They add that some of the participants tried to avoid cards that depicted mothers as having no identity except the one as cook, cleaning woman and family nurse. "Many women said they prefer cards which depict women as multidimensional and able to satisfy personal needs outside of the mother role," the researchers said.

Although most said they would feel guilt and shame if they did not send Mother's Day greetings, several admitted to using a different strategy if the mother-daughter relationship was stormy. Some said they would send a message that made no mention of any conflict, implying a kind of truce. Others chose humorous cards that poked fun at past conflicts with such messages as "Loving me isn't always easy," or "You're lucky I'm not twins." In either

case, the researchers note, the goal seems to be to heal past wounds by attempting to put them at a distance.

For many of the women, selecting a card involved walking a fine line between cards that portrayed them as dependent children yet still made clear their love and appreciation. "Women who were mothers themselves often expressed an understanding of what their mothers had gone through as a result of their own experiences," they added. Still, the research subjects said it was often difficult to find a card that expressed both connection and separation from their mothers without calling into question the value or meaning of the mother's life or childrearing practices.

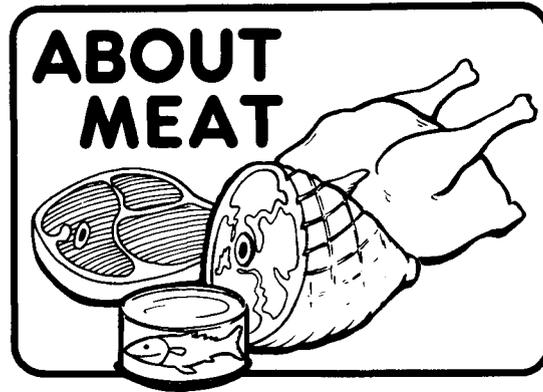
Meyer and Rosenblatt conclude that women who subscribe to contemporary values of equality in household duties and childrearing may not find contemporary cards that mirror those sentiments. "One of the original purposes of Mother's Day was the glorification of motherhood in order to make this role appealing and something women strive for," Meyer and Rosenblatt add. "Women today may find that values of gender equality conflict with some of the myths associated with motherhood and the celebration of Mother's Day."

# # #

AEA,BSS,CEO,E,G,S

NHEC2152

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744



July 2, 1987

Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** Our freezer was accidentally unplugged while we were away. Is the meat in it safe to eat?

**A:** The most important thing to do is to check the internal temperature of the meat. If the freezer has been off for 30 hours or more and the temperature of the meat has exceeded 59 degrees F, the general recommendation would be to discard the meat. If you don't have a thermometer, open some packages and check for spoilage as indicated by discoloration (a greenish color) or a putrid smell. If the meat contains ice crystals or is obviously still cold, refreeze it immediately. Meat that has been cooked, frozen and then temperature abused in a malfunctioning freezer poses the greatest threat of food poisoning.--**Richard Epley, extension animal scientist, meats**

**Q:** How does one shuck oysters?

**A:** Scrub the oyster with a stiff brush under cold water. Then, hold it flat on the counter with your left hand and force an oyster

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

knife between the halves of the shell at the thin end. Keep the knife against the shell and avoid plunging it into the meat. Move the knife sharply left and right to cut the large muscle attached to the shell. Remove the shell with a twisting motion. Cut the other end of the same muscle attached to the other half of the shell. Remove any bits of broken shell. Be careful not to lose the tasty liquor inside.--**Jeffrey Gunderson, area extension agent, marine fisheries**

**Q:** How do I keep fresh oysters?

**A:** Usually, fresh oysters are sold in the shell by the dozen or shucked and in their own liquor by the pint or quart. Keep fresh oysters in the shell cold, in the refrigerator or atop ice, but not in water. If oysters have been shucked, they must be eaten as soon as possible. Remove any pieces of shell attached to shucked oysters. Drain the liquor through a fine cloth or sieve. Six oysters on the half shell are a typical serving.--**Jeffrey Gunderson, area extension agent, marine fisheries**

Send your questions about red meats, poultry or fish to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

X

-30-

X070287

(page 2 of 2)

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Wallace W. Nelson  
507/752-7372  
Writer: Mary Kay O'Hearn  
612/625-2728

## LAMBERTON FIELD DAY ATTRACTS NEARLY 500

Weather cooperated with a gentle early morning rain mellowing temperatures for the Summer Field Day at the Southwest Experiment Station, Lamberton, June 24. The skies opened up again with welcome rain just as the day's activities ended at 2 p.m.

Station Superintendent Wallace W. Nelson said attendance was 482. One pilot and passenger from Lake Benton landed at Springfield since there is no longer a landing strip at the station. The two were met by pickup and brought to Lamberton.

On five hayrack tours of the 668-acre station, those attending heard discussions by specialists with the University of Minnesota's Extension Service and researchers with its Agricultural Experiment Station. Tour choices included alternative crops, weed control, soybeans, corn and management. There were clinics or displays covering plant problems (weed control, soils, entomology, horticulture and plant pathology).

Field days have been held at the Lamberton station since 1960. Adding flavor to the day was the greeting in English, German and Spanish to those who arrived from Herman Vossen, former Cottonwood County extension agent, and the lunch served by the Lamberton Cardinals 4-H Club.

# # #

AEA,BSS,SWDist,SCDist,V1

Page 1 of 1

NAGR2159

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

7-2-87  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Roy D. Wilcoxson  
612/625-4271

Writer: Mary Kay O'Hearn  
612/625-2728

## **BARLEY YELLOW DWARF IS PREVALENT IN SMALL GRAINS**

Field yellowing in wheat, barley and oats is probably caused by the barley yellow dwarf virus, which is transmitted by aphids, Roy D. Wilcoxson, University of Minnesota plant pathologist, told those attending Summer Field Day June 24 at the Southwest Experiment Station, Lamberton.

"One insect per plant can start a streak up one side of the leaf and all affected plants fail to grow normally," Wilcoxson said. Barley yellow dwarf virus was first found in barley in California in 1951, which accounts for its name. The aphids that transmit the virus come to Minnesota from Texas or Oklahoma and inoculate plants when they feed. Wilcoxson said an entomologist told him the 1987 infestation was one of the larger, consisting of as many as four aphids per plant.

In oats, the same disease is called red leaf. Ogle is a resistant oat variety. Minnesota wheat and barley varieties are susceptible. Early planting helps escape infection. Although the virus doesn't carry over in crop debris, it could overwinter in grasses along roadsides.

"If stands are poor and the crop is planted late, plants are

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

often infected, but those weren't the conditions this year,"  
Wilcoxson said. A statewide outbreak of barley yellow dwarf virus  
occurred in the late 1950s in Minnesota. The disease was  
noticeable during the past two years and it is widespread this  
year.

Insecticides can't be used to control the spread of the virus  
because no one knows when the aphids arrive and fungicides sprays  
are no good because they won't control viruses, Wilcoxson said.

# # #

AEA,BSS,CEO,V1

NAGR2158

---

# News and Information

---

EDS  
FASTP

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Dan Putnam  
612/625-7773  
Writer: Mary Kay O'Hearn  
612/625-2728

## **SPECIALTY CROPS DISCUSSED AT LAMBERTON FIELD DAY**

Those on tours during the Summer Field Day at the University of Minnesota's Southwest Experiment Station, Lamberton, June 24 tasted amaranth flakes from a breakfast cereal package during a discussion of specialty crops by agronomist Dan Putnam, who does research on uncommon, new and little-researched crops for the university's Agricultural Experiment Station.

Of more than 300,000 species of flowering plants in the world, less than 3 percent have been explored for possible cropping in the United States, Putnam said.

He warned that the risk is greater in growing specialty than major commodity crops: although specialty crops may have a higher per-acre value, the market for them is fragile.

Putnam urged making use of information available from the university's Minnesota Extension Service and new Center for Alternative Crops and Products. It is important to analyze markets to find out whether production will be profitable and to have a "willingness to start small," he said. He suggested trying an interesting new crop "in your garden before planting 100 acres--and then expanding with the market." Overproduction can easily

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

occur in a fragile and volatile market.

The trend in the future, Putnam sees, will be looking at what people are consuming and then trying to fill that need. He used the Jerusalem artichoke as a good example of a specialty crop that didn't have production, processing and marketing going hand in hand. Any crop needs the total process thought out to be successful.

Some of the crops Putnam mentioned in the specialty category included white lupines (a grain legume), peanut, rape seed or canola (for cooking oil), millet (a rice substitute), dry beans and camelina (a potential oil seed crop).

# # #

AEA,BSS,CEO,V1

NAGR2157

---

# News and Information

---

MSC  
10/1/87  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 2, 1987

Source: Jim Staricka  
507/752-7372  
Writer: Mary Kay O'Hearn  
612/627-2728

## **APRIL 21 PLANTING SPEEDS NITROGEN EXPERIMENT AT LAMBERTON**

April 21, 1987, an early planting date at the Southwest Experiment Station, Lamberton, means speeded up experiments in what has been described as the longest continuous urea experiment on corn in the world--now in its 28th summer.

Soil scientist Jim Staricka described the current experiments June 24, during the station's Summer Field Day. He pointed out that timing--whether there is fall application or spring application and sidedressing--doesn't make a lot of difference. That gives farmers in southwestern Minnesota an advantage; they have more options than farmers in other parts of the state.

With 18 different treatments of nitrogen fertilizer, involving four different application times, two forms of nitrogen (ammonium nitrate and urea) and four rates, there isn't much difference in efficiencies of timing, Staricka said. "That makes it lucky to be a farmer in southwest Minnesota," he remarked. "This means the total farming operation can be looked at and the farmer can plan nitrogen applications on corn around the other work that needs to be done."

Staricka told those on the field day tour that at least one

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

elevator operator he has heard of is encouraging farmers to buy nitrogen this fall by assuring them that they will be refunded the difference should the price drop by spring (the price of nitrogen is tied closely to the price of natural gas and is usually cheaper in the fall). The idea is to avoid the spring crunch for nitrogen purchases.

# # #

AEA,BSS,CEO,V1

NAGR2160

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 7, 1987

Source: Sandy Rand  
612/625-8148  
Writer: Russ Vogel  
612/625-3725

Editors: County agents can provide names of local participants.

## **4-H YOUTHS TO STUDY CITIZENSHIP IN VISIT TO NATION'S CAPITAL**

More than 300 Minnesota 4-H'ers will travel to Washington, D.C., this month to study leadership, national heritage and democracy through the 4-H Citizenship-Washington Focus program. The Minnesotans are among 5,000 youths from 46 states who will participate in the program this summer.

During their week-long stay in Washington the state teens will study citizenship and leadership in workshops at the National 4-H Center, attend seminars on the legislative process, participate in simulated congressional hearings and mock city council meetings, debate social issues of concern to youths and learn about voting and the use of voting machines.

In their 'spare time' the young citizens will tour such nationally important sites as the Capitol, the White House, the Supreme Court, the Smithsonian Institution, the Library of Congress, Gettysburg, the Vietnam Veterans Memorial and Arlington National Cemetery, the Kennedy Center, Mt. Vernon and Ford's Theater. The delegates, ages 13 to 19, also will meet with members of Minnesota's congressional delegation and observe a congressional committee hearing.

Page 1 of 2  
**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

Because the Citizenship-Washington Focus program is designed to be a part of ongoing 4-H citizenship programs at the local, county and state levels, workshops on how the youths can 'take home' their new knowledge and skills are offered. Delegates also prepare individual 'plans of action' for sharing what they have learned and putting it to use once home. Focus for the plans of action this year is 'Teen leaders--strengthening 4-H.'

The first contingent of state youths left for the capital June 27. Three more groups will leave on various dates in July. Five 4-H adult leaders or county agents will accompany each group.

# # #

V1,V4,Q,W

N4-H2165

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 7, 1987

Source: Juanita Reed  
612/625-9231  
Writer: Russ Vogel  
612/625-3725

## **4-H MEMBERS EARN HONORS IN STATE RECORD JUDGING**

4-H scholarship recipients, state ambassadors and delegates to national 4-H conferences have been determined after a week of competition in the state record judging event held recently in St. Paul.

State record judging features two fields of competition: judging of achievement, leadership, citizenship and National 4-H Conference records and judging of record books from specific project areas. Some 45 teenagers competed in the leadership, citizenship, achievement or national conference record evaluations. The winners will be invited to become 4-H ambassadors and are delegates to the National 4-H Congress or the National 4-H Conference. Winners from among the 140 competitors in other project areas will represent Minnesota in national project record competition at 4-H Congress.

In winning top honors in their area, the youths join a tradition of excellence in state 4-H records judging, says Juanita Reed, University of Minnesota 4-H extension specialist who coordinates state record judging. Reed says Minnesota has long been a leader nationally in record judging competition.

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Winners' names and home counties are listed alphabetically by project area below.

Achievement: Bill Arthur (Steele), Becky Williams (Fillmore);  
Aerospace: Mark Carlson (Sherburne); Alumni: Bea Brown (Renville)  
Ray Edgren (Mille Lacs), Ruth Sundeen (Nicollet), Judith Lee  
(Rice); Beef: Jeffrey Petry (Norman); Bicycle: Mike Heilman,  
(Dakota); Bread: Dawn Krcil (McLeod); Child development: Chris  
Heilman (Dakota); Citizenship: Kristi Petry (Norman), Kari  
Krogstad (Douglas); Clothing: Kristin Harris (Stevens);  
Conservation: Brent Mueller (Renville); Consumer education: Ann  
Germshaid (LeSueur); Creative arts: Darcy Nelson (Goodhue).

Dairy: Kim Rott (Olmsted); Dairy foods: Karla Johnson  
(Wadena); Dairy goat: Angela Whitney (East Ottertail); Dog:  
Janelle Olson (Grant); Electric: Brian Cuykendall (Jackson);  
Entomology: Bradley Browers (Carlton); Food nutrition: Lanette  
Shaffer (Isanti); Food preservation: Nancy Brueshoff (Norman);  
Forestry: Michelle Maher (Pope); Gardening: Scott Ross (Douglas);  
Health: Jamie Loewe (Sibley); Home environment: Lisa Peterson  
(Redwood); Horse: Jessica Sabolik (Douglas); Horticulture: Linda  
Notch (McLeod).

Leadership: Anne McDonald (South St. Louis), Tracy Van  
Moorlehem (Sibley), Christy Eichers (Blue Earth), Carolyn Bryce  
(Pope); Livestock: Janelle Sunvold (Renville); Needle arts:  
Shelley Monitor (Washington); Petroleum power: Grant Glass (West  
Polk); Photography: Heidi Palm (Meeker); Plant and soil science:  
John Hanson (Murray); Poultry: Becky Hacklander (Faribault);

Public Speaking: Patty DeGrood (Rice); Rabbit: Michele Amundson (Olmsted); Safety: Jennifer Brown (Redwood); Sheep: Tom Vold (Yellow Medicine); Swine: Larry Sedlacek (West Polk); Veterinary Science: Jessica Pick (Benton); Wildlife and fish: Curtis Pieske (Stevens); Wood Science: Mark Fritsche (Brown).

Delegates to the National 4-H Conference are: David DeMars (Mille Lacs), Kim Rabehl (Crow Wing), Terri Wehrman (Clay), Deb Scheibel (Renville), Keely Kleinwort (Dodge) and Juliann Ristow (North St. Louis). Chosen to compete for national 4-H scholarships were: Ag. careers: Erik Rockstad, (Norman); Dairy Goat: Brandon Yoemans (Goodhue); Food Careers: Kari Beran (Renville); Rabbit: Kirsten Bengtson (Winona); the Edwin T. Meredith Scholarship: Deborah Mayo (Martin); the Gertrude L. Warren Scholarship: Nancy Surprenant (Murray); the Ball Corporation Scholarship: Kari Beran (Renville).

Reed says Minnesota 4-H congratulates these outstanding young people, and all of those involved in state record judging, on their achievements of excellence.

# # #

V1,V4

N4-H2161

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 7, 1987

Source: David Pace  
612/625-3736  
Writer: Russ Vogel  
612/625-3725

## 4-H EXCHANGE PROGRAMS PROMOTE YOUTHS' GLOBAL AWARENESS

Dozens of state 4-H members will be learning more about the world in which they live this summer by traveling to distant lands or hosting international visitors through Minnesota 4-H international exchange programs.

Most recently, 17 state 4-H'ers, along with groups from Iowa, Wisconsin and South Dakota, left for a month-long stay in Norway. After orientation in Bergen they will live with host families who are members of Norske 4-H. More than 350 Minnesotans have traveled to Norway and nearly 800 Norwegians have stayed with midwestern host families in the 10 years the exchange program has existed.

New this year is an identical exchange program with families from Finland's counterpart to 4-H. Two Minnesota youths and an adult advisor departed June 24 for a one-month stay in Finland.

Among the many other state 4-H international exchange programs taking place this year are:

- The International 4-H Youth Exchange Representative (IFYE) program, which sent a Ramsey County 4-H alumnus, Linda Hanson, of Circle Pines, to Taiwan June 14. Also through this program,

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Minnesota will host IFYE representatives August 12 through October 16 from Northern Ireland, Switzerland, Taiwan, Portugal and Australia.

- The Japan-Minnesota 4-H Exchange, in which twelve 4-H members and adult advisors travel to Japan July 16 and 90 visitors from Japan's equivalent to 4-H will stay with Minnesota families July 19 through August 23.

- An IFYE Ambassador Exchange program, through which state 4-H'ers are staying in Switzerland and West Germany.

4-H international exchange programs throughout the country annually send members to some 35 countries and have American 4-H families, both urban and rural, hosting hundreds of international visitors. Minnesota programs alone have sent more than 800 4-H members to some 60 different countries since 1948.

David Pace, Minnesota Extension Service specialist, 4-H, and coordinator of state exchange programs, says the purpose of the programs is six-fold: to learn about another way of life; to become better informed on world affairs; to better understand ourselves and our own culture; to learn about 4-H and youth development programs; to better understand the contributions made by educational youth programs in other countries; and to improve communication and leadership skills.

# # #

V1,V4,Q

N4-H2163

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 16, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2728

## **MINNESOTA HAD 45 FARM-RELATED ACCIDENTAL DEATHS IN 1986**

Accidental farm-related deaths totaled 45 in 1986, one more than in 1985, and occurred in 31 of Minnesota's 87 counties.

Tractor-related accidents accounted for 20 of the fatalities, according to figures compiled by John True, agricultural engineer with the University of Minnesota's Extension Service. He terms the totals "provisional" meaning they may be incomplete. They are compiled from Minnesota Department of Health death certificates and news clippings from a clipping service.

Major causes of accidental deaths since 1981 in Minnesota have been farm machinery and tractors, specifically. For comparison, there were 51 accidental farm-related deaths in 1981, 63 in 1982, 49 in 1983, 46 in 1984, and 44 in 1985.

Fatalities in 1986 involved males from ages 3 to 80. Of the tractor accidents, there were rollovers and runovers, tipplings and fallofs. No deaths were attributed to animals last year, but some of the other causes were electrocution, suffocation, falls, truck/car and other farm machinery.

Stearns County had four farm-related fatalities, Todd County, three; Dodge, Douglas, Kittson, Lac qui Parle, Marshall, Morrison,

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Otter Tail, Pennington and Winona, two each, and the following counties each had one: Becker, Blue Earth, Cass, Crow Wing, Dakota, Fillmore, Freeborn, Houston, Lyon, McLeod, Meeker, Murray, Nobles, Norman, Olmsted, Pennington, Redwood, Renville, Scott, Waseca and Wright.

From newspaper clippings, True noted 44 non-fatal farm work injuries during 1986. Sixteen of them involved tractors or power take off.

# # #

CEO,V2

NAGR2166

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 16, 1987

Source: John True  
612/625-9733  
Editor: Mary Kay O'Hearn  
612/625-2728

## **PROTECT OXYGEN-LIMITING SILOS AND FIREFIGHTERS**

It's time for hay to be put into the silo--summer canning time for animals' winter food.

If you have an oxygen-limiting silo, designed to have all openings sealed to prevent air from entering, know how to prevent silo fires from occurring, says John True, agricultural engineer with the University of Minnesota's Extension Service.

Fire departments, most often these are neighbors who are volunteer firefighters, need to know what they are fighting. When oxygen-limiting silos are involved, they need to know that directing water or foam into a fire through the top openings of such a silo may cause a silo explosion--endangering their lives and those of anyone nearby.

When the hatches of an oxygen-limiting silo are tightly closed and the silo is filled, oxygen concentration should be too low to support a fire. But if the silo isn't properly sealed, air can spill in and spontaneous heating and perhaps ignition of silage may result. Oxygen seeping into the silo could be in just the right amount to allow a fire to smolder, resulting in accumulation of gases due to incomplete combustion. An additional increase in

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

oxygen could provide the explosive atmosphere. So merely opening top hatches of such silos, or applying water or foam by hose stream from the top of the silo, could let enough oxygen in to trigger the explosion. Dust explosions can happen, too, if dust inside the silo becomes suspended as a result of the hose stream and then is ignited by the heat of the smoldering fire.

True says the National Institute for Occupational Safety and Health has these suggestions to prevent fires and explosions:

- Keep hatches closed when the oxygen-limiting silo is not being filled or emptied.

- Maintain the silo to prevent air leaks and observe recommendations on filling rates and moisture content of the silage.

- Injected carbon dioxide or liquid nitrogen can be used as fire control measures with oxygen-limiting silos. Water or foam MUST NOT be directed onto the fire from top hatches or the roof. Leave the hatches open--don't attempt to close them--if smoke or steam is coming out of them.

# # #

CEO,V2

NAGR2167

---

# News and Information

---

11-11-87  
2/2/87

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 16, 1987

Source: Juanita Reed  
612/625-9231  
Writer: Russ Vogel  
612/625-3725

## 4-H'ERS PREPARE FOR MINNESOTA STATE FAIR

4-H members from clubs throughout Minnesota are perfecting projects and competing at county fairs in the hope that they will be among the 6,000 state youths who will participate in 4-H activities at the 1987 Minnesota State Fair, Aug. 27 through Sept. 7 in St. Paul.

4-H'ers at the state fair will be involved in everything from livestock and other exhibits and demonstrations to special contests in areas like small engines and fashion to the exciting "Share the Fun" and "Arts-in" shows, according to Juanita Reed, Minnesota Extension Service 4-H Youth Development specialist, who coordinates 4-H state fair activities.

In addition to traditional events, several new project areas will be featured this year, Reed says. For example, 4-H'ers will be presenting health and safety talks on eating disorders; alcohol and chemical abuse; stress and depression; and traffic, farm and home safety. Others will be involved with Junior Leadership exhibits. Special exhibits centering around the four state 4-H program issues--global awareness, career education, self-protection and youth-community connections--will be featured

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Saturday, Sept. 5. Still other 4-H'ers will compete in new Consumer Judging Contests, conducted like livestock judging contests but focusing on consumer products such as clothing, small appliances or food products.

In all, some 42,000 youths are members of 4-H clubs in Minnesota; the 6,000 4-H'ers who will participate in state fair activities earned this opportunity through participation in 4-H competition at county fair and/or district levels.

They will be joined at the fair by some 300 4-H adult volunteers, who serve as judging assistants and advisors to county delegations and help out in countless other ways, Reed says. "It's almost impossible to gauge the tremendous contribution volunteers make to our state fair effort," she says. "It just couldn't be done without them."

Reed adds that it is especially fitting in this, the Minnesota Year of the Volunteer, that a 4-H volunteer lounge would again be available at the 4-H building. All 4-H volunteers are invited to enjoy the lounge while taking in the myriad events and exhibits at the 4-H state fair facilities, she says. "It's one small way to recognize the people who make it possible for our youths to have such an enriching and rewarding experience."

# # #

AEA,CEO,V1,V4

N4-H2181

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 16, 1987

Source: Jim Lewis  
612/625-7746  
Writer: Russ Vogel  
612/625-3725

## **MINNESOTA 4-H FOUNDATION GRANTS AWARDED TO 18 PROGRAMS**

A total of \$15,200 in grants has been awarded to 18 4-H programs in Minnesota by the Minnesota 4-H Foundation's Board of Trustees, foundation president Duane Wilson has announced. The grants, which were awarded July 1, will support development of innovative 4-H programs at local, county and state levels.

"Their aim is to provide opportunities to try out something new and see if it works--and then to report back," said Jim Lewis, foundation executive director. The foundation board annually awards such grants to individuals, business and associations in support of new 4-H programs in the state, Lewis said. Grant funds come from unrestricted gifts to the Minnesota 4-H program.

The board awarded the following grants this year:

--\$1,500 to the Urban 4-H Marketing Plan, an effort to expand the image of 4-H in Hennepin and Ramsey counties, granted in response to a proposal by Extension agents Roger Holmes (Hennepin) and David Moen (Ramsey).

--\$1,000 for a Global Education Inservice Conference for 4-H and school leaders at the Rochester Public Schools, in response to a proposal by Robert Beery, director of curriculum and instruction

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

for Independent School District #535.

--\$2,500 to the Blue Skies Below My Feet program for curriculum and pilot project development, in response to a proposal by Marilyn Olson of the state 4-H office and agents Mary Duncomb, Dave Moen and Roger Holmes.

--\$500 to the Cook County Extension Service for volunteer leader training and coordination of efforts to expand membership, in response to a proposal from county agent Robert Sopoci.

--\$500 to Quad County Arts-in, a four-county, fine-arts skills and youth development program, in response to a proposal by Grant County Agent Laurie Magnus.

--\$200 to the Land and Water Stewardship Program in Dodge County, in response to a proposal from county agent Pat Pogalz.

--\$500 to a study called "The Healing Touch" on the relationships between 4-H'ers and the farm animals they work with, in response to a proposal submitted by Ralph Holcomb of the University of Minnesota's College of Veterinary Science.

--\$1,000 to 4-H Fishing Sports District Training programs, in response to a proposal from State 4-H Fishing Sports Program Development Committee members Joe Courneya of West Polk County and Bruce Munson of Sea Grant.

--\$500 to a committee to establish a 4-H volunteers' lounge at the state fair, in response to a proposal by committee chairpersons Doris Moeller, a 4-H volunteer from Northfield, and Norma Shaffer, a 4-H volunteer from Cambridge.

--\$250 to Freeborn County 4-H Shooting Sports programs, in

response to a proposal by county agent Sharon Davis.

--\$250 to Morrison County 4-H Shooting Sports programs, in response to a proposal by county agent Jim Carlson.

--\$1,000 to the Southwest Citizenship Focus program, in response to a proposal by Jackson County agent Rhonda Crom and Redwood County agent DeAnne Johnson.

--\$1,000 to the Volunteer Connection, a program in Carlton County to coordinate volunteer efforts for youth development, in response to a proposal by county agent Polly Prunuske.

--\$2,000 to the 4-H Goes Suburban program, in response to a proposal from Dakota County agent Mary Duncomb.

--\$500 to the development of a Minnesota 4-H Songbook, in response to a proposal from Becker County Agent Larry Swenson and Clay County Agent Sharon Query.

--\$500 toward scholarships for a Five-County Leader Retreat, in response to a proposal by Chippewa County Agent Karen Jacobson.

--\$1,000 to Southeast District Project Development Committees, in response to a proposal from Goodhue County agent Paula Lee.

# # #

AEA,CEO,Q,V1,V4

N4-H2180

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 16, 1987

Source: Charles Christians  
612/624-0766  
Writer: Jack Sperbeck  
612/625-1794

## **FAST CHANGES ARE NEEDED IN BEEF INDUSTRY**

The beef industry needs to move rapidly to identify cattle lines with the best combination of muscling, marbling and external finish, according to a speaker at the recent Beef Cattle Conference at the University of Minnesota.

"Breeders who are successful in identifying these cattle lines without jeopardizing early growth will be in a position of leadership in the years ahead," said Harlan Ritchie, animal scientist at Michigan State University.

Ritchie outlined the trends he sees in beef production:

### Seedstock industry:

--There will be fewer purebred herds, and up to 50 percent of present registered herds will go out. Some breed associations will pool resources and operate together.

--Artificial insemination will expand from 25 to 50 percent of registered cows.

--The future of embryo transfer will lie in the sale of frozen embryos from the top 0.1 percent of registered cows.

--Sex control will become a reality.

### Commercial cow-calf industry:

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

--Both large herds and small herds will continue to increase.  
The number of middle-sized herds will decrease.

--Some producers will switch to yearling grazing operations,  
but competing with feedlots for cattle will be difficult.

--Use of artificial insemination will increase from 1.5 to 5.0  
percent of the national cow herd.

--Large production units will not have time for problem  
cattle. Cattle must be relatively free of problems like calving  
ease, disposition and functional soundness.

--Breed types and crosses will be fine-tuned to more closely  
match environment and feed resources.

--Within a region, herds will become more uniform to meet  
tighter specifications of the packing, retailing and food service  
industries.

--Creative financial arrangements will foster an increase in  
retained ownership of calves.

--Good records will be a must in identifying and controlling  
costs.

#### Feedlot industry:

--Feedlots will continue to become larger.

--Commercial lots will continue to solicit and attract outside  
capital. But it will be profit-motivated, not tax-motivated.

--There will be a gradual shift in numbers from the  
Texas-Oklahoma area to the Nebraska, Kansas and Colorado area.

--Corn Belt cattle feeding will change. There will be more  
custom feeding, less ownership of fixed assets like land and

facilities, and more leasing. "Hotter" diets (less roughage, more grain) will be fed. More feed will be purchased instead of grown. "The bottom line for Corn Belt feeders is that farmer-feeders will become more like commercial lots," Ritchie said.

"The age of biotechnology means the production per animal and per farm will increase dramatically. Fewer animals and fewer farms will be needed.

"Animal rights groups will become more sophisticated and active. Cattle producers must be prepared to tell their side of the story to the public. The industry must also assure consumers of beef's safety," Ritchie said.

# # #

A,AEA,BSS,CEO,V1,V4

NAGR2179

---

# News and Information

---

July 16, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Warren Sifferath  
612/463-3302  
Writer: Jack Sperbeck  
612/625-1794

## **NUGGETS OF GOOD NEWS FOR MINNESOTA'S BEEF INDUSTRY**

You stop at the grocery store on the way home from work and pick up ready-to-eat lean steaks. The steaks came from a cattle feedlot that specializes in the "convenience" beef market.

Beef producers in the future will need to focus their marketing on specific consumer groups. And if they're successful, beef consumption could increase, according to a livestock marketing specialist with the University of Minnesota's Extension Service.

"The beef industry needs to focus on consumers and produce what they desire. It's the beef industry that must change. Consumers aren't going to adapt to the beef industry," says Warren Sifferath, who spoke at the recent Beef Cattle Conference at the University of Minnesota.

"Cattle feeders of the future will need to position themselves to serve a distinct consumer group," he adds. He lists the home-consumed, convenience market; the "white tablecloth" restaurant market; the health-conscious market; the organic market, for people who want beef with no additives; the high-quality meat market; and fast food and institutional markets.

"This means the packer specifies a specific carcass with big

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

discounts if cattle don't meet specifications," Sifferath says.

Surveys show that consumers in the 40- to 49-year age bracket are spending more on food items in grocery stores. "That's good news for the beef industry, since this age group will increase by 1 million per year for the next 10 years," Sifferath says.

"The broiler industry has done a great job of product development and promotion, based on consumer market research. The beef industry needs to do the same thing," Sifferath says.

"You can buy precooked drumsticks, breasts, whatever you want, and there's little food preparation time. That's the game the beef industry needs to play."

Minnesota has lost a major share of its cattle-feeding industry. Sifferath doesn't see Minnesota becoming a major cattle-feeding state. "But we could get some cattle feedlots back if the major cattle-feeding area moves north from Texas and Oklahoma to the Nebraska, Kansas and Colorado area," he says.

Minnesota feedlot operators in the future are apt to feed 1,000 to 10,000 head. The cattle may be financed and owned by other parties, such as other farmers, cow-calf operators and investors primarily looking for profits, not tax breaks.

"Feedlot operators will need to be experts at gaining financing and be excellent managers," Sifferath says.

Minnesota now has about 400,000 beef cows, compared to 850,000 in the early- to mid-'70s. "We could handle a larger cow-calf and backgrounding industry in the state," he says.

# # #

July 16, 1987

Source: Charles Christians  
612/624-0766  
Writer: Jack Sperbeck  
612/625-1794

### **CONSUMERS DEMAND YOUNG, LEAN BEEF**

Consumers want leaner beef, and beef producers must meet the challenge. That's what several speakers said at the recent Beef Cattle Conference at the University of Minnesota in St. Paul.

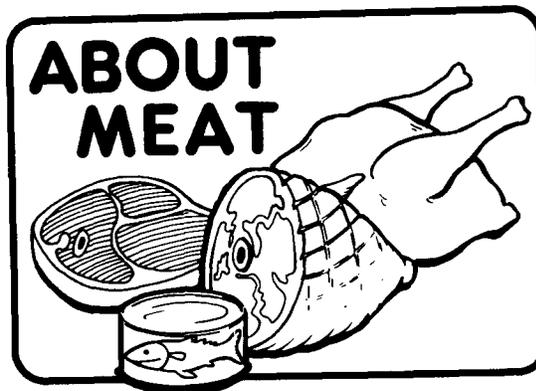
"Producers must respond to consumer demand and produce more lean beef with less external and between-muscle fat," says Charles Christians, conference coordinator and livestock specialist with the University of Minnesota's Extension Service. "We must produce a quality product with adequate marbling for juiciness and flavor. This will probably be Good to Low Choice quality grade. We need to produce cattle that are ready for slaughter at a younger age to produce beef with less fat and acceptable tenderness and juiciness." The USDA maturity "A" has too wide a range of age standards (up to 30 months), Christians adds.

"To produce tender beef, cattle should be ready for market at a maximum of 13 to 15 months of age. This means we'll need a consumer education program in meat preparation. Younger beef with less marbling can't be cooked as much or it will become too dry and lose tenderness," Christians says.

# # #

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744

July 16, 1987



Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** I've heard that lamb has "hard" fat. Is lamb fat all saturated?

**A:** No. A 3-ounce, roasted, trimmed serving of lamb has 8.2 grams of fat. Of this, 3.0 grams are saturated, 3.7 grams are monounsaturated and 0.5 gram is polyunsaturated fat.--**Richard Epley, extension animal scientist, meats**

**Q:** What is plaice? There's a recipe in my cookbook for it.

**A:** Plaice is a popular European flounder (a flat fish with both eyes on the same side of its head). It can attain a weight of 12 to 15 pounds, but most plaice are marketed between 1-1/2 and 3 pounds. Its flesh is of fine flake and sweet. Plaice are found between the coasts of southeastern England and Holland, off the Yorkshire coast and in the Irish Sea. Substitute another small flounder or lemon sole in your recipe.--**Jeffrey Gunderson, area extension agent, marine fisheries**

**Q:** How does one clean squid?

(page 1 of 2)

**A:** Thaw the squid if they are frozen. To clean them, grasp the head and mantle (body) firmly; pull off the head, tentacles and ink sack. Pull the transparent backbone (or quill) from the mantle. Squeeze any remaining entrails from inside the mantle. Under cold, running water, peel off the speckled membrane that covers the mantle. Wash the mantle thoroughly. Squid can then be cut into 1/2-inch rings and cooked as you like.--**Jeffrey Gunderson, area extension agent, marine fisheries**

**Q:** I like processed meats but have just been placed on a sodium restricted diet. What can I do?

**A:** Check ingredient statements of processed meats to see whether some of the sodium chloride (salt) has been replaced with potassium chloride. Also, reduce the amount of processed meat that you eat.--**Richard Epley, extension animal scientist, meats**

Send your questions about red meats, poultry or fish to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

-30-

X

X071687

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 22, 1987

Source: Mel Baughman  
612/624-0734  
Writer: Deedee Nagy  
612/625-0288

## **FAST-GROWING TREES ARE POTENTIAL NEW CROP ON CRP LANDS**

Farmers in the eight counties surrounding Granite Falls may want to consider entering land into the Conservation Reserve Program (CRP) before July 31 and planting it with fast-growing hybrid poplars. Northern States Power Company (NSP) is interested in converting its Minnesota Valley Power Plant at Granite Falls to a wood-burning facility and could be a potential market for the trees in about 10 years if there is an adequate supply of wood available at a cost competitive with coal, according to Mel Baughman, forestry specialist with the University of Minnesota's Extension Service.

The trees grow to between 5 and 10 inches in diameter and about 60 feet in height in 10 years. To reduce hauling costs, NSP would like the plantations concentrated within 25 miles of Granite Falls although plantations within 40 miles might be economical.

Farmers considering putting land into the conservation program during the current sign-up period ending July 31 should indicate if they are interested in the tree-planting program. A forester from the Department of Natural Resources (DNR) will then inspect their land and advise them on its suitability for trees,

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

needed management practices and potential markets for the wood. Farmers will still have the choice of planting either trees or grass on CRP acres up until the time they sign a contract, which could be several weeks or months in the future, Baughman says.

Cultivation and uses of hybrid poplar have been under investigation in this region for many years. Because there are no large tree plantations of this type in the Granite Falls area, DNR foresters are adapting information from research conducted in other locations. Baughman says they are presently recommending the planting of hybrid poplar on deep, well-drained loam soils. Other tree species suited for this type of cultivation, such as silver maple, eastern cottonwood or willow, may be recommended on poorly drained soils. Trees will most likely be planted on an 8-foot-by-8-foot spacing, and weed control may be necessary for two years. Fertilization and irrigation may increase tree survival and growth on some sites, but the economics of such measures may not justify their use.

Plantations would be ready for harvest in approximately 10 years. In addition to providing fuelwood, hybrid poplar plantations would provide woody cover needed by some wildlife species in this largely agricultural area.

NSP and the DNR are developing a brochure describing the potential woodburning power plant and the small financial incentive NSP is offering farmers for the first 3,000 acres planted to trees in the targeted area. The brochure will be available soon in Agricultural Stabilization and Conservation

Service (ASCS) offices in Chippewa, Kandiyohi, Lac Qui Parle, Lincoln, Lyon, Redwood, Renville and Swift counties. This project has evolved from cooperative work by the U.S. Forest Service's North Central Forest Experiment Station, the University of Minnesota, the U.S. Department of Energy, Minnesota's Department of Trade and Economic Development and NSP.

For more information about tree planting under the CRP program, farmers should contact a local ASCS or DNR forestry office. For information about growing hybrid poplars for NSP's proposed woodburning power plant, call the Minnesota DNR-Forestry/NSP office at the Minnesota Valley Power Plant in Granite Falls at (612) 564-3481. A toll-free number, (800) 323-0936, to that same office will be available by about July 31.

# # #

SWdist,SCdist,V1,V4,12,34,37,41,42,67,68,81

NCRD2192

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 23, 1987

Source: Pat Borich  
612/624-2703  
Writer: Deedee Nagy  
612/625-0288

## **MINNESOTA EXTENSION SERVICE NAMES NEW ASSOCIATE DIRECTOR**

Gail Skinner, currently a district director for Wisconsin's Cooperative Extension Service in Eau Claire, has been named Associate Director--Programs for the University of Minnesota's Extension Service effective in September, according to Pat Borich, Dean and Director of Minnesota Extension.

Skinner's position will involve leading a wide variety of programs and educational efforts directed at consumers, farmers, business persons, youth and others throughout the state's 87 counties. She joins the Minnesota Extension Service near the completion of a major statewide restructuring effort that will organize county and area extension agents and campus-based specialists into issue response teams. According to Borich, the effectiveness of such issue-oriented programming has been demonstrated in Extension's recent Project Support effort for farmers in economic trouble, Teens in Distress programs for troubled youth, and the farmer-lender mediation effort for farmers in serious financial difficulty.

It is this issue-oriented programming and Minnesota's excellent reputation for responding quickly to the state's needs

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

that attracted Skinner to her new position. She adds, "Minnesota Extension is well ahead of the game in its emphasis on major issues and the interdisciplinary approach to solutions that I see working so well here. I'm looking forward to the opportunity and challenge of working with Minnesota Extension."

Borich adds, "We're fortunate to be adding her to our staff. Her Extension career in Wisconsin and Nebraska has been outstanding and her talent in dealing with people and coordinating programs will be very useful in this position."

Skinner holds a doctorate in educational administration from the University of Wisconsin as well as bachelor's and master's degrees in home economics from the University of Nebraska. Before moving to Wisconsin to do her graduate work and later join the Extension staff there as personnel coordinator, Skinner was an extension clothing specialist in Nebraska for four years.

Her appointment is one of a number of changes to come to Minnesota Extension, which has undergone a major restructuring and refocusing of programs in the past year. Borich says, "We think we are now in a much better position to make rapid responses to local issues and conditions as we proved with Project Support and its service to farm families. As a result of this restructuring, we can move quickly to offer educational assistance, coordination and communication throughout the state."

He points to the county clustering concept as an example of how counties are working together to tackle important issues. Currently 13 small groups of counties have announced their

intentions to work closely together in clusters of from three to seven counties each. Other county cluster groupings are still being formed. Borich says this approach will permit maximum benefit from agents' areas of specialty and will encourage cross-county programming for major issues affecting the region and the entire state.

# # #

AEA,BSS,CEO,IAC,V1,V4

NEXT2190

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 23, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## GARDENING TIPS FOR AUGUST

To keep vegetables productive, harvest the fruit as soon as it ripens, advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "If you allow summer squash or cucumbers to stay on the vine until they turn orange and seedy, the plant will slow down its production of new flowers and fruit," Brown says.

-----

The dog days of summer aren't a good time to use herbicides, according to Deborah Brown, Minnesota Extension Service horticulturist. She says, "Refrain from using weedkillers on the lawn as long as temperatures remain high, particularly if the grass is moisture-stressed. Wait until cooler weather, with daytime highs in the low 80s, maximum, combined with adequate rainfall to prevent damage."

-----

"Put on your final application of rose fertilizer in early August," advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Feeding roses too late in the summer can interfere with the gradual hardening off process that

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

allows roses to go dormant in fall, then survive the winter as long as they have decent protection."

-----

August is a good time to divide and replant iris, or to plant new ones, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "Find a bright, sunny location with well-drained soil, and plant the rhizomes almost horizontally, just below the soil's surface. To ease the job, you may clip back the foliage to 4 or 5 inches."

-----

Gardeners in the southern half of Minnesota may try planting some quick-maturing vegetables in August. Minnesota Extension Service horticulturist Deborah Brown says that leaf lettuce, spinach, radishes and green onions are good choices. Once in a while, peas will produce sufficiently to be worth planting, too.

-----

It may seem early, but August is already time to think about moving houseplants back indoors, according to Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "If plants have grown a lot, it's a good idea to repot them into larger containers two or three weeks before bringing them inside," Brown says. "Most houseplants should come indoors when night temperatures dip below 60 degrees F."

# # #

I,V4,V7

NAGR2189

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 23, 1987

Source: Jeffrey Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## WILLOW APHIDS MORE NUISANCE THAN SERIOUS PEST

People who have willows in their yards may find the trees' branches and limbs infested with small, black, orange-legged, pear-shaped insects. Although these insects--known as black willow aphids--do not kill willows, they can be a nuisance.

"The aphids secrete a sugary substance called honeydew that creates a sticky mess on anything underneath the willow," says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service. "The aphids themselves can be found on anything near the tree, including clotheslines and the sides of buildings. They can cause problems by attracting yellowjackets, which feed on them."

Hahn says that persons who have a black willow aphid problem can use a garden hose with a spray attachment to dislodge the insects. If a chemical treatment is desired, Orthene can be used. If nothing is done, the aphids' numbers will diminish on their own, usually within several weeks.

# # #

I,V4,V7

Page 1 of 1

NAGR2187

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 23, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## ARE YOUR TOMATOES LESS THAN PICTURE PERFECT?

Gardeners are often dismayed to find that their tomatoes are cracked and misshaped, considerably less attractive than the fruits depicted in seed catalogs. There may be several reasons for this, says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service.

She says, "Concentric or radial cracks frequently develop on the stem end of tomatoes that ripen during hot, rainy weather. These cracks result from extremely rapid fruit growth brought on by periods of abundant rain and high temperatures especially when such weather follows drought.

"Minimize damage by maintaining a uniform supply of moisture through watering and soil mulches. Varieties differ in their susceptibility to cracking and variety descriptions often include this information."

Malformation and scarring of tomato fruits, particularly at the blossom end is a condition called "catface." Affected fruits are puckered with swollen protuberances and can have cavities extending deep into the flesh.

Page 1 of 2

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Ash says, "The causes are not generally known, but any disturbance to flowers can lead to abnormally shaped fruits. Extreme heat, drought, low temperatures and contact with hormone-type herbicide sprays may be causes of flower injury. Other than keeping herbicides away from flowers, the only control for catface is planting less susceptible varieties."

# # #

I,V4,V7

NAGR2183

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 23, 1987

Source: Joe Deden  
507/467-2437  
Writer: Mary Kay O'Hearn  
612/625-2728

## LANESBORO BATS RATE CONDOMINIUM

Bat houses are popping up in gardening-type catalogs. The come-on is "one bat is capable of catching 500 mosquito-sized insects in one hour." The gray bat is reputed to knock off as many as 3,000 in a night.

Joe Deden isn't sure a single bat's appetite is that ravenous, but he has had a condominium for bats the last three years at Lanesboro, 45 miles southeast of Rochester, where he is with the Southeastern Minnesota Forest Resource Center. The 900 acres of forest land in the Richard J. Dorer Memorial Hardwood Forest are being developed in conjunction with the University of Minnesota's College of Forestry and Minnesota Extension Service and the Minnesota Department of Natural Resources (DNR).

"I can't honestly attribute fewer insects to bats, but it certainly helps," Deden admits. The "condo" houses 200 to 300 of the shy creatures, who do not return to the condo the next day if disturbed when tours come too near them. At Lanesboro that is fairly often.

Deden has two reasons for having a bat condominium: to keep them around while moving some 2,000 out of a caretaker's house,

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

and, as a wildlife management venture, to broaden public awareness of the beneficial qualities of bats. He plans to install a second condo in a quieter spot, more to the bats' liking.

The bat dwelling is 4 feet wide and high, 7 or 8 feet long and 10 feet off the ground. It is on a pole, but could be on a tree, if one preferred. It is painted dark brown to absorb the heat--bats like it hot. "You can walk underneath and look up at the bats," Deden describes. Inner surfaces must be roughened up so that bats can cling easily to them. According to the DNR publication "Woodworking for Wildlife--Homes for Birds and Mammals," which has directions for building bat housing, the most critical dimension of a bat house is the width of the entry space which should be three quarters of an inch.

The bats Deden has attracted are the brown bats and small, buff-colored pipistrels. These are two of four species in Minnesota, which has the largest population of pipistrels.

Placing bat houses in a south-facing location, near rivers, lakes, bogs or marshes where the insect population is high, is most apt to attract residents. If more than a half mile from one of these sites, be prepared for a low occupancy rate. It may take a year or two for the bats to catch on, but once the space is used it doesn't need to be cleaned, according to the DNR. Deden smeared guano (bat dung) on the outside of the condo to entice entry. Some visitors to Deden's bat condo have taken bottles of guano home to start their own bat housing. At Detroit Lakes and DNR area fisheries headquarters, a bat house helped solve a bat

problem at the manager's residence. Bats are "devoted parents," the DNR publication points out. Mother bats help each other raise young; they reproduce slowly--just one offspring a year.

There are many myths about bats. One is that they are rodents or flying mice. Actually, they are more closely related to humans than to mice or rodents. And they are not rabies carriers any more than any other animal might be. In 40 years in the United States and Canada, statistics report that only 10 people are believed to have contracted rabies from bats.

It is true that bats' sonar systems (helping them find food) are more sophisticated than any human-made system.

But what about bats and histoplasmosis? It's a fever and respiratory problem resulting from bird and bat droppings. Deden says he worries more about bird than bat droppings. "I don't know if I'd want to house them (bats) over a dry ungrassed soil." But over green, vigorous, growing lawn and grass, he believes the elements will take care of the problem. "You could even put their housing over water or a pond," he says.

And if you didn't already know, there is a Bat Conservation International organization headed by Merlin D. Tuttle and its location is the Milwaukee, Wisc., Public Museum.

# # #

CEO,I,R,V4,V7

NCRD2176

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 23, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## STAKING, MULCHING HELPS REDUCE TOMATO SOIL ROT

Gardeners may find soil rot, caused by the soil-borne fungus Rhizoctonia solani, on their tomatoes during wet periods.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, says, "A soft brown rot develops, usually on the sides of fruits touching the ground or where soil is splashed up, onto the fruit. Large, sunken spots appear which often have a target-like pattern. Occasionally, the fruit may crack open.

"Soil rot is easily controlled by keeping the tomato fruits up, off the ground. Where just a few plants are involved, staking or placing them in tomato cages works well. In larger plantings, a plastic mulch may be necessary."

# # #

I,V4,V7

NAGR2182

Page 1 of 1

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 30, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## START SEEDING LAWNS IN MID-AUGUST

Mid-August marks the beginning of the best time for seeding lawns in Minnesota, according to Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

She says, "You have only a short time in which to act, until about mid-September in the southern part of the state; even earlier further north. Competition from germinating weeds is down to virtually zero by mid-August, nights are cooler and getting longer, and--we hope--rainfall should be more plentiful by then."

Brown advises choosing a good bluegrass-fescue seed combination, perhaps with some perennial rye. Annual rye is of little value if a lawn is seeded in autumn because it will not survive the winter.

Brown says, "Work the soil up so the seed can be raked into it, not just scattered on top of hard, packed ground. Fertilize with a special 'starter' fertilizer, or a mild, organic fertilizer such as Milorganite. Then water as often as necessary to keep the soil surface and the seeds continually moist.

"Grass planted in early fall will germinate and grow strong enough to come through most winters in good shape. In fact, the

grass you plant in August or September often comes up thicker and greener the following year."

# # #

I,V4,V7

NAGR2186

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 30, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## **AUGUST IS GOOD TIME TO PRUNE MANY TREES**

August is a good time to prune most established shade trees, including birches, maples, basswoods (lindens) and others, according to Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

Oaks are thought not to be at risk from oak wilt when pruned in August, Brown says, though many people prefer to wait until a hard frost to be on the safe side.

She adds, "Because of Dutch elm disease, it may be preferable to delay pruning elm trees until they are dormant. Although there is no conclusive evidence yet, current research seems to indicate elms are more vulnerable to infection when trimmed during the growing season.

"Wait to prune fruit trees until late winter or early spring; somewhere around the end of March. At that time, wounds will heal rapidly and there will be less chance of disease than when they're pruned in summer."

Brown says it's not a good idea to trim shrubs in August. Instead, she advises pruning them after they've gone dormant. She says, "Every time you prune during the growing season, new growth

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

is encouraged. Growth that develops late in the season has little opportunity to harden off, or become prepared to survive the winter."

# # #

I,V4,V7

NAGR2185

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 30, 1987

Source: John True  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2728

## KNOW YOUR ROLE BEFORE THE ACCIDENT

No one likes to even imagine an accident happening to himself, a family member, friend or anyone else. But it may be better to program in advance your reactions for when the adrenalin prompted by an accident situation sends you into "overdrive" and you want all your efforts to count for the person in need of help.

Of course, serious accidents can happen to someone working alone. That's why it's good to check frequently on how a person working alone is getting along (this is especially important on the farm). It's better to work in teams of two or more whenever possible.

John True, agricultural engineer with the University of Minnesota's Extension Service, says that having first aid training is certainly a plus. If two people find someone in distress, one could go for help while the other assists the victim. But if it's a one-to-one situation, alleviating the victim's problems comes first, before seeking help.

Unless there is an immediate threat (such as fire or an enraged animal), no inexperienced person should move a seriously injured person. Leave that to experienced rescuers and physicians.

Be sure you know the answers to the following points in advance--

Page 1 of 2

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

then hope you'll never be called on to deal with a life-or-death situation:

--Where and how to turn off the engine on powered equipment.

--Emergency phone numbers (911 if it covers your area), which should be on or near every telephone.

--How to disengage the power take-off (PTO).

--Location of fire extinguishers, how to use them and the best source of water for fighting fires (which might be a lake or pond).

--How to turn on the lights and how to turn off or disconnect electric power.

--Where electric power lines are in relation to movement of equipment.

--Where and how to turn off stationary farm equipment such as automatic grain handling equipment, grain dryer, silo unloader, conveyors, etc.

--How to turn off a portable auger or elevator.

--How to use safety bars on self-unloading wagons.

--How to turn on fans to get air moving in manure pits and confinement housing.

--Location of the water container or tank in event of an anhydrous ammonia accident.

--Directions to the accident location and how to get emergency vehicles into various areas of the farm.

# # #

AEA,CEO,BSS,F,V1

NAGR2202

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 30, 1987

Source: Claire Althoff  
218/643-5481  
Writer: Russ Vogel  
612/624-3051

## **WILKIN COUNTY'S KIDS IN THE KITCHEN PROGRAM EARNS NATIONAL AWARD**

Kids in the Kitchen, a five-week food preparation course for older gradeschool children developed by Wilkin County, Minnesota, extension agent Clair Althoff, has received the National Potato Board's 1987 Nutrition Action Award. A \$1,000 award for the Wilkin County 4-H Leaders Council was presented to Althoff July 11 at the board's headquarters in San Francisco.

The program offers cooking classes for third- to sixth-graders in thirteen basic food preparation and nutrition skills, from peeling vegetables to mixing and measuring and using an oven. It was developed in response to a growing need for kitchen skills among children of working parents, Althoff says.

"With the increasing number of dual-career or single-parent families, parents are often too rushed at mealtime to teach kids or let them help," Althoff says. A survey of children who have participated in the program showed that 80 percent had rarely or never performed even simple tasks like stirring or measuring. Moreover, as increasingly more children are home alone after school, they need such skills to prepare nutritious snacks and lunches for themselves.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

In the Kids in the Kitchen course, groups of three or four children work together on new cooking tasks, and a snack or meal for the students results from each class. Both girls and boys are encouraged to participate, Althoff says, "because boys like to eat, too."

The program was developed around the 4-H manual "Fit It All Together," and classes are taught by 4-H adult and junior leader volunteers with "dishpan kitchen" kits that require only an oven, a water supply and tables as additional facilities.

Kids in the Kitchen courses, which often are coordinated through local community education programs, have been held at schools in Rothsay and Campbell and in Polk County.

The program, which was launched through support from the Minnesota 4-H Foundation, is an excellent volunteer recruitment tool, as curriculum and equipment needs are already laid out, Althoff says. For junior leaders, it also offers excellent experience in working with people.

"It's been really fun to work with the program, and it's rewarding to have it nationally recognized," says Althoff. As Kids in the Kitchen develops further, it may be expanded throughout Minnesota and beyond.

# # #

AEA,CEO,H,Q,V1,V4,14,26,56,61,89

N4-H2203

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 30, 1987

Source: Jim Lewis  
612/625-7746  
Writer: Russ Vogel  
612/624-3051

## **4-H COOKBOOKS ARE GOING FASTER THAN FRESH BROWNIES**

Copies of the cookbook "Blue Ribbon Favorites," a collection of nearly 500 favorite recipes from 4-H families throughout Minnesota, are vanishing quicker than the last few bites of Ole's Cheese Meat Loaf. Copies of this 160-page treasure, published by the Minnesota 4-H Foundation, will be available only a while longer, according to Jim Lewis, foundation executive director.

"Blue Ribbon Favorites" offers both wholesome, hearty, pride-of-the-fair fare and an opportunity to support Minnesota's 4-H program, Lewis says. "It's both from and for 4-H, as the recipes come from 4-H families and the proceeds go to support 4-H programs."

The book's head cook was Polk County 4-H'er Tanyja Kuznik, who worked months to compile recipes from each of Minnesota's 87 counties. Kuznik got the idea from similar 4-H cookbooks in other states, which have raised thousands of dollars to support 4-H activities.

The fruit of her efforts includes delicacies like Beginners Brownies and Impossible Quiche; Deviled Egg Bake and Heavenly Jam; and 7-Up Pancakes and Pineapple-Oreo Salad. Herein are such

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

Gopher State favorites as Mississippi Mud Cake, Choco-diles Bars, Microwave Turtles, Fondant Ducks and Mud Hen Bars.

Heartier offerings include One-pound Bread Loaf, Roadside Potatoes, Sour Cream Meatballs, Impossible Cheeseburger Pie, Carol's Tater Tot Hot Dish, Fit-for-a-King Beans and Mrs. America Casserole.

In the Heritage Favorites section are, of course, recipes for krumkake, lefse, rommegraut and kringles, but also Grandma's German Coffee Cake, Slovenian Krofe, Mexican Almond Pudding, Oriental Chicken Wings and more.

Ole's treasured meat loaf is joined by other family favorites, such as Mom's Food Processor Blueberry Muffins, Grandma's Barbecued Meatballs, Daddy's Special, Mrs. Frank's Favorite Buns, Irene's Broccoli Soup and Mary Kay's Corn Bread--not to mention Nina's Cheesecake for (U.S. Senator) Rudy (Boschwitz), Wild Rice Soup from Gov. and Mrs. Rudy Perpich and Fettucine a la Pimento Mondale from the former vice president.

"Blue Ribbon Favorites" is spiral bound, has a washable cover and features nutritional information for recipes and dozens of 4-H photos. It can be purchased at the 4-H Building during the Minnesota State Fair or by contacting a county agent. Copies are available also by calling Margaret Anderson at (612) 625-0244 or by sending a check for \$7.50, plus \$1 postage, to the Minnesota 4-H Foundation, 340 Coffey Hall, University of Minnesota, St. Paul, MN 55108.

# # #

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

July 30, 1987

Source: Sherri Johnson  
612/624-1708  
Writer: Deedee Nagy  
612/625-0288

## **MILDEW COULD BE LINGERING REMINDER OF RECENT FLOODING**

Just when you thought it was safe to go down in your basement, mildew could be growing on carpets and furnishings left wet from recent heavy rains and flash floods. Sherri Johnson, textiles and clothing specialist with the University of Minnesota's Extension Service, says the potential for mildew growth is increased by the conditions present in many Twin Cities area homes: moisture, humidity, warmth and poor air circulation.

Johnson says that mildew is often a delayed reaction to water problems. As long as an area is saturated, mildew does not have enough air to grow. But once some drying has occurred, the fungus will thrive at temperatures between about 75 and 85 degrees F.

Mildew is easy to detect because of its characteristic musty odor, Johnson says. Mildew damages carpeting and other fabrics by weakening the fibers to the point where they may shred or fall apart if moved or even walked upon. It also discolors fibers and the stain is almost impossible to remove. Although only natural, not manmade, fibers are affected by mildew, carpeting of synthetic fiber often has a jute backing that can be attacked by the fungus.

Eliminating moisture before mildew can set in is the best

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

control. Remove wet carpet and pad and dry it as quickly as possible, Johnson advises. "Normally you should seek professional carpet cleaning assistance," she says. "If that isn't available quickly, however, there are some steps you can take while you're waiting for professional help."

--Use a wet vacuum to extract as much water from the carpet as possible. Remove the carpeting from the room.

--Remove the pad. "In most cases, it will probably deteriorate once dried so you should plan on purchasing new padding," Johnson adds. "Padding marketed under the trade name Omalon may be salvageable, but others are undoubtedly ruined." She advises that both the carpet backing and its face need to be treated with a mildew protector. Professional carpet cleaners have this type of product. Once carpet and pad are removed, the carpet should be dried using fans and dehumidifiers.

--Dry the subflooring and treat it with a mold and mildew disinfectant. Only after the subflooring is thoroughly dry should you put down a new pad and have the carpeting professionally reinstalled, according to Johnson.

If it's too late for these preventive steps and mildew has started growing in carpets, it may still be confined largely to the backing. Johnson suggests examining the backing for discolored areas that may indicate the growth location. To control growing mildew, she recommends:

--Removing small rugs or carpets and placing them in full

sunlight if possible. This will usually kill mildew in a day or so.

--Giving the backing a light "painting" of one part of 3 percent hydrogen peroxide to five parts water. Direct exposure to sunshine will speed this process.

--Eliminating growth conditions for mild and mildew in the subflooring before replacing carpets and new padding.

# # #

CEO,V7

NHEC2205

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: David Bedford  
612/474-6886

Writer: Mary Kay O'Hearn  
612/625-2728

## **GOOD EATING IS ALREADY HERE WITH MINNESOTA APPLES**

There will be plenty of Minnesota-grown apples at this year's state fair. Our early spring and hot summer speeded their growth.

At the University of Minnesota Horticultural Research Center at Excelsior, a mile west of the Minnesota Landscape Arboretum, apple sales began July 25, "one of the earliest dates in my eight years here," says David Bedford, assistant scientist. This year's apples are earlier and somewhat smaller, he says, but more plentiful.

Mantet and Oriole varieties were picked in July and in normal years aren't harvested until early August. "We're two or three weeks ahead of normal," Bedford says. You may even be munching a State Fair or Beacon variety as you read this. Paulareds are starting to show up and "we might be into Wealthy by fair time." Red Baron, Sweet Sixteen and McIntosh will be ripening next. Because Labor Day is unusually late this year, the state fair doesn't open until Aug. 27.

Less disease and more insects characterize this year's growing season. Bedford says plum curculio (which also affects apples)

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

has done some surface damage to the crop, but there is much less apple scab, which is usually the major cause of surface blemishes on apples.

Heavy rains and wind on July 20 knocked some fruit off. "We've had to support some trees by staking because they were leaning over with so much moisture in the ground and the heavy crop in their branches," Bedford said, adding that he can't recall doing that in other years. Spotty hail throughout the state damaged apple crops in some areas, he notes.

Bedford thinks that the early varieties, such as Mantet and Oriole, whet tastes for later apples. They are for fresh eating, pie or sauce, softer than late-season apples and don't store as well. Trail is the crabapple already being harvested; it's good for jellies and pickling. Centennial, Northland and Dolgo will be ripening soon, as will Chestnut, a large crabapple which he calls "one of the nicest little eating apples." With the "flood" of July rainfall, Bedford says mid- and late-season apples may turn out to be normal size.

A University of Minnesota Extension Service publication, "Apples for Minnesota," by Emily Hoover and Shirley Munson, names many varieties, typical harvest dates, characteristics of the fruit, suggested uses and storage. There is also a map which shows where they'll grow best within the state. The publication, item number AG-FO-1111, is available from county Extension offices throughout Minnesota.

# # #

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: Jeffrey Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## EARLY SPRING WILL MEAN YELLOWJACKETS GALORE

Look out, folks, 1987 is stacking up to be another Year of the Yellowjacket.

Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service, says, "'Population explosions' of yellowjackets are due to early, warm springs. This type of weather allows them to get a head start on building their nests, which ultimately means that more workers are produced. The pleasant, early spring we experienced this year will come back to haunt us as the yellowjackets will be very noticeable by the end of the summer."

Why are yellowjackets more noticeable at the end of summer?

Hahn explains, "There are more yellowjackets then, but it is also a matter of food preference. Yellowjackets start on a protein diet, feeding on insects. However, as summer progresses, insects become less abundant and the yellowjackets switch to a carbohydrate diet, feeding especially on sugary foods.

"This means that they will be wherever there are people, swarming around food, even garbage. Outdoor gatherings are easily ruined by yellowjackets. During the 1985 Minnesota State Fair,

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

yellowjackets were everywhere, making an extreme nuisance of themselves. It is expected that they will be as numerous--and as bothersome--throughout the area this year."

What are your options if your picnic is besieged by hungry yellowjackets?

"Any nests that are in the yard can be sprayed with an insecticide labeled for yellowjackets," Hahn says. "This should be done during the evening, when they are less active. However, many yellowjackets do not come from nearby nests, giving you very few alternatives. There are no baits or chemical sprays to effectively control or repel them. Covering garbage cans and dumpsters will help to a degree. However, if a yellowjacket wants to share your soda, it is hard to refuse it."

# # #

I,V4,V7

NAGR2188

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: Mary Nelsestuen  
612/646-8384  
Writer: Russ Vogel  
612/624-3051

## **AWARD-WINNING 4-H PROGRAM LINKS YOUTH, SENIOR CITIZEN VOLUNTEERS**

A new Minnesota 4-H program matching senior citizen volunteers with 4-H youths has been awarded a \$1,000 grant from RJR Nabisco, Inc. through the National 4-H Salute to Excellence program.

The intergenerational program will "match the leadership needs of 4-H clubs with seniors who have expertise or are willing to provide leadership to youths," says program developer Mary Nelsestuen, a St. Paul home economist and 4-H adult leader. Nelsestuen got the idea from the example of her mother, who at 71 is still an active 4-H volunteer leader in Wisconsin.

4-H utilizes a great deal of volunteer leadership, Nelsestuen says, but traditional sources of adult leaders are becoming less available. "The 'typical' 4-H volunteer appears to be a married female, high school graduate, age 36 to 44, who has been a volunteer for 5 to 10 years," she says. Surveys show, however, that well more than half of women in that group work fulltime and are no longer as available for volunteer work.

"We need to look at other sources of volunteers for the 4-H program," Nelsestuen concludes. "Seniors today are a very active, productive group and have much to offer." She says retirees can

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

provide life skills and career or hobby experience to youths--and the youths, in turn, "can offer enthusiasm, can keep older people more aware of what's happening and keep them young."

Nelgestuen will conduct surveys to gauge clubs' leadership needs and to determine the availability of suitable volunteers, and then follow up with matching and recruitment efforts. Her work also will include training seniors to work with youths, promoting understanding of the 4-H program, and developing a handbook that will help club leaders fully utilize senior citizen resources.

The program will be launched on a pilot basis in three Ramsey County 4-H clubs. Nelgestuen plans to contact seniors through community and senior housing centers and retired senior programs.

She received grant support through participation in the national 4-H Salute to Excellence program, which annually brings an outstanding 4-H leader from each state to the National 4-H Center in Chevy Chase, Md., for leadership training and program development. The work delegates do on their projects while at the conference can lead to grants such as the one Nelgestuen's project received. Nelgestuen will launch the pilot effort this month and report on its success a year from now.

The program is especially timely in that 1987 is the Minnesota Year of the Volunteer. "I feel that one of 4-H's strengths is that it's a volunteer program," says Nelgestuen. "And that's why we need to utilize the immense potential of the retired senior population."

# # #

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: David Halvorson  
612/625-5292  
Writer: Sam Brungardt  
612/625-6797

## **MINNESOTA POULTRY SERVICE WORKSHOP TO BE SEPT. 24**

The Minnesota Poultry Service Workshop for veterinarians and service people who work with egg, broiler and turkey producers will be Sept. 24 on the St. Paul campus of the University of Minnesota.

The workshop will begin at 8:30 a.m. in Room B45 of the Classroom-Office Building with a general session which will include presentations on water quality for poultry production, computer monitoring and control of poultry houses, interpreting antibody titers, the effect of vaccine handling on immunization, and wet droppings in poultry.

Concurrent sessions dealing with problems in egg production and poultry meat production will follow the general session.

During the sessions on egg production, experts will discuss the effect of nutrition on reproduction, hatching egg handling and sanitation, monitoring antibody levels and controlling mycoplasmosis in laying flocks, nutrition near peak production, and pullet-growing problems.

During the sessions on meat production, topics of discussion will be leg problems in meat birds, serological monitoring of a

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

meat flock, erysipelas, production tips, and consumers and the promotion of poultry meat products. There will also be a panel discussion of carcass quality, poultry meat products of the future and salmonella contamination of poultry carcasses.

The registration fee for the workshop, which includes lunch, is \$20 if paid in advance and \$25 at the door. Checks for registration should be made payable to the University of Minnesota and be sent to James O. Hanson, 440 Vet Teaching Hospital, University of Minnesota, St. Paul, MN 55108.

The Minnesota Poultry Service Workshop is sponsored by the University of Minnesota's Extension Service, College of Veterinary Medicine and Department of Animal Science and the Midwest Association of Avian Veterinarians.

# # #

AEA,BSS,CEO,N,V1

NAGR2213

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: Jim Lewis  
612/625-7746  
Writer: Russ Vogel  
612/624-3051

## 5 NEW TRUSTEES JOIN MINNESOTA 4-H FOUNDATION BOARD

Minnesota 4-H Foundation President Duane Wilson has announced the election of five outstanding Minnesotans to the foundation's board of trustees. The board is a 36-member body that guides and governs foundation activities in support of the state 4-H program.

The new business/industry representatives on the board are Allen Gerber, executive director of the Minnesota Association of Cooperatives, St. Paul; Clinton D. Kurtz, president of Citizen's State Bank, Norwood; and Terry Thompson, director of corporate communications for General Mills, Inc., Minneapolis. Joining Central District trustees is Donald Chapdelaine, general manager of the Farmers Union Co-op Oil Association of South St. Paul. And a new 4-H member trustee is Laura Matson, a state 4-H ambassador and National 4-H Congress delegate from Spring Valley.

The Minnesota 4-H Foundation was incorporated in 1981 as an operating foundation for the Minnesota 4-H Program, according to Jim Lewis, foundation executive director. "It exists to raise funds for the program and to determine how those funds are expended," Lewis says. The board of trustees directs and guides all affairs of the foundation, including oversight of long-range,

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

strategic and annual planning; approval of all fund-raising policies and assistance in generating charitable contributions; and direction of financial management.

The board is made up of representatives of business and industry, delegates from the state's five 4-H districts, representatives of county extension services, outstanding 4-H members, and ex officio members from the Minnesota Extension Service. Trustees are elected by the board to three-year terms.

Gerber was named executive director of the Minnesota Association of Cooperatives last year after nine years as executive assistant. The former Peace Corps unit officer is a board member of the Rochdale Institute, Co-op Printing, the Minnesota Highway Users Federation and the U.S. Overseas Cooperative Development Committee and a member of the overall advisory committee for the University of Minnesota Technical College, Waseca.

Kurtz is president and director of the Citizens State Bank of Norwood, Norwood Bancshares, Inc. and Norwood Agency, Inc. A former president of the Minnesota Bankers Association, he has also been a leader in the American Bankers Association; director of the Independent Bankers Credit Company; Minnesota director and an instructor in the Midwest Banking Institute; and active on state ag task forces and with the Minnesota Extension Service.

Thompson was named director of corporate communications at General Mills in 1982 after 15 years in public relations, mostly for the Quaker Oats Company. A nationally published writer, he is

a member of the communications committee of Minneapolis United Way and the Public Relations Society of America, Twin Cities chapter, as well as a trustee of Metropolitan State University Foundation in the Twin Cities.

Chapdelaine was named general manager of Farmers Union Co-op Oil Association of St. Paul in 1974 after serving as assistant manager for 18 years. He is chairman of the South St. Paul-Inver Grove Heights Chamber of Commerce transportation committee; president of the Wakota Life Care Center and of Total Life Clinics; and a member of the advisory board for the University of Minnesota Technical College, Waseca. He has been president of the Minnesota Association of Cooperatives, the Minnesota LP Gas Association and the Southern Minnesota Managers Association.

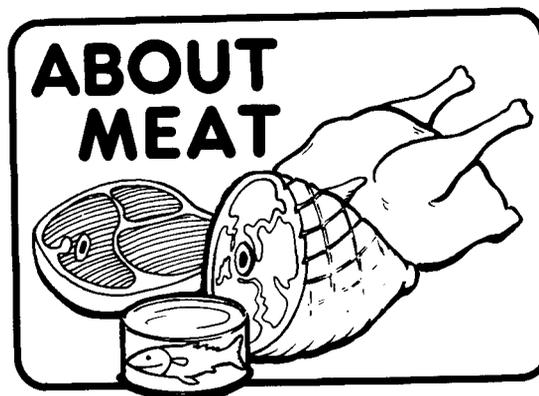
In addition to being a state 4-H ambassador and delegate to National 4-H Congress, Matson has been a 4-H international exchange program delegate and a county 4-H ambassador and has held several offices in her 4-H club. In school, she has been class president, a student council member, active in speech and drama, a member of All-State Band, co-captain of the volleyball and golf teams and a constitutional officer at Girls' State. This fall, Matson will attend Macalester College in St. Paul, where she will study anthropology.

# # #

AEA,CEO,V1,V4,V7

N4-H2214

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744



Aug. 6, 1987

Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** I know that ground beef has more fat than extra lean ground beef. However, ground beef costs less per pound. Which is the best value?

**A:** USDA percentages for fat and protein of raw ground beef are 26.6 and 16.6, respectively. Fat and protein percentages of raw extra lean ground beef are 17.1 and 18.7. Thus, extra lean ground beef has 2.1 percent more protein. Therefore, on a percentage basis, extra lean ground beef should be worth 12.7 percent more in price.--**Richard Epley, extension animal scientist, meats**

**Q:** Because extra lean ground beef has less fat, isn't it better for you than regular ground beef?

**A:** While fat is the major component lost from ground beef during broiling, extra lean ground beef loses mainly moisture (although total cooking losses are about the same). Three and one-half ounces of broiled ground beef have 292 calories; the same amount of extra lean ground beef has 265. Although the cooked extra lean

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

ground beef has less fat than the cooked ground beef, it also has more protein, which also contributes to calories. Thus, the difference in total calories between the two is not as large as some think.--Richard Epley, extension animal scientist, meats

Q: I buy beef in bulk and they say to use the ground beef first.

Why?

A: Air is incorporated into ground beef during the grinding. Thus, oxidative rancidity of the fat occurs sooner in ground beef during frozen storage than in steaks and roasts. Keep the temperature of your freezer at minus 5 degrees F to maximize storage time for optimum quality.--Richard Epley, extension animal scientist, meats

Send your questions about red meats, poultry or fish to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

-30-

X

X080687

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: Jim Lewis  
612/625-7746  
Writer: Russ Vogel  
612/624-3051

## **5 NEW TRUSTEES JOIN MINNESOTA 4-H FOUNDATION BOARD**

Minnesota 4-H Foundation President Duane Wilson has announced the election of five outstanding Minnesotans to the foundation's board of trustees. The board is a 36-member body that guides and governs foundation activities in support of the state 4-H program.

The new business/industry representatives on the board are Allen Gerber, executive director of the Minnesota Association of Cooperatives, St. Paul; Clinton D. Kurtz, president of Citizen's State Bank, Norwood; and Terry Thompson, director of corporate communications for General Mills, Inc., Minneapolis. Joining Central District trustees is Donald Chapdelaine, general manager of the Farmers Union Co-op Oil Association of South St. Paul. And a new 4-H member trustee is Laura Matson, a state 4-H ambassador and National 4-H Congress delegate from Spring Valley.

The Minnesota 4-H Foundation was incorporated in 1981 as an operating foundation for the Minnesota 4-H Program, according to Jim Lewis, foundation executive director. "It exists to raise funds for the program and to determine how those funds are expended," Lewis says. The board of trustees directs and guides all affairs of the foundation, including oversight of long-range,

Page 1 of 3

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

strategic and annual planning; approval of all fund-raising policies and assistance in generating charitable contributions; and direction of financial management.

The board is made up of representatives of business and industry, delegates from the state's five 4-H districts, representatives of county extension services, outstanding 4-H members, and ex officio members from the Minnesota Extension Service. Trustees are elected by the board to three-year terms.

Gerber was named executive director of the Minnesota Association of Cooperatives last year after nine years as executive assistant. The former Peace Corps unit officer is a board member of the Rochdale Institute, Co-op Printing, the Minnesota Highway Users Federation and the U.S. Overseas Cooperative Development Committee and a member of the overall advisory committee for the University of Minnesota Technical College, Waseca.

Kurtz is president and director of the Citizens State Bank of Norwood, Norwood Bancshares, Inc. and Norwood Agency, Inc. A former president of the Minnesota Bankers Association, he has also been a leader in the American Bankers Association; director of the Independent Bankers Credit Company; Minnesota director and an instructor in the Midwest Banking Institute; and active on state ag task forces and with the Minnesota Extension Service.

Thompson was named director of corporate communications at General Mills in 1982 after 15 years in public relations, mostly for the Quaker Oats Company. A nationally published writer, he is

a member of the communications committee of Minneapolis United Way and the Public Relations Society of America, Twin Cities chapter, as well as a trustee of Metropolitan State University Foundation in the Twin Cities.

Chapdelaine was named general manager of Farmers Union Co-op Oil Association of St. Paul in 1974 after serving as assistant manager for 18 years. He is chairman of the South St. Paul-Inver Grove Heights Chamber of Commerce transportation committee; president of the Wakota Life Care Center and of Total Life Clinics; and a member of the advisory board for the University of Minnesota Technical College, Waseca. He has been president of the Minnesota Association of Cooperatives, the Minnesota LP Gas Association and the Southern Minnesota Managers Association.

In addition to being a state 4-H ambassador and delegate to National 4-H Congress, Matson has been a 4-H international exchange program delegate and a county 4-H ambassador and has held several offices in her 4-H club. In school, she has been class president, a student council member, active in speech and drama, a member of All-State Band, co-captain of the volleyball and golf teams and a constitutional officer at Girls' State. This fall, Matson will attend Macalester College in St. Paul, where she will study anthropology.

# # #

AEA,CEO,V1,V4,V7

N4-H2214

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 6, 1987

Source: Jeffrey Hahn  
612/624-4977  
Editor: Sam Brungardt  
612/625-6797

## EARLY SPRING WILL MEAN YELLOWJACKETS GALORE

Look out, folks, 1987 is stacking up to be another Year of the Yellowjacket.

Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service, says, "'Population explosions' of yellowjackets are due to early, warm springs. This type of weather allows them to get a head start on building their nests, which ultimately means that more workers are produced. The pleasant, early spring we experienced this year will come back to haunt us as the yellowjackets will be very noticeable by the end of the summer."

Why are yellowjackets more noticeable at the end of summer?

Hahn explains, "There are more yellowjackets then, but it is also a matter of food preference. Yellowjackets start on a protein diet, feeding on insects. However, as summer progresses, insects become less abundant and the yellowjackets switch to a carbohydrate diet, feeding especially on sugary foods.

"This means that they will be wherever there are people, swarming around food, even garbage. Outdoor gatherings are easily ruined by yellowjackets. During the 1985 Minnesota State Fair,

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

yellowjackets were everywhere, making an extreme nuisance of themselves. It is expected that they will be as numerous--and as bothersome--throughout the area this year."

What are your options if your picnic is besieged by hungry yellowjackets?

"Any nests that are in the yard can be sprayed with an insecticide labeled for yellowjackets," Hahn says. "This should be done during the evening, when they are less active. However, many yellowjackets do not come from nearby nests, giving you very few alternatives. There are no baits or chemical sprays to effectively control or repel them. Covering garbage cans and dumpsters will help to a degree. However, if a yellowjacket wants to share your soda, it is hard to refuse it."

# # #

I,V4,V7

NAGR2188

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 13, 1987

Source: Larry D. Jacobson  
612/625-9733  
Writer: Mary Kay O'Hearn  
612/625-2728

## **CATALOG OF FARM STRUCTURE PUBLICATIONS IS AVAILABLE**

A free, 28-page catalog listing new and revised publications of Midwest Plan Service, an official activity of 12 North Central land grant universities, including the University of Minnesota, is available from the Agricultural Engineering Department at the University of Minnesota.

Larry D. Jacobson, agricultural engineer with the Minnesota Extension Service, says new and revised publications on cast-in-place concrete, extinguishing silo fires and farm accident rescue are included. The annual catalog gives brief descriptions, prices and illustrations for 21 handbooks, 17 agricultural engineers' digests, five technical resources and 110 building plans. These publications are written by land grant university agricultural engineers and other specialists from the North Central Region.

Jacobson says, "Some of the farm structure publications cover housing for swine, beef, sheep, dairy, horse and solar livestock housing; livestock manure management; framing and utility buildings; farmstead planning; and hay, grain and machinery storages." Publications on solar grain drying, family housing,

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

private water systems, domestic sewage disposal and home and yard improvements are also available and described in the catalog.

For a copy of the 1987-88 MWPS catalog, write Jacobson at 201 Agricultural Engineering, University of Minnesota, St. Paul, MN 55108.

# # #

AEA,CEO,V1

NAGR2216

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 13, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## ASTER YELLOWS IS COMMON DISEASE IN LATE SUMMER

Aster yellows, a disease that attacks more than 170 species of broadleaved plants, can often be seen in late summer. Marigolds, asters, delphiniums, daisies, petunias, phlox, lettuce and carrots are just a few of the more common hosts.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, says, "Aster yellows is caused by a mycoplasma-like organism that is spread from plant to plant by leafhoppers. The first symptom of the disease is vein clearing or loss of chlorophyll followed by a yellowing of newly formed tissues and adventitious growth, erect habit and greenish flowers. Infected asters will be stunted, with stiff, yellow growth and many secondary shoots. The tops of an infected carrot plant will appear stunted, yellowed and bushy and the root will have many short, bushy, secondary roots, often arranged in several rows along its length.

"Remove infected plants as soon as they are noticed," Ash advises. "No chemicals are recommended for control as damage is seldom severe in the home garden."

# # #

I,V4,V7

Page 1 of 1

NAGR2184

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 13, 1987

Source: Robert M. Jordan  
612/624-6784  
Writer: Sam Brungardt  
612/625-6797

## **ANGORA GOAT SEMINAR AND WORKSHOP WILL BE SEPT. 26 IN ST. PAUL**

Mohair producers will have a rare opportunity to become updated on the latest production and marketing practices at the University of Minnesota's second Angora Goat Seminar and Workshop on Saturday, Sept. 26. The event, which will begin 9:30 a.m. at the Sheep Research Barn on the university's St. Paul campus, will emphasize hands-on, practical learning.

Dick Boniface, field director of the North Central Wool Marketing Cooperative; Warren Fomo, an Angora breeder and skilled shearer; and University of Minnesota animal scientist R. M. Jordan will teach mohair grading, evaluation and marketing.

A demonstration by Fomo and Jordan on selecting breeding stock, followed by an evaluation contest of animals before and after shearing, will enable attendees to learn how to select the most profitable goats for replacements. Among the husbandry practices that are to be demonstrated will be shearing, hoof trimming, drenching, ear notching, external and internal parasite control, castrating and dehorning.

The University of Minnesota and Texas A & M are the only U.S. universities that conduct Angora goat research. The seminar and

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

workshop will feature a discussion of the research being conducted on Angoras for the University of Minnesota's Agricultural Experiment Station.

Enrollment for the Angora Goat Seminar and Workshop will be limited to 75. The registration fee is \$15 per person, which will include a copy of the proceedings. Checks for registration should be made payable to the University of Minnesota and be sent to Extension Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55103. For more information, persons outside the Minneapolis-St. Paul metropolitan area may call (800) 567-5363; inside the metro area, 625-2787.

# # #

AEA,BSS,CEO,0,V1,V3,V4

NAGR2217

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: David Brown  
612 624-0712  
Writer: Jack Sperbeck  
612 625-1794

## **NEW NATURAL DRUGS MAY PREVENT DIARRHEA IN PIGS, HUMANS**

New drugs made from naturally occurring amino acids may help prevent diarrhea in baby pigs. The idea is already being used experimentally to treat human diarrhea, according to Dr. David Brown, a veterinary pharmacologist at the University of Minnesota.

Somatostatin, a natural "messenger" substance found in the pig's digestive system, is one peptide that could be modified by organic chemists and injected into baby pigs to prevent dehydration, the main cause of death from diarrhea. "We could possibly see products like this on the market within 10 years," Brown says.

Somatostatin analogue is a compound derived by organic chemists that's being used in clinical trials with human patients. "It's been very useful in treating human patients for diarrhea in cases where there was no response to other drugs," Brown says. Based on the clinical studies with human patients, the compound seems to have little or no toxic side effects, he adds.

"Researchers used to think that peptides broke down so fast that they couldn't be introduced into the body system to perform useful functions. The peptide derivatives that organic chemists

make have biological effects like natural substances, but are longer lasting," Brown says.

There's a bit of luck involved in the process. "In the pig, the lower small intestine is the area where the drugs work best. It's also the area where most bacterial infections occur," Brown says.

Diarrhea, or scours, costs U.S. hog producers \$50 to \$100 million annually from death losses and reduced weight gains. Losses average \$1 to \$2 per pig, and 15 to 20 percent of all pigs are affected.

The natural drugs that Brown is researching rapidly reverse dehydration, or water loss. "Lethal dehydration occurs over a critical three- to five-hour time frame. A shot given in this time period to 'rehydrate' the pig may be helpful in stopping the scouring.

"Dehydration is the major cause of death from diarrhea. Current antibiotics and vaccines address the longer-term bacteria infections, but not the short-term dehydration problem," he says.

Brown is with the University's College of Veterinary Medicine. His research is funded by the University's Agricultural Experiment Station and the National Institutes of Health. Funding also comes from the Minnesota Pork Producers Association through the University's Swine Center.

"Pigs are helping people in research," Brown says. "The pig's digestive system is much like the human digestive system. One

spin-off from our research could help children in developing countries.

"One of every two kids born in underdeveloped countries dies of diarrhea disease. Rampant diarrhea affects general health through dehydration. And with undernourished children, diarrhea also impairs intestinal absorption of nutrients already in short supply."

# # #

AEA,BSS,CEO,V1,V4,V7,P,S

NAGR2222

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: Jim Pettigrew  
612 624-5340  
Writer: Jack Sperbeck  
612 625-1794

## **DOSE OF COCONUT OIL MAY SAVE MORE BABY PIGS**

Giving underweight baby pigs a dose of coconut oil may help their chances of survival, according to research by scientists with the University of Minnesota's Agricultural Experiment Station.

Laboratory work with baby pigs shows that they can use fatty acids found in coconut oil as a supplemental energy source, according to Jim Pettigrew, director of the University's Swine Center. He and graduate student Shu-hsing Chiang found that the baby pigs could use coconut oil fatty acids better than the fatty acids found in most other fat products.

The researchers used stomach tubes to give newborn pigs doses of two different fats: long-chain fatty acids (oleic acid) and medium-chain fatty acids (octanoic acid--the kind found in coconut oil). They measured the amount of each fat that was digested, absorbed and used for energy by the pigs.

"The pigs used the medium-chain fatty acids well. That's why we think coconut oil would be a good energy source for them," Pettigrew says. "A producer with a relatively high preweaning mortality rate might consider using coconut oil as a supplemental

Page 1 of 2  
University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

energy source for low-birth-weight pigs," he advises.

Study results suggest that a dosage of about 7 cc is best for a 2- to 2.5-pound pig. If the dose is much larger, the pig can't digest it well.

"Now we plan to do farm trials in which we hope to determine whether coconut oil will actually improve survival of underweight pigs," Pettigrew says.

Fat dosages at about the recommended level didn't reduce the amount of colostrum the baby pigs took from the sow.

Partial funding for the project came from the Minnesota Pork Producers Association through the Swine Center.

Earlier research using corn oil as a fat supplement didn't increase baby pig survival rate. One possible reason is that baby pigs don't have much capacity to use that kind of fat.

# # #

AEA,BSS,CEO,V1,V3,P,S

NAGR2221

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: Jim Pettigrew  
612 624-5340  
Writer: Jack Sperbeck  
612 625-1794

## **NEW U OF M SWINE RESEARCH BUILDING STARTS OPERATIONS**

Pork producers and animal scientists say it's a unique "cross." The new animal science swine research facility on the University of Minnesota's St. Paul campus is a cross between a swine production unit and a research laboratory.

The new unit holds 60 sows and will be used mainly for intensive research with a small number of animals, says Jim Pettigrew, animal scientist and director of the University of Minnesota's Swine Center. Extensive research with many pigs will continue around the state at branch stations of the University's Agricultural Experiment Station.

The building has four controlled-environment rooms where scientists can vary temperature, ventilation rate and lighting. Contributions from pork producers and the swine industry helped fund these rooms.

There are also nutrient balance rooms, small rooms for special research procedures and a weighing-handling area. Sows in the farrowing area will appreciate a computer-controlled cooling feature that drips water on their shoulders during warm weather.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Now there's a combination of intensive (basic) and extensive (applied) swine research facilities in Minnesota. "We're convinced that's our most effective use of limited taxpayer resources in support of the pork industry," Pettigrew says.

# # #

AEA,BSS,CEO,V1,V3,V4,P,S

NAGR2220

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## **PROPER COMPOSTING OF GARDEN REFUSE DESTROYS FOLIAR PATHOGENS**

Is it safe to compost diseased plant refuse from the garden or should one dispose of it in some other way to avoid disease problems next year?

"Most foliar, or leaf, pathogens are destroyed rather quickly once crop refuse is in contact with soil and the refuse rots," says Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service. "However, some pathogens, such as the wilt diseases of tomato, are soil inhabitants and are not destroyed by contact with soil or by the rotting of crop refuse."

Ash says that composting will kill most plant pathogens if the compost heats properly and the temperature is maintained long enough. She says a compost pile must have a minimum volume of 1 cubic yard and be turned frequently to kill pathogens in the plant refuse. Pathogens are killed if the temperature in the pile is 120 to 160 degrees Fahrenheit for two to three weeks. Temperatures can be checked by partially burying a candy or meat thermometer in the pile.

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

"Turn the pile every two or three days to provide aeration and mixing," Ash advises. "Adding sawdust, leaves, etc. helps to provide a mixture more likely to heat properly. Keep the pile at 65 to 75 percent moisture--fairly moist but not wet. Add water if necessary to maintain the proper moisture. These procedures help maintain high temperatures."

Ash says that if the temperature is too low or turning is not frequent enough, some pathogens will survive, particularly those near the edges of the pile. If high pile temperatures cannot be maintained, then diseased plant refuse from the garden might best be destroyed.

# # #

V4,V7,I

NAGR2226

---

# News and Information

---

11 C  
11 + 17

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## **APPLE LOVERS ALERT: GREAT MINNESOTA CROP THIS YEAR**

A mild winter followed by a hot, dry spring and early summer have proven to be a mixed bag in terms of Minnesota's horticultural crops. One big success story, however, is this year's apple crop, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"Early apples that usually ripen in mid- to late August were being harvested around July 20 in the Twin Cities area," Brown says. "And it looks as though other varieties will ripen several weeks ahead of their normal schedule as well. Not only is the harvest going to be early, the crop is going to be abundant.

"We grow many wonderful apple varieties in Minnesota, most of which are far superior to those shipped in from other parts of the country. This is the year to try them all. Locally grown apples will be available at orchards, farmers' markets, roadside stands and some supermarkets."

V4,V7,H,I

# # #

NAGR2229

Page 1 of 1

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Aug. 20, 1987

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Deborah Brown  
612/624-7491  
Writer: Sam Brungardt  
612/625-6797

## RESEED IF BLUEGRASS HASN'T RECOVERED

Despite recent rains, many Minnesota homeowners are finding that their bluegrass lawns have not recovered well from this summer's hot, dry weather. Many lawns have areas of dry, dead grass.

"If, after two or three weeks of rain or watering, parts of your bluegrass lawn haven't greened up, you should reseed those areas that failed to recover from the drouth," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"The ideal time to establish bluegrass in Minnesota is from mid-August to mid-September, and the further north you are located, the earlier the reseeding should be done so the bluegrass seedlings will make enough growth before cold weather to be able to survive the winter."

# # #

AEA,CEO,V4,V7,I

NAGR2237

Page 1 of 1

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: Mary Darling  
612/624-6286  
Writer: Deedee Nagy  
612/625-0288

## **WOMEN'S DIETS ARE CHANGING, BUT NOT ALL FOR THE BETTER**

Women who are changing their eating habits out of concern for their fat intake may be misinformed and even reducing the quality of their diets by their choices. That is one of the conclusions resulting from national surveys of 1,500 women conducted by the U.S. Department of Agriculture in 1977 and 1986.

Mary Darling, nutritionist with the University of Minnesota's Extension Service, says women today are consuming less whole milk, eggs and meat and more lowfat milk, soft drinks and grain products than was the pattern a decade ago. Despite this, the changes haven't always resulted in better nutrition, she adds. Higher-income women in particular have curbed their meat intake enough to fall short of their recommended dietary allowances for zinc and iron.

And despite calorie- and cholesterol-conscious decisions to limit meat and whole milk in their diets, upper-income women consumed slightly more fat than those in lower-income groups. Darling says this is because although they are eating less fat in meat, poultry and eggs, the high-income women in the survey have increased their consumption of such fat-laden foods as salad

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

dressings, cheeses, cream desserts and baked goods other than bread.

The study found that women whose incomes were more than three times the poverty level income averaged 74 grams of fat per day in their diets. Women whose incomes averaged between 130 and 300 percent of the poverty level consumed 68 grams per day, and women whose incomes were below that level consumed 65 grams of fat per day. As percentages, the highest-income women got 38 percent of their calories from fat, compared to 36 percent for women in the middle and lowest income groups.

Darling says, "At all income levels, women's intakes of several important nutrients are below recommended levels and their fat intakes are above the 30 to 35 percent of energy that most authorities recommend." This points out, she says, that nutrition education should emphasize choosing foods for their vitamin and mineral content as well as the avoidance of fat.

In addition, Darling notes, women's efforts to reduce fat intake may have adversely affected the iron and zinc levels in their diet. "If these women were acting on the basis of nutrition education they received, either the advice itself was confusing or incomplete or the way it was interpreted was incorrect," she concludes.

# # #

V4,V7,H

NHEC2231

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 20, 1987

Source: Neal P. Martin  
Michael A. Schmitt  
612/625-3747  
Editor: Sam Brungardt  
612/625-6797

## **NITRATE TOXICITY IS DANGER WITH DROUTH-STRESSED CORN**

Sound management can reduce the possibility that nitrate toxicity from feeding drouth-stressed corn will harm livestock, say Neal P. Martin and Michael A. Schmitt, agronomists with the University of Minnesota's Extension Service.

If forages are needed immediately, Martin and Schmitt encourage producers to look into options other than green chopping or grazing drouth-stressed corn. Martin advises, "Alter the ration to a minimum fiber diet using relatively inexpensive corn grain as an energy source and other supplements to provide protein and minerals."

Corn that is still stressed and very immature is the most likely to cause nitrate toxicity problems. One way to determine the nitrate content of corn is to collect a forage sample and have it analyzed in a laboratory for nitrate nitrogen. No toxicity problems should be expected if the nitrate nitrogen level of the sample is below 3,000 parts per million, the agronomists say.

Because the majority of nitrates accumulate in the stem, raising the cutting height will reduce nitrate concentrations if drouth-stressed corn must be chopped. However, neither Martin nor

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Schmitt advise grazing drouth-stressed corn as long as the plants are in a weakened condition.

"Because of recent rains, the corn crop will attain its highest quality and yield as well as its optimum moisture content for storage if harvesting is delayed," Schmitt says. "With additional rain, the corn plants that are still green will accumulate more dry matter in their stalks and leaves. Harvest should be delayed until the optimum level of 62 to 65 percent moisture is reached, whether or not the corn has set ears."

The agronomists say that if harvest is delayed, normal plant development and maturation will reduce the nitrate level of drouth-stressed corn. Ensiling suspect corn reduces nitrates substantially, and mixing it with other feeds also reduces the chance of toxicity problems.

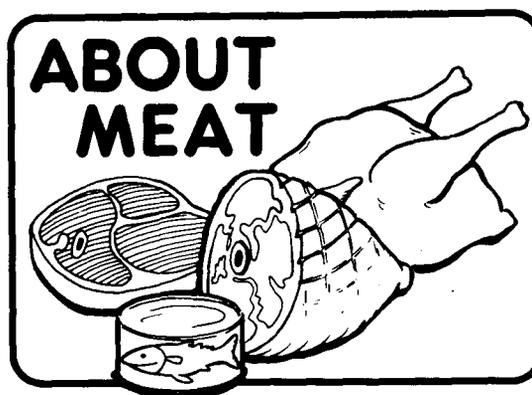
# # #

V1,V3,V4,A,D

NAGR2232

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108  
(612) 625-6744

Aug. 20, 1987



Specialists with the University of Minnesota's Extension Service and Sea Grant programs answer questions about red meats, poultry and fish.

**Q:** We purchased a 1,000-pound steer from my uncle and had it custom slaughtered and processed. We were shocked when we only got back 438 pounds of frozen beef. What happened to the other 562 pounds?

**A:** The hide, head, feet, blood, lungs, intestines, etc. comprise approximately 40 percent of the live weight of a steer.

Approximately 27 percent of the resulting carcass weight is lost during chilling, aging and trimming excess fat and bone. A number of factors influence these percentages. However, a rule of thumb for meat yield from a steer is to multiply the live weight by 60 percent and the resulting figure by 73 percent (or multiply the live weight by 0.438).--**Richard Epley, extension animal scientist, meats**

**Q:** We want to have a pig barbecue but don't know where to get the pig. Any suggestions?

**A:** Check with local meat processors. They probably can locate a pig and process it for you. More importantly, they may be able to

(page 1 of 2)

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND MINNESOTA COUNTIES COOPERATING

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

cook the pig in their smokehouse or on their own spit. Doing your own whole-hog barbecue is difficult because of the equipment needed and the timing element. The pig does not have to be slaughtered under federal inspection if the meat is consumed only by you, the members of your household and nonpaying guests. Meat sold in Minnesota must be federally (USDA) inspected.--**Richard Epley, extension animal scientist, meats**

**Q:** My son likes to eat raw hamburgers. I was always taught to thoroughly cook all meat. Who's right?

**A:** I side with you on this one. Although the presence of pathogenic organisms in raw beef is not common, cooking to 145 degrees F makes meat "safe." Thus, ground beef should be cooked to at least a medium degree of doneness.--**Richard Epley, extension animal scientist, meats**

If you have questions about red meats, poultry or fish, send them to About Meat, 136 ABLMS, University of Minnesota, 1354 Eckles Ave., St. Paul, MN 55108. Specialists will try to reply to all questions. Selected questions will appear in this column.

X

-30-

X082087

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 27, 1980

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## HORTICULTURAL TIPS FOR EARLY AUTUMN

Early autumn is a good time to plant evergreen trees and shrubs, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "Their root systems will have ample opportunity to begin the re-establishment process that will help them come through winter in good shape."

- - - - -

"Early fall is a good time to take cuttings from geraniums, coleus, wax begonias and impatiens that you want to try overwintering indoors," says Deborah Brown, horticulturist with the Minnesota Extension Service. "Root them in moist vermiculite or fresh potting soil, then keep them in a bright, sunny window or 10 to 12 inches beneath fluorescent light tubes."

- - - - -

Early autumn is a good time to check your lawn for thatch build-up, says Deborah Brown, Minnesota Extension Service horticulturist.

"Rent a power rake if the thatch layer exceeds 1/2 inch in thickness," Brown advises. "If the lawn is thin, overseed immediately after removing the thatch. Several weeks of good growing conditions

Page 1 of 2

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

before cold weather sets in will minimize any potential damage from dethatching."

- - - - -

"Early fall is a good time to zap those dandelions once and for all," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Use a broadleaf weedkiller containing 2,4-D when temperatures are in the 60s or 70s, the wind is calm and no rain is forecast for at least 24 to 48 hours. If you kill dandelions in the fall, they won't be around to bloom their fool heads off next spring!"

- - - - -

Early autumn is a good time to fertilize your lawn, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "There's no need for special fertilizers in autumn. A standard lawn food containing approximately four parts nitrogen to one part phosphorus and two parts potassium should do a good job. Don't forget to repeat the application in late October or early November for best results."

- - - - -

Early autumn is a good time to bring in houseplants that have been outdoors for the summer, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "Even though they can gradually become accustomed to cooler temperatures, the transition will be less traumatic if they are brought inside before night temperatures fall much below those of your house."

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 27, 1987

Source: Cynthia Ash  
612/625-6290  
Editor: Sam Brungardt  
612/625-6797

## **NEXT YEAR'S BEAUTIFUL LAWN BEGINS NOW**

Having a beautiful lawn next spring and summer may depend on what you do this fall.

Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service, says, "Naturally, you'll want to start with the cultural practices recommended for your lawn situation but don't forget to consider any disease problems you may have had or that are common in your area."

Ash offers these suggestions for helping to control or prevent lawn disease problems this fall:

--Keep the lawn mowed at the recommended height until it goes dormant in late fall. This will help prevent a serious snow mold problem if winter weather conditions are conducive for snow mold.

--Apply fertilizer at the recommended rate and time. This will encourage good root growth and early green-up next spring. Healthy plants are less likely to have disease problems. Improper fertilization and lack of mowing in the fall can promote excessive shoot growth and increase your chances for snow mold and other disease problems next season.

--Lawns with a thatch layer more than 1/2 inch thick are subject to a complex of fungal diseases known as "patch disease" (Fusarium blight). Fall aeration and/or dethatching stimulates root development and helps to reduce the thatch layer that is common on many newer lawns.

"In most instances," Ash observes, "management practices are the main key to controlling or preventing lawn diseases. Fungicides are seldom necessary."

# # #

V4,V7,I

NAGR2225

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

August 27, 1987

Source: Juanita Reed  
612/625-9231  
Writer: Russ Vogel  
612/624-3051

Editors: This release is meant mostly for your use in planning state fair coverage, but it could, with minor editing, be worked into schedules you plan to publish or broadcast or into a story. Specific times and dates and more information are available from the specialists listed below or by calling the 4-H state fair public relations office at 612/642-2388. If all else fails, call the 4-H state fair office, 642-2356. See you at the fair!

#### **4-H OFFERS FULL SCHEDULE OF STATE FAIR FUN, FASCINATION**

So many 4-H activities are planned during the 1987 Minnesota State Fair, Aug. 27-Sept. 7 in St. Paul, that it takes a book--an 80-page premium book--to describe them all. But that's what happens when 6,000 outstanding Minnesota teenagers gather to exhibit or demonstrate the blue-ribbon projects that have earned them a trip to this statewide showcase.

The hub of 4-H state fair activities is the 4-H Building, which is located on Cosgrove Street (just west of Snelling), between Commonwealth and Randall Avenues. Hundreds of demonstrations and exhibits and many of the shows and contests take place on the first floor of Harkness Hall, but Erickson Hall, one floor up, also is always buzzing. Fairgoers will find all 4-H activities free of charge.

Here are some notes on 4-H state fair highlights:

Page 1 of 5

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

**Arts and Communications:** 100 young artists in the Arts-In Program will present their stage show, "Step into the Arts" and their Arts in the Park crafts and presentations throughout the fair. The spirited, nearly professional stage show will be presented two or three times daily on center stage in Harkness Hall, while Arts in the Park players will share their skills with children at a park across Cosgrove Avenue from the building. Share the Fun shows and performances by the State Public Speaking and Communication Arts Contest finalists also will grace the stages.

Among creative arts exhibits in Harkness Hall will be a lifelike, 9-foot-long wire sculpture of a blue marlin by 4-H'er Bradley Phillips of Janesville. And don't forget the 4-H clowns, who will brighten each night's State Fair Parade at 6 p.m.

Sources: Carol Shields, 612/625-8715, or Muriel Mapes, 625-3107.

**Home Economics:** A new contest, the Consumer Judging Event, will be held at 8 a.m., Thursday, Sept. 3, in the Northstar Ballroom of the Student Center on the University of Minnesota's St. Paul campus. Teams from dozens of counties will compete in judging everyday consumer purchases for quality and economy. A technology exposition Sept. 6 in Harkness Hall will offer the public hands-on experience at six advanced computer stations. And the Children's Center will again offer kids a chance to try new activities developed by 4-H'ers for their child development projects--while the parents have an opportunity to visit exhibits

on their own for a few minutes. Source: Marilyn Olson, 612/646-0703 or 642-2358.

**Fashion Revue:** Some 200 4-H models will show their latest fashion purchases and creations at 10:30 a.m. on Aug. 29 and 31 and Sept. 2 and 4 on the two halls' main stages. Among the models Sept. 4 will be talented Kris Schissel of Park Rapids, who has been in the state fashion revue for the past two years and a member of the Court of Honor both times. Source: Lynn Shimota Honnold, 612/829-7288.

**Bicycle:** In the 4-H bike contests, to be held at 9 a.m. and 2 p.m. on Aug. 29 and Sept. 2 one block north of the 4-H Building, at the Randall Street entrance (which is permanently closed), participants must drive a special course, identify bike parts, troubleshoot a "tampered" bike and complete a written exam. All kids (4-H'ers or not) who are 12 or younger and sign up at the bike information booth are eligible to win a new bike, helmet or bike lock. Source: Cynthia McArthur, 612/625-9719.

**Animal Science:** More than 2,500 youths will participate in animal science activities at the fair. Most of the dozens of fascinating events will be held during Livestock Weekend, Sept. 4-7. Among highlights are the skillathons, in which participants go through a variety of stations solving animal health situations, and an education exhibit area on the west end of the dairy barn where 4-H'ers will offer hands-on experience to the public in such areas as tatooning or noseprinting animals for identification (starts at noon Friday, Sept. 4, and runs continuously through the

weekend). Of course, hundreds of exotic or market-perfect animals will be shown during the weekend, too. Information on times and locations of shows, skillathons, judging contests and demonstrations is available from Dan Messenburg, 612/625-5737 or 642-2360, or Tom Zurcher, 612/625-4228.

**Tractor and Small Engine:** The 4-H and FFA Tractor Driving Contest, which starts at 8:30 a.m. Sept. 3 at the Youth Camp north of the 4-H Building, pits young drivers against several tests of their abilities, including backing a variety of farm implements and driving safely through a prescribed course. The Small Engine Contests, at 8:30 a.m. and 2 p.m. on Aug. 29 and Sept. 2 at the former Randall Street entrance, will feature tests of mechanical knowledge and parts identification and a timed troubleshooting segment, in which participants must find several tricky "bugs" in engines and get them fixed and running. Source: John Kvasnicka, 612/625-1229 or 642-2358.

**4-H Leaders' Lounge:** 4-H Leaders' Lounge: The lounge, sponsored by the 4-H Association of Volunteer Leaders, will again offer adult leaders a chance to relax, enjoy refreshments and talk with other leaders from around the state. The lounge is open all day at the south side of the 4-H Building and is a good place to meet dedicated 4-H adult volunteers--especially on fair Volunteer Day, Aug. 30.

**4-H Issues Area Day:** Minnesota 4-H has identified four areas of concern to youth--global awareness, self-protection (health, chemical and sexual responsibility), career education and

youth-community connections--that Minnesota 4-H will tackle in coming years. Presentations and exhibits on Sept. 5 in Harkness Hall will address these issues and 4-H's plans, as a high-quality youth development program, to help Minnesota youths deal with them. Source: Juanita Reed, 612/625-9231.

# # #

V1,V4,V7,G,I,Q,W

N4-H2242

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

August 27, 1987

Source: Mary Ann Bucher  
507/289-0591  
Writer: Russ Vogel  
612/624-3051

## **MINNESOTA YOUTH TO COMPETE IN STATE 4-H HORSE SHOW**

More than 400 Minnesota youths will bring their horses to the Minnesota State Fairgrounds Coliseum in St. Paul Sept. 19-21 to participate in the 17th annual State 4-H Horse Show. This, the largest youth horse show in Minnesota, will be held on a weekend for the first time this year to allow more of the public to attend.

Some 5,000 youths are involved in the Minnesota 4-H horse program; the 400 finalists were selected in county competition. They will compete in 58 classes of English, western and gymkhana competition during the three-day show. Among other features of the show are a grand entry parade, a horse judging contest, a new Kids Korner and a variety of commercial booths.

Saturday's shows will feature English and gaming events. The evening performance will open with the grand entry parade--led by 1987 Dan Patch Award winner Jessica Sabolik of Kensington, followed by a dressage show, presentation of the Dan Patch Award, a raffle drawing and ceremonies honoring Le Sueur County Extension Agent and long-time 4-H volunteer Arlos Krueger, to whom this year's show is dedicated.

Gaming events continue Sunday, along with showmanship and judging team competition. Western pleasure and horsemanship competition will be Monday.

Major supporters of the State 4-H Horse Show include the Minnesota 4-H Foundation, Canterbury Downs, the Minnesota Friends of 4-H, the Minnesota Quarterhorse Association, the Western Saddle Club Association and the Minnesota Livestock Breeders Association.

# # #

V1,V3,V4,V7,B,K,M,Q

N4-H2240

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

August 27, 1987

Source: Jeffrey Gonsulus  
612/625-8130  
Lee Hardman  
612/625-6226  
Writer: Sam Brungardt  
612/625-6797

## **CRISIS EXEMPTION ALLOWS DESICCANT TO BE USED ON DRY EDIBLE BEANS**

The Minnesota Department of Agriculture announced Aug. 21 that a Section 18 had been granted for the use of sodium chlorate as a desiccant on dry edible beans in Minnesota.

The crisis exemption was granted primarily because many Minnesota bean fields are maturing late, when the likelihood of weather that is not very favorable for drying is increased, said Lee Hardman, agronomist with the University of Minnesota's Extension Service.

"Exemptions for the use of sodium chlorate have also been granted to North Dakota and Michigan," Hardman said, "and although the crisis is primarily one of delayed maturity, the desiccant will also help prevent white mold and seed discoloration, which affect the grade and value of the crop."

The department set the maximum rate of application at 6 pounds per acre, with a minimum of 5 and 20 gallons of water per acre for air and ground application, respectively. Only licensed

Page 1 of 2

**University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating**

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

applicators may apply the sodium chlorate. It must be applied at least seven days before harvest and the residue from treated fields may not be fed to livestock.

Minnesota's Section 18 for sodium chlorate on dry edible beans is valid through Sept. 4, 1987 and is likely to be extended.

# # #

AEA,BSS,CEO,V1,V3,V4,F

NAGR2245

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 27, 1987

Source: Mike Schmitt  
612/625-8700  
Writer: Jack Sperbeck  
612/625-1794

## SAVE DRYING COSTS BY LETTING CORN DRY IN FIELD

There's a good chance that farmers can save on drying costs by letting corn dry in the field to around 20 percent moisture. But waiting for corn to field dry can mean higher harvest losses, weather risks and delayed fall tillage operations, says Mike Schmitt, agronomist with the University of Minnesota's Extension Service.

Schmitt calculates that farmers can save from \$9-16 per acre on drying costs. He estimates field losses to increase to 6.1 percent with 20 percent moisture corn, compared to 3.3 percent with 26 percent corn. Field losses would average \$6.75 per acre, assuming yields of 150 bushels per acre for 15.5 percent grain.

"Based on just these calculations, it would seem advantageous to let the corn dry longer in the field. But you need to take the intangible factors of yield loss, weather and postharvest operations into consideration," he says.

"If you have your own on-farm grain drying facilities, you may want to harvest corn at 24-26 percent moisture. Then you can prepare for next season's crop and not worry about wet weather.

"But if the crop will be custom dried, gambling on weather

conditions may pay off in substantial savings in drying costs,"  
Schmitt adds.

More details are available in the August edition of "Crop  
News," available from Minnesota county extension offices.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2243

---

# News and Information

---

MSC  
8/27/87  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 27, 1987

Source: Morgan Morrow  
612 625-5295  
Writer: Jack Sperbeck  
612 625-1794

## RESEARCH SHOWS BIG LITTER INCREASE WITH LATER REBREEDING

A University of Minnesota research trial has shown an increase of 3.4 more second parity pigs born alive when rebreeding is delayed until the second estrus after weaning.

That's the largest increase researchers have found between first and second parity litter size by delaying breeding. "Other studies have shown increases of 1 to 1.5 more pigs born alive," says Morgan Morrow, veterinary researcher with the university's Agricultural Experiment Station.

The project involved nearly 600 York-Landrace sows.

"Our next step is to study a large number of farms to determine the risk factors associated with a depressed parity-2 litter size," says Morrow. An economic analysis will be part of the project.

Morrow estimates that about 20 percent of U.S. hog producers have the problem of lower litter size in the second parity. "But from an economic standpoint, you need at least one more pig per litter to justify delaying rebreeding until the second estrus," he says.

Page 1 of 2

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

Morrow worked with University of Minnesota swine veterinarian  
Al Leman on the project. Partial funding came from the Minnesota  
Pork Producers Association through the university's Swine Center.

# # #

AEA,BSS,CEO,V1,P,S

NAGR2244

---

# News and Information

---

Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Aug. 27, 1980

Source: Deborah Brown  
612/624-7491  
Editor: Sam Brungardt  
612/625-6797

## HORTICULTURAL TIPS FOR EARLY AUTUMN

Early autumn is a good time to plant evergreen trees and shrubs, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "Their root systems will have ample opportunity to begin the re-establishment process that will help them come through winter in good shape."

- - - - -

"Early fall is a good time to take cuttings from geraniums, coleus, wax begonias and impatiens that you want to try overwintering indoors," says Deborah Brown, horticulturist with the Minnesota Extension Service. "Root them in moist vermiculite or fresh potting soil, then keep them in a bright, sunny window or 10 to 12 inches beneath fluorescent light tubes."

- - - - -

Early autumn is a good time to check your lawn for thatch build-up, says Deborah Brown, Minnesota Extension Service horticulturist.

"Rent a power rake if the thatch layer exceeds 1/2 inch in thickness," Brown advises. "If the lawn is thin, overseed immediately after removing the thatch. Several weeks of good growing conditions

Page 1 of 2

University of Minnesota, U.S. Department of Agriculture, and Minnesota Counties Cooperating

---

The University of Minnesota, including the Minnesota Extension Service, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status or sexual orientation.

before cold weather sets in will minimize any potential damage from dethatching."

- - - - -

"Early fall is a good time to zap those dandelions once and for all," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Use a broadleaf weedkiller containing 2,4-D when temperatures are in the 60s or 70s, the wind is calm and no rain is forecast for at least 24 to 48 hours. If you kill dandelions in the fall, they won't be around to bloom their fool heads off next spring!"

- - - - -

Early autumn is a good time to fertilize your lawn, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "There's no need for special fertilizers in autumn. A standard lawn food containing approximately four parts nitrogen to one part phosphorus and two parts potassium should do a good job. Don't forget to repeat the application in late October or early November for best results."

- - - - -

Early autumn is a good time to bring in houseplants that have been outdoors for the summer, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. She says, "Even though they can gradually become accustomed to cooler temperatures, the transition will be less traumatic if they are brought inside before night temperatures fall much below those of your house."