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# News and Information

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

January 14, 1988

Source: Mike Pullen  
612/624-1749  
Writer: Jack Sperbeck  
612/625-1794

## KEEP PETS FROM FREEZING IN COLD WEATHER

Dogs and cats need food, water and shelter--especially shelter--during cold winter weather.

If you keep your pets outdoors, make sure they have "unfrozen" food and water, advises Mike Pullen, veterinarian with the University of Minnesota Extension Service. Give outdoor pets fresh water two or three times a day. Otherwise, the water freezes very quickly and they'll be thirsty.

Moist or canned pet foods rapidly freeze into inedible lumps in cold weather. "Pets can't eat frozen food. You may think they're not hungry, but you may need to switch to dry pet food," Pullen says. This cold weather quick freeze also affects milk set out for cats.

Pullen says pets must be sheltered from the wind and need heat or insulation from cold surfaces. "Pets can get frostbite from cold surfaces. Use something like straw or blankets to get them off the cold ground, concrete or metal," he suggests.

"Mature dogs and cats usually do fairly well if they're well nourished and out of the wind. But new kittens or puppies should be brought inside and kept in a warm area.

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

"Newborns may wander away unnoticed from the mother and freeze," he adds. If pets get hypothermia or frostbite, bring them inside and wrap them in blankets. Then immediately call your veterinarian. Contact your local humane society office for information on pet shelter design, Pullen suggests.

And if you have an indoor pet, don't pick a cold day to let it out for more than short periods. Dogs and cats not used to outdoor living can easily get frostbite--especially in body areas where they have less hair protection. Areas vulnerable to frostbite include under the abdomen and legs, and on the tips of ears and tails.

# # #

AEA,BSS,CEO,V1,V3,V4,V7,V8,B

NAGR2500

MCC  
3/17/88

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# News and Information

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

January 14, 1988

Source: Mike Schmitt  
612/625-8700  
Writer: Jack Sperbeck  
612/625-1794

## **USE MINNESOTA RATING SYSTEM TO COMPARE CORN HYBRID MATURITIES**

Minnesota corn growers should use Minnesota's rating system to compare relative maturities of corn hybrids from different companies.

"All hybrids sold in Minnesota must have the Minnesota rating on the tag," says Mike Schmitt, agronomist with the University of Minnesota's Extension Service. "Ask sales people for the Minnesota rating if they're making the sales pitch using the company's rating system," Schmitt advises.

To compare hybrids from any one company, you can use the company's relative maturity system. Each seed company develops hybrids using its own relative maturity system. But it may be different than Minnesota's system.

"If company X says a hybrid is 105-day relative maturity, this may or may not be what the Minnesota rating system concludes," Schmitt says. "And seed companies have research facilities in several states, which further confuses the issue. A 105-day hybrid in Illinois may not be comparable to a 105-day hybrid in Minnesota."

If you want to compare hybrids from different companies, you must use the Minnesota ratings. Seed corn companies may or may not use the Minnesota rating in their information material. Sometimes they use only their own maturity indexes.

"If you spot a hybrid referred to as a 'nonmultiple of 5,' such as a 112- or 98-day, you know it's a specific company's designation," Schmitt says.

The Minnesota system uses moisture content at harvest and classifies hybrids to 5-day intervals. The Minnesota Legislature established relative maturity zones in 5-day increments for five zones in the state.

The Minnesota Department of Agriculture commissions the University of Minnesota's Agricultural Experiment Station to periodically check ratings. The department uses this data to determine whether hybrids are correctly rated. Seed companies are required to change the rating if there's a discrepancy.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2496

MCC  
9/2/88

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# News and Information

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

January 14, 1988

Source: Mel Baughman  
612/624-0734  
Writer: Mary Kay O'Hearn  
612/625-2728

## CONFERENCE FOR WOODLAND OWNERS, USERS WILL BE FEB. 20

Reserve Saturday, Feb. 20, to attend the sixth annual Woodland Owners and Users Conference at the Earle Brown Center on the University of Minnesota's St. Paul campus.

Experienced natural resource professionals will present information on a variety of topics of interest to woodland owners wanting to learn more about managing their land for wildlife, timber or investment purposes.

Twelve topics will be dealt with in concurrent sessions running from 8:45 a.m. to 4:15 p.m.: timber taxes, harvesting timber, marketing timber, management planning, oak management, aspen management, regenerating woodlands, managing for deer, managing for blueberries, landscaping for wildlife, backyard tree care and sources of funding.

The day begins with 8 a.m. registration. Lunch is "on your own," at either the St. Paul Campus Student Center cafeteria or area restaurants. Registration before Feb. 12 costs \$10. Registration after that date and at the door is \$15. This includes all papers written by the speakers, access to the exhibits and presentations, and refreshments. For

registration information, contact Extension Forest Resources (612/624-7222), the Minnesota Department of Natural Resources (218/246-8343) or any Minnesota county extension office.

Conference sponsors are the University of Minnesota's Extension Service and the Department of Natural Resources Forestry Division.

# # #

AEA,BSS,CEO,T,Se1Media

NCRD2498

MSC  
9-1-TP

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# News and Information

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

January 14, 1988

Source: Mel Baughman  
612/624-0734  
Writer: Mary Kay O'Hearn  
612/625-2728

## **COMBINED FORESTRY INCOME TAX, TREE FARM INSPECTORS WORKSHOPS SET**

Experts will explain the latest in federal income tax treatment of forestry costs and incomes, and how to become a tree farm inspector at identical workshops Thursday, Feb. 11, in Grand Rapids and Friday, Feb. 12, in St. Paul.

The Rainbow Inn is the Grand Rapids location. In St. Paul, it's the Earle Brown Center on the University of Minnesota's St. Paul campus. Both workshops are free. They begin with 9:30 a.m. registration and conclude at 4 p.m.

The morning session is designed for woodland owners, tax preparers and foresters. It covers federal income taxes as they are related to woodland purchase, tree planting expense, operating expense, passive loss regulations, cost-share payments, timber sales and casualty losses. Experts involved in the presentations are to include George Myles, taxation and finance specialist, U.S. Forest Service, State and Private Forestry.

The afternoon session is directed at foresters and explains how to participate in the Tree Farm Program as an inspector. Among the instructors will be John Harrington, the American Forest Council Northcentral Regional Representative, Troy, N.Y.

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

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The Tree Farm Program offers management planning and recognition to private woodland owners who actively manage their woodlands for wood products and other benefits.

Sponsors are the University of Minnesota's Department of Forest Resources and Minnesota Extension Service, the Minnesota Department of Natural Resources, the U.S. Forest Service and the American Forest Council.

For more information on either workshop, contact Mel Baughman, Department of Forest Resources, University of Minnesota, St. Paul, MN 55108; phone (612) 624-0734.

# # #

AEA,BSS,CEO,T,Se1Media

NCRD2499



MSC  
ALP

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# News and Information

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

January 14, 1988

Source: F. Januschka  
612/255-6169  
Writer: Jack Sperbeck  
612/625-1794

## **DAIRY FARMERS NEED EVEN SHARPER PENCILS**

The recent milk price cut of 52 cents per hundredweight means dairy farmers need to use "sharper pencils" to calculate costs and returns.

"Make good use of DHI records and get lower producers out of the herd," advises Francis Januschka, Stearns County agricultural agent with the University of Minnesota's Extension Service. Also, make good use of DHI reproductive information and get your somatic cell count (SCC) down to earn quality premiums, he advises.

"Dairy farmers need to fine-tune all record systems and do a good financial analysis," Januschka says.

# # #

AEA,BSS,CEO,V1,V4,D

NAGR2501

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# News and Information

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January 14, 1988

MTC  
8/2/88

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

Source: Leland Hardman  
612/625-6226  
Writer: Larry A. Etkin  
612/625-4272

## **UNIVERSITY OF MINNESOTA'S 1988 "VARIETAL TRIALS" IS NOW AVAILABLE**

A redesigned and newly revised 1988 edition of "Varietal Trials of Farm Crops" is now available. "Varietal Trials" is an annual report on crop variety performance in Minnesota that is published by the University of Minnesota's Agricultural Experiment Station.

The report presents the latest results from the experiment station's testing of more than 500 varieties of 32 crops. University scientists grow varieties and evaluate them for yield, resistance to lodging and pathogens, and relative maturity at as many as 12 sites in Minnesota to evaluate their performance across the range of Minnesota conditions. Their results are compiled annually and, along with planting recommendations, are published in "Varietal Trials."

Annual users of the publication will be greeted by a few changes in this year's edition. Some of the tables have been revised to include new categories and subdivisions. Others have been changed to reflect yields in more commonly used units of measure. And, information on Phytophthora root rot resistance has been added to soybean tables. A new cover design will also greet

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

users, along with interior changes in the presentation of material that are designed to make "Varietal Trials" easier to use.

Single copies of "Varietal Trials of Farm Crops" are available to Minnesotans from their county extension offices as publication number AD-MR-1953. Orders for more than one copy or from outside Minnesota should be directed to the Distribution Center, 3 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108 (phone 612/625-8173).

# # #

V1,V4,V8,F

NAGR2504

MSC  
8/27/88

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# News and Information

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

January 15, 1988

Source: Robert W. Snyder  
612/625-4219  
Writer: Mary Kay O'Hearn  
612/625-2728

## **COURTS TAKING SHARP LOOK AT LAND USE PLANNING, ZONING DISPUTES**

One mark of life in the 20th Century (especially its final years) will be a busy, busy court system--increased litigation.

Cities, counties and states have been in the thick of some of the actions which involve zoning, nonconforming permits and even building permits as facets of land use, says Robert W. Snyder, attorney and land economist with the University of Minnesota's Extension Service.

Snyder notes that 10 of 27 land use cases he's reviewed recently were lost by governmental bodies. "Rezoning cases, almost impossible for cities to lose in the past, are being lost," he says. "Courts are stiffening up, requiring more from cities and other local government units in order to win these cases."

But whether awards are to landowners or governmental units, the fact that disputes couldn't be resolved locally and wound up in the courts means that it's the local taxpayers who are paying.

Minnesota courts have awarded damages to landowners who have suffered injuries in zoning context decisions. Snyder cites one instance when a couple was ordered by police, late at night, out of their home or be fined for remaining in a nonconforming

residence located in a floodway district of a flood plain. The owner had been denied a building permit to repair structural damage to the house caused by a lowered water table due to a county drainage ditch flowing through his property.

The trial court awarded the owner house damages, but didn't find the taking of his property unconstitutional although the couple was forced to pay rent elsewhere and default on mortgage payments. However, the Court of Appeals reversed the decision, calling it an unconstitutional taking, ordering the city to pay since it had not followed the ordinance procedure for eliminating a nonconforming structure: a required hearing and determining the remaining useful life of the nonconforming permit.

This Minnesota case preceded by two years a California court decision--again involving a flood plain--this time a church camp wiped out in a 1979 flood. In 1987, the U.S. Supreme Court said the church camp could get monetary damages if there had been an unconstitutional taking of the property. The church had sued for damages when it was told it could not rebuild.

In yet another action in Minnesota, the Eighth Circuit Court held that the right to a building permit is a property right protected by the constitution and can't be denied if the legal requirements for obtaining a permit have been met. This case involved a municipality withholding a building permit for a subdivision on condition that a public right-of-way be dedicated giving access to private property.

These are some of the planning-zoning cases Snyder has reviewed ahead of the meetings he will hold around Minnesota during January and February to update communities and describe impacts the 1988 legislative session might have on state planning law. The meetings, which are open to the public at no charge, are scheduled for these cities and dates: Gaylord, Jan. 19; LeCenter, Jan. 20; Farmington, Jan. 21; Pipestone, Jan. 25; St. James, Jan. 26; North Branch, Jan. 27; Faribault, Jan. 28; Roseau, Feb. 1; International Falls, Feb. 2; Carlton, Feb. 3; Grand Rapids, Feb. 4; Rochester, Feb. 9; Redwood Falls, Feb. 10; Golden Valley, Feb. 11; Moorhead, Feb. 16; Long Prairie, Feb. 25; and Thief River Falls, Feb. 29. Contact the extension offices of the counties in which these cities are located for meeting locations and times.

# # #

AEA,CEO,V4,V5,V6

NCRD2506

# News and Information

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3A2110  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

January 15, 1987

Source: Laura McCann  
612/625-5747  
Writer: Sam Brungardt  
612/625-6797

Editors, broadcasters: Although many of this symposium's sessions will be technical in nature, they could provide valuable information for stories about the opportunities and challenges that exist in developing alternative uses for soybeans. Registration for the news media is complimentary, but there will be a charge for meals.

## **SCIENCE, INDUSTRY TO LOOK AT ALTERNATIVE USES FOR SOYBEANS**

U.S. farmers produce a lot of soybeans, and it is hoped that next month's Soybean Utilization Alternatives Symposium will stimulate scientists and industry to look at this versatile commodity in a new light.

The symposium will be Feb. 16-18 at the Radisson Hotel South in Bloomington, Minn. It is being sponsored by the University of Minnesota's Center for Alternative Crops and Products in cooperation with the university's College of Agriculture, Extension Service and Agricultural Experiment Station; the American Soybean Association; Minnesota Soybean Research and Promotion Council; Iowa Soybean Promotion Board; North Dakota Soybean Council and Minnesota Department of Agriculture.

Objectives of the symposium are to provide discussions of past, present and future uses of soy products; to provide visibility for current utilization research; to provide a forum

Page 1 of 2

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for interaction between public and private sectors interested in utilization alternatives; and to stimulate the development of new ideas for utilization research.

At a kick-off banquet on Feb. 16, G. Edward Schuh, dean of the University of Minnesota's Humphrey Institute, will speak on global issues in soybean utilization.

Feb. 17, the first full day of the symposium, will feature sessions on past and present soybean utilization, chemical characteristics of soybeans, composition modification, nutritional value of soybeans and using soybeans in animal feeds.

Industrial use of soybeans, human food use and the future of soybean utilization will be the topics of sessions on Feb. 18.

Registration for the symposium will be limited to 300. To register, contact Curtis Norenberg or Cathie Bergum at Extension Special Programs, 405 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108 (or call 800/367-5363 or 612/625-2722). For information about the program, contact Laura McCann at (612) 625-5747.

# # #

AEA,BSS,CEO,V1,V3,V4,F,H,S

NESP2502



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# News and Information

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1776  
12/17

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

January 15, 1988

Source: Robert W. Snyder  
612/625-4219  
Writer: Mary Kay O'Hearn  
612/625-2728

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Page 1 of 3

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

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# # #

AEA,CEO,V4,V5,V6

NCRD2506

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# News and Information

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EDUCATIONAL DEVELOPMENT SYSTEMS  
MINNESOTA EXTENSION SERVICE  
433 COFFEY HALL  
UNIVERSITY OF MINNESOTA  
ST. PAUL, MINNESOTA 55108

January 15, 1988

Source: Robert M. Jordan  
612/624-6784  
Writer: Sam Brungardt  
612/625-6797

## MINNESOTA SHEEP AND LAMB FEEDERS DAY WILL BE FEB. 4

Sheep and lamb producers would do well to circle Thursday, Feb. 4, on their calendars, the date of the University of Minnesota's 60th annual Sheep and Lamb Feeders Day.

The event, the oldest of its kind in the country, will be held in Edson Hall on the campus of the University of Minnesota, Morris. It will be start at 10 a.m. and continue until 3 p.m., with a noon lunch featuring lamb.

Among the topics that will be discussed by Minnesota Agricultural Experiment Station and USDA-ARS scientists and Minnesota Extension Service specialists will be characteristics of pasture forages; out-of-season breeding; breeding for milk production; getting 40 tons of lamb from 400 ewes; the effects of supplemental light, corn silage, types of protein and Ivermectin treatment on lamb performance; ewe nutrition; "super" creep diets; and Angora goat nutrition.

# # #

AEA,BSS,CEO,V1,V3,V4,0

NAGR2505

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# News and Information

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January 21, 1988

MSC  
7/27/87

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

Source: Robert W. Snyder  
612/625-4219  
Writer: Mary Kay O'Hearn  
612/625-2728

## **FEES MAY NOT DISCOURAGE ZONING LAWSUITS IN FUTURE**

One deterrent to bringing legal action against land use regulators is worrying about paying the attorney fees and knowing there will be fees whether the suit is won or lost.

But in zoning matters, recent court action may be turning around this reluctance to bring suit on the part of people who believe they are right and that the governing body handing down the decision has abused its regulatory power.

"In the future, the fee situation may not be the deterrent it has been," says Robert W. Snyder, land economist with the University of Minnesota's Extension Service and an attorney himself.

Minnesota courts have recently awarded attorney fees against local governments in some zoning cases, he points out. Previously, under certain federal statutes, the landowners (if successful) in a suit could be awarded attorney fees (paid by government units side in the suit) but Snyder did not know this to have happened in state courts in Minnesota.

Snyder became aware of the shift last summer with a suit in the Twin Cities metro area in which a conditional use permit was

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

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requested to operate a group home for mentally ill adults. Residential zoning in the area did allow this use of an existing apartment building. In February 1986, the judge ordered the conditional use permit granted but reserved the issue of attorney fees. Last July, the judge ordered the city, which had wrongfully denied the permit, to pay \$16,000 in attorney fees.

If other district court cases award attorney fees against cities and other local governmental units, it is likely this could reach the next highest court, the court of appeals, for a ruling that would establish a binding precedent statewide, Snyder says.

Losing litigants have also had to pay cases the court terms as "frivolous." A case in point was a conditional use permit requested for a hardware store. The town board and county planning commission, both recommending bodies, suggested it be denied. But the governing board with power to act, the board of county commissioners, approved the permit. However, when the township appealed to the county board of adjustment, the county zoning administrator refused to issue the permit. When the matter was taken to court, the court held there was no legal basis for any action by the board of adjustment and the county was ordered to pay attorney fees (including those incurred at the court of appeals) for the landowner who requested the permit--which the court also ordered be issued.

# # #

AEA,CEO,V4,V5,V6

NCRD2508

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# News and Information

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

Jan. 21, 1988

Source: Ervin Oelke  
612/625-8700  
Writer: Sam Brungardt  
612/625-6797

## **U OF M ADDS VERNE FLAX TO LIST OF RECOMMENDED VARIETIES**

The University of Minnesota's crop variety review committee has added Verne flax to the list of recommended varieties for Minnesota.

Verne, released by the Minnesota Agricultural Experiment Station last spring, is named for Verne Comstock, a retired USDA plant breeder who conducted a flax breeding program at the university for many years. Verne was the last variety that Comstock developed.

Minnesota Extension Service agronomist Ervin Oelke said that Verne is notable for its high yield, particularly when sown late. It is an early-maturing variety with good lodging resistance. Verne has excellent resistance to rust and wilt, but is only moderately resistant to pasmo, according to Oelke.

In 25 trials at seven Minnesota locations over the past several years, Verne yielded an average of 20.8 bushels per acre, compared to 20.7 bushels for Dufferin and Rehab, the other two flax varieties that are recommended for Minnesota. Site-specific yield data for Verne and other flax varieties are in the 1988 edition of "Varietal Trials of Farm Crops" (item no. AD-SB-1953),

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

which is available from Minnesota county extension offices.

Growers interested in buying seed of Verne flax may contact the Minnesota Crop Improvement Association, 1900 Hendon Ave., St. Paul, MN 55108.

# # #

AEA,BSS,CEO,V1,F

NAGR2507



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# News and Information

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January 28, 1988

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

Source: Carl E. Vogt  
612/624-7222  
Writer: Mary Kay O'Hearn  
612/625-2728

## **MAPLE SUGAR CLINICS TO FEATURE QUEBEC PRODUCER**

The hope that 1988 will yield a better maple syrup season than the previous two years sets the stage for the six free 1988 Maple Syrup Clinics that the University of Minnesota's Extension Service will conduct in February.

Maple producer Richard Ferris of Ham-Nord, Quebec, will speak at the clinics about the business's tradition, its family opportunities, and the impact of acid rain on maple forests. Some sugarbushes in Quebec (which produces 80 percent of the world's maple syrup) have been totally destroyed within the last two years.

"Quebec's experience is sure to be felt throughout the North American maple region," says Carl E. Vogt, forester with the extension service.

Here are the meeting locations and dates and the person to contact for further information:

--Ramsey County: 2020 White Bear Ave., St. Paul, Monday, Feb. 8, 7-9 p.m., Don Olson (612/777-8156)

--Douglas County: Alexandria Courthouse, Tuesday, Feb. 9, 7-9 p.m., Larry Zilliox (612/762-2381)

Page 1 of 2

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

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--Itasca County: Grand Rapids City Hall, Wednesday, Feb. 10,  
12:30-3:30 p.m., Carl Wegner, (218/327-2849)

--Wright County: Buffalo Courthouse, Wednesday, Feb. 10, 7-10  
p.m., Joe Schroeder (612/682-3900)

--Chisago County: a local restaurant in Taylors Falls,  
Thursday, Feb. 11, 6:30-9:30 p.m., Rod Elmstrand (612/257-2982)

--Carver, Hennepin Counties: University of Minnesota  
Arboretum, 3675 Arboretum Drive, Chanhassen, Friday, Feb. 12, 1-3  
p.m., Mike Zins (612/443-2460)

In addition to the Ferris presentation, the program will deal  
with sugar house construction and maple syrup processing. The  
program for the 25th year of these clinics in Minnesota is  
designed for those just getting started as well as commercial  
producers. Representatives from the Minnesota Department of  
Agriculture and the University of Minnesota's Extension Service  
and College of Forestry will be present to answer questions.  
There will be commercial supplies and equipment on display also.

"Opportunities look good for maple production in the future,"  
Vogt says, urging those interested not to miss this educational  
opportunity.

# # #

AEA,BSS,CEO,T,13,19,21,27,31,91

NCRD2518

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# News and Information

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February 4, 1988

MCS  
7-1-88  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: David Thawley  
612/625-7791  
Writer: Martin Moen  
612/625-6243

Broadcasters, editors: This is the second in a two-part series on pseudorabies testing. An audio version is available by calling the Minnesota Extension Service Newline at (612) 625-7720.

## **VETERINARIAN SUGGESTS WAYS OF DEALING WITH PSEUDORABIES VIRUS**

The Minnesota Extension Service is giving some practical advice to hog producers. County agents are reporting that some farmers are confused by the rules which attempt to control the spread of the pseudorabies virus in swine.

Dr. David Thawley, chairman of the University of Minnesota's Large Animal Clinical Sciences Department, says the rules do not apply to all producers. "If you are only raising hogs for slaughter, you don't have to do anything at this time. But if you are selling breeder stock or feeder pigs, you have no choice but to eliminate the pseudorabies virus from your herd if you want to remain in business."

If your swine herd is already infected, Thawley says there are a number of clean-up plans. A producer can test his hogs and remove those that are infected, or a farmer might separate healthy piglets from the infected adults. A last resort might be to slaughter the entire herd and begin anew. Thawley says these options should include some type of vaccination program.

Producers lucky enough to have escaped an encounter with the

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

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pseudorabies virus must take steps to keep their herds safe. Thawley says producers should demand proof that a hog has been tested for the virus before purchasing it. "They can also keep newly purchased hogs in isolation for 30 days and then retest the animals three weeks after contact with the rest of the herd."

Thawley says the chance of a herd becoming infected increases if a neighbor's herd is infected. He says producers can prevent the neighborhood spread of the disease by securing their buildings from entry by wildlife, and by the immediate and proper disposal of piglets killed by the disease.

Thawley believes the new state regulations will help control the pseudorabies virus. However, the elimination of the disease in hogs will be costly.

# # #

AEA,BSS,CEO,V1,P

NAGR2526

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# News and Information

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February 4, 1988

MSE  
JAL:TP

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

Source: Gerald Gray  
612/297-2284  
Writer: Larry A. Etkin  
612/625-4272

## **BROAD BENEFITS RESULT FROM STATEWIDE FOREST RESOURCE PLANNING**

Statewide forest resource planning may not excite many people, but that doesn't diminish the important successes that have resulted from such planning in most of the 48 states that have tried it.

More than \$10 million has been invested in statewide forest resource planning over the past five years. The states have done the planning for many different reasons and in many different ways.

Those programs were generally productive and worthwhile, according to a summary of an evaluation recently published by the University of Minnesota's Agricultural Experiment Station. Forestry economists Gerald Gray and Paul Ellefson of the university's Department of Forest Resources found that despite broad differences in style and ultimate objective, most states were generally successful in strengthening long-term planning for their forestry communities and industries.

The benefits ranged from broad policy developments, such as restructuring the industry tax environment, to less visible improvements in cooperation between regulators, environmental organizations and commercial interests.

Gray said that if there were a single statement that summarized those benefits, it would be that "the planning made state forestry

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

organizations more effective in an increasingly complex management environment."

Gray and Ellefson surveyed and interviewed hundreds of government, industry and environmental leaders across the nation for their evaluation of the value of statewide forest resource planning programs.

Their summary publication, "Statewide Forest Resource Planning: The Effectiveness of First Generation Programs" (Miscellaneous Publication 20), is available free from the College of Forestry, 110 Green Hall, University of Minnesota, 1530 N. Cleveland Ave., St. Paul, MN 55108.

Their complete study, "Statewide Forest Resource Planning Programs: An Evaluation of Program Administration and Effectiveness", will be available after Mar. 1 from the Distribution Center, 3 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108 as item number AD-SB-3365. It will cost \$15.50, and Minnesotans should also include 6 percent sales tax. Checks should be made payable to the University of Minnesota.

# # #

AEA,BSS,CEO,S,T

NNRD2524

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# News and Information

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M.S.  
L.A.S.P.

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

February 4, 1988

Source: Jim Christensen  
507/831-4022  
Writer: Martin Moen  
612/625-6243

Broadcasters, editors: This is the first of a two-part series on pseudorabies testing.

## **PSEUDORABIES TESTING OF SWINE WILL SOON BE REQUIRED**

Testing for pseudorabies is becoming a fact of life for some Minnesota hog producers. By Jan. 1, 1990, producers in the feeder pig business must be testing a portion of their herd each year in order to sell, trade, loan or lease any of their animals. Jim Christensen, Cottonwood County extension director, advises producers to begin testing now.

The Minnesota Department of Agriculture's Board of Animal Health will pay lab fees for testing swine herds during 1988 only. This amounts to a \$2-per-head saving for swine producers.

In addition, a number of neighboring states have placed embargoes on untested feeder pigs from Minnesota. Iowa, which imports over 400,000 feeder pigs from Minnesota annually, has set July 1, 1988 as the date it will no longer accept feeder pigs from Minnesota unless they come from herds being monitored for the pseudorabies virus (PRV).

Pseudorabies is a viral disease that attacks swine and other livestock. In swine, it causes abortions and piglet deaths. Adult swine usually do not die, but become carriers of the disease and spread it by contact.

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

**(Broadcasters, please note: the following is not in broadcast style.)**

The number of swine herds which have been quarantined because of pseudorabies infection is growing by leaps and bounds each year. Christensen says, "One hundred ten herds were diagnosed as having the disease last year, compared with 77 in 1986. PRV is spreading to herds in the northern part of the state, but has had its greatest impact on producers in south-central Minnesota."

In an effort to preserve outstate markets and to control the spread of the disease, the Board of Animal Health has divided the state into two zones. The north-south dividing line runs along the northern edge of Renville County. After July 1, 1988 in the Northern Zone and after January 1, 1990 statewide, transactions involving feeder pigs must originate from one of the following source herds: (a) a PRV-Monitored herd, (b) a Qualified PRV-Negative herd, (c) a PRV-Controlled Vaccinated herd, or (d) a herd from a Low-Prevalence PRV area.

Christensen says, "If the feeder pigs do not originate from one of these herds, they must be tested for PRV within 30 days of sale. A producer who wishes to remain in the feeder pig business should consult with a good swine veterinarian to establish and maintain a PRV testing program."

# # #

AEA,BSS,CEO,V1,P

NAGR2525



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# News and Information

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MP  
3027

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

February 11, 1988

Source: Donna Rae Waldock  
612/625-9255  
Writer: Martin Moen  
612/625-6243

**Broadcasters:** An audio version of this story is available by calling (612) 625-7720 before Wednesday, Feb. 17, 1988.

## **RURAL LEADERSHIP EDUCATION PROGRAM BEGINS**

A two-year program designed to develop new leaders for rural Minnesota and Iowa begins Monday, Feb. 15, in St. Paul. The Minnesota/Iowa Leadership Empowerment for Agricultural Development, or M/I LEAD Program, is teaching 20 people from rural Minnesota and 20 from rural Iowa how to be better leaders.

M/I LEAD will show the participants how global issues affect their businesses and communities says coordinator Donna Rae Waldock. "With the crash of the stock market, we found what happens in Tokyo affects farmers in Minnesota. We think leaders are needed who can understand, interpret and influence the issues which affect them on their farms."

Waldock says current leaders are getting tired of struggling with the same problems year after year. Through M/I LEAD new leaders with new ideas and knowledge will be injected into local communities. They will bring with them a new awareness of how decisions are made at the state, national and international levels.

Waldock says the new leaders won't have to reinvent the wheel.

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

"We may be past the era where we always thought in terms of growth. The question may instead be what do we want to sustain in our communities?"

The M/I LEAD participants were chosen because of their role as emerging leaders in their communities. Waldock says each has demonstrated the potential to have a state or national impact in his or her field. She says it's important the Minnesota and Iowa Extension Services help educate people for the future.

The week-long session will give the participants an overview of what it means to be a leader. They will be exposed to the latest in technology being developed at the University of Minnesota. They will also learn about the agricultural economy and its considerable impact on their state's economy as a whole. Speakers include Bob Terry, director of the Reflective Leadership Program at the Humphrey Institute, University of Minnesota ag economist Mike Boehlje and Iowa State University economist Neil Harl.

# # #

AEA,BSS,CEO,V1,V3,V4,V7,V8,W

NAGR2528

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# News and Information

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February 11, 1988

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

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## CHECK OUT NEW FARM PRODUCTS BEFORE YOU BUY

'Tis the season when fast talking con artists peddle "wonderful new products" to farmers for hefty prices.

"They appear every year about this time," says George Rehm, soil fertility specialist with the University of Minnesota's Extension Service. "They're usually promoted by fast talking salesmen looking for local farmers who want to be dealers.

"The products are described in attractive promotional literature that shows no performance date. They're supported by testimonials rather than performance data from Land Grant universities. And they're products that have a high price tag, but little or no value for agriculture," Rehm says.

His advice is simple: Check out a new product before you buy it. There are several reliable information sources, including county extension offices, fertilizer dealers and consultants. They usually have up-to-date information on new products that benefit agriculture.

"Numerous questionable products have been evaluated in Land Grant university field trials in recent years. Results have been summarized and are available if you ask," Rehm says.

Page 1 of 2

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"Don't be fooled by claims that a product will renew and stimulate 'new life' in soil, or statements that a product will make water more available in soils. If you're not sure about something, don't be afraid to ask. The answer may save you some money," Rehm says.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2530

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# News and Information

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

February 11, 1988

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## **CONSIDER SOIL pH IF PHOSPHORUS TEST IS CONFUSING**

Many soil testing laboratories use two different procedures when they analyze soil samples for phosphorus. If you see results of both tests on a soil test report, considering the soil pH should clear things up, says George Rehm, soils specialist with the University of Minnesota's Extension Service.

The Bray procedure is the standard procedure that's been used to measure phosphorus in soils for many years. Research shows the Bray procedure gives the best measure of soil phosphorus when the pH is 7.4 or lower.

The Olsen procedure has given the best measure of phosphorus status when soil pH is higher than 7.4.

"If the results of both tests are listed on your report, consider your soil pH and then choose the results that are appropriate," Rehm advises.

Soil test values are not the amounts of nutrients "available" in a soil. A soil test value is nothing more than an index that tells whether the level of a certain nutrient is very low, low, medium high or very high.

Rehm says, "If the relative level is known, it's easy to

Page 1 of 2

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

provide a fertilizer recommendation that will meet the yield goal of the individual farmer."

A soil test report may also give you information you don't need. For example, some soil testing laboratories analyze soils for phosphorus and report  $P_1$  and  $P_2$  values. Minnesota research has shown that the  $P_2$  value is not related to crop response to phosphate fertilizer. Ignore the  $P_2$  number, Rehm advises.

Revised University of Minnesota fertilizer recommendations are available on computer disks from county extension offices throughout Minnesota. "Using the fertilizer recommendations in this computer program should help eliminate some confusion," Rehm says.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2529

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# News and Information

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MSC  
8A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

February 18, 1988

Source: Ervin Oelke  
612/625-8700  
Writer: Mary Kay O'Hearn  
612/625-2728

## U OF M PUBLICATION COVERS TRITICALE PRODUCTION, UTILIZATION

Triticale (pronounced trit-ih-KAY-lee) is not a familiar crop like corn or soybeans.

It's a cross between wheat (Triticum) and rye (Secale), which explains its hybrid Latin name, according to Ervin Oelke, agronomist with the University of Minnesota's Extension Service. "It's self-pollinating like wheat, rather than cross-pollinated like rye," Oelke says.

"Triticale in Minnesota," a 4-page folder, is the first of many publications to be produced by the Center for Alternative Crops and Products, a multidisciplinary unit of the College of Agriculture which was established to develop alternative crops and products. Oelke co-authored the publication with R. H. Busch, a geneticist with the USDA-Agricultural Research Service. In a 1982 University of Minnesota study with turkeys and laying hens, triticale, when substituted for corn in the diet, was about equal to durum wheat for body weight gain, feed use efficiency and energy content.

In a 1987 study of cows fed a forage diet of triticale at the University's Agricultural Experiment Station-Rosemount, results in milk production, milk composition and dry matter intake were similar to cows

Page 1 of 2

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

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fed alfalfa.

Wheat-rye hybrids date back more than 100 years, but it's only 30 years since efforts began to develop high-yielding triticales as a field crop. "The University of Manitoba began the first intensive program in North America working with durum wheat-rye crosses," Oelke says.

Triticale varieties Karl and Kramer represent good choices of high-yielding spring triticales available for Minnesota, according to the authors. In the publication, they compare triticale with hard red spring and durum wheat. Triticale varieties are four to six days earlier and more susceptible to leaf rust than either of the two wheats. The publication also gives information on cultural practices: planting date and rate, herbicides, fertilizers, diseases and harvesting.

Markets for the crop are limited, the authors warn. In 1987, about 10,000 acres of triticale were planted in Minnesota, North Dakota and Wisconsin. Some elevators were paying a slight premium above No. 2 yellow corn on a weight basis at 14 percent moisture: triticale tests out at 50 pounds per bushel. "But know where triticale can be sold before planting it as a cash crop," Oelke advises.

Minnesotans may obtain a copy of "Triticale in Minnesota," item number AG-F0-3337, from their county Extension offices. Persons from outside Minnesota may obtain the publication from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108.

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# News and Information

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February 18, 1988

MSC  
JATP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Dan Panshin  
612/624-1773  
Writer: Deedee Nagy  
612/62500288

## **MINNESOTA EXTENSION SERVICE NAMES NATURAL RESOURCES PROGRAM LEADER**

Steven Laursen, a natural resources specialist and faculty member with the Montana Extension Service of Montana State University, has been named state program leader for natural resources by the University of Minnesota's Extension Service, effective March 1.

In announcing Laursen's appointment to the new post, Patrick J. Borich, Minnesota Extension Service director, said, "Natural resources of all kinds are precious to us here in Minnesota. I am delighted that a person of Steve Laursen's caliber will be joining the Minnesota Extension Service to give leadership to our expanding educational efforts in this high-priority area."

Laursen has been the Montana Extension Service natural resources specialist for three years. During that time as the state's only natural resources specialist, he began a program to deliver education on natural resources throughout the state. He cooperated with agencies, industry, and policy-making bodies to develop and deliver comprehensive natural resource programming to those who use and enjoy natural resources, as well as to county extension agents and other educators and government officials.

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

Born in Oregon, Laursen grew up in Hopkins, Minn. He took his undergraduate work in conservation and resource development at the University of Maryland and the College of William and Mary. His master's degree in forest resources and his doctorate in forestry, wildlife and range sciences are from the University of Idaho. Before joining the Montana State University staff in 1984, Laursen held several research positions at the University of Idaho.

# # #

AEA,BSS,CEO,V1,V4,R,T,W

NNRD2531

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# News and Information

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February 18, 1988

MSC  
A21P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Philip Raup  
612/625-8241  
Writer: Jack Sperbeck  
612/625-1794

## **ESTIMATED FARMLAND VALUES DOWN 7 PERCENT**

The estimated value of Minnesota farm land and buildings was \$480 an acre in July 1987. That's down 7 percent from July 1986, according to a newly released University of Minnesota survey.

However, the annual decline was the smallest since land values started to fall in 1981-82, according to Andrew Schwab and Philip M. Raup, agricultural economists who conducted the survey. The study was published in the February 1988 "Minnesota Agricultural Economist" (issue no. 655) by the Minnesota Extension Service and Department of Agricultural and Applied Economics.

The survey reports estimates of farmland values and data on actual sales from the January-June 1987 period. Average price received in actual sales was \$559 per acre, down 14 percent from the same period in 1986. Adjusting the figures to remove the effect of increased sales of lower-priced land in 1987 reduced the statewide decline in sales price to 10 percent.

All six districts reported declines in unadjusted sales prices from July 1986 to July 1987. But the adjustments reduced the decline in the Southwest district from 9 percent to 5 percent, and converted a drop of 18 percent into an increase of 12 percent in

Page 1 of 3

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

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the Northwest. This was primarily due to expanded sales in the northern (and lower-priced) counties of the district.

Expansion buyers bought 74 percent of all tracts sold, investor buyers 14 percent and nonexpansion farming buyers 12 percent. "As in all recent years, expansion buyers dominated the market in the Southwest and Northwest districts," Raup said. The figures were 86 and 89 percent, respectively. Expansion buyers acquired 72 percent of all tracts sold in the West Central district.

Cash financing was used in 40 percent of all sales, mortgages in 22 percent and contracts for deed in 38 percent. In the Northwest district, 52 percent of all transactions were cash sales. "This is the first time in the history of the survey that over half the sales in any district were cash sales," says Raup, who's conducted the survey for the Minnesota Agricultural Experiment Station since 1953.

Despite the downward trend in 1987, there were areas of stability in the farmland market, especially in parts of the Southeast, Southwest and Northwest districts. These were areas where government price and income support programs were especially significant, or where enrollment in the Conservation Reserve Program was high.

"We've received 'anecdotal reports' of some price increases since mid-1987," Raup says, "but the farmland market remains subject to much uncertainty and lacks buoyancy."

The University of Minnesota has been reporting information on the state's rural real estate by the six districts for 77 years. Since 1953, the information has been received from questionnaires mailed to brokers, bankers, farm managers, appraisers and others familiar with the land market.

The report, "The Minnesota Rural Real Estate Market in 1987," is available free from the Waite Memorial Library, 232 Classroom-Office Bldg., University of Minnesota, St. Paul, MN 55108.

# # #

AEA,BSS,CEO,V1,V4,V7

NAGR2534

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# News and Information

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MSC  
1A21F  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

February 18, 1988

Source: Sharon K.B. Wright  
612/625-7246  
Writer: Gail Tischler  
612/625-3141

## **SURVEY, REPORT PROBE MINNESOTA YOUTHS' VIEWS ON HEALTH ISSUES**

Youth attitudes on health issues such as eating disorders, sexuality, stress and drug use are reported in a report available from the Minnesota 4-H Office. The "Adolescent Health Survey Report" not only presents the results of a survey of more than 36,000 Minnesota teenagers, but offers analysis of those results by an expert panel of 10 youths.

The Adolescent Health Survey, conducted across the state in 1987 by the University of Minnesota's Adolescent Health Program, is unique because it looks beyond statistics to underlying attitudes and beliefs, says Sharon Wright, head of youth health programs for Minnesota 4-H.

"Data on numbers of accidents or suicides or diseases are useful in developing youth programs," Wright says. "But what is more important is information about causes--the feelings and values that influence adolescents' behavior."

That emphasis in the survey mirrored the 4-H commitment to programs that deal with youths' needs, Wright says, so 4-H went a step further and sought youths' reactions for its report. "We feel the input of our survey focus group makes the report more useful--both to youths and to adults who work with them," Wright says. The aim of both survey and

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

report, she adds, is the development of programs that help youths learn to make responsible health and lifestyle decisions.

The youth panelists--4-H members from farms, towns, and cities--thoroughly discussed the survey and wrote analyses on the dozens of critical issues it explored--from drunken driving to depression to farm crisis stress to sexual abuse.

"They brought together a wide variety of experiences and opinions," Wright says. "They expected great differences between urban and rural responses and were often surprised when data didn't bear it out. They were surprised, too, at the many common behaviors, attitudes and expectations they had all experienced despite their dissimilar backgrounds."

The youths' perspectives often are as frank and illuminating as the survey results. For example, in response to figures from the body image/eating disorders section that showed that 42 percent of females feel they are overweight while only 6 percent actually are, panelists reacted candidly:

"Females worry about their weight because they think if they aren't a certain weight, no one will be their friend," wrote panelist Karlyn Doyle, 18, of Marshall.

"Advertisers have created the 'perfect' female body to sell their products," adds Christy Eichers, 19, of Mankato. "This is a very false and unhealthy image."

And Amy Jirik, 19, of Fisher, related the problem to other survey data: "It's interesting that girls are able to seek help more often for their problems yet they still attempt suicide more. This may

be due to the fact that girls are harder on themselves in terms of living up to everyone's expectations of how they should look."

"There is not always consensus on any given topic in the report," Wright says, "but there is thoughtful, careful analysis. These teens have a strong interest in understanding and articulating the health concerns of their peers and they hope their work is valuable to other young people."

On the positive side, the survey found that Minnesota youths generally feel good about themselves; the youths feel that they are healthy, doing well in school, and cared about by their families, Wright says.

Survey respondents ranged in age from 12 to 18 and were divided equally by sex. Of the 36,284 students surveyed, two-thirds were from metro areas and the remainder from rural areas. County 4-H agents helped distribute the survey outstate.

Copies of the 26-page "Adolescent Health Survey Report" are available by sending \$2 per copy, payable to the University of Minnesota, to 4-H Youth Development, 340 Coffey Hall, University of Minnesota, St. Paul, MN 55108. Minnesota residents can get a fact sheet, "Adolescent Health Survey Results," item number 4H-FS-3404, from county extension offices. Persons from outside Minnesota may order copies of the fact sheet from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108, or call (612) 625-8173.

# # #

AEA,BSS,CEO,V1,V4,Q

N4-H2527



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# News and Information

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February 25, 1988

MSL  
(127)

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

Source: Dave Andow  
612/624-5323  
C. Eugene Allen  
612/624-5387  
Writer: Larry A. Etkin  
612/625-4272

## SEARCH FOR 'SUSTAINABLE AGRICULTURE' INVOLVES DIFFICULT DECISIONS

Think about agriculture and you may visualize huge tractors plowing deep furrows or pulling large chemical sprayers across fields. Think of a closer connection, and you possibly contemplate the cost of food at the supermarket. Neither view is necessarily wrong. Both are incomplete.

Agriculture is also family farms with limited acreage, small-scale livestock operations and farmers concerned with the stewardship of the land as well as their ability to make a profit and survive. Concern is growing that some farming practices create profit at the expense of stewardship. Concern is growing also for developing a more sustainable agriculture.

"More" is used with "sustainable agriculture" partly to cover the term's many definitions. The definitions cover a broad range—from totally eliminating the use of chemicals (fertilizers, growth hormones, herbicides and other pesticides) and large-scale, single-crop farming to simply making more efficient and reduced use of chemicals and fuels made from nonrenewable resources.

The University of Minnesota's Agricultural Experiment Station has considerable relevant research under way, especially if the

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definition focuses on reducing inputs rather than totally eliminating them. The distinction is important, says plant pathologist Philip Larsen, because we don't currently have the knowledge and tools to completely eliminate chemicals and yet deliver the unblemished produce consumers expect.

There's an array of issues associated with choosing a specific definition for sustainable agriculture. But according to experiment station researcher Dave Andow, there are elements common to most definitions. These include sustainable agriculture being a long-term approach, being "systemic" in trying to view the larger agricultural sector of our economy and society beyond the individual farm, and being critical of current commercial farming practices.

However, Andow says the differences loom larger than the areas of agreement and create a dilemma for researchers. Which of the many definitions should the Minnesota Agricultural Experiment Station adopt for its research? And how do sometimes conflicting concerns such as profitability, environmental protection and maintenance of rural communities enter into considerations?

For the experiment station, many of the answers to these questions remain to be found. While some of the station's current research activities are relevant to sustainable agricultural issues, others may need redirection to include elements that address those concerns. And, some new research will need to be initiated.

The definition that the Minnesota Agricultural Experiment Station's current and planned research best fits is one that seeks to eliminate, reduce or more efficiently use chemical and mechanical inputs. The goal is to reduce inputs while maintaining or improving profitability, according to University of Minnesota agronomist Kent Crookston.

Broadly speaking, the best fitting definition suggests research of the nuts-and-bolts variety (such as looking for resource-conserving techniques), research into systems design (such as interrelated cropping and livestock production systems that maintain long-term productivity) and research for system change (geared toward a theoretical understanding of agriculture and the effects of interactions and change).

Such research would help change the more-is-better attitude of producers who use higher-than-optimal levels of expensive inputs, risking both profitability and soil and water resources.

It would include current research such as overwintering corn in the field to dry on its own instead of using expensive energy to dry it in the fall and research on crop interplanting to take advantage of beneficial compatibilities.

It would expand current research directed at finding weed and insect control alternatives that use biological controls such as companion plantings, crop rotations, beneficial predator insect releases, tillage interactions and mulches.

The experiment station's current research on computerized soil-specific chemical applicators, chemical-stretching additives,

ridge tillage systems, alternative crops, disease-resistant crops, weed-competitive varieties, weather-driven predictive systems, disease-suppressive soil microbes and multiple-use plantings would continue to be relevant also.

And, it would certainly call for new research that compares the effects on both profitability and the environment of a wide variety of alternative methodologies for reducing or eliminating purchased inputs.

These possibilities would provide wide-ranging benefits to a broad range of beneficiaries--the national and local economies, farmers, consumers, society in general, the environment and future generations.

# # #

AEA,BSS,CEO,V1,V4,C

NAGR2536

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# News and Information

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February 25, 1988

MSC  
BACTP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Dick Rust  
612/625-8101  
Writer: Martin Moen  
612/625-6243

Broadcasters: An audio version of this story is available on the Minnesota Extension Service newslines at (612) 625-7720

## **PRECISE APPLICATION OF CHEMICALS MAY CUT COSTS, POLLUTION**

Computer-controlled application of fertilizer and herbicides is the latest step being taken by the Minnesota Agricultural Experiment Station to make low-input agriculture viable for farmers.

A research project this spring near Lamberton and Windom in southwestern Minnesota will demonstrate the concept. University of Minnesota soil scientist Dick Rust says the use of the computer could maximize income while minimizing environmental risks.

The research involves a computer which regulates fertilizer and herbicide distribution. Using previously collected data about the soil types that exist within a field, the computer applies only the amount of fertilizer or herbicide which is needed for each soil type.

Rust says, "Farmers determine the average amount of fertilizer nutrients a field needs. But this results in some parts of the field getting too much fertilizer and some areas receiving too little. The computer eliminates this problem."

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

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For the typical corn grower, it's estimated the system would reduce chemical costs by 25 percent. But since the computer and software cost between \$5,000 and \$10,000, not every farmer will be able to purchase the system. Rust hopes most cooperatives will invest in the equipment, thus spreading the cost over many producers.

The research is funded by a \$100,000 grant from the U.S. Department of Agriculture. Rust hopes the research will continue for a minimum of two years so the results will be more accurate.

The computer keeps track of the distribution truck's position on the field by radio signal triangulation. The location is plotted on a map which details soil types. The computer then operates the sprayer, discharging the correct balance and amount of fertilizer or herbicide. Rust says that in the near future, the sprayer's location on the field will be plotted using satellite navigation, which is more accurate.

Although the research project at Lamberton and Windom will deal with corn and soybeans, Rust says the results could be applied to any crop. It will examine crop yields under this method of low-input agriculture. Experiment station staff will also monitor leaching and runoff to determine how much of an impact this system has on reducing water pollution.

# # #

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

NAGR2538

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# News and Information

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February 25, 1988

MSC  
3A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mike Schmitt  
612/625-8700  
Writer: Jack Sperbeck  
612/625-1794

Editors, broadcasters: This can be handled as one long story or several shorter items.

## **INCREASE CORN PROFITS WITH LITTLE EXPENSE**

Farmers need to make several decisions on cultural practices before corn planting starts. Properly adjusted cultural practices such as hybrid selection, planting date, seeding rate, planting depth and row spacing cost little or nothing, but can improve profits.

Here are some tips from Mike Schmitt, agronomist with the University of Minnesota Extension Service:

**Hybrid selection.** This may be the most critical factor in corn management. The hybrid determines the theoretical yield goal.

Selecting the relative maturity classes is a major decision. You'll normally get highest yields from full-season hybrids since they take advantage of the full growing season. But combining full-season hybrids with some mid- or short-season hybrids will spread out the fall harvest. It also distributes some of the risk associated with growing season stress.

Within a relative maturity class, select hybrids for yield, standability, moisture content, pest resistance, stress resilience and other factors. Many organizations conduct hybrid trials and make this

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data available.

"Select hybrids that consistently rate in the top 10 to 20 percent of all trials. And try to evaluate results from several locations and years," Schmitt says.

- - -

**Planting date.** Early planted corn generally performs best, says Mike Schmitt, agronomist with the University of Minnesota Extension Service. Planting early lets you:

--Plant higher-yielding, full-season hybrids.

--Grow relatively shorter plants that stand better.

--Reduce risks related to mid-season temperature and moisture stress.

--Plan an earlier harvest or allow more field drying time.

"Your early planting goal is to have all corn planted by the optimum planting date," Schmitt says. Those dates are May 5 for southern Minnesota and May 10 in central Minnesota. Planting later often reduces yields.

According to Schmitt, the threat of planting too early is often exaggerated. He says that frost may be a concern, but since the growing point of corn is protected under the soil surface for a few weeks, potential loss from frost is minimal.

How do you get all your acres completely planted by the optimum date? Factor in acres to be planted, planter size, labor, and weather. In Minnesota, roughly half of the days from mid-April to early May are suitable for field work. So start planting as early as practical.

Starter fertilizer is very important when you plant early. Cooler



soils allow fertilizer placement near the seed to have a beneficial effect, even on medium-testing and some high-testing soils.

And, use high-quality seed with high seedling vigor when you plant early.

- - -

**Seeding or population rate.** Selecting an optimum corn seeding rate or population in spring can be hard. Weather has a habit of fouling things up.

"We need to distinguish between seeding population and final harvest population," says Mike Schmitt, agronomist with the University of Minnesota Extension Service. The number of plants present at harvest is less than the number of seeds planted due to mortality factors like poor seed quality (low germination), insect and disease losses, and mechanical elimination.

Most Minnesota corn producers will get optimum yields with a final population of 23-26,000 plants per acre. You generally need to increase the planting rate by 10 percent to achieve this. "And if you're planting in mid-to late April, raise the seeding rate by an extra 10 percent to account for higher mortality," Schmitt advises.

Use the high end of the final population range if you're in an intensive management system. Higher populations have a higher yield potential with higher fertility, better pest management and sound cultural practices.

Consider lower populations if you're planting corn after the optimum planting date or on very droughty soils. But, you probably shouldn't lower seeding rates on good soils when it's dry at planting time. Since

the chances for adequate rainfall over the course of the growing season are reasonable, decreasing the seeding rate can reduce yield potential.

Genetics of the plant may influence the final population. Hybrids with "fixed" ears usually need higher populations to increase yield. But hybrids with "flex" ears can compensate a bit in lower populations and variable weather conditions.

The plant can tell you if the population is too high or low. Plants with double ears, several suckers and extremely large ears say the population is too low. And many plants without ears or with nubbins may mean the population is too high.

- - -

**Planting depth.** Optimum planting depth for corn is based on soil temperature and moisture at planting, says Mike Schmitt, agronomist with the University of Minnesota Extension Service. Corn should be planted at a depth with adequate moisture for germination and enough warmth to germinate before it rots.

Soil temperature is a function of soil type and planting date. Coarse-textured soils warm up faster in spring, and soils gradually warm up as the planting date is delayed.

Early planting is correlated to cool and moist soils. Plant at depths of 1 to 1-1/2 inches, with the greater depth on coarse-textured soils.

When planting near the optimum planting date, seed at depths of 1-1/2 to 2-1/2 inches. Deeper plantings are for soil that's becoming dry or for sandier soils.

As planting progresses into May, seedbed moisture becomes a

concern--especially in dry years. As the soil dries, seeding depth should be increased until the seed is placed in moisture. With fine-textured soils, the lower limit is 3 to 3-1/2 inches. Coarse-textured soils can be planted 1/2 inch deeper. These are maximum depths which should not be exceeded.

- - -

**Row spacing.** Yield increases of 5 to 10 percent are common when you reduce wide spacings to 30-inch rows.

The majority of Minnesota corn producers use 30-inch row equipment, but some are still using 36- or 38-inch rows. But, you need good management to get higher yields by switching to 30-inch rows.

Corn producers who miss the optimum planting date, who have trouble with pest control and have low fertility soils won't always get higher yields with narrower rows. Short-season relative maturity hybrids are also less responsive to the closer row spacings.

Research on row spacings narrower than 30 inches has been very limited and results are inconsistent in the Upper Midwest, says Mike Schmitt, agronomist with the University of Minnesota Extension Service.

"Yield increases have been noted in some trials. But when all trials are averaged, the added cost of switching equipment is not offset by the yield increase," he says.

# # #

AEA,BSS,CEO,V1,F

NAGR2535

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# News and Information

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March 3, 1988

MSE  
3 A37P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Larry Simonson  
218/327-4490  
Writer: Phyllis Jenks  
612/625-7793

## **RESORT MANAGEMENT SEMINAR TO BE HELD AT BREEZY POINT**

"Will the Good Times Roll?" is the name of a resort management seminar that will be held Sunday and Monday, March 13 and 14, at Breezy Point Resort near Brainerd. The seminar is for resort owners and operators, chambers of commerce members and others affiliated with Minnesota tourism, campgrounds and related industries.

The seminar will feature speakers Hank Todd, Minnesota Office of Tourism; Jack Gray, University of Wisconsin; Mark Fermanich, Minnesota Department of Revenue; Mac McGuire, Minnesota Resort Association; and many others.

A cracker barrel discussion will follow the Sunday afternoon and evening presentations on the Shoreland Management Act, county zoning proposals and water quality planning. Monday highlights will include marketing, the Minnesota Tourism Center, real estate taxes, energy efficiency, landscaping and a panel on tips for success.

Seminar sponsors are the University of Minnesota's Tourism Center and Extension Service, the Minnesota Office of Tourism, the Minnesota Resort Association and the Small Business

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Administration.

Registration fee, including lunch and breaks, is \$20 for the first resort member and \$15 for each additional member. For a seminar brochure and registration information, contact James Rabehl, Crow Wing Service Building, Brainerd, MN 56401 (phone 218/828-3980).

# # #

AEA,BSS,CEO,V2,V4,V8,W

NCED2542

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# News and Information

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March 3, 1988

MSC  
8A27P

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

Source: James O. Hanson  
612/624-3434  
Writer: Sam Brungardt  
612/625-6797

## U OF M SPRING CLINIC FOR HORSE OWNERS WILL BE APRIL 9

The University of Minnesota's annual Spring Clinic for Horsemen will be Saturday, April 9, in room 125 of the Animal Science-Veterinary Medicine Building on the university's St. Paul campus.

The program, which will run from 8:55 a.m. until 4:30 p.m., will deal with aspects of management and health care that affect the performance of racing horses and other "equine athletes."

Jerry Gillespie, D.V.M., of Kansas State University's College of Veterinary Medicine will give an introduction to equine sports medicine and performance testing, and speak on cardiopulmonary function and energy metabolism and performance testing to determine level of conditioning, talent and health status.

Harold Hintz, D.V.M., of the New York State College of Veterinary Medicine will speak on nutrition for the equine athlete and nutritional diseases (malnutrition).

There will also be an update on equine research by University of Minnesota faculty.

Registration fee for the program is \$20 per person, and this includes a proceedings. There is an additional \$5 charge for

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persons who wish to attend the noon luncheon, at which the Minnesota Horse Council will present its Horseman of the Year Award.

Persons who wish to attend the clinic may preregister by sending a check, payable to the University of Minnesota, to James O. Hanson, D.V.M., College of Veterinary Medicine, 1365 Gortner Ave., University of Minnesota, St. Paul, MN 55108. Or, attendees may register the day of the clinic. Persons who have questions about the program should call (612) 624-3434.

The clinic is being sponsored by the University of Minnesota's College of Veterinary Medicine, Minnesota Extension Service and Department of Animal Science; the Minnesota Racing Commission and the Minnesota Horse Council.

# # #

AEA,BSS,CEO,V1,V3,K

NAGR2541

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# News and Information

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March 3, 1988

MSC  
3A27p  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Pauline Boss  
612/625-0291  
Writer: Sam Brungardt  
612/625-6797

## **RESEARCH AIMS TO HELP FAMILIES WITH ALZHEIMER'S VICTIMS**

Identifying both supportive and debilitating ways in which family members behave in coming to terms with Alzheimer's disease is the goal of a five year research project being conducted by University of Minnesota family social scientist Pauline Boss. Researchers and mental health professionals from the Minneapolis Veterans Administration Medical Center are cooperating.

Alzheimer's is a currently irreversable form of dementia. More than 3 million Americans in their mid-40s and older already have it. With the aging of baby boomers, an estimated 7 million Americans will have the disease by the year 2000.

Alzheimer's is like having a person physically present but psychologically absent. Family members don't know if a victim is in or out of the family system. Continuing long familiar patterns of personal relations is impossible. It's a change that exemplifies a phenomenon called "boundary ambiguity."

The disease causes progressive losses of memory, intellectual capabilities and the ability to perform even simple tasks. Drastic personality changes occur. Death eventually results. In its later stages, victims require constant supervision, putting

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



great stress on caregivers.

Boss says the boundary ambiguity is only one element of an extremely stressful situation. Exemplifying how stress can appear is where only a spouse sees the symptoms, with others doubting anything is amiss. Or, where a son or daughter denies the disease's existence, and stays away or otherwise stops giving support and comfort to both the caregiver and patient.

With these reactions, family stress increases and family members stop supporting each other. The family is unable to act cohesively to deal with the situation. Even the ambiguity of diagnosing Alzheimer's adds stress, because only the autopsy after death can prove it.

Boss' research, extends earlier work she did for the Minnesota Agricultural Experiment Station. Funded by the National Institute on Aging, it involves 57 families. Using videotaped interviews, it documents how people act and interact as they are confronted with a family member's probable Alzheimer's affliction.

Boss says, "We're investigating the psychosocial impact of Alzheimer's on the caregiver and other family members. When there's a catastrophic illness, the entire family suffers, not just the victim. We are interviewing family members, gathered together in the home, during the first five years after the VA doctors confirm that a patient has probable Alzheimer's.

"We videotape the interviews as the disease progresses to record how family members interact as they attempt to deal with the ambiguity, the confusion as to whether the victim is on or out

of the family system. You have to know what the components of any system are before you can organize that system to survive, and the same is true of families."

A videotape simulation of a family struggling to accept the reality of Alzheimer's has already resulted from the research. It shows ways in which the behavior of family members increases or reduces stress. The videotape, "The Family and Alzheimer's Disease: The Case of Ambiguous Loss," is available as item number HE-VH-3369 through county extension offices. It may also be rented from the Minnesota Extension Service Distribution Center by calling (612) 625-8173.

# # #

V1,V4,V7,V8,G,S

NHEC2540

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# News and Information

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March 3, 1988

MSC  
9A27P

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

Source: Kevin Guise  
612/624-4277  
Writer: Martin Moen  
612/625-6243

Broadcasters: An audio version of this story is available by calling 612/625-7720.

## **ANIMAL PATENT RULING WON'T HAVE MUCH AFFECT ON FARMERS**

Farmers may be paying more for brood stock because of the U.S. Patent and Trademark Office's decision to extend patent rights to new forms of animals. But animal scientist Kevin Guise thinks the increase will be small.

Guise is one of a team of University of Minnesota scientists that is working to develop a breed of fish that will grow faster and larger than its predecessors. If the project is successful, Guise feels the new fish will be worth protecting with a patent. But he says there are other ways of protecting a company's or university's financial investment in animal research.

Currently, breeders control the reproductive capacities of their animals by charging stud fees or controlling the brood stock. Guise says, "If a genetically engineered animal is patented, I think it would be handled in much the same way. Royalty payments for successive generations of animals would not be feasible in my opinion."

Guise says that's because, "Products of genetic engineering would be worked into existing brood stocks. Therefore, no

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substantial change would occur in how a bloodline is marketed." He also says enforcing royalty payments would be difficult because detecting genetic changes is expensive and time consuming.

Guise does not think farmers will see a big increase in the cost of a breeder's services. "All this is controlled by the marketplace. If a company has a genetically superior animal and charges too much for its services, farmers will go elsewhere. Any increase in price would have to be based on what the organism could offer, which could be either increased growth rates or increased efficiency in production or food consumption."

Several proposals are being considered by Congress which may significantly change the ruling's impact on farmers. Guise says to qualify for a patent, an animal must be substantially different from what occurs in nature, such as a "geep," which is a cross between a goat and a sheep.

While Guise feels the patent ruling will have little effect on farmers, that could change as the results of animal research become more diverse. Genetic research of animal life is expected to increase as a result of the ruling because Guise says there is money to be made in developing better engineered animals.

# # #

AEA,BSS,CEO,V1,V3,V4,S

NAGR2543

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# News and Information

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March 10, 1988

MSC  
8/28/78

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

Source: Mel Baughman  
612/624-0734  
Editor: Mary Kay O'Hearn  
612/625-2728

## **PROCEEDINGS OF WOODLAND OWNERS & USERS CONFERENCE ARE AVAILABLE**

Persons wishing to obtain a copy of the talks given at the Woodland Owners & Users Conference may obtain them for \$3 a copy says Mel Baughman, forest resources specialist with the University of Minnesota's Extension Service.

These topics are included in the conference proceedings: management planning, how to market timber effectively, backyard tree care, regenerating your woodland, sources of financial support for private woodland owners, managing woodlands for whitetail deer, harvesting timber, managing for blueberries, woodland landscaping for wildlife, federal income tax update, and oak and aspen management.

The conference, held Feb. 20, was sponsored by the Minnesota Department of Natural Resources' Division of Forestry and the university's College of Forestry and Minnesota Extension Service.

To obtain a copy of the proceedings, send a check for \$3 payable to the University of Minnesota to Extension Forest Resources, 1530 N. Cleveland Ave., University of Minnesota, St. Paul, MN 55108.

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AEA, BSS, CEO, T

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NNRD2551

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# News and Information

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March 10, 1988

MIC  
8/27P

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

Source: Cynthia Ash  
612/625-7022  
Writer: Deedee Nagy  
612/625-0288

## PLANT DISEASE DIAGNOSIS, ADVICE ARE AS NEAR AS PHONE

White, cottony spots on the lawn. Leaves dropping from the boulevard tree in midsummer. Strange insects on the developing fruit on the apple tree in the backyard.

These are some of the kinds of inquiries from Twin Cities metro area homeowners that get answered at the University's Dial-U Insect and Plant Information Clinic.

The clinic, with its staff of horticulturists, entomologists and plant pathologists, handled approximately 24,000 questions during 1987, including about 2,000 calls from county extension agents who needed information to pass on to their clients.

The clinic is open year around. At the present time, it is staffed from 9 a.m. until 2 p.m. weekdays, but the hours will be extended to 5 p.m. beginning April 1 to handle the many calls the clinic receives during the spring and summer. Callers to the Dial-U number, 1-976-0200, are charged \$2 for the information conveyed. Many also are sent printed materials and factsheets for more detailed information and advice.

# # #

V7,ECDfst

Page 1 of 1

NAGR2546

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# News and Information

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March 10, 1988

M-5C  
9A27P

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

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## LOOKING FOR EASY MONEY THIS SPRING?

Minnesota farmers looking for "easy money" this spring should carefully study their soil test results, advises George Rehm, soils specialist with the University of Minnesota's Extension Service.

"Soil test values for P and K throughout Minnesota have increased substantially in the last 10 years," he says.

"Generally, there's been a marked increase in the percentage of samples that fall in the medium, high or very high category.

"Fertilizer rates are reduced as soil test values increase. And this can easily translate into increased savings for Minnesota farmers," he adds.

An increase in the soil test level for P and/or K can make placement decisions easier. Where soils have a medium level of P and/or K, you can place more emphasis on using starter fertilizer rather than a broadcast application. And this management technique will also reduce fertilizer costs.

"There's no need to continue to build soil test levels for both P and K to very high levels," Rehm emphasizes. "It's very doubtful if corn yields will benefit from phosphate fertilizer if

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the soil test for P is higher than 40 pounds per acre. Likewise, potash fertilizer can't be expected to increase corn yields when the soil test value for K is higher than 300 pounds per acre.

"Sample your soils this spring if you didn't get it done last fall," Rehm advises. Soil sample bags and information sheets are available at county offices of the Minnesota Extension Service.

"There's still no substitute for soil testing as a major management tool for the most profitable yields," Rehm concludes.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2553



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# News and Information

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March 10, 1988

MSC  
9 A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Merv Freeman  
612/296-1306  
Writer: Jack Sperbeck  
612/625-1794

## **CROP INSURANCE MUST BE PURCHASED BEFORE APRIL 15**

Multiple-peril crop insurance (MPCI) must be purchased before planting--by April 15--for spring-planted crops.

Government subsidies for MPCI reduce a farmer's premium costs by about 50 percent, says Mervin Freeman, area farm management specialist with the University of Minnesota's Extension Service. MPCI is available in the major crop-producing counties of Minnesota. And, farmers will not be eligible for emergency low-interest loans unless they have MPCI insurance, Freeman says.

Coverage is available--although not for all crops in all counties--for barley, beans, corn, sweet corn, flax, hybrid seed, oats, green peas, potatoes, soybeans, sugarbeets, sunflowers and wheat.

"Farmers purchasing MPCI insurance should consider breaking their farm into separate insurable units," Freeman advises. "This will increase chances you'll be able to collect indemnity payments.

"Unavoidable production losses like drought, excessive moisture, hail and wind may be confined to a small part of your total acreage. It's much easier to collect on MPCI insurance when

Page 1 of 2

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

you can collect for spot or limited acreage losses," Freeman says, adding that the separate insurable units add a 10 percent extra cost to the premium.

The first requirement to separate the farm into different insurable units is to have an APH or actual production history for each unit. Each unit must be divided from the other units by a road or fence line. A farmer can also divide his farm as one unit owned and another crop shared, Freeman says.

"There's no substitute for good records when establishing a unit's APH," Freeman says. "You can get a lot of production history from your local ASCS office. And, it's to your advantage to have the highest APH yield possible on the farm."

More information is available from county and area offices of the University of Minnesota's Extension Service, and from ASCS offices.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2552

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# News and Information

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March 10, 1988

MSC  
9A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Kathy Mangum  
612/625-9721  
Writer: Jennifer Obst  
612/625-2741

## **MEDIATION PROGRAM HAS REACHED OVER 4,400 FARMERS**

Minnesota's farm mediation program, which was mandated by the 1986 Minnesota Farm Bill and which prohibits lenders from foreclosing on farm families until they have come together in a mediation session, has reached more than 4,400 farmers and about 11,000 lenders so far.

"In the last seven months, we've had a case load of about 1,000 farmers," says Kathy Mangum, the Minnesota Extension Service specialist who directs the program. "This is a drop in the number of mediations compared to this time last year.

"There are at least three reasons for the decline. One is that Farm Credit Services, which has been the biggest initiator of mediation cases, started its own debt restructuring program, and these are negotiated before they initiate mediation.

"Also, because of the mediation program, we see many more initiatives taken by the individual lender and the farmer to start communicating before the crisis stage.

"The third reason," Mangum says, "is that, at least this past year, farmers had a good income year."

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The Minnesota Extension Service was mandated by the law to administer the mediation program, and it has trained about 700 volunteer mediators. According to Mangum, more than half of the mediation cases have resulted in favorable settlements which keep the farmer in business.

Minnesota has the lowest per capita rate of Chapter 12 bankruptcies in the country, and it is felt this is due to the mediation program. As a result of its success, the program has become a model for other states, as well as for the mediation portion of the federal Farm Credit Act.

Mangum says, "In December, there were 23 states that had farm mediation as a public policy agenda item on their legislative docket. With the passage of the federal bill, there's even more of an incentive for states to pass such a bill."

The program also has raised some new public policy issues. Mangum says, "We have a Minnesota law that says the family farm shall be preserved, and much of the 1986 farm bill attempted to provide strong legal rights for farmers faced with foreclosure. The law dealt with that public policy issue, but created some new ones.

"For example, what has been the impact on credit? Also, farmers are now not being treated equally by lenders. For those who have the ability to repay their debts, the lenders are not offering the debt restructuring and interest writeoffs and buydowns. So, in a sense, the farmers who are on the brink of going out are getting the best deals from the lenders. As a

result, there's been a backlash in some communities.

"But I think other states have seen that we are keeping some families on the farm engaged in profitable farming," Mangum says. "Lenders have been writing off a debt and thereby taking a loss, but in the long run, the lending system as well as the farm family will be in better shape, because the rural community will be maintained."

# # #

AEA,BSS,CEO,V1,V4

NAGR2564

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# News and Information

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March 10, 1988

MSC  
9A27p  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Robert M. Jordan  
612/624-6784  
William Boylan  
612/624-1727  
Writer: Sam Brungardt  
612/625-6797

## **DAIRYING COULD SUPPLEMENT SHEEP PRODUCERS' INCOME**

Although the United States annually imports more than 22 million pounds of sheep milk cheese (Roquefort, Kasseri, Romano and Manchego, to name a few types), sheep dairying is virtually nonexistent in this country. However, interest in it has grown since the University of Minnesota began research on the topic in the early 1980s.

The University of Minnesota is the first and only U.S. institution to conduct such research, and it now has a sheep milking parlor in operation at its Rosemount Agricultural Experiment Station.

The sheep dairying research, supported by the university's Agricultural Experiment Station, initially evaluated the production performance and milk composition of various U.S. sheep breeds and their crossbreds.

Animal scientist William Boylan, who directs the production research, says that although the Suffolk was found to produce the most milk, it produces far less than some foreign breeds.

Unfortunately, the U.S. Department of Agriculture will not allow

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these breeds to be imported because of animal disease concerns.

Nonetheless, Boylan says dairying could be profitable for some producers: although they do not have access to foreign milk sheep breeds, they can raise their flocks' milk production by culling low-producing ewes after their first lactation.

What's sheep milk worth? Animal scientist Robert Jordan says it sells for four to five times the price of cow milk in Europe because it's high in solids (so less is needed to make a pound of cheese) and because the cheese made from it sells for more per pound than cheese made from cow milk. Jordan says it should be worth 44-55 cents a pound in the United States if cow milk sells for 11 cents a pound.

Jordan says it may be possible to set up a milking parlor and buy the necessary equipment for as little as \$5,000. That's a relatively small investment, he points out, considering that a lamb producer with 100 ewes could increase his net profits as much as \$10,000 a year by milking his ewes.

It would be most profitable, he says, to begin to milk the ewes as soon as they lamb, continue for 160 days and feed the lambs milk replacer for a month, until they are old enough to wean. Although this would require more labor and a higher investment, Jordan figures a producer would clear about \$30 more per ewe than if he were to wean at 30 days and then milk the ewes for 130 days, and about \$100 more per ewe than if he were to not milk them at all.

Where can a producer sell sheep milk? That's the challenge, Jordan says. A producer must be able to contract with a plant that makes sheep milk cheese or yogurt, and he and Boylan know of only a few such plants. Fortunately, freezing does not affect the cheesemaking properties of sheep milk, so producers can freeze their milk and accumulate it until a processor is ready to make a batch of cheese.

"The sheep dairying industry is like a three-legged stool," Jordan says. "One leg is demand, which we have. Another is milk supply, which we don't have yet. And the third leg is manufacturing ability, which in a sense we don't have either because most plants aren't going to make sheep milk cheese until they can be assured of a steady supply of milk."

So, while sheep dairying may be an industry whose time has not quite arrived, Jordan and Boylan are optimistic that it will one day be an alternative enterprise for some Minnesota sheep producers. It will allow them to increase their profits, it will create new jobs in the state's food processing industry and it will help reduce the United States' balance-of-payment problems.

# # #

AEA,BSS,CEO,V1,V3,V4,O,S,W

NAGR2545



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# News and Information

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March 10, 1988

MSC  
2/11/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mel Baughman  
612/624-0734  
Editor: Mary Kay O'Hearn  
612/625-2728

## 'GREAT AMERICAN WOODLOTS' VIDEOS NOW AVAILABLE TO PUBLIC

The public can now buy, rent or borrow videotapes of the 13-program "Great American Woodlots" series which has appeared on many public television stations.

The magazine format of each of the 30-minute programs includes interviews with woodlot owners; practical, how-to-do-it information; and managing for game and nongame animals as well as segments on how young people are learning about forests and viewpoints of woodlots from forestry leaders.

Some of the filming was done in Minnesota, says Mel Baughman, forest resources specialist with the University of Minnesota's Extension Service. Program 5 includes an interview with Waldo Kick, a Minnesotan twice named outstanding Tree Farm Operator. Gordon Gullion, who does grouse research for the Minnesota Agricultural Experiment Station at the University of Minnesota's Cloquet Forestry Center, appears in programs 7, 8 and 9. A backyard maple syrup production segment for program 12 features Carl Vogt, forest resources specialist with the university's Minnesota Extension Service. John Suffron, Minnesota Forestry Association, represents woodlot owner organizations on program 13,

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which includes timber management information from Minnesota. The series, produced by the University of Maine and the Maine Public Broadcasting Network, also drew on experts from Alaska, Arkansas, Connecticut, the District of Columbia, Idaho, Indiana, Kansas, Maine, Maryland, Massachusetts, Mississippi, Montana, Nebraska, New Brunswick, New Hampshire, New York, North Carolina, Ohio, Oklahoma, Oregon, Virginia, Vermont, West Virginia and Wisconsin.

The series comes in both the 1/2- and 3/4-inch VHS format. Videotapes of each of the 30-minute programs in the series may be purchased for \$14 each from Bud Blumenstock, Great American Woodlots, 107 Nutting Hall, University of Maine, Orono, ME 04469 (phone 207/581-2890).

The Minnesota Extension Service also is renting videotapes that each contain several programs in the series: programs 1-4, programs 5-7, programs 8-10 and programs 11-13. For more information, contact the Distribution Center, Room 3, Coffey Hall, University of Minnesota, St. Paul, MN 55108 (phone 612/625-8173).

The series is also available through the interlibrary loan system, and people wishing to borrow the tapes should contact their local library's interlibrary loan office. The tapes are stored at Fogler Library at the University of Maine, Orono.

An information sheet on each of the programs and information on how to obtain them is available from Mel Baughman, Extension Forest Resources, University of Minnesota, 1530 N. Cleveland Ave., St. Paul, MN 55108.

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# News and Information

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March 10, 1988

MSC  
9 AZ7P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Cynthia Ash  
612/625-7022  
Writer: Deedee Nagy  
612/625-0288

## PLANT DISEASE DIAGNOSIS, ADVICE ARE AS NEAR AS PHONE

White, cottony spots on the lawn. Leaves dropping from the boulevard tree in midsummer. Strange insects on the developing fruit on the apple tree in the backyard.

These are some of the kinds of inquiries from Twin Cities metro area homeowners that get answered at the University's Dial-U Insect and Plant Information Clinic.

The clinic, with its staff of horticulturists, entomologists and plant pathologists, handled approximately 24,000 questions during 1987, including about 2,000 calls from county extension agents who needed information to pass on to their clients.

The clinic is open year around. At the present time, it is staffed from 9 a.m. until 2 p.m. weekdays, but the hours will be extended to 5 p.m. beginning April 1 to handle the many calls the clinic receives during the spring and summer. Callers to the Dial-U number, 1-976-0200, are charged \$2 for the information conveyed. Many also are sent printed materials and factsheets for more detailed information and advice.

# # #

V7,ECDist

Page 1 of 1

NAGR2546

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# News and Information

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March 17, 1988

educ  
group

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

Source: Jim Kielsmeier  
612/624-3489  
Writer: Deedee Nagy  
612/625-0288

## COMMUNITY, YOUTH DEVELOPMENT GO HAND IN HAND

Tapping the energy and social concerns of young people for the betterment of the community is one goal of a statewide youth development model being designed by the University of Minnesota's Center for Youth Development and Research.

With enabling legislation through community education and new state funding, more than 150 communities throughout Minnesota are developing plans to engage youth in volunteer and community service tasks.

Jim Kielsmeier, who is on the staff of the Center for Youth Development and Research, is working on guidelines and standards for schools and other youth-serving organizations to consider in beginning such development programs. Among the areas where youths can make a difference are tutoring, caring for the elderly, environmental improvements and working with young children.

# # #

AEA,BSS,CEO,V4,G,Q

N4-H2549

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# News and Information

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March 17, 1988

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

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## **GETTING FERTILIZER RECOMMENDATIONS FROM U OF M IS FASTER**

"I like the University of Minnesota fertilizer recommendations, but don't like the long wait for the results."

That's been a common complaint of Minnesota farmers in recent years, says George Rehm, soils specialist with the Minnesota Extension Service.

But major changes at the university's Soil Testing Laboratory mean that farmers can expect faster results. For example, if a soil sample reaches the laboratory on Monday, the results will be in Wednesday's mail.

"There will be special efforts to speed results to farmers during the busy months of March, April and May," Rehm says. Farmers who want to deliver samples on Saturday morning, can make special arrangements to do so by calling (612) 625-3101.

Although there's an emphasis on speed, there has been no change in the quality of the analytical results. And there's no change in the most cost-effective fertilizer recommendations.

"Minnesota farmers can take advantage of soil sampling early this spring," Rehm says. "P and K levels in Minnesota soils have

Page 1 of 2

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changed in recent years. Now is the time to check the nutrient status of your soils."

Soil test bags and information sheets are available at county offices of the Minnesota Extension Service.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2567

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# News and Information

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March 17, 1988

MSC  
9/2/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: William Koskinen  
612/625-4276  
Writer: Jack Sperbeck  
612/625-1794

## **COMING: PEST CONTROL WITHOUT GROUNDWATER CONTAMINATION**

Vastly reduced chances of groundwater pollution and economical crop pest control. That's a welcome option that may be available to Minnesota farmers in a few years, say researchers with the University of Minnesota's Agricultural Experiment Station.

"Through computer programs, farmers should be able to identify the most economical and environmentally safe chemicals for a specific crop on their farm," says U.S. Department of Agriculture soil scientist William Koskinen.

Koskinen, who is stationed at the University of Minnesota, St. Paul, and coworker James Anderson are using field studies and sophisticated laboratory procedures to help develop "leaching" models for various soils, crops and pesticides.

"We know there's a problem with certain pesticides reaching the groundwater. What we don't know is how they get there, what's causing them to get there and what we can do to control pesticide leaching," Koskinen says.

He, Anderson and other University of Minnesota scientists expect to find the answers that farmers can use to apply

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economical and environmentally safe chemicals.

"We're looking at tillage practices to reduce pesticide movement in the soil," Koskinen says. "Later, we'll be looking at other management practices like pesticide application techniques and alternative chemicals that don't leach into the groundwater."

All this is time consuming, expensive and complicated. For example, a farmer can pay \$50 to \$100 to get a laboratory pesticide analysis of soil or water.

The scientists are looking for parts per billion of pesticide contamination--minute amounts. Extracting and preparing the samples is exacting work. The samples are analyzed using gas chromatography and confirmed by mass spectroscopy.

# # #

V1,V4,C,F,S

NAGR2554



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# News and Information

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March 17, 1988

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

Source: John Nieber  
612/625-6724  
Writer: Jack Sperbeck  
612/625-1794

## **RESEARCH AIMS TO GET HANDLE ON SOURCES OF NONPOINT WATER POLLUTION**

Tracking nonpoint sources of surface water and groundwater pollution means understanding the hydrologic cycle, water runoff, deep percolation, groundwater recharge and other things. It's all complicated, but critically important to us water drinkers.

Researchers with the University of Minnesota's Agricultural Experiment Station are working on a project to describe the impact of agricultural and other land management practices on surface and groundwater quality. Agricultural engineers John Nieber and Ian Moore are analyzing how chemicals applied to the land move to groundwater and surface water (lakes and streams).

"Biological and chemical reactions in soil reduce the concentrations of chemicals applied to the land," Nieber says.

The hydrologic cycle "drives" the movement of chemicals such as nitrogen through and over the soil to lakes and streams. It also drives the soil erosion and sedimentation processes that are an important part of the total nonpoint source pollution story.

The two researchers are analyzing the processes of water movement and chemical transport with mathematical models and field experiments. They use mathematical models to predict what will

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happen to water, sediment and chemicals under different land use situations. Field experiments are used to test predictions from the mathematical models.

Then, they use high-resolution color graphics to display results and help understand the human impact on surface water and groundwater quality.

"The information we get is being developed into recommendations and programs by Minnesota Extension Service personnel to help farmers and consumers deal with nonpoint water pollution issues," Nieber says.

# # #

V1,V4,C,F,S

NAGR2558

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# News and Information

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March 17, 1988

MSC  
3/17/88

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

Source: Wanda Olson  
612/624-3780  
Writer: Deedee Nagy  
612/625-0288

## **RESEARCH LOOKS AT LAUNDERING FOR PESTICIDE-CONTAMINATED CLOTHING**

Farmers and pesticide applicators often downplay the risks involved in handling herbicides and insecticides, and that can lead to improper laundering and further exposure to the chemicals.

Agricultural Experiment Station research conducted at the University of Minnesota and four other universities has resulted in a number of recommendations for those who launder pesticide-contaminated clothes as well as for the wearers themselves.

Wanda Olson, Minnesota Extension Service household equipment specialist who was involved in the research, says people often assume incorrectly that common work clothing protects against skin exposure to the chemicals and that normal laundering removes all the pesticide from the clothing.

She says persons who apply such chemicals should wear gloves, boots, long-sleeved shirts, trousers or coveralls to protect against skin contact. Neoprene or rubber-coated clothing provides the best protection and is especially important when handling pesticides in concentrate form.

Any clothing with pesticide on it should be washed before it is worn again. Clothing on which liquid concentrates of the chemicals

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have spilled, such as cotton gloves, should be discarded because even repeated washings do not effectively remove the pesticides. A study indicated that even after 10 washings, 30 percent of the concentrate remained in the fabric.

Olson says two or more layers of regular clothing are more protective than one. Smooth fabric is recommended for the under layer of clothing rather than something fleecy, such as a sweatshirt or open, mesh underwear.

The researchers also suggest separating clothing worn while applying pesticides, including underwear, from other clothing and washing this clothing after daily wearing. Pesticides from repeated soilings and older soil are much more difficult to remove.

Launderers should wear rubber gloves when handling contaminated garments. Such clothing should be prerinsed and washed in hot (140 degree F) water using small loads, the highest available water level and the longest wash time available, according to Olson.

After running a load of pesticide-contaminated clothing through the washer, run the empty washer through a complete cycle with detergent. Then, line dry the clothing to avoid possible contamination of the clothes dryer.

The laundry research, as well as related surveys of pesticide applicators and farm launderers, was conducted at the University of Minnesota, the University of California-Davis, Oklahoma State University, Michigan State University and Iowa State University.

# # #

AEA,BSS,CEO,V1,V3

NHEC2547

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# News and Information

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March 17, 1988

m.l.c.  
SATIP

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

Source: Ralph W. Holzenthal  
612/624-7728

Editor: Sam Brungardt  
612/625-6797

Editors: Call Carl Walker (612/624-3708) to obtain a photograph to use with this story.

## U OF M COLLECTION PRESERVES DIVERSITY OF INSECT LIFE

For those who like bugs, the University of Minnesota Insect Collection (UMIC) is the place to be. In the rows upon rows of metal cabinets that hold the collection, there are more mosquitoes than on a Boundary Waters portage in June, more ants than at a church picnic. Or, if your tastes run to the exotic, there's an 8-inch-long beetle that bears an uncanny resemblance to a rhinoceros. With more than 2.6 million specimens, the collection includes an insect to please just about anyone.

One of the top 10 university-based insect collections in North America, the UMIC was started in 1987 by state entomologist Otto Luggner with insects from the north shore of Lake Superior. Since then, specimens of some 37,000 species from all over the world have been added, including rare or endangered species and irreplaceable, one-of-a-kind specimens. The value of the collection has not been calculated, but curator Phil Clausen says some individual bugs are worth thousands of dollars.

"It's essentially a library of the world's insect fauna," says Ralph Holzenthal, the assistant professor of entomology who

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directs the Minnesota Agricultural Experiment Station project that funds the UMIC. "Specimens are catalogued much like a library is catalogued. Each species is like a book--it contains information."

The collection, like a library, serves a variety of purposes. As a permanent physical record of insects, it's an invaluable tool for research in systematics and related sciences, providing the groundwork for applications in pollution control, resource use, agriculture and public health. Students from grade school through grad school use the collection to observe and analyze firsthand the incredible diversity of insects. The collection also serves as a useful identification resource for university scientists and extension agents, state agency staff, environmental groups and others.

But of perhaps the greatest global consequence, the UMIC helps preserve specimens that, through habitat destruction (particularly in the tropics) and subsequent extermination, might otherwise be lost to science for all time.

"Species are being destroyed before they are even known by scientists," Holzenthal says. "This decline in biodiversity is a crisis that demands immediate, massive efforts to collect, study and catalogue as rapidly as possible the plants and animals found in these habitats."

The task of curating a collection of this size and nature is not an easy one. Each of the 30,000 or so specimens added to the collection annually must be processed, mounted, identified as to

family, labeled and catalogued. With the help of a computerized inventory management system, Clausen also handles the UMIC's liberal loan program. Scientists from many countries frequently borrow specimens or groups of insects from the collection for research, keeping him busy pulling and replacing specimens.

But the job has its rewards, too. "If there's a best thing about curating a collection, it's being able to see the abundance and diversity of things," Clausen says. "I do enjoy seeing different sizes, different colors. Even though I don't find myself in awe of it all the time, I do like to see it and get it all in order."

# # #

AEA,BSS,CEO,V1,V4,S

NEXP2568

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# News and Information

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March 17, 1988

MSC  
JAP-IP

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

Source: Sharon M. Danes  
612/625-9273  
Writer: Jennifer Obst  
612/625-2741

## **FARM FAMILIES EXPERIENCE GROWTH, CHANGE VALUES IN FINANCIAL CRISIS**

Preliminary results of a University of Minnesota study of farm families who have gone through the farm credit mediation process show that while the economic stress brought some families together, it tore some apart.

The study, funded by the university's Agricultural Experiment Station, is looking at the families' economic, social and emotional adjustment strategies, says Sharon M. Danes, family social science specialist with the Minnesota Extension Service. She, with colleagues Jean Bauer and Kathy Rettig, has been studying 329 people who have completed mediation.

The study has revealed some changes in values. "A lot of the farm families no longer trust financial institutions or other people," Danes said. "They feel a way of life they knew and loved has been destroyed and they're resenting it."

The stress has also been an impetus for change. Danes said, "Some of the families have become more politically aware, not in terms of bipartisanship, but in terms of farm policies. They have a broader perspective beyond their own situation. That some of these people could gain this perspective as they were or are

Page 1 of 2

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losing their lands is amazing to me.

"We found cases where wives or husbands were very bitter because their spouse had heart attacks and died. But then we also heard a lot of positive things. The majority of our respondents said that the family became more important and moved closer together during the stressful times. They talked about enjoying family activities more. They mentioned the help they received in money and services in both the immediate and extended family.

"The economic situation forced couples to set goals and clarify priorities. And an important positive outcome of the stress was improvement in money management practices. Respondents said they now had more knowledge of laws, banking services and investment alternatives and community resources. They keep better records, have improved business practices and have become more effective consumers. They said they have an emergency fund, watch their spending more carefully and are more reluctant to go into debt," Danes said.

The researchers often received letters when the respondents returned the survey form. "We were surprised by the amount of appreciation we got from people, that they felt they could express their feelings and experiences, because they didn't always feel they could do it with neighbors or other community members," Danes said.

The study will continue for a second year, to look at not only the families' initial adjustment strategies, but their recovery process.

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# News and Information

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March 17, 1988

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JAC:lp

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

Source: Charles Clinton  
612/625-9218  
Writer: Mary Kay O'Hearn  
612/625-2728

Editors: Call Carl Walker (612/624-3708) to obtain a B/W print or 35-mm color transparency to use with this story.

## U OF M RESEARCH SEEKS NEW USES FOR WHEY

Who doesn't remember that childhood verse about Miss Muffet eating her curds and whey?

But the verse has never made sense to the dairy industry--at least the part about the whey. The industry has always found plenty to tempt the consumer with products made from curd, while whey has gone begging.

"Of 100 pounds of milk, 10 pounds wind up as cheese (that's the curds portion) and 90 pounds as whey (the watery part)," explains University of Minnesota food scientist Howard Morris.

Some whey becomes an ingredient in other foods for humans or in animal feeds or winds up in pharmaceutical products, but a significant amount remains a disposal problem, usually at the wastewater treatment facilities nearest the cheese factory. An estimated 2.9 million tons of liquid whey is produced in Minnesota annually and approximately half of that is dumped as wastewater.

Disposal costs for all waste, including whey, are rising. Because whey is unusually high in biochemical oxygen demand, it is expensive and difficult to treat. Whether a cheese factory can

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afford to remain in a community becomes partially dependent on what can be done about the whey. And, as costs rise, everyone realizes, ultimately it's the consumer who pays.

So, to help tackle the problem, Morris is providing whey left over from cheesemaking classes in the Department of Food Science and Nutrition to Charles Clanton, the agricultural engineer who is coordinating multidisciplinary research for the university's Agricultural Experiment Station into the anaerobic digestion of whey.

Clanton's goals are to find a relatively inexpensive method of pretreating whey to reduce wastewater treatment costs and to find a way that cheesemaking plants can manufacture methane from whey for a source of energy.

If methane production is feasible, Clanton says this conversion could supply as much as 35 percent of a cheese factory's energy needs.

But producing methane is a delicate, fastidious process that demands knowledge and control of the microbiological processes involved. Controlling salt and pH levels during the process is essential.

On the top floor of the agricultural engineering building on the university's St. Paul campus, Clanton, assistant scientist Bruce Backus and graduate student Gene Fox have six digesters going, each scaled to six liters of liquid. Different buffer solutions are mixed with whey to discover which will be least toxic to the microorganisms that produce methane. So far, a

calcium hydroxide buffer seems to show the most promise.

Research on this alternative use of whey is also going on in England, Germany and Australia, Clanton points out, and anaerobic digesters are said to be in use in England and Nova Scotia. Also, a Wisconsin brewer recently asked Clanton whether the Minnesota research could also be adapted for the brewing industry.

As waste disposal becomes more and more expensive, this kind of research may not only result in an alternative to expensive treatment, but convert wastes to usable products as well.

# # #

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

NAGR2570

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# News and Information

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March 17, 1988

1782  
3A-18  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Gary Malzer  
612/625-6728  
Writer: Jack Sperbeck  
612/625-1794

## HERE'S THE 'NEXT GENERATION' OF NITROGEN MANAGEMENT

A nitrogen management plan refined by a computerized expert system that gives crops exactly what they need--and no more.

That's what University of Minnesota researchers are working on. Their goal: optimum yields, restored profitability to agriculture and improved ground water quality.

"Our research represents the 'next generation' of nitrogen management," says Gary Malzer, soil scientist with the university's Agricultural Experiment Station.

Malzer's research is focused on the irrigated Sand Plain of central Minnesota. The computerized expert system monitors crop needs. And in unusual years, it adjusts nitrogen rates during the growing season.

"Last year was dry in the Sand Plains growing area so there was little nitrogen leaching during the growing season," Malzer says. "But let's say we have 4 inches of rain in late June. The expert system predicts what took place in the soil and recommends adjusted nitrogen rates.

"The system makes sure there's enough nitrogen for the crop, but not so much that excess nitrogen is left in the soil at the

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end of the growing year. It also helps keep nitrogen from getting in the groundwater before crops can use it."

Coworker Michael Russelle, a soil scientist with the USDA's Dairy Forage Research Center, is working on a related project to improve water quality and restore profitability to agriculture. His research project uses forages such as alfalfa to improve nitrogen cycling on farms. And Malzer is working to integrate the two--to use "fixed" nitrogen from legumes and incorporate it into overall nitrogen management plans.

# # #

V1,V4,C,F,S

NAGR2556

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# News and Information

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1975  
1977

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

March 17, 1988

Source: C. Eugene Allen  
612/624-5387  
R. Kent Crookston  
612/625-0220  
Writer: Sam Brungardt  
612/625-6797

## **CROOKSTON TO DIRECT SUSTAINABLE AG WORKING GROUP AT U OF M**

C. Eugene Allen, dean of the University of Minnesota's College of Agriculture, has appointed R. Kent Crookston director of the college's Working Group in Sustainable Agriculture. Crookston is a professor in the university's Department of Agronomy and Plant Genetics.

"During the next few months, Dr. Crookston and the faculty working in his group will be developing plans for initiatives in the area of sustainable agriculture," Allen said. "We hope their efforts will soon lead to the establishment of a Center for Sustainable Agriculture here at the university.

"The group will also be working with an external advisory group and other interested individuals and groups. The advisory group will probably be constituted later this spring or summer."

Agricultural and other interests in Minnesota have become increasingly interested in sustainable agriculture, according to Allen. In its last session, the Minnesota Legislature appropriated \$75,000 toward the establishment of a chair in sustainable agriculture at the University of Minnesota with the proviso that the university match the seed money.

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

Allen says the cost of establishing such a chair is actually \$1.5 million, and he hopes the Legislature will increase its ante by \$675,000 in the current session. Then, the university will attempt to match the Legislature's \$750,000 to make the endowed chair a reality.

The legislation that funded the chair said that "sustainable agriculture represents the best aspects of traditional and modern agriculture by utilizing a fundamental understanding of nature as well as the latest scientific advances to create integrated, self-reliant, resource-conserving practices that enhance the enrichment of the environment and provide short- and long-term productive agriculture."

Allen said, "Although I strongly support the concept of a chair in sustainable agriculture, our first priority is to establish a center for sustainable agriculture. The person who fills the chair will hold tenure in a single academic department, and may take a more restrictive approach to his or her research than would result if there's a center that coordinates faculty efforts across departmental lines. Our experience in the College of Agriculture has been that centers are very effective at enabling an interdisciplinary approach to problem solving."

Crookston will be responsible for providing leadership and coordination to University of Minnesota programs in sustainable agriculture. He said a number of university faculty who are already working on topics important to sustainable agriculture and others who have indicated an interest in it will make up the working group.

Crookston said a top priority will be to develop plans for the Koch farm, a 160-acre parcel of land adjacent to the Southwest Experiment Station near Lamberton, which the university's Agricultural Experiment



Station has rented.

The Koch farm will provide a site ideally suited to sustainable agriculture research and extension work, according to Crookston. While the Southwest Experiment Station has a long history of chemical inputs, the Koch farm has been cropped in a corn-soybean rotation for at least 30 years with almost no use of fertilizers and pesticides. The land has never been tilled, and has been worked only with relatively small equipment. And since the Koch farm has soil types that are very similar to those on the Lamberton station, there will be a basis for comparisons.

"During the first year, we'll concentrate on determining the exact state of the land," Crookston said, "for example, its fertility, chemical residue and microbial status so we'll have benchmark data for future studies."

Next week, Crookston will attend the USDA-sponsored Sustainable Agriculture in the Midwest conference in Nebraska. There, he and other representatives from the land grant universities of the 12 states in the north central region will report on the research and extension programs that are already under way in sustainable agriculture and work out a strategy for cooperative efforts. The USDA has designated \$800,000 of the \$3.9 million that Congress appropriated in its 1988 budget for sustainable agriculture research and education programs in the north central region.

Crookston's research at the University of Minnesota has concentrated on crop management systems. Raised on a small farm in Alberta, he has been on the University of Minnesota faculty since 1974.

# # #

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# News and Information

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March 17, 1988

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

Source: Shirley Munson  
612/624-3419  
Editor: Sam Brungardt  
612/625-6797

Editors: Call Carl Walker (612/624-3708) to obtain a b/w print or 35-mm color transparency to use with this feature.

## **POSTHARVEST RESEARCH GIVES PANELISTS A TASTE OF PLENTY**

To be on Shirley Munson's panels judging french fries and fruits, you've got to keep your lip buttoned.

"They can't talk and we tell them not to say 'yuk' or 'wow' or make any comment that the others could hear," Munson says of her taste panelists.

Munson, a University of Minnesota postharvest horticultural scientist, evaluates the postharvest quality of fruits and vegetables for the university's Agricultural Experiment Station.

Munson has been training volunteer panels to evaluate fruits and vegetables for years. Last year, panel members--usually undergraduate and graduate students--evaluated french fries made from 40 different kinds of potatoes which University of Minnesota scientists had developed for specific characteristics. There are also panels to evaluate apple, strawberry and blueberry selections.

The results of the samplings are tabulated and relayed to horticultural scientists Florian Lauer and breeder Jim Luby, who are in charge of the experiment station's potato and fruit

Page 1 of 5

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

breeding programs, respectively. The breeders keep the panels' judgments in mind when deciding to drop or keep breeding lines or to introduce a new variety to the public. The potato judging is financed in part by a grant from the Red River Valley Potato Growers' Association.

"We're doing it to make a better french fry," Munson says. Some potato lines are evaluated for several years by panels. Some of the breeding lines Lauer has produced have been judged to make much better french fries than the Russet Burbank variety that the industry now uses almost exclusively, she adds.

Munson pioneered this kind of sensory evaluation panel in the United States and devised her own questionnaire for judging. Munson, unlike many who evaluate foods, does not want to know how much the tasters like a food overall. What she's after is judgment of several characteristics, including shape, size, color, texture and flavor.

"Mouth feel is terribly important and size and color are what attracts you to certain fruits and vegetables when you shop," she says. "When you're dealing with breeding lines, you need to know what they're like, not how well they're liked, so that's why we have the descriptive differences scored."

Tests are run with a tight hand on potential variables. For example, Munson provides several terms to describe french fries, including "greasy," "limpy," "dry" and "bitter." All the frying is done with the same kind of oil and timed precisely to keep the

difference in panel reaction due as much as possible to the difference in potatoes.

Munson has one big rule for picking judges: "They have to like the food. If they don't really like it, they aren't good judges." And that's liking it plain, not fancy. For example, the french fries are only lightly sprinkled with salt; no ketchup is allowed until the official tasting is done.

Panel members are chosen every fall and receive training in the process and vocabulary before they start chomping their way--usually several times per week--through the samples.

"There's a lot of psychology involved in running sensory evaluation panels," Munson notes. "I never run a panel before 10 a.m. because some people are slow starters, or too soon after lunch because their taste buds may be dull. The samples all have arbitrary three-digit numbers instead of being labelled 1, 2, 3 or A, B, C because some people always pick the first in a j series."

"Panel members are asked not to drink coffee for at least half an hour before the session and they must come into the sampling room through a side door, lest the food preparations bias them in any way. They sit in walled cubicles, always in the same place. Artificial lighting simulates daylight, so the panelists can get a good look at the food they're testing."

Panelists drink uncarbonated spring water first to clear their palates. Unsalted soda crackers and more water are available if they need to "erase" the taste of a sample.

The actual tasting regimen is quite precise. For example, when french fries are being tested, panel members first taste a reference sample of commercial french fries, and assign a score against which the others are judged.

Next, Munson and her assistant, Mara Crombie, an undergraduate student in food science and nutrition, get to work, much like fast-food workers braving the noon rush. The cubicles are separated from the kitchen by panels that can be raised to slip the plate of sample before the judge and quickly lowered again.

The samples, 8 to 10 hot fries each, are served on white paper plates. Panel members eat enough to score the sample, then go on to the next plate. Generally, they taste five to six samples. Scores for each characteristic range from 1 to 9. "We tell them not to hug the middle," Munson says.

The panel members finish up the fries if they want to after the judging is done, with salt and ketchup allowed. They are also given other foods, such as fruit, trail mix and candy bars, that Munson considers rewards for their volunteer service.

Even before the panels start, Munson often screens many samples to detect those that aren't worth the effort. This year, she wound up eating an endless supply of boiled potatoes, with no salt or butter added, of course. "I could hardly look a boiled potato in the face after that," she says, laughing.

Munson's closeness to fruits and vegetables is virtually hereditary. Her grandfather, an Italian immigrant, had a fruit and vegetable business and her father was a state fruit and

vegetable inspector. "I was the only one in my first food science class in college who had ever eaten an artichoke," she says.

Panels are usually composed of five or six people--less than ideal, Munson admits. Scheduling problems limit the size of the panel, she says. But many panelists stay for several years. "I could never do this without a lot of cooperation, from faculty, staff and students," she notes.

# # #

AEA,BSS,CEO,V1,V4,H,I,L,S

NAGR2569

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# News and Information

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March 17, 1988

MSC  
GA 270  
Educational Development Systems  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: David Landkamer  
612/624-2720  
Editor: Sam Brungardt  
612/625-6797

## **SPECIALIST SAYS AQUACULTURE IS OF GREAT INTEREST IN MINNESOTA**

Minnesota has the potential for new fish farming ventures, according to David Landkamer, aquaculture specialist with the University of Minnesota's Extension Service and Sea Grant program.

Trout are already being farmed in the state, and Landkamer says Minnesota trout farmers have a definite advantage when it comes to supplying local markets.

But salmon probably has the greatest potential for large-scale production in Minnesota, according to Landkamer. Several large companies are considering raising salmon in flooded mine pits on the Iron Range, and as many as 25 pits may be available for immediate use.

"Salmon may be the most feasible because so much research has been done on this species," Landkamer says, adding that Minnesota's proximity to Chicago, one of the nation's larger seafood markets, may give Minnesota salmon producers an advantage over growers from either coast.

Minnesota's diverse water resources will help new aquaculture businesses develop. "In southern Minnesota, spring water is ideal for salmonid (salmon and trout) hatcheries," Landkamer observes.

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"Northern mine pits could be used for salmon, and central Minnesota lakes and ponds may be best for raising baitfish and minnows."

Landkamer says many business associations in Minnesota are very interested in aquaculture because they see the possibility of small business ventures for their communities.

However, he cautions that developing profitable aquaculture businesses won't be easy. The permit process can be confusing because the use of public waters requires review by federal as well as state agencies. For example, at least 22 permits are needed from various agencies to start an aquaculture operation in Oregon.

Potential fish producers need reliable information before they invest in an aquaculture operation. One of Landkamer's jobs is to talk with farmers and other potential entrepreneurs and to educate them on the risks of aquatic systems. "We're not talking about the difference between raising goats and raising hogs;" Landkamer says, "fish are very different."

Aquaculture demands unpolluted water, and Landkamer says nonpoint source pollution is a problem that farmers must resolve if they expect to become fish producers.

There's a quantity aspect to the water situation as well. Landkamer says, "Depletion of the water table due to irrigation and municipal withdrawal is also a concern. Although it's generally not yet a problem, it could be in some areas of the state in the future."



"Aquaculture will provide farmers with added incentive to safeguard surface and ground water," Landkamer says. "They will be more likely to manage their water supply so it will be clean and abundant if they see it as a resource that could contribute to their farms' profit."

# # #

AEA,BSS,CEO,V1,V4,V8,W

NNRD2544

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# News and Information

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March 17, 1988

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

Source: Wilbur Maki  
612/625-6237  
Writer: Martin Moen  
612/625-6243

## **ECONOMIC IMPACT OF AGRICULTURE REMAINS SOLID IN MINNESOTA**

The number of jobs related to agriculture is still a significant part of Minnesota's overall labor picture. University of Minnesota economist Wilbur Maki says agricultural trade also continues to pump millions of dollars into our state and metro economies.

Maki says agriculture is directly or indirectly responsible for about 450,000 jobs in the state. "That's a little less than 20 percent of all jobs in Minnesota," he says. "However, as part of the overall economic base of Greater Minnesota, agriculture looms much larger, accounting for 50 percent of all jobs, and even larger proportions in the more ag-dependent areas."

Agriculture is no longer as important in Minnesota as it once was. Maki says, "Agriculture has lost ground because of the tremendous upsurge in manufacturing, particularly in the Twin Cities area. Agriculture has also lost because of the decline of its foreign markets."

But with a weaker dollar, Maki expects those markets to open up again for Minnesota farmers. He predicts the next two years will see Greater Minnesota enjoy the kind of economic growth the rest of the country has experienced.

Maki says Minnesota's growing dependence on manufacturing has hurt in

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recent years. "Everyone's been quick to blame agriculture for the economic hard times in this state. But the same things that have hurt agriculture...namely, a strong dollar and weak foreign markets...have hurt manufacturing. But you don't hear that story because the plant simply closes down. Agriculture continues to struggle to survive."

Greater Minnesota, according to Maki, suffers from relatively low investment per worker outside of agriculture. This makes it difficult to achieve the high levels of productivity that are possible, given the kind of workforce that's available.

Maki says, "These people are hard workers and are willing to learn new things. But without some larger investment by the business community, nothing will happen." An excess of workers exists in Greater Minnesota, which is an advantage for business because it keeps wages low, he adds.

There is evidence that business is making use of the opportunities that exist in rural Minnesota. Maki, who studies the economic effects of agribusiness development for the university's Agricultural Experiment Station, says that half of the growth in Minnesota's manufacturing industries has occurred in Greater Minnesota. But much more is possible.

The key to growth in Minnesota's economy is the expansion of world trade in manufacturing and agriculture. "We are now into our sixth year of recovery," Maki says. "Sooner or later we're going to see a downturn in the economy. I suspect this time around the downturn will occur a bit later in Minnesota than in the rest of the country."

# # #

AEA,BSS,CEO,V1,V3,V4,V8

NAGR2571

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# News and Information

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March 17, 1988

MSC  
GARP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mike Boehlje  
612/625-0231  
Writer: Jack Sperbeck  
612/625-1794

## U OF M ECONOMIST SEES NEW DIVERSITY IN AGRICULTURE

Diversification is fast becoming a trademark of agriculture as the industry emerges from several years of severe financial stress.

By diversification, Michael Boehlje means:

- generating both farm and nonfarm income in diverse ways;
- using new ways to raise capital, including nonfarm equity and different leasing arrangements; and
- employing diverse marketing plans that reduce risk. And marketing and financial diversity will be at least as important as new production ideas, says Boehlje, an economist with the University of Minnesota's Extension Service.

The "new" diversification is different than the diversified agriculture of past generations, according to Boehlje. "We won't see farmers going back to the era of a few chickens, some hogs, cattle and several crops, with a total of 6 to 10 enterprises," he says. "But farmers will successfully combine livestock and grain operations and be very good with 2 or 3 production enterprises."

Boehlje sees many farm families combining farm and off-farm employment. "This can be a good way to get started in farming.

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It makes sense to have some off-farm income so you're less vulnerable to swings in the agricultural sector," he says. "And for some, it may be a permanent and satisfying way of life."

"Off-farm" income may not always come from jobs in town. Instead, it can come from "creative minds and talents working on home-based businesses that have nothing to do with agriculture," Boehlje says.

Diverse marketing and financial plans may be the most important part of the changing agricultural sector. "We'll see farmers combining various methods of raising capital--not just borrowing," Boehlje says. "New, longer-term leasing arrangements for land and other capital items may become an important part of the total farm operation. We'll probably see land leased not for one year, but on a longer-term basis as part of the operator's permanent land base."

Nonfarm equity, where outside investors share risk, could become part of a diversified financial structure that reduces a farm operator's vulnerability to financial swings.

And on the market side, a diversified approach of using options, futures markets, forward contracting and cash sales will also reduce risk.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2576

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# News and Information

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MSC  
9277  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

March 17, 1988

Source: Wilbur Maki  
612/625-6237  
Writer: Martin Moen  
612/625-6243

## **AGRICULTURE IS IMPORTANT PART OF METRO AREA'S ECONOMY**

On a recent trip to Japan, Minnesota farm broadcaster Lynn Kettelson saw watermelons selling for \$75, muskmelons for \$50 and Big Macs for \$6. During National Agriculture Week, March 20-26, the University of Minnesota's Extension Service is asking Minnesotans to remember who puts low-cost food on their table.

Metro area residents appreciate affordable food. But what about the impact of agriculture on the Twin Cities economy?

University of Minnesota economist Wilbur Maki, who studies the economic effects of agribusiness development for the university's Agricultural Experiment Station, says agriculture still provides a solid base for the metro economy.

Maki says the percentage of jobs in the metro area directly and indirectly related to agriculture has been dropping. He estimates that well over 100,000 jobs in the Twin Cities, or about 10 percent of the total, exist because of agriculture.

The Twin Cities economy has been growing during the 1980s because of manufacturing, Maki says. "During the '40s and '50s Metropolitan Minnesota was basically a service center for the Upper Midwest. That role continues to be important, but other

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parts of the economy have grown up much faster. Now, the Twin Cities are more of an urban industrial complex which serves regional and world markets."

Maki says the same can be said of agriculture's impact on the Twin Cities. It once was the only game in town, but other sectors of the economy have grown faster, decreasing its importance.

Despite this, agriculture is still important. Maki says, "Metro Minnesota buys one-third of what Greater Minnesota exports, while two-thirds of the services available for export from the Twin Cities are purchased by residents and businesses in rural Minnesota."

Maki feels too many people fail to recognize this interdependence. "Metropolitan Minnesota adds value to the goods produced by rural Minnesota. This creates more jobs and sends out a more valuable product than if it came directly off the farm."

The move toward a diversified Twin Cities economy and away from an economy dependent on agriculture is good news for the entire state, Maki says.

# # #

AEA,BSS,CEO,V1,V7

NAGR2572

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# News and Information

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March 17, 1988

MDC  
JAZP

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

Source: Dick Meronuck  
612/625-6290  
Writer: Jack Sperbeck  
612/625-1794

## HIGH-TECH PLANT PEST IDENTIFICATION IS HERE

You see bean leaves in your field or garden that are wilting and spotted. You pick a few, take them to your home or office computer and, using a program that Dick Meronuck has developed, diagnose the disease within five minutes.

The program for dry edible beans can easily be adapted for other crops, says Meronuck, a plant pathologist with the University of Minnesota's Extension Service. Meronuck has developed an "artificial intelligence" key using a computer and color video monitor.

"The program is ready for classroom use, county agents and pest management training," Meronuck says. "We use 'digitized' colored pictures from plant disease bulletins for the video. And they can be updated very fast as new information becomes available.

"The program is very 'user friendly.' If you make a mistake, you can start over by using just one key on the computer. It's also relatively inexpensive. If you have an IBM computer with a hard disk and the right kind of color monitor, you're ready to install the color cards to run the program. Purchase of the

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additional hardware, including the software, color monitor and color and digitizing cards, costs about \$3,000."

Meronuck sees the program being expanded to diagnose diseases in other crops plus insect and other plant pest problems. "The 'shell' of the program is available for other specialists to use in developing specific programs," he adds.

Meronuck's program is keyed for 15 dry edible bean diseases. Using bronzing disease as an example, here's how it works:

The computer screen asks whether lesions are present on the plant. There are, so you hit the "Y" key for "yes." Are the plants wilting? They are, so hit "Y" again. Are certain plants uniformly bronzed or brown in color? They are, so a third "Y" response tells you the possible answer: bronzing.

What you see on the color monitor is a leaf that has the bronzing caused by an infectious organism along with sunlight and air pollution. It is on the left of the monitor, with a normal leaf on the other half of the screen. The computer tells you, "the solution is found!"

Now, it's probably not all good news to discover your beans have bronzing disease. However, the data base part of the program (which is still being developed) can tell you the latest information scientists have on available controls, the disease organisms's life cycle, susceptible crops and so on.

More information is available from Dick Meronuck, 216 Stakman Hall, University of Minnesota, St. Paul, MN 55108.

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# News and Information

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March 17, 1988

MSC  
8A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mike Boehlje  
612/625-0231  
Writer: Jack Sperbeck  
612/625-1794

## U.S. NO LONGER DOMINATES AG RESEARCH, DEVELOPMENT

To many Americans, "international agriculture" means increasing farm exports to other countries. That's important, but three other dimensions of international agriculture are equally important, says Mike Boehlje, economist with the University of Minnesota's Extension Service.

He says the three additional developments in the international area that affect agriculture are:

- international ag research and development;
- farm inputs, such as fertilizer and machinery, coming to the United States from other countries; and
- international financial transactions, lending policies of the World Bank and International Monetary Fund, and financial firms in other countries making loans to U.S. farmers and agribusinesses.

"The U.S. no longer dominates research and development in agriculture as we did in the 1960s," Boehlje says. "Some say our real competitive advantage in agriculture was our human skills and technology, not our soils and climate.

"In recent years our competitive advantage in research and

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development has been reduced. Other countries are now very competitive at increasing agricultural production through technology.

"We must stay 'linked' to international research and development activities, Boehlje says. "That means things like accessing germplasm sources. It also means that if we ban new technology--such as growth hormones--other countries can improve their competitive advantage even more.

"In the 1960s, the U.S. was the major country that invested both public and private sector dollars in research and development. Our land grant university system and private firms, such as seed and fertilizer companies, focused on U.S. conditions and dominated the market.

"But now, agricultural research, development and technology is international--the U.S. no longer dominates. There are firms doing agricultural research in Europe, both North and South America, and Pacific Rim countries--in effect, all over the world."

Boehlje says the international financial dimension of agriculture is more than the impact of the World Bank, International Monetary Fund, exchange rates and inflation on agriculture and trade. "We now have financial firms in The Netherlands and France making loans to U.S. farmers and agricultural businesses," he observes.

And U.S. agriculture is importing many inputs. "We're importing potash from Canada and other fertilizer materials and

chemicals from other parts of the world," Boehlje says. And there's no farm tractor of less than 100 horsepower manufactured in the U.S."

Should the United States and international lending agencies help other countries develop their agricultural production--especially when they compete with U.S. farm products? Groups such as commodity organizations argue that we're helping the competition. But the counter argument, Boehlje says, is that if we expect to export farm commodities to other countries, they must generate income from their primary industry--agriculture--to have the funds to buy from us.

He says, "With specific commodities--like the soybean industry in Brazil--there is direct competition. But generally, as income in developing countries goes up from their own agricultural sector, they buy more U.S. exports to upgrade their diets."

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2575

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# News and Information

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March 17, 1988

MSC  
9A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mike Boehlje  
612/625-0231  
Wilbur Maki  
612/625-6237  
Writer: Martin Moen  
612/625-6243

## **SPECIAL NOTE TO BROADCASTERS**

The University of Minnesota's Extension Service is offering audio cuts from interviews conducted with Mike Boehlje and Wilbur Maki in honor of National Agriculture Week. The cuts will be available through Wednesday, March 23, by calling (612) 625-7720. Press releases dealing with both sources have already been mailed.

# # #

V2,V3,V8

NAGR2573

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# News and Information

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March 17, 1988

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2/22/88

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

Source: Jim Kielsmeier  
612/624-3489  
Writer: Deedee Nagy  
612/625-0288

## **COMMUNITY, YOUTH DEVELOPMENT GO HAND IN HAND**

Tapping the energy and social concerns of young people for the betterment of the community is one goal of a statewide youth development model being designed by the University of Minnesota's Center for Youth Development and Research.

With enabling legislation through community education and new state funding, more than 150 communities throughout Minnesota are developing plans to engage youth in volunteer and community service tasks.

Jim Kielsmeier, who is on the staff of the Center for Youth Development and Research, is working on guidelines and standards for schools and other youth-serving organizations to consider in beginning such development programs. Among the areas where youths can make a difference are tutoring, caring for the elderly, environmental improvements and working with young children.

# # #

AEA,BSS,CEO,V4,G,Q

N4-H2549

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

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# News and Information

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March 22, 1988

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

Source: Kathy Mangum  
612/625-9721

Writer: Jennifer Obst  
612/625-2741

Editors, broadcasters: We sent this release to you on March 10 with an error in the first sentence of paragraph two, which read: "In the last seven months, we've had a case load of about 1,000 farmers," says Kathy...the program. This version is correct. We regret any inconvenience this may have caused you.

## **MEDIATION PROGRAM HAS REACHED OVER 4,400 FARMERS**

Minnesota's farm mediation program, which was mandated by the 1986 Minnesota Farm Bill and which prohibits lenders from foreclosing on farm families until they have come together in a mediation session, has reached more than 4,400 farmers and about 11,000 lenders so far.

"In the last seven months, we've had a case load of about 2,000 farmers," says Kathy Mangum, the Minnesota Extension Service specialist who directs the program. "This is a drop in the number of mediations compared to this time last year.

"There are at least three reasons for the decline. One is that Farm Credit Services, which has been the biggest initiator of mediation cases, started its own debt restructuring program, and these are negotiated before they initiate mediation.

"Also, because of the mediation program, we see many more initiatives taken by the individual lender and the farmer to start communicating before the crisis stage.

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

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"The third reason," Mangum says, "is that, at least this past year, farmers had a good income year."

The Minnesota Extension Service was mandated by the law to administer the mediation program, and it has trained about 700 volunteer mediators. According to Mangum, more than half of the mediation cases have resulted in favorable settlements which keep the farmer in business.

Minnesota has the lowest per capita rate of Chapter 12 bankruptcies in the country, and it is felt this is due to the mediation program. As a result of its success, the program has become a model for other states, as well as for the mediation portion of the federal Farm Credit Act.

Mangum says, "In December, there were 23 states that had farm mediation as a public policy agenda item on their legislative docket. With the passage of the federal bill, there's even more of an incentive for states to pass such a bill."

The program also has raised some new public policy issues. Mangum says, "We have a Minnesota law that says the family farm shall be preserved, and much of the 1986 farm bill attempted to provide strong legal rights for farmers faced with foreclosure. The law dealt with that public policy issue, but created some new ones.

"For example, what has been the impact on credit? Also, farmers are now not being treated equally by lenders. For those who have the ability to repay their debts, the lenders are not offering the debt restructuring and interest writeoffs and



buydowns. So, in a sense, the farmers who are on the brink of going out are getting the best deals from the lenders. As a result, there's been a backlash in some communities.

"But I think other states have seen that we are keeping some families on the farm engaged in profitable farming," Mangum says. "Lenders have been writing off a debt and thereby taking a loss, but in the long run, the lending system as well as the farm family will be in better shape, because the rural community will be maintained."

# # #

AEA,BSS,CEO,V1,V4

NAGR2564

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# News and Information

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March 22, 1988

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

Source: Richard J. Sauer  
612/624-4777  
C. Eugene Allen  
612/624-9299  
Writer: Sam Brungardt  
612/625-6797

## **ALLEN, WHARTON NAMED ACTING ADMINISTRATORS AT U OF M**

Richard J. Sauer, interim president of the University of Minnesota, has named C. Eugene Allen acting vice president for agriculture, forestry and home economics and acting director of the Minnesota Agricultural Experiment Station. Allen, who has been dean of the university's College of Agriculture since 1984, has been an associate director of the experiment station. He will assume the duties that Sauer performed before he was named interim president last week.

In turn, Allen has appointed Wesley K. "Keith" Wharton acting dean of the College of Agriculture. Wharton has been associate dean for academic and student affairs for the college since 1984. He has served as acting dean of the college before, just prior to Allen's appointment.

As vice president, Allen will coordinate and represent the programs of the University's Colleges of Agriculture, Forestry and Home Economics; the Minnesota Extension Service; the Minnesota Agricultural Experiment Station; and its two-year technical colleges at Crookston and Waseca.

Page 1 of 3

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

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In announcing the appointment, Sauer said, "Gene Allen is well qualified to serve as acting vice president for agriculture, forestry and home economics and acting director of the Agricultural Experiment Station. He has a broad perspective of the institute and the university, supports Commitment to Focus and the Academic Priorities plan, and has a strong research background. He is seen within the university as an administrator whose interests are much broader than agriculture and he is a proponent of greater interdisciplinary collaboration across the university."

Allen, who was raised on a small farm in Idaho, joined the University of Minnesota faculty in 1967. He was a professor of animal science and a professor of food science and nutrition before being named dean. He received his B.S. degree from the University of Idaho and his M.S. and Ph.D. degrees from the University of Wisconsin.

Allen has conducted research for the Minnesota Agricultural Experiment Station, has been an undergraduate and graduate teacher and advisor and has served on many local and national committees related to education or research. Before becoming dean, he served as director of the graduate program in nutrition. He is currently a member of the board on agriculture at the National Research Council (NRC) and is also a member of the American Meat Science Association, the American Society of Animal Science, the Institute of Food Technologists and the American Institute of Nutrition.

Allen has received national awards for his research from the American Society of Animal Science and the American Meat Science Association. In 1984, he received the Horace T. Morse-Amoco Outstanding Teaching Award for undergraduate education at the University of Minnesota. In 1987, he was named a fellow of the Institute of Food Technology.

Wharton earned his B.A. degree from Texas Western College, El Paso, and his M.A. and his Ph.D. degrees from Colorado State College, Greeley. He came to Minnesota in 1968, after being a research fellow at Colorado State College's Bureau of Research Services. At the University of Minnesota, Wharton has been a research associate in the Bureau of Institutional Research and coordinator of educational development and assistant dean for academic and student affairs for the College of Agriculture.

# # #

AEA,BSS,CEO,V1,V3,V4,V8

NEXT2584

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# News and Information

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March 24, 1988

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

Source: Gene Allen  
612/624-5387  
Writer: Jack Sperbeck  
612/625-1794

## **MEAT INDUSTRY MUST CHANGE TO MEET CONSUMER NEEDS**

The red meat industry needs "a new creative offense" to meet the nutritional needs of consumers, according to an associate director of the University of Minnesota's Agricultural Experiment Station.

Consumer demand for "lite" foods and more emphasis on preventive health care and diet are "extremely positive changes for consumers and the meat industry," said C. Eugene Allen, who is also dean of the University's College of Agriculture.

"At times, all of us associated with the red meat industry have been too defensive about fat, cholesterol and saturated fatty acids," Allen said March 23 in a talk to the Midwestern Section Meeting of the American Society of Animal Science in Des Moines, Iowa.

"Even though we were not wrong on a number of issues, we probably missed some opportunities because of a defensive posture. For example, it's surprising that the red meat industry is only now beginning to market the branded beef concept when societal changes have suggested it for some time.

"The entire food and meat industry needs to work together. There's nothing to be gained in the long term by intense species

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

competition based on marginal claims of differences in nutritional value," he said.

"Consumers have become more calorie conscious, while at the same time meat producers and processors are providing significant new retail products. We need more interaction among meat producers, educators and those concerned with human health.

"Meat producers and processors need to increase investments in research and development if red meat products are to remain attractive and competitive for consumers. The research needs to start with improving our understanding of the basic biology of livestock and fundamentals of meat processing.

"They extend to successful marketing of new or improved products that have meat or its constituents as a major part of the product," Allen said.

"The initiative of the dairy industry to significantly increase funding for public research on dairy products is an example of a commitment by a commodity group. This should be closely examined by the red meat industry as a coordinated effort among species," he said.

# # #

AEA,BSS,CEO,V1,V4,A,D,H,P,S

NAGR2583

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# News and Information

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March 24, 1988

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

Source: Ken Thomas  
612/625-7040  
Writer: Jack Sperbeck  
612/625-1794

## U OF M ECONOMISTS DETERMINE THUMB RULES FOR ESTIMATING CASH RENT

Two rough "thumb rules" for estimating cash rent for a given farm or area have been determined by agricultural economists with the University of Minnesota's Extension Service.

The guidelines were developed from a survey of Minnesota's farm cash rental market from 1986-88 by Kenneth Thomas and Robert Craven.

The first thumb rule involves dividing the normal expected corn or wheat yield into the reported cash rent for the land parcel.

"Renters and landowners should exercise judgment in using this rule of thumb," Thomas advises. "Use dollars of cash rent paid per bushel of corn in areas where corn is the major crop, and use wheat where it predominates. In transition areas, where both corn and wheat are major crops, check the expected rent using both crops."

Thomas and Craven's study suggests that in major corn areas, 50-60 cents per bushel of normal yield is quite common. In wheat areas, 75 cents to \$1 a bushel is typical.

The second rule of thumb involves the percent that cash rent is relative to reported sales prices for land. Minnesota cash rents are running at about 8.5 to 9.5 percent of the land sales price.

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"This says that land prices have declined faster than cash rents," Thomas says. "It also suggests that farm operators are more willing to bid favorable government programs and crop yields into cash rents than into a long-term investment in land."

In their survey, Thomas and Craven developed a rental survey form patterned after one previously used by the Minnesota Department of Revenue. County extension agents distributed the survey forms to farm operators and landowners. Approximately 1,500 forms were distributed, with 571 responses. Sixty-three of Minnesota's 87 counties participated.

In 1987, cash rents statewide were down 6 percent from 1986. Statewide averages per acre were \$55.59 in 1986 and \$52.38 in 1987. The expected average (statewide) cash rent for 1988 is \$53.73 per acre, up 2 to 3 percent from 1987.

Expected cash rent averages for 1988 ranged from a high of \$76.72 in south central Minnesota (basically the two tiers of counties bordering Iowa) to \$18.74 in northeastern Minnesota.

Figures for Minnesota's 10 cash rental regions and more details from the survey are available in publication FM 665, Feb. 1988, "Minnesota's Farm Cash Rental Market, 1986-1988." Free copies are available at county offices of the Minnesota Extension Service. Or, write to Extension Farm Management, 249 Classroom-Office Bldg., University of Minnesota, St. Paul, MN 55108.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2586



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# News and Information

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March 24, 1988

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

Source: Gene Allen  
612/624-5387  
Writer: Jack Sperbeck  
612/625-1794

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

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"Meat producers and processors need to increase investments in research and development if red meat products are to remain attractive and competitive for consumers. The research needs to start with improving our understanding of the basic biology of livestock and fundamentals of meat processing.

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# # #

AEA,BSS,CEO,V1,V4,A,D,H,P,S

NAGR2583

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# News and Information

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March 24, 1988

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

Source: Stanley Stevens  
612/625-8770  
Writer: Jack Sperbeck  
612/625-1794

## **SOYBEAN PRICES DEPEND ON WEATHER, SOVIET DEMAND**

Soybean prices into summer 1988 will depend on the weather and Soviet demand.

"The improved soybean outlook is due primarily to new Soviet interest in soybeans and meal," says Stanley Stevens, economist with the University of Minnesota's Extension Service. "The soybean market is waiting for more information about Soviet demand. New Soviet interest above the 5 million metric tons that we expect them to buy from all sources this year could drive the market higher.

"Without that kind of news, I look for soybean prices to drift modestly lower until we get more information about our 1988 crop.

"The weather will make all the difference," Stanley adds. "Soybean prices could move sharply in either direction this summer, depending on how the crop develops."

In the future, it will take even larger Soviet demand to keep U.S. demand at current levels. "Expansion of U.S. soybean acres is very dependent on continued growth of the Soviet market," Stevens says.

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Stevens says that unlike the situation with corn and wheat, the Soviet Union does not have a good alternative to soybeans because it has no soybean crop. He says, "They are less apt to venture in and out of the soybean market, unless there's a policy change resulting in less oilseed and meal purchased."

# # #

AEA,BSS,CEO,V1,V3,V4,F

NAGR2585

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# News and Information

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March 24, 1980

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

Source: Barbara Wiersma  
612/625-3701  
Writer: Jennifer Obst  
612/625-2741

## **INFORMATION CENTER TRACKS HOT NEWS ON COLD CLIMATE HOUSING**

Housing is a \$6-billion industry in Minnesota, and faces some unique challenges due to the demands of the state's climate. The Cold Climate Housing Information Center (CCHIC), administered through the University of Minnesota's Extension Service, is a centralized source of information on construction techniques for cold climate housing.

The energy crisis in the 1970s first raised awareness of the importance of energy conservation techniques. But this awareness has created new problems. Indoor air quality is the major problem, says Barbara J. Wiersma, a CCHIC ventilation specialist from the Department of Agricultural Engineering.

Wiersma says, "The energy crisis made us aware that drafts in our homes were wasting energy. So we thought, let's put gaskets in the sills, let's put in thicker windows and more insulation in the walls. Suddenly we have these really tight houses, with no ventilation. Now we have moisture condensing on the windows, water dripping down the walls and mold in the insulation."

A major part of Wiersma's job is consulting and educating people on ways to mitigate these problems. There are five CCHIC

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members and two associate members from the university's Departments of Forest Products, Agricultural Engineering and Design and Housing. They have different specialties, but all are concerned with unique requirements of good cold climate housing.

"For example," Wiersma explains, "Phil Thompson, a health and safety specialist, would talk about the health problems related to insufficient ventilation, while I would talk about the kind of ventilation systems that could mitigate the problem, and Tim Larson, a construction specialist, would talk about construction issues in installing the proper duct work."

The CCHIC gets questions on everything from residential moisture problems to problems associated with decks, siding, insulation and general performance of building materials. Although the specialists answer questions from attorneys, engineers, homeowners, materials suppliers and researchers, their main audiences are vo-tech instructors and members of the construction industry. They are also providing assistance to the statewide Minnesota Department of Health radon survey.

The specialists will be training Minnesota Extension Service county agents in cold climate housing issues. "Different areas of the state will have different emphasis," Wiersma says. "In northern Minnesota, for example, there are a lot of questions about issues related to heating with wood."

The Cold Climate Housing Information Center is part of the Minnesota Cold Climate Building Research Center, which the University of Minnesota established last year as a broad-based, interdisciplinary organization to study the energy-related performance of residential and commercial buildings in Minnesota.

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# News and Information

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March 24, 1988

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

Source: Stanley Stevens  
612/625-8770

Writer: Jack Sperbeck  
612/625-1794

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Page 1 of 2

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# # #

AEA,BSS,CEO,V1,V3,V4,F

NAGR2585



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# News and Information

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MBC  
7/2/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

March 24, 1988

Source: Diane Hedin  
612/330-2347  
Writer: Deedee Nagy  
612/625-0288

Editors: Contact Carl Walker (612/624-3708) to obtain a black and white print or 35-mm color transparency to use with this story.

## **MINNESOTA TEENS RATE COMMUNICATION WITH PARENTS MOST IMPORTANT**

Most Minnesota parents would earn a place on the "A" or "B" honor roll if their teenage children graded their skill as parents, according to the results of a recent Minnesota Youth Poll.

Diane Hedin, formerly with the University of Minnesota's Center for Youth Development and Research and now director of community relations for Pillsbury, conducted the poll among 1,250 high school students across the state. The results, she says, are a credit to the good job parents are doing during the sometimes-stormy years with adolescents in the family.

"We hear so much about the endless difficulties of raising teenagers and of all the conflict between parents and teens," Hedin said. "That's dramatic and may make headlines, but the fact is that, on average, kids are getting along quite well with their parents. Three-fourths of the young people in the poll gave their parents high grades--either an 'A' or a 'B'--when asked to grade their performances."

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

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Hedin said that less than 5 percent of the teenagers gave their parents failing grades. "F" grades were reserved for parents viewed as uncaring and neglectful.

"Parents who had really abdicated their responsibilities and given up on the kids were the ones graded the lowest," Hedin said. "'C' and 'D' marks went to parents who, according to the kids, were always arguing with them and criticizing them. As long as there was some communication, even open warfare, between the generations, the teens gave their parents passing grades."

A second part of the poll, which was funded by the university's Agricultural Experiment Station, asked the teenagers to offer advice to parents. Nearly half said that teenagers need to be given more freedom, more opportunities to make decisions and more responsibility. One respondent wrote, "Let us make some mistakes, but also help us out if we need it. Give us several chances, and if we get too bad, then punish us, but give us some responsibilities."

Many teenagers also thought parents should be more empathetic about what young people are going through. Another common suggestion was that parents need to know more about pressures--including drugs, sex and competition for grades--on today's youths.

The Minnesota Youth Poll asked the high school students to rate who had the greater influence on them, their parents or their peers. Hedin reported that three-fourths credited their friends with more influence. "But it usually wasn't because of any

hostility toward their families," she said. "Rather, it was a gradual drift toward friends caused by a strong pull toward their own generation."

Peers had more influence on the way the teenagers dressed, on their social life and leisure activities, and on their fads and music, according to the poll. Parents' influences were strongest in morals, values, spiritual matters and future plans.

And influence works both ways. The teens said parents asked for their advice on fashion, decorating and family activities, such as vacations and meals.

Young women in the poll said they were most likely to discuss friends, dates and personal problems with their mothers. For young men, these topics of conversation were usually reserved for friends. Their conversations with parents more often centered on sports, cars and money.

Sex led the list when the teenagers were asked to list topics they did not want to discuss with their parents. Close behind were alcohol and drugs, boyfriends and girlfriends, and intimate concerns about their bodies or health.

# # #

AEA,BSS,CEO,V1,V4,V8,G,Q

NHEC2578

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# News and Information

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March 25, 1988

MSC  
8A27p  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Juanita Reed  
612/625-9231

Writer: Evelyn Anderson  
612/624-3770

## **6 YOUTHS WIN TRIPS TO 4-H CONFERENCE IN WASHINGTON, D.C.**

Six Minnesota teenagers, achievement winners in the Minnesota 4-H awards program, will attend the National 4-H Conference April 16-22 in Washington, D.C.

Their trips are sponsored and financed by the Minnesota Bankers Association.

The winners are David DeMars, son of Douglas and Sharon DeMars, Princeton; Keely Kleinwort, daughter of Quentin and Marian Kleinwort, Dodge Center; Kimberly Rabehl, daughter of Jim and Marilyn Rabehl, Brainerd; Juliann Ristow, daughter of Calvin and Pauline Ristow, Hibbing; Deb Scheibel, daughter of Henry and Donna Scheibel, Bird Island; and Terri Wehrman, daughter of Willis and Linda Wehrman, Moorhead.

The national conference is conducted through the Cooperative Extension Service of the U.S. Department of Agriculture, in cooperation with the National 4-H Council and the extension services of land grant universities.

Minnesota 4-H is the youth education program of the Minnesota Extension Service, University of Minnesota. Its mission is the positive development of young people through the involvement of

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

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youth, adults and the community. Current priority issues are self-protection, career education, youth connectedness, global awareness, volunteer empowerment and increased membership.

# # #

V4,Q,Se1Media

N4-H2595

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# News and Information

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March 31, 1988

MCC  
EATN

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

Source: Jim Anderson  
612/625-8209  
Writer: Larry A. Etkin  
612/625-4272

## **SURPRISES MAY BE IN STORE FROM UM'S AG WATER QUALITY CENTER**

The University of Minnesota Center for Agricultural Impacts on Water Quality is entering its second year of field research with the possibility of surprising recommendations on the horizon.

The Center never planned to have recommendations this soon. But, according to Center director and University soil scientist Jim Anderson, the first year's research had unexpected results that, if confirmed this spring and summer, may lead to fertilizer management recommendations a lot sooner than expected.

"To be really statistically sure, you probably need three to five years," Anderson says, "but if our results are consistent from the fall through the winter, into the spring and early summer, we'll be fairly confident in saying some things about management, even at this point." The Center does most of its field research on the two types of Minnesota soils considered most vulnerable to groundwater pollution, because water moves rapidly through them. Coarse textured soils are being investigated at a Westport site in Pope County. Silt loam over limestone bedrock sites are being examined in southeastern Minnesota's Goodhue, Winona and Olmsted counties.

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

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Westport, a former USDA research site, is a particularly good location. Its soil management history is known, and expensive research facilities are already in place. Anderson says duplicating that site today would possibly cost as much as the entire Center budget, if it were even possible.

The Center operates on a budget of about \$400,000, funded mainly by the Minnesota Agricultural Experiment Station and the Legislative Commission on Minnesota Resources. In our region, only Iowa has a larger budget for this type of research.

Center research is in four areas: nitrogen movement and agricultural practices, pesticide pollution, ground water flow, and economic impacts. The current focus is simply on accumulating data at the field research sites.

A three phase research effort is underway at Westport. A "lysimeter" phase lets experiment station soils scientists Gary Malzer and Gyles Randall, accurately measure how much nitrogen misses its target plants, passing right through the soil, down to ground water.

A lysimeter is a five-foot diameter, four-foot deep stainless steel container buried in the earth. Closed at the bottom, it lets researchers measure exactly how much of an additive passes through the soil unused. There are 30 lysimeters at Westport.

A second phase uses acre-sized plots where actual wells have been drilled to measure the amounts of nitrates and additives

reaching ground water under a variety of tillage and soil management treatments.

The third phase has more than 100 small plots testing the effects of just about every imaginable combination of crop and soil management practices. This includes chemical additives, crop rotations, tillage practices and irrigation use.

The third phase is important for answering the basic question of what we can do to minimize the impact of agricultural practices on ground water. It should eventually tell us, very specifically, how to time applications of nutrients and pesticides, optimal amounts to use, and adjustments to accommodate different crops, rotations and tillage.

"Each phase of the research is important and can sit by itself, but each one of them by itself won't answer the overall question," says Malzer, a nitrogen researcher.

Many researchers have a hand in evaluating raw data. Soil scientist Bill Koskinen and agronomist Don Wyse work on pesticide pollution. Agricultural engineer John Nieber heads the investigation into water flow. Bill Easter leads the economic analysis of costs for potential alternative management practices.

The Center also assists local research and demonstration projects in a number of counties, such as with a well monitoring program in Faribault, Martin and Watonwan. "Local involvement is so important to us. It ties into an increased interest and awareness on the part of people that they should be concerned



about the condition of their wells. It was the local people there that took the initiative," says Anderson.

"There are a number of similar groups operating in other areas of the state. We try to work in conjunction with the people from particular areas that have concerns, to help set our research priorities," he said.

"This two-way street of communication, what the problems are as they see it out there, is really important to help us set those priorities. We see ourselves as working together," Anderson says.

Recent surveys by the Departments of Health and Agriculture found 38 percent of Minnesota wells testing positive for some agricultural chemical.

# # #

AEA,BSS,CEO,V1,V4,V6,C,S,22,45,63,88

NAGR2605

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# News and Information

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MSL  
2-2-88

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

March 31, 1988

Source: Arley D. Waldo  
612/625-2744  
Writer: Richard Sherman  
612/625-3154

## **PROPERTY TAX REFORM MAY OVERTAX OUR ABILITY TO UNDERSTAND**

Taxes may be as certain as death, and when it comes to property taxes Minnesota doesn't even let them rest in peace. Property tax reform has become a vehicle for achieving social goals from helping the blind to protecting our prairies, and the system has been changed by every legislature since 1941.

The 1987 changes in the property tax law were major, according to Arley D. Waldo, economist with the University of Minnesota Extension Service. Minnesota's property tax system is the most complicated in the nation, he says. "It is difficult to understand, hard to administer, and almost impossible to explain to anyone."

Minnesota's first classified property tax system, adopted in 1913, had only four classes of property. Following passage of the 1987 tax "simplification" bill, property classes numbered about 20. According to Waldo, only 18 other states have more than one class of taxable property, and even those have only two or three.

On the bright side, remember that prior to the 1987 bill Minnesota had about 70 property classifications.

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

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How did our system become so complicated? "It was because of legislative attempts to achieve goals thought to be desirable," says Waldo. "To provide tax relief for farmers and homeowners, to give special help to the blind and disabled, to encourage the construction of fire-resistant apartments, etc.," he says.

Waldo said that though the goals of tax reform are laudable, an incomprehensible tax system means that voters cannot decide on the merits of proposed changes.

Frequently not understood, says Waldo, is that classification changes providing tax relief for some classes, automatically shift the tax burden to owners of other property within a tax jurisdiction. Giving relief to one group may sound good when proposed, but when other taxpayers realize the burden is shifting to them, they are not likely to welcome the "reform."

# # #

AEA,BSS,CEO,V1,V4,V6

NHEC2599

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# News and Information

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March 31, 1988

MTC  
LASTP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Arley D. Waldo  
612/625-2744  
Writer: Richard Sherman  
612/625-3154

## MINNESOTA: LAND OF LAKES, LOONS, AND LOTTERY?

Lotteries are as old as the Old Testament, and their fiscal and moral worth have seemingly been debated for just as long. Even Michelangelo's Sistine Chapel masterpiece was financed, at least in part, by lottery profits.

Minnesotans now find themselves part of the lottery debate. Minneapolis Star Tribune polls find state legislators at odds with the general public over a state lottery. It reported in February, that while only 32 percent of our legislators favored a state-run lottery, 63 percent of the public favored one. According to Arley Waldo, an economist with the University of Minnesota Extension Service, the lottery issue may heat up in the days to come.

Proponents often claim that lottery income can finance programs that are difficult to fund from general taxes. They cite examples such as Pennsylvania, where lottery income is earmarked to benefit the elderly.

Some opponents argue that a lottery is simply gambling and is morally wrong. The state, they say, has no business promoting gambling, which might encourage the spread of organized crime. Opponents say that a lottery is really a regressive tax, hitting

Page 1 of 2

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

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low-income players the hardest.

Other opponents say a lottery would also hurt forms of gambling that are already legal. Canterbury Downs, already financially troubled, could become the victim of unfair competition by state-run gambling they say. And others argue that money spent on the lottery will be money that is no longer spent on games run for the benefit of charities.

"Compared to other sources of state revenue, lottery earnings are relatively small," says Waldo. "In 8 of the 27 states that operated lotteries in 1986, net lottery income accounted for less than 1 percent of total state revenue," he says.

The relatively small numbers don't seem to dampen interest in a lottery. A lottery bill has already been approved in the House Appropriations Committee this session, with its proceeds earmarked for the Greater Minnesota Corporation, environmental programs, and budget reserves.

Will Minnesota soon have a state-run lottery? Proponents wager that it will. Opponents say don't bet on it.

# # #

AEA,BSS,CEO,V1,V4,V6,V8

NHEC2602

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# News and Information

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M51  
RAD:IP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

March 31, 1988

Source: Arley D. Waldo  
612/625-2744

Writer: Richard Sherman  
612/625-3154

## STATES ENTER ERA OF FEND-FOR-YOURSELF FEDERALISM

Ask your friends if they favor better schools, roads, parks, medical care for the elderly, and fire and police protection. If they answer "yes," as they probably will, then ask them who should pay for it.

Many such popular programs are increasingly becoming the responsibility of state and local governments. That means Minnesota can have all the parks and low-income housing it wants, but that Minnesota taxpayers must foot the bill.

We're living in an era of "fend-for-yourself federalism" says Arley D. Waldo, economist with the University of Minnesota Extension Service. Despite a trillion dollar federal budget, the percentage of federal dollars available for state and local outlays has been steadily decreasing since the late 1970s.

Federal funding is concentrated in three broad categories: social security and other income maintenance programs (37%), national defense (27%), and interest on the federal debt (13%). That leaves only 23 percent for everything else. Less than half of that will go to state and local governments.

Page 1 of 2

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In response to declining federal revenues, states must increasingly fend for themselves. They are confronting an unpleasant dilemma that has no easy solution, says Waldo.

Lower taxes that help states compete for new jobs and businesses, may leave them without the revenues necessary to provide the roads and parks that most everyone wants. Higher taxes can pay for the programs, but may deter the economic growth states are depending on to cope with declining federal support.

# # #

AEA,BSS,CEO,V1,V4,V6,V8

NHEC2600

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# News and Information

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

March 31, 1988

Source: Tom Thorburn  
612/625-9292  
Writer: Jack Sperbeck  
612/625-1794

## **FARMERS MUST COMMUNICATE TO CONSUMERS, HORTICULTURIST SAYS**

Farmers must communicate the importance of agriculture to consumers, says Laura Heuser, a horticulturist from Lawrence, Michigan.

Heuser, an organizer of American Agri-Women, has been "telling agriculture's story" for 19 years. She has spoken in 48 states. She spoke to agricultural agents of the University of Minnesota Extension Service, March 23, in St. Paul.

"Farm women are courageous, valiant people. We do things from sitting down at a computer and running financial programs to driving a truck with bad brakes to the elevator," she joked.

Heuser encouraged farm families to become more involved in the political process and press for needed legislation. "Politics is fun, exciting--and sexy," she said.

She also encouraged farmers to use news media to tell their story. "Agriculture is a great story, but people don't understand it. We must educate the public with the 'truth' about growing food," she said.

# # #

AEA,BSS,CEO,V1,V4

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NAGR2596

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# News and Information

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

March 31, 1987

Source: Tom Thorburn  
612/625-9292  
Writer: Jack Sperbeck  
612/625-1794

## **BEEF REFERENDUM VOTE IS MAY 10**

Beef referendum voting will be conducted in county offices of the Minnesota Extension Service, May 10, 1988, during normal business hours.

Beef producers and importers unable to vote in person may request an absentee ballot by contacting Tom Thorburn, Beef Referendum State Coordinator, 146 Classroom Office Building, University of Minnesota, St. Paul, MN 55108.

Absentee ballots will be available from April 1 until the end of the business day April 29, 1988. The absentee ballots must be received in the county extension office serving the voter's residence by close of business May 3, 1988.

All cattle producers who owned or acquired cattle, and importers of cattle, beef or beef products from Oct. 1, 1986 through March 31, 1988, are eligible to vote. This includes 4-H, FAA and other youth who owned cattle during the designated time period.

USDA's Agricultural Stabilization and Conservation Service will count ballots, determine the eligibility of challenged voters and ballots, and report referendum results.

The beef referendum is authorized by the Beef Promotion and Research Act of 1985.

AEA,BSS,CEO,V1,V4,A

# # #  
Page 1 of 1

NAGR2603

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

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# News and Information

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

March 31, 1988

Source: Arley D. Waldo  
612/625-2744  
Writer: Richard Sherman  
612/625-3154

## PROPERTY TAXES RARELY RISE IN REAL TERMS

Most of us tend to say that taxes are too high already, and are rising too fast. Minnesota property owners paid their share of the tab to the tune of a combined property tax bill of \$2.5 billion last year.

Net payable taxes for Minnesota property reached \$1 billion in 1975. That was twice the amount of 10 years earlier. They topped \$2 billion by 1984, and may soon exceed \$3 billion.

According to economist Arley Waldo, with the University of Minnesota Extension Service, net property taxes have declined only twice in the past 25 years. One was a \$99 million reduction with the 1968 Property Tax Reform and Relief Act. The other was 1972's "Minnesota Miracle," which raised sales, income, and other taxes to provide \$73 million in property tax relief.

Critics ask if more tax relief is needed, whether we rely too heavily on property taxes to finance local services, and whether local governments spend too much.

Why do taxes always seem to rise? Waldo says that if you figure in inflation, you'll see that they don't. Between 1977 and 1981, for example, net taxes increased by 164 million dollars.

Page 1 of 2

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However, adjusted for inflation, taxes in 1981 were at their lowest level in 25 years.

The 1987 increase can't be explained away by inflation, however. In real terms, only once in the last 25 years were property taxes at 1987 levels. That was 1971, one year before the "Minnesota Miracle."

# # #

AEA,BSS,CEO,V1,V4,V6,V8

NHEC2601

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# News and Information

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5-27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

March 31, 1988

Source: Phillip K. Harein  
612/624-3777  
Writer: Mary Kay O'Hearn  
612/625-2728

## CARBON DIOXIDE TESTED AS GRAIN FUMIGANT

The cereal grain industry may soon have a chemical residue free fumigant available. That's the hoped for outcome from University of Minnesota tests of carbon dioxide fumigation, according to extension entomologist Phillip K. Harein.

Harein says that if carbon dioxide proves satisfactory for insect control it would be cost competitive with conventional fumigants. It would not leave chemical residues.

The University has experimented by pumping CO2 into a sealed room containing 160 cages of insects which often infest flour (adult and larvae of confused flour beetle, Indian meal moth, cigarette beetle, sawtooth grain and red flour beetles). They varied the exposure time, the concentration of carbon dioxide and the temperature in the room to determine the best rate of insect kill.

# # #

CEO,V2

NAGR2598

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# News and Information

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March 31, 1988

MSC  
[initials]  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Phillip K. Harein  
612/624-3777

Writer: Mary Kay O'Hearn  
612/625-2728

## 1988 STORED GRAIN INSECT LOSS COULD EXCEED \$100 MILLION

Insects are expected to destroy more than \$100 million worth of stored Minnesota grain in 1988. So estimates Phillip K. Harein, entomologist with the University of Minnesota Extension Service.

His estimate is based on a 1986 survey of Minnesota farmers' barley storage. Harein says the dollar figure applies to shelled corn and other stored small grains such as wheat and oats because management practices are similar.

"These losses don't include the \$2 to \$3 a bushel to produce the grain which can never be marketed because of the insects," he adds. Production costs include such items as costs of seed, fertilizer, pesticides, gasoline to power farm machinery and the depreciation on that machinery.

This year, for the first time, farmers across the state will monitor insects in their stored grain for Harein. Thirty-five farmers, located from Rochester west to Jackson and north to Crookston, have agreed to participate. Such insect sampling has been done before, but not by farmers.

Page 1 of 3

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They will begin weekly monitoring with corn storage starting April 15. Sampling will continue through October 15. Clear plastic sampling tubes will be stuck down into the grain to capture the insects. Trapped, dead insects will be collected weekly and mailed to Harein. This will tell him what he is dealing with and enable him to make recommendations.

Insect infestations in 1986 cost farmers an estimated \$82 million. For 1981-83, Harein estimated annual losses at \$55 million. Proper storage methods and following recommended nonchemical and chemical practices could have cut some of these losses, Harein said.

In 1985 questionnaires sent to 1,000 private and commercial barley managers, randomly selected by the Minnesota Department of Agriculture, asked about storage practices aimed at avoiding insect losses. Return responses varied.

"While most barley managers cleaned their bins before storing new grain, very few treated the empty bins with a residual insecticide," Harein said. Of the total 551 bins used for barley storage, 31% in private facilities and 38% in commercial facilities were equipped for aeration. Periodic grain sampling methods and monitoring were not adequate to detect insect problems.

Minnesota ranked third in barley production in 1985, supplying about 12% of the nation's harvest. Harein says there is little documented information available on the insect-related problems

and losses in stored barley on Minnesota farms. "Probably more barley is fumigated in Minnesota than corn or wheat--perhaps because of the relatively high insect infestation levels in barley and because of standards for malt barley." Malathion is the most commonly used insecticide.

Cleaning grain before storage helps remove grain fines and externally feeding insects, yet fewer private managers (7%) than commercial managers (35%) cleaned their barley. Too many managers aerated their barley only after the grain had been stored for some time. Their delay was often based on the erroneous idea that aeration during rain or high humidity adds excess moisture to the grain. More commercial managers (68%) than private managers (12%) turned their barley (moved it from one storage bin to another) to reduce temperature and moisture differences between the warm center and cooler edges.

A complete description of the study is contained in "Management of Stored Barley in Minnesota: Practices Versus Recommendations," University of Minnesota Agricultural Experiment Station.

# # #

AEA,BSS,CEO,V2

NAGR2579

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# News and Information

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

April 7, 1988

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## **BEWARE OF USING SAME PHOSPHATE, POTASH RATES**

If you apply the same phosphate and potash rates you used in past years, you could be making a mistake.

"Soil test levels have changed and farmers should be aware of the changes," says George Rehm, soils specialist with the University of Minnesota's Extension Service. "Minnesota farmers have done a good job of fertilizing crops for the past 10 to 15 years. Soil test results show it," Rehm says.

Soil sampling this spring is an easy way to find out what changes have taken place. County extension offices have bags and information sheets.

"Soil test values have shifted from low and very low to medium, high, and very high. This shift indicates some soil testing laboratories' philosophy of making recommendations that will increase soil test levels.

"It's true that fertilizer phosphate and potash should be used to increase soil test levels when these levels are very low. But there's a point at which the philosophy of recommending fertilizer to build soil test levels becomes very expensive and is no longer useful," Rehm says.

Page 1 of 2

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For example, at soil test phosphorus levels of 20 pounds per acre or higher, it's easy to apply all the needed phosphate in a starter for corn or with the drill for small grains.

There's no need to broadcast phosphate and potash when soil test levels are higher than 30 and 250 pounds per acre, respectively. "Your investment return for broadcast phosphate and potash at these soil test levels will be very small," Rehm says.

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AEA,BSS,CEO,V1,V4,F

NAGR2612

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# News and Information

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

April 7, 1988

Source: Mel Baughman  
612/624-0734

Editor: Mary Kay O'Hearn  
612/625-2728

## **THINK OF TAX BENEFITS WHEN PLANTING TREES THIS SPRING**

The temptation, about now, is to forget about income taxes for another year, but if spring finds you planting trees for timber production income, document your expenses. It could be to your benefit for the next eight tax years, says Mel Baughman, University of Minnesota extension forester.

"Start keeping good records now," Baughman says, "when trees are planted for timber production, the first \$10,000 of qualified reforestation expenses are eligible for a tax credit and amortization over eight tax years."

He quotes Section 194 of the Internal Revenue Code as saying qualified tree planting expenses may be amortized providing the trees were planted in the United States, cover at least 1 acre and were planted for timber production. Expenses above the \$10,000 annual limit must be capitalized and recovered when the trees are sold. Expenses that qualify include preparation for natural regeneration or for planting, seed, seedlings, fertilizer, herbicides, rodent control, labor, tools and depreciation for tractors, trucks and tree planters used during planting. Beyond that, expenses to maintain the plantation after establishment

Page 1 of 3

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(weed control, pruning, precommercial thinning) are treated as operating expenses.

To amortize your costs, file IRS Form 4562 in the year costs were incurred. Attach a statement describing the expenses and dates incurred--this deduction may be taken whether or not you itemize deductions. "If you elect to amortize tree planting costs, 1/14th may be deducted the year of planting, 1/7th of the cost in each of the next six tax years and the remaining 1/14th in the eighth tax year," Baughman says.

Tree planting costs reimbursed by a government cost-share program (unless those cost-share payments were included in your income) cannot be amortized. If the timber is disposed of within 10 years, the amortization deduction is subject to full recapture by the Treasury as ordinary income. There is no recapture if the property is disposed of as a gift, transfer at death, like-kind exchange, involuntary conversion and certain tax-free transfers, such as to a corporation controlled by the timber owner.

An investment tax credit on IRS Form 3468 is also allowed when trees are planted for the production of income. There are choices: taking a 10 percent tax credit and amortizing 95 percent of the tree planting costs or taking an 8 percent credit and amortizing 100 percent of the planting costs. "It is usually better to take the 10 percent credit and amortize 95 percent of costs," Baughman says.

Cost-share payments received for planting trees under the Conservation Reserve Program (CRP) must be included in income.

These are eligible for amortization and a tax credit. If the cost-share payment doesn't substantially increase annual income from the property, it may be excluded from taxable income in federally approved tree planting programs, such as the Forestry Incentives Program and Agricultural Conservation Program, and state programs for soil conservation, protecting or restoring the environment, improving forests or providing wildlife habitat.

Baughman recommends that from a financial perspective it may be better to include cost-share payments in income, then amortize and take a tax credit on the full cost. The alternative is to exclude these payments from income and not amortize and claim a tax credit on the excluded amount. "Perform the calculations both ways to see which way is best for you," he concludes.

A more complete paper on the tax implications of tree planting is available from Mel Baughman, 102 Green Hall, University of Minnesota, 1530 N. Cleveland Ave., St. Paul, MN 55108.

# # #

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# News and Information

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April 7, 1988

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1988  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: David Pace  
612/625-3736  
Writer: Evelyn Anderson  
612/624-3770

## **LISA KATZUNG WILL GO TO UNITED KINGDOM IN 4-H EXCHANGE**

Lisa Katzung, daughter of Sharon and Jerry Katzung, Route 2, Owatonna, will live in the United Kingdom for six months, representing Steele County and Minnesota 4-H as part of an International Four-H Youth Exchange (IFYE) program.

Katzung and three other U.S. representatives will live and work this spring and summer on farms with host families in England, Ireland and Scotland through the Young Farmers Clubs in the United Kingdom. The National 4-H Council, in cooperation with Minnesota 4-H, sponsors the exchange to help young people become better informed leaders as they experience other cultures first hand.

Katzung was active in 4-H for 10 years and has a degree in animal science from the University of Wisconsin, River Falls. She was an exchange participant to France last summer.

Minnesota 4-H is a program of the Minnesota Extension Service, University of Minnesota. It is the state's largest out-of-school educational program for youth, serving 137,000 young people in cities, towns and rural areas. Current priorities are career development, global awareness, self-protection, youth connectedness, volunteer empowerment and membership expansion. For information about 4-H, contact your county extension office.

AEA,CEO,V4,Q,79

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Page 1 of 1

N4-H2607

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# News and Information

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April 7, 1988

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11/11/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Karen Plass  
218/726-8106  
Writer: Phyllis Jenks  
612/625-7793

## STATEWIDE HOSPITALITY TELECONFERENCE WILL BE MAY 19

"Explore Minnesota Hospitality," a satellite teleconference, is scheduled for Thursday, May 19, from 1 to 5 p.m. at 40 to 50 Minnesota locations.

The event is designed for people who work in travel-related industries such as restaurants, lodging facilities, retail shops and visitor information centers. It will focus on improving hospitality skills to deal better with tourists. Skill-building specifically geared toward strengthening tourism, such as customer problem-solving techniques and how to greet guests, will be covered. Information on Minnesota tourism and its local impact will be provided also.

The two-hour teleconference portion, which will be broadcast live from St. Paul, will be followed by two hours of local programming at each site. Local programs will deal with area-specific tourism issues.

Registration fee is \$12, and registration will be handled by local site coordinators. For more information, or to locate a site nearest you, contact Glenn Kreag, Sea Grant Extension in Duluth (218/726-8106).

Sponsors of the training are the University of Minnesota's Sea Grant program and Tourism Center, the Minnesota Office of Tourism, the Small Business Development Center and Minnesota technical institutes.

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AEA,BSS,CEO,V1,V4,W,Se1Media Page 1 of 1

NCED2608

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# News and Information

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April 7, 1988

MSC  
3/2/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Robert M. Jordan  
612/624-6784  
Editor: Sam Brungardt  
612/625-6797

## 1988 SHEEP INVENTORY HOLDS SOME SURPRISES

There were fewer sheep on U.S. farms on Jan. 1, 1988 than many had anticipated, according to Robert M. Jordan, animal scientist with the University of Minnesota's Extension Service.

Jordan says, "Based on the high prices of \$125 to \$150 per head that were paid for young ewes last fall, one would expect numbers to increase markedly. The \$85 to \$100 per 100 pounds of lamb paid last May and June certainly escalated the price level for ewes and encouraged interest in sheep."

However, Jordan says, sheep numbers have changed little from 1986-87 despite the high interest in sheep and high prices. The number of breeding ewes on U.S. farms in 1988 increased only 3 percent, to 7.08 million head. The number of ewes in Minnesota declined 8 percent to 120,000 head; in Iowa, increased 8.5 percent to 277,000; in North Dakota, declined 5 percent to 114,000; in South Dakota, increased 4 percent to 453,000; and in Wisconsin, was unchanged, at 53,000 head.

The number of ewes kept for breeding in the major sheep-producing states--Texas, California, Wyoming, South Dakota, Utah and Montana--remained the same or increased slightly.

Page 1 of 2

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On Jan. 1, there were about 114,000 farms with sheep in the United States. Minnesota ranked eighth, with 4,800 head; Iowa had 11,000; Texas, 8,500; California, 6,000; and Ohio, 7,100 head.

There were 18 percent more lambs on feed Jan. 1, 1988 than the 1.5 million fed in 1987. Jordan says this suggests that more ewe lambs are being slaughtered than had been anticipated.

He says, "The static ewe numbers and the increases in ewe lambs slaughtered indicate tight supplies and high lamb prices in 1988. However, this may not occur. Lambs are being fed to heavier-than-normal weights, which increases production, and the small trickle of 10,000 feeder lambs imported from Australia in January may turn into a flood of 210,000 feeder lambs by June.

"If that happens, it will have a very bearish effect on the prices midwestern sheep producers receive for their lambs. Despite this threat, sheep production remains one of the most consistently profitable, low capital-required livestock enterprises for farmers in the Midwest."

# # #

AEA,BSS,CEO,V1,V2,V3,0

NAGR2610



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# News and Information

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MSC  
2/28/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

April 7, 1988

Source: Juanita Reed  
612/625-9231  
Writer: Evelyn Anderson  
612/624-3770

## **MLBA SCHOLARSHIP WINNERS ARE ANNOUNCED**

Allen Schoenfeld of Faribault and Todd Leiding of Mapleton are the 1988 winners of scholarships from the Minnesota Livestock Breeders Association (MLBA).

Schoenfeld, son of Howard and Mary JoAnn Schoenfeld, won the \$450 MLBA scholarship. He is a senior at Medford Public School. His 4-H activities for the past 10 years have focused on swine projects, including chairing the county swine development committee and serving as junior superintendent of the county 4-H swine show. He also is active in Future Farmers of America. Schoenfeld plans to take animal science courses at the University of Minnesota.

Todd Leiding, winner of the \$450 McKerrow Scholarship, is a junior at the University of Minnesota in St. Paul, majoring in agricultural education and animal science. Leiding was an 11-year 4-H member with projects in sheep, swine and dairy cattle. He held a number of local and county offices in 4-H and was active in FFA. In college, he holds leadership roles in several organizations, including the Junior Holstein Association.

# # #

AEA,CEO,V1,D,O,P,Q,07,79 Page 1 of 1

N4-H2606

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# News and Information

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April 11, 1988

MSC  
8/1/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## **ZINC IS ONLY FERTILIZER MICRONUTRIENT NEEDED FOR MINNESOTA CORN**

Zinc is the only micronutrient needed in a fertilizer program for corn production in Minnesota. But it's not necessary to add zinc for every corn field.

"Your soil test is the best guide for zinc," says George Rehm, soils specialist with the University of Minnesota's Extension Service. If test results show the zinc level to be between zero and .5 ppm (parts per million), use 2 pounds of actual zinc per acre in a starter fertilizer.

Use 1 pound of actual zinc per acre in a starter if the soil test zinc level is between .5 and 1.0 ppm. The soil will supply adequate amounts of zinc if the soil test shows a level of 1.0 ppm or higher, Rehm says.

"Calculate the cost of zinc before you decide on a source," Rehm advises. For some sources, the price may be \$1 to \$1.50 per pound of actual zinc. But other sources may charge as much as \$10 per pound of actual zinc.

"Research trials with corn have shown all zinc sources have an equal effect on yield. So choose the least expensive source,"

Page 1 of 2

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Rehm advises. Some zinc sources can easily be blended with dry fertilizers or mixed with liquid fertilizers.

There are six micronutrients required for crop production. In Minnesota, corn has not responded to applications of iron, manganese, copper and boron even though these micronutrients may be recommended by some soil testing laboratories.

"Growers who concentrate on using the right rate of zinc have solved the micronutrient problem for corn production," Rehm says.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2617

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# News and Information

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MSC  
9A27p  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

April 11, 1988

Source: George Rehm  
612/625-6210  
Writer: Jack Sperbeck  
612/625-1794

## **STARTER FERTILIZER CAN CUT CORN PRODUCTION COSTS**

Starter fertilizer can lower production costs without reducing corn yields.

You can usually cut phosphate and potash rates in half by using starter fertilizer in place of a broadcast application, says George Rehm, soils specialist with the University of Minnesota's Extension Service. "Remember that phosphate and potash don't move from where they're placed in the soil," Rehm says.

So, a starter fertilizer used to supply these two nutrients should be applied below the seed. Older planting equipment fixes the starter 2 inches to the side and 2 inches below the seed. With newer equipment, you can adjust the placement. There's no ideal placement, but there should be at least 1 inch of soil between the seed and the starter fertilizer.

Some growers have success placing a small amount of fertilizer with the seed. This "pop-up" placement works, but use low rates. Also, don't apply fertilizer containing urea in contact with the seed.

There's no standard starter fertilizer rate to use. You can easily adjust rates to match your soil test results. There are

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limits to rates of starter that can be used. Rates vary with several factors and are available in summary form from county offices of the Minnesota Extension Service.

"Starter fertilizers have been used by top corn producers for many years. They'll continue to be an important management tool for profitable corn production in 1988," Rehm says.

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2615

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# News and Information

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April 14, 1988

EDUCATIONAL DEVELOPMENT SYSTEM  
3/24/88  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Jim Lewis  
612/625-7746  
Writer: Evelyn Anderson  
612/624-3770

Editors, broadcasters: You may wish to use this story during Volunteer Recognition Week, April 17-23.

## **VOLUNTEERS ARE WORTH \$16 MILLION TO 4-H**

If you paid Minnesota's 24,000 4-H volunteer leaders at the minimum wage, their work would be worth \$16 million. But the value of their contributions to the 137,000 youth they serve cannot be measured only in dollars.

"These volunteers are what makes 4-H work," says Byron Schneider, assistant extension director for 4-H youth development. "They give guidance, leadership and encouragement to Minnesota's young people and help them deal with the stresses of today's society." Minnesota 4-H is saluting its volunteers during Volunteer Recognition Week, April 17-23.

Currently, about 15,000 adults and 9,000 teen-agers volunteer to provide leadership in a variety of projects in Minnesota cities, towns and rural areas. Their activities include newer programs, such as global awareness, self-protection and career development, as well as the more traditional 4-H programs.

Persons interested in volunteering should contact their county extension office. Minnesota 4-H is a program of the Minnesota Extension Service, University of Minnesota.

# # #

AEA,CEO,V1,V4,Q

Page 1 of 1

N4-H2629

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# News and Information

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April 14, 1988

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

Source: Ward Stienstra  
612/625-6290  
Writer: Jack Sperbeck  
612/625-1794

## CONSIDER TREATING SOYBEAN SEED IN 3 SITUATIONS

There are three situations in which one should consider using a fungicide seed treatment for soybeans. The guidelines were developed after five years of research at three Minnesota locations, says Ward Stienstra, plant pathologist with the University of Minnesota's Extension Service and Agricultural Experiment Station.

1. Consider treating soybean seed if you will be planting seed with a germination level of less than 85 percent (as determined by a warm germination test). In two years of the research trials, treating seed with captan improved germination by 15 to 20 percent where seed germination ranged from 65 to 80 percent. Captan will improve the stand if the poor germination is due to fungi present on the seed; it won't if the poor germination is due to mechanical damage of the seed.

2. Consider treating soybean seed if you're planting a variety tolerant to Phytophthora root rot, especially if you expect a soaking rain soon after planting. The fungicide Apron (metalaxyl) will help the soybean seed resist Phytophthora.

3. Consider treating soybean seed if there's a chance you will be planting too deeply in a poorly prepared seedbed that is likely to crust over. A fungicide seed treatment will give seedlings some protection at early growth stages.

AEA,BSS,CEO,V1,V4,F

# # #  
Page 1 of 1

NAGR2625

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# News and Information

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April 14, 1988

EDUCATIONAL DEVELOPMENT SYSTEM  
MINNESOTA EXTENSION SERVICE  
433 COFFEY HALL  
UNIVERSITY OF MINNESOTA  
ST. PAUL, MINNESOTA 55108

Source: Ervin Oelke  
612/625-8700  
Sherri Johnson  
612/625-5261  
Writer: Mary Kay O'Hearn  
612/625-2728

## TURNING FLAX INTO LINEN IS ONLY FOR TRULY DEDICATED HOBBYISTS

Interested in growing flax to produce linen fiber you can weave into cloth? It will be rewarding, but prepare for some hard work.

You'll want to raise fiber flax (a tall, nonbranching type) for such a project rather than the shorter, more commonly grown oilseed flax, whose fibers are less suitable for linen. One can grow a pound or less of fiber flax seed easily; small amounts of fiber flax seed can be purchased in Minnesota, according to "From Flax Straw to Linen Fiber," a fact sheet just published by the University of Minnesota's Extension Service. Its authors are extension agronomist Ervin Oelke, extension textiles/clothing specialist Sherri Johnson, Iowa weaver Pam Ehrhardt and Verne Comstock, professor emeritus, agronomy and plant genetics.

The process of converting flax into weavable thread is tedious and only for the very committed, yet it's something earlier generations did (perhaps they wouldn't had they watched TV for the 7 hours and 2 minutes daily experts now say is average).

Page 1 of 2

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Flax fiber is part of the stem and must be separated from other plant tissues by "retting." This involves exposing the stems to moisture to loosen the fiber from the nonfibrous material through bacterial action. Retting can take as long as six weeks or as little as four or five days, depending on the process used. Over-retting weakens the fiber; under-retting produces coarse, harsh fiber. Knowing when the straw has been retted enough is one of the secrets "only gained by experience," the authors say.

When retting is completed, the flax straw is rinsed and air dried. Then it goes to a brake--a heavy plank on legs with several V-shaped depressions along its length. Another heavy plank is hinged to one end of the bottom plank with a handle attached to the other end. Molding pieces are glued to the underside of the top plank to form "teeth" that fit into the depressions in the bottom plank. When a handful of stalks is laid crosswise on the lower plank, the top is slammed down on them, breaking the wood portions but not the fibers.

Scutching follows braking. This is scraping away the broken outer pieces to expose the inner fiber. The fibers are scraped or beaten against the side of a board secured in a base with a wooden blade to remove as much of the woody part (boon) as possible. Then comes hackling or combing. A block of wood with 3- to 4-inch spikes makes up the hackle. Bundles of flax are combed through a succession of hackles, from coarse to fine, to remove the remaining straw and short fibers. A smooth, clean hank of "line" or long fiber is the result.

The line is then ready to be spun into linen thread. Now is the time to know something about dressing a distaff to prepare for spinning, and the actual spinning. . (If any of this is unfamiliar, a list of helpful reference books appears at the end of the publication.)

How much linen would one need, for example, to make a medium-size, long-sleeved men's shirt with a collar? About 4 yards of 36-inch-wide fabric (that includes 1.5 yards for loom wastage and shrinkage). To produce the linen for such a shirt would take some 348 square feet of flax acreage.

Copies of "From Flax Straw to Linen Fiber," item AG-FS-3339, are available from county extension offices.

# # #

CEO,V1,V4,G

NHEC2633

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# News and Information

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April 14, 1988

MSC  
1021P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mary Preisler  
218/935-5785  
Writer: Evelyn Anderson  
612/624-3770

Editors, broadcasters: You may want to use this story during Volunteer Recognition Week, April 17-23.

## **4-H VOLUNTEER 'LEARNED ALONG WITH THE KIDS'**

Mary Preisler of Bejou, Minn., didn't belong to 4-H as a child. But when she began to see what 4-H did for her five children, she became one of Minnesota's most active adult 4-H volunteers.

Currently president of the Minnesota 4-H Adult Volunteers Association, Preisler is one of 24,000 adult and junior volunteers in 4-H being recognized during Volunteer Recognition Week, April 17-23.

Fourteen years ago Preisler's husband suggested they take their oldest child to a 4-H meeting because he had enjoyed 4-H as a teenager. All five children became active in a variety of 4-H programs, with four earning trips to Washington, D.C., to participate in leadership and citizenship conferences. Her oldest son, now 23, served as a state 4-H ambassador and has decided to go into extension work because of his 4-H interest.

Preisler has participated in many local, district and state 4-H activities. She also has accompanied groups to leadership conferences in Washington, D.C., and chaperoned a six-week trip to

Page 1 of 2

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Japan, where she lived with a family in Hiroshima. She has served on the State 4-H Advisory Council. She now works as a farm mediator for northwestern Minnesota, a program that grew out of 4-H's family mediation program.

She was one of the founders of the Minnesota 4-H Volunteers Association, which provides training, information and other resources to its 600 members.

"My children have gained a broad understanding of today's issues through 4-H," Preisler said. "I'm excited about the new programs in some of the 'touchy' areas kids have to deal with. They are better prepared to be adults because of 4-H."

Preisler said 4-H has made a big difference in her life, too, with such experiences as public speaking and foreign travel.

"It has contributed to my educational and personal growth," she said. "I've learned along with the kids."

# # #

AEA,CEO,V1,V4,Q,43

N4-H2627

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# News and Information

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April 14, 1988

EDUCATIONAL DEVELOPMENT SYSTEM  
MINNESOTA EXTENSION SERVICE  
433 COFFEY HALL  
UNIVERSITY OF MINNESOTA  
ST. PAUL, MINNESOTA 55108

Source: Kathy Sperry  
605/229-4591  
Writer: Evelyn Anderson  
612/624-3770

## **4-H CAMP COUNSELORS TO ATTEND TRAINING PROGRAMS**

More than 200 Minnesota teenagers will receive training this spring in preparation for their work as counselors at 4-H camps throughout Minnesota.

Counselor training camps will be held April 25-27 at Camp Ihduhapi in Loretto, April 27-29 at Camp Shetek in Slayton and May 2-4 at the Itasca Biological Station in Itasca State Park.

The counselor trainees, ages 15-18, represent 81 counties that participate in 4-H camps. They will help train other counselors in their communities. Minnesota 4-H camps annually serve 10,000 youngsters in summer and winter programs.

Theme for this year's camps is "We Are the World," helping young people learn more about developing countries through a camp experience. The theme ties in with the current global awareness focus of Minnesota 4-H. In addition, counselors will learn camp skills and effective ways of dealing with campers of different ages.

"These counselor trainees not only learn camp counseling, but they also develop people skills they will use the rest of their lives," said Kathy Sperry, Minnesota 4-H camping coordinator.

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

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Minnesota 4-H is the youth development program of the Minnesota Extension Service, University of Minnesota. It is the state's largest out-of-school educational program for youth, serving 137,000 young people. For information about 4-H, contact your county extension office.

# # #

AEA,CEO,V1,V5,V6,Q

N4-H2628

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# News and Information

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April 14, 1988

MSC  
9A27p  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Ward Stienstra  
612/625-6290  
Writer: Martin Moen  
612/625-6243

Broadcasters: An audio version of this story is available by calling the Minnesota Extension Service Newslines at 612/625-6243.

## **PROTECTION OF ENDANGERED SPECIES MEANS MORE PESTICIDE REGULATION**

The impact of the Endangered Species Act of 1982 may be felt in rural Minnesota later this year. The Environmental Protection Agency (EPA) wants to have new pesticide restrictions in place by the 1989 growing season. The new rules would help protect endangered plants and animals and their habitat from pesticide exposure.

The EPA tried to implement the new restrictions last fall, but the attempt created an uproar and the rules were withdrawn amidst confusion and controversy. To make the revised rules more acceptable, the EPA is inviting comment from interested parties through June 7.

One of those with strong feelings on the subject is plant pathologist Ward Stienstra of the Minnesota Extension Service. "We don't want to lose a plant or an animal because of the use or misuse of a pesticide," he says. "A difficulty with last year's restrictions is the way they were developed." While pesticides may be a problem, Stienstra points out there are many other ways in which man destroys endangered species.

Page 1 of 3

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The EPA's proposed rules would have greatly increased the amount of land where certain pesticides could not be applied. Pesticides would be banned in areas where endangered species are currently found.

Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the risks of a pesticide's use are weighed against its benefits before deciding whether a restriction is needed. Stienstra says under the proposed rules, any pesticide which poses a risk to an endangered species would be restricted.

Only a handful of farmers can say they have an endangered species living on their land. But by including potential habitat in the restrictions, Stienstra says many more farmers would have to change their farming methods.

"For example, if as few as 10 acres contain the target species we're concerned about, the EPA was, in some cases, proposing a pesticide ban on the entire section, or 640 acres of land, around the 10-acre site," Stienstra says. "I don't believe we have to shut down a farming enterprise just to preserve an endangered species. Other alternatives should be found."

Stienstra would like to see the EPA's endangered species pesticide rules targeted to select areas. He believes landowners should be informed if an endangered plant or animal exists on their property. He says, "I think most landowners would freely participate in establishing a local protection plan. If a landowner refuses to cooperate, then additional action, when it's appropriate, could be taken by authorities."



Stienstra feels all farmers need to be concerned about the EPA's proposed pesticide restrictions, even if they aren't currently affected. He says, "New 'crop clusters' or new endangered species can be identified at any time. When the rules are issued for species 1, 2 and 3, the concern is that next year they'll be applied to species 20, 30 and 40 and so on."

Some of the endangered species found in Minnesota which would be covered by the EPA's rules are the prairie bush clover, the Minnesota trout lily and a freshwater mollusk.

The EPA has scheduled eight public hearings on the new rules. The closest to Minnesota will be April 28 in Kansas City, Kan.

# # #

AEA,BSS,CEO,V1,V4,C,F,L,R

NAGR2623

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# News and Information

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April 18, 1988

MSC  
9 A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Marvin Bauer  
612/624-3703  
Writer: Jennifer Obst  
612/625-2741

Editors: Call Carl Walker at (612) 624-3708 to obtain a 35-mm color transparency to use with this story.

## TO SEE THE FOREST FOR THE TREES

You've got your work cut out for you if you take Minnesota forests as your field of research--unless you're Paul Bunyon. Minnesota's forests are a large, uncharted territory, hard to get around in, easy to get lost in, and impossible to see whole.

So how do you get a good look at them? One way is from 569 miles away, straight up. Satellite imagery of Minnesota forestland is providing some practical, specific detail about this resource. Looking from far away is proving to be a good way to see it up close.

The Minnesota Agricultural Experiment Station's Remote Sensing Laboratory in the University of Minnesota's College of Forestry uses satellite images to analyze forest cover. The images come from two satellites. The United States' LANDSAT, and the French SPOT satellite.

SPOT produces higher-resolution images than LANDSAT, but in a narrower range of light reflectance bands. Researchers can analyze areas as small as one-quarter acre, while at the same time working over broad areas since each image covers more than 10,000 square miles.

Remote Sensing Laboratory director Marvin Bauer isn't dazzled by this high technology. He focuses on the practical use of the

Page 1 of 3

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

information it gathers. Bauer says remote sensing has improved dramatically since the first LANDSAT image arrived in 1972: "The images are better. The old technology produced images in which one picture element was 1.1 acre. This second-generation sensor has one-quarter resolution and additional spectral bands."

In the laboratory, the satellite images are analyzed by computer. Bauer says, "The human analyst is an integral part of the classification and analysis, but as we learn how to extract information from this data, we expect to make the process more automatic. This digital approach is more quantitative and objective than photo interpretation methods."

The satellite images sense a broad range of reflected light, including visible and near-infrared light invisible to the human eye. This is useful because the varying reflectance spectra of green vegetation can identify both types and amount of vegetation. "With more vegetation, the visible reflectance will decrease, and the near infrared will increase," Bauer says. "With these measurements, we can discriminate between high and low amounts of vegetation to identify cover types: crop species, such as corn or soybeans, and tree species, such as red pine or aspen. The computer can then easily calculate the area occupied by each of these species.

"The next important thing to measure is the occurrence and degree of stress that vegetation is undergoing. This is also an area of current research."

Bauer believes it's important to keep a watchful eye on changes in Minnesota forests. He says, "Once a tree stand is established, it may be there 40 to 100 years. But forests do keep changing--they grow and

they get cut down, and what grows in that place may be different from what was before. The last comprehensive statewide inventory of Minnesota forests was done more than 10 years ago. Although it's the volume of timber ultimately that is important, information on forest type and area is critical. A typical question from the forest industry is, where should a new plant be built, and to answer that you need to know type, size and location of trees."

Bauer believes remote sensing is beginning to find its stride as a tool. "It's beyond its infancy and at the point where it can be used as operational information," he says.

Bauer counters the impression among some that remote sensing is too expensive. "The satellite approach may be more affordable than other options," he says. "Just to acquire aerial photography for a statewide forest inventory would cost about \$250,000. But using LANDSAT would cost about \$75,000. Plus the data analysis would be cheaper. It would probably take 20 photo interpreters two years to interpret the photography for such an aerial survey. It would probably take two to three analysts only about six months to analyze the satellite data by computer.

"Also, remote sensing is useful for more than forestry applications. Other uses in agriculture include crop inventory, soil mapping and land use classification. The data are also extensively used in geology and mineral exploration and water resource analysis."

As Bauer sees it, the view from way up there can be very helpful down here.

# # #

AEA,BSS,NWdist,NEdist,ECdist,SEdist,V1,V4,C,S,T

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MSC  
3 A27P

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# News and Information

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

April 18, 1988

Source: Elaine Asp  
612/624-3032  
Writer: Jennifer Obst  
612/625-2741

Editors: Call Carl Walker at (612) 624-3708 to obtain a 35-mm color slide or black-and-white print to use with this story.

## HOW GOOD ARE HOME-DELIVERED MEALS?

For the frail elderly or those recently home from the hospital, a hot meal delivered to their door is more than a luxury. It's a lifeline allowing them to stay in their own home and community.

Home-delivered meals programs offer a pretty good product, but could be improved, say University of Minnesota nutritionists Elaine Asp and Mary Darling. Asp, a Minnesota Agricultural Experiment Station researcher, and Darling, a Minnesota Extension Service home economist, have completed a five-year study on the quality and nutrition of home-delivered meals.

The popularity of these meal services is growing. "In 1980, there were 31 million home-delivered meals, and five years later that figure had risen to 47 million meals," Asp says.

Darling says, "For those just released from the hospital, home-delivered meals give them temporary support until they get their stamina back. For the frail elderly, this is a way to keep them in their homes longer and independent." And, with the elderly population growing, the demand is likely to grow.

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Asp and Darling's study began when the Southeast Home-Delivered Meals program of Minneapolis asked them to evaluate its meals for nutrient content and food quality. "The board also was concerned about the temperature of both hot and cold food when it was delivered, because proper food temperatures are critical for food safety and food quality," Asp explains.

The researchers evaluated one week of meals each year. They also interviewed meal recipients about how they used the meals, what they liked and didn't like about them, and how well they understood nutrition concepts.

"We found considerable variability in the nutrient content of the meals," Asp says. "If the recipients took every meal in the week, their average nutrition intake would be good, but if they only got a few of the meals, depending on which meals they received, they might fall short."

Asp and Darling learned that the meals were sometimes not eaten when delivered. They were also not eaten all at once. Recipients would sometimes save food to parcel out over the course of the day. Darling says, "We found that without these meals their nutrient intakes were quite low. This meal was their major food for the day."

"The biggest nutrition problem we found in the program we were evaluating was the low calcium content of the meals because they didn't deliver milk," Asp says. "If the meal doesn't include milk, then they should have more milk-rich foods on the menu, such as cream sauces, pudding or cheese."

Asp and Darling also evaluated the color, flavor and texture of the

meals and asked for the recipients' evaluation. The recipients identified some quality problems such as meat that was not always as tender as they desired. "These people do recognize food quality," Asp says. "Their complaints were that the quality was not consistently high."

A home-delivered meal is a series of compromises based on the restrictions its delivery system imposes. "Sauce or a breading is used to keep it moist and soft and warm," Darling says.

A number of recommendations came out of the study. These included providing more fresh foods, increasing the fiber content of meals, and, Darling says, "to handle the problems some elderly people find in chewing raw foods, these foods could be grated and put into food mixtures."

One clear conclusion was the realization of how important of these meals are to the recipients. Darling says, "Many of these people find food preparation difficult. They can get help to get to the grocery store, but food preparation comes every day, several times a day."

The researchers say their conclusions should apply to rural areas as well as to the urban program they studied. Moreover, in rural areas, where distances between homes are greater than in the city, the problems of delivering a hot meal are even greater. "The fact that the elderly population is tending to stay in rural Minnesota, adds to the costs to the volunteer in transportation," Darling points out. "Small towns are going to have greater needs for this service than cities and more volunteers will be needed to cover the delivery territory."

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# News and Information

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April 21, 1988

m5c  
JAZP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Cynthia McArthur  
612/625-9719  
Editor: Gail Tischler  
612/625-3141

## **4-H OBSERVES STATE BIKE WEEK WITH SAFETY, REGISTRATION PROGRAMS**

Minnesota 4-H invites the 2.5 million bicyclists in the state to participate in bike safety and registration programs and biking events during 1988 Minnesota Bike Week, May 15-21.

"Minnesota Bike Week is a statewide effort to promote safe bicycling as healthy and energy-efficient recreation and transportation," says extension fellow Cynthia McArthur, who heads the 4-H bike program for the University of Minnesota's Extension Service. "It is a good time to get your bike out and ready to ride in the coming season."

A highlight of Minnesota Bike Week again will be the Lieutenant Governor's Annual Bike Ride, in which Lt. Gov. Marlene Johnson will lead cycling enthusiasts in a pleasure ride May 21 in Duluth. But there will also be local bike events in dozens of communities--both during and after bike week.

Many communities conduct bicycle activities and awareness campaigns to educate riders about traffic laws and bike safety, McArthur says. More than 90 Minnesota communities sponsored some type of educational bike event during 1987--reaching more than 106,000 bicyclists. Among such activities 4-H helps promote are

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bike safety and maintenance classes, bike rodeos and bike-athons.

While fun and exercise are part of these local events, bike safety is often the focus, McArthur says. Along with its ongoing emphasis on bike registration and general safety, Minnesota 4-H is making a special effort this year to encourage cyclists to wear helmets.

More than 500,000 Americans are seriously injured and more than 600 children die in bike accidents each year, McArthur says. Three of four cyclists killed in crashes die from head injuries, she adds. Helmets not only can help prevent injury, they can increase the visibility of cyclists and help shelter them while riding in bad weather. 4-H encourages cyclists of all ages to purchase and wear approved headgear.

Minnesota 4-H also is continuing its efforts to promote bicycle registration, McArthur says. Authorities report a decrease in the number of Minnesotans registering their bikes and remind cyclists that more than \$1.5 million worth of bicycles are stolen in Minnesota each year. In addition to making bikes easier to recover, registration can discourage their theft in the first place and can provide rider identification in case of an accident.

McArthur encourages cyclists to seek more information about bike safety and registration from their local police department, bike shop or motor vehicle deputy registrar. "And," she adds, "Minnesota Bike Week is an excellent time to do it."

# # #

V1,V4,V7,Q,M

N4-H2512

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# News and Information

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April 21, 1988

MSC  
BARTP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Basil Furgala  
612/624-4798  
Writer: Jennifer Obst  
612/625-2741

Editors: Call Carl Walker (612/624-3708) to obtain a 35-mm color transparency or black-and-white print to use with this story.

## **ARRIVAL OF AFRICAN BEE MAY BE OPPORTUNITY FOR MINNESOTA BEEKEEPERS**

Killer bees is the stuff of horror shows, best served with popcorn and a willing suspension of disbelief.

But an invasion of the Africanized bee, known for its aggressive behavior, is something Basil Furgala, an entomologist with the University of Minnesota's Agricultural Experiment Station, takes very seriously. Its inevitable arrival into the southern United States could radically change beekeeping and honey production in Minnesota, possibly for the better.

The Africanized bee has moved steadily northward since it was introduced to Brazil in 1957. Now it is in Mexico. "It's possible the first wave of swarms could reach either Texas, southern California, Arizona or New Mexico in two or three years," Furgala says.

The Africanized bee causes worry because of its exceptionally defensive behavior. "The African honeybee is, number one, unpredictable in where it goes, when it goes and where it nests," Furgala explains, adding that its defensive behavior far exceeds anything now known in Minnesota. "I can, during a nectar flow, walk

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into an apiary without a shirt and not worry," he says. "There is no way that you could do that with any sense of confidence with the Africanized bee."

Africanized bees swarm, follow and sting much more aggressively than the European bee, which is the type kept by U.S. beekeepers. Furgala says, "Some research indicates that the Africanized bee will not pollinate efficiently under temperate conditions, and they are also not very good honey producers in those conditions. The bees are well suited for the sparsely populated, tropical forests where they came from, but for the Minnesota beekeeping industry, they would be a disaster."

Bees are an important, often unrecognized, resource to Minnesota. Last year, Minnesota honey production was a \$5-million business. Pollination of crops, including apples, sunflowers and strawberries is worth \$25 to \$30 million. And that amount doesn't include the benefits of bees to backyard orchards and gardens, or their benefits to wildlife, in increased production of seeds, berries and other fruits.

Furgala says the Africanized bee, which has been moving north at the rate of 300 to 400 miles a year, will probably not fly into Minnesota; it will be brought in.

"The North American beekeeping business is highly mobile," he explains. "There's a lot of interstate movement of bees. In Minnesota, from 100,000 to 130,000 colonies of bees come up from Texas, Florida and Mississippi every year. We depend on a southern line of states for queens and packages." Packages are screened

cages containing 2 or 3 pounds of bees and a queen.

"This is the way the industry has developed over the past 60 to 70 years. Because of our winter, it's very difficult to produce queens when we need them in the numbers that we need them.

"So, if the Africanized bee hits Texas in two to three years, you can imagine what's going to happen. For public health reasons, the state will say, 'No movement of bees into Minnesota,' and the same thing will happen in other states," he says.

Since the early 1980's, Furgala has been looking at alternative sources for queens, and at strategies that will allow Minnesota's beekeeping industry to become more self-sufficient. He's been comparing different lines from Hawaii and British Columbia to the starline queen. The starline is common in Minnesota, and Furgala's been studying it for 20 years.

Both Hawaii and British Columbia can rear queens early enough so Minnesota beekeepers could receive them by a May 15 target date. Australia and New Zealand are other potential sources, but so far Furgala hasn't been able to obtain permission to import them for study. He's evaluating the queens for brood and honey production, wintering ability and foraging characteristics during the honey flow, as well as defensive behavior. "We need gentle bees," he says.

If Furgala can identify a good alternative queen--and some of the lines look promising--the arrival of the Africanized bee could be an opportunity for Minnesota beekeepers. "If we have alternative sources of queens and can certify that there's no Africanized genes

in our stock, we could become the source of queens and packages," Furgala says.

"What I see in the next decade or so is a whole new industry for states like Minnesota, where there will be a reverse flow of packages with queens from here to the southern states. But in order for this to happen, we've got to generate management systems efficient for Minnesota beekeepers.

"Our bees will be needed to pollinate, for example, the \$400- to \$700-million almond crop and the vegetable seed crops in southern Arizona and California. If the Africanized bee becomes established down there, it will be necessary for them to periodically either requeen or depopulate their colonies."

Furgala is also comparing traditional package systems with a wintering system he developed and has studied for many years. His "horizontal two-queen system" is a winterized unit that is divided in the spring. It's easier to manage than is the vertical two-queen systems used by some honey producers.

Management of the packaging system is easier, Furgala admits, than maintaining the colonies through the winter. With current options threatened by the Africanized bee, graduate student Steve Duff is comparing the cost of production of, and returns from, the the horizontal two-queen system with the package and vertical two-queen systems.

"We need these options," says Furgala. "We're racing against time."

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# News and Information

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April 21, 1988

MSL  
2/27/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Cynthia McArthur  
612/625-9719  
Editor: Gail Tischler  
612/625-3141

## **SPRING IS TIME TO REGISTER BIKES--AND BIKE WEEK IS GOOD REMINDER**

Minnesota 4-H invites the 2.5 million bicyclists in the state to celebrate 1988 Minnesota Bike Week, May 15-21, by registering their bikes to prevent loss and theft.

"Minnesota Bike Week is a statewide effort to promote safe bicycling as healthy and energy-efficient recreation and transportation," says extension fellow Cynthia McArthur, who heads the 4-H bike program for the University of Minnesota's Extension Service. "It is a good time to get your bike out and ready to ride in the coming season--and to get it registered."

More than \$1.5 million worth of bicycles are stolen each year in Minnesota, McArthur says. If lost or stolen bikes are registered, they can be returned to their owners when recovered. "Even if a license number is lost, the bike owner can be identified by serial number and/or name and date of birth," she adds. Moreover, thieves are less willing to steal a bicycle displaying a registration sticker since it can be identified.

Another reason to register a bicycle is accident victim identification, McArthur says. "Many bicyclists, especially children, carry no identification. But it takes less than 30

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seconds for a police officer to identify the owner of a bicycle registered in Minnesota's State Bike Registration System--and that time can be vital in the event of an accident."

To register a bike, owners must supply the following information: brand name, serial number, number of speeds, date purchased and owner's name and date of birth. Cost of registration is only \$6 and the registration is valid anywhere in the state.

Local 4-H clubs work closely with community officials in a variety of bike safety and registration programs. More than 90 Minnesota communities sponsored some type of educational bike event during 1987--reaching more than 106,000 bicyclists. Among such activities are bike safety and maintenance classes, bike rodeos and bike-athons.

McArthur encourages cyclists to seek more information about bike safety and registration from their local police department, bike shop or motor vehicle deputy registrar. "And," she adds, "Minnesota Bike Week is an excellent time to do it."

# # #

V1,V4,V7,Q,M

N4-H2514

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# News and Information

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April 21, 1988

MSC  
JAZ/p  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Cynthia McArthur  
612/625-9719  
Editor: Gail Tischler  
612/625-3141

## **MINNESOTA BIKE WEEK IS GOOD TIME TO GET INTO HELMET HABIT**

Minnesota 4-H invites the 2.5 million bicyclists in the state to celebrate 1988 Minnesota Bike Week, May 15-21, by buying and wearing an approved cyclist's helmet.

"Minnesota Bike Week is a statewide effort to promote safe bicycling as healthy and energy-efficient recreation and transportation," says extension fellow Cynthia McArthur, who heads the 4-H bike program for the University of Minnesota's Extension Service. "It is a good time to get your bike out and ready to ride in the coming season--and a good time to purchase a helmet to wear while riding it."

Statistics support the need for cyclists to wear protective headgear:

--More than 500,000 Americans will be seriously injured this year in bicycle accidents.

--More than 600 children will die in bicycle accidents this year.

--Three of four cyclists killed in crashes die of head injuries.

--The majority of bike riders' injuries are head related.

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--The brain is extremely sensitive to any impact, even from accidents while bicycling at a very low speed.

A helmet can protect bike riders from such injury or death, McArthur says--but only if it is worn at all times while riding. The majority of children killed in bike accidents each year are only a few blocks from home, she says. And many serious bicycle accidents happen on "quiet" residential streets, in parking lots and on bike paths.

"Ninety-five percent of bicycle accidents don't even involve automobiles," McArthur says. "On any ride you might catch a wheel in a crack in the road surface, skid on gravel, hit a wide pothole or drain grate, or collide with a pedestrian or a dog or another vehicle."

Helmets not only protect against head injury, they offer added safety in other ways. Bike riders are easier to see with a white or yellow headpiece on, especially at dusk, in rain or fog, or after dark. If the rider has a medical emergency condition, that information can be taped inside the helmet. A helmet will keep the rider's head dry in rain or snow. And motorists will treat cyclists with more respect if they are wearing a helmet, "because you look like you know what you're doing," McArthur says.

Helmets are available in many colors and styles, she adds. The most important factors are that it fits the rider well and has a label signifying safety approval by the Snell Memorial Foundation or the American National Standards Institute (ANSI). McArthur advises cyclists to carefully read the instructions

supplied with the helmet before using it. "A helmet properly fitted and with reflective tape properly placed on it can add greatly to bike riders' safety," she says.

Helmets can make such a big difference in injury protection that Minnesota 4-H is making a special effort during 1988 Minnesota Bike Week to promote their use. 4-H clubs work closely with community officials in a variety of bike safety and registration programs each year. More than 90 Minnesota communities sponsored some type of educational bike event during 1987--reaching more than 106,000 bicyclists. Among such activities are bike safety and maintenance classes, bike rodeos and bike-athons.

McArthur encourages cyclists to seek more information about bike safety and registration from their local police department, bike shop or motor vehicle deputy registrar. "And," she adds, "Minnesota Bike Week is an excellent time to do it."

# # #

V1,V4,V7,M,Q

N4-H2516

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# News and Information

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April 21, 1988

MSC  
JAZP  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Sean Ahearn  
612/624-6709  
Writer: Jennifer Obst  
612/625-6797

## REMOTE SENSING AIDS IN EFFORT TO SAVE MINNESOTA'S PRAIRIES

Although Minnesota has some of the largest expanses of remaining northern tall grass prairie, our native prairie is continually threatened by development. Remote sensing is being used to locate "savable" pieces of what remains.

Sean Ahearn, University of Minnesota assistant professor of forest resources, working with the Minnesota Department of Natural Resources, is identifying and characterizing the prairie, seeking the best areas for purchase by the Nature Conservancy.

According to Carmen Converse, with the DNR's Heritage Program, "We also hope that we can identify specific wildlife habitat, such as that of the burrowing owl, so that it can be preserved."

As part of a two-year study, they've completed mapping Lac Qui Parle County and will be looking at Big Stone County next.

"We've generated a map of the whole county that shows where prairies occur with a relatively high degree of accuracy using LANDSAT imagery," Ahearn says. "We're also getting a handle on the quality of each of the prairies identified."

A high-quality prairie has a mixture of native species. Lower-quality prairies contain non-native, exotic species, such as

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bromegrass. And the more diverse the native species, the better the prairie.

Ahearn says that to get all that information, they "train" a computer: "We find the prairies by first training the computer to identify prairies on the satellite images. This is done by taking a sample on the satellite image of what we know from the ground to be prairie to generate statistics that relate a cover type (such as prairie) to how light is reflected in each of the spectral bands. This relationship gives us a spectral response that can be used to classify those areas where we have no cover type information. A portion of the known samples are not used in the training process but are used later in the accuracy analysis, which is a critical part of every satellite classification.

"The advantage of satellite image classification is that with relatively few samples very large areas can be classified." To do this same amount of mapping manually on the ground would take a very long time.

Ahearn has run into some unique difficulties in classifying prairies from satellite images. He says, "With forest remote sensing, you deal with illumination problems due to vegetative height differences and shadows. But with prairie, it's litter. When the grass dies, the litter builds up over time, and this complicates the analysis procedure."

But the researchers are finding ways to surmount this difficulty, and they are pleased that their results so far, reviewed by a DNR ecologist, match data collected on the ground.

# # #

AEA,BSS,CEO,V1,V4,C,R,S,06,12,37,80,81,83,92

NNRD2636

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# News and Information

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April 21, 1988

MSC  
83-77  
Educational Development System  
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

## RECYCLE YOUR EASTER LILY

There's a good chance you can recycle your Easter lily so it will bloom outdoors in the garden for years to come. But if you don't have a sunny location outside for it, there's little point in trying to save the bulb, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"As individual blossoms die, remove them so seeds aren't allowed to develop," Brown advises. "Seeds will use up valuable energy that could go towards next year's growth."

"When no flowers remain, put the plant in a bright, sunny window and continue to water as long as the leaves stay green and healthy looking. Once they begin to yellow and dry, gradually withhold water. Then cut off the stem, right to the ground."

"Plant the bulb outdoors, making sure the top of the bulb is a good 5 or 6 inches below the soil surface. With any luck, it will send up new growth, and you may even get some flowers this summer."

"Mulch the area next fall with straw or lots of leaves. The bulb will probably overwinter in good condition, then grow and bloom normally next summer."

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V4,V7,I

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NAGR2450

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# News and Information

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April 21, 1988

MSC  
612/625-6797  
Educational Development System  
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

## REMOVE BLACK KNOT SWELLINGS BEFORE NEW GROWTH EMERGES

If you have cherries, plums, chokecherries or other members of the Prunus genus growing in your yard, now's the time to get a handle on any black knot problem that may exist.

Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service, says that swellings on the stems of Prunus caused by the black knot fungus are reservoirs of new infection.

"These infections may be visible at the end of the first season as slightly swollen areas," she says. "However, after a second season of growth, infected areas are readily visible as swollen, elongated, black areas on the stems. In the spring, these swollen areas produce spores that infect new tissue or wounds on the tree."

Ash says the best means of control is to simply remove the galled and slightly swollen areas in the spring before new growth begins. A dormant application of lime sulphur after pruning is also beneficial.

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V4,V7,I

NAGR2643

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# News and Information

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April 21, 1988

MCC  
LA 27F  
Educational Development System  
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

## PLAN YOUR GARDEN WITH DISEASE CONTROL IN MIND

Face it, planting and maintaining a flower or vegetable garden is hard work. With that in mind, Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service, urges gardeners to design their gardens to minimize disease problems. "That way," she says, "you won't have to spend time later destroying diseased plants and spraying the remaining ones."

Here are ideas that Ash suggests gardeners keep in mind:

--Allow plenty of space between plants and rows. This allows the air to circulate and keeps the plants dry. Moisture is necessary for the development and spread of disease.

--Water early in the day so any foliage that becomes wet will dry quickly. If possible, water only at the base of plants.

--Before planting, remove plant debris from the garden. Disease organisms overwinter on plant material left in the garden.

--Select disease-resistant cultivars. Check extension publications, seed catalogs, seed packages and plant identification stakes for this information.

--Provide proper cultural and environmental conditions for vigorous plant growth. Vigorously growing plants are less likely to have disease problems.

V4,V7,I

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Page 1 of 1

NAGR2642

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

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# News and Information

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April 21, 1988

MSC  
627P

Educational Development System  
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

## **DORMANT SEASON SPRAYING REDUCES MANY PLANT DISEASE PROBLEMS**

Many plant diseases can be reduced or eliminated by applying lime sulphur in early spring before new growth begins, says Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service.

"This is called a dormant season application," Ash says, "and it kills fungal spores which have overwintered on plant material. These spores would otherwise germinate in the spring, when the weather is cool and wet, and cause numerous plant diseases."

Ash says one should prepare for a dormant season application by removing any dead branches, leaves or other plant parts. Mix the lime sulphur with water according to label directions. Spray all surfaces of the plant to insure good coverage. Do not apply, she cautions, when the temperature is over 80 degrees F or under 45 degrees or when it may fall below freezing within 24 hours.

"A dormant spray of lime sulfur will control black spot, powdery mildew and rust on roses," Ash says. "On raspberries, it will control anthracnose and cane blight. It can also be applied to shade and fruit trees to control several diseases.

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"Lime sulphur can be mixed with an oil spray to control insects at the same time. Refer to the label for rates and other important information."

# # #

V4,V7,I

NAGR2447

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8/17/27P

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# News and Information

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

April 21, 1988

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

## EARLY SPRING HORT SHORTS

"Don't forget houseplants in your haste to get out and work in the yard," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Now that days are longer and sunnier, you should resume periodic fertilization and check to see whether your houseplants need watering a bit sooner. Wash off winter's accumulated dust as part of your spring housecleaning. Check also to see whether any plants need repotting. This is a good time to do it; you're least likely to disturb the plants."

\*\*\*\*\*

Wait to prune evergreens--even browned out branches--until this year's growth is visible, advises University of Minnesota extension horticulturist Deborah Brown.

She says, "If you prune too heavily and remove all the new growth, you may not get any new buds opening afterwards, leaving bare, woody branches. If excessive browning has occurred, you may need to replace the shrub, rather than try to save it through pruning."

\*\*\*\*\*

As long as you don't care whether your deciduous shrubs flower this year, you can prune them as soon as the buds swell. Deborah Brown, horticulturist with the University of Minnesota's Extension Service, says most shrubs bloom on last year's wood. So, if you prune them in early spring, you will remove the flower buds.

"If you enjoy the flowers of, say, a lilac hedge, wait until after it has bloomed--when the flowers have faded--to prune it," Brown advises.

\*\*\*\*\*

"Plant grass seed as soon as the soil is firm and no longer 'squishy' under foot," advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Spring rains and cool night temperatures will make the task of keeping the seed moist easier than it will be in warmer weather."

\*\*\*\*\*

Some vegetable and flower seeds may be planted in the garden as soon as the soil is dry enough to work, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. These include radishes, onions, peas, leaf lettuce, sweetpeas, cleome, California poppy, annual phlox and calendula. Onion sets and seedling pansies and johnny-jump-ups can also be planted as soon as the soil is workable.

\*\*\*\*\*

Mid-April isn't too late to start tomatoes from seed, says Deborah Brown, Minnesota Extension Service horticulturist.

"All you need is a six- to eight-week headstart to produce sturdy little plants to set out in the garden towards the end of May or early June," Brown says. "These small plants should really take off once they're in the garden because they will experience less transplant shock. Over the long haul, they'll be at least as productive as plants that were more advanced when they went into the garden. In fact, they'll probably be more productive."

# # #

V4,V7,I

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# News and Information

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April 21, 1988

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

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

## **ACT NOW TO AVOID ROOT MAGGOT DAMAGE LATER**

Gardeners who plan to grow crucifers--cabbage, broccoli, radishes, turnips, cauliflower, kohlrabi, mustard and related vegetables--or onions this year may do well to apply an insecticide when they plant to avoid trouble later with root maggots.

Jeffrey Hahn, entomology educator with the Minnesota Extension Service, says root maggots feed on the roots of crucifers and onions, causing wilting, reduced vigor and death. Their presence can be verified by examining crucifers and onions for tiny, white worms. However, once their damage is seen, it is too late to treat. Control needs to be done at the time of planting.

Hahn says, "If you had a problem with root maggots last summer, you'll probably have them again this year. An application of diazinon granules in the furrow at the time of planting will provide effective control. Crucifers should be drenched over the top with diazinon four to six weeks after planting."

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V4,V7,I

NAGR2452

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News or information  
for extension,  
experiment station staff

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

April 21, 1988

Source: Cynthia Ash  
Ward Stienstra  
612/625-6290  
Writer: Mary Kay O'Hearn  
612/625-2728

**NEW PUBLICATION HELPS IN GETTING JUMP ON LAWN DISEASES**

Keeping your lawn green and healthy can be one of summer's challenges. A new publication titled "Lawn Diseases" can help you meet that challenge this year.

Authors of the new publication, produced jointly by the Extension Services of the University of Minnesota and North Dakota State University, are plant pathologists Cynthia L. Ash and Ward C. Stienstra (both of Minnesota) and H. Arthur Lamey (North Dakota).

Pictures can help you identify the source of trouble in your own lawn, and the 17 color photos in "Lawn Diseases" will help you recognize problems. Written descriptions reinforce what you may already suspect from the photos and suggest what to do to treat leaf spot and melting out, necrotic ring spot, Rhizoctonia yellow patch, summer patch, Sclerotinia dollar spot, Rhizoctonia blight, powdery mildew, Typhula blight, Fusarium patch, rust, stripe smut, red thread, Pythium blight, fairy rings, mushrooms, slime molds, moss, algae, dog damage and injury from non-living disease agents, such as ice, flooding, mower blades, fuel and oil spills and excess fertilizer.

"Lawn Diseases" is available from the \_\_\_\_\_ County Extension Office. Ask for item number AG-F0-3386.

AEA,BSS,CEO

# # #  
Page 1 of 1

NAGR2454

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

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# News and Information

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April 21, 1988

EDUCATIONAL DEVELOPMENT SYSTEM  
MINNESOTA EXTENSION SERVICE  
433 COFFEY HALL  
UNIVERSITY OF MINNESOTA  
ST. PAUL, MINNESOTA 55108

SOURCE: Cynthia Ash  
612/625-6290  
WRITER: Sam Brungardt  
612/625-6797

## IF YOU VALUE YOUR OAKS, DON'T PRUNE THEM NOW

If you have oak trees in your yard, now is not the time to prune them; wait until after July 1. That's the advice of Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service.

She says, "Oak trees, especially red oaks, are very susceptible to a fungal disease called 'oak wilt.' This disease kills large numbers of oaks annually in Minnesota. The greatest concentrations of oak wilt are in and adjacent to the seven-county metropolitan area surrounding Minneapolis and St. Paul."

Ash says that oak wilt is easily identified in red oaks by the rapid wilting of infected trees. After the first symptoms appear, a tree will wilt completely in two weeks. Often, diseased trees occur in groups or centers of infection. The trees wilt from the top of the crown down, and individual leaves wilt from their tips to their bases, turning dull green, then brown. Fallen leaves from infected trees are likely to be green at the base.

"White oaks may die in one year, but more often die slowly over a period of several years," Ash says. "Bur oaks are

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intermediate in susceptibility and may be killed as quickly as red oaks or as slowly as white oaks."

The oak wilt fungus is spread in two ways, according to Ash. Most new infections are the result of the fungus moving from infected to healthy oaks via grafted root systems (where the roots of two trees have grown together). It can also spread by means of spores produced on fungal structures called "mycelial mats." The mats are produced on red and pin oaks, and have a fermenting odor that attracts insects, especially sap-feeding beetles. As the beetles crawl over the mats, spores of the fungus adhere to them. Infection of other oak trees can result when the beetles fly to them to feed on the sap that flows from fresh wounds.

"That is why the timing of pruning is so important," Ash says. "Overland spread by insects can be prevented by not wounding oaks in May and June. Because weather varies from year to year, wounding of any kind should be avoided from April 15 to July 1 to be safe. If wounding occurs, a nontoxic tree wound dressing should be applied immediately to the wound."

Ash adds that wilting or recently wilted trees should not be moved in any form, including firewood, to areas where oak wilt is not present. She says this has happened in several instances and accounts for the long-distance spread of the fungus.

# # #

V4,V7,I

NAGR2645



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# News and Information

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April 25, 1988

mcc  
3/27/88

Educational Development System  
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

## U OF M HORTICULTURIST PRESENTS '88 CRABGRASS REVIEW

Don't be tempted to apply pre-emergent weed preventers for crabgrass and other annual weeds too early, advises Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"Typically," she says, "they should be applied in early May, and watered in well so they will be fully active when seeds germinate. They'll work even if they're applied earlier, but they won't remain effective as long into the summer."

In the Minneapolis-St. Paul area, crabgrass usually sprouts around Memorial Day, according to Brown. It might sprout as much as a week earlier near the Iowa border, or a week or two later as goes north of the Twin Cities.

Brown says, "This spring does not seem to be unusually early, so plan to apply the weed preventer one or two weeks before seeds are expected to sprout, and you should get good results."

Pre-emergent herbicides only kill germinating weed seeds; they do not harm seedlings that have already sprouted. However, not all crabgrass germinates at the same time. If you miss the proper application time by a bit, it might still be worthwhile to use a pre-emergent to stop seeds that have not yet sprouted.

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

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"Most pre-emergents kill desirable grass seedlings right along with crabgrass, foxtail and other annual weeds," Brown says.

"When you reseed a lawn in spring, you must look for a crabgrass preventer that is formulated for use on newly seeded lawns. Check the label to make sure you are buying such a formulation.

"Crabgrass preventers may be purchased as a wettable powder to be mixed with water, then sprayed on the lawn. More often, though, they are in a granual form, combined with fertilizer."

# # #

V4,V7,I

NAGR2449

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# News and Information

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April 25, 1988

MSC  
3-17p

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

Source: Tom Thorburn  
612/625-9292  
Writer: Martin Moen  
612/625-6243

## VOTE ON BEEF CHECKOFF TO BE MAY 10

It's decision time for Minnesota cattle and dairy producers. The May 10 referendum on the \$1-a-head beef checkoff program is just around the corner.

A "yes" vote will mean that a producer supports the checkoff program which last year collected nearly \$700,000 from Minnesota beef producers. More than 90 percent of that money was spent on advertising and promotion. If the referendum passes, farmers will no longer be able to request refunds from the mandatory checkoff.

Anyone who owned cattle between Oct. 1, 1986 and March 31, 1988 is eligible to vote. Importers of cattle, beef or beef products are also eligible to cast a ballot.

Voting will be conducted at county extension offices throughout Minnesota during normal business hours. State coordinator of the referendum, Tom Thorburn, says the demand for absentee ballots was high and he expects a good turnout on May 10.

Official results are expected around May 24. Three previous referendums failed.

# # #

AEA,BSS,CEO,V2,V4,V8,A

NAGR2640

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# News and Information

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April 25, 1988

MSC  
LAMP

Educational Development System  
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

## TREATING SEED WITH FUNGICIDE HELPS PREVENT DAMPING OFF

When seeds germinate and the young plants encounter cold, wet soils, they may also encounter and succumb to a fungal disease called "damping off."

Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service, says, "Young seedlings are very tender and susceptible to invasion by these fungi. The fungi are right at home in cold, wet soils and they infect young seedling quite easily. The seedling rots at the soil line and then topples over, as though it had been pinched."

Ash says fungicides can be used to protect the seed and young seedling until the tissues become less succulent and are no longer susceptible to attack by the damping off fungi. Two such fungicides, captan and thiram, are readily available at garden stores and can be used to treat seeds before planting. Ash also recommends planting seeds in warm, well-drained soil, whether you are planting indoors or out.

# # #

V4,V7,I

NAGR2644

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# News and Information

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April 28, 1988

MSC  
2A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Larry Karels  
612/625-1229  
Writer: Evelyn Anderson  
612/624-3770

## **4-H OUTDOOR SPORTS PROGRAMS RECEIVE GRANTS**

Four organizations recently announced grants to enable Minnesota 4-H Youth Development to expand its programs in fishing, wildlife and shooting sports.

The Minnesota Deer Hunters Association (MDHA) donated \$20,700 for a statewide curriculum on wildlife and shooting sports. The curriculum will be used by MDHA and 4-H volunteers and staff to teach young people about 32 topic areas in wildlife management, the safe use of firearms and hunting tactics.

Federal-Hoffman, Inc., Anoka, donated \$1,000 for general support of shooting sports programs.

The Lake Superior Steelhead Association and the St. Louis River Recreational Association each donated \$2,000 for development of an intermediate angler's guide.

"These generous donations will help us educate young people in ways they can enjoy outdoor sports and appreciate the natural environment," said Larry Karels, University of Minnesota 4-H outdoor extension educator.

Minnesota 4-H Youth Development is the state's largest out-of-school educational program, serving 137,000 young people in

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

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cities, towns and rural areas. It is a program of the Minnesota Extension Service, University of Minnesota. For information on 4-H programs, contact your county extension office.

# # #

AEA,CEO,V1,V7,Q,R

N4-H2469

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# News and Information

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April 28, 1988

M 52  
1A27P  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Dave Pace  
612/625-3736  
Writer: Evelyn Anderson  
612/624-3770

## **CHIPPEWA COUNTY WOMAN TO BE IFYE IN TRINIDAD AND TOBAGO**

A University of Minnesota student, Julie Ann Bosch, daughter of Mr. and Mrs. Norman Bosch, Route 2, Montevideo, will spend the next five months in Trinidad and Tobago as a representative of the Minnesota and national 4-H youth development programs.

Her visit is part of an exchange to help young people become better-informed leaders as they live in and experience other cultures first hand.

Bosch is the only U.S. representative to Trinidad and Tobago this year. The International Four-H Youth Exchange (IFYE) program is coordinated by the National 4-H Council, Minnesota 4-H Youth Development, the National Federation of Young Farmers' Clubs in Trinidad and Tobago and that country's Ministry of Agriculture, Land and Food Production.

During her stay, Bosch will live with host families and work closely with leaders of the Young Farmers' Club as they conduct summer programs. She will assist with workshops and presentations.

Bosch was active in Chippewa County 4-H programs for 11 years and served as a state 4-H ambassador. She maintains her interest

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in 4-H at the University of Minnesota, where she is majoring in human relations. She is a member of University 4-H and is a volunteer leader for a 4-H club for residents of student housing on the St. Paul campus.

Minnesota 4-H Youth Development is a program of the Minnesota Extension Service, University of Minnesota. It is the state's largest out-of-school educational program for youth, serving 137,000 young people in cities, towns and rural areas. For information on 4-H, contact your county extension office.

# # #

AEA,CEO,V1,Q,12

N4-H2468



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# News and Information

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April 28, 1988

MSA  
1021P  
Educational Development System  
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

## **DAMAGE TO TREES FROM CONSTRUCTION CAN BE FATAL**

Construction activities when new homes are built or when utility lines, sidewalks, rooms or other features are added to existing homes seriously damage and kill hundreds of trees in Minnesota each year.

Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service, says most of the damage occurs to the root systems of trees. She says, "In an urban situation, the root system of a large tree extends well beyond the drip line, sometimes as far away from the trunk as the height of the tree. While rooting depth varies with soil type, most of the roots responsible for water and mineral absorption are located where there is a good supply of oxygen, usually within the top 12 to 18 inches of the soil."

Ash says the tree is a balanced system. When part of the root system is removed or killed during construction activities, the tree is less able to take up water and soil minerals. The food stored in those roots is lost, and the tree's physiology is upset. Consequently, the tree's root system can no longer support the amount of top growth it had in the past.

"The new foliage of trees whose root systems have been damaged is smaller and lighter in color and the branches begin to die," Ash says.

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"If the damage is minimal and the tree is properly cared for, it may recover. When the damage is severe or the tree is not properly cared for, it usually dies over a period of three to five years. Sometimes, the loss takes as long as 10 years."

Damage to the trunk and larger limbs by bulldozers or other equipment can also cause problems. Ash says the water- and food-conducting system in the trunk and limbs may be disrupted, resulting in less flow of water and nutrients to portions of the tree. Wounds also provide sites where canker and wood decay fungi can enter the tree and cause more problems. In the case of oaks, damage to the above-ground portions of a tree between April 15 and July 1 can result in the tree becoming infected with oak wilt. Oak wilt is deadly to red and pin oaks and can kill or seriously damage white and bur oaks.

Ash says, "Adding soil over existing root systems during final grading must be done with caution. One to 2 inches of coarse fill can be added over the root systems of most trees. If more soil must be added, special provisions must be made for adequate aeration of the existing root system."

Information on preventing construction damage to trees and on the control of construction-related tree diseases can be obtained from county extension offices throughout Greater Minnesota. Persons in the seven-county Minneapolis-St. Paul metro area can get such information from their county extension office or for a \$2 fee from the University of Minnesota's Dial-U Clinic (phone 975-0200).

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# News and Information

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EDS  
9/27/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

April 28, 1988

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

## **WARM WEATHER BRINGS NUISANCE INSECTS BACK TO LIFE**

Last autumn, many insects took refuge in and around buildings, where they remained dormant and inactive during the winter. But with the return of warm weather, some of these insects--boxelder bugs, hackberry psyllids, ladybird beetles, cluster flies, sowbugs, wasps and many others--are waking up and making a nuisance of themselves indoors.

"These insects, although different, have similar habits," says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service. "They do not reproduce inside, but are actually the same insects that entered buildings last fall. They are not harmful to people or property, but they can be a nuisance.

"If left alone inside, they will die or leave soon on their own. Although insecticides, such as pyrethrins, can be used to kill any that are out in the open, it's just as effective and less expensive to remove them with a vacuum cleaner. Since the insects could crawl out of the bag, it should be thrown out after you are done."

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Hahn says these same insects may be found on the exterior of buildings this spring, but it's unlikely they will come inside. Some may accidentally, but most only want to remain outdoors to feed and reproduce. He says that control of insects found on the exterior of buildings this spring is neither necessary nor recommended.

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V4,V7,I

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# News and Information

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April 28, 1988

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

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

## WHITE GRUB DAMAGE IS VISIBLE THIS SPRING

Minnesotans may notice dead patches of lawn in their yards this spring. If the dead turf can be rolled back easily, it has been damaged by white grubs, says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service.

White grubs live underground and feed on the roots of grass. They take three years to develop into adults, the familiar May beetles or June bugs.

Hahn says most white grubs are in their third year, or at the end of their life cycle, this spring. And since they've already done most of their damage, he does not suggest that anyone attempt to control them. He says this also means that June bugs will be numerous later this spring, and will be laying eggs to start a new generation of white grubs.

"First-year grubs, which are less than 1/2 inch long, do not cause much damage and are usually not noticed," Hahn says.

"Control of white grubs in their third year of development, when they are about 3/4 inch long, is not suggested because their damage is almost finished. The best time to control white grubs is during their second year, when they are about 1/2 inch long.

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"Diazinon or Oftanol (isofenphos) should be applied when 3 to 5 or more white grubs are found per square foot, following all label directions. However, since not all white grubs are in the same year of development at any one time, check their size to decide whether control is necessary."

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V4,V7,I

NAGR2451

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# News and Information

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May 5, 1988

MSC  
8/27/88

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

Source: Erlin Weness  
507/372-8210  
Writer: Jack Sperbeck  
612/625-1794

## **AVOID HAVING INTEREST EXPENSES DISALLOWED**

Farmers can reduce income taxes by living off sales of farm products instead of borrowing money for living expenses. The Tax Reform Act of 1986 disallows farm interest expense deductions if you borrow money for living expenses.

Avoid having interest expense disallowed. Establish two accounts, advises Erlin Weness, farm management agent with the University of Minnesota's Extension Service. Establish separate farm and household living accounts.

When you sell grain or livestock, or receive other income, deposit it in the farm account and then immediately write a check to the household account. You can also deposit sale proceeds directly into the household account.

Don't place borrowed funds either directly or by transfer into the household account. "If you spend borrowed funds for personal items, you can expect interest on the loans to be disallowed as a farm expense," Weness says.

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AEA,BSS,CEO,V1,V2

NAGR2475

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# News and Information

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May 9, 1988

1112  
7/27/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Marci Hilt  
202/447-4026  
Writer: Sam Brungardt  
612/625-6797

Editors, broadcasters: Registration for this conference is complimentary for reporters. If you wish to attend, call the USDA's Office of Public Liaison (202/447-2798) to preregister.

## **MINNEAPOLIS CONFERENCE WILL DISCUSS BIOTECHNOLOGY IN AGRICULTURE**

The last of four regional conferences on biotechnology in agriculture will be held May 17-18 at the Airport Hilton, 3700 E. 80th St., in Minneapolis, Minn.

Purpose of the Agricultural Biotechnology and the Public conference is to discuss the latest developments in agricultural biotechnology, which conference sponsors hope will aid in the development of a sound and effective public policy.

Sponsors of the conference are the U.S. Department of Agriculture and the land grant universities, state agricultural experiment stations and cooperative extension services of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota and Wisconsin.

Conference organizers say that important decisions regarding agricultural biotechnology are being made today at all levels of society, and these decisions will affect the way Americans live--what we eat and wear, our health, our environment and our future.

Scientists, journalists, government officials and regulators, elected

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officials and policymakers, civic and religious leaders, educators and other opinion molders, industry representatives, farmers, ranchers and food processors can play a role in helping make those decisions by participating in this conference.

Among the speakers at the conference will be USDA Assistant Secretary Kenneth Gilles; C. Eugene Allen, acting vice president of Agriculture, Forestry and Home Economics and acting director of the Agricultural Experiment Station, University of Minnesota; Jack Doyle, Environmental Policy Institute; Fred Smith, Competitive Enterprise Institute; Patrick Jordan, Cooperative State Research Service, USDA; Paul Bendix, The Talbott Group; Dixon Hubbard, Extension Service, USDA; Charles Muscoplat, Molecular Genetics, Inc.; Alvin Young, Office of Agricultural Biotechnology, USDA; Katherine Reichelderfer, Economic Research Service, USDA; and Allen J. Dines, Agracetus.

Several panels will discuss topics related to biotechnology; journalists will discuss the public's right to know; three panels of land grant university scientists will discuss research in plants, animals and food processing; and representatives from USDA's Animal and Plant Health Inspection Service, Environmental Protection Agency, Food and Drug Administration, Agracetus and the Conservation Foundation, will discuss federal regulation of bioengineered organisms.

Registration fee for the conference is \$75. Persons wishing to attend should call Beatina Coe at Heritage Travel in Washington, D.C. (phone 1-800-626-5200).

# # #

Page 2 of 2

AEA,BSS,CEO,V1,V2,V3,V4,V7,V8,S

NEXT2482

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# News and Information

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

May 12, 1988

Source: Carl J. Rosen  
612/625-8114  
Editor: Mary Kay O'Hearn  
612/625-2728

Broadcasters: Audio from an interview with Carl Rosen is available by calling the Minnesota Extension Service Newsline at (612) 625-7720. Audio will be available Monday, May 16.

## TEST SOIL BEFORE FERTILIZING LAWN

A routine soil test is the best way to discover the proper ratio of nutrients for your lawn. Advice on soil characteristics in your area is also available from your local Minnesota Extension Service county agent.

Testing for phosphorus (P) and potassium (K) levels will be valid for several years because these two elements move very little in the soil. Nitrogen (N) moves rapidly out of the root zone, so testing for it is less reliable.

The route to a healthy lawn is described in a new Minnesota Extension Service publication, "Fertilizing Lawns," written by D. H. Taylor, extension turf specialist; C. J. Rosen, extension soil scientist; and D. B. White, professor in the Department of Horticultural Science and Landscape Architecture at the University of Minnesota.

A lawn's nutrient needs depend on the type of grass planted and the management practices given it. This refers to how much care you decide to give the lawn balanced with the demands of the

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

grass variety. A lawn that is watered during the summer and has grass clippings removed after mowings is called a high-maintenance lawn. It will need more added nutrients than a low-maintenance lawn that isn't watered during summer and doesn't have grass clippings removed.

To prevent water quality problems from nutrients added to lawns, Rosen says not to overapply nitrogen. Phosphorus and potassium should be watered into the lawn and will stay put if the ground cover is sturdy and erosion is not a danger. Rosen suggests obtaining the extension publication, "Preventing Pollution Problems from Lawn and Garden Fertilizers."

For more information, ask your county extension agent how to obtain "Fertilizing Lawns" (item no. AG-FO-3338) and "Preventing Pollution Problems from Lawn and Garden Fertilizers" (item no. AG-FS-2923). Extension has also developed a computer program called TURFGRASS (item no. AG-CS-2539), also available through county extension offices in Minnesota, to help determine the most appropriate fertilizer for lawns together with a cost analysis.

# # #

CEO,V2

NAGR2489

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# News and Information

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

May 12, 1988

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

## **WATER YARD, GARDEN THE RIGHT WAY**

Watering takes on added importance during a dry spring, when Mother Nature hasn't done her job adequately, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"Young and newly planted trees and shrubs are particularly vulnerable to moisture stress," Brown says, "as they've yet to develop extensive root systems that can pick up moisture from deep in the ground.

"Fruit trees and small fruits, such as raspberries, strawberries and blueberries, need a steady supply of moisture to bloom and produce a good crop. And gardens--perennial or annual--need a good soaking once a week."

Lawns, too, need a thorough soaking weekly. Brown recommends applying enough water to wet the soil to a depth of about 5 inches. "You can check with a trowel to see how long it takes to accomplish this," she says. "On sandy soils that drain readily, you'll probably want to water twice weekly, but it takes less water to wet the root zone thoroughly."

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Brown says the most efficient time of day to water is early in the morning. Plants will dry rapidly, reducing the potential for foliar disorders, and little moisture will be lost to the atmosphere as evaporation. However, there's no reason--from a plant health standpoint--not to water in the heat of the day, but more water will be lost at that time, Brown says.

"It is a mistake to water in the evening, unless you've absolutely no choice in the matter," Brown says. "Evening watering encourages disease problems because foliage stays moist for extended periods.

"It's also a mistake to water frequently, but not deeply. Superficial watering encourages development of shallow roots, and this leaves plants more vulnerable to moisture and heat stress."

# # #

V4,V7,I

NAGR2493

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# News and Information

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

May 12, 1988

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

## **DON'T CONFUSE RHIZOSPHAERA NEEDLECAST WITH ENVIRONMENTAL PROBLEMS**

Rhizosphaera needlecast is a disease that can seriously damage spruce trees. However, it's easy to confuse the needle discoloration that this fungal disease causes with the discoloration caused by adverse environmental conditions, says Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service.

Ash says, "Although the fungus that causes Rhizosphaera needlecast attacks newly developing needles in May and June, the infected needles do not turn reddish brown until the following June.

"The fungus produces reproductive structures on the needles it infects, and these can be seen with a magnifying glass or hand lens. These structures are black and fuzzy and replace the white stomata or minute pores on the needles. The presence of these structures will help you distinguish Rhizosphaera needlecast from other problems."

According to Ash, needlecast develops first on the lower branches, then works its way upward. With Rhizosphaera needlecast, the tips of infected branches are almost always green,

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in contrast to damage caused by environmental desiccation (winter injury, sunscald, drought, etc.), which affects the most exposed portions of the tree--the tips of the branches and the needles on the top side of the branches--causing them to turn brown and fall off.

To control *Rhizosphaera* needlecast, Ash recommends applying chlorothalonil or Bordeaux mixture when the new needles are 1/2 to 2 inches long and again in three to four weeks. Keeping spruce trees watered during dry periods will minimize the impact of adverse environmental conditions on them, she adds.

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V4,V7,I

NAGR2491

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# News and Information

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

May 12, 1988

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

## **WARM-SEASON VEGGIES DO POORLY WHEN PLANTED TOO EARLY**

There's a great temptation to set tomatoes in the garden in early to mid-May, then protect them when frost threatens. But Deborah Brown, horticulturist with the University of Minnesota's Extension Service, points out that tomatoes and other warm-season vegetables do poorly when planted too early.

She says, "Warm-season veggies, including tomatoes, peppers, eggplant, the vine crops (cucumbers, melons and squash) and beans, grow faster and are more productive if you wait to plant them until the latter part of May or even early June, when both soil and air temperatures have warmed.

"Don't mulch the plants until the end of June or early July, when the soil is warmer yet. By mulching too soon, the soil is insulated and kept cooler longer, which tends to slow the growth of these heat-loving vegetables."

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V4,V7,I

NAGR2492

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# News and Information

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

May 12, 1988

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

## **THATCH, POOR CARE ARE MAIN CAUSES OF PATCH DISEASE**

A year or two after sodding a lawn, many homeowners notice crescent- to doughnut-shaped areas of dead grass. This is especially prevalent where sod has been laid on heavy, clay soils.

This problem, called "patch disease," was formerly referred to as "Fusarium blight," according to Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service.

Ash says the two primary reasons for patch disease are the presence of thatch over 1/2 inch in depth (which encourages shallow rooting) and improper treatment of new sod.

She says, "Turf that is shallow rooted is likely to go into drought stress off and on during the summer. Stressed turf is susceptible to the fungi that cause patch disease. The grass becomes infected and begins to die. Proper watering and fertilizing is important in the establishment and maintenance of a lawn.

"On sodded lawns or other lawns with thick thatch, the thatch layer must be reduced to less than 1/2 inch. Until conditions

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which encourage drought stress are alleviated, the lawn will continue to be susceptible to patch disease."

A fact sheet, "Patch Diseases of Lawns," is available from county extension offices throughout Minnesota. Ask your county agent for item no. AG-FS-3034.

# # #

CEO,V4,V7,I

NAGR2494

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# News and Information

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

May 12, 1988

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

## **BIRCH LEAFMINERS WILL BE OUT EARLIER THIS YEAR**

Birch leaf miners are expected to emerge about May 16 in the Twin Cities area this year, about a week earlier than normal, says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service.

Hahn says the birch leafminer is a wasp-like insect that attacks birch trees. The adults emerge in the spring as the birch are leafing out. The females then lay their eggs in the leaves. Small, caterpillar-like larvae hatch from the eggs. The larvae feed on the tissues between the upper and lower leaf surfaces of the leaves, creating "mines." The mines are small at first but get progressively larger, sometimes covering the whole leaf.

Most people do not notice the damage until after the larvae have finished feeding and the leaves turn brown. At this point, it is too late for effective control.

Recent research at the University of Minnesota has shown that birch can tolerate up to 40 percent defoliation without stress or injury, usually making control necessary only to protect the trees' appearance.

Hahn says, "If control is desirable, birch trees can be sprayed with Orthene when the miners are still small. A soil injection with MetaSystox-R2 using the Kiornitz system can also be applied by a plant health specialist when the miners first appear."

# # #

V7,I

NAGR2498

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# News and Information

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

May 12, 1988

Source: Kent Olson  
612/625-7723  
Writer: Jack Sperbeck  
612/625-1794

## '87 FARM INCOME HELPS MAKE UP FOR LEAN YEARS

Farmers in two Minnesota farm management associations showed a healthy profit in 1987. But the value (net worth) of their farm businesses has dropped by two-thirds in seven years, says Kent Olson, farm management economist with the University of Minnesota's Extension Service.

Average 1987 profits were \$63,404 for 178 farms in the Southwest Minnesota Farm Business Management Association. "There was a wide profit range among the 178 farms," Olson says. Profits averaged \$136,119 for the top 20 percent and \$12,995 for the low 20 percent.

Net worth or value of the business averaged \$204,788 at the end of 1987. But in 1979, average net worth was \$745,742. "That shows the ups and downs of the farm economy," Olson says. "Two-thirds of the net worth has been lost over eight years."

From a consumer standpoint, that's equivalent to having a house in most urban areas worth \$100,000 in 1979 being devalued to about \$30,000 by 1987. The house value would probably have increased--instead of decreased--by two-thirds.

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Olson says higher livestock prices and low feed costs were major reasons for the higher 1987 farm income. Government crop payments were another. "Last year was a decent crop year. Yields were about average. Crop prices were up a bit from 1986 but still low," he says.

"Farmers need a few good years to recoup from losses of income and net worth," Olson says. Measured in constant 1987 dollars, average profit figures were \$33,266 in 1986; \$5,797 in 1985; and \$10,802 in 1984. The lowest profit figure over the last 17 years--\$2,839--came in 1981.

Profits for 62 farms in the Southeastern Minnesota Farm Business Management Association averaged \$45,197 in 1987. But the range between the top 20 percent and low 20 percent was even wider than in southwestern Minnesota: \$119,882 and \$635, respectively.

Both farm business management associations have a cooperative arrangement with the University of Minnesota's Extension Service and Agricultural Experiment Station.

# # #

AEA,BSS,CEO,V1,V2,V4

NAGR2483

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# News and Information

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

May 12, 1988

Source: Monique Gauthier  
612/624-6748

Writer: Martin Moen  
612/625-6243

## HOSPITALITY CONFERENCE TO BE HELD MAY 19

A satellite teleconference will be held Thursday, May 19, at (see below) from 1 until 5 p.m. The conference, titled "Explore Minnesota Hospitality," will focus on improving hospitality skills of people who deal with tourists on a daily basis. The techniques of how to solve a customer's problems and how to greet guests will be covered.

The event will consist of a two-hour teleconference broadcast live from St. Paul and two hours of local programming at each site. Local programs will deal with area-specific tourism issues.

The teleconference is sponsored in part by the University of Minnesota's Sea Grant program and Tourism Center.

There is a registration fee of \$12, and registration will be handled by local site coordinators.

The sites which will participate in the teleconference are:  
(Aitkin County) Quadna Resort, Hill City; (Beltrami County) Bemidji Technical Institute, Bemidji; (Blue Earth County) Mankato Technical Institute, Mankato; (Carlton County) Cozy Cafe, Carlton, and Public High School, Moose Lake; (Clay County) Moorhead Technical Institute, Moorhead; (Cook County) Public Library, Grand

Marais; (Crow Wing County) Rutger's Resort, Bay Lake;

(Fillmore County) American Legion, Mabel; (Freeborn County)

Holiday Inn, Albert Lea; (Goodhue County) Red Wing Technical

Institute, Red Wing; (Hubbard County) Eagles Club, Park Rapids;

(Kandiyohi County) Willmar Technical Institute, Willmar;

(Pennington County) Best Western Inn, Thief River Falls;

(Pipestone County) Southwest Technical Institute, Pipestone;

(Polk County) Northwest Experiment Station, Crookston; (Ramsey

County) Earle Brown Center, University of Minnesota, St. Paul;

(Redwood County) Church of the Living Lord, Redwood Falls;

(St. Louis County) Quality Inn, Superior, Wisc., and Hibbing

Community College, Hibbing; (Stearns County) St. Cloud Technical

Institute, St. Cloud; (Swift County) KWCM Public TV, Appleton;

(Wadena County) Wadena Technical Institute, Wadena; and (Winona

County) Winona Technical Institute, Winona.

# # #

AEA,CEO,V4,V7,V8,W

NCED2490



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# News and Information

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

May 12, 1988

Source: Jim Lewis  
612/625-7746  
Writer: Evelyn Anderson  
612/624-3770

## **MINNESOTA 4-H FOUNDATION FUNDS 31 PROGRAMS STATEWIDE**

The Minnesota 4-H Foundation recently awarded grants totaling \$25,000 to support 31 local, county, district and state 4-H programs.

The grants, ranging from \$200 to \$2,500, will assist 4-H groups in cities, towns and rural areas. The foundation generates private funds in support of 4-H Youth Development, a program of the Minnesota Extension Service, University of Minnesota, serving more than 137,000 young people in Minnesota.

These ideas garnered the dollars: \$2,500 for 1989 State 4-H Animal Science Extravaganza, in which participants learn about animal science and gain leadership skills; \$1,250 to Riding High a Brown County horse program for physically and mentally handicapped youth; \$2,000 to Celebrate 4-H, an urban 4-H marketing plan;

\$2,000 to High on Myself, a drug prevention curriculum offered at camps for 4-H members and nonmembers in west-central Minnesota; \$2,500 to 4-H Activity Pages, a monthly publication in Anoka and Hennepin Counties; \$775 to Power of Goal Setting and Decision Making, teen retreats in southeastern Minnesota;

\$250 to The Great Ramsey County Zucchini Race, a plant science

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

project; \$1,200 to I Am Responsible, an after-school program for Aitkin County youngsters in grades 3 to 6; \$1,000 to 4-H Home Environment Awareness, a statewide curriculum; \$800 to send a Minnesota judging team to the National 4-H Poultry and Egg Conference; \$1,000 to A Day in the Life of Grant County, a project to learn photography techniques and produce a book;

\$750 to Minnesota 4-H Horse Project to expand knowledge of this project's objectives; \$500 to Isanti County 4-H Arts-In to provide theater arts experience to county youth; \$600 to Family 4-H, a Fillmore County project offering enrollment in 4-H to family units; \$875 to manage local Consumer Choices contests;

\$950 to establish leader training for state and district rabbit and poultry events; \$500 to send the Rice County 4-H Dairy Judging Team, which won state and national competitions, to an international contest in Scotland; \$600 for eight Chisago County day camps for 4-H members and nonmembers; \$450 to You Make the Choice, a project providing Clearwater County youth with information to make responsible decisions;

\$500 to Fillmore County 4-H Arts-In for a noncompetitive performing arts opportunity; \$600 to Moms and Daughters Talking Together, a Ramsey County program for preadolescent girls about human sexuality; \$250 for a Renville County trip to the Boundary Waters Canoe Area; \$700 to expand a Cook County pilot program on program development for 4-H clubs;

\$400 to 4-H Family Camp in Kandiyohi and Renville counties; \$250 to District Rabbit and Poultry Project Days; \$250 to a

Renville County 4-H public relations campaign; \$400 to a Smart Shopping Sense consumer education trip in the Grand Forks area; \$500 to My Health for Better Living, a local program to encourage healthy lifelong living habits;

\$250 to Teens in Distress information displays in Isanti County; \$200 to 4-H Learning that Lasts a Lifetime, a Wilkin County scholarship fund and county 4-H history project; and \$200 to a Faribault County group to distribute stickers with emergency telephone numbers.

In addition to these grants, the foundation awarded a block grant of \$35,000 to support ongoing statewide 4-H programs.

For more information on 4-H, contact your County Extension Office.

# # #

AEA,CEO,V1,V4,Q

N4-H2485

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# News and Information

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

May 12, 1988

Source: Sharon Wright  
612/625-7246  
Writer: Evelyn Anderson  
612/624-3770

## **4-H TEENAGERS TELL 2,700 YOUNGER KIDS ABOUT ALCOHOL USE**

Forty-eight Minnesota young people met recently to evaluate a program in which they helped younger students make decisions about alcohol use.

The teenagers were among more than 200 in 12 counties who made presentations during this school year in elementary schools. They reached 2,700 elementary students, plus 800 high school and college students, parents and other adults.

Purpose of the program, called "Alcohol Decisions," is to use teenagers as peers and role models for younger students. The teenagers told elementary students about their own experiences and opinions, and gave information on the effects of alcohol and about drinking and driving.

The Alcohol Decisions program is sponsored by Minnesota 4-H Youth Development, the Minnesota Department of Public Safety and the Minnesota Safety Council.

The 48 teenagers who attended the evaluation meeting shared their experiences and were recognized for their work. Younger students, they said, questioned them about whether they drank, whether "everybody" in high school uses drugs, and what high

Page 1 of 2

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school is like. The teenagers said their peers reacted to their participation in the program in a variety of ways, ranging from teasing to respect.

Minnesota 4-H Youth Development is the state's largest out-of-school educational program, serving 137,000 young people. It is a program of the Minnesota Extension Service, University of Minnesota. For information, contact your county extension office.

# # #

AEA,CEO,V1,V4,V7,G,Q

N4-H2487

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# News and Information

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May 16, 1988

Educational Development System  
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

## **PLANT NEW UNIVERSITY OF MINNESOTA MUMS FOR FALL COLOR**

The University of Minnesota's Agricultural Experiment Station has introduced three colorful new chrysanthemums for home gardeners: Burnt Copper, Grape Glow and Lemonsota.

All three bloom in early September in the Twin Cities area and should put on a good display in other areas of Minnesota as well, says Deborah Brown, horticulturist with Minnesota Extension Service.

Of the three new introductions, Lemonsota is the most compact, producing an abundance of small, 1-inch pompon-shaped flowers on sturdy foot-tall plants.

Grape Glow has the largest blooms--3-1/2 to 3-3/4 inches across--and grows to a height of 13 to 15 inches in full sun.

Burnt Copper also has large blossoms--about 3 inches wide--but is a taller, narrower plant, reaching a height of about 20 inches.

Brown says, "No Minnesota mum is 100 percent winter hardy, but given good growing conditions and a hefty layer of mulch later each fall, there's a real good chance you will be able to enjoy these new mums for years to come."

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V7,I

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NAGR2497

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# News and Information

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May 16, 1988

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

Source: Larry Simonson  
218/327-4490  
Writer: Pam Barnard  
612/625-4730

## **FESTIVALS AND EVENTS SEMINAR TO BE HELD IN ST. CLOUD**

A Festivals and Events Seminar will be held June 7 and 8 at the Americanna Inn, St. Cloud, Minn, for persons involved in planning and hosting festivals or special events.

Seminar topics will include marketing and market planning; networking; and planning, organizing and managing events.

Barb Koth, Minnesota Extension Service (MES) tourism development specialist; Glenn Kreag, MES tourism/recreation agent; and Colleen Illg, manager, Travel Trade Services, Minnesota Office of Tourism, will begin the seminar with an introduction to basic marketing principles and strategies. Then, a panel of festival managers will discuss what has and hasn't worked for them.

The second session will include case studies of successful festivals, with an introduction to Celebrate Minnesota 1990, a year-long series of events and activities. Charles E. Cook, promotion assistant, North Metro Convention and Tourism Bureau; Leo H. Berg, president, Heritagefest; and Perry Vining, festival consultant for the Big Island Rendezvous and Fort Ridgely Historical Festival, will speak in this session.

Page 1 of 3

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

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In the first day's final session, John Geisler, former executive director of the St. Paul Convention and Visitor Bureau and past president of the International Festival Association, and Carson Watt, with Texas A&M's extension recreation, parks and tourism, will discuss festival networking. After that, seminar participants will have an opportunity to share ideas and discuss the possibility of forming a Minnesota Festivals Association.

The second day will include discussions on planning, organizing and managing festivals. John Sem, MES program leader for Community and Economic Development, will preside, with John Geisler presenting ideas on planning and organizing festivals with the same panel of festival managers.

Participants will then select two of four topics (volunteer coordination, financial management, locating and booking entertainment, and risk management and insurance) to explore in 45-minute, small-group sessions led by various experts.

The final session will include a presentation on the role of festivals and events in Minnesota tourism by Hank Todd, director of tourism, Minnesota Office of Tourism. The program will conclude with Geisler and Larry Simonson, MES tourism specialist, presenting their thoughts on the future of festival planning.

Registration fee (including two lunches, a dinner, refreshments and a manual on festivals and events) is \$65. Advance registration is due on or before June 1. To register, send a check, payable to the University of Minnesota, to Registrar, Extension Special Programs/EDS, 405 Coffey Hall,



University of Minnesota, St. Paul, MN 55108. Seminar participants are encouraged to bring for display promotional material and novelty items from their festivals.

For more information about the program, contact Larry Simonson, North Central Experiment Station, 1861 Highway 169 East, Grand Rapids, MN 55744 (phone 218/327-4490).

The Festivals and Events Seminar is being sponsored by the University of Minnesota's Extension Service, Tourism Center and Small Business Development Center; the U.S. Small Business Administration and the Minnesota Office of Tourism.

# # #

AEA,BSS,CEO,V4,V7,V8,W

NCED2510

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# News and Information

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

May 16, 1988

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

## **ANNUALS CAN BRIGHTEN SHADY AREAS**

Any shaded location in a yard that receives three or four hours of sunlight, or receives dappled light, filtered through the open branches of trees, should be able to support at least some colorful annuals.

Deborah Brown, horticulturist with the University of Minnesota's Extension Service, says impatiens give gardeners the widest array of colors from which to choose. And, they range in size from tiny, compact plants, 5 or 6 inches tall, to loosely shaped varieties that approach knee height. Brown notes, "Impatiens are so popular they've pushed petunias aside as number one in bedding plant sales in the United States."

Other standards that perform quite reliably in shade, according to Brown, are fibrous-rooted (wax) and tuberous-rooted begonias, coleus and caladiums, which grow from cold-tender corms that must be planted outdoors each spring.

She adds, "There are several less common annuals suitable for shady places, as well as a few annuals we typically associate with sunnier gardens that will also do fairly well."

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

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"Mimulus or monkey flower is a short plant with blooms in the yellow, gold and mahogany range of colors. Browallias grow to about a foot in height, producing pretty bell-shaped blossoms in blues or white. The sky blue varieties contrast beautifully with pink and peach-colored impatiens, and seem to thrive under similar conditions. Torenia or wishbone plant has lively little flowers that look like they're partially covered with dark velvet.

"As for the common sunlovers, try dwarf red salvia, small French marigolds and sweet alyssum," Brown advises. "They won't bloom as vigorously as they do when there's six or more hours of direct sun, but they should bloom enough to lend some cheery color to any shady garden."

# # #

V7,1

NAGR2496

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# News and Information

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May 19, 1988

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

Source: Charles Christians  
612/624-0766  
Writer: Mary Kay O'Hearn  
612/625-2728

## **BULLS AVERAGED \$1,741 AT WINDOM SALE**

Sixty-two bulls of nine breeds grossed nearly \$108,000, for an average price of \$1,741, at the Minnesota Beef Cattle Improvement Association's 1988 Tested Bull Sale April 16 at Windom.

This compares with a gross of \$78,763 and an average price of \$1,575 for the 50 bulls sold at a similar sale last year.

Charles J. Christians, Minnesota Extension Service animal scientist who works with the association, reports the top-selling bull, an Angus, was consigned by Eloi Stassen of Marshall and sold to Robert Gee & Family of Cottonwood for \$3,900. The top price paid in 1987, \$2,500, was also for an Angus. The 11 Angus bulls averaged \$1,922 this year.

The next-highest seller, a Limousin, was consigned by Leonard Wulf & Sons, Morris, and sold for \$3,100 to Mark Van Santern, Battle Lake. The average price for all Limousin bulls was \$2,112.50--highest for all breeds.

Eleven Charolais bulls averaged \$1,895, with the two highest-selling bulls going for \$2,650 each. Consignors of these animals were Larry Wakefield, New Richland, and Gramm Farms, Hancock. Purchasers were Ray Pederson, Nimrod, and Tom Lois, Wilmont.

Page 1 of 3

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

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Twenty-three Simmental bulls averaged \$1,650, with two bulls tying for the top price of \$2,650. These bulls were consigned by Eugene Hook & Family of Tracy and Gramm Farms. Purchasers were MLO Partnership, Minneapolis, and David Strand, Starbuck. A Polled Simmental bull owned by Dennis Schentzel, Canby, had the highest test daily gain of 5.04 pounds. It sold for \$2,750 to Ken Wallinga, Windom.

Four Saler bulls averaged \$1,825, with the top-selling bull bringing \$2,000. Consigned by Larry Wakefield, this bull was purchased by Andy Oswald of Joice, Iowa.

Three Gelbvieh bulls averaged \$1,633, with the top seller bringing \$2,000. Consigned by Clair Sauer, Lewiston, MPL Partnership of Minneapolis was the buyer.

Four South Devon bulls sold for an average of \$1,362. Lawrence Maciej, Swanville, sold the top bull in this breed for \$1,800 to James Thompson, Storden.

The Minnesota Beef Cattle Improvement Association 1988 Central Tested Bull Sale Summary follows:

**Minnesota Beef Cattle Improvement Association  
1988 Central Tested Bull Sale Summary**

Breed	No. Bulls	Avg. Price	Top Price	Consignor	Buyer
Angus	11	\$1,922.72	\$3,900	Eloi Stassen Marshall, MN	Robert Gee Cottonwood, MN
Charolais	11	\$1,895.45	\$2,650	Larry Wakefield New Richland, MN	Ray Pederson Nimrod, MN
			\$2,650	Gramm Farms Hancock, MN	Tom Lois Wilmont, MN
Simmental	23	\$1,648.91	\$2,800	Eugene Hook & Family Tracy, MN	MLO Partnership Minneapolis, MN
			\$2,800	Gramm Farms Hancock, MN	David Strand Starbuck, MN
Limousin	4	\$2,112.50	\$3,100	Leonard Wulf & Sons Morris, MN	Mark Van Santen Battle Lake, MN
Salers	4	\$1,825.00	\$2,000	Larry Wakefield New Richland, MN	Andy Oswald Joice, IA
Gelbvieh	3	\$1,633.33	\$2,000	Clair Sauer Lewiston, MN	MPL Partnership Minneapolis, MN
South Devon	4	\$1,362.50	\$1,800	Lawrence Maciej Swanville, MN	James Thompson Storden, MN
Chianina	1	\$ 975.00	\$ 975	Ed Kaehler Eyota, MN	Ray Pederson Nimrod, MN
Marchigiana	1	\$ 950.00	\$ 950	Jim Bryce Cumberland, WI	Ludwig Bros. Corwith, IA
<b>TOTAL</b>	<b>62</b>	<b>\$1,741.12</b>			

# # #

AEA,CEO,V2,A

NAGR2512

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# News and Information

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

May 19, 1988

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

## **TIPS FOR DEALING WITH HONEYSUCKLE WITCHES' BROOM APHID**

It wasn't too long ago that having a honeysuckle in your yard was a good deal. There were no insects or diseases of any consequence to worry about, and all you had to do was prune the plant periodically to keep it happy.

However, that changed in 1981 with the arrival of the honeysuckle witches' broom aphid, says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service.

He says, "The aphid gets its name from the mass of smaller shoots, called a 'witches' broom,' caused by its feeding. This affects only the honeysuckle's appearance at first, but can also stress and possibly kill it over time."

Hahn says that spraying honeysuckle plants with Orthene, a contact and systemic insecticide, will help control the aphid. Chemical treatments beginning around the end of May with four additional applications once every three weeks will help protect a plant's appearance. Three applications at one-month intervals starting June 1 will maintain a plant's health but not necessarily its looks. Insecticides may not be practical for people that have many honeysuckle plants, Hahn adds.

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

He concludes, "Ultimately, the best control will be resistant varieties of honeysuckle. Emerald Mound, Freedom and Sakhalin are resistant varieties that are available at some nurseries."

# # #

V7,I

NAGR2500



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# News and Information

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

May 19, 1988

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

## **PRUNING CAN BOTH PROMOTE, ELIMINATE CANKERS**

Trees and shrubs can become infected with fungi and bacteria that cause cankers, wounds that can disfigure or kill a plant, depending on the pathogen involved.

Cynthia Ash, assistant plant pathology specialist with the Minnesota Extension Service, says cankers are initially localized infections on woody plant parts and young shoots.

"These infections can increase in size during the season or from year to year," she says. "Since many canker diseases infect plants through wounds, wound prevention is of the utmost importance.

"Pruning, among other things, causes wounds. To minimize disease spread, prune only during dry weather and do as much of your pruning as possible in late winter."

Ash advises examining trees and shrubs for wounds and cankers before buying them at a nursery. "Look for areas on the bark that are discolored--either lighter or darker than the surrounding, healthy bark," she says.

"Cankers are often sunken and their margins form a distinct line between healthy and diseased tissues. They can be removed by

pruning infected branches 6 to 8 inches in from the canker margin. Wound dressings are not necessary. Cankers on larger limbs or the trunk may heal over if the tree is vigorous," Ash concludes.

# # #

V7,I

NAGR2495

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# News and Information

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May 23, 1988

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

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

## WAIT UNTIL JUNE TO BEGIN WASP CONTROL

Jeffrey Hahn, entomology educator with Minnesota Extension Service, offers these tips to improve your wasp control efforts this year:

"It's not necessary to control nests from last year," Hahn points out. "All wasps in the nest died from the cold or lack of food at the beginning of last winter. New wasps will not reuse old nests."

Hahn says the wasps one sees first in the spring are mated females that left the nest the previous fall. They are the only survivors from their colonies and will start to construct nests when it is warm enough.

He says, "Peoples' first reaction when they find a wasp building a nest around their home is to spray it right away. But if the queen is killed too early, before she establishes her territory, another queen could move in and start another nest. It is best to wait until June, when the wasp has established herself but the nest is still small, to spray. Other wasps will not attempt to build nests then, even though the queen is killed. Insecticides labelled for wasps, such as resmethrin or Baygon, are effective."

# # #

V7,I

Page 1 of 1

NAGR2501

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# News and Information

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May 26, 1988

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

Source: Cynthia Ash  
612/6250-6290  
Editor: Sam Brungardt  
612/625-6797

## **WOUNDS ON TREES, SHRUBS PROVIDE INFECTION POINTS FOR FUNGI**

Cynthia Ash, assistant plant pathology specialist with the University of Minnesota's Extension Service, says homeowners should take care to prevent wounding of trees and shrubs whenever possible.

"Canker and wood decay fungi need wounds to infect most trees and shrubs," she points out. "Wounds can be caused by the careless use of the lawn mower, weed whip, hail, children playing on or near plants or even careless operation of a motor vehicle. Once established, the fungi can spread to other portions of a plant, disfiguring it and in some cases killing it."

If wounds do occur, Ash says their healing can be improved by keeping the tree or shrub in a vigorous condition. Except in the case of oak (because of oak wilt), wound dressings are not necessary.

# # #

V7,I

NAGR2499

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# News and Information

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May 31, 1988

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

Source: Stan Stevens  
612/625-8770  
Writer: Sam Brungardt  
612/625-6797

## **MEETINGS SET FOR PILOT MARKETING PROGRAM IN SWIFT, POLK COUNTIES**

Farmers in two Minnesota counties--Polk and Swift--will have an opportunity to learn about USDA's Futures and Options Pilot Program at four orientation meetings in June.

Stan Stevens, marketing specialist with the University of Minnesota's Extension Service, says, "Any farmer who intends to participate in the program must attend an orientation meeting."

In Swift and Polk counties, soybean producers and farmers who participate in the 1988 and/or 1989 price support and production adjustment programs for corn or wheat are eligible.

The Futures and Options Pilot Program, Stevens explains, grew out of the 1985 Farm Bill, which mandated that USDA find ways to encourage farmers to experiment with marketing plans that include futures and options trading so they would rely less on federal commodity programs. The pilot program will be for the 1988 and 1989 production years, and Polk and Swift counties are among the 40 counties nationwide in which it will be conducted. The Agricultural Stabilization and Conservation Service (ASCS) is administering the program.

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Stevens says, "Under this pilot program, farmers will be given a set of rules by which they can participate in the futures and options market, and--under some conditions--be reimbursed if they lose money."

The orientation meetings will cover the program's background, goals and objectives and requirements for participation. Stevens also hopes to gather information about potential participants' farming and marketing programs.

Stevens says, "If there's enough interest expressed at the meetings, we intend to offer 10 hours of marketing management training in late June, although this is not a prerequisite for participation in the Futures and Options Pilot Program."

# # #

AEA,CEO,V1,V2,V4,F

NAGR2514

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# News and Information

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June 3, 1988

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

Source: Stanley Stevens  
612/625-8770  
Writer: Jack Sperbeck  
612/625-1794

Broadcasters: Audio from an interview with Stan Stevens will be available until 10:30 a.m. Tuesday, June 7. Call (612) 625-7720.

## **WATCH MARKET TRENDS FOR CORN, SOYBEANS**

Forecasts for continued dry weather have crop prices jumping and farmers guessing about market trends. The overall market direction for corn and soybeans during late June or early July usually follows through for the rest of the summer, says Stanley Stevens, grain marketing specialist with the University of Minnesota's Extension Service.

"May and June are the 'nervous months,' but they don't tell us much about overall market direction," Stevens says. "The market usually moves moderately high during this phase. It takes the room it needs to be volatile to the upside.

"By mid-June to July 1, it's a good bet the weather pattern will carry through into July. Prices will either move higher in response to continued dry weather or erode to levels near loan rates if we get rain."

Stevens suggests some basic marketing strategies for this year's "early weather market."

First, go with the flow of the futures market. Stevens says, "If you own corn or soybeans in the field on June 15, establish in

Page 1 of 2

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your mind what the market trend is. If the market is moving higher, hold off selling. But if the market is dropping, sell fairly aggressively."

Stevens suggests the "eight-day rule" as a guide. "Look at the most recent eight trading days on the futures market. If there's a new low today, that signifies a trend change and you should consider selling. But if the market continues to go up, you want to own the corn or soybeans until a downward trend is signaled.

"In an up market, you probably don't want to hold after Aug. 15. The best pricing opportunities are usually earlier in the year during short crop years. If prices are high on Aug. 15, they're probably close to peaking," he says.

Stevens suggests these strategies for marketing corn and soybeans, but not wheat. He says, "Wheat is a more diversified crop and is grown more broadly. The weather factor isn't as significant."

# # #

AEA,BSS,CEO,V1,V4,F

NAGR2516



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# News and Information

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June 3, 1988

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

Source: Stanley Stevens  
612/625-8770  
Writer: Jack Sperbeck  
612/625-1794

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# # #

AEA,BSS,CEO,V1,V4,F

NAGR2516

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# News and Information

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June 9, 1988

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

Source: Kent Crookston  
612/625-0220  
Wallace W. Nelson  
507/752-7372  
Writer: Sam Brungardt  
612/625-6797

## **LAMBERTON FIELD DAY TO HIGHLIGHT SUSTAINABLE AGRICULTURE RESEARCH**

The emphasis will be on sustainable agriculture research June 29 at the Summer Crops and Soils Field Day at the Southwest Experiment Station, Lamberton.

Agronomic scientist Kent Crookston, who heads the University of Minnesota's working group on sustainable agriculture, says, "We will have tours of research plots, both off and on the station, during which we will share information about some of the sustainable agriculture research we've been doing and during which we hope to get information from farmers who have tried, or would like to try, various methods of reducing inputs in their operations."

The tours, which will begin at 8:30 a.m. and continue until 1 p.m., will deal with three central topics: reduced usage of fertilizers and pesticides on different soil types, corn and soybeans in a sustainable system, and weed control and alternative crops.

Crookston adds, "At 1:15 p.m., a special program around the theme 'Sustainable agriculture in Minnesota--What do we need to

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do?' will begin. The speakers for this part of the field day have been chosen so different perspectives on sustainable agriculture research can be aired.

"Bill Larson, head of the Soil Science Department, will give the perspective of University administration. The national and international perspective will be given by Richard Harwood of Winrock International, Winrock, Ark. Two southwestern Minnesota farmers who have implemented input reduction to varying degrees will give the farmer perspective, and Sen. Dave Frederickson, vice chairman of the Minnesota Senate Agriculture Committee, will give the political perspective."

Earlier this year, the Minnesota Agricultural Experiment Station rented the Koch Farm, a 160-acre property next to the Southwest Experiment Station, for research and extension efforts on sustainable agriculture. Few chemical inputs have been used on the Koch Farm over the years, and a meeting will be held in Redwood Falls after the Lamberton field day to develop a research plan for the property. Crookston says University administrators, scientists and extension personnel; farmers; nonuniversity special interest groups; and nationally known scientists with experience in sustainable agriculture research will take part in the meeting.

More information about the Summer Crops and Soils Field Day at the Southwest Experiment Station is available by calling the Lamberton branch station at (507) 752-7372.

# # #

AEA,BSS,CEO,V1,V2,V4

NAGR2530

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# News and Information

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June 9, 1988

MEC  
6/10/88

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

Source: Dave Noetzel  
612/624-9272  
Writer: Mary Kay O'Hearn  
612/625-2728

## **GRASSHOPPERS MOVING INTO CROPLAND -- SO FAR NO NEED FOR ALARM**

Dry weather is moving grasshoppers into cropland for feeding, particularly in central and northwestern Minnesota. This is because forage for them in the usually wet roadside areas and idle Conservation Reserve Program (CRP) land isn't there.

Dave Noetzel, entomologist with the University of Minnesota's Extension Service, doesn't see the situation as being alarming, but urges farmers to monitor field activity. "In cropland, eight grasshoppers per square yard should be watched, but there must be some evidence of damage beginning before treating the field," he says. "In noncropland, 20 grasshoppers per square yard is the signal."

In the past week, Noetzel has had nearly a dozen grasshopper calls from county extension agents in the central and western part of the state. He says sunflowers, soybeans and sugarbeets are more susceptible to damage from grasshoppers than small grains.

"What we used to see at harvest time, we are now seeing during this dry weather," he says. "Grasshoppers lay eggs in idle land (such as the CRP areas), where eggs are safe from cultivation.

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Without rain, forage is reduced for the nymphs and then they migrate to the crops."

Although biological control of grasshoppers is mentioned, Noetzel says insecticides are more effective and practical. He mentions Furadan or Penncap-M by air and Sevin for ground application on crops for which each is labeled.

Noetzel recently traveled the Staples, Thief River Falls, Hallock, and Crookston-to-Breckenridge area of western Minnesota looking mainly at aphids, but says neither the aphid nor grasshopper situation alarms him at the present time.

In North Dakota (always watched by Minnesota farmers for what might arrive here) Dave Nelson, survey entomologist with the North Dakota State Department of Agriculture, revealed "minimal grasshopper activity" in the southwestern part of the state in a mid-May newsletter from the North Dakota State University Extension Service. He, too, advises chemical application as effective on 90-95 percent of a grasshopper population while the biological means in one Dakota study provided only 49 percent control after three weeks. He also advises checking fields for early indications of grasshopper activity.

# # #

AEA,BSS,CEO,V4

NAGR2529

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# News and Information

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MTC  
9/1/88

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

June 16, 1988

Source: Cynthia Ash  
612/6256290  
Editor: Sam Brungardt  
612/625-6797

## **HOT WEATHER MAY SPEED DECLINE DUE TO VERTICILLIUM WILT**

Verticillium wilt is a fungus disease that usually kills susceptible woody plants over the course of two or more years. However, Verticillium wilt can kill a tree or shrub during a single growing season if the plant is particularly water stressed because of hot, dry weather.

Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service, explains: "The Verticillium wilt fungus plugs the water-conducting system of trees and shrubs. The fungus, which is soil borne, enters the plant through wounds in the roots. As the water-conducting vessels become clogged, the plant wilts. This is followed by a yellowing of the foliage and dieback.

"Plants showing partial wilt during the growing season may wilt further and die the following year. 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 the roots are infected and the plant is severely water stressed, it may wilt and die before the end of the first summer."

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Ash adds that trees and shrubs that show general and severe wilt cannot be saved and should be replaced with nonsusceptible species. Plants 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 Verticillium wilt fungus from the plant, but it does result in the removal of weakened limbs, which may be infected with other disease-causing fungi.

Among the trees and shrubs that are particularly susceptible to Verticillium wilt are ashes (black, blue, European, green and white), azaleas, Japanese barberry, Korean boxwood, catalpas, cherries, Kentucky coffeetree, dogwoods, elms (American, Chinese and slippery), lindens (American and littleleaf), black locust, maples (Amur, Norway, red, silver and sugar), oaks (pin and red), pagodatree, plums, roses, Russian olive, smoketree, sumacs (fragrant, smooth and staghorn) and viburnums.

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# News and Information

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June 16, 1988

MCA  
7/2/88

Educational Development System  
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

## **HOT, DRY JUNE CALLS FOR MODIFICATIONS IN LAWN CARE**

Lawn care in June is very dependent on weather conditions, says Deborah Brown, horticulturist with the Minnesota Extension Service. She says, "If it's hot and dry, you need to rethink what you'd normally do this time of year...unless, of course, you have an automatic sprinkler system with limitless access to water.

"If rainfall is ample, or watering regularly is not a problem, you may choose to fertilize for a second time in early to mid-June. If hot, dry conditions prevail and you're uncertain about your ability to water thoroughly each week, it's much smarter to wait until late August or early September, when temperatures are cool, to apply lawn fertilizer."

Brown says homeowners can spray broadleaved weeds, such as dandelions, plantain and creeping-charlie, as long as temperatures are in the 60s, 70s or very low 80s and the grass is not moisture-stressed. However, she cautions, spray when there's little wind, and no rain forecast for at least 24 hours.

"But," Brown says, "If temperatures are higher or there's been little rain, those same chemicals that normally damage only weeds may very well burn your lawn, particularly in hot areas such as

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south-facing slopes. It's better to wait until fall to deal with weeds, rather than put the lawn in jeopardy by using herbicides once the weather is hot."

June is late for power raking because there's too much risk of heat drying and killing grass that has been damaged in the process. Brown says, "The only reason to power rake would be if the lawn is in desperate condition due to a huge thatch build-up, and it just can't wait. But then you'd need to do additional watering until the lawn knits back together again."

Mowing height may also need adjustment due to the weather. Brown says a lawn may be kept shorter in cooler weather. But, if it's hot and dry, cutting the grass at a height of 2-1/2 to 2-3/4 inches will help shade and protect the crowns, reducing drying and burning.

Brown says, "Sod may be laid successfully in June, but if you're planning to seed the lawn, your chances will be much improved by waiting until the weather cools, anywhere from mid-August for some years to mid-September. It will be easier to keep seeds moist then, and there will be little, if any, competition from germinating weed seeds."

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# News and Information

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June 16, 1988

1002  
3/17/88  
Educational Development System  
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

## **PRUNE SPRING-FLOWERING SHRUBS SOON AFTER THEY FLOWER**

Prune spring-flowering shrubs, such as honeysuckle, lilac, double-flowered plums, bridalwreath spirea and mockorange, as soon as they finish blooming. If you wait too long to prune, you run the risk of removing the tiny buds that will develop into next year's blooms, cautions Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

Brown says, "It won't hurt shrubs to prune them late in the fall, once they're dormant, or in the early spring, before the buds open. However, in either case you will be pruning off the flower buds unless the shrubs are ones that bloom on new wood, such as hydrangeas and weigelas."

Brown says that late-summer pruning--after July 15--is not a good idea, either. She explains, "Every time you prune, you encourage new growth. By midsummer, woody plants should be allowed to slow down for winter."

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NAGR2534

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# News and Information

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June 16, 1988

EDUC  
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1988

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

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

## **PROTECT YOUR GARDEN FROM CABBAGEWORMS**

Last year, you may have noticed pretty, white butterflies in your garden about this time in June. And a little later, you may have noticed caterpillars eating the leaves of your lettuce or cabbage.

"Although you may not have thought the events were related, there is a connection between the two," says Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service. "Lettuce and cabbage can be attacked by the imported cabbageworm, also known as the cabbage butterfly, and the cabbage looper, a drab-colored moth. Together these insects are known as cabbageworms.

"In June, these insects lay eggs which hatch into caterpillars. These caterpillars chew holes in the leaves and can severely damage crops."

Hahn says cabbageworms should be sprayed as soon as they are seen because control is most effective when they are small. As the caterpillars grow larger, they do more damage and controlling them becomes more difficult.

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"The caterpillars can be controlled with insecticides, such as Sevin and Bacillus thuringiensis, which is sold as B.t., Dipel and Thuricide), a bacterium that only affects certain insects and is virtually nontoxic to mammals," Hahn says.

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V7,I

NAGR2539

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# News and Information

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MCC  
1988

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

June 16, 1988

Source: Craig Coon  
612/624-6263  
Writer: Sam Brungardt  
612/625-6797

## **MODIFIED SOYBEAN MEAL AMOUNTS TO MORE THAN CHICKEN FEED**

The finding by University of Minnesota scientists that removing a carbohydrate from soybean meal allows chickens to obtain more energy and nutrients from the meal and other ration ingredients should have far-reaching implications for poultry producers--and consumers.

The finding, made by Craig Coon and Mel Hamre, poultry scientists with the Minnesota Agricultural Experiment Station, allows chickens to utilize feedstuffs more efficiently. The scientists say this should allow farmers to produce eggs, broilers and other poultry meat, including turkeys, for less, which could mean savings for consumers at the supermarket.

Coon says, "This process allows us to recover 25 percent more metabolizable energy from the ration. If the energy and nutrients that we can recover by this process had to be added to soybean meal, it would cost approximately \$52 per ton of meal.

"In many countries, including the United States and Canada, soybean meal is fed to chickens primarily to provide protein. But soybeans also contain oligosaccharides, carbohydrates that have a laxative effect when they are present in a chicken's gut. This

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means that soybean meal and other ration ingredients move through the gut too rapidly for the bird to extract as much energy and nutrients from the feed as it might otherwise be able to do.

"By removing these carbohydrates, we have enabled chickens to get more nutritional value from the ration. The ration containing oligosaccharide-free soybean meal remains in the gut approximately 30 percent longer than a ration from which oligosaccharides have not been removed.

"Increased fiber digestion accounts for the extra energy obtained from the feed. Because food moves through the gut more slowly, the microbes in the ceca, or lower gastrointestinal tract, are able to degrade 50 percent more of the fiber in the ration. And, we think we're getting increased absorption of nutrients from all the other feedstuffs with which the oligosaccharide-free soybean meal is fed."

Coon and Hamre removed the oligosaccharides from the soybean meal in the laboratory, using an alcohol-extraction process. Now, they hope to develop a commercial process by which they can be removed at the mill where soybeans are processed for poultry feed. Another possibility would be for plant breeders to develop soybean varieties that are low or deficient in oligosaccharides and specially suited for poultry rations.

Coon and Hamre's research was supported by the Minnesota Agricultural Experiment Station, the Minnesota Soybean Association and the American Soybean Association.

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AEA,BSS,CEO,V1,V3,V4,F,N,S

NAGR2553

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# News and Information

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June 16, 1987

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

Source: Mike Schmitt  
612/625-1796  
Writer: Jack Sperbeck  
612/625-1794

## HERBICIDES CAN PUT MORE STRESS ON SOYBEANS

Be careful when applying postemergence broadleaf herbicides to drought-stressed soybeans. You want to avoid putting extra stress on soybean plants already stressed by a lack of moisture, says Mike Schmitt, agronomist with the University of Minnesota's Extension Service.

"Read label directions very carefully," Schmitt advises. Label directions give reduced rates for crops under stress. Another option is shallow cultivation--in the upper inch of the soil.

With timely rains, the soybean crop could be very good. "As of mid-June, yield potential of soybeans has not been reduced," Schmitt says, "Soybeans are in the vegetative stage. They're not into the yield-determinant stage of flowering or pod set."

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AEA,BSS,CEO,V1,V2,

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# News and Information

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June 16, 1987

MCL  
7/2/87  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Mike Schmitt  
612/625-1796  
Writer: Jack Sperbeck  
612/625-1794

## **DON'T GIVE UP ON CORN CROP**

With timely rains, we could still have a very good corn crop in Minnesota.

Corn yields won't be seriously reduced unless we go into the tasseling stage--starting in early July--with stressed plants. If there's stress on the plants just before tasseling, yield reductions will translate to 1 to 2 percent a day, says Mike Schmitt, agronomist with the University of Minnesota's Extension Service.

Flex-eared hybrids will do better than fixed-eared hybrids this year. "Hybrids with higher 'flex' ratings do better under stress, while 'fixed' hybrids do better in normal years," Schmitt says.

"Last year we had stressed corn in early July in Pine and Isanti counties, but we ended up with some 160-bushel yields. Hybrids with high flex ratings were part of the reason."

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AEA,BSS,CEO,V1,V2

NAGR2554

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# News and Information

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June 16, 1988

MSC  
1/2/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Patrick Borich  
612/624-2703  
Writer: Deedee Nagy  
612/625-0288

## **CENTER FOR FARM FINANCIAL MANAGEMENT WINS USDA HONOR**

The Minnesota Extension Service's Center for Farm Financial Management has been awarded the U.S. Department of Agriculture's Superior Service Award, one of USDA's highest commendations and the first such award presented to a Minnesota program since 1980.

The Center for Farm Financial Management develops and supports the highly successful FINPACK computer program to aid farmers in farm financial planning and analysis. Richard Hawkins, University of Minnesota extension economist and director of the center, and assistant farm management specialists Robert Craven and Dale Nordquist, will accept the award June 22 in Washington, D.C. Their award is one of fewer than 10 such citations being given nationwide this year.

FINPACK is being used by farm management educators in nearly every state and it is estimated that in Minnesota alone, it has helped one-third of commercial farm families analyze their financial situation and plan for the future. It is actually a package of four computer programs that aids farmers in making important financial and management decisions based on their circumstances.

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Some 200 banks and other lenders across the country have also used FINPACK to help them make decisions related to farm loans. About 1,100 of the nation's extension offices use FINPACK in financial management work with farm families.

Pat Borich, dean and director of the Minnesota Extension Service, credits Hawkins, Craven and Nordquist with making a significant contribution to the strength of rural communities. He says, "Thanks to the efforts and insights of the staff at the Center for Farm Financial Management, extension programs in every state can offer a financial management tool with proven success in good times and bad. By helping to preserve the financial viability of farm families across the nation, these Minnesota extension specialists have made an unparalleled contribution to rural life."

# # #

AEA,BSS,CEO,V1,V2,V4

NEXT2517

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# News and Information

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APC  
KAS/tp  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

June 16, 1988

Source: Rebecca Knittle  
612/624-3279  
Writer: Richard Sherman  
612/625-3154

Broadcasters: Audio from an interview with Rebecca Knittle about this story will be available through 10 a.m. Tuesday by calling 612/625-7720.

## 'HELPERS' EXTEND REACH OF MENTAL HEALTH AGENCIES

The "strong, silent type" has long been an appealing figure; someone who can solve life's problems without the help of others. Unfortunately, some of these types may be "silently" distressed.

Rebecca Knittle, educational project coordinator of the Rural Mental Health Demonstration Project for the University of Minnesota's Extension Service, says rural values like self-reliance can prevent emotionally stressed persons from seeking help. "Mental health care exists in rural areas, but rural people are often hard to reach," she says. For some, seeking "counseling" violates their sense of strength and independence.

Reluctance to seek help plus today's economic problems can add up to trouble. "Rural distress is often the result of the economic dislocations and rapid social changes of the rural crisis," Knittle says.

Depression, withdrawal/denial, substance abuse, spouse abuse, or other difficulties may not receive the attention they deserve, Knittle says. She cites recent rural studies that show high suicide rates among farmers, high suicide attempt rates among adolescents, and other indicators of high stress levels.

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

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The Rural Mental Health Demonstration Project was created in response to this need for better mental health care delivery. It is a cooperative venture between the Department of Human Services, Mental Health Division; the Department of Agriculture; and the Minnesota Extension Service. This project is the first cooperative agreement between the three agencies, Knittle says. Similar projects are now operating in Nebraska, Iowa and South Dakota. Funding comes from a \$300,000 U. S. Department of Health and Human Services grant.

In Minnesota, the project is aimed at the southwestern part of the state, where the indicators of rural crisis are the state's highest. The project is working through community mental health centers in Luverne, Marshall and Willmar.

Existing community networks will receive training to assist the work of mental health professionals, Knittle says. Those who come in contact with distressed persons through their professional roles, such as physicians, clergy, public health nurses, business owners and teachers, will be trained. Rural people who have informal contact with this hard-to-reach population, such as friends and neighbors, also need training, Knittle says. "A distressed rural person may be more willing to talk to a neighbor than a professional," she says, "and such helpers can be the 'front line' in this outreach effort."

Training will include recognition of stress, appropriate referral and basic helping techniques to use when dealing with distressed persons. A teleconference scheduled for the summer of 1989 will be a major part of the training effort.

AEA,BSS,CEO,V4,V8,G,34,42,70

# # #

NHEC2533

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# News and Information

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June 20, 1988

MSD  
6/20/88  
Educational Development System  
Minnesota Extension Service  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108

Source: Joseph Wathesen  
612/624-3224  
Writer: Sam Brungardt  
612/625-6797

Editors: Call Carl Walker (612/624-3708) to obtain a b/w print or 35-mm color transparency to use with this story.

## **MINNESOTA-SOUTH DAKOTA DAIRY FOODS RESEARCH CENTER OPENS**

A ceremony at the University of Minnesota, St. Paul, on June 16 marked the official opening of the Minnesota-South Dakota Dairy Foods Research Center.

The center is one of six opening nationwide to conduct basic research that will support the development of new dairy products and new ways of using dairy products. It will include facilities at both the University of Minnesota and South Dakota State University. The University of Minnesota is nationally known for dairy product research, and South Dakota State University for its dairy technologist training program, according to Ivan Strickler, chairman of the National Dairy Promotion and Research Board, one of the center's sponsors.

Funding for the center's \$1.2 million annual budget will come from several sources, including dairy farmers, through commodity checkoff programs. During each of the next five years, the National Dairy Promotion and Research Board will contribute \$400,000; the Minnesota Dairy Promotion Council, \$200,000; the American Dairy Association of

Page 1 of 1

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

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South Dakota, \$67,373; and the University of Minnesota and South Dakota State University, \$400,000 in matching funds through the universities' Agricultural Experiment Stations.

Additional funding for the center has been pledged by Dairy Quality Control Institute; Dean Foods; General Mills, Inc.; Kraft, Inc.; Land O'Lakes, Inc.; Marigold Foods, Inc.; Miles Laboratories, Inc.; Mid America Dairymen; Nordica International; North Central Cheese Industries; The Pillsbury Company; Pioneer Hi-Bred International, Inc.; Schwans Sales Enterprises and Valley Queen Cheese Factory.

University of Minnesota food scientist Joseph Warthesen, director of the center, said, "The center will focus its research on the application of genetics and biotechnology to the processing, quality and safety of dairy foods. Research projects have already been approved on the development of new starter cultures to accelerate cheese ripening and improve cheese flavors, on the development of new uses for milk components, and on the development of processes to make new and improved dairy products. Other projects will deal with food safety, as it applies to dairy products, and improved chemical and flavor analysis for higher-quality dairy products."

Minnesota is one of the United States' leading dairy states, ranking second in the manufacture of dairy products. Minnesota and South Dakota together have more than 1 million dairy cattle and produce 9 percent of the nation's milk supply.

# # #

AEA,BSS,CEO,V1,V2,V4,D,H,S

NAGR2558

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# News and Information

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June 20, 1988

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

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

## **PLAN NOW TO CONTROL APPLE MAGGOTS**

If you have an apple tree in your yard, it's time to start thinking about how you will protect your apples from apple maggots.

Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service, says, "The apple maggots have been living in the ground since fall as pupae, but starting about July 1, they will begin emerging as adult flies.

"The adults are small, black and white, and resemble houseflies. They do not all come out at the same time, but emerge throughout the summer. Soon after they emerge, they lay eggs in the apples.

"Once maggots hatch from these eggs, they feed and tunnel into the flesh of the fruit. These tunnels turn brown and might eventually rot. Maggot-infested apples have small, pock-like marks, where the eggs were deposited, and sunken, discolored areas, where the maggot tunneled."

Hahn says there are several strategies for controlling apple maggots. A nonchemical method, which uses sticky traps that can be purchased from gardening catalogs, is effective. "Place one

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trap for every 100 apples, or about five traps in an average-size apple tree," Hahn advises.

Other control methods use insecticides. Hahn says diazinon or Sevin are effective chemicals for homeowners to use. He says, "To obtain the best results, insecticides should be applied once every 10 to 14 days starting July 1. An alternative would be to spray two days after a rainfall or a watering of 1/2 inch or more. The flies are more likely to emerge when the ground is wet.

"An alternative would be to follow a spray schedule that uses a single sticky trap to monitor maggot activity. Sprays are applied when two to five apple maggot flies are found on the trap. If you follow this alternative schedule, you will use less insecticide than if you spray on a regular basis but the results may not be the same."

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# News and Information

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June 20, 1988

MSL  
37-10

Educational Development System  
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

## BLACK SPOT CAN KILL ROSES

Black spot, a disease caused by the fungus Diplocarpon rosae, is the bane of rose growers. It not mars the leaves and causes them to die, but may eventually kill the plant.

"Leaves infected with the black spot fungus have somewhat circular, fibrous-looking, black spots 1/16 to 1/2 inch in diameter that are frequently surrounded by a yellow halo," says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service.

Ash explains that black spot is spread by splashing water. Infection occurs after the leaves have been wet for several hours.

She says, "Whenever possible, water at the base of the plant and early in the day. Start a fungicide program just before the leaves become spotted or when you notice the first spot, removing any infected leaves before you spray."

"When the leaves are growing rapidly or during rainy weather, you may need to spray the plants two times a week. Otherwise, spraying at 7- to 10-day intervals is usually enough."

Numerous fungicides available from greenhouses, garden centers

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

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and nurseries are effective against black spot. "Remember, though," Ash cautions, "these fungicides are preventative. They must be applied before the disease occurs. They will not get rid of existing infections."

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V7,I

NAGR2548

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# News and Information

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June 20, 1988

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

Sources: Neal Martin  
612/625-8700  
Jim Linn  
612/624-4995  
Writer: Jack Sperbeck  
612/625-1794

## **USE CAUTION WHEN FEEDING SWEET CLOVER FORAGE**

Sweet clover that has been cut from set aside acres as an emergency forage may give cattle "sweet clover bleeding disease" if it's fed when moldy.

It is only moldy sweet clover forage that is a potential problem, say Neal Martin and Jim Linn, specialists with the University of Minnesota's Extension Service. They explain that sweet clover has high levels of coumarin. If mold occurs during hay or silage making, the coumarin can be converted to dicumarol, an anticoagulant that can cause internal bleeding of cattle that eat the forage.

If you suspect a problem, you can feed sweet clover forage for 10 days, then other forage for three weeks. You can also feed smaller amounts of the sweet clover forage; for example, letting it make up a quarter of the forage portion of the daily ration.

Another precautionary measure is to feed a less valuable animal, such as a dairy steer, all the sweet clover forage it will eat for three weeks. Then have a veterinarian run a test on the animal's blood. If the blood clots normally, there's no problem. But if it doesn't clot after 15 minutes, there's potential for sweet clover bleeding disease.

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

Adding propionic acid at 1.5 percent by weight (15 pounds per ton) to hay will reduce the risk of molds. Use 25 pounds of propionic acid per ton for haylage at or above 50 percent moisture.

# # #

AEA,BSS,CEO,V1,V4,A,D

NAGR2557

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# News and Information

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June 21, 1988

MEC  
1A-207

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

Source: Richard H. Anderson  
507/835-3620  
Editor: Sam Brungardt  
612/625-6797

## **WASECA STATION TO MARK 75TH YEAR WITH OPEN HOUSE, FIELD DAY**

An open house on Sunday, June 26, and a Crops and Soils Field Day on Tuesday, June 28, will mark the 75th anniversary year of the University of Minnesota's Southern Experiment Station. The branch station is just west of Waseca, on U.S. Highway 14.

Superintendent Richard H. Anderson says, "We invite our rural and urban friends, including families, to attend our Diamond Anniversary Open House on June 26. Fun will be the order of the day, with horsedrawn wagon rides, animals to pet, balloons and courtesy ice cream cones."

The open house will run from 1 p.m. until 4 p.m. Twenty four stops will give visitors an opportunity to see the branch station's laboratories, field plots, barns and livestock, including its milking operations and live animal growth and nutrition trials. Antique farm equipment from Farmamerica will be on display, as will modern planting and fertilizing equipment.

Horsedrawn tours of Diamond Anniversary plots will highlight the Crops and Soils Field Day on June 28. At each stop, University of Minnesota professors emeriti will discuss improvements that have evolved in crop and livestock production

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

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over the Southern Experiment Station's 75-year history.

Other tours, which will be conducted continuously from 8:30 a.m. until 3:30 p.m., will deal with weed control, fertilization, and tillage and hybrid management. There will also be tours on swine research at 10:30 a.m. and 1 p.m.; dairy and forage crops research at 10:50 a.m. and 1:20 p.m.; and horticultural crops research at 10:30 a.m. and 1:30 p.m.

Other highlights of the Southern Experiment Station's Crops and Soils Field Day will be clinics on farming by soil type and the drought. Farmers should also find a number of exhibits by organizations, including the Greater Minnesota Corporation, of interest.

# # #

AEA,BSS,CEO,V2,Z4,07,08,10,19,22,40,45,46,52,75,77,86,88 NAGR2559

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# News and Information

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

June 23, 1988

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

## **ANTS BUILD NESTS IN LAWN BUT DON'T KILL GRASS**

It's very common to find ants nesting in a lawn in areas where the grass is thin or nonexistent.

Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service, says, "At first glance, it appears as though the ants have killed the turf in order to make their nest and that they will kill the entire lawn without some kind of action. In reality, however, the ants nest in places where sparse areas already exist and do not harm the grass."

Although it is not necessary for the health of the lawn, Hahn says ant nests can be controlled by using an insecticide, such as diazinon. He says, "If the grass grows more fully in the sparse areas, the ants will move their nest on their own."

# # #

V7,I

NAGR2538



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# News and Information

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

June 23, 1988

Source: Earl Fuller  
612/625-6760  
Writer: Jack Sperbeck  
612/625-1794

## FARMERS MAY BE ABLE TO GET REFUNDS ON 1987 TAXES

Many farmers with "unusable" investment tax credit carry-overs did not take advantage of a special provision in the 1986 Tax Reform Act.

Farmers may use up to \$1,500 of the carry-over in 1987 to get a cash benefit of up to \$750--even if there was no 1987 tax liability to offset. The farmer can still get a refund if the credit exceeds the 1987 taxes owed. What is left cannot be used as an investment tax credit carry-over to future years, says Earl Fuller, economist with the University of Minnesota's Extension Service.

Farmers who wish to use the special provision but have already filed their 1987 tax return may still claim the credit any time within three years by filing an amended return on Form 1040X.

Forms for filing amended returns are available at most Internal Revenue Service offices, or by calling the IRS toll-free at 1-800-424-3676.

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AEA,BSS,CEO,V1,V2

NAGR2561

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# News and Information

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

June 23, 1988

Source: Deborah Brown  
612/62547491  
Editor: Sam Brungardt  
612/625-6797

## HIBISCUS IS LATEST GARDENING RAGE

The hibiscus--kissing cousin to hollyhocks, okra and velvetleaf, a troublesome weed--is the latest gardening rage in Minnesota.

"Although tropical in origin, nurseries and garden centers are promoting hibiscus for summer-long bloom on decks and patios, then as houseplants indoors in winter," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "Since hibiscus are blessed with gorgeous flowers and attractive, glossy green foliage, that's really not a bad idea.

"Hibiscus are easy to grow, but need lots of light to keep blooming. Full sun all day is not too much, though they'll certainly bloom with five or six hours. They are not suitable for shadier gardens, unless you'll be satisfied with nice foliage and only an occasional flower or two."

Brown says hibiscus plants should be watered thoroughly whenever the soil feels dry a little below the surface. She recommends fertilizing every few weeks when the plants are growing actively, using a liquid plant food suitable for flowers, but mixed at one-half the label-recommended strength.

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"Keep an eye open for spider mites, the number one pest of hibiscus, indoors or out," Brown warns. "You can reduce the chances of infestation by cleaning the plants regularly, spraying both the tops and undersides of their leaves with a fairly forceful spray of water from a garden hose, kitchen nozzle or shower head."

# # #

V7,I

NAGR2540

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# News and Information

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

June 23, 1988

Editors, broadcasters: The following are ideas on which you may want to base articles, stories and features.

**Invasion of the boxelder bugs!!!** The drought seems to have stimulated mating behavior among boxelder bugs. University of Minnesota extension entomologist Jeffrey Hahn (612/624-4977) says a number of people have called the Dial-U help line to complain about the bugs turning the sides of their houses into bordellos. Hahn says all this amorous activity has resulted in a large number of red nymphs (juveniles), which won't have much to eat if the drought continues.

**Fund will make affordable housing available to Minnesotans with very low incomes.** A fund established by the 1988 Minnesota Legislature will help very low-income residents obtain affordable, nonprofit-owned and limited-equity cooperative housing. Program requirements and procedures will be developed by the Minnesota Housing Finance Agency (MHFA) in conjunction with an advisory committee, which will represent housing advocates, apartment owners, realtors, lenders, low-income persons, advocates for the homeless, builders and nonprofit developers. For more information, contact the extension home economics agent in your county or the MHFA. Information on the fund is also in the May 16, 1988 issue of "Housing News", published by the Minnesota Association of Homes for the Aging.

**Here's an EGGciting discovery.** University of Minnesota researchers have found that chickens recover 25 percent more metabolizable energy from their feed when oligosaccharides are removed from the soybean meal that goes into the ration. Oligosaccharides are carbohydrates that have a laxative effect. When they are removed from the soybean meal, the ration moves more slowly through the lower gastrointestinal tract, allowing the birds to extract more energy and nutrients. Poultry scientist Craig Coon (612/624-6263) headed the study for the Minnesota Agricultural Experiment Station. You may also want to talk to a local egg, broiler or turkey producers about the impact this finding could have on production costs.

**Vo-ag instructors to discuss their future.** Minnesota's vocational agriculture teachers will gather in Mankato July 18-22 to discuss the future of their profession. Workshops will be held to help the instructors improve their teaching skills and their ability to

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design high-quality educational programs. Contact your local vo-ag instructor for his or her perspective on where the profession is going, or contact extension specialist Curt Norenberg, the workshop director, at (612) 625-1925.

**Helping families manage the stress of Alzheimer's.** Alzheimer's disease affects 3 million Americans and their families. University of Minnesota family social scientist Pauline Boss says the entire family suffers when one of its members has this fatal disease. She and Minneapolis VA Medical Center mental health professionals are conducting a five-year study to learn how families can better deal with the stress of Alzheimer's. Contact Boss at (612) 625-0291 for the research team's conclusions. You may also want to interview local families that have members with Alzheimer's as well as professionals at local adult care and mental health facilities.

**Manufacturers agree to correct defects in high-efficiency gas furnaces.** Arkla Inc. of Shreveport, La., and Preway Industries of Evansville, Ind., have agreed to implement a corrective action program for 60,000 of their high-efficiency gas furnaces, which have been sold nationwide. The companies have received complaints from owners that their new furnaces have corroded internally, which could allow carbon monoxide to pass into the living areas of the home, causing illness or even death. Arkla and Preway have agreed to inspect the furnaces at no cost and repair or replace damaged furnaces on a pro rata basis. For more information on the furnaces affected, contact the home economics extension agent in your county or call the U.S. Consumer Product Safety Commission hotline at (800) 638-2772.

V1,V2,V3,V4,V8

NTIP2563

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# News and Information

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

June 23, 1988

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

## **DETHATCHING LAWN THIS FALL WILL SOLVE PATCH DISEASE PROBLEM**

With the current drought, many Minnesota homeowners may find they have a problem with patch disease, a condition formerly called "Fusarium blight." Patch disease can devastate lawns, particularly sodded ones. Symptoms are patches of yellow, dead and dying grass.

Patch disease is only a problem on lawns that have a thick--over 1/2 inch deep--thatch layer, says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service. "Thick thatch reduces the rooting depth of the grass, leaving it open to drought stress during warm, dry weather," she explains. "When the grass becomes drought stressed, the disease organisms are able to invade and colonize its crowns and roots."

Ash says the best way to avoid patch disease or help a lawn recover from it is to reduce the thatch layer by power raking and aerating in the spring or fall and to encourage good rooting through proper fertilization, watering and maintenance.

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V7,I

NAGR2549

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