
News and Information

M 5/22/89

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

July 3, 1989

Source: Larry Karels
612/625-1229
Writer: Evelyn Anderson
612/624-3770

4-H/DNR FISHING PROGRAM TO INCLUDE AQUATIC ETHICS

Should every fish caught be eaten or mounted or should some be returned to lakes and streams to produce more fish?

A new Twin Cities area aquatic education program plans to help new groups of people join the nearly 3 million Minnesotans who already enjoy fishing, but it will couple environmental ethics awareness with angling skills.

The pilot program targeted at youth, senior citizens, women and minority groups is sponsored by Minnesota 4-H Youth Development and the Minnesota Department of Natural Resources' (DNR) Section of Fisheries.

The two-year program is made possible by a \$350,000 grant from the Legislative Committee on Minnesota Resources. Funds will be used to hire staff, to develop a new curriculum for the target urban audiences and to train volunteers to teach participants conservation ethics and fishing skills.

Combining the educational experience of 4-H, which is part of the University of Minnesota's Extension Service, and the

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management expertise of DNR, the aquatic education program will teach participants about aquatic ecology, fish management, water quality, safety, ethical behavior, angler skills, resource usage and fish identification.

"Our goals are to improve ethical practices and stewardship of resources," said Larry Karels, Minnesota 4-H outdoor educator.

"If you catch a 10-pound walleye that may be a major reproducer, do you eat it or mount it? Or should you take a picture, then release it?

"We want people to be more aware of water resources and of the effect of pollution from acid rain and fertilizer runoff on fish and on the food chain. We also hope people will become more willing to monitor the activities of others when, for example, they see someone taking more than their limit or leaving their trash behind."

Once the pilot is complete, the sponsors will seek ongoing statewide funding from a 1986 federal law that allows states to use up to 10 percent of their returns from the federal excise tax on fishing equipment and boats for aquatic education programs. In Minnesota, Karels said, that could be as much as \$700,000 a year.

If the pilot is successful, its findings will be integrated into ongoing aquatic programs of the DNR, 4-H and other organizations such as Boy Scouts, Girl Scouts, parks and recreation programs, sports clubs and community groups. Networks will be developed among those organizations to recruit and train volunteers and to deliver programs.

People who participate in the program may choose a short-term learning activity or become involved in more structured experiences, such as 4-H's fishing sports program, according to Karels.

For more information, contact Minnesota 4-H Youth Development, 340 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108 (phone 612/625-1229) or the Department of Natural Resources, Section of Fisheries, 500 Lafayette Rd., St. Paul, MN 55155 (612/296-3325).

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AEA,BSS,CEO,V4,V7,L2,R,Y

N4-H3092

News and Information

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Educational Development System
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433 Coffey Hall
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July 3, 1989

Source: Jim Linn
612/624-4995
Writer: Joseph Kurtz
612/625-3168

DAIRY RATION MAY NEED TO BE ADJUSTED DURING HOT WEATHER

Dairy producers may need to feed their cows a little differently during hot weather to keep milk production from slipping.

"The digestion of feed produces heat in the cow's body," says Jim Linn, University of Minnesota extension dairy nutritionist. "When a cow is suffering from heat stress, the first thing she will do is eat less."

Linn says misting cows' heads with cool water or feeding during cooler night hours using fresh feeds will help keep feed intake up. Providing cool water (50 degrees F or colder) will also help keep feed intake and milk production up.

It is important to balance the ration so that cows get the nutrients they need for milk production with a minimum of heat production. "Forages create more heat during digestion than grains," says Linn. "Diets high in concentrate, such as grain, produce less heat and provide more energy for cows than diets high in forage. Shifting to a 55 to 60 percent concentrate/45 to 40

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percent forage diet on a dry matter basis can be beneficial during heat stress periods."

Linn says fat produces a relatively small amount of heat when it is digested. Adding fat to the ration also helps maintain energy intake as feed intake drops. Linn says adding 2 to 3 percent fat to the diet is acceptable for dairy cows. Some of this should be a rumen-bypass fat.

Feeding cows too much protein can increase heat stress, according to Linn. Getting rid of excess protein requires energy and increases body heat production. Properly balancing the diet will prevent this problem. Research has shown that feeding bypass protein sources is also beneficial during heat stress periods.

Linn says giving cows several small feedings per day rather than one or two large ones helps them keep heat production to a minimum.

Heat stress and higher water intake increase the cows' needs for minerals. "Florida research shows potassium, sodium and magnesium levels in the diet should be increased during the summer," says Linn. "Increase potassium levels to 1 to 1.5 percent, sodium to .35 to .5 percent and magnesium to .3 to .35 percent on a dry matter basis. Feeding buffers, such as sodium bicarbonate and magnesium oxide, helps provide these minerals and helps cows adjust to higher-grain rations without milk fat levels dropping."

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Educational Development System
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July 6, 1989

Source: Cynthia Ash
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

BEETLE MAY BRING WILT TO CUCUMBER PATCH

Bacterial wilt may be heading for your cucumber patch via the cucumber beetle. The wilt may also make a stop at the muskmelons, or occasionally squash and pumpkins.

"The bacteria which cause this disease spend the winter in cucumber beetles and are introduced into the water-conducting tissues of the cucumber plant when the beetles feeds," explains Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service. The bacteria multiply in these tissues, clogging them and preventing normal water flow.

Initial symptoms of bacterial wilt are wilting of individual leaves followed by collapse of the vine and eventually the entire plant. The presence of the bacteria in the stems can often be detected by slicing through a wilting stem and looking for a cream-colored bacterial ooze coming from the water-conducting tissues, Ash says.

"Keep cucumber beetles out of the garden with protective barriers, hand picking or insecticides such as Sevin," Ash advises. "Weed control may help reduce the number of overwintering beetles. Infected vines should be removed and destroyed. Prevention is the only control."

I2

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NAGR3095

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News and Information

Educational Development System
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433 Coffey Hall
University of Minnesota
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July 6, 1989

Source: Carlos Pijoan
612/625-1233
Writer: Joseph Kurtz
612/625-3168

BUILDING CHANGES MAY NOT IMPROVE SWINE HEALTH

Pork producers who want to keep their hogs healthy sometimes spend a lot of money making changes to their swine buildings. But it's not always money well spent, according to one University of Minnesota veterinary scientist.

"Changes that modify the environment in a building are costly and usually have only a small impact on disease," says Carlos Pijoan, who conducts research for the Minnesota Agricultural Experiment Station. "Management changes that minimize the spread of disease tend to be less costly and more beneficial to animal health."

Many producers try to provide an environment in swine buildings that is comfortable for humans. But an environment that is comfortable for pigs, particularly weaned pigs, is not necessarily comfortable for humans, Pijoan says.

"It is essential to obtain an accurate reading of the environment before making building changes," he says. "Get specific numbers for daytime-nighttime temperature fluctuations, humidity, air currents and gas concentrations. Most ag engineers and veterinarians can make these measurements. The equipment to do it yourself is not expensive."

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Pijoan says increasing ventilation rates in a building often creates more problems than it solves. Higher rates tend to lower humidity, and this usually increases the dust level. Dust particles carry bacterial toxins that cause problems in hogs.

Pijoan also urges caution in spending money to eliminate cold air drafts. "Pigs in good health can tolerate extreme cold drafts with minimal effects--perhaps an increase in feed intake," he says. "And our research suggests that the impact on diseased pigs may be less than is usually suspected."

Trying to maintain a temperature in a building that is constant 24 hours a day is also not beneficial, according to the Pijoan. He says research indicates pigs actually prefer some temperature fluctuation.

"Our research has not demonstrated any dramatic impact from environment on disease," says Pijoan. "We have failed to impair growth or produce disease in weaned pigs with a variety of environmental stressors, including low ventilation rates, fluctuating temperatures, cold air drafts or their combination."

Pijoan says that on most farms, minimizing the spread of infection will benefit swine health more than modifying buildings. He recommends an all-in, all-out system that completely empties buildings periodically. He also advocates aggressive sanitation, no mixing and sorting, and use of raised crates, self-cleaning floors, solid pen partitions, small pens and small rooms.

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AEA,BSS,CEO,V1,V2,V3,P1

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News and Information

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July 6, 1989

Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

TIMELY GARDENING TIPS FOR JULY

Although it seems like a long time since we were enjoying spring-blooming iris, it's time to think of them again, says Deborah Brown, Minnesota Extension Service horticulturist. From mid-July through early September is the perfect time to plant iris or to divide and replant overgrown, crowded clumps.

Trim out the woody, old centers of the clumps. Then reset the healthy, firm, outer rhizomes, fans of leaves facing outward, so the rhizomes are just covered with soil. Water them regularly until frost.

* * *

Continue to water newly established grass, both seeded and sodded, regardless of the weather. Grass planted last fall should also receive extra attention this summer, even though it may appear in excellent shape, cautions Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

Hold off fertilizing, though, until mid- to late August, when temperatures moderate. Fertilize only if you have an automatic sprinkler system and are absolutely assured of being able to supply a regular supply of moisture to the lawn.

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* * *

Continue to control weeds in the garden. Hoe out small annual weeds as they appear. Renew or add to any mulch layer that has packed down and begun to lose its effectiveness.

Weeds not only compete with garden plants for moisture and nutrients, they also attract and harbor insects that can move onto flowers or vegetables, damaging them and sometimes infecting them with diseases, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

* * *

It's time to sidedress vegetables with 5-10-10 or 10-10-10 if you haven't yet. Most plants need a boost to make it through the rest of the summer, suggests Deborah Brown, horticulturist with the University of Minnesota's Extension Service. Don't fertilize, though, if plants already appear very lush and green but are not very productive when it comes to forming flowers and fruit.

* * *

Fertilize roses until early August, then stop so new growth will not be encouraged late in the season, when roses need to prepare for winter dormancy. Water them thoroughly, right through the growing season, except when there's ample rainfall. Continue to spray or dust regularly to keep diseases and insects in check.

When you cut roses or trim off faded flowers, make the cut right above a five-leaflet leaf, says Deborah Brown, Minnesota Extension Service horticulturist. If you make the cut at a three-leaflet leaf, the new growth that forms probably will not be vigorous enough to produce

another flower at its tip.

* * *

August is a good time to prune birch trees. Wounds should heal rather quickly without a lot of sap flow. More important, pruning in August will not encourage attack by the bronze birch borer, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

The best way to protect birch from the borer is to protect the tree from environmental stress as much as possible. Mulch the root area with 4 to 6 inches of wood chips to help insulate the root system and reduce moisture loss. Birch roots are shallow and quite sensitive to warm soil temperatures.

Be sure to water heavily, out to the dripline (as far as the branches extend) and beyond, every 7 to 10 days in hot, dry weather. Fertilize the tree after the leaves have fallen in late autumn or next spring if the soil is poor, the leaves are pale green or growth is particularly slow.

* * *

Check garden centers and discount, hardware and other stores that sell gardening supplies as the summer wears on. They often put garden tools, sprinklers, garden fertilizers and pesticides on sale while there's still time left this year to use them, says Deborah Brown, Minnesota Extension Service horticulturist.

It's perfectly safe to buy fertilizers and pesticides now for use next year, as long as you store them in a dry place where they won't freeze. You should pick up some real bargains.

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July 6, 1989

Source: Jeffrey D. Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

BRONZE BIRCH BORER DAMAGE MAY BE EVIDENT NOW

Birch trees under attack by the bronze birch borer should be exhibiting symptoms about now, according to Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service.

Branch dieback, due to larvae tunneling and girdling the inner bark of the tree, is usually the first symptom. Raised ridges in the bark due to the girdling and D-shaped exit holes may also be visible to indicate bronze birch borer activity, says Hahn.

"Bronze birch borers only survive in weakened or stressed birch," he says. Birch, native to the forests of northern Minnesota, enjoy cool, shaded conditions. However, when added to the urban environment, birch often are planted in the open with little or no ground cover to protect their shallow roots. The result: a weakened tree that loses vigor. The drought of 1988 has intensified these conditions, making birch very susceptible to attack by the bronze birch borer.

"The best way to protect your birch from this insect is to maintain its health and vigor," says Hahn. "Water once a week if

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there is not sufficient rainfall. Add a layer of mulch around the tree under the canopy to reduce moisture loss and help keep the soil cool. Older trees on poor soil should be fertilized in the spring every two to three years."

Small branches that have died should be pruned in August, cutting the limb 2 feet beyond the point of damage to be certain all bronze birch borer larvae are removed. August is the best month to do this because the adults are not laying eggs and the wound heals better then, during reduced sap flow. If the damage is in a large limb or trunk, the tree is probably too far gone to be helped.

There is no effective insecticidal control this late in the season. Professional applicators could have applied bendiocarb (Turcam) starting the end of May. These applications will not protect the birch if it remains unhealthy, Hahn concludes.

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I2,V7,V8

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News and Information

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Source: Cynthia Ash
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Editor: Mary Kay O'Hearn
612/625-2728

THIS IS TIME WHEN TOMATO DISORDERS MAY SHOW UP

Nonparasitic disorders of tomatoes are plant responses to abnormal growth conditions. These conditions cannot be corrected or prevented by chemical application, observes Cynthia Ash, assistant plant pathologist with the Minnesota Extension Service.

One of the most common disorders is blossom-end rot. It shows up about the time the first few fruits are maturing. One can identify it, Ash says, by a water-soaked spot that appears at the blossom end of the fruit and enlarges to become brown and leathery. The discolored tissues shrink to form a flat surface that is sometimes colonized by fungi that live on dead and decaying organic matter.

Blossom-end rot can be reduced by maintaining a uniform supply of moisture through irrigation and mulches, by avoiding root damage during cultivation and by incorporating fertilizers high in superphosphates and low in nitrogen before planting.

Sunscald is another common disorder, Ash says. Initially, a light-colored spot appears on the side of the fruit facing the sun, followed by blistering and then formation of a large, flat,

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gray-to-white spot with a dry, paper-like surface. Sunscald happens when tomato plants drop leaves from disease or other causes and the fruits are suddenly exposed to the sun. Use of a disease control program will help prevent foliage loss.

"Cracks of varying depths radiating from or encircling the stem end of the tomato fruit are called growth cracks," Ash describes. These result from extremely rapid fruit growth brought on by abundant rain and high temperatures, especially when such weather conditions follow drought. When selecting tomato varieties, ask about susceptibility to cracking. Variety descriptions often include this information. Controls as mentioned for blossom-end rot may help prevent growth cracks.

Catface is a puckering or distortion of the tomato fruits resulting from a disturbance of the flower. Its causes include extreme heat, drought, low temperature and contact with 2,4-D-type herbicides. "Keep herbicides and mulches treated with herbicides out of the garden," Ash says. Varieties vary in their susceptibility to catface, so switch varieties if catface is a continual problem.

Always watch out for 2,4-D-type weedkillers. Their vapor or direct spray drift can cause serious damage to tomatoes. Older leaves are excessively pointed, down-curved or rolled with prominent, light-colored veins; young leaves do not fully expand and are narrow and elongated with parallel veins; stems may split and the fruits are malformed-catfaced. Plants may recover from light damage but not from severe damage, Ash says.

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Source: Jim Linn
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Writer: Joseph Kurtz
612/625-3168

KEEP DAIRY REPLACEMENT HEIFERS GAINING DURING SUMMER

Dairy producers should feed replacement heifers well enough during the summer to keep them growing and gaining. Maturing summer pastures may not be adequate for this, according to Jim Linn, extension dairy specialist at the University of Minnesota.

"Bred heifers and those of breeding age are a particular concern," says Linn. "These heifers should be gaining 1.5 to 1.8 pounds per head per day. It may take an extra 2 to 3 pounds of grain to provide the energy necessary for this gain."

He recommends keeping a close eye on heifers to make sure they continue in good flesh and are gaining. If pastures are short, heifers may need supplemental forage as well as grain and/or protein.

As summer progresses, pastures mature and dry out, lowering their quality, Linn points out. This tends to increase the need for supplemental feeding.

Linn says the amounts of supplemental feeds heifers need vary considerably with the amount and quality of forage they are

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getting and the animals' size and condition. "Bred heifers should get a diet containing 61 percent total digestible nutrients and 12 percent protein," he says. "Heifers that will calve in the fall need to grow enough so that they will reach their full milk production potential after calving."

Heifers need access to trace-mineralized salt to maintain sodium balance during hot weather, he adds.

Linn also emphasizes the need for a good supply of fresh, clean water. "Don't force heifers to drink from stagnant ponds or slow-moving streams," he cautions.

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AEA,BSS,CEO,V1,V2,D

NAGR3105

News and Information

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Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

STATE HORTICULTURAL SOCIETY CONFERENCE TO BE AT MORRIS

The Minnesota State Horticultural Society will hold its educational conference Aug. 11-13 on the campus of the University of Minnesota, Morris. The program is aimed at meeting the needs of amateur gardening enthusiasts statewide, and one does not have to be a member of the society to attend.

Highlights will include a heritage tree workshop, in which participants will learn to identify and measure trees of historical significance; tours of the area, including test plots at the University's West Central Experiment Station; a picnic; a banquet; and a host of classes tailor-made for Minnesota gardeners.

Inexpensive housing is available at University dorms. A limited number of apartment units are also available.

For more information, call the Minnesota State Horticultural Society at (612) 624-7752.

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I2,V7,V8

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NAGR3097

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July 17, 1989

Source: Jeff Reneau
612/624-4995
Writer: Joseph Kurtz
612/625-3168

HEAT STRESS ON DRY DAIRY COWS CAUSES VARIED PROBLEMS

Dairy producers should protect their dry cows from heat stress during hot weather. Heat stress on dry cows can cause a variety of problems, according to Jeff Reneau, extension dairy scientist at the University of Minnesota.

"Heat stressed dry cows have smaller calves and smaller placentas," says Reneau. "They also have more calving problems, retained placentas and metritis. In addition, they produce less milk in the next lactation and have poorer reproductive performance."

Reneau says Florida researchers have documented these problems, but the problems also occur on northern dairy farms in July and August.

"Dry cows should not be crowded into a stuffy barn or pole shed with little relief from the heat," says Reneau. "Provide pasture and a clean, dry, shaded rest area."

Reneau says dry cows will eat less during hot weather, so it's important to watch their dry matter intake. "Make sure that despite the drop in dry matter intake, the cows get the right amount of nutrients to maintain good health," he concludes.

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AEA,BSS,CEO,V1,V2,D .

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Source: Gerry Wagner
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Writer: Joseph Kurtz
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UNIVERSITY OF MINNESOTA SCHEDULES RACE HORSE CLINIC

Horse racing as a business is the subject of a University of Minnesota program to be presented twice in August at Shakopee.

The program, called the Minnesota Race Horse Clinic, will take place at Canterbury Inn and the Canterbury Downs backstretch.

It will be held August 5, and then repeated on August 12.

Registration on both dates will begin at 6:30 a.m. at Canterbury Inn. The program will run from 7 a.m. to 12:15 p.m.

The Minnesota Race Horse Clinic is designed for owners, breeders, trainers, investors and others currently in the race horse business or interested in getting into the business.

The clinic will cover such aspects of owning a race horse as risk, investment, operating cost and returns. It will also cover types of race horse ownership, taxes, records, relationships between owners and trainers, basic licensing and functions of the track.

There will be an opportunity to visit with trainers and track personnel and to observe training and other activity.

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Presenting the program will be representatives of the sponsoring organizations--the university's Department of Animal Science and Minnesota Extension Service, the Minnesota Racing Commission, Canterbury Downs and the Minnesota Thoroughbred Association.

There is no charge to attend the clinic. However, it is necessary to register as space may be limited and persons pre-registered will be admitted first and have choice of dates.

Registration and program information is available from Extension Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108, telephone (612) 625-1214 or (800) 367-5363.

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AEA,BSS,CEO,V1,V4,V7,V8,K

NAGR3108

News and Information

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433 Coffey Hall
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July 17, 1989

Source: Jeff Reneau
612/624-4995
Writer: Joseph Kurtz
612/625-3168

DAIRY COW HEAT DETECTION TOUGHER IN HOT WEATHER

Doing a good job of detecting cows in heat (estrus) is important to the success of a dairy operation. But heat detection is more difficult during hot weather, notes an extension dairy scientist at the University of Minnesota.

"Producers can do a better job of heat detection during the summer by watching for heat during the coolest part of the day," says Jeff Reneau. "It's also important to be aware of and watch for all heat signs."

Reneau says the clear sign that a cow is in heat is that she will stand to be mounted by another cow. Secondary behavioral signs include chin resting, following, licking, bunting and bellowing.

During hot weather, the total amount of activity will be the same, according to Reneau. However, producers should expect to see less mounting activity and more of the secondary behavioral signs.

"Research has shown that as many as 30 percent of cows that were known to be in heat physiologically did not show standing or mounting behavior during hot, humid weather," says Reneau.

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AEA,BSS,CEO,V1,D

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NAGR3107

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News and Information

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Source: Juanita Reed-Boniface
612/625-9231
Writer: Evelyn Anderson
612/624-3770

Editors, news directors: For more information on the winners from your area, contact the 4-H agent at your county's office of the Minnesota Extension Service. Please note that there are four groups of award winners, each listed by county.

MINNESOTA 4-H RECOGNIZES 62 FOR ACHIEVEMENTS

The University of Minnesota's 4-H Youth Development program has recognized 62 4-H members and alumni from throughout the state for their accomplishments. The awards were announced in June at the Minnesota 4-H Junior Leadership Conference.

Award recipients, their hometowns and project areas, are (by county): **Becker**--Kimberley Maninga, Ponsford, leadership; **Brown**--Susan Lochner, Sleepy Eye, achievement; Jill Marti, Sleepy Eye, dairy; **Chippewa**--Karen Ostlie, Montevideo, conservation; **Clearwater**--Tammie Friborg, Bagley, dairy goat; **Cottonwood**--Mark Christianson, Windom, aerospace; **Dakota**--Natasha Justis, Burnsville, horticulture; Heidi Wagner, Hastings, health; **Dodge**--Julie Bennerotte, West Concord, creative arts; **Faribault**--David Hacklander, Blue Earth, poultry; **Fillmore**--Suzette Pease, Chatfield, leadership; **Goodhue**--Edmund Gillis, Welch, food and nutrition; Brad Anderson, Welch, petroleum power; Johanna Nesseth,

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Nerstrand, public speaking; **Grant**--Justine Olson, Elbow Lake, food conservation, preservation and safety; **Lyon**--Craig Aamodt, Cottonwood, plant and soil science; Sheri Meulebroeck, Marshall, needle arts; **Marshall**--Garth Kruger, Warren, entomology; **Nobles**--Andrea Ruesch, Worthington, citizenship; **Norman**--Kristi Neprud, Skelly, swine; Robert Sip, Ada, beef; Cheryl Jacobson, Ada, achievement; **Olmsted**--Amy Schoenfelder, Rochester, bread; **Otter Tail**--Becky Gudmundson, Fergus Falls, child development; **Pine**--Sarah Anderson, Pine City, bicycle; **Pipestone**--Craig Raatz, Pipestone, agriculture; **Polk**--Kari Strickler, Euclid, livestock; Karen Capistran, Crookston, forestry; Suzie Gulsvig, Crookston, consumer education; **Renville**--Janelle Roker, Bird Island, veterinary science; **Rice**--Kami Flom, Nerstrand, leadership; **St. Louis**--Kevin Bovitz, Hibbing, electric; Kelly Kuznik, Hibbing, home environment; Daniel Thom, Cook, wildlife and fisheries; **Sibley**--Terry Battcher, Gaylord, rabbit; Lynette Eibs, Henderson, leadership; Dalynn Morton, Winthrop, clothing; **Swift**--Cory Mitteness, Benson, gardening; **Todd**--Laura Golnitz, Long Prairie, sheep; Beth Watland, Browerville, horse; **Wadena**--Rita Schluttner, Verndale, dog; Loren Horsager, Verndale, citizenship; **Wilkin**--Melissa Steiner, Foxhome, dairy foods; Karey Torkelson, Foxhome, photography; and **Wright**--Mark Otto, Delano, safety; Rochelle Barberg, Cokato, wood science.

In addition, four 4-H alumni received statewide recognition for using 4-H philosophy successfully in their careers: **Dakota**--Donelle Heilman, Eagan; **McLeod**--Muriel Hoernemann, Norwood;

Meeker--Dorothy Stenberg, Litchfield; and **Olmsted**--Mary Ann Bucher, Byron.

Six 4-H members won trips to the National 4-H Conference, which will be next April in Washington, D.C. Their trips are sponsored by the Minnesota Bankers Association. They are: **Benton**--Cindy Bauerly, Sauk Rapids; **Grant**--Janelle Olson, Elbow Lake; **Nobles**--Jeff Weness, Worthington; **Otter Tail**--Melanie Rotz, Clitherall; **Pennington**--Heather Olson, Thief River Falls; and **Washington**--Shelley Monitor, Hugo.

Six 4-H'ers won scholarships for their accomplishments: **Brown**--Jill Marti, Sleepy Eye, \$1,000 DeKalb Genetics Corp. scholarship for agricultural careers; **Dakota**--Heidi Wagner, Hastings, \$1,000 Gertrude L. Warren Scholarship; **Dodge**--Tammy Lorch, Kasson, \$1,000 scholarship from Guide Dogs for the Blind for raising and training guide dogs; **Isanti**--Lanette Shaffer, Cambridge, \$400 Ball Corp. scholarship for food and nutrition; **Martin**--Melissa Hamman, Fairmont, \$1,000 Edwin T. Meredith Foundation scholarship; and **Mower**--Scott Koch, Rose Creek, \$1,000 agricultural awareness scholarship from E. I. DuPont de Nemours & Co.

4-H Youth Development is part of the University of Minnesota's Extension Service. It is Minnesota's largest out-of-school educational program, serving 209,000 young people.

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AEA,BSS,CEO,V1M,V2M,V4,V8,YM

N4-H3111

News and Information

100
11-17
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

July 20, 1989

Source: Jeffrey D. Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

WEEVILS ARE MYSTERIOUSLY ATTRACTED TO INSIDE OF HOMES

Weevils do not bite, damage property or reproduce indoors, but they can be a nuisance.

"Weevils are small, often dark-colored, hard-shelled insects whose mouthparts are elongated into a short snout," describes Jeffrey Hahn, entomology educator with the University of Minnesota's Extension Service.

Hahn says weevils are mysteriously attracted to the interior of houses; there's no apparent reason why they come inside, entering through foundation cracks, loose-fitting screens and doors, and under siding. Once inside, they crawl on ceilings and walls and turn up around sinks and bathtubs, attracted by the moisture.

Fortunately, weevils are a temporary problem. Hahn says caulking cracks and using tight-fitting screens and doors will minimize the number of weevils that get inside. "An insecticide, such as chlorpyrifos (Dursban) or diazinon, can be sprayed around the foundation and other places where they are entering, although the effect is temporary," he says. "Any weevils that do get inside can be controlled by physically removing them--with a vacuum cleaner, for instance."

I4,V7,V8

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NHEC3099

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News and Information

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

July 20, 1989

Source: Cynthia Ash
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

USE FUNGICIDES IN GARDEN, YARD AS LAST RESORT

Problems in the garden and landscape can be treated in many ways. The easiest and usually least expensive is to wait to see whether a problem goes away on its own. The second line of attack involves cultural practices, such as pruning, fertilizing, watering and washing the foliage.

If a problem persists, chemicals are perceived to be the ultimate cure, says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service. "However," she says, "where diseases are involved, chemicals are seldom warranted in the home garden and landscape. That's because they are not designed to cure existing infections. Most fungicides are preventatives, which means they protect healthy foliage for a short while and must be applied before the infection occurs."

The other important thing to know is that fungicides must be used within a year or two after the date of manufacture to be most effective. "Do not store fungicides where they will freeze or be exposed to high temperatures," Ash warns. Freezing causes liquid chemicals to separate, resulting in a burning of the foliage when the chemical is applied.

I2

Page 1 of 1

NAGR3100

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News and Information

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

July 24, 1989

Source: Lee Johnston
612/589-1711
Writer: Joseph Kurtz
612/625-3168

PROFITABILITY TO BE THEME OF 4-STATE SWINE CONFERENCE

Making pork production more profitable will be the theme of a four-state conference for swine producers scheduled for Sept. 14 and 15 in South Sioux City, Neb.

The conference is entitled "Techniques for Improving Profitability Seminars" or TIPS. It will be at the Marina Inn in South Sioux City.

The conference is sponsored by the extension services of Minnesota, Iowa, Nebraska and South Dakota. Producers in each of these states can obtain registration forms for the conference from their county extension offices. Enrollment will be limited to 150, and the deadline for returning registration forms is Sept. 8. The registration fee is \$45 per person.

Conference topics include breeding management, genetics, using financial and biological records to make financial decisions, employee relations, herd health, structural changes in the pork industry and adjusting swine diets to seasonal changes.

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Speakers will include a practicing veterinarian, two pork producers, and extension and research personnel from the University of Minnesota, Iowa State University, the University of Nebraska and South Dakota State University.

The conference will begin at 1 p.m. Sept. 14 and will run until 3:30 p.m. Sept. 15.

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AEA,BSS,CEO,V1,V2,P1

NAGR3112

News and Information

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

July 27, 1989

Source: Robert Stucker
612/625-2738

Writer: Sam Brungardt
612/625-6797

GERMPLASM MAY SPEED SEARCH FOR BETTER WILD RICE VARIETIES

The Minnesota Agricultural Experiment Station has released a wildrice germplasm population that could lead to higher yields.

Robert Stucker, the University of Minnesota scientist who heads the Experiment Station's wild rice breeding program, expects the Pistillate M3 germplasm to be of value in wild rice hybridization programs.

"Pistillate M3 should be of interest to plant breeders, rather than growers," he says. "It is not intended for use as a commercial variety and should not be used as such without the Experiment Station's approval."

Pistillate M3 was developed by selecting for pistillate plant type in the variety M3. According to Stucker, Pistillate M3 should be similar to M3 in performance characteristics except that half of the plants will be pistillate (their panicles will produce only female florets) and the other half will be normal, monoecious plants (which will produce panicles bearing both female and male

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florets). If grown in isolation from other wild rice varieties, seed produced by the pistillate plants will consistently produce a 1-to-1 ratio of pistillate to normal plants.

Stucker says the pistillate plant characteristic segregates similarly to a genetic male sterile system, and the pistillate plants are male sterile in that they do not produce any male florets.

"This trait offers intriguing possibilities for increased yield," he says, "because of the increased number of female florets that the pistillate plants have relative to normal plants."

Pistillate M3 is medium in height, medium to late in maturity and should produce high yields. Since the pistillate plants produce no male florets, the yield potential of the population should be greater than that of M3 in environments conducive to high yields.

Seed of Pistillate M3 will be available in quantities up to 1 pound after Sept. 1. Scientists and plant breeders who desire seed should contact Harold J. Schumer at the North Central Experiment Station, 1861 Highway 169 East, Grand Rapids, MN 55744.

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AEA,BSS,CEO,F1

NEXP3116

News and Information

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

July 27, 1989

Source: Laura McCann
612/625-5747
Luther Waters
612/624-4217
Writer: Sam Brungardt
612/625-6797

NEWSLETTER COVERS ALTERNATIVE FARM, FORESTRY ENTERPRISES

If you're interested in alternative farm and forestry enterprises you may want to get "BioOptions," a quarterly newsletter published by the University of Minnesota's Center for Alternative Plant and Animal Products.

Luther Waters, director of the Center, says the newsletter was developed in response to requests for information on the Center's activities and publications. He says, "The newsletter, like the Center, is designed to facilitate interaction among people interested in alternative enterprises, such as producers, scientists, extension agents and those in agribusiness."

The first (Summer 1989) issue featured articles on Minnesota lupine research and a discussion of barriers to developing enterprises. Other regular features included a calendar of events, a listing of new publications and a news briefs section.

Page 1 of 2

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The subscription rate is \$5 a year for U.S. and Canadian subscribers; \$8 a year in other countries. Checks should be made payable to the University of Minnesota and sent to the Center for Alternative Plant and Animal Products, 305 Alderman hall, University of Minnesota, St. Paul, MN 55108.

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AEA,BSS,CEO,A1,F1,H4,L1,L3,V1,V2

NEXP3117

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News and Information

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

July 31, 1989

Source: Brian Larson
612/624-4995
Writer: Joseph Kurtz
612/625-3168

AMMONIATING WHEAT STRAW BOOSTS ITS FEEDING VALUE

Applying anhydrous ammonia dramatically improves the feeding value of wheat straw and other crop residues, according to a University of Minnesota extension beef specialist.

Brian Larson says ammoniated wheat straw is equivalent to medium quality prairie hay in feeding value. Thus, ammoniated straw may be a good alternative feed for beef producers who are short on pasture or hay for their cows.

"Ammoniation increases the digestibility of the fiber in straw," says Larson. "This increases the energy available to cows by eight to 15 percent. In addition, ammoniation increases the crude protein content of the straw by 4-5 percent, to roughly double the normal level."

Larson says University of Nebraska research on gestating cows showed ammoniating straw increased daily intake per cow from 19.3 pounds to 23 pounds. The cows getting the ammoniated straw gained .88 pounds per day, compared with .26 pounds per day for the cows

getting regular straw.

Although toxicity is a concern with ammoniated forages, it is usually associated with crops high in simple sugars. Wheat straw and other crop residues usually lack these sugars. Thus, there is little, if any, potential for toxin production, says Larson.

Most of the crude protein in ammoniated straw is non-protein nitrogen. Larson says feeding trials have shown that cows getting ammoniated wheat straw respond to supplementation with natural protein. Grain supplementation has also been beneficial.

"It appears that 3-5 pounds of grain or .3 to .5 pounds of crude protein from an "all natural" source, plus free choice ammoniated wheat straw and minerals, should be adequate for wintering dry, mature cows," says Larson. "However, as with any feed, adjustments are necessary for cow size, age, milking ability and body condition."

Information on applying anhydrous ammonia to large round bales is available from county extension agents in Minnesota.

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AEA,BSS,CEO,V1,V2,A2

NAGR3117

News and Information

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

August 3, 1989

Source: Carlos Pijoan
612/625-1233
Writer: Joseph Kurtz
612/625-3168

TWO FORMS OF ATROPHIC RHINITIS AFFECT SWINE

Most pork producers are concerned when they find hogs with "twisted noses" in their herds, because this condition signals the presence of atrophic rhinitis. However, the most common form of this widespread disease has little economic impact on a herd, according to a University of Minnesota veterinary scientist.

"Atrophic rhinitis is really two diseases," says Carlos Pijoan. "Each disease is caused by a different bacterial organism. However, both diseases produce the same clinical signs in hogs."

Pijoan says the most common form of atrophic rhinitis is caused by bacteria called Bordetella bronchiseptica. Scientists refer to this form as regressive atrophic rhinitis. "Regressive AR is widespread, mild, and has little or no effect on animal performance," says Pijoan.

Scientists have found that some strains of another organism, Pasteurella multocida, can cause a form of atrophic rhinitis that is outwardly similar to regressive AR. They refer to this less

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prevalent, but more severe form as progressive AR. "Progressive AR definitely hurts the growth rate of hogs, and thus cuts profits," says Pijoan.

The Minnesota scientist says producers who find hogs with twisted noses need to find out which form of atrophic rhinitis is causing this condition. This usually means consulting a veterinarian.

For herds with regressive AR, control measures are usually not worthwhile, according to Pijoan. Exceptions might be in operations selling breeding stock or feeder pigs, since the presence of twisted noses could hurt sales. For herds with progressive AR, control measures are necessary to minimize financial losses.

Pijoan says the best strategy for controlling atrophic rhinitis is to combine management changes with vaccination. He recommends management changes that minimize contact among animals, such as using an all-in, all-out system in buildings, putting solid wall partitions between pens, reducing pen size to less than 20 pigs per pen, reducing room size to less than 160 pigs per room, and not mixing pigs from different groups.

Protecting pigs from cold air drafts and unexpected temperature changes may also be helpful.

Modern vaccines are effective in controlling atrophic rhinitis, but work best in combination with the suggested management changes, says Pijoan. "It is unrealistic to expect

that a vaccine will control disease in an open herd, continuous-flow operation with large pens and constant mixing and sorting," he points out.

Pijoan recommends vaccinating sows as well as pigs. The best age for vaccinating pigs depends on several factors that vary from farm to farm, and he suggests relying on a veterinarian to make that decision.

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AEA,BSS,CEO,V1,V2,P1

NAGR3120

A-7p

News and Information

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

August 7, 1989

Source: Dennis Gibson
612/269-2127
R. M. Jordan
612/624-6784
Writer: Joseph Kurtz
612/625-3168

Editor: Two black-and-white photos are available for use with this story. To obtain them, call Joseph Kurtz at (612) 625-3168.

DEER REPLACE CATTLE IN MINNESOTA FARMER'S FEEDLOT

Chippewa County, Minn., extension agent Roger Larson says Dennis Gibson "is willing to try new things."

One of the new things Gibson is trying is deerfarming.

Gibson, 48, farms 1,500 acres of flat, fertile land northeast of Montevideo. His farmstead contains large, fenced lots with feedbunks and concrete floors, which Gibson once used to feed beef cattle. In fact, he says, "I grew up feeding cattle. I spent half my life creating cattle facilities."

However, by 1981 Gibson's cattle-feeding enterprise was producing "devastating" financial losses, so he got out of the business. His lots sat empty, a fact that made him uncomfortable.

Gibson began to look for ways to utilize his facilities. His search sometimes took him to the Chippewa County Extension Office to bounce ideas off Larson. In December 1986, it also drew him to the

ADAPT 100 conference on agricultural diversification in Des Moines.

"I didn't go to the session on deer at the conference," Gibson recalls. "But when I got home, I read the information on Joseph von Kerckerink's deerfarming operation in New York."

Gibson decided to visit von Kerckerink's farm "to see if it was real." That visit and further research convinced him that deer prices, then \$200-\$400 per doe, were as low as they likely would be for years. In the spring of 1987, he decided to get into the business.

Gibson purchased 100 fallow deer from a game dealer who had contacts with game farms in the southern United States. Fallow deer originated in Asia and have been raised on farms for 2,500 years. They are slightly smaller than the white-tailed deer that are native to Minnesota.

Gibson's first year with the deer was not without trials. The animals were undernourished when he got them, and the first year death loss was about 20 percent. Also, although the does were bred when he got them, only 30 produced fawns.

Last year was better; Gibson had 80 does left and got 80 fawns. This year, his doe herd includes those he purchased plus about 20 from his first crop of fawns. Fawns are born in the summer, and Gibson is hoping for 100 fawns this year. However, he won't be able to get an accurate count of how many fawns there are until late summer or early fall.

Although Gibson hasn't yet realized a big income from his deer, he feels they have been a good investment. In 1987, he paid \$300 apiece for 100 head of breeding stock, or \$30,000 total. He put another

\$15,000 into facilities and fencing for 40 acres of lots and pastures. Today, deer like those in his herd sell for \$600 to \$1,000 apiece.

R. M. Jordan, University of Minnesota extension animal scientist, is planning a symposium at the university Sept. 16 on deerfarming. Jordan has authored an extension publication on the topic and provides information to persons interested in this alternative enterprise. He and Gibson also attended the annual meeting of the North American Deer Farmers Association last April in Texas and visited some deer farms there.

Jordan says the potential for deerfarming in the United States is illustrated by its success in New Zealand. "They have 700,000 deer on farms there," he says, "and are increasing at the rate of 30 percent per year. In the U.S., there isn't enough product available to establish a market, but we take 25 percent of the venison New Zealand exports. We haven't scratched the surface on this as a farm enterprise."

Gibson sees an expanding market for venison in the long term. Venison contains only 3 to 4 percent fat, compared with 35 percent for high-quality beef, and Americans are trying to reduce their intake of fat. In the short term, the price of deer should continue to increase because of the demand for breeding stock.

"I'm not positive it (deerfarming) will work," says Gibson, "but the future looks bright."

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AEA,BSS,CEO,L3,V1,V2,V4,06,12,37,92,68,34,63,81

NAGR3135

News and Information

Minnesota
August 7, 1989

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

August 7, 1989

Source: Jeffrey Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

AUGUST IS MIGRATION TIME FOR GREENBUGS

Most insect pests seen in Minnesota are hardy enough to survive our cold winters. The greenbug, a pest of established lawns, is an exception. It makes its way to Minnesota every year from the South.

A kind of aphid, the greenbug is a small, soft-bodied, yellow-green insect. Although it feeds on a variety of plants, including wheat and other small grains, it is a concern to Minnesota homeowners as a pest of bluegrass lawns, according to Jeffrey Hahn, assistant entomologist with the University of Minnesota's Extension Service.

"In late July or August, greenbug comes north on air currents so Minnesotans can actually find it overnight," he explains. Greenbugs are usually found in shaded areas--such as around trees and shrubs. The grass looks yellowed where they are feeding, and individual blades often have burnt orange-colored spots. The small aphids can be seen by careful looking at such an area.

When greenbug-damage is identified, insecticides are often necessary to stem the problem. Acephate (Orthene) can be sprayed on affected areas if control is desired, says Hahn.

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I2M,V7,V8M

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NAGR3122

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News and Information

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

August 10, 1989

Source: Wilbur Maki
612/625-6237
Writer: Jack Sperbeck
612/625-1794

MANUFACTURING IS KEY TO MINNESOTA'S ECONOMIC BASE

Field and factory have come together to form a more diversified economic base in parts of rural Minnesota.

"In rural areas in a 100- to 125-mile radius of the Twin Cities metropolitan area, manufacturing shares the economic base with farming," says Wilbur Maki, economist with the University of Minnesota's Agricultural Experiment Station.

The products made in rural areas are particularly dependent on export markets. According to Maki, more than 50 percent of the dollars coming into Minnesota are already generated by manufacturing. And, by the year 2000, manufacturing will have become more important to Minnesota's economy than agriculture was in 1950.

The manufacturing of nonelectrical machinery, of which computers are an important part, is a growth industry in the state. Minnesota produces nearly 10 percent of all computers and related equipment and nearly 4 percent of all the nonelectrical

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machinery manufactured in the United States. This includes engines and turbines, farm machinery, and garden and construction machines as well as computers and peripheral equipment.

"We ship out sales worth \$50 billion," Maki says.

Manufactured machinery, including electrical, accounts for a large proportion. And \$5 to \$6 billion of the total sales are to buyers outside the United States. "We're the Japan of the northwestern United States in terms of exports," Maki says.

Minnesota's more than 1,200 machine manufacturing plants employ over 100,000 people. Another 700 plants, which manufacture fabricated metals, such as tools, containers, heating products and cutlery, provide about 40,000 jobs.

"Manufacturing fabricated metals and machinery were natural outgrowths of agriculture in rural Minnesota," Maki says. These industries are especially strong outside the Twin Cities metropolitan area. The state is also strong in manufacturing scientific and controlling instruments.

To support manufacturing growth in rural areas, Maki says five things are necessary: a qualified labor pool, entrepreneurs interested in starting businesses, sufficient information, communication and education.

"Public education plays an important role in rural development," Maki adds, pointing out that most Minnesotans live within 35 miles of an area vocational technical institute, a community college, a four-year state university or a branch of the University of Minnesota.

A prospective small manufacturing plant needs a labor pool of people with high school or higher education. According to Maki, most new businesses are started by people already in the community. And, he says, "New research shows that most businesses are started by people with 2- or 4-year college degrees."

Minnesota's economic outlook to the year 2000 may depend on the success of manufacturing industries. "But," Maki points out, "manufacturing in Minnesota depends on trade and is sensitive to business cycles. It can be Minnesota's nemesis."

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AEA,BSS,CEO,E1M,N2,V4M,V2M,V7,V8M

NCED3137

News and Information

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

August 10, 1989

Source: M. Janice Hogan
612/625-6766
Writer: Evelyn Anderson
612/624-3770

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

SHARING, SHIFTING ROLES: HOW DO COUPLES FEEL ABOUT WHO DOES WHAT?

It used to be, there was "men's work" and "women's work." And everybody knew which was which. Husbands and wives may not have liked their roles, but they had no doubt about what society expected of them.

Today, society expects couples to change the traditional role distinctions. Husbands are asked to be more nurturing, to do more housework. Wives are told to know more about family finances.

But do men and women really want to change? And, what kinds of couples are most successful in making changes?

Two University of Minnesota family social science researchers sought answers to those questions in a study they recently conducted for the University's Agricultural Experiment Station. Telephone interviews with 235 married couples in the seven-county Twin Cities metropolitan area provided M. Janice Hogan and Patricia Spaulding with wide-ranging data.

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Hogan and Spaulding concluded that couples feel the need for change. But at the same time, nearly half the wives surveyed said they were satisfied with their own and their husband's family roles. This was especially true among older women with fewer children at home.

However, when couples do break from traditional roles, most wives want still more change. The researchers found that women whose husbands now do more housework than when they were first married want their husbands to continue taking on new household responsibilities.

By contrast, most husbands surveyed (65 percent) wanted very little change in either their or their wives' responsibilities. Another 17 percent wanted no change in their own responsibilities but an increase in their wives'.

Only 18 percent said they need to greatly increase their own responsibilities. These were the youngest men, with the lowest income, and most had several children.

Hogan and Spaulding asked the couples how satisfied they were with the resources available to them, including money, space, time and energy. The richest couples, they found, weren't necessarily the most satisfied. Those couples who felt content with their resources wanted the greatest change in family roles. More women than men considered their resources adequate.

What if one spouse wanted change and the other didn't?

Interviewing spouses separately and comparing responses, Hogan and Spaulding found that 59 percent of the couples had

"complementary preferences." That is, either both partners desired similar amounts and direction of change or both wanted no change at all. Another 27 percent of the couples had relatively minor differences.

The researchers found only 14 percent of the couples "highly disparate" in their preferences. Among some of these couples, were wives who wanted major changes while their husbands preferred the status quo. For other couples, each spouse simply wanted less responsibility only for himself or herself.

Will hopes for change translate into action?

We'll know in a few months because Hogan and three doctoral students are now doing follow-up interviews.

"We'd like to see, over time, how these couples cope," Hogan said. "Especially for the highly disparate couples, we want to see how they negotiate the differences and what changes, if any, result."

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AEA,BSS,CEO,E5,E7,N2,V4,V7,V8

NHEC3138

News and Information

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

August 10, 1989

Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

U OF M HORTICULTURIST OFFERS TIPS ON CRABGRASS CONTROL

Are large, yellow-green patches of crabgrass flourishing in your lawn where the grass thinned out or died from last year's heat and drought, or where no pre-emergent herbicide was used last Spring?

Sprays will not be very effective at killing crabgrass once it is large and tough, and they may brown desirable grasses at least temporarily, according to Deborah Brown, horticulturist with the Minnesota Extension Service.

Instead, pull or hoe out crabgrass in areas of the lawn you plan to reseed, Brown advises. Other crabgrass plants may be left to die this winter. Only their seed will survive.

Plan to use a pre-emergent herbicide early next May to prevent a crabgrass outbreak next summer. Meanwhile, catch lawn clippings to limit the amount of crabgrass seeds that fall to the ground, and keep desirable grass as healthy and thick as you can by watering and fertilizing regularly.

Crabgrass and other annual seeds have less chance of getting a toehold in thick, dense turf, Brown concludes.

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I2,V7,V8

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NAGR3124

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News and Information

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

August 10, 1989

Source: Cynthia Ash
612/625-7022
Editor: Mary Kay O'Hearn
612/625-2728

POWDERY MILDEW DAMAGES FOLIAGE, WEAKENS PLANTS

Powdery mildew fungi have been wreaking havoc in many gardens and landscapes this summer, producing gray-to-white, powdery-appearing leaves.

Severe mildew infections can result in leaf puckering, poor growth and fewer flowers, says Cynthia Ash, a plant pathologist with the University of Minnesota Extension Service. Although powdery mildew seldom seriously harms plants, it can reduce photosynthesis and weaken them, she says.

Powdery mildew differs from other fungal diseases because it needs only occasional periods of high humidity. When this happens, the fungus grows over the surface of the leaf and sinks little structures into the leaf to derive nourishment.

To prevent problems with powdery mildew, avoid putting susceptible plants in heavily landscaped areas. In existing landscapes, prune or replace plant materials to increase air circulation and sunlight penetration.

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Avoid overcrowding. Use plants adapted to the landscape areas present. Water early in the day and at the base of plants. Fungicides are available for some plants, but Ash says they are only a temporary cure.

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I2,V7,V8

NAGR3125

News and Information

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

August 10, 1989

Source: Steven J. Taff
612/625-3103
Editor: Jennifer Obst
612/625-2741

WHY ISN'T EVERYONE INTO SUSTAINABLE AGRICULTURE?

If some low-input farming techniques cost less, provide a better quality of life for farm families or help reduce erosion or groundwater pollution, why haven't more farmers switched from "conventional" farming to "sustainable" agriculture?

The answer, says University of Minnesota agricultural economist Steve Taff, is that despite the potential benefits of sustainable agriculture, our system works against it.

"Farmers are reluctant to adopt regenerative techniques mainly due to inhibiting effects--policies, laws and property rules--of the institutions that have grown up around 'conventional' farming," says Taff, who conducts research for the Minnesota Agricultural Experiment Station on the effects public policies have on private land use. "As long as these institutions determine long-term costs and income, it simply is not in the typical farmer's interest to change practices."

For example, the government insures crop risk but not income risk. "The fear of going broke makes farmers less willing to

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gamble," Taff says. "And adoption of sustainable agriculture is clearly a gamble--especially since a fully functioning rotation may take five years or more to establish."

Federal crop insurance, which provides an incentive for farmers to grow that handful of crops for which insurance is available, gives farmers less reason to diversify crop-wise.

Government price supports provide incentives to concentrate on that handful of crops more than they otherwise would, Taff says. This works against adoption of regenerative farming practices which depend more on rotations with crops not now eligible for government supports.

Also working against the adoption of sustainable agriculture is the fact that farmers--more than most businesses in America--are largely immune from pollution-control regulations. Therefore, says Taff, they are not rewarded for adopting agronomic practices that result in less pollution.

Other factors, such as state and federal tax law provisions, also hinder wide-scale adoption of sustainable agriculture.

Taff believes that if sustainable agriculture is to significantly alter the way Americans grow food, its advocates must address all of these institutional constraints. He says, "It's not enough to convince farmers that sustainable agriculture is the 'right' thing to do, because farmers may not have a choice."

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AEA,BSS,CEO,A1,B2,F1,L3,V1,V2

NAGR3136

News and Information

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

August 14, 1989

Sources: J. L. Anderson
612/625-8209
R. R. Allmaras
612/625-1742
Editor: Sam Brungardt
612/625-6797

2 U of M SCIENTISTS ARE NAMED FELLOWS OF CONSERVATION SOCIETY

Two faculty in the University of Minnesota's Department of Soil Science--Raymond R. Allmaras and James L. Anderson--were among the 11 people who recently received the 1989 Fellow Award of the Soil and Water Conservation Society (SWCS).

The award is the highest honor the SWCS presents to its members. It is given for professional excellence and for service to the Society.

Allmaras, a soil scientist with USDA's Agricultural Research Service, was honored for his research on the problems of sustainable and productive conservation tillage and for his contributions to the Society. Allmaras is stationed on the St. Paul campus and works with University of Minnesota soil scientists who conduct research for the Minnesota Agricultural Experiment Station.

Allmaras has conducted and published research on soil and water for the ARS for nearly 34 years. His discussions on conservation

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tillage adoption in the United States have appeared in many journals, and he has written more than 100 articles, chapters in books, technical reports and symposia proceedings.

A 1952 graduate of North Dakota State University, Allmaras holds a M.S. degree from the University of Nebraska and a Ph.D. from Iowa State University. All of his degrees are in soil science.

The son of George and Marcella Allmaras of New Rockford, N.D., Allmaras lives at 1944 Rosedale Drive in Roseville, Minn.

James L. Anderson, an associate professor, is an extension soil scientist who also serves as director of the Center for Agricultural Impacts on Water Quality at the University. He was recognized for his accomplishments in promoting the use of soil survey information in Minnesota.

Anderson has surveyed farm and nonfarm groups to determine how and how often the soil surveys are used. Interpretations are included for on-site waste treatment, crop-equivalent ratings, soil suitability for conservation tillage systems and the prediction of nitrogen-loss potential. Anderson has used this information to help others in agriculture, particularly farmers, make more site-specific judgments about soil fertility and tillage management programs related to water quality.

In 1971, Anderson received his undergraduate degree from the University of Wisconsin in soil science. He also holds M.S. and Ph.D. degrees from the University of Wisconsin in soil genesis,

classification and morphology. He has been on the University of Minnesota faculty since 1978.

Anderson, the son of Dorothy Anderson of Sparta, Wisc., lives at 3541 Ensign Ave. N., New Hope, Minn.

The Soil and Water Conservation Society, a private, nonprofit organization dedicated to promoting the wise use of land and water resources, has nearly 13,000 members in the United States, Canada and 80 other countries.

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B2M, SelMedia

NAGR3141

News and Information

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

Aug. 14, 1989

Source: Vince Fritz
507/835-3620
Writer: Sam Brungardt
612/625-6797

HORTICULTURAL CROP STAND ESTABLISHMENT TO BE TOPIC OF SYMPOSIUM

Next April, horticultural researchers, extension personnel, growers and others interested in newly emerging technology for improved horticultural crop stand establishment will be able to obtain the latest information at a national symposium.

The National Symposium for Stand Establishment in Horticultural Crops, which is being organized by the University of Minnesota and cosponsored by the American Society for Horticultural Science, will be April 4-6, 1990 at the Minneapolis-St. Paul Airport Hilton.

Those attending will have the opportunity to hear and discuss the newest information on research and technology in such topics as preplant-preseeding treatments (such as premoisturization, osmoconditioning, pregermination, hardening and seed coating/pelleting); post-treatment storage and duration of handling of pretreated seeds; transplant production (including solid matrix media, biotechnology, antitranspirants as well as other new developments in transplant technology); and postplant

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environment management.

Registration will begin at 8 a.m. on April 4, and the program will begin at 9 a.m. Tours of large, commercial greenhouse operations are planned for the afternoon of April 5.

Persons wishing registration and more program information should contact Cathie Bergum at Extension Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108 (phone 800/367-5363 or 612/625-2722).

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AEA,BSS,CEO,L1,L3,SelMedia

NAGR3143

News and Information

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

August 14, 1989

Source: Deborah Brown
612/624-7491

Editor: Mary Kay O'Hearn
612/625-2728

NOW IS THE BEST TIME TO RESEED LAWNS

Mid-August to mid-September is by far the best time to plant grass in Minnesota, says Deborah Brown, horticulturist with the University of Minnesota Extension Service. "Soils are still warm, but nights are growing longer and cooler--ideal grass growing conditions."

And when you plant this late, you needn't worry about weeds popping up all over. Weed seeds don't normally germinate now. And next spring, when they'll be ready to sprout, you can use a pre-emergent herbicide on the lawn to stop the weeds in their tracks, Brown says.

"Soil preparation is the most critical factor in starting grass from seed," Brown adds. "You can't just spread seeds on hard-packed soil and expect them to develop good roots. Instead, you need to work up the soil, adding starter fertilizer and raking it smooth. Then, rake the grass seed in so only some of it is covered. Water gently and frequently to keep the newly seeded

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area constantly moist until most seeds have germinated."

Mow the new grass regularly to a height of about 2-1/2 inches. Water it daily at first, but gradually wait longer between watering, and keep the sprinkler on longer to moisten the soil more deeply.

Grass seeded between mid-August and mid-September should be well enough established to come through most winters in good condition. In fact, it usually comes up thicker in spring than it was the previous fall, Brown notes.

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I2M,V7,V8M

NAGR3127

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News and Information

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

August 14, 1989

Source: Dale Haggard
612/625-4273
Writer: Joseph Kurtz
612/625-3168

PROCESSING CALVES INCREASES THEIR VALUE

Beef producers can put more money in their pockets by processing their calves to make them more valuable to buyers.

Dale Haggard, extension veterinarian at the University of Minnesota, says dehorning, castration, vaccination and treatment for parasites are all part of a good processing program.

Haggard recommends dehorning and castrating calves when they are young, rather than waiting until weaning time. "There is less stress when the calves are young, and less chance of hemorrhaging and infection," he points out.

The best time to dehorn and castrate is in the first month of a calf's life, according to Haggard. But don't do these operations during the fly season, he adds.

Haggard recommends consulting a veterinarian to set up a vaccination program. Most feedlots like calves to be vaccinated for IBR, BVD, pasteurella and the clostridian diseases, including blackleg and malignant edema.

Calves should also be treated for both internal and external parasites. "Contact a veterinarian to determine the most cost-effective products for your area," advises Haggard.

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AEA,BSS,CEO,V1,V2,A2

NAGR3142

News and Information

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

August 14, 1989

Sources: Curtis Norenberg
612/625-1925
Stan Stevens
612/625-8770
Writer: Martin Moen
612/625-6243

AG OUTLOOK '90 CONFERENCE IS SET FOR SEPT. 11

The Minnesota Extension Service is again sponsoring a fall conference on marketing agricultural commodities. The Ag Outlook '90 conference will be Sept. 11 at the Earle Brown Center on the University of Minnesota's St. Paul campus.

Marketing forecasts will be given for wheat, corn, oilseeds, coarse grains, dairy, beef and hogs. The conference will include a presentation on private weather forecasting of drought and floods.

Registration will begin at 8 a.m., and the program is scheduled to conclude at 4 p.m. Registration for Ag Outlook '90 is \$40, and the deadline for registration is Sept. 6.

The following extension economists will give presentations: Stan Stevens, University of Minnesota; Robert Wisner, Iowa State University; George Flaskerud, North Dakota State University; Richard Shane, South Dakota State University; Ken Egertson,

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University of Minnesota; Robert Cropp, University of Wisconsin;
and Harlan Hughes, North Dakota State University.

For more information about attending the conference, call toll
free (800) 367-5363 or write to Cathie Bergum, Educational
Development System, Minnesota Extension Service, 405 Coffey Hall,
1420 Eckles Ave., St. Paul, MN 55108.

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AEA,BSS,CEO,V2,V4,V7,A1

NAGR3139

News and Information

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

August 17, 1989

Source: Hugh Chester Jones
507/835-3620
Writer: Larry Etkin
612/625-4272

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

HOLSTEIN BEEF IS AT POPULARITY PEAK

In the 1930s, a farmer feeding out Holstein steers might have been thought a bit strange. The Holstein, a dairy breed, was by tradition not used for beef production.

"A self-respecting cattle feeder simply didn't feed Holsteins," says Ken Miller, a retired University of Minnesota animal scientist. "That was like a Minnesota fisherman going out for bullheads."

But demand for leaner meats has turned that proposition on its head, says Hugh Chester-Jones, Miller's successor at the Southern Experiment Station, Waseca. It may be only a temporary blip in the beef market, but today, he says, Holstein beef is a premium product. Furthermore, demand may grow substantially in the short term as marketing improves.

The lean meat qualities of Holsteins are an unintentional

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by-product of developing more productive dairy cows, and Holstein beef was just waiting for Americans' increased health consciousness and their demand for leaner meats.

About 400,000 dairy bull calves are born in Minnesota each year, and since almost all dairy cows are inseminated artificially with semen from those few bulls that have the most productive offspring, most bull calves aren't needed for breeding. Some are raised for veal, but that market isn't big enough to use them all.

That's why Miller began to get questions from Minnesota farmers in the 1950s. "The questions were all about the feeding and management of Holstein steers," he recalls. "The reason they were interested at that time was that western feeder steers--the traditional beef and beef-cross type--were quite expensive. They could buy Holstein feeders for about half the cost."

For a long time, the Minnesota Agricultural Experiment Station tried to improve cattle for both meat and milk production. "They never did come up with a good, desirable, dual-purpose animal," says Miller. The results "were just mediocre for both characteristics."

Although Miller and Chester-Jones agree that there's no genetic reason why a dual-purpose animal couldn't be developed, Chester-Jones says, "we've found here that there is too much variation in genetics in the Holstein market to make that a short-term proposition."

Adds Miller: "When you select for a lot of traits, it's very

difficult to improve or even maintain any of the traits."

The market may not wait for better-bred Holstein beef. "Down the road, there is going to be more and more competition from traditional beef and exotic beef for the Holstein lean market," says Chester-Jones. "I think the larger beef breeders in this country are going to refine their genetics to meet the market needs. The Holstein steer, I think, is going to reach a peak or plateau out, in terms of marketability, within 10 years."

Different arguments lead University of Minnesota extension meat specialist Richard Epley to similar conclusions. Though markets for leaner meats are currently expanding, surveys show that "taste" tops the list of what consumers want when it comes to meats. And "taste in meat is very strongly related to the fat content, the marbling," Epley points out.

But there is a split market and opportunities to an unknown degree for leaner Holstein cuts. "Historically, retailers have been on a Choice beef program, which is what they have felt the consumer wanted," says Epley. "Now, more and more retailers are offering two grades, Choice and Select, recognizing that some consumers want the marbling and the taste they get in Choice and others want less marbling and less fat"

"The whole country has gone Holstein beef crazy basically," notes Chester-Jones. "Somebody told me something like 300,000 calves are leaving the Wisconsin and Minnesota area and going to feedlots in the other parts of this country. There are people in Oklahoma and Texas feeding a lot of Holstein steers. I get

questions from all over the country.

"More and more people are getting on the Holstein bandwagon, recognizing that there is more understanding through research of how to feed them. You've got to feed them a high-energy diet to make money in a normal year."

So, for the moment, the Midwest's surplus Holsteins enjoy a premium position in the marketplace. And while dairy beef production will continue as a by-product of the dairy industry, Chester-Jones, Miller and Epley agree that dairy beef will find its market niche.

"Acceptance among cattle feeders may never be total, but I think people are realizing that if they can make money with these things and the market is there, then they'll sacrifice their pride a little bit in favor of capitalistic values," Chester-Jones concludes.

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AEA,BSS,CEO,A2,H1

NAGR3146

MSP
10/17/89

News and Information

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

August 17, 1989

Source: Jeffrey Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

WASPS MAY TRY TO MOVE INSIDE IN FALL

This is expected to be an average "wasp year," compared to 1985 and 1987, but even average numbers of wasps can cause problems, says Jeffrey Hahn, assistant entomologist with the University of Minnesota's Extension Service.

As autumn approaches, the standard method for controlling wasps should be modified, he says. "Earlier in the summer, a wasp nest was treated with an insecticide, such as Baygon or resmethrin. In late summer, wasps with nests in homes--for example, in wall voids, in attics or around foundations--have a greater tendency to move into the living quarters, particularly when control is attempted."

Hahn recommends treating a nest you have immediately. "The longer it is left untreated, the greater the chance the wasps will come inside," he says.

As the first hard freeze nears, it becomes less important to control wasp nests, especially with the risk of forcing them inside. Most of the colony will die after the first hard frost,

making insecticide applications unnecessary. Subsequent freezes will finish off any remaining workers.

"Only newly mated queens survive winter," Hahn explains.

"They escape the colony during autumn to find a protected place, such as under bark, stones, and siding, to hibernate for winter."

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I2,V7,V8

NAGR3121

News and Information

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02/17

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

August 17, 1989

Source: Roland Gertjejansen
612/624-4730
Writer: David Hansen
612/625-7290

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

STRETCHING ASPEN RESOURCE IS VITAL TO PANELBOARD INDUSTRY'S FUTURE

Aspen is big news in Minnesota. The billion-dollar expansion of northern Minnesota's panelboard industry, which uses aspen, often makes headlines in the business pages of newspapers and magazines. Roland Gertjejansen and others who conduct research for the University of Minnesota's Agricultural Experiment Station are working hard to see that this boom industry doesn't bust.

And the industry has been booming. "Ten years ago, there was one waferboard plant in the U.S.; it was located in Minnesota. Now, in 1989, there are 30 structural panelboard plants in the U.S. and five are in Minnesota," says Gertjejansen.

The expansion of the panelboard industry is good for the economy, he adds, but "this unprecedented growth plus expansion of the paper industry has placed great demands on the aspen resource in the Lake States."

Heavily dependent on aspen, these industries will need options to

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continue producing. While a younger generation of trees matures, "There will be a shortage around the year 2000 that may last for 20 years," Gertjejansen says, referring to Minnesota Department of Natural Resources (DNR) and U.S. Forest Service estimates. "Because paper generates more income per cord of aspen than does oriented strandboard (OSB) or waferboard, the board plants will be forced to use alternative species."

Gertjejansen, a forest products researcher, helped during the early establishment of the waferboard industry in Minnesota. Today, his hot press in Kaufert Laboratory, located on the University's St. Paul campus, turns out sample boards made of aspen and birch, plantation-grown red pine or balsam poplar. Gertjejansen combines these underutilized species with aspen to make waferboard and OSB as strong or stronger than boards made solely from aspen.

In Minnesota, less than a third of the birch that should be cut each year is harvested, and 70 percent of that is cut for fuel. This year, mill managers will have an opportunity to try a formula for a birch core waferboard developed by Gertjejansen, David Ritter and Robert Kroll, all researchers in the Department of Forest Products.

Their birch formula requires wafers and strands thinner than the aspen. "Thin paper birch core wafers and strands resulted in waferboard and OSB with properties that exceeded those of the all-aspen boards," Ritter says.

Red pine wafers also work as a mix for structural panelboards. The higher resin content of the pine caused "blows" in some panels. But Gertjejansen and Ritter find that pine performs best as narrow wafers. These allow resinous gases formed during the heat and pressure of manufacturing to escape more easily.

Where will the red pine come from? Hundreds of blocks of pine, totaling as much as 18,000 acres, are scattered throughout central Minnesota. According to John Krantz of the DNR's Forestry Division, these 20- to 40-year-old trees are too small for lumber and no other market exists for all the "juvenile wood" that must be thinned to give the remaining trees room to grow.

Gertjejansen has also worked with balsam poplar. It is related to and grows alongside aspen, but has a much higher moisture content. This means it must be handled separately or the moisture will affect the bonding of waferboard.

Balsam poplar also is very unpredictable when it is waferized. It often produces fine, fibrous material that "gunks" up manufacturing equipment. Gertjejansen and his team are collecting samples from different locations to see whether this machinability problem is determined by a specific physical property of balsam poplar.

"If it is," Kroll explains, "our next step is to see if the characteristics are related to a specific soil type, tree size or other trait. If so, then selective logging can be practiced."

These options to the looming aspen shortage may not be used soon. However, the structural panelboard industry in northern Minnesota economy may depend on them in the next century. "The paper birch and red pine results illustrate that it is possible to reduce the aspen consumption by a board mill and also produce a superior product," Gertjejansen concludes. "This is going to be extremely important when the aspen crunch arrives."

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AEA,BSS,CEO,H3,H4,N2

NNRD3145

News and Information

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

August 21, 1989

Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

EARLY LOCAL APPLES ARE AVAILABLE

August and early September bring the first tasty, early Minnesota apples to fairs, farmer's markets and orchard salesrooms.

Oriole, Mantet, State Fair, Duchess, Paulared and Beacon should all ripen by the end of August. By mid-September, they will be joined by Wealthy, Minjon and Chestnut. Chestnut, a dessert crabapple about 2 inches in diameter, is a children's lunch box favorite because of its size, sweet flavor and crisp, juicy flesh.

Early apples tend to be softer than midseason or late varieties that ripen from late September through the middle of October, says Deborah Brown, horticulturist with the University of Minnesota Extension Service. They should be used fairly quickly, as they lack the long keeping qualities of later-maturing apples.

"They don't lack flavor, though," observes Brown. "They're far superior to most of the supermarket apples that have been in storage since last fall's harvest."

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H1M, I2M, V7, V8M

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News and Information

MPC
10/17/89
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

August 24, 1989

Source: Dave Noetzel
612/624-9272
Writer: Jack Sperbeck
612/625-1794

DON'T PLOW TO REDUCE GRASSHOPPER PROBLEMS

Plowing will not reduce grasshopper problems. "Don't change tillage practices because of grasshopper problems," says Dave Noetzel, entomologist with the University of Minnesota's Extension Service.

Once grasshoppers lay eggs, even deep plowing will not kill enough grasshopper eggs to make a difference, Noetzel says.

On small grain fallow, normal tillage following harvest will reduce or stop egg laying. But once the grasshoppers lay eggs, tillage is not a factor in grasshopper control.

"Unfortunately, there's a perception that plowed land has fewer grasshoppers. But that's not true," Noetzel says.

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AEA,BSS,CEO,F1

NAGR3151

Page 1 of 2

News and Information

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

August 24, 1989

Sources: Charles R. Blinn
612/624-3788
Melvin Baughman
612/624-0734
Editor: Gail Tischler
612/625-3141

U OF M TO OFFER CORRESPONDENCE COURSE ON LAND INVESTMENT POTENTIAL

Beginning next January, the University of Minnesota will offer a correspondence course--Land Investment Potential: Financial Analysis for Owners and Managers--in managing natural resources for profit.

The six-unit course is tailored to the needs of private landowners and public resource managers who seek a solid understanding of the techniques involved in designing and selecting the most economically favorable options for managing land. Among the topics it will cover are planning a financial analysis, identifying investment alternatives, developing cash-flow tables, incorporating taxes and inflation, assessing uncertainty, calculating measures of investment worth and choosing and monitoring an alternative.

The course provides an easy-to-follow, step-by-step procedure for applying technical, economic principles to individualized

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

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circumstances. No advanced knowledge is required; participants need only an understanding of basic mathematics.

The course is cosponsored by the University of Minnesota's Extension Service, Department of Forest Resources and Agricultural Experiment Station. Persons who successfully complete the course will be eligible for 12 Continuing Forestry Education contact hours.

For a brochure and registration form, contact Extension Forest Resources, Department of Forest Resources, University of Minnesota, 1530 N. Cleveland Ave., St. Paul, MN 55108 (telephone 612/624-7222).

#

AEA,BSS,CEO,V1,V5,V6,A1,H4,L3

NNRD3150

News and Information

10
1-27p
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

August 24, 1989

Source: Harold Pellett
612/443-2460
Writer: Sam Brungardt
612/625-6797

U OF M HORTICULTURAL SCIENTIST PELLETT IS NAMED ASHS FELLOW

Home gardeners, nurserymen and landscape designers in Minnesota and other northern states value Northwood red maple, Northern Sun forsythia, Cardinal dogwood, Princess Kay flowering plum and the Northern Lights series of hardy azaleas. Harold Pellett, the University of Minnesota scientist who played a major role in the development of these hardy plants, was recently elected a Fellow of the American Society for Horticultural Science.

In addition for his role in introducing hardy woody landscape plants, Pellett, a professor in the Department of Horticultural Science and Landscape Architecture, received the honor in recognition of his research; his leadership in efforts to preserve and improve woody landscape plants; and for previous awards from the American Association of Nurserymen and the Massachusetts Horticultural Society.

An alumnus of Iowa State University, Pellett received his BS degree in 1960, his MS degree in 1961 and his PhD degree in 1964.

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His first faculty position was at the University of Nebraska, where he evaluated woody landscape plants for highway planting.

In 1966, Pellett joined the University of Minnesota faculty. He served as superintendent of the Horticultural Research Center, advised students, taught classes and coordinated a two-year degree program in landscape horticulture from 1967 until 1978, when he began to conduct research full-time

Pellett has conducted research and published extensively on the cold hardiness of woody plants and on the relationship of environmental factors and cultural practices to growth of landscape plants. His breeding and evaluation work at the Minnesota Landscape Arboretum, Chaska, has resulted in the introduction of 14 cultivars of woody landscape plants by the Minnesota Agricultural Experiment Station.

Pellett's leadership in developing cooperative national efforts for germplasm improvement led to the establishment of a Woody Plant Crop Advisory Committee in the National Plant Germplasm System and has resulted in increased USDA effort and support for the preservation of woody landscape plant germplasm. Pellett currently is coordinating an effort to establish a Center for Improvement of Landscape Plants.

Pellett is a native of Atlantic, Iowa, where his family owned and operated Pellett Nursery. His mother is Elizabeth Pellett of Route 3, Atlantic. Pellett lives at 1450 Game Farm Rd., Mound, Minn.

#

News and Information

MCC
0627p
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

August 25, 1989

Source: Larry Karels
612/625-1229
Writer: Evelyn Anderson
612/624-3770

STATE 4-H SHOOT TO DRAW MORE THAN 500 YOUNG PEOPLE TO CAMBRIDGE

Cambridge will host North America's largest on-site shooting and conservation event Sept. 9-10. More than 500 young people will gather for the Minnesota 4-H Invitational Shoot at the Isanti County Fairgrounds on Highway 95.

Youth will compete in shooting events such as archery, trapshooting, muzzleloading, shooting with .22 rifles and BB guns, and silhouette shooting. Educational activities will include retriever dog exhibits, trapshooting demonstrations, wildlife quiz bowls. There will also be a bird-calling competition, and exhibits by conservation organizations and 4-H groups. A falconer will give a demonstration, and the University of Minnesota Raptor Center will present a program.

Shooting sports/wildlife management is the fastest growing 4-H project area, with 4,000 participants, about 40% of whom are female. The program teaches life skills through the study of marksmanship, wildlife and ethical conduct.

Minnesota 4-H Youth Development is the state's largest out-of-school educational program, serving 209,000 young people. A program of the University's Extension Service, it is available in all counties.

#

CEO,V1,V4,L2,Y

Page 1 of 1

N4-H3154

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

News and Information

MCC
9-22-89

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

August 28, 1989

Source: Michael Schmitt
612/625-7017
Editor: Mary Kay O'Hearn
612/625-2728

APPLYING NITROGEN? IT DEPENDS ON LOCATION IN MINNESOTA

Sweeping statements on fall applications of nitrogen on Minnesota soils just aren't possible.

It all depends on where you live in Minnesota, according to Michael Schmitt, soil scientist with the University of Minnesota's Extension Service. That is why he speaks of the state divided into six regions before making such recommendations.

Southeast Minnesota: No fall applications of nitrogen fertilizer are recommended. This is because the area has shallow soils over porous limestone (karst) formations. If large amounts of rain were to fall after the nitrogen was applied, it would leach out of the soil into the groundwater.

South-Central Minnesota: Fall applications can be used, but with a few precautions. Delay nitrogen applications until the soil temperature drops to 50 F. Use of a nitrification inhibitor may be beneficial only when soil temperatures are above 50 F and the rooting zone is completely recharged from rainfall. Research indicates that preplant anhydrous ammonia usually gives the highest yields.

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Southwest Minnesota: If application is delayed until the soil temperature reaches 50 F, nitrogen is less likely to be lost. Nitrogen losses from leaching and denitrification are lower in this area because there is less rainfall, Schmitt explains.

West-Central Minnesota: This is a good area for fall nitrogen application. Wait until soil temperatures reach 50 F.

Central Minnesota Sands: Leaching is a large problem in this area, so do not apply nitrogen in the fall.

Northwest Minnesota: For many farms fall application of nitrogen is practical, especially if growers do early spring planting.

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AEA,BSS,CEO,F1

NAGR3152

MSC
94-7p

News and Information

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

August 31, 1989

Source: Jim Linn
612/624-4995
Writer: Joseph Kurtz
612/625-3168

MATURE CORN YIELDS SILAGE WITH HIGHEST FEEDING VALUE

Dairy producers harvesting corn silage should make sure the corn plants have reached physiological maturity before chopping. That's how to get the most feeding value out of the crop, says Jim Linn, extension dairy scientist at the University of Minnesota.

"Corn is physiologically mature when the black layer has formed at the tip of the corn kernels," says Linn. "The moisture content of the kernels is about 65 percent by then, and the ears are well dented. Most of the upper leaves of the plant will still be green, but the lower leaves will be in various stages of drying. No further grain development occurs once the plant reaches physiological maturity."

Linn says a 3/8-inch TLC (theoretical length of cut) is good in silage for dairy cows.

Adding nonprotein nitrogen (NPN) at ensiling is an economical way to provide supplemental protein for silage. "Cows can utilize the NPN that is added to corn silage," Linn points out. Corn silage without NPN will contain about 8 percent crude protein on a

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dry matter basis. Adding NPN products can increase the crude protein level to 12 percent. Adding anhydrous ammonia at the rate of 7 pounds per ton of wet silage or adding urea at 10 pounds per ton of wet silage will bring the crude protein level of the silage up to 12 percent.

Linn recommends filling silos rapidly, adding, "Beware of silo gases during the fermentation period."

He also recommends testing silage to determine its feeding value. You can test a sample as it goes into the silo, or, if you are adding NPN, you can test a sample coming out. "It's important to test, because there's a big variation in silage quality," says Linn. "You need to know what's in the silage in order to balance rations properly."

A seven-page Minnesota Extension Service publication, "Feeding Corn Silage to Dairy Cattle" (item number AG-FO-0978), is available from county extension offices throughout Minnesota.

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AEA,BSS,CEO,V1,V2,D

NAGR3157

MSC
1-6-79

News and Information

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

August 31, 1989

Source: Tom Brennan
612/625-3701
Editor: Mary Kay O'Hearn
612/625-2728

SAFETY SHOULD BE PARAMOUNT CONCERN DURING HARVEST

Farming and traveling by airplane have two great moments of anticipation, pressure and stress sandwiched around long periods of relative calm. The successful "flight" in farming, says Tom Brennan, safety expert with the University of Minnesota's Extension Service, centers on the takeoff, or planting season, and the landing, or harvest season.

In addition to rough weather, there are many variables to distract the flight (growing) pattern: hired help (or lack thereof), machinery and market prices.

"With many factors competing for attention during the upcoming harvest season, the one that should be paramount is the safety factor," Brennan says. Keeping principles of a safe work environment foremost can mean all the difference is handling unforeseen setbacks with less pressure and stress.

These are things to think about year-round, but especially during Farm Safety Week, Sept. 17-23.

"Good weather and enough daylight always seem to be at a premium at

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the end of the growing season," Brennan says. "Now is a critical time to review planned maintenance on all harvest equipment. Properly maintained equipment, coupled with skilled equipment operation, can reduce downtime and the potential for accidents during harvest."

Brennan offers these tips for making this harvest a safe one:

--Unless you enjoy the stress associated with trying to harvest 400 acres of corn with a broken combine, make sure equipment is "harvest-ready" several weeks before it is to be used. It takes time to order parts, perform the work and test the results.

All guards and shields should be securely in place before equipment sets one tire in the field. "In 1988," Brennan says, "19 farmers met untimely deaths in Minnesota due to machinery-related accidents, many of which were due to missing guards and shields."

--Securely block hydraulically raised equipment before anyone starts work on or under it.

--Always shut off equipment before getting out of the driver's seat. Never attempt to clear plugged equipment (such as a corn picker) while the power is on. One cannot let go of crop material quickly enough if the machine suddenly clears itself.

--Fire is a major field hazard, and every piece of powered equipment should carry a charged fire extinguisher. Your insurance company may insist on this.

--Keep children away from machinery. Of the 26 farm fatalities in Minnesota in 1988, seven were children younger than 12 and all were machinery related, Brennan says.

Combines call for special precautions since cylinder speed changes usually have to be made with the machinery running:

--Never make other adjustments with the power engaged, even if it seems convenient. Lock all guards and shields in place before starting the machine.

--Keep the ladder and all platforms clean to prevent slips and falls. No one should be in the combine's grain tank or receiving wagon or truck while the combine is being unloaded.

--To clear a plug, first try reversing the header. If this doesn't work, stop the combine, turn off the engine and pocket the key. The main cylinder or drive shaft should be turned with tools designed for this purpose. After the plug has been cleared, replace all shields.

--Don't make sudden changes in speed or turn sharply, especially when operating on slopes, because combines have a high center of gravity.

--Stay a good distance away from ditches--a space at least as wide as your combine's wheel track--if that's possible. The combine's weight can shear or collapse the bank.

--On public roads, use extreme caution when operating a combine. Replace the SMV (slow moving vehicle) sign if it's faded or missing. Rear steering of the combine causes the back of the machine to swing into the opposite lane of traffic when it is turned right. Keep the brakes locked for straight line stopping on the road.

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AEA,BSS,CEO,E4

NAGR3164

M-20
06-27p

News and Information

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

August 31, 1989

Source: Lee Johnston
612/589-1711
Writer: Joseph Kurtz
612/625-3168

4 STATES TO COOPERATE ON SWINE CONFERENCE

Sept. 8 is the deadline for pork producers from a four-state area to register for the TIPS conference in South Sioux City, Neb.

TIPS is an acronym for "Techniques for Improving Swine Profitability." The conference will take place at the Marina Inn in South Sioux City, beginning at 1 p.m. Sept. 14 and ending at 3:30 p.m. Sept. 15.

Producers from Minnesota, Iowa, Nebraska and South Dakota can obtain registration forms for the conference from their county extension offices. The conference is sponsored by the extension services of those four states. Enrollment is limited to 150 persons, and the registration fee is \$45 per person.

The conference will cover breeding management, genetics, using financial and biological records to make financial decisions, employee relations, herd health, structural changes in the pork industry and adjusting swine diets to seasonal changes.

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AEA,BSS,CEO,V1,V2,P1

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NAGR3156

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Mon
8/27/89

News and Information

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

August 31, 1989

Source: Tom Brennan
612/625-3701
Editor: Mary Kay O'Hearn
612/625-2728

CORN PICKERS CAN BE HARVEST HAZARDS

Harvest time is short, but accidents and their consequences due to inattention to safety can last forever.

"Accidents should not be part of the price of farming," says Tom Brennan, safety expert with the Minnesota Extension Service.

These are a few of the precautions he suggests when operating ear corn pickers and picker/shellers:

--Never attempt to clear plugged snapping rolls while the power is engaged. Hundreds of farmers have lost fingers, hands and limbs over the years to these rolls.

--Take care not to jack-knife the trailer picker and wagon when moving down or across steep slopes.

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AEA,BSS,CEO,E4,V2

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NAGR3165

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News and Information

M-3
06-27

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

August 31, 1989

Source: Keith I. Loken
612/625-0265
Writer: Joseph Kurtz
612/625-3168

LYME DISEASE FACT SHEET IS AVAILABLE FROM UNIVERSITY OF MINNESOTA

A new fact sheet about Lyme disease has been published by the University of Minnesota's Extension Service.

Lyme disease is the most frequently diagnosed tick-transmitted illness in the United States. The fact sheet, "Lyme Disease in Minnesota," provides information on the disease, the tick that spreads it and prevention of the disease.

Single copies of "Lyme Disease in Minnesota" are available from county extension offices throughout Minnesota as item AG-FS-3753. The fact sheet is also available by mail from the Distribution Center, 3 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108. When ordered from the Distribution Center, the cost per copy is 30 cents. Minnesota orders should include 6 percent sales tax. Please order by title and item number and make checks payable to the University of Minnesota.

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AEA,BSS,CEO,I1,L2,R,V2M,V4,V8M

NAGR3114

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News and Information

MSG
2/27/89

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

August 31, 1989

Source: Charles Christians
612/624-0766
Writer: Joseph Kurtz
612/625-3168

NOW IS GOOD TIME TO CULL BEEF COWS

Now is a good time for beef producers to decide which cows to cull from their herds. Producers can stretch their pastures by culling early. Also, cow prices often weaken toward the end of the year, says Charles Christians, extension animal scientist at the University of Minnesota.

Christians recommends culling cows in September according to their soundness, conception and performance. "Initially, cull those females that have a smooth mouth (those lacking incisor teeth), poor udder, poor feet and cancer eye," he suggests. "Pregnancy check cows and identify those that are open. Cull these cows first if their calves are lighter than the herd average."

Previous performance records for weaning weight are useful for categorizing cows and identifying likely candidates for culling, Christians points out. The repeatability for weaning weight is relatively high, so those cows that wean light calves are likely to rank in the lower half of the herd next year.

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Cows that calve late will wean off lighter calves and will probably cycle late. Research at Colorado State University shows that every 20-day delay in calving after the beginning of the calving season results in a 26-pound weaning weight reduction for the calf.

Late-calving cows need a diet high enough in energy to produce enough milk to improve calf weights and enhance estrus.

Christians suggests trying to shorten the calving interval of late-calving cows that you want to keep because they have produced good calves. "To stimulate the onset of heat, consider removing calves from their dams for a 24- to 30-hour period," he says. "This scheme will often initiate estrus and potentially shorten the calving interval. Be sure to provide adequate shade, water and creep for the calves."

Christians says measuring calf weaning weights, pregnancy checking cows and careful culling of cows are all important to the profitability of a cow-calf enterprise.

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AEA,BSS,CEO,V1,V2,A2

NAGR3155

News and Information

MS
0-1-7p

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

August 31, 1989

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

CONTRACT FEEDING MAY BE ONLY OPTION FOR SOME HOG PRODUCERS

Recent losses in the hog feeding business have stimulated interest in contract feeding.

For hog producers under financial pressure, producing hogs under contract may not be the most desirable option. But aside from going out of business, it may be the only option, says Michael Boehlje, economist with the University of Minnesota's Extension Service.

Whether a producer should consider contract production depends on risk exposure and profit potential. Producers on solid financial ground who can afford the risk of marketing hogs on the open market may find contract feeding less attractive. "There were good prices and profits the last two to three years for producers who sold their pigs on the open market," Boehlje says.

But a small, contract-guaranteed profit may be the only option for producers who can't get a bank loan or afford to build facilities.

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Some see contract hog production as another step toward corporate control of agriculture. The fear is that independent operators could be squeezed out as packers line up hog supplies through contracts.

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AEA,BSS,CEO,A1,P1

NAGR3158

News and Information

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

August 31, 1989

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

3 KEY ISSUES WILL BE DEBATED FOR NEXT FARM BILL

Budget limits, the environment and production flexibility will be key issues debated in the 1990 farm bill.

The \$27-billion price tag associated with farm programs in the mid-'80s is much higher than Congress will tolerate this time, says Mike Boehlje, economist with the University of Minnesota's Extension Service.

"Environmental groups will be very active in discussing the 1990 farm bill," Boehlje says. The environmental restraints may not be tough in the 1990 farm bill, but eventually there will probably be some provision prohibiting farmers from collecting full farm program benefits if they have water quality or soil erosion problems, he says.

Boehlje expects some movement toward increased flexibility in planting crops based on profit potential instead of base acreage protection. "We probably won't see complete flexibility, but there will be a move in that direction," he says.

"Follow the debates and get involved through commodity groups and farm organizations," Boehlje advises farmers.

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AEA,BSS,CEO,A1,V2

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NAGR3159

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MCS
a 627p

News and Information

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

August 31, 1989

Source: Cynthia Ash
612/625-7022
Editor: Mary Kay O'Hearn
612/625-2728

COMPOST PILE MUST BE HOT ENOUGH TO KILL DISEASE ORGANISMS

Composting is a good way to recycle plant materials from vegetable and flower gardens and the yard. This can include lawn clippings as well as tree leaves.

However, adding diseased plant materials to compost can spread diseases, says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service.

"Composting will kill most plant pathogens if the compost heats properly and the temperature is maintained long enough," she says. "The compost pile must have a minimum volume of one cubic yard and be turned frequently to kill all the pathogens in the plant refuse."

Ash suggests turning the pile every two to three days to provide aeration and mixing. Adding such items as sawdust and leaves helps to provide a mixture more likely to heat properly. Keep the pile at 65 to 75 percent moisture (fairly moist but not wet), she says.

Most foliar (leaf) pathogens are destroyed rather quickly once

crop refuse is in contact with soil and the refuse rots. However, some soil-borne pathogens, such as those that cause the wilt diseases of tomatoes and other vegetables, live in the soil and are not destroyed by contact with soil or by the decomposition of crop refuse. These and other pathogens will be killed if the temperature in the pile is 120-160 degrees F for two to three weeks. Use a candy or meat thermometer partially buried in the pile to check the temperature. If it is too low or the pile is not turned often enough, some pathogens will survive, particularly those near the edges of the pile.

"If you doubt your composting diligence, then diseased plant material is best destroyed," Ash concludes.

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I2,V7,V8

NAGR3160

News and Information

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

August 31, 1989

Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

ATTACK BROADLEAF WEEDS ONCE WEATHER COOLS

When summer's heat moderates and temperatures drop between the low 60s and 80s, it's safe to resume attacking broadleaf weeds with herbicides. Of course, if you haven't got many, you can pull or dig them out of the lawn any time, says Deborah Brown, horticulturist with the Minnesota Extension Service.

Often the combination of herbicide spray and subsequent cold, winter weather gives good control of some tough weeds that are difficult to kill at other times of the year.

"Use a weed and feed product, a combination of lawn fertilizer and broadleaf weed killer, only if the weeds you are dealing with are scattered throughout the entire lawn. Otherwise, you'll probably be better off using a spray that you can direct specifically to the areas where the weeds are prevalent," she says.

Brown advises spraying only when it's not windy and when no rain is forecast for at least 24 hours--48 hours would be even

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better--as rain washes off the herbicide and lessens its effectiveness. If one application of herbicide doesn't do the job, you can repeat 10 to 14 days later.

#

12,V7,V8

NAGR3130

News and Information

MSC
25270

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

August 31, 1989

Source: Jeffrey Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

CRICKETS CAN INVADE HOMES

Late summer and fall is when crickets usually enter homes. Outdoors, crickets feed on a variety of plants and dead insects, but indoors they can eat fabric, including cotton, silk and wool.

Jeffrey Hahn, assistant entomologist with the University of Minnesota Extension Service, says people are likely to encounter three kinds of crickets. Black field crickets have rounded wings that do not completely cover the abdomen. House crickets are light yellowish-brown, have three dark bands behind the head, and long pointed wings. Camel crickets are tan, hump-backed and wingless.

The best strategy in cricket control, Hahn suggests, is simply preventing them from coming inside. Do this by caulking or repairing cracks and gaps in foundations, and around doors, basement windows or other areas that could provide entry.

Keeping weeds and grass cut and removing wood piles and other cluttered areas also minimizes the number of crickets that will be

Page 1 of 2

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around to try and come inside. Outside lights attract field and house crickets, and should be turned off at night if possible.

"If this can't be done, use yellow lights, which are less attractive to insects, rather than white, neon or mercury vapor lights," Hahn suggests.

Insecticides, such as chlorpyrifos (Dursban) or diazinon, can be used to supplement nonchemical controls. Apply them to the foundation and in a band to the soil around the outside of the building.

Fortunately, crickets that enter buildings usually do not take up residence, but die by autumn or early winter. There are nonchemical as well as chemical methods to help ensure this.

Dry out damp areas with a fan or dehumidifier. This is especially effective for camel crickets. Avoid debris and clutter to minimize potential hiding places. Sticky traps, such as a Roach Motel, will also catch crickets, and camel crickets seem to be especially attracted to them.

Insecticides should be considered a secondary control method. If chemical control is desired, a ready-to-use household aerosol containing chlorpyrifos (Dursban), propoxur (Baygon) or tetramethrin can be applied to areas where crickets are seen, says Hahn.

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I4,V7,V8

NHEC3126

News and Information

1000
00-37

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

September 7, 1989

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

MANY FARM SUPPLIERS ARE PUSHING CREDIT TERMS

Some major farm supply firms are pushing low-cost, full-season credit plans. The result could lower interest costs and better service for farmers, says Mike Boehlje, economist with the University of Minnesota's Extension Service.

Boehlje says there are three factors to consider when comparing finance terms from suppliers with those from conventional sources:

--Direct interest costs. Some suppliers are pushing low interest rates.

--Convenience of having the credit terms approved with the purchase of the input.

--How credit from the supplier affects credit availability for other financial needs. For example, a supplier could require a first lien for the supplies you purchase. You might then have problems getting credit from traditional credit sources for things like repairs and fuel.

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Thus far, Boehlje says the lower interest rates offered by supply firms apparently haven't driven down rates from other lenders. "But banks and other agricultural lenders may respond to the competition with better service," he says.

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AEA,BSS,CEO,A1,V2

NAGR3175

MCC
06-27

News and Information

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

September 7, 1989

Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

FALL PLANTING GIVES JUMP ON SPRING

If you think of fall only in terms of wrapping up the garden season, winding down activities and cleaning up debris to get a jump on next spring--expand those ideas.

Fall is a time for great beginnings, too, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service. "But most projects begun in fall require patience; they won't pay off until the snow melts next spring," she cautions.

Of course, there are exceptions. While newly seeded grass usually looks pretty wimpy in September and October, sod that's laid in autumn will look lively and established within a few weeks. (Assuming that it is watered regularly and mowed as soon and as often as necessary.)

Evergreens planted in September and October look good from their first day in the ground. The earlier in fall they're planted, the more opportunity they have to establish roots before winter...and the better they'll look next spring.

Deciduous trees are often planted later in fall, after they've lost their leaves and have gone dormant. A 4- to 6-inch layer of

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woodchips may be spread over the root area to keep the soil from freezing as rapidly and improve overwintering conditions. This will benefit evergreens, also.

Garden lily bulbs may be planted from mid-September through early October for bloom next summer. And all the spring-flowering bulbs we love to see in April and May--tulips, daffodils, crocus, hyacinths, snowdrops, scilla and others--need to be planted from late September on.

"Go ahead and make your planting plans," Brown urges. "By next garden season, you'll forget about all the work you did this fall. You'll be too busy admiring the results!"

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I2,V7,V8

NAGR3171

MSC
A27p

News and Information

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

September 7, 1989

Source: Tom Brennan
612/625-3701
Editor: Mary Kay O'Hearn
612/625-2728

SAFETY COURSE IS ESSENTIAL FOR ATV OPERATORS

Three-wheel ATVs (all terrain vehicles) were banned two years ago, but the four-wheelers were excluded from this ban. Even so, Tom Brennan thinks drivers should enroll in an operator training courses and use should be restricted to those 18 and older.

Brennan, a safety specialist with the University of Minnesota's Extension Service, talked about safe ATV operation in preparation for Farm Safety Week, Sept. 17-23.

He says, "An ATV handles very differently from other vehicles, including motorcycles and cars. It is especially disconcerting to see parents allowing their children to operate an ATV when they wouldn't think of allowing unlicensed children to operate the family car." With a poorly trained operator at the control and because they are used off-road on unstable terrain, collisions and rollovers happen suddenly.

The way concerned parents can be sure these vehicles are used safely and productively, Brennan says, is by taking an approved training course. In Minnesota, the Department of Natural

Resources (DNR) offers courses in summer and ATV dealers are required by federal law to offer safety training courses to all purchasers. It's simply the rule of "no safety training class, no warranty on your ATV," he notes.

ATVs aren't for passengers--there is only one seat. Friends can walk or get their own ATV, Brennan says.

ATVs don't belong on pavement--they aren't designed for it and automobile drivers don't expect to see them there. ATVs should be operated with proper riding gear: helmet, eye protection, long pants, gloves and boots.

Smashing sales of ATVs occurred in the early 1980s when farmers realized they could be the farmstead workhorse, hauling fertilizer, chasing down cattle and checking fences. A fleet of them could cost considerably less than a new pickup. But the tragic side to their popularity was the 1,200 deaths attributed to ATVs since 1982, most of them to youngsters under age 16. Injuries and paralysis number in the thousands as a result of ATV related accidents, he says.

How can you enroll in an ATV operator safety course? Call the Consumer Product Safety Commission at (800) 638-2772 or (800) 328-9975 for training information in Minnesota.

"The surest way to deprive oneself of the fun and versatility of this machine is to abuse the privilege associated with ownership," Brennan concludes.

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AEA,BSS,CEO,E4

NAGR3169

News and Information

MSC
9/27p

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

September 7, 1989

Source: Cynthia Ash
612/625-7022
Editor: Mary Kay O'Hearn
612/625-2728

IF YOUR LAWN LOOKS TOUGH, NOW'S TIME FOR SOME TLC

Many lawns are still suffering from the drought of '88.

Fear of drought led many people to overwater, while others took a casual attitude and weeds triumphed, says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service.

This means that many lawns are under stress and stressed lawns are more susceptible to diseases. Many things can trigger lawn diseases but some of the worst are excess nitrogen fertilizer, improper watering and a thick thatch layer.

"Fortunately, this is the best time of year to tackle these problems," Ash says. Lawns can be fertilized twice in the fall with a fertilizer containing approximately four parts nitrogen to one part phosphorus to two parts potassium--unless a soil test indicates otherwise. Apply 1 pound actual nitrogen per 1,000 square feet in early September and again between the end of October and Nov. 15.

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Ash reminds that the size of the numbers on the fertilizer bag is not as important as the amount of fertilizer that is applied. "The smaller the numbers--which give the percentages of nitrogen, phosphorus and potassium in the mix--the more you will have to apply to a given area to provide the same amount of nutrition," she explains.

Review watering practices. A well established lawn should be watered infrequently and deeply. Apply at least an inch of water at a time in heavy soils or two applications of 1/2 inch each on lighter, sandy soils. Apply the water slowly so it does not run off. To find out how long it takes to put down an inch of water, place a coffee can or other container in the area being irrigated. As a rule of thumb, most lawns need an inch of water in the form of irrigation or rain per week--more during hot windy weather. Newly sodded or seeded lawns have shallow root systems and need to be watered more often.

Thatch is the brown layer of plant debris that is located between the surface of the soil and the grass blades. The thatch layer must be kept below 1/2 inch in depth. Thick thatch encourages shallow rooting, which predisposes the turf to stress. The result is patch disease (formerly called Fusarium blight).

Reduce thatch by aerating and power raking early this fall and by avoiding higher-than-recommended applications of nitrogen fertilizer.

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I2,V7,V8

NAGR3161

News and Information

MSC
9/11/89

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

September 11, 1989

Source: Charles Christians
612/624-0766
Writer: Joseph Kurtz
612/625-3168

EVALUATE BEEF COWS ON BASIS OF FIRST CALF

A beef cow that ranks in the bottom quarter of the herd in weaning weight of her first calf is a good candidate for culling, says Charles Christians, extension animal scientist at the University of Minnesota.

"You should look at several factors in deciding whether to cull a cow on her first calf and replace her with a heifer," he says. "Consider her ranking in the herd, whether she is pregnant again, her condition and salvage value, and the economic trade-off of culling her and rearing a replacement."

In a herd where sire selection is sound, replacements should be genetically superior to older cows and first-calf heifers, Christians points out. Superiority depends on selection intensity, along with the producer's ability to set priorities, know what to select for, and know how much emphasis to place on each trait.

Christians says that if the first calf from a heifer is light at weaning, there is a strong chance that future calves will also be light. "Calf weaning weight is a moderately heritable trait," he points out. "The repeatability estimate is high compared with

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most other traits. The repeatability estimate for weaning weight on a cow's first calf is about 45 percent. This means there is a 45 percent chance the weaning weight of the next calf will be the same, and a 55 percent chance it will be higher or lower."

If you decide to keep a cow even though her first calf has a low weaning rate, you can evaluate her again next year on the basis of two calves. The repeatability goes up from 45 percent to 64 percent with a second calf. The third calf raises the repeatability to 73, the fourth to 78 and the fifth to 81 percent.

"After you have weaning weights on a cow's first three calves, you gain very little accuracy beyond that point in predicting her future ability to wean heavy calves," Christians points out.

In deciding whether to give a cow a second chance, it is important to look at the cost of replacements and their genetic superiority, rather than the salvage value of the cow, the University of Minnesota specialist concludes.

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AEA,BSS,CEO,V1,V2,A2

NAGR3177

News and Information

September 11, 1989

MBC
9/11/89
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

Source: Paul Rosenblatt
612/625-3120
Writer: Mary Kay O'Hearn
612/625-2728

FARM ACCIDENTS CAN TEAR FAMILIES, COMMUNITIES APART

It may be only a short story in the nearest town's newspaper, but the effect of a accidental death on a farm is devastating to the family and most likely their community. And it can continue to be so for years to come, says Paul Rosenblatt, professor of family social science at the University of Minnesota.

With funds from the University's Agricultural Experiment Station, Rosenblatt and graduate student Terri Karis have contacted people who have suffered such a tragedy, hoping to find out more about cause and effect.

"It's been harder to get people to agree to talk in this than in any study we have done," Rosenblatt says. "There is lots of toughing it out," both in mental and physical pain, he and Karis have found. In many serious--though not always life-threatening--accidents, the doctoring may be done at home because of a lack of insurance.

Instant replays of how accidents happened (or might have happened if no one witnessed them) may be speeding through the minds of family members and neighbors, but these thoughts aren't apt to be shared. There may be guilt, it's hard to grieve in

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public and the economics of a death can shatter the pattern of life for many people, Rosenblatt points out.

The "what ifs" can go on for many lifetimes--if the day hadn't been rainy...if the timing had been different...if he (most often it's men who die) hadn't been alone.

Sept. 17-23 is the right time for Farm Safety Week, Rosenblatt says, as hurry too often goes with harvesting. Daylight is at a premium, corners are often cut to finish up jobs and it's hard to keep track of children who move with lightning speed and want to be in the midst of farm activity.

The macho independence associated with farm life is evident in that no men have consented to be interviewed for Rosenblatt's study. No one who has lost a child to an accident has wanted to talk about it, either. Of the women who have agreed to be interviewed, at least one mentioned doing it "if anyone could benefit from the experience."

According to a 1989 Iowa State University study with which Rosenblatt is familiar, 67 percent of those responding said they had changed their safety practices as a result of learning about someone else's farm accident. Eighty-three percent of the respondents knew someone who had a serious farm accident injury. Seventy-three percent had worked where they felt air quality affected their breathing. Sixty-eight percent had had a close call--something that could have resulted in a serious accident. Sixty percent had not used agricultural chemicals they thought were too dangerous. Fifty-eight percent used agricultural

chemicals that they thought affected their health in some way (made them cough, itch or tingle). Forty-nine percent had helped a farmer do chores because that person or someone in the family had a farm accident, and 30 percent had helped someone get medical care after a farm accident. (The study was based on 2,016 usable questionnaires.)

Nearly 70 percent of farm accident victims in the Iowa study were farm operators. Other victims were spouses, children, other family members or employees. The Iowa farm operators ranked insecticides as very hazardous among the health and safety hazards in farming, followed by augers, confinement building air quality, herbicides, grain dust, front-end skidloaders, balers, combines and tractors, in that order.

Paul Lasley, extension sociologist at Iowa State University summarized this, the 11th Iowa Farm and Rural Life Poll which has been conducted since 1982, Rosenblatt says. The safety questions were included this year as part of a cooperative effort between Rosenblatt and Lasley.

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AEA,BSS,CE0,V1,V2,V4,V7,E4,E5

NAGR3179

News and Information

September 14, 1989

MSC
0-2-7p

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

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

KEEP NEW CORN MARKETS IN PERSPECTIVE

South Korea, Taiwan and Mexico are "good news" emerging markets for U.S. corn. "These are high-quality markets with stable growth trends," says Stanley Stevens, grain marketing economist with the University of Minnesota's Extension Service.

But we need to keep things in perspective, he adds. Growth in these markets amounts to less than 1 percent of the U.S. corn crop per year. "By most estimates, U.S. production is growing by more than this just from normal yield increases."

So it's hard to make the case that new markets will do much more than absorb some of the expanding U.S. corn production potential, Stevens says.

About half of the improvement in world corn trade since 1985 can be explained by these new markets. Most of the other half is due to increased Soviet demand.

But the Soviet market is risky, say Stevens and coworker Richard Shane of South Dakota State University. In the short run, the Soviet market varies with their weather. In the long run, it will be determined more by political reform.

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Stevens spoke Sept. 11 at an Ag. Outlook conference on the University of Minnesota's St. Paul campus. More information on the corn and other coarse grains outlook is available from county extension offices.

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AEA,BSS,CEO,A1,F1,V2

NAGR3182

News and Information

September 14, 1989

MSC
JFZ/p

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

Source: Robert Wisner
515/294-6780
Writer: Jack Sperbeck
612/625-1794

OILSEED PRICES SHOULD RISE IN LATE WINTER, SPRING

Soybean, flaxseed and sunflower seed prices should rise slowly this fall.

The greatest potential for significantly improved prices should come during the spring 1990 fieldwork season, says Robert Wisner, extension economist at Iowa State University.

Oilseeds prices dropped sharply this summer due to improving crop prospects. While the lower prices are discouraging to farmers, Wisner says several positive developments may lead to higher prices for at least limited time periods in the next year or two.

Most important is that U.S. and world soybean carryover stocks are modestly below the peak level of two years ago. Another positive factor is political and economic changes in eastern Europe and the USSR, which could lead to increased priority for consumer meat supplies. This would help strengthen export demand for U.S. soybeans and soybean meal in the next few years.

Also, 1989 West European rapeseed and sunflower crops will be moderately below a year earlier, and Canadian canola plantings may decline in 1990 due to strong competition from wheat.

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Reduced carryover stocks mean farmers in most areas should have no trouble finding a place to store this year's crops. "Early indications are that storage capacity in the Upper Midwest may exceed total grain supplies by 15 to 20 percent or more. In some areas, excess capacity may lead to a small reduction in storage charges," Wisner says.

He expects the Iowa-Minnesota average farm price for soybeans for the September 1989-August 1990 marketing year to be about \$5.60 to \$5.70 a bushel, or 21 to 23 percent below a year earlier. This is based on a 1.90-billion-bushel U.S. crop.

Each 50-million-bushel change in the final U.S. crop size from the 1.90-billion-bushel level could move the season average price about 30 cents in the opposite direction, Wisner says.

He spoke at the Ag Outlook conference on the University of Minnesota's St. Paul campus. More detailed information is available in the "1990 Ag Outlook" report, available from county extension offices.

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AEA,BSS,CEO,A1,F1,V2

NAGR3183

News and Information

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

September 14, 1989

Source: Harlan Hughes
701/237-7380
Writer: Jack Sperbeck
612/625-1794

FEEDER CATTLE PRICES ARE BEING BID UP

Strong feeder cattle prices mean that cattle feeding profits will remain low, agricultural economists say.

Choice steer prices in Minnesota and the Dakotas are expected to average in the mid-to-high \$70s this fall. But despite these high slaughter cattle prices, cattle feeding margins are likely to remain low as potentially lower feed costs are currently being bid into feeder cattle prices.

Finishing yearling steers off grass this year projects to earn a \$24 return to labor, management and facilities. But even with a projected total cost of gain of 55 cents per pound, profit projections are low and the price risk is high.

For cow-calf producers, this may be a year when it pays to sell calves at weaning, says Harlan Hughes, economist at North Dakota State University. Hughes spoke Sept. 11 at the Ag Outlook conference on the University of Minnesota's St. Paul campus.

Cattle producers have been reducing the nation's cattle herd since 1982. But a new price cycle is in place to motivate cow-calf producers to expand the nation's herd, say Hughes and

Gene Murra of South Dakota State University.

Current projections are that the nation's cow herd will build for the next four to five years, with beef and dairy cow numbers peaking around 45 million in the mid-1990s.

If the nation's cow herd is rebuilt slowly as predicted, bred cow prices should remain strong for the next few years. Producers who need to buy back cows liquidated during the 1988-89 drought to reduce income taxes will be facing higher cow prices.

But owners of existing, high-equity beef cow herds should expect to earn high profits from their herds over the next few years.

More information is available in the "1990 Ag Outlook" report, available from county extension offices.

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AEA,BSS,CEO,A1,A2,V2

NAGR3186

News and Information

September 14, 1989

M 10 3 427
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

Source: Robert Cropp
608/342-1393
Writer: Jack Sperbeck
612/625-1794

DAIRY INDUSTRY FACES UNCERTAINTY, ECONOMIST SAYS

The dairy industry faces more uncertainty than at any time during the past decade. The reason: the current milk supply-demand situation has pushed milk prices well above the government support price, says Robert Cropp, University of Wisconsin extension economist.

Cropp spoke Sept. 11 at an Ag Outlook conference on the University of Minnesota's St. Paul campus.

Since 1979, manufacturing milk prices have stayed fairly close to and allowed changes in the support price. "The current supply-demand balance is a very good situation--one which dairy policy has been striving for since 1980," Cropp says.

"Yet, market forces can lead to sharp fluctuations in dairy product prices and farm milk prices. As a result, there's considerable uncertainty and a wide range of opinions as to milk production, consumption and farm milk prices for 1990 and beyond."

The 1988 drought had a big impact on Wisconsin and Minnesota dairy producers, who raise all their own forage and most of their grain. Forage shortages and high prices forced them to reduce the size of their herds by 1.9 and 3.8 percent, respectively.

Page 1 of 2

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

This compared to a reduction of less than 1 percent for the United States.

Less production in the two states resulted in just 0.8 percent more milk being produced in the nation during the first six months of 1989, compared to a year earlier. "It now appears that 1989 production will total around 146.5 billion pounds, up less than 1 percent from 1988," Cropp says.

With a tight supply-demand situation and no government stocks, prices should continue to rise during the fall. Cropp says the Minnesota-Wisconsin (M-W) price could reach about \$13 by November. Farm milk prices for 1989 should average 70 to 80 cents higher than a year ago.

He thinks the milk supply-demand situation for 1990 will keep farm milk prices above the support price. "Here is where there are major differences of opinion," he says. "In my opinion, the base M-W price could fall from around \$13 per hundred in late 1989 to around \$10.05 to \$10.35 by April or May of 1990."

Even with this drop, the M-W price would remain 20 to 50 cents above the support price. The M-W price could increase seasonally around 60 cents, peaking at \$10.65 to \$10.95 per hundred by November 1990. These price changes would result in an average milk price from 90 cents to \$1.20 per hundred lower than for 1989 and 15 to 40 cents lower than for 1988.

More information is available in the "1990 Ag Outlook" report, which is available from county extension offices.

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News and Information

September 14, 1989

MCC 6/27p
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

Source: Larry Jacobson
612/625-9733
Writer: Joseph Kurtz
612/625-3168

CONSIDER MORE THAN COST BEFORE REMODELING SWINE BUILDING

If you need a better building for your hogs, should you remodel an existing building or build a new one?

There are four main factors to consider in making this decision, according to Larry Jacobson, extension agricultural engineer at the University of Minnesota: the location of the existing building, its structural soundness, its compatibility to other swine facilities and the economics of remodeling versus new construction.

"Don't remodel a facility that is located on the side of the farmstead away from other swine buildings or in a poorly-drained area," Jacobson advises. "Also, don't put your swine production in an old barn just because it's still standing. The value of a remodeled unit usually represents only a small fraction of the total cost of future facilities."

In terms of structural soundness, a building needs a good foundation, solid walls and an adequate roof. "Without these, it's a very poor candidate for retrofitting," says Jacobson.

"Remodeling costs are high enough without having to repair cracked

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foundations, rotted walls and leaky roofs."

Avoid basing the size of a swine facility on the available space in an existing building, says Jacobson. If you need a larger building than the existing structure can accommodate, it's better to either build a new unit or look at other facilities.

The existing structure also needs to be compatible with its intended use after retrofitting. A machine shed works best for finishing or gestation, since it is easy to modify to natural ventilation and lightly insulate. A dairy barn is better for converting into farrowing and nursery units, since mechanical ventilation and waste handling systems are easier to incorporate.

Jacobson says most people underestimate the cost of materials and labor involved in remodeling. "Adding an extra 10 percent to the overall remodeling estimate gives a more realistic cost figure for the retrofitting job," he says. "As a general rule, the remodeling expenses should not exceed one-half to two-thirds of the cost of a comparable new unit."

Jacobson notes that in some cases, the only benefit to remodeling is to save the cost of the building shell. This is a relatively small percentage of the total building system, he adds.

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AEA,BSS,CEO,V1,V2,P1

NAGR3178

1000/0627

News and Information

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

September 14, 1989

Source: Tom Milton
612/624-5307
Writer: Richard Sherman
612/625-3154

TIMBER BRIDGES COULD BE PARTIAL SOLUTION TO NATION'S BRIDGE CRISIS

If you've ever driven across a timber bridge, you've experienced a warmth and rustic charm seldom found on today's roads. Of course, a bridge that enhances the beauty of a wooded area and is attractive to tourists is valuable in its own right, but can it be as practical as one built of steel and concrete?

Surprisingly, the answer is "yes," says Tom Milton, forest products specialist with the University of Minnesota's Extension Service. Pound for pound, wood is stronger than steel or concrete, and using modern treating methods, wood can be protected from decay for more than 50 years. In many situations, timber bridges can be designed of native species and built by local workers at cost savings averaging 20 to 40 percent.

Thousands of bridges nationwide need replacement. If local decisionmakers can learn the advantages of timber bridges and builders can learn the latest techniques in their construction, timber bridges may become the answer to the replacement problem.

An upcoming workshop, Minnesota Native Timber Bridge Design, is for builders, decisionmakers, engineers and others who want to learn more about the timber bridge alternative. The workshop will

be held Sept. 21-22 at the Moose Lodge in Baudette, Minn.

The workshop will begin with overviews of such topics as bridge replacement needs and construction opportunities and go on to include new bridge technologies, treatment requirements, use of native species such red pine or red oak, fabrication needs, construction methods and a trip to a newly completed bridge designed by Bruno Frank. Eric Geisler of the Minnesota DNR and Terry Webber of the Headwaters RC&D will conduct the workshop.

For more information about registration call (612) 763-7433.

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CEO,V5,V6,V8,H3,P2

NNRD3189

News and Information

September 14, 1989

100
2007

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

Source: Ken Egertson
612/625-5283
Writer: Jack Sperbeck
612/625-1794

CHANCES FOR HOG PROFITS LOOK BETTER IN LATE 1990

Most hog producers lost money from mid-1988 to mid-1989. And although some farrow-to-finish producers had small profits in July and August, negative returns will return this fall, say marketing economists with the University of Minnesota's Extension Service.

Losses will continue for feeder pig operations this fall, says Kenneth Egertson, who spoke Sept. 11 at the Ag Outlook conference on the University's St. Paul campus.

By the last half of 1990, price conditions should look more favorable, assuming that producers reduce winter and spring (1990) farrowings. "Profit prospects will depend not only on hog prices, but also on feedgrain prices," Egertson says.

"If we assume that feedgrain prices will hold at projected early 1990 levels, profits should return to hog producers in the second half of 1990. Profits should strengthen even more into 1991."

Egertson and coworker Warren Sifferath suggest these management tips:

--Profits at heavier weights change quickly as weight discounts and feed costs change. Watch hog weight discounts and

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premiums closely, relative to costs of putting on additional weight.

--Watch for contracting possibilities, especially for quarters when cash prices are expected to be low. Set realistic profit goals and be ready to act if prices reach these goals.

--Hog producers will have to continue to reduce costs and improve quality to be competitive. "This is a good time to adopt cost-saving ideas and cull poor-quality breeding stock," Egertson says.

--Belt tightening makes sense during tight-margin times. This includes delaying capital purchases, cutting frills and finding ways to get more out of the system.

More information is available in the "1990 Ag Outlook" report, available from county extension offices.

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AEA,BSS,CEO,A1,P1,V2

NAGR3185

News and Information

September 14, 1989

M-106427

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

Source: Matt Welbes
612/625-5737
Writer: Evelyn Anderson
612/624-3770

NEW 4-H PROGRAM HOPES TO INCREASE BICYCLE COMMUTING

The next time you're tied up in rush hour traffic, consider this: 12 percent fewer cars would be on the road if everyone who was able to commute by bicycle did so. And if even 2.4 percent of Twin Cities drivers switched to bikes, ozone-depleting carbon monoxide emissions would be cut by five percent.

Those figures prompted the 1989 Minnesota Legislature to grant \$57,000 to Minnesota 4-H Youth Development for a program to promote bicycle commuting, and thus reduce dependence on cars in the metropolitan area.

The one-year program, which starts this month, expands the University of Minnesota Bicycle Promotion Program to reach business as well as University commuters. It will help Twin Cities municipalities form bicycle advisory committees and inform commuters about biking to work.

"One of the biggest barriers potential bicycle commuters face," according to program coordinator Matt Welbes, "is a lack of commuting information, such as what roads are best for bicycling, how to dress for biking to work and where to find the most secure bike parking." To provide such information, the project will

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develop materials and sponsor workshops and a media campaign, including a bike-to-work day.

Welbes says bike commuters find advantages beyond energy conservation. Biking provides low-stress aerobic exercise. Operating a bicycle costs about two percent of the cost of owning and operating a car, not counting the benefit of free, close-in parking. For urban commutes of three miles or less, bicycling frequently is faster than driving a car and walking from a parking space.

"Best of all," Welbes says, "bicycling is fun and can actually reduce stress." He points out that 2.5 million Americans already ride their bicycles to work.

Money for the Legislative grant came from the Stripper Well Oil Overcharge Fund, created from fines levied on a company that violated federal oil pricing regulations. The funds are held in escrow and distributed by the Legislature for energy conservation programs.

Minnesota 4-H Youth Development, the state's largest out-of-school educational program, is part of the University's Extension Service. More than 100,000 young people participate in the 4-H bicycle program.

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CE0,V7,E3,Y

N4-H3190

News and Information

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

September 14, 1989

Source: George Marx
218/281-6510
Writer: Joseph Kurtz
612/625-3168

CATTLE DO WELL ON BARLEY DRIED DISTILLERS GRAIN

Young dairy calves and Holstein beef steers perform well on a diet containing barely dried distillers grain, a University of Minnesota study has found.

Barley dried distillers grain (BDDG) is a relatively new feed that results from the production of ethanol. Although corn, rye and sorghum are the grains most often used for ethanol production, the availability and lower cost of barley in the Upper Midwest has made it competitive as a source of carbohydrate for fermentation.

The starch from the grain goes to make the alcohol. All of the hull and most of the protein remain behind in the by-product, which is BDDG.

George Marx, animal scientist at the University of Minnesota's Northwest Experiment Station, Crookston, evaluated BDDG as a protein supplement for young dairy calves and finishing Holstein steers. In one trial, he compared two starter rations for preweaned calves, both containing 17 percent crude protein. One ration contained 10 percent soybean meal and 30 percent BDDG as sources of protein. The other contained 16 percent soybean meal but no BDDG.

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"During the four-week feeding period, grain intake and gains were similar for both groups," Marx said. "Health problems were minimal for both groups."

In another trial, Marx fed the same rations to two groups of weaned calves for 16 weeks. All of the calves also received as much haylage as they would eat. "Performance on BDDG and soybean meal was similar and satisfactory with this age group of calves," said Marx.

In a 140-day feeding trial, Marx compared two groups of Holstein steers getting corn silage and dry barley. For one group, BDDG replaced half the barley. The group on BDDG had slightly better feed efficiency, consumed more forage and gained slightly faster than the other group, Marx reported. However, the differences were not statistically significant. Also, carcass traits were virtually identical for the two groups.

"In these trials, BDDG performed as well as soybean meal and was a less expensive source of protein in the diet," Marx concluded.

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AEA,BSS,CEO,V1,V2,A2,D,N2

NAGR3188

News and Information

September 14, 1989

10-23p
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

Source: Cynthia Ash
612/625-7022
Editor: Mary Kay O'Hearn
612/625-2728

START THIS FALL TO CONTROL NEXT YEAR'S PLANT DISEASES

Several little jobs performed this fall could save substantial time and money and prevent plant loss next year, says Cynthia Ash, assistant plant pathologist with the Minnesota Extension Service.

First, plan to remove all plant material including weeds from the vegetable garden and annual flower bed after harvest. This removes the initial sources of inoculum for disease development next spring.

Cut back perennials, rake out fallen leaves and mulch with clean straw. Apply a dormant application of liquid lime sulphur to rose bushes with a history of black spot and to raspberries with leaf spot or cane blight problems (see label for directions).

Lastly, she says, "Plan to spend some time this winter browsing through nursery catalogs. Select disease-resistant plant material for your garden and landscape and be sure it is fully hardy for the area where you live."

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I2,V7,V8

NAGR3162

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News and Information

MSC
0623p

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

September 18, 1989

Source: Jim Linn
612/624-4995
Writer: Joseph Kurtz
612/625-3168

HIGH-MOISTURE CORN IS GOOD FEED FOR DAIRY CATTLE

Many dairy producers will soon be harvesting a new supply of high-moisture corn for their cows. Producers can get the most value from this crop by harvesting, storing and feeding it properly, according to Jim Linn, extension dairy scientist at the University of Minnesota.

"Well-preserved high-moisture corn is an excellent, palatable feed and will support good milk production," says Linn.

For corn going into sealed or oxygen-limiting silos, Linn recommends harvesting and storing corn when the kernel moisture is 26-28 percent. For stave silos, the moisture level should be 28-30 percent. Linn says the overall moisture level of ear corn will be about five percentage units higher than the kernel moisture.

"The lower-moisture corn (26-28 percent) tends to feed better, but if it gets drier, you can have problems with preservation," says Linn. "On the other hand, feeding corn that is too wet may result in depression of milkfat."

Linn recommends coarse processing or grinding for either shelled or ear corn going into a stave silo. Shelled corn should keep well in an oxygen-limiting silo without processing.

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

Does high-moisture shelled corn or ear corn make better feed for dairy cows? "Research from Wisconsin has shown equal milk production when properly ensiled shelled and ear corn are fed at the same level on a dry matter basis," says Linn. "The advantage for ear corn is that the cob contains some highly digestible fiber, offering an opportunity to substitute some fiber carbohydrate in place of starch."

Linn adds that the cob portion of the corn may be beneficial in feeding programs where fiber levels in the diet are minimal or just adequate.

Because high-moisture corn is fermented when fed, the protein in the corn is digested faster than the protein in dried shelled corn, says Linn. In other words, protein degradability is higher in high-moisture corn. Linn says producers should consider this in formulating a protein supplement.

The palatability of high-moisture corn will be highest if you keep it fresh. "With an upright silo, you need to feed off a minimum of two inches per day during the winter to keep the feed fresh," says Linn.

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AEA,BSS,CEO,V1,V2,D

NAGR3191

News and Information

100-427p
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

September 21, 1989

Source: Jane Stevenson
612/625-6232
Writer: Anne Lewis
612/625-7793

CONFERENCE ON CHANGES FACING RURAL EDUCATION WILL BE NOV. 13-14

Rural education in the Upper Midwest is undergoing rapid and often wrenching change. Population is dwindling and the tax base is eroding, yet schools must prepare students for the challenges of the 21st Century.

These and other crucial issues facing rural school districts will be discussed Nov. 13-14 at a public policy program at the Holiday Inn in Fargo, N.D.

The program will encourage dialogues between speakers, many of whom are nationally known educators, and conference participants, who may be administrators, teachers, school board members, parents or local leaders.

The conference, called "Restructuring the Upper Midwest: Implications for Rural Education," is being sponsored by the University of Minnesota and North Dakota State University and is partially funded by a W. K. Kellogg public policy grant.

Participation will be limited to 125, half chosen from Minnesota applicants and half from North Dakota. Preference will be given to school district "teams" (e.g, principal, teacher, parent). Cost is \$65 before Oct. 30 and \$80 after that date. For

Page 1 of 2

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registration materials, call (612) 625-8198 or write
EDS/Registrar, University of Minnesota, 405 Coffey Hall, 1420
Eckles Ave., St. Paul, MN 55108.

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CEO,14,E1,E5

NHEC3192

News and Information

MBC
0827p

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

September 21, 1989

Source: Dale Haggard
612/625-4273
Writer: Joseph Kurtz
612/625-3168

PRECONDITIONING RESULTS IN HEALTHIER FEEDLOT CATTLE

Healthy cattle in the feedlot and less death loss! Those are the main benefits when cow-calf operators precondition their calves. In the long run, that benefits both calf producer and feedlot operator, according to Dale Haggard, extension veterinarian at the University of Minnesota.

"All calf producers should precondition," says Haggard. "It's really not much more than processing, except that the owner and a veterinarian specify on a written certificate what has been done to the calves."

Haggard says studies have shown that 20-30 percent of nonpreconditioned calves require treatment for disease during their first 30 days in the feedlot. Preconditioning reduces that to 5 percent. Death loss during the same period drops from over 2 percent to less than 0.5 percent with preconditioning.

"Healthier animals are an obvious advantage to the feedlot operator," says Haggard. "Since preconditioned calves are more valuable, they should bring a better price for the calf producer. And even if this doesn't work out in every specific situation, calf producers will suffer in the long run if they provide

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unhealthy animals to feedlots."

Haggard says a preconditioning program usually includes dehorning, castration, vaccination and treatment for parasites.

"Certified preconditioning does not necessarily mean that calves are completely processed," he points out. "The certificate indicates exactly what has been done to process the calves. The feedlot operator and his veterinarian can use it to determine if additional processing is necessary."

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AEA,BSS,CEO,V1,V2,A2

NAGR3196

News and Information

MCS
07-27p

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

September 21, 1989

Source: Bill Lazarus
612/625-8150

Writer: Joseph Kurtz
612/625-3168

Editors, news directors: Please use this during October Pork Month.

PORK PRODUCTION IS MAJOR MINNESOTA INDUSTRY

The importance of pork production comes into national focus each fall during October Pork Month. Minnesota's producers sold over 1.7 billion pounds of pork in 1988, according to Bill Lazarus, extension agricultural economist at the University of Minnesota.

"Minnesota ranks third in the United States in the value of hogs marketed," he says. "In 1988, Minnesota producers sold hogs valued at \$755 million at the farm level. This does not take into account the value added to pork products during processing."

Lazarus says nearly all of Minnesota's hog producers are family farms. Their total, about 16,500 farms, represents about one of every six Minnesota farms.

But swine producers are changing. "Farms producing hogs are becoming fewer, larger and more specialized," says Lazarus.

While the number of swine operations has decreased about 20 percent in the past five years, the number of hogs on Minnesota farms has stayed roughly constant. In fact, that number--between four and five million head--has remained relatively constant for

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

over 30 years.

Minnesota farms have about 8.5 percent of the U.S. hog inventory. That percentage has been increasing slowly as hog numbers have decreased in other states.

The 1982 Census of Agriculture showed that most Minnesota swine operations were small. About 650 farms had 1,000 or more hogs and pigs on hand. Only 126 farms had 2,000 or more hogs.

Pork production accounts for 15 percent of farm cash receipts in Minnesota. Hogs are the number two producer of cash farm income in the state, behind milk.

About three-quarters of Minnesota's swine operations have breeding herds. They either grow hogs to market size or sell feeder pigs for finishing on other farms. The rest of the operations grow and finish feeder pigs purchased elsewhere.

Lazarus says there are good reasons why the Minnesota swine industry became established and has prospered through most of this century. "Minnesota has some important advantages for producing pork," he points out. "There is a plentiful supply of competitively priced feed. Minnesota farmers have a wealth of expertise in raising hogs. Also, seasonal labor demands for hogs fit well between peak periods of crop work, although this is becoming less important with modern year-round confinement swine facilities."

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AEA,BSS,CEO,V1M,V2M,V7,A1M,P1M

NAGR3197

News and Information

September 21, 1989

MSC
9/27p
Educational Development System
Minnesota Extension Service
433 Coffey Hall
University of Minnesota
St. Paul, Minnesota 55108

Source: Frank Pflieger
612/625-6290
Writer: Sam Brungardt
612/625-6797

BEDDING PLANT CONFERENCES SLATED FOR 3 NORTHERN MINNESOTA CITIES

Conferences that will update bedding plant producers will be held in Duluth, Brainerd and Detroit Lakes, Minn., the first week of October. Locations and dates for the conferences are the Park Inn International in Duluth on Oct. 3; the Elks Lodge in Brainerd on Oct. 4 and Bergen's Greenhouse in Detroit Lakes on Oct. 5.

The programs, which will begin with registration at 8:30 a.m., will be similar at all three locations. They will cover disease and insect problems of greenhouse plants, plant growth regulators, use of temperature to control plant height, ground water quality issues and new bedding plant varieties. Each of the conferences will conclude with a 3:30 p.m. tour of a local greenhouse operation.

Fee for the Duluth conference will be \$13 (participants will receive a notebook, lunch, coffee and rolls). The fees for the conferences in Brainerd and Detroit Lakes will be \$3 and \$2, respectively, for coffee and rolls.

The 1989 Northern Minnesota Bedding Plant Conferences are being sponsored by the Minnesota Extension Service of the University of Minnesota and J. R. Johnson's Wholesale, St. Paul.

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AEA,BSS,CEO,V8M,L1M

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NAGR3198

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MCC
0827

News and Information

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

September 21, 1989

Source: Deborah Brown
612/624-7491
Editor: Mary Kay O'Hearn
612/625-2728

FACT SHEET PROVIDES GUIDELINES FOR STORING TENDER BULBS

Many summer-flowering bulbs are not winter-hardy in Minnesota. Gladioli, dahlias, cannas and calla lilies are among the bulbs that must be dug up and stored indoors over winter.

Usually these bulbs are dug up immediately after the tops dry or are damaged by frost. Many require a curing process in which they are dried in a warm location before being placed in long-term cool storage, explains Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

For more information about overwintering tender bulbs, ask your county extension office for a copy of item AG-FS-1117, "Storing Tender Bulbs and Bulblike Structures."

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I2M,V7,V8M

NAGR3163

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News and Information

September 21, 1989

MPC
9/22/89

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

Source: Jeffrey Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

SOBBUGS, MILLIPEDES SEEK HOME, SWEET HOME IN FALL

Sowbugs and millipedes are commonly seen as the weather starts to cool. They normally live outside in moist conditions, hiding under leaf litter and other plant debris. In the fall they often head for homes and other buildings as they seek winter shelter, says Jeffrey Hahn, assistant entomologist with the University of Minnesota's Extension Service.

They normally enter homes through cracks in the foundation and are frequently found in basements and ground level floors. Sowbugs and millipedes do not eat clothes or food and are harmless to humans, he adds.

Most sowbugs and millipedes die shortly after entering buildings because it is too dry. "If you see consistent numbers that remain alive, it means a too damp area is allowing them to survive," says Hahn. Reducing the humidity often results in the death of most sowbugs and millipedes.

To reduce the number that migrate indoors, Hahn says you can also caulk cracks in the foundation. Rake up leaves and remove other decaying vegetation close to the house as another

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preventative measure. This reduces the number of hiding places near the house and provides less opportunity for them to get inside.

A temporary insecticide barrier can be sprayed around the foundation and ground in a 5-foot band using chlorpyrifos or diazinon. Apply sprays when sowbugs or millipedes are first noticed in the fall.

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I2,I4,V7,V8

NAGR3173

News and Information

September 21, 1989

MSC
a.k.a. 27p

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

Source: Cynthia Ash
612/625-7022
Editor: Mary Kay O'Hearn
612/625-2728

FUNGUS LIKELY TO BE AMONG US IN FALL

With fall rains and irrigation, many fungi will produce their reproductive structures, commonly called mushrooms or conks. Most of these fungi do not cause plant diseases but are organisms which attack weak and dead plant material. "Actually, they help to recycle plant material," says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service.

Some of these mushrooms are edible and quite tasty, while others are tasteless and a few are poisonous. Ash warns, "If you plan to collect wild mushrooms, be sure you identify every one of them. Otherwise, just enjoy their beauty without picking them." If they occur where children or pets might eat them, they can be removed by picking or breaking up with a garden rake.

A closely related fungus called a slime mold has also been abundant this summer, Ash says. This fungus appears suddenly, usually in the lawn, on wood chips or in strawberry patches. It is usually described as a foamy, tan-to-gray substance which may move up the outside of the plant. It is wet at first but quickly dries into a powdery mass of spores. Since this fungus is not a plant pathogen, no control is necessary. It can be easily washed off plant material with a garden hose.

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I2,V7,V8

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NAGR3174

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

News and Information

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

September 21, 1989

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

TAKE SOIL SAMPLES NOW FOR SPRING ALFALFA SEEDINGS

If you're planning to seed alfalfa next spring, collect soil samples now to determine lime needs.

Lime must be incorporated for top effectiveness. "You'll get little benefit by applying lime to the surface of established alfalfa stands," says George Rehm, soils specialist with the University of Minnesota's Extension Service.

"So it makes sense to sample now, apply any lime you need this fall and incorporate it before seeding. Early soil sampling allows time for this," Rehm says.

Don't guess at the amount of lime you need. Analyzing a soil sample gives you an accurate recommendation for lime use. County extension offices have soil sample bags and easy-to-follow instructions.

"Don't get caught in the time bind next spring. Take samples now and get a head start on liming for alfalfa," Rehm advises.

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AEA,BSS,CEO,V1,V2,F1

NAGR3194

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News and Information

September 25, 1989

MSC
9627p

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

Source: Jerry Wagner
612/625-1978
Writer: Sam Brungardt
612/625-6797

PROCEEDINGS OF DAIRY SHEEP, DEER FARMING SYMPOSIA ARE AVAILABLE

Farmers, extension agents, researchers and others interested in alternative animal enterprises will want the proceedings of two symposia--on dairy sheep, and on deer farming--held this summer at the University of Minnesota.

The North American Dairy Sheep Symposium had experts from the United Kingdom, France, Canada, Mexico and the United States presenting information on producing sheep milk and manufacturing sheep milk products. They spoke on the economics, opportunities and strategies of starting a new business. Their presentations, and summaries of recent research, are included in the 192-page book.

The 46-page Deer Farming Symposium publication includes the presentations of New Zealand scientist Geoff Ascher, the internationally recognized authority on red and fallow deer. Other presentations discuss deer biology, behavior, health, reproduction, nutrition, handling and equipment; the profit potential of a deer farming operation; and regulations on the slaughter and sale of deer.

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Both publications can be ordered from Extension Special Programs, 405 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108. Orders should be accompanied by checks made payable to the University of Minnesota.

Cost of the North American Dairy Sheep Symposium proceedings for residents of the United States and Canada is \$17 a copy, postpaid. Cost to overseas purchasers is \$19, including airmail delivery.

The Deer Farming Symposium proceedings costs \$11, postpaid, for both U.S. and foreign orders.

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AEA,BSS,CEO,V1,A1,D,L3,N3

NAGR3200

MSC
afzfp

News and Information

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

September 25, 1989

Source: Bill Lazarus
612/625-8150
Writer: Joseph Kurtz
612/625-3168

Editors, news directors: Please use this during October Pork Month.

MINNESOTA SWINE INDUSTRY HAS \$344-MILLION IMPACT, EMPLOYS 25,200

The swine industry in Minnesota provides \$344 million in annual income and wages to the state's economy.

That's what Bill Lazarus, University of Minnesota extension agricultural economist calculates in determining the impact of Minnesota's swine industry.

Lazarus uses a statistical model developed at the University to determine that \$344-million figure. He makes that calculation now because October is Pork Month.

"There are 16,500 farms producing hogs in the state," says Lazarus. "Most of these farms produce crops and may have other livestock as well, so the swine enterprises employ only part of the operators' time. The swine enterprises on these farms provide the equivalent of about 6,700 full-time jobs."

In addition, says Lazarus, about 18,500 persons are employed providing supplies and services to pork producers and in meatpacking related to hogs. This brings Minnesota's total employment from the swine industry to 25,200.

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AEA,BSS,CEO,V1M,V2M,V7,A1M,P1M

NAGR3199

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

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

September 28, 1989

Source: Cynthia Ash
612/625-7022
Editor: Mary Kay O'Hearn
612/625-2728

SOME FUNGI ATTACK ONLY SURFACE OF APPLES, NOT THE FLESH

Some fungi that attack apples in the orchard result in superficial blemishes but do not affect the flesh of the fruit. Examples are sooty blotch--cloudy or smudge-like spots--and flyspeck--groups of black dots.

These diseases usually do not appear until late summer or early fall, says Cynthia Ash, assistant plant pathologist with the University of Minnesota's Extension Service. Their development is encouraged by moderate temperatures (65-75 degrees F), high humidity and abundant moisture. Symptoms show up on the fruits about 30 days after infection.

"Since moisture and high humidity favor development of the disease, judicious late winter pruning, plus mowing grasses and weeds in the area around the trees will help to improve air circulation," Ash says.

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I2,H1,V7

NAGR3172

Page 1 of 1

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM

405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

NEWS/ INFORMATION

September 28, 1989

Source: Stan Stevens
612/625-8770

Writer: Jack Sperbeck
612/625-1794

CORN PRICES SHOULD IMPROVE MODERATELY IN FIRST HALF OF 1990

Corn prices will probably range from \$2.20 to \$2.50 a bushel, basis December futures, until the end of 1989. Then prices should move moderately higher during the January-to-June 1990 period, says Stan Stevens, marketing specialist with the University of Minnesota's Extension Service.

"A demand-side surprise could move the market sharply higher. The most likely source would be an unusually large demand by the Soviet Union," he says.

There should be enough basis improvement to justify on-farm storage, but probably not enough to cover elevator storage costs, Stevens says.

Emerging markets in South Korea, Taiwan and Mexico are good news for U.S. corn producers. But growth in these markets amounts to less than 1 percent of the U.S. corn crop, and most estimates say production is growing by more than 1 percent just from normal yield increases.

"So," Stevens says, "it's hard to make the case that new markets will do much more than absorb some of our expanding U.S. corn production potential."

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AEA,BSS,CEO,V1,V2,A1,F1

NAGR3204

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

September 28, 1989

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

SOYBEAN PRICES ARE APT TO REMAIN DEFENSIVE

Odds are that soybean prices will trade below \$6 a bushel and remain on the defensive most of the 1989 marketing year.

A severe drought in both South America and the United States could push prices to the \$10-\$12 range, says Stan Stevens, marketing specialist with the University of Minnesota's Extension Service. "But probability of a drought is about one chance in three or four," he says. "And the chance of drought in both South and North America is about one in 10."

A severe drought this winter in Brazil and Argentina could move soybean prices up to about \$8 a bushel. Prices would gradually decline into the spring and early summer.

If that scenario were followed by a serious drought in the United States in 1990, prices could move to the \$10-\$12 range before gradually declining into the fall.

But the most probable scenario is for farm-level soybean prices to approach the loan level and be below \$5 a bushel by late spring 1990.

"Corn prices should hold up better than soybean prices," Stevens says. "This suggests selling soybeans ahead of corn in most marketing schedules."

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AEA,BSS,CEO,V1,V2,A1,F1

NAGR3202

Page 1 of 1

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM

405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

NEWS/ INFORMATION

September 28, 1989

Source: Stan Stevens
612/625-8770

Writer: Jack Sperbeck
612/625-1794

WHEAT PRICES WILL LIKELY DRIFT LOWER

Wheat prices will probably drift lower over the next few years and may test the lows of 1986-87.

"Wheat prices will probably be cyclical in the next three to five years," says Stan Stevens, marketing specialist with the University of Minnesota's Extension Service. Prices will probably go no higher than the 1988-89 highs or lower than the 1986-87 lows.

World wheat trade will not increase much in 1989. And there will be increased competition from Canada, Argentina and Australia, Stevens says. U.S. wheat exports are expected to fall. U.S. and world wheat stocks could begin to accumulate again next year, Stevens says. Reasons include the 1990 wheat program (a 5 percent set-aside), more normal U.S. wheat yields and expansion in world wheat acreage.

Combined expansion in Canada, Argentina and Australia amounts to nearly one-third of what these countries withdrew earlier in the 1980s. U.S. production is also expanding.

Growth in world wheat utilization has slowed since 1987. Chinese and Indian consumption has plateaued, and other major wheat-producing nations have reached some level of saturation.

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AEA,BSS,CEO,V1,V2,A1,F1

Page 1 of 1

NAGR3203

NEWS/ INFORMATION

MSC 9A27p
MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

September 28, 1989

Source: Dale Haggard
612/625-4273
Writer: Joseph Kurtz
612/625-3168

FEEDING OPEN COWS WASTES MONEY

A beef producer who feeds an open cow through the winter is throwing money away. Fall pregnancy checking is the way to avoid this problem, according to Dale Haggard, extension veterinarian at the University of Minnesota.

"Studies have shown it costs approximately \$300 a year to maintain a beef cow," says Haggard. "About 70 percent of this is feed cost. It makes no sense to feed an open cow."

Pregnancy testing is a procedure many producers take care of at weaning. This is usually easier than handling cows an extra time while they are still on pasture.

Along with culling open cows, producers may want to get rid of cows bred late in the breeding season. Haggard says, "If you want to improve reproductive efficiency, keep cows in the herd that were bred early. If a cow drops a late calf, her heifer is also likely to calve late. Having calves early in the season is one of the keys to profitable beef production."

Producers wanting more information on checking cows for pregnancy should contact their veterinarians.

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AEA,BSS,CEO,V1,V2,A2

Page 1 of 1

NAGR3201

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 2, 1989

Source: Brian Larson
612/624-4995
Writer: Joseph Kurtz
612/625-3168

MINNESOTA EXTENSION SERVICE DEVELOPS CUSTOM FEEDLOT DIRECTORY

The Minnesota Extension Service is developing a directory of Minnesota feedlot operators who are interested in feeding cattle owned by other people.

The purpose of the Custom Feedlot Directory is to bring feedlot operators together with cow-calf producers and investors. "In the past, there has been no way to do this other than through word of mouth," says Brian Larson, University of Minnesota extension beef cattle specialist.

Larson says interest in custom feeding is high in Minnesota, with inquiries coming from cow-calf operators and bankers, among others.

Persons who own feedlot facilities and have feeding expertise, but are short on capital to buy cattle or feed, may find opportunities in custom feeding. For cow-calf producers, custom feeding provides an opportunity to retain ownership of their animals until slaughter and to benefit from the genetics of their herds.

The directory now consists of a computerized list available through county extension offices in Minnesota. Each listing

includes the feeder's name, address, telephone number, lot capacity, lot type and preferred type of cattle. Other Minnesota feedlot operators who want to be added to the directory should contact their county extension office.

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AEA,BSS,CEO,V1M,V2M,A1M,A2M

NAGR3212

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 2, 1989

Source: Deborah Brown
612/624-7491

Editor: Mary Kay O'Hearn
612/625-2728

NOW'S TIME FOR FALL HOUSEPLANT CLEAN-UP

This is the time of year when houseplants need special help.

Make a special point of cleaning your houseplants as shorter days approach with less sunlight, says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

"Plants need all the light they can get in fall and winter to compensate for those short days. When they're dirty, the layer of dust or grease interferes with light penetration to the chlorophyll within the leaves, resulting in a reduction of photosynthesis," she explains.

Small plants can be sprayed with water in the kitchen sink or laundry tub. "Just be sure to wash the undersides as well as surfaces of leaves," Brown cautions. "Fit plastic wrap over the top of the pot to prevent splashing soil all over. Larger plants could go into the shower...but you'll probably have to hop in with them."

You can also cover the soil, then tip plants upside down to swish them through a tub of water. Add just a few drops of mild dishwashing detergent to the water to help remove grease.

Large leaves should be individually supported with one hand while being wiped gently with a soft rag. Rinse the rag frequently and be careful not to wash a leaf that has suspicious-looking spots or lesions and then use the same cloth on a healthy leaf.

"Avoid leaf-shine products, both natural and otherwise. The oilier surface they leave behind simply accumulates more dust and dirt," Brown says.

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I2,V7,V8

NAGR3206

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 5, 1989

Source: Bill Wilcke
612/625-8205
Writer: Jack Sperbeck
612/625-1794

SMALL FANS MAY LEAD TO SPOILAGE WITH COMBINATION DRYING

Combination corn drying combines the speed and reliability of high-temperature drying with the energy efficiency and good grain quality of natural-air drying.

But you need adequate airflow in the natural-air drying bin to prevent corn from spoiling before it dries, says Bill Wilcke, agricultural engineer with the University of Minnesota's Extension Service.

With combination drying, you remove the top points of moisture quickly from wet corn with any high-temperature dryer. Then, the corn is transferred hot at about 21 to 22 percent moisture to a natural-air drying bin.

Wilcke says the bin should be equipped with a fan that can provide 1 cubic foot of air per minute per bushel of corn (1 cfm/bu). For typical drying depths of 15 to 18 feet, you need about one fan horsepower per 1,000 bushels of corn (1 hp/1,000 bu) to provide 1 cfm/bu.

Be careful if you try natural-air drying with higher corn moisture or lower airflow than recommended: you'll need careful management to prevent corn spoilage. "Corn in these bins is not

likely to dry to a safe storage moisture before winter, and might not dry before it spoils in spring," Wilcke says.

Watch such corn closely and feed or sell it before spring. If the corn starts to spoil, the top layers should be fed, sold or redried immediately in the high-temperature dryer to prevent large losses.

Hot corn from the high-temperature dryer loses one to two percentage points of moisture the first day in the natural-air bin as it's cooled to outdoor temperatures. After the corn is cooled, the fan is left on for four to eight weeks, or as long as it takes to dry the corn to a safe storage moisture.

Often, drying is not completed before winter sets in, Wilcke says. The partially dried corn is aerated as needed to maintain its temperature at 20 to 30 degrees F during winter. Drying is resumed in early spring.

"Natural-air drying is more energy efficient than high-temperature drying," Wilcke says. And, it produces corn with a higher test weight and lower susceptibility to breakage than corn that has been rapidly dried and cooled.

"But corn in natural-air dryers can spoil if the initial moisture content is too great," he adds. From 20 to 21 percent moisture is the recommended maximum moisture for natural-air drying in Minnesota in bins with an airflow of 1 cfm/bu. Higher moisture corn can be dried in bins with greater airflow, but you need either large fans or shallow grain depths to get enough airflow.

You don't have to wait until corn dries to 21 percent in the field if you use a high-temperature dryer before natural-air drying. Corn can be harvested earlier, when weather is better and field losses from lodged stalks and dropped ears should be less.

When corn is removed from a high-temperature dryer hot at 21 to 22 percent moisture instead of drying it to 15 percent and cooling it in the dryer, the capacity of the high-temperature dryer is increased two to three times and the kernel cracking caused by rapid cooling is reduced.

Wilcke says the recommendation of 1 cfm/bu or 1 hp/1,000 bu at a 15- to 18-ft. drying depth for 20 to 21 percent moisture corn for the natural-air portion of combination drying is solid. "This recommendation is based on many years of university grain drying research and computer simulations using more than 20 years of weather data," he says. "When the recommendation is followed, you should get corn with acceptable quality out of natural-air bins almost every year." Farmers with fans that can't provide 1 cfm/bu to full bins should use shallower grain depths or lower moisture corn to avoid potential spoilage problems, he adds.

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AEA,BSS,CEO,V1,F1

NAGR3215

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 5, 1989

Source: Deborah Brown
612/624-7491

Editor: Mary Kay O'Hearn
612/625-2728

IT'S TIME FOR FINAL FALL LAWN CHORES

Here is a list of lawn care chores that homeowners should consider doing before winter, according to Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

--Fertilize one last time, right around the end of October or beginning of November.

--Mow as long as the grass continues to put on new growth, so it doesn't mat down badly over the winter.

--Rake the lawn periodically to maintain good air circulation. Put leaves in compost piles or drop them off at municipal composting sites.

--Water thoroughly any time a week or more passes without ample rainfall.

--Do not use weedkillers once daytime temperatures are no longer in the 60s. Results will be poor, at best.

--Finally, try not to use ice-melting pellets on walks or driveways where the snow will eventually be shoveled or blown onto the lawn.

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I2,V7,V8

Page 1 of 1

NAGR3205

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 5, 1989

Source: Jerry Wagner
612/625-1978
Writer: Joseph Kurtz
612/625-3168

U OF M DAIRY GOAT CONFERENCE WILL BE NOV. 11

Dairy goats and dairy goat products will be the center of attention at a conference Nov. 11 at the University of Minnesota.

The tenth annual Dairy Goat Conference is open to all interested persons, including 4-H members with dairy goat projects. It will be in McNeal Hall on the University's St. Paul campus. Registration will begin at 8 a.m., the program will get under way at 9, and adjournment is scheduled for 4:30 p.m.

David Sherman, formerly a faculty member in the College of Veterinary Medicine at the University of Minnesota, heads the lineup of speakers for the conference. Sherman is now an associate professor in the School of Veterinary Medicine at Tufts University, North Grafton, Mass. He has done extensive research and educational work concerning dairy goat health and management and has traveled in France observing dairy goat operations there.

Sherman will discuss management and diseases of kids and milking does and provide an update on current dairy goat health issues. He will also present an overview of Coach Farm in New York State, one of the nation's premier dairy goat farms and cheese production facilities.

There will also be presentations on promoting and marketing dairy goat products, cheesemaking, how DHI works and herd health the organic way. In the afternoon, there will be 4-H workshops on feeding and housing of kids, selecting a dairy goat, and fitting and showing.

Fee for the conference is \$12 per person and \$6 for each additional person from the same family. There is no fee for a person under 18 accompanied by a fee-paying adult.

Registration and program information is available from county extension offices in Minnesota and from Extension Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108, telephone (612) 625-1214 or (800) 367-5363.

The conference is sponsored by the Minnesota Extension Service and Minnesota Farm Family Institute in cooperation with the Minnesota Dairy Goat Association.

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AEA,BSS,CEO,V1,V2,D,L3,N3

NESP3216

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 11, 1989

Source: Pat Borich
612/624-1222
Writer: Deedee Nagy
612/625-0288

U of M EXTENSION AGRONOMIST IS GIVEN DISTINGUISHED FACULTY AWARD

Neal Martin, agronomist and forage specialist with the University of Minnesota's Extension Service, received the Director's Award to Distinguished Faculty Oct. 10 at the annual extension staff development conference.

Martin joined the Minnesota Extension Service 15 years ago with responsibility for forage crop production and utilization. During his years at the University of Minnesota, he has worked with producers, agribusiness groups and faculty of other state Universities to increase production and profitability for farmers. He has obtained nearly \$200,000 in grants to study a way to computerize forage analysis, dairy rations and alfalfa and birdsfoot trefoil cultivation.

During the drought of 1988, Martin helped organize a "Hay Hot Line" to supply county agents and farmers with information on hay availability and prices. A mobile forage testing laboratory begun with Martin's leadership travels to two dozen or more Minnesota counties each year to analyze forage samples for nutritional quality. This information helps farmers make decisions on what forage to buy and what price to offer at hay auctions.

Martin has also been instrumental in the Minnesota Alfalfa Grower program. This program represents more than 50,000 acres in 46 counties and has allowed producers in the program to bring in crops that are 76 percent larger than the state average without boosting production costs beyond state averages.

A member of several national agronomy organizations, Martin is also active in the Centennial United Methodist Church in Roseville, where he lives.

The Director's Award to Distinguished Faculty is given annually to an outstanding campus-based faculty member. It carries a \$1,000 stipend through the University of Minnesota Foundation and is financed by contributions.

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AEA,CEO,DM,F1M,Se1Media

NEXT3225

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 11, 1989

Source: Pat Borich
612/624-1222
Writer: Deedee Nagy
612/625-0288

FARM MANAGEMENT EXTENSION AGENT FREEMAN IS GIVEN FACULTY AWARD

Mervin Freeman, area extension agent in farm management from Rochester, was presented the Minnesota Extension Service Director's Award to Distinguished Faculty Oct. 10 at the annual extension staff development conference.

Freeman was cited for his outstanding work, both statewide and in his home area of southeastern Minnesota, on farm management educational materials and programs. He is one of the originators of the Managing Our Farm Family Future program, which has helped several hundred Minnesota farm families stay in business through recent financial difficulties. His heavily attended series of land rental meetings held in the Rochester area each winter has helped farmers in that region draw up fair land rental agreements.

Freeman has been with the Minnesota Extension Service for 27 years, beginning as an extension agent in Douglas County before taking on the area farm management agent position for southeastern Minnesota 21 years ago. He is also president of the Minnesota Association of County Agricultural Agents and has served on the University of Minnesota Senate.

The Director's Award to Distinguished Faculty is given annually to an outstanding county- or area-based faculty member. It carries a \$1,000 stipend through the University of Minnesota Foundation and is financed through contributions.

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AEA,CEO,A1M,Z4,Se1Media

NEXT3226

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 12, 1989

Source: Sherri Wright
612/625-7246

Writer: Evelyn Anderson
612/624-3770

MARSHALL TO HOST REGIONAL TEEN PREGNANCY CONFERENCE

Professionals, volunteers and parents from southern Minnesota will gather at Southwest State University in Marshall November 29-30 to learn what they can do to reduce the incidence of teen pregnancy in their communities.

The Teen Pregnancy Prevention Conference is in response to concern about teen pregnancy in Minnesota. Nearly 5,000 babies are born to teenage mothers in the state each year. More than 60% of twelfth grade boys and girls are sexually active, half of them not using contraceptives.

The conference is especially for coalitions that want to tackle the problem of teen pregnancy in their communities-- including educators, health and youth professionals, clergy, business people, parents, volunteers, counselors, curriculum directors, school administrators, and law enforcement and social service personnel.

The conference is being sponsored by Minnesota 4-H Youth Development, Southwest State University, the Southwest Initiative Fund, Junior League of Minneapolis and the Clay County and Chisago County Teen Pregnancy Prevention Coalitions. It is funded by

grants from the Blandin Foundation and the U.S. Department of Health and Human Services.

Dr. Michael Resnick, director of research and demonstration programs at the University of Minnesota's Adolescent Health Program, will speak about factors that contribute to risk behavior among adolescents. Linda Bearinger, who is on the nursing faculty of the Adolescent Health Training Program at the University, will discuss how adolescent behavior relates to decisions about sexuality.

Representatives of teen pregnancy prevention coalitions in Clay and Chisago Counties will describe their programs' successes and problems. Workshop participants also will learn about prevention programs conducted by Minnesota 4-H Youth Development, Hazelden, and the Junior League of Minneapolis.

Registration fee for the two-day conference is \$25, including conference materials and some meals. For more information, contact Marie Lee-Rude at (507) 537-6159 or Sharon Wright at (612) 625-7246.

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CEO,V1,V8,E5,E7,Y

N4-H3213

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

NEWS/ INFORMATION

October 12, 1989

Source: Randy Cantrell
612/624-4232
Writer: Deedee Nagy
612/625-0288

MINNESOTA EXTENSION SERVICE HONORS TOURISM SPECIALIST

Larry Simonson, University of Minnesota extension tourism specialist from Grand Rapids who will retire in 1990, was honored Oct. 10 with the Distinguished Service Award from the Minnesota Extension Service. The award was made at the extension service's annual staff development conference at Brainerd.

In addition to his 30 years of service with the Minnesota Extension Service, Simonson was recognized for his recent work in developing the University's Tourism Center. He has also organized events and festivals workshops and conducted community tourism workshops and hospitality training sessions throughout Minnesota. Last year, the Minnesota Office of Tourism named Simonson Tourism Professional of the Year.

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AEA,CEO,P2M,Z2

NEXT3230

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 12, 1989

Source: Deborah Brown
612/624-7491

Editor: Mary Kay O'Hearn
612/625-2728

OCTOBER IS MONTH TO PROTECT ROSES FROM RAVAGES OF WINTER

October is the month to protect tender roses in Minnesota. "We usually start about mid-month in the Twin Cities area, earlier farther north and just a bit later to the south," says Deborah Brown, horticulturist with the University of Minnesota's Extension Service.

To the inexperienced rose grower, styrofoam rose cones might appear to be the easiest method of protection. In fact, they are probably the least reliable means of overwintering roses successfully, she notes. As the sun begins to pick up strength in late winter and early spring, the insides of those cones heat up, resulting in disease or death of the very plants they are supposed to protect, she warns.

The Minnesota tip method of rose protection allows saving the largest plants from year to year, but it is definitely the most work.

Spray the plants, then tie the canes of each plant together to make them as compact as possible, and tip them into trenches dug to the side of each. "You must loosen the soil around the roots before tipping," Brown advises. "Cover each trench with soil and

a thick layer of straw, making sure to mark the location of the rose's base and tip so you can dig them up next spring with minimal damage."

Mounding accomplishes much the same thing, but is far less work. Brown says to cut each rosebush down to about 12 inches. Then mound soil over the bushes before covering them with straw, the same as tipped roses. This works best if the roses have been planted so the graft union--the swollen area at the base of the stem where the hybrid rose was grafted to the rootstock--is planted an inch or two below the soil surface.

"The plants you mound won't be as large in spring as those that are tipped, but they often send out vigorous new canes and appear to catch up to a large degree over the growing season," says Brown.

Whatever method you choose, she adds, do plan to protect your tender roses before night temperatures dip to 20 degrees or less. Frost won't kill rosebushes, but colder temperatures certainly will.

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I2M,V7,V8M

NAGR3207

**NEWS/
INFORMATION**UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 12, 1989

Source: Geraldine Gage
612/625-5741
Writer: Jennifer Obst
612/625-2741

Editor: Call Carl Walker (612/624-3708) to obtain a b/w print or 35-mm color slide for use with this story.

WHAT DO PETS MEAN TO CHILDREN?

A Twin Cities newspaper recently sponsored a childrens' essay contest. It asked what one thing would they save in case of a fire. Some children wrote they would save a precious belonging, like a grandmother's quilt or the family Bible. But many said they would rescue their pet.

That caught the interest of University of Minnesota family social scientist Geraldine Gage, who studies the social role pets play in peoples' lives for the University's Agricultural Experiment Station. She wanted to know why these children, aged 11 to 14, considered their pets so important.

So, Gage retrieved the boxes of essays from the newspaper. They were a social science researcher's gold mine. They told her that pets were very important to their young owners' lives, but not for entirely altruistic reasons. In fact, her research suggests that many assumptions about the role of pets in the family may be more mythology than reality.

To sort the content of the essays and eliminate bias in her analysis, Gage used a computer content analysis method developed

by rural sociology professor Donald McTavish. The method analyzes every word in a text by placing the words into 127 categories.

The essays focused heavily on two categories. One involved statements about responsibility, the other referred to dependability.

"The first category included the children's statements about being responsible for the pet," Gage explains. "The second referred to the dependability of the pets' behavior, for example statements like, 'my pet is always there. It makes me feel good. It will always play with me when I want to.'"

What struck Gage was the scarcity of altruism in what they children had to say about their pets. She says, "One boy's essay talked about saving his parakeet Humphrey, because the boy was interested in the bird's development and wanted to see what the bird could learn. I thought that was a pretty sophisticated concept he was expressing. But most children talked about their pets as a sort of big three-dimensional, moving toy."

Gage calls this attitude "hedonistic utility." She says, "The children wanted to save their pet, but conditioned on the pet's behavior--because it was always there and made them feel good. The children were obviously terribly fond of their pets, and they had a great emotional investment in them. However, the hedonistic utility response is not a very advanced level of moral development." The level of moral development shown by the children was no more and no less than the norm for children of that age.

Altruism is a more advanced motivator, Gage explains. "There weren't more than three children who said they would save their pet for itself, because it is a living thing, and all living things takes precedence over nonliving things," she says.

So, it may be a myth that pets teach children to be more altruistic. "In fact, I think that a lot of what is said about pets is not true." Gage says.

One theory of moral development states that people develop empathy out of interaction. "It's hard to develop real empathy in the abstract," Gage says. "But it's not at all clear from these essays that children learn empathy from their interaction with pets.

"Right now, I'm not persuaded that kids are learning much at all from pets. The way the children described their pets in the essays was very much the same as older adolescents talk about their car.

"If parents want their children to learn to be more altruistic and to have more empathy, it might be more effective if they themselves modelled that behavior."

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AEA,BSS,CEO,V4,A3,B1,E7,N

NHEC3221

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 12, 1989

Source: Gail Skinner
612/625-3774
Writer: Judy Keena
612/625-7047

MES DIRECTOR CITES COLD CLIMATE HOUSING INFORMATION CENTER TEAM

Patrick J. Borich, director of the University of Minnesota's Extension Service, has presented the first annual Issue Team Award to the people who work with the University's Cold Climate Housing Information Center (CCHIC). Borich presented the award Oct. 12 during extension's annual staff development conference.

The award recognizes the team's outstanding contribution to extension programming that addresses an issue important to Minnesotans, and reflects the Minnesota Extension Service's focus on multidisciplinary educational solutions to problems and issues with statewide implications.

The CCHIC team, coordinated by Lewis T. Hendricks, extension forest resources specialist, is staffed by educators from the Forest Products; Design, Housing and Apparel; and Agricultural Engineering departments who bring their efforts to bear on the design and operation of energy-efficient homes in cold climates such as Minnesota's. The team also works with faculty from the University's departments of Mechanical Engineering, Civil and Mineral Engineering, Landscape Architecture and the College of Agriculture and with representatives of the building industry to develop a wide-ranged technology-transfer program including,

workshops, seminars, publications and radio and television programs.

Borich, in commending the team's dedication and teamwork, said, "The Cold Climate Housing Information Center team has served as a model of exemplary programming, reaching new audiences to address an issue vital to Minnesotans. The creativity and innovation shown by this team demonstrates the kind of energy that can be focused on a statewide problem when team members work together to bring a varied expertise to the solution."

In addition to Hendricks, CCHIC team members include Patrick Huelman and Tim Larson, extension forest products specialists; Wanda Olson, extension housing technology specialist; Bill Angell, extension housing specialist; Harold Cloud, extension agricultural engineer (retired); Jeanne Brownback, assistant to Hendricks and program leader and curriculum specialist with the Rochester Technical Institute; Lynda Ascher, project secretary; Chris Reed and Charles Delancey, forest products graduate research assistants; Sylvia Fouss, design, housing and apparel graduate student; and John Fick, agricultural engineering graduate student.

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AEA,CEO,E3M,I4M,H3M,SelMedia

NEXT3229

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 19, 1989

Source: Fred Bergsrud
612/625-9733
Writer: Jack Sperbeck
612/625-1794

BERGSRUD TO COORDINATE EXTENSION SERVICE'S WATER QUALITY PROGRAMS

"Whether you buy a pint or quart of paint thinner is an environmental decision," says Fred Bergsrud, water quality coordinator for the University of Minnesota's Extension Service.

"Many of us have something in our basement or garage that we bought too much of," says Bergsrud, who recently was named to the position. "Excess chemicals ultimately must be disposed of, and that may create water quality problems.

"We need to develop an 'environmental ethic' so we think of the environment with every decision we make. Our waste disposal habits and everyday buying decisions--such as what and how much we buy--affect water quality."

Bergsrud, who's spent his career working on water-related topics, says there are more "potential" than "real" water quality problems in Minnesota. "But we need to make changes in our lifestyles," he says. "We have the potential for big water quality problems in Minnesota. Right now we have some isolated problems, and the challenge is to learn from them."

Bergsrud, an agricultural engineer, has worked on water-related topics such as agricultural drainage, irrigation and

water quality. He's been head of the University of Minnesota's Department of Agricultural Engineering and has worked in industry and on a U.S. Agency for International Development project. He also worked with the U.S. Department of Agriculture's Extension Service in Washington, D.C., where he helped develop the national water quality initiative.

Gail Skinner, associate director of the Minnesota Extension Service, says water quality is an issue that is very important to Minnesotans. "Our efforts in water quality are expanding rapidly and we need a person to provide statewide leadership and coordination," she says.

The Minnesota Extension Service is developing water quality programs in three main areas: safe drinking water for families and communities; waste management and utilization; and impacts of agricultural practices on water quality.

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AEA,BSS,CEO,V1M,V2M,V4M,RM

NAGR3241

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 19, 1989

Source: Leland Hardman
612/625-8700
Writer: Sam Brungardt
612/625-6797

PUBLICATION MAY HELP IN ALTERNATIVE CROP DEVELOPMENT EFFORTS

"Strategies for Alternative Crop Development: Case Histories" is a publication that scientists, research directors, processors, small business developers, exporters and farmers may find helpful.

The publication includes case histories for five crops that are in various stages of commercial development as well as a discussion of opportunities and constraints on alternative crop development presented last fall at a meeting sponsored by the Crop Science Society of America and the University of Minnesota's Center for Alternative Plant and Animal Products. Included in the case histories for grain amaranth, canola, lupine, meadowfoam and kenaf are information on origin and history of the crop; impediments to production and marketing; the role of scientific advances, politics, "crop champions" and funding in development of the crop; and future prospects for the crop.

Says Leland Hardman, University of Minnesota extension and research agronomist, "We have learned quite a bit about new crop development, and we hope this case history approach will help people avoid making the same mistakes again."

Cost of the 72-page publication is \$10, including postage.
Checks, made payable to the University of Minnesota, should be
sent to Cathie Bergum, Educational Development System, 405 Coffey
Hall, University of Minnesota, St. Paul, MN 55108.

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AEA,BSS,A1,F,H2,L3

NAGR3239

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 26, 1989

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

APPLY ANHYDROUS IN FALL WHERE SOIL CONDITIONS FIT

Low anhydrous ammonia prices are good news for Minnesota farmers in areas where soil and weather conditions allow fall nitrogen applications.

Fall application of anhydrous ammonia is a good management practice where there's low potential for nitrate-nitrogen losses from the root zone. "In Minnesota, the probability of loss is low for all of western Minnesota," says George Rehm, soil scientist with the University of Minnesota's Extension Service.

Western Minnesota farmers should base rates on results of the soil nitrate test. However, this test is not a reliable predictor of nitrogen needs for south-central Minnesota. "For this part of the state, we still have to base nitrogen rate on yield goal, the soil's organic matter content and the previous crop," Rehm says.

Apply anhydrous ammonia when soil temperatures cool to below 50 degrees F. This delay in application keeps the nitrogen in the ammonium form until next spring.

"It's best to wait for one or two days after application before tillage," Rehm says. This will guarantee that ammonia will not be lost after application.

Do not apply nitrogen in fall to either sandy soils or soils that stay very wet and saturated in early spring. Avoid applying nitrogen in fall to the well-drained soils of southeastern Minnesota.

Don't increase the rate in anticipation of some nitrogen losses. "If you suspect losses from fall-applied nitrogen, don't do it," Rehm advises.

It's doubtful whether a nitrification inhibitor will be needed for anhydrous ammonia applied this fall. For nonsandy soils, inhibitors will be effective only where there is potential for nitrogen losses by denitrification. "Since there's limited subsoil moisture throughout most of the state, the potential for nitrogen loss due to denitrification is very low," Rehm says.

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AEA,BSS,CEO,V1M,V2M,F1M

NAGR3245

NEWS/ INFORMATION

October 26, 1989

Source: Jeffrey Hahn
612/624-4977

Editor: Mary Kay O'Hearn
612/625-2728

ENTOMOLOGIST OFFERS TIPS FOR KEEPING INSECTS OUT OF FOOD

Most insects that come into houses in the fall, such as boxelder bugs, are harmless. However a few, such as sawtoothed grain beetles and flour beetles, may be potential food pests.

These insects initially are drawn inside homes as they search for winter shelter, says Jeffrey Hahn, extension entomology educator with the University of Minnesota's Extension Service. "They are attracted to moisture or dried food products such as flour, cake mixes, cereal, macaroni, dried fruits, pet food and sunflower seeds," he says.

Finding these insects indoors does not automatically indicate there is a problem, especially if they are found in foodless areas. Given enough time, however, these insects probably will find and infest susceptible food.

"If you find this type of insect indoors, check dried food products for pests," Hahn advises. "Food infested with insects can be wrapped in plastic and thrown away or cold sterilized by freezing for three to seven days.

"Even if insects are not found in food, it is important that they not be given a chance to find any. Place uninfested food in

plastic containers or glass jars that can be tightly sealed. This is particularly important for food that is used only occasionally. It is also important to remove--for instance, by vacuuming--crumbs that accumulate in places such as cupboards, drawers and around appliances."

Any insects that are found can easily be removed with a vacuum cleaner. (Be sure to properly dispose of the vacuum cleaner bag.) A household aerosol spray containing pyrethrins can also be helpful. However, insecticides do not eradicate those pest that have already infested food. Removal and sterilization are your best bets against potential or already established infestations, Hahn says.

For more information, request a copy of the fact sheet "Pantry Pests" (item AG-FS-1000) from your county's office of the Minnesota Extension Service.

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E2,H1,V7,V8M

NHEC3210

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 26, 1989

Source: Jerry Steuernagel
612/624-4995
Writer: Joseph Kurtz
612/625-3168

AI RESULTS IN BETTER CALVES FROM HEIFERS

Dairy producers can get superior calves from first-calf heifers by using artificial insemination. These superior calves are likely to make the herd more productive and profitable, according to Jerry Steuernagel, extension dairy specialist at the University of Minnesota.

"Too often we use low-quality farm bulls to breed heifers," says Steuernagel. "The USDA sire summary shows the dollar value index averages +130 for AI bulls and +3 for non-AI bulls. While these figures are part of an index used for making comparisons, they do give an indication of the expected dollar income differences per lactation among daughters of different bulls."

Steuernagel says the value of AI bulls is proven through the production records of the daughters they have sired. "For the natural service sire, we often don't have any proof of his value until we're done using him," he notes.

Steuernagel acknowledges that heat detection is more difficult with heifers. Heifers ready for breeding need to be close to the farmstead. Producers enrolled in the Dairy Herd Improvement program can check their DHI action lists to keep track of heifers that are ready to breed.

While calving ease is a consideration, Steuernagel recommends that producers not choose AI bulls for heifers strictly on the basis of calving ease. "Select a pool of bulls for the entire herd," he advises. "From this pool, select bulls that are rated best for calving ease for use with heifers."

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AEA,BSS,CEO,V1,V2,D

NAGR3244

**NEWS/
 INFORMATION**

UNIVERSITY OF MINNESOTA
 EDUCATIONAL
 DEVELOPMENT SYSTEM
 405 Coffey Hall
 1420 Eckles Avenue
 St. Paul, Minnesota 55108

October 26, 1989

Source: Philip R. Goodrich
 612/625-9733
 Writer: Joseph Kurtz
 612/625-3168

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

BOX UP THOSE EXPERTS AND BRING 'EM TO THE BARN

Wouldn't it be handy, if you were a dairy producer, to have veterinarians, engineers and accountants on call on the farm to solve problems and help with management decisions?

But the cost! A producer who could afford these professionals full time wouldn't need to farm for a living.

How to affordably make the thought processes of "experts" available to dairy producers through a microcomputer program is the object of interdisciplinary Agricultural Experiment Station research under way at the University of Minnesota. The research, which deals with "expert system" technology, is headed by agricultural engineer Phil Goodrich and animal scientist Joe Conlin. It is partially funded by a grant from the University's Telecommunications Development Center.

"An expert system is a computer program that is able to do something we traditionally think humans have to do," says Goodrich. "It captures in a computer program the knowledge of experts and allows the computer to use the principles people use in solving problems."

The researchers are working on expert systems for herd management, mastitis control, milking systems, bulk tank analysis and waste management.

"The expert system, or computer program, supplies the analytical and problem-solving ability, but the producer or another source must put the information into the computer for analysis," Goodrich says. Inputting is usually through a computer keyboard. However, Goodrich is looking at other ways of doing that because he feels producers dislike and resist inputting with a keyboard.

"Producers have plenty of information about their operation," says Goodrich. "In fact, they have more information than they can use and analyze. For instance, they get a great deal of information from their DHI (Dairy Herd Improvement) reports. But they don't have good standards against which to analyze the DHI data."

To give an expert system access to DHI data, it could be put directly into the computer through a telephone line or floppy disk, Goodrich says.

One expert system the scientists are testing identifies specific dairy herd management strengths and opportunities for improvement from the 10 DHI management measures most closely associated with high milk production. The program also provides a comparative herd management profile analysis and suggests management changes that could boost milk production.

The mastitis expert system provides an in-depth diagnosis of herd mastitis problems from DHI somatic cell count information. The program identifies the seriousness of a herd mastitis problem, estimates economic losses and suggests areas for further investigation.

Goodrich predicts the eventual development of 100 or more expert system computer modules that would help producers deal with virtually every aspect of their operation. He also foresees the development of an overall computer operating system to tie the various expert systems together.

"A Minnesota dairy farm is a very complex operation," he says. "Our producers are involved in growing crops, buying animals, growing replacements, producing milk, buying feed, choosing sires, controlling diseases and many other tasks. Producers in states such as California and Arizona are not as likely to be doing all these things. To be an expert in all these areas is impossible. We hope these expert systems can help producers be more successful in more of these areas."

Goodrich says farmers will not have to make a large investment to use expert systems: "The cost for the computer and programs would be much less than the cost of a pickup or a milking system. In most cases, the investment should pay for itself in a few months."

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AEA,BSS,CEO,V1,V2,D,N2

NAGR3242

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 26, 1989

Source: Jeffrey Hahn
612/624-4977
Editor: Mary Kay O'Hearn
612/625-2728

FALL CLEAN-UP REDUCES IRIS BORER THREAT

Autumn signals the end of another growing season. But there is some essential work remaining for iris growers.

"Old plants are a refuge for a very destructive pest known as iris borer," says Jeffrey Hahn, extension educator, entomology, with the University of Minnesota's Extension Service.

These borers damage iris by attacking the rhizomes, also allowing entry of a bacterial soft rot, he explains. Iris borers pupate at the end of summer and emerge as moths in fall. The females lay eggs on old iris plants. The eggs remain there throughout the winter.

Sanitation of old iris plant material is important, Hahn says. "Cut the foliage back to about 6 inches and remove and destroy plant debris after the first frost. This kills the eggs and minimizes the number of iris borers that may be present next year," he points out.

Insecticides will still be necessary next spring. Apply dimethoate (Cygon) in spring when new growth is 4 to 6 inches above ground, Hahn concludes.

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I2,V7,V8

Page 1 of 1

NAGR3211

**NEWS/
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UNIVERSITY OF MINNESOTA
EDUCATIONAL
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

October 26, 1989

Source: David Noetzel
612/624-9272
Writer: Joseph Kurtz
612/625-3168

FALL IS TIME TO TREAT CATTLE FOR GRUBS, LICE

Treating of cattle for grubs and lice is a normal part of fall management for many cow-calf producers. The end of the grazing season is a good time for treatment, notes David Noetzel, extension entomologist at the University of Minnesota.

"There are a number of pour-on insecticides that are easy to use and effective," says Noetzel. "Famphur (Warbex) and fenthion (Tiguvon) give effective control of lice and grubs as one-shot fall treatments. Coumaphos (Co-Ral), trichlorfon (Neguvon) and fenthion (Spotton) provide very effective grub control, but somewhat less effective louse control.

"Imovec (ivermectin) as an injectable controls internal parasites and grubs, and is particularly effective on sucking lice. However, if a producer is dealing only with grubs and lice, famphur and fenthion will be less costly."

Noetzel stresses that producers should read and follow label directions and safety precautions for these compounds and should not use them on lactating dairy cows. Producers may treat dry dairy cows but should observe the after-freshening waiting period listed on the product before using the milk.

"There are no cut-off times on the current grubicide labels," says Noetzel. "However, it is wise to treat before mid-November, while migrating grubs within the animals are small. Treating while grubs are small means less stress for cattle and somewhat better control."

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AEA,BSS,CEO,V1,V2,A2

NAGR3243

UNIVERSITY OF MINNESOTA
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

NEWS/ INFORMATION

November 2, 1989

Source: B. J. Conlin
612/624-4995
Writer: Joseph Kurtz
612/625-3168

USING TOP AI BULLS IMPROVES DAIRY HERDS

Dairy producers need to mate their cows to bulls that have a record of siring daughters that produce a lot of milk. That simple strategy is a key factor in improving herd profitability, according to B. J. Conlin, extension dairy specialist at the University of Minnesota.

Conlin recommends selecting a pool of bulls for artificial insemination from bulls that rank in the upper 25 percent of the AI bulls of the breed for PTA dollars. PTA (predicted transmitting ability) measures a bull's potential to transmit milk production to his daughters. PTA dollars account for the value of the milk and its components.

"Selecting bulls on the basis of PTA will have the greatest economic effect," Conlin says. "Calving ease is also a consideration when breeding heifers. Any other traits you consider should relate to profitability. Selecting for other traits tends to reduce the rate of improvement you can make in milk production ability, the primary profit trait."

Conlin notes that most producers have to consider semen prices when selecting bulls because semen from top bulls is expensive. "At normal conception rates, calfhood mortality rates and bull-heifer ratios, it

takes about nine ampules of semen to result in a replacement heifer entering the milking herd three years later," he points out.

Expenditures for semen are an investment in the future, not a quick payback investment, Conlin notes.

He recommends using a pool of at least five proven AI bulls in a 50-cow herd. "It's acceptable to breed up to 20 percent of the herd to young sires that are in sampling programs through AI," he says. "It's important not to use any one of these young sires extensively."

Conlin says the sires a producer uses determine the genetic make-up of the cow herd, and the cows' genetics determine their capability to produce milk.

A study that has been going on 23 years at the University's Southern Experiment Station at Waseca shows the difference genetics makes. The study compares two groups of cows. One group has been improved using the best bulls available for transmitting milk production capability. The other has been developed using only bulls that are at the breed average for 1964 in terms of their ability to transmit milk production. The group developed from the top bulls now has a herd average of 20,459 pounds of milk per cow per year, while the other group averages 14,073 pounds.

"The two groups of cows are fed and managed in the same way," says Conlin. "They share the same lot, feed at the same bunks, and come into the parlor together. The difference in the amount of milk they produce is due to genetics."

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AEA,BSS,CEO,V1,V2,D

NAGR3247

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 6, 1989

Source: Ann Landucci
612/625-7046
Writer: Joseph Kurtz
612/625-3168

DairyCHAMP COMPUTER PROGRAM IS AVAILABLE

A computer program that dairy producers can use to make their herds more profitable is now available from the University of Minnesota.

The program, called DairyCHAMP (for Dairy Computerized Health and Management Program), has been under development in the University's College of Veterinary Medicine for over four years.

The DairyCHAMP program allows researchers as well as farmers, veterinarians and other farm advisors to identify problems and opportunities to improve productivity.

The program was developed to aid in research and teaching at the University. In addition to helping with herd management, it provides researchers with a means of measuring the productivity of the many dairy cows that are kept under a wide range of management and production systems.

Records from a large number of herds can help researchers identify factors that limit productivity, and thus direct their efforts toward finding practical ways of resolving problems and raising farm productivity and profitability. That's why the University of Minnesota is seeking DairyCHAMP users who will be willing to share data. Producers who agree to datashare will be asked to send a copy of their data once each year to the University.

The program processes herd records relating to events such as calving, postpartum examinations, heat cycles, breeding, pregnancy diagnosis and diseases. It will also record and chart milk production as well as drug, feed and semen inventories.

From these records, the program produces three kinds of reports: lists, monitoring/management reports and problem analysis (custom) reports. The lists aid in day-to-day management. Monitoring/management reports calculate indices that help analyze herd performance. Problem analysis reports enable users to design their own reports using database management options to focus on specific problems.

"An important principle of the program is to make it easier to improve the reproductive performance of an entire herd, rather than just treating individual animals with reproductive problems," says Gerard Nimis, a systems analyst and DairyCHAMP programmer.

The DairyCHAMP program is fast and easy to use, even by persons who have little or no computer experience. It is designed to be used with personal computers that are IBM-compatible with at least 640K of memory and a hard disk. Recommended accessories include a printer and color monitor. An instruction manual accompanies the program.

The list price of the program is \$1,500, with a \$500 discount for users who agree to datashare. The first 300 datashare users will be able to buy the program for \$600.

To purchase the program, contact Ann Landucci, DairyCHAMP, 225 VTH, University of Minnesota, 1365 Gortner Ave., St. Paul, MN 55108; telephone (612) 625-7046; FAX (612) 625-6241.

UNIVERSITY OF MINNESOTA
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

NEWS/ INFORMATION

November 6, 1989

Source: James O. Hanson
612/624-1711
Writer: Joseph Kurtz
612/625-3168

U OF M TO HOLD SWINE HEALTH CLINICS IN MONTEVIDEO, FAIRMONT

"Competing in the '90's" is the theme of two Southern Minnesota Swine Health Clinics scheduled for December.

The program is identical at each clinic. The first will be Tuesday, Dec. 12, in Montevideo. It will be at the senior high school on Highway 7, seven blocks south of the Dairy Queen. The second will be Wednesday, Dec. 13, at the Fairmont Holiday Inn, Interstate 90 and Highway 15.

Registration at each clinic begins at 8 a.m. Opening presentations are set for 9 a.m., with adjournment at 5 p.m.

The morning session will feature Jim Lewis, president of the Minnesota Pork Producers Association. He will speak on "Challenges and Opportunities Facing the Minnesota Swine Industry."

Other morning topics will cover competing in the '90s, assessing growing/finishing, assessing progress in production and profitability, advantages of raising swine in Minnesota, and record systems. Discussing these will be, respectively, Kent Kislingbury, Fairmont veterinarian; Steve Henry, Abilene, Kan., veterinarian; Al Leman, former University of Minnesota veterinarian now with Swine Graphics in Webster City, Iowa; Gary Dial, University of Minnesota extension veterinarian; and Erlin

Weness, area extension agent in farm management stationed at Worthington.

Afternoon topics will be living with disease profitably, the cost of swine disease, alternatives to living with disease, biotechnological advances, advances in design of facilities and equipment, 10 new technologies, feed quality, controlling the mystery syndrome, and what's ahead.

Presenting these respective topics will be Henry; Dale Polson, U of M College of Veterinary Medicine; Jim Dick, Fairmont veterinarian; Jerry Torrison, University of Minnesota College of Veterinary Medicine; Tim Loula, Nicollet veterinarian; Rodney Johnson, Morris veterinarian; Lee Johnston, University of Minnesota extension swine specialist stationed at Morris; Bill Christensen, University of Minnesota College of Veterinary Medicine; and Leman.

The registration fee for each clinic is \$20. Additional family members, or students accompanied by parent or instructor, can register for \$15. The fee includes lunch and a proceedings booklet. Advance registration, prior to Dec. 5, is encouraged but not required.

Checks should be payable to the University of Minnesota and mailed to James O. Hanson, D.V.M., College of Veterinary Medicine, 1365 Gortner Ave., University of Minnesota, St. Paul, MN 55108.

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AEA,BSS,CEO,V1M,V2M,P1M,Z5,Z6,Z7

NAGR3256

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 9, 1989

Source: Dave French
612/625-6290
Writer: Deedee Nagy
612/625-0288

ANOKA COUNTY IS WORKING TO LOSE 'OAK WILT CAPITAL' DISTINCTION

Anoka's designation as Pumpkin Capital is much more upbeat than the title the Anoka County Extension Service is working to combat: Oak Wilt Capital.

But the deaths of more than 60,000 trees in the county attest to the oak wilt problem facing Harvey Buchite, Anoka County agent, and Janette Monear, oak wilt and diseased tree hotline coordinator in the county extension office.

Tree loss has devalued property as much as 25 percent in some parts of the county. It also has accounted for more than 9,000 calls or inquiries to the county office and to oak wilt expert Dave French, plant pathologist with the University of Minnesota's Extension Service.

French says that losing the Oak Wilt Capital distinction will take a lot of hard work. He thinks, however, that the prognosis is better than that for Dutch elm disease, which continues to claim so many shade trees throughout Minnesota.

"There is a possibility of eliminating oak wilt or at least getting it down to 'insignificant losses.' But we aren't there yet," French cautions.

The fungus that wilts and eventually kills oak trees is spread when the root systems of infected and healthy oaks grow together, creating root grafts, and by picnic beetles, which are attracted to fresh wounds on the oaks. Wounds caused by construction and utility work are to blame

for much of the oak wilt in newly developed areas, according to French.

He adds that public utilities in Anoka County are cooperating by reducing the pruning they do in the spring, when the wounds are most likely to become infected. When crews must prune between April 15 and July 1 to extend utilities to customers, they carry pruning paint to seal the trimmed surfaces.

State and local agencies and governmental units are working well together to educate the public on the disease. French, Monear and Buchite have spoken at several dozen township and municipality meetings. In September, French spoke to a meeting of more than 150 realtors. He stressed how construction work and the building of roads and power lines can make the problem worse. Also on the program was Donald C. Willeke, a lawyer and member of the state's Shade Tree Advisory Committee, who spoke about the legal implications of tree loss on lots that were sold at premium prices for their wooded beauty.

Oak wilt isn't only Anoka County's problem. Nearby Sherburne, Isanti and Chisago counties are also experiencing tree loss and their sand plain conditions are similar to Anoka's, according to hotline coordinator Monear. She credits strong support from county commissioners, the county extension committee and local city and township foresters for the county's success in answering homeowners' and builders' questions and controlling the spread of the disease. In addition to speaking at meetings and educating the public through news articles and telephone inquiries, Anoka County staff have prepared a publication on replacement trees and shrubs that has gone to more than 1,000 concerned property owners.

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NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 9, 1989

Source: Steven J. Taff
612/625-3103
Writer: Larry A. Etkin
612/625-4272

PUBLICATION ASSESSES CRP'S IMPACT ON MINNESOTA

Hailed at its 1985 debut as a program that would satisfy both farmers and environmentalists, the Conservation Reserve Program was designed to take marginal farmland out of production. It promised something for almost every special interest.

Proponents said the CRP would reduce erosion and sedimentation, protect long-term agricultural production capacity, improve water quality and fish and wildlife habitat, bring burgeoning grain production in line with consumer demand and provide needed income support for farmers.

But have these goals been met? More specifically, what has happened with the CRP in Minnesota? Has it worked as expected, or have there been unanticipated results or impacts?

Only the voluminous CRP farm contract records provide answers to these questions, and information in those records was nearly inaccessible until University of Minnesota economist Steven Taff, with support from the Minnesota Agricultural Experiment Station, compiled and calculated a series of tables isolating Minnesota's state and county CRP contract records.

Taff focused on the characteristics of the 20,000 farms and the 1.7 million acres of Minnesota cropland enrolled through February 1989. He looked at the resulting cash payments and the

reductions in soil erosion and commodity program production base.

He noted that farmers who put essentially all of their acreage into the CRP tended to have smaller farms. He also found that most of the land retired from production was not of the most erodible kind; Minnesota farmers predominantly enrolled acreage that fell short of having very severe production limitations.

The tables compiled and calculated by Taff are available in a 64-page report published by the Minnesota Agricultural Experiment Station. "The Conservation Reserve Program in Minnesota: 1986-89 Enrollment Characteristics and Program Impacts" (64 pages) is available for \$5 prepaid (Minnesota residents add 6 percent sales tax) from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108. Ask for Item No. AD-MR-3824 and include the title when ordering. Checks should be made payable to the University of Minnesota.

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AEA,BSS,CEO,A1M,B2M,L3M

NAGR3255

NEWS/ INFORMATION

November 9, 1989

Source: Mel Baughman
 612/624-0734

Writer: Richard Sherman
 612/625-3154

AUDIOVISUALS HELP WOODLAND OWNERS LEARN MANAGEMENT SKILLS

What crop simultaneously produces income, minimizes soil erosion, improves wildlife habitat, and is beautiful too? Trees! They can yield all these and other benefits to land owners or managers, but only if they are well managed.

Where do you get expert advice and research-based information you need to be a good woodland manager? The answer may be as close as your living room. According to Mel Baughman, forester with the Minnesota Extension Service, seven video cassettes, each featuring a woodland management topic, are now available for rent or purchase.

Designed for current and potential nonindustrial, private woodland owners, these programs describe practical ways to manage oak and aspen woodlands, market timber, plant trees on marginal farmland and establish plantations of fast-growing trees that mature in less than 15 years. "They are packed with ideas on how to grow marketable timber, improve food and shelter for wildlife, and enhance the aesthetic value of woodlands," says Baughman.

Available programs and their running times include: "Marketing Timber: A Guide for Private Woodland Owners" (18:10), "Managing Oak Woodlands" (23:00), "Managing Aspen in the Lake States"

(27:30), "Tree Planting on Agricultural Land" (24:00), "Planting Trees for Conservation" (5:30), "Short-Rotation Forestry in the Lake States" (22:30) and "Fast-Growing Trees: An Alternative Crop" (5:00).

Except for "Marketing Timber: A Guide for Woodland Owners" (a live-action video), all titles are also available as slide-tape sets. Purchase prices range from \$18 to \$35 for the videotapes and from \$30 to \$75 for the slide-tape sets. Rental prices are \$8 for Minnesota residents and \$10 out-of-state.

A free color brochure describes these forestry programs, and tells how to purchase or rent them. Call (612) 624-3020 or write to Forest Resources Extension, University of Minnesota, 1530 N. Cleveland Ave., St. Paul, MN 55108, and request the brochure, "A Natural Resource: Audio-Visual Programs for Effective Forest Management."

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AEA,BSS,CEO,H4

NNRD3253

NEWS/ INFORMATION

November 9, 1989

Source: Leland Hardman
612/625-8700

Writer: Sam Brungardt
612/625-6797

SOYBEAN COUNCIL FUNDS RESEARCH AT UNIVERSITY OF MINNESOTA

During fiscal year 1989-90, the Minnesota Soybean Research and Promotion Council will provide \$269,800 to fund soybean research at the University of Minnesota. In addition, the Council will provide its annual contribution of \$50,000 toward the Chair for Molecular Genetics as Applied to Plant Improvement in the Department of Agronomy and Plant Genetics.

The research projects that the Council chose to fund were selected from proposals that University researchers had submitted to a review committee comprised of two Council members, four representatives of the Minnesota Agricultural Experiment Station and two persons from private industry. The committee evaluated each proposal with respect to how well it met research priorities established by the Council. Those priorities include increasing the protein content and unique composition of high-yielding, Minnesota-grown soybeans; increasing the utilization of Minnesota-grown soybeans and increasing profitability for Minnesota soybean growers.

Leland Hardman, the University of Minnesota extension and research agronomist who acts as a liaison with the Council, says, "The Council identified those priority areas because the soybean growers wanted their checkoff money going into research to be more carefully focused on current problems and opportunities."

Here's a breakdown of the research that Council chose to fund in five departments at the University and at four branch experiment stations:

--Ongoing research to develop varieties adapted to Minnesota, with emphasis on improved protein content, acceptable levels of other quality characteristics, competitive yield and resistance to production hazards, and to continue testing of varieties available to producers.

--Ongoing support for soybean research at the University's branch experiment stations at Lamberton, Waseca and Morris.

--Research to evaluate strategies for using full fat soybeans (FFS) in ruminant diets. Because of their high oil and protein content, FFS can supply the large amount of energy dairy cows require during early lactation for maximum production.

--Research that continues the development of nitrogen management strategies, including the use of special inoculant strains, for early-maturing varieties in northwestern Minnesota. This research aims to enhance the stability and profitability of soybean production in that part of the state.

--Research to develop a commercially feasible process for removing oligosaccharides and sucrose from soybean meal by ethanol and isopropyl alcohol extraction, and to evaluate treated soybean meal in feeding trials with broilers and laying hens. This process would make meal from Minnesota-grown soybeans more competitive as a feedstuff because it increases the crude protein by 35 percent and the metabolizable energy by 20 percent.

--Research to find a better way to use the near infrared reflectance (NIR) method for assessing protein content in breeding lines and populations so outstanding ones can be identified for use in variety development.

--Basic research to find the genetic basis for differences in seed protein content in high-yielding soybean varieties and to use gene transfer technologies to improve protein composition in new or existing varieties.

--Research, in its final year, to determine the extent to which Minnesota-grown soybeans are inferior to soybeans from other regions in protein and oil content and the reasons for this.

--Research to evaluate the ability of selected Rhizobia strains, including some from Thailand, to increase nodulation and nitrogen fixation, and to understand the physiological basis for nodule initiation.

--Research to evaluate lecithin, a soybean by-product, as an ingredient in rations for young pigs.

--Research to analyze the economic impact of two new technologies--porcine growth hormone (somatotropin) and repartitioning agents--on soybean meal use in pork production.

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AEA,BSS,CEO,F1M,N2M

NAGR3258

**NEWS/
INFORMATION**UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 13, 1989

Source: Pete Anderson
612/624-4995
Writer: Joseph Kurtz
612/625-3168**MINNESOTA EXTENSION SERVICE SCHEDULES CATTLEFEEDERS' DAYS**

Strategies to make cattle feeding more profitable will be in the spotlight next month at three Minnesota Cattlefeeders' Day programs.

Cattlefeeders' Days will be at Crookston on Tuesday, Dec. 5, in the auditorium of the University of Minnesota, Crookston; at Slayton on Wednesday, Dec. 6, at Chelsey's (formerly the Royal Supper Club); and at Morris on Thursday, Dec. 7, at the West Central Experiment Station.

The program will be the same at each location. Each will begin with registration at 9:30 a.m. The program will run from 10 a.m. to 3 p.m.

There will be three speakers. Pete Anderson, University of Minnesota extension beef specialist, will discuss management strategies to produce lean, palatable beef, with special emphasis on recent research developments. Dale Haggard, University of Minnesota extension veterinarian, will discuss ways to reduce stress in incoming feeder cattle. Harlan Hughes, extension farm economist at North Dakota State University, will discuss marketing from a cattle feeder's perspective.

There will be a small registration fee at each event, and this fee will cover the cost of lunch.

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AEA, BSS, CEO, V1M, V2M, A2M

NAGR3262

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 13, 1989

Source: Pete Anderson
612/624-4995
Writer: Joseph Kurtz
612/625-3168

PETE ANDERSON IS NEW EXTENSION BEEF SPECIALIST AT U OF M

A new beef cattle specialist has joined the staff of the University of Minnesota's Extension Service. He is Pete Anderson, a native of Owatonna, Minn., who recently received his Ph.D. degree in animal science from Michigan State University.

Anderson's University of Minnesota work will emphasize extension educational programs in beef cattle nutrition and management for cattle feeders and cow-calf producers. He will be keeping producers updated on recent research results and on new ideas relating to beef cattle production. He also has a partial research appointment with the Minnesota Agricultural Experiment Station.

Anderson, a 1980 graduate of Owatonna High School, earned his bachelor's degree at Kansas State University in 1983. He earned his master's degree at Michigan State in 1987 and completed his doctorate earlier this year. His graduate degrees were in animal science, with emphasis on nutrition and growth biology.

He also coached the livestock judging team and taught several courses at Michigan State.

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AEA, BSS, CEO, V1M, V2M, A2, 79

NAGR3259

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 13, 1989

Source: Don Otterby
612/624-0782
Writer: Joseph Kurtz
612/625-3168

MINNESOTA EXTENSION SERVICE PLANS MEETINGS ON BST

Helping dairy producers decide whether to use bovine somatotropin (BST) is the purpose for nine meetings to be held by the Minnesota Extension Service this winter.

BST, a protein hormone, has been shown to increase milk production 10 to 15 percent. It has not yet been approved for commercial use by the Food and Drug Administration.

University of Minnesota animal scientists Don Otterby and Brian Crooker will be the primary speakers at the meetings. They will discuss what BST is, its safety relative to both human and animal health, research on BST, the economics of using BST and its potential effect on milk supplies.

"These meetings are to provide information to producers so they can make a preliminary decision on whether to use BST if it is approved," says Otterby. "We will also look at what management practices are necessary to use the product successfully. More than likely, we won't recommend its use by every producer."

Otterby and Crooker have been conducting research on BST since 1984 under the auspices of the Minnesota Agricultural Experiment Station. Their research trials have involved more than 600 cows on farms and in University herds.

Otterby says the FDA will likely decide whether to approve BST sometime during 1990. He predicts it will be approved.

The first BST meeting will be Dec. 12 at Waseca in the auditorium at the University of Minnesota, Waseca. That meeting will be from 1-3:15 p.m.

Also on Dec. 12, will be a presentation on BST at the Dairy Day at the Victorian Inn in Hutchinson. This program will run from 10 a.m. to 3 p.m., with the BST presentation at 11:15 a.m.

On Dec. 14, there will be a BST meeting at Rochester in the 4-H building at the fairgrounds. This meeting will begin at 1 p.m.

The other meetings will take place in 1990. They will be Jan. 9 at Perham, Jan. 10 at Crookston, Jan. 11 at Grand Rapids, Jan. 24 at Shakopee, Jan. 31 at Alexandria and Feb. 1 at Watertown, S.D. Sites and times have not yet been set for most of these meetings.

The site for the meeting on Jan. 24 has been set, at Shakopee's Canterbury Inn. That meeting will address consumer concerns as well as those of producers. Representatives from the University of Minnesota's Department of Food Science and Nutrition will be on the program, which will begin at 11 a.m. The extension offices in Carver and Dakota counties are organizing this meeting.

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AES, BSS, CEO, V1M, V2M, V7M, DM

NAGR3260

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 13, 1989

Source: Jerry Steuernagel
612/624-4995
Writer: Joseph Kurtz
612/625-3168

HEIFERS SHOULD CALVE AT 24 MONTHS OF AGE

Getting heifers to calve by 24 months of age means money in the bank for dairy producers. Age of first calving is a key factor in the profitability of a dairy operation, according to Jerry Steuernagel, extension dairy specialist at the University of Minnesota.

"Studies of DHI records show that for a 50-cow herd, calving at 24 months instead of 29 months results in \$1,700 more return to labor and management per year," says Steuernagel. "Per hundredweight of milk, calving at 24 months returns 20 cents more per hundredweight than calving at 29 months."

Age at first calving affects profitability in two ways, he says. First, heifers that calve at 23-24 months produce more milk during their first lactation than those that calve later. Second, expenses to feed and care for a heifer continue each month. The cost of feeding a two-year-old heifer is typically \$1.50-\$2.00 a day.

Steuernagel says getting heifers large enough is a key consideration with early calving. This minimizes both calving problems and the amount the animal needs to grow after entering the milking herd.

"Typically, you would expect a two-year-old Holstein to weigh 1,150-1,200 pounds at the time of her first calving," says the University of Minnesota specialist.

In addition to the heifer's size, the sire of the first calf is a factor in calving difficulty. Steuernagel recommends breeding heifers to AI bulls that have a good record for calving ease.

"It's normal to have more calving difficulty with first-calf heifers, but with good selection and management of heifers, it should be possible to limit difficulty to 5 to 8 percent of calvings," Steuernagel says.

He adds that calving heifers at less than 24 months of age is not a good idea unless they are exceptionally well-grown for their age.

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AEA,BSS,CEO,V1,V2,D

NAGR3261

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 13, 1989

Source: Charles R. Blinn
612/624-3788
Writer: Larry A. Etkin
612/625-4272

PUBLICATION REVIEWS NUTRIENT NEEDS OF NORTH AMERICAN TREES

Forests and forest industries are increasingly important to the economies of nations and the environment. With an estimated 50,000 square miles of forest being destroyed across the planet every year to facilitate development, reforestation is an essential environmental topic.

But even where reforestation is a high priority, it's not always native species that are being used to replant forests. New plantations often include only the more valuable or faster-growing species, and it may be decades before it is known whether an exotic species will thrive in a new environment.

Because introduced species don't always thrive in alien environments because of soil or climate, a new, 28-page Minnesota Agricultural Experiment Station publication may be a valuable tool for forest and tree plantation managers worldwide.

"Normal Foliar Nutrient Level in North American Trees--A Summary" brings together the results of more than 250 research publications. Authors Charles Blinn and Edward Buckner have compiled a table of nutrient requirements for 87 native North American tree species. Blinn is an associate professor and extension specialist in the University of Minnesota's Department of Forest Resources. Buckner is a professor in the Department of

Forestry, Wildlife and Fisheries at the University of Tennessee.

Nutrition problems of trees often aren't apparent until long after large acreages are planted. So, early monitoring of nutrient status is important. If even one of the 14 essential nutrients is lacking, growth can stagnate.

Foliar analysis, used widely in North America, is an indirect measure of the nutrients available to a tree. It can be an early warning for the need to add unavailable or limiting elements to the soil.

"Normal Foliar Nutrient Levels in North American Trees--A Summary" is available for \$2 (Minnesota residents add 6 percent sales tax) from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108. Ask for Item No. AD-SB-3762, and include the title when ordering. Checks should be made payable to the University of Minnesota.

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AEA,BSS,CEO,H4,R

NNRD3263

MSC 10A27p

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 16, 1989

Source: Emily Hoover
612/624-6220
Sam Blue
612/388-6429 or
612/388-2148
John Jacobson
612/429-7202
Writer: Mary Kay O'Hearn
612/625-2728

MONITORING OF APPLE PESTS IS GOOD FOR CONSUMERS, GROWERS

You can't spray apples by the calendar, you have to know what's happening in your orchard.

Apples with more consumer appeal and less cost to growers is the goal of two grants from the Minnesota Department of Agriculture's Sustainable Agriculture Program and the Greater Minnesota Corp. Putting the total \$83,000 to work over a period of two to three years are the Minnesota Apple Growers Association and the University of Minnesota's Extension Service.

As the first harvest season is completed, the idea, says Emily Hoover, extension horticulturist and project supervisor, is to use integrated pest management (IPM). This means decreasing chemical use on apples while lowering energy inputs. The intent: for consumers, increased food safety and appeal; for growers, saved time and dollars spent producing a high quality crop.

Eight growers, located in Carver, Dakota, Goodhue, Houston, Wabasha, Washington and Winona counties, are participating in the study. All are members of the Minnesota Apple Growers Association headed by Sam Blue of Red Wing (president) and John Jacobson of White Bear Lake (vice president). Altogether, the eight orchards

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

cover about 600 acres. A 2- to 5-acre IPM test block was used in each with the rest of the orchard as the control.

From the data which will be gleaned over the years, an integrated apple pest management strategy usable statewide will be developed. "It means disease and weather monitoring," Hoover says. The sites have been selected to collect extensive weather data and to monitor development of apples diseases and insect pests.

Horticulture graduate students Kevin Iungerman and Doug Foulk did the field work. Iungerman made weekly circuits from May through August to each orchard. Foulk monitored apple scab spore development from April to June.

"We looked for five insects beginning in April: European red mite, codling moth, apple maggot, green fruit worm and spotted tentiform leafminer," Hoover says.

Timing is all important, she adds. For example, spraying when it isn't needed can actually increase mite populations. If an apple scab lesion the size of a pencil eraser tip appears on a young apple the size of a quarter, the lesion just keeps getting bigger. The fruit won't be marketable.

Threshold levels (the time to initiate control measures to keep the fruit marketable) were set for each insect. Weekly monitoring alerted the participating grower immediately when this level was exceeded for the orchard. From April through June, the growers only sprayed when they were told to, using the compound and method they normally would to control the problem.

The apple growers newsletter alerted all orchard owners besides those in the study to Iungerman's findings. These were taped, accessed by a phone call. Many called in to select the information which could be applied to their orchards.

Sprays were cut back a quarter to a half as much in the IPM test block as in the rest of the orchard--yet harvest results were no different, Hoover says.

IPM is commonly used on field crops in Minnesota, but this is a first time for a minor crop such as apples. Michigan, Massachusetts and New York have all used IPM with apple crops.

"We are still learning," Hoover says. "If there were a major outbreak of some pest or disease, it could alter future findings. We still don't know what effect the drought of 1988 has had on pests. We will closely monitor it again next year to be sure."

Participating growers are very positive about the IPM method, she says, adding this is basically the way orchards will have to be managed in the future to satisfy consumer demands for food safety.

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AEA,BSS,CEO,H1,L1,L3

NAGR3267

MSC 19A23p

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

**NEWS/
INFORMATION**

November 16, 1989

Source: Paul V. Ellefson
612/624-3735
Writer: Larry A. Etkin
612/625-4272

NEW PUBLICATION QUESTIONS FORESTRY ASSISTANCE

The wood products industry grows increasingly important to Minnesota's economy. Many public agencies lend their support to arrange financing, clear environmental hurdles, and assure timber supplies. But is all that support effective, or appropriate?

A new publication of the Minnesota Agricultural Experiment Station evaluates the economic benefit of at least one type of support: Private Forest Management Program assistance provided by the Minnesota Department of Natural Resources.

The report by three University of Minnesota Department of Forest Resources researchers looked at the costs and results of assistance DNR's foresters provide to private forest land owners.

Especially with aspen harvests, the researchers concluded that landowners assisted in selling their aspen "did receive significantly higher stumpage prices than unassisted landowners." However, net economic benefits to society as a whole were minimal.

They found that "the Division of Forestry does an excellent job" of administering the Private Forest Management Program. But they also recommended several specific departures from current Division practices. They recommended increasing the fees for timber cruising "to levels closer to their actual costs," moving to more of an advisory and less of a technical assistance role,

and guiding aspen harvests more through their comprehensive and brief management plans.

The report was developed by Russell Henley, Paul Ellefson and Melvin Baughman. Ellefson is a professor of forest economics and policy, and Baughman an associate professor/extension specialist, both with the Department of Forest Resources at the University of Minnesota. Henley, a former research specialist at Minnesota, is currently in the Department of Forestry and Resource Management, University of California, Berkeley.

Their complete report is available as Miscellaneous Publication 58-1988, published by the Minnesota Agricultural Experiment Station. Minnesota's Private Forestry Assistance Program: An Economic Evaluation (59 pages) is available, until the supply is exhausted, from the Forestry Resources Departmental Office, 140 Green Hall, 1530 North Cleveland Avenue, University of Minnesota, St. Paul, MN 55108.

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AEA,BSS,CEO,V1,V2,V4,V7,V8,A1,H3,H4,R

NEXP3265

NEWS/ INFORMATION

November 16, 1989

MSC/9A57p
MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

Source: C. J. Christians
612/294-0766
Writer: Joseph Kurtz
612/625-3168

UNIVERSITY OF MINNESOTA PLANS SWINE RESEARCH DAYS

Three University of Minnesota Swine Research Days, focusing on leanness and performance of finishing pigs, will take place in January, 1990.

They will be Jan. 9 at Waseca in the auditorium at the University of Minnesota, Waseca; Jan. 10 at Jackson at the Best Western Motel; and Jan. 11 at Morris in Edson Hall at the University of Minnesota, Morris.

Registration for each of the events will be from 9-9:50 a.m. The program will begin at 10 a.m. and adjourn at 3 p.m.

During the morning session, Bill Rempel, U of M animal scientist, will discuss the animal rights issue. Hugh Chester-Jones or Jim Pettigrew, both U of M animal scientists, will discuss the influence of fat, lysine and temperature on finishing pigs. Jerry Hawton, U of M extension animal scientist, will discuss biotechnology. Patrick Murphy, agricultural engineer from Kansas State University, will discuss on-farm feed mill design.

The afternoon session will begin with an update on U of M swine research, with several speakers involved. Then, Murphy will discuss grinding feed ingredients. Gary Dial, U of M extension veterinarian, will discuss management and facility influences on finishing hogs. C. J. Christians, U of M extension animal scientist, will discuss marketing quality pork.

A written U of M swine research report will be available at each event.

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AEA,BSS,CEO,V1,V2,P1

NAGR3266

**NEWS/
 INFORMATION**

UNIVERSITY OF MINNESOTA
 EDUCATIONAL
 DEVELOPMENT SYSTEM
 405 Coffey Hall
 1420 Eckles Avenue
 St. Paul, Minnesota 55108

November 27, 1989

Source: Jerry Steuernagel
 612/624-4995
 Writer: Joseph Kurtz
 612/625-3168

MASTITIS CUTS MILK PRODUCTION

More mastitis means less milk. That's a fact of life on dairy farms, says Jerry Steuernagel, extension dairy scientist with the University of Minnesota.

The Minnesota State Dairy Herd Improvement Association makes measurements on several factors relating to a herd's production average. These measurements go to producers in their monthly reports. "The percentage of cows infected with subclinical mastitis is the most important factor we measure in DHI that influences the rolling herd average," Steuernagel points out.

The figure most commonly associated with mastitis is the somatic cell count. A high cell count in the milk is a strong indication an infection is present. The infiltration of somatic cells through the milk secretion tissue due to infection or other tissue irritation lowers that tissue's milk yield.

"DHI converts somatic cell count to a linear figure from 0 to 9," says Steuernagel. "Each increase of 1 in the score is associated with a doubling of the cell count. Each time the cell count doubles, the expected drop in milk production for older cows is approximately 1.3 pounds per day, or 400 pounds per lactation."

All cows with a linear score of 5 or above are considered to have subclinical mastitis, he adds.

Steuernagel says a study of Minnesota DHI herds completed this year found that, in herds with rolling averages over 20,000 pounds, 20 percent of the cows had subclinical mastitis. In herds where the average was 14,000 pounds, 35 percent of the cows were infected; and in herds averaging less than 12,000 pounds, 42 percent had infections.

Steuernagel says producers who have a high percentage of cows with mastitis should consult a veterinarian and develop a strategy to deal with the problem. A bulk tank screening test may be helpful in determining the cause of the infections.

A Minnesota Extension Service publication may also be helpful. The publication, titled "Somatic Cell Count--An Effective Tool in Controlling Mastitis," is available from county extension offices in Minnesota. Ask for item AG-F0-0447.

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AEA,BSS,CEO,V1M,V2M,DM

NAGR3269

NEWS/ INFORMATION

MSC/9A270
MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM

405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 30, 1989

Source: Ian Barrie
612/625-4724
Writer: Martin Moen
612/625-6243

1980S DROUGHT LOOKS MORE AND MORE LIKE A CASE OF DEJA VU

Despite the continuing drought in Minnesota, 1989 corn yields were about average. Last year, due to drought and high temperatures, corn yields fell to 35 percent below normal.

This year, we were lucky and received timely rains which produced corn yields 20 percent above normal. The rains have stayed away this fall, leaving farmers with an uncertain future.

Before you assume the preceding statements accurately describe the 1980s drought, look more closely. The yields just presented came from 1934 and 1935, respectively. University of Minnesota extension climatologist Ian Barrie says there are striking similarities between the current drought and that of the mid-1930s.

Corn yields have bounced up and down in the last few years similar to trends during the 1930s drought. In 1987, the first year of the current drought, yields in Minnesota were 10 percent above normal and produced a record crop. In 1988, they plummeted by 45 percent. This year, yields bounced back to near the long-term upward trend.

For those who remember the extreme heat and dryness of the 1930s, such a comparison can be frightening because the return to normal yields in 1935 was followed by another plunge to 35 percent

below normal in 1936.

However, such an attitude assumes 1990 will parallel 1936--one of Minnesota's driest years in this century. Barrie says current weather data do not support the 1990-1936 comparison.

But they do not rule it out, either. "This time of year is the most difficult period in which to predict weather patterns," says Barrie. "Predicting any 1990 weather patterns now would be premature."

Still, Barrie admits 1990 doesn't look promising for Minnesota farmers. For one thing, soil moisture levels are even lower than a year ago. He says, "This increases the odds of 1990 being a drought year, and means that once again we will need at least near-normal weather patterns to get by."

Barrie, quoting from data based on Soil Conservation Service samples and prepared by University of Minnesota soil scientist Donald Baker, says soil moisture levels are at least as low as last year's levels in many counties. "The difference is that the main drought area has shifted from central Minnesota to the southwest and south-central areas," says Barrie.

Soil moisture levels are hovering around 2 to 4 inches in the driest areas. Barrie says these areas would need 2 to 6 inches of moisture to recharge even to normal levels. Meanwhile, soils in central Minnesota contain almost 5 inches of moisture, 2 inches short of normal fall recharge.

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AEA,BSS,CEO,V2M,V7,A1M,F1M

NAGR3277

NEWS/ INFORMATION

MSC 19A23p
MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM

405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 30, 1989

Source: Bill Wilcke
612/625-9733
Writer: Jack Sperbeck
612/625-1794

GRAIN QUALITY CONFERENCE SET FOR JAN. 11-12

Grain quality will be highlighted at the 1990 Crop Conditioning and Storage Conference Jan. 11-12 at the Holiday Inn in Fargo, N.D.

"Each year I talk to people who say they would have attended, but weren't aware of the conference," says Kenneth Hellevang, agricultural engineer with the North Dakota State University Extension Service.

Bill Wilcke, agricultural engineer with the University of Minnesota's Extension Service, will talk on drying grain for quality. Hellevang and other speakers from North Dakota State University, the private sector and the Federal Grain Inspection Service will speak on topics such as what grain quality means, maintaining quality in storage, enhancing U.S. grain quality for international trade and grain quality assessment.

For registration information, contact Kenneth Hellevang, Agricultural Engineering, North Dakota State University, Fargo, ND 58105. Telephone (701) 237-7236.

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AEA, BSS, CEO, V1M, V2M, F1M

NAGR3274

**NEWS/
INFORMATION**

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

November 30, 1989

Source: Dale Hicks
612/625-8700
Writer: Martin Moen
612/625-6243

STICK TO WHAT'S IMPORTANT WHEN CHOOSING CORN HYBRID

"How large of a yield will it produce?" is the biggest question to be answered when choosing hybrid seed corn. University of Minnesota extension agronomist Dale Hicks says farmers shouldn't make decisions based on what the weather might be like next year.

"Farmers need to know what is the best yielding hybrid in a good producing environment, and that's the one they should select," he says. "Even in stressed environments, high-yielding hybrids are going to produce as well or better than other hybrids."

Once the yields of the various hybrids are compared, Hicks says there are other factors to consider. For instance, moisture at harvest is an important characteristic. "If two hybrids are equal in yield and one is wetter than the other, then the net profit is less with the second because they'll need to artificially dry the corn," says Hicks.

It's difficult for Minnesota farmers to obtain unbiased information about hybrid performance, says Hicks. Consequently, they have to rely on several sources of information.

Hicks says, "Minnesota farmers have to rely on their own

production experience, data provided by county corn grower and
vo-ag instructor strip test results and the information provided
to them by the companies they buy hybrids from."

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AEA,BSS,CEO,V2,F1M

NAGR3276

**NEWS/
INFORMATION**UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

December 4, 1980

Source: Allan Cattanach
701/237-8596
Editor: Sam Brungardt
612/625-6797**FOR SUGARBEETS, 1990 MAY BE ANOTHER BAD YEAR**

Drought significantly reduced North Dakota and Minnesota sugarbeet yields this year and last, and things may get worse in 1990, says Allan Cattanach, extension sugarbeet specialist for the University of Minnesota and North Dakota State University.

According to Cattanach, certain peculiarities of the sugarbeet help it survive a single drought year yet make it very vulnerable to continuing drought.

The sugarbeet is a biennial that is harvested in the first year of its two-year life, while it is in its vegetative stage. This means it can recover from drought in a way quite impossible for annuals, which must go through a reproductive stage before the harvestable parts develop.

"Annuals, such as wheat and soybeans," says Cattanach, "tend to need water throughout the growing season, and especially at the critical reproductive stage. Sugarbeets can withstand drought for much of a growing season, then make a comeback if late season rain appears. The August and September rains of 1988 and 1989 were too late to help Red River Valley small grains and beans, but did help the sugarbeets. These late rains prevented beet yields from being even lower."

Also, because sugarbeets root deeply (to as much as 8 feet), they can effectively exploit stored soil moisture and resist drought.

Trouble is, significant rainfall is needed to replenish soil moisture in fields where sugarbeets are grown. Without that rainfall, future crops suffer.

"In 1990," says Cattnach, "many farmers will be forced to plant beets on fields last planted to beets in 1987--fields that have not been recharged for two years. The result could be more low yields. Many sugarbeet growers are sitting on large acreages that will require rainfall well above normal in 1990 in order to maintain crop growth."

The impact of the 1988 drought, says Cattnach, is clearly shown by the cost of production survey that USDA conducted last February and march. Average yields for the 1980s were about 17 tons per acre. In 1988, yields averaged about 14 tons per acre.

According to the survey report, average return to management for Minnesota and eastern North Dakota sugarbeet growers in 1988 was \$48.80 per acre, or \$3.44 per ton. Total costs of production was \$557 per acre, or \$39.25 per ton. These costs included cash expenses, general farm overhead, taxes, insurance, capital replacement and a charge for owned inputs.

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AEA,BSS,CEO,V2M,F1M

NAGR3279

**NEWS/
 INFORMATION**

UNIVERSITY OF MINNESOTA
 EDUCATIONAL
 DEVELOPMENT SYSTEM
 405 Coffey Hall
 1420 Eckles Avenue
 St. Paul, Minnesota 55108

December 7, 1989

Source: Ervin Oelke
 612/625-8700
 Writer: Jack Sperbeck
 612/625-1794

SMALL GRAIN WORKSHOPS SET FOR WESTERN MINNESOTA

Fine tuning small grain production will be the topic of seven workshops in western Minnesota in January and February.

Speakers from the University of Minnesota's Extension Service will present the day-long programs. Topics will include soil testing, variety selection, use of plant growth regulators, insect and weed management and disease control.

All meetings will start at 9 a.m. with a discussion of local small grain topics by county crops and soils extension agents.

Meeting dates and locations are: Jan. 16, City Hall, McIntosh; Jan. 17, VFW Hall, Shelly; Jan. 18, Courthouse, Breckenridge; Jan. 23, First American Bank Building, Warren; Jan. 24, City Auditorium, Roseau; Feb. 19, (location to be determined), Canby; Feb. 20, Memorial Building, Clinton.

A loose-leaf notebook on small grain production, sponsored by the Minnesota Wheat Research and Promotion Council, is being prepared for each participant.

More information is available from county offices of the Minnesota Extension Service.

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AEA,BSS,CEO,V1M,F1M

NAGR3280

Speakers, topics for Small Grains Workshops:

All speakers are with the Minnesota Extension Service of the University of Minnesota:

Soil scientist George Rehm: the soil nitrate test; changes in soil test values for P and K; using soil test results to make fertilizer decisions; "how high is too high?"

Agronomist Ervin Oelke: variety selection and recommendations for 1990; public vs. private varieties; classes and effects of plant growth regulators; Cerone and Trigger in small grains.

Entomologist David Noetzel: grasshoppers in 1989 and 1990; insecticide-fungicide interaction; biologies and controls of small grain insects.

Agronomist Beverly Durgan: effective weed management, including weed identification; herbicide injury and effects of environmental conditions on weed management.

Plant pathologist Roger Jones: impact of EBCD fungicides withdrawal on small grains; wheat streak mosaic virus; results of 1989 fungicide tests.

NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

December 14, 1989

Source: Larry Jacobson
612/625-9733
Writer: Mary Kay O'Hearn
612/625-2728

HANDBOOK ON BUILDING WITH CONCRETE IS AVAILABLE

Your plan had better be jelled when the ready-mix arrives or the home-mix is prepared--concrete's not a substance that waits for decisions.

A publication, MWPS-35, "The Farm and Home Concrete Handbook," can help with that essential planning. It is available for \$5 (Minnesota residents add 6 percent sales tax) from Extension Agricultural Engineering, 201 Agricultural Engineering Bldg., University of Minnesota, St. Paul, MN 55108.

"Concrete is an essential construction material for farm building design. When properly mixed, handled and cured, it is very durable and resists attack by water, animal manure, chemicals, such as fertilizer, and fire," says Larry D. Jacobson, extension agricultural engineer. A versatile material, concrete can be used for patios and driveways as well as above- or below-ground silos and manure pit walls.

This 1989 first edition handbook, written by professional engineers, deals with the practical "how much to order" to the essential "subgrade preparation" to the applied "cast-in-place wall design." Its chapters include: Concrete as a Material, Flatwork, Weather Precautions, Cast-in-Place Concrete Walls, Tilt-up Concrete, Tilt-up Buildings, Casting Surface, Edge Forms,

Lifting Inserts and Rigging Methods, Below-Ground Silos,
Above-Ground Silos, Concrete Masonry and Laying Blocks with
Mortar. There are also three appendices of basic information
which should help eliminate any guesswork involving concrete.

Midwest Plan Service, Ames, Iowa, originated the publication
together with 12 north central Land Grant universities and the
U.S. Department of Agriculture.

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AEA,BSS,CEO,V1,V2,A1,E4,I4

NAGR3283

Msc 19 #27p

UNIVERSITY OF MINNESOTA
EDUCATIONAL
DEVELOPMENT SYSTEM
405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

**NEWS/
INFORMATION**

December 14, 1989

Source: Karen Brooks
612/625-9267
Writer: Sam Brungardt
612/625-6797

MONOPOLIES HAMPER SOVIET AGRICULTURAL REFORMS

Americans enjoy inexpensive, plentiful and dependable food. By contrast, the Soviet Union's ideology and production, processing, distribution and marketing inefficiencies cripple its food production system.

"Soviet farms get one-half to two-thirds as much output per unit of input as farms in North America," says University of Minnesota agricultural economist Karen Brooks. Brooks studies economic reform in Soviet agriculture for the Minnesota Agricultural Experiment Station.

No mere outsider looking in, Brooks has traveled to the Soviet Union several times, most recently to Lithuania. She works with economists from the Agricultural Academy of Sciences. "The Soviets have a tremendous opportunity," Brooks says. "If their agriculture were chronically unproductive because they have a poor natural resource base, they wouldn't be able to do much about it."

Changes initiated by Soviet President Mikhael Gorbachev may improve things, says Brooks. For example, newly legalized lease contracts exploit personal initiative and promise the benefits of private management without ideologically unacceptable private ownership. Lease contracts permit farmworkers to lease land from the state-owned farms where they were formerly employed.

Yet, relatively few farmworkers strike out on their own, despite the

allure of more freedom and money-making opportunities. Brooks says that's because the system has not yet changed enough.

For example, leaseholders can only obtain machinery, fuel, fertilizers and chemicals from the state farms from which they rent. Those farms often try to cover losses by inflating prices to the entrepreneurs. And, leaseholders who clash with the farm chairman may even find those essential inputs totally cut off.

Eliminating the middle-man role of state and collective farms wouldn't solve the problem, Brooks says, because all inputs come from state monopolies. The lack of competition does little to encourage service, improve quality, ensure timely delivery or lower prices. "They need to break up the state monopoly in the input supply business," Brooks says.

"The Soviets have tried to approach agricultural reform simply by restructuring the relationship between the people who do the work and the farms. They haven't put the same effort into changing the economic environment so that people can work effectively.

"They need to increase people's confidence that these changes are here to stay. Longer leases would help, or if people had ownership deeds in their hands. And, if they could feel that the economic environment is changing so they could make a go of it, they might be much more enthusiastic about striking out on their own."

Brooks summarizes, "There are many problems they need to work on in order for agricultural reform to work: supplying inputs, marketing both inputs and outputs, breaking up the state monopolies and changing pricing policy. Soviet agriculture is moving in the direction of private ownership although it won't get there soon."

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NEWS/ INFORMATION

UNIVERSITY OF MINNESOTA
EDUCATIONAL
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

December 18, 1989

Source: Jim Luby
612/624-3453
Writer: Sam Brungardt
612/625-6797

Editors: This is intended for the commercial horticulture industry. A version for home gardeners will be sent out early in 1990. To obtain a 35-mm color slide or b/w print of Luby with 'St. Cloud' or a close-up of 'St. Cloud', call Carl Walker at (612) 624-3708.

UNIVERSITY OF MINNESOTA INTRODUCES 'ST. CLOUD' HALF-HIGH BLUEBERRY

The University of Minnesota's Agricultural Experiment Station has released a cold-hardy, half-high blueberry named 'St. Cloud'.

According to James Luby, the horticultural scientist who heads the Experiment Station's blueberry breeding program, 'St. Cloud' should be a useful addition in commercial plantings in cold regions as well as in residential plantings and gardens. The new cultivar was named after the city of St. Cloud in central Minnesota, where it has performed very well.

Luby says 'St. Cloud' has a more upright growth habit than 'Northblue' (which is grown commercially in the colder regions of the United States and Canada), 'Northsky' and 'Northcountry'--the half-high cultivars previously released by the Station. 'St. Cloud' plants grow about 4 feet tall and 3 to 4 feet in diameter.

"While their greater height allows for more convenient harvesting," says Luby, "it may predispose them to more winter injury in extremely cold regions or during seasons with inadequate snow cover."

Nevertheless, yields from 'St. Cloud' have been similar to

those from 'Northblue', indicating that the new release has considerable hardiness. Mature plants have averaged 7 pounds of fruit over the last six years at Becker in south-central Minnesota.

Harvest of 'St. Cloud' can begin four to six days earlier than 'Northblue'. Fruit size is approximately three-fourths as large as that of 'Northblue'. In firmness and flavor, 'St. Cloud' fruit is superior to 'Northblue'. Frozen fruit quality usually has been superior to 'Northblue' and similar to 'Northcountry'.

'St. Cloud' requires cross pollination with another cultivar to set fruit. It is compatible with 'Northblue', 'Northcountry' and 'Northsky'.

The parentage of 'St. Cloud', which was tested as MN 167, is B19a x US 3. B19a was selected from a cross between G65, a selection from the USDA breeding program, and 'Ashworth', a cultivar selected from the wild in northern New York. US 3 was selected from a cross between the highbush cultivar 'Dixi' and Michigan Lowbush No. 1, a wild lowbush blueberry from central Michigan.

Persons wishing the names of wholesale sources of 'St. Cloud' plants should contact Jim Luby, Department of Horticultural Science & Landscape Architecture, 254 Alderman Hall, St. Paul, MN 55108 (phone 612/624-3453) or David Wildung, North Central Experiment Station, 1861 Highway 169 East, Grand Rapids, MN 55744 (218/327-4490).

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**NEWS/
INFORMATION**

December 18, 1989

Sources: Bh. Subramanyam
612/624-9292
Phil Harein
612/624-3777
Writer: Dave Hansen
612/625-7290

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

SURVEY TO REVIEW CHEMICAL CONTROL OF INDIAN MEAL MOTH

In Minnesota, Indian meal moths and their larvae are the third most common insect pest that feeds on corn stored in bins.

However, neither the amount of damage the Indian meal moth causes nor the effectiveness of control measures has ever been precisely known. University of Minnesota stored-grain entomologists Phil Harein and Bh. Subramanyam are trying to change that.

It's timely research of the Minnesota Agricultural Experiment Station because one of the more effective controls may be off the market soon. The control is simple--hanging a resin strip in the bin space above the corn. The strip slowly releases dichlorvos vapors that kill the adult moths before they have a chance to mate and reproduce. But since tests show that the chemical can cause cancer in laboratory animals, the EPA may remove it from the market, pending review.

Harein says, "We just don't know what impact this is going to have on populations of this pest and the damage they cause."

That's why the researchers will sample corn from farmers' bins

over the next two years, tracking populations against temperature changes to develop a predictive model.

"This survey will show how serious a pest the Indian meal moth is," says Subramanyam, who has spent four years investigating problems caused by stored grain insects in Minnesota. "It will enable farmers to predict when control is needed."

The researchers will also study whether Indian meal moths have developed resistance to dichlorvos. Laboratory tests with moths collected from different locations will show whether the resin strips are losing their effectiveness.

The researchers do not suspect that the adult moths have developed resistance to dichlorvos because less than 10 percent of Minnesota's farmers use it. Other chemical alternatives, such as malathion and pirimiphos-methyl, and a nonchemical alternative, the bacterium Bacillus thuringiensis, are ineffective against the moth's larvae because of resistance.

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AEA,BSS,CEO,V1M,V2M,F1M

NAGR3285

NEWS/ INFORMATION

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MINNESOTA EXTENSION SERVICE

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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

December 21, 1989

Source: Steve Henry
913/263-2301
Writer: Joseph Kurtz
612/625-3168

VET SAYS MORE EFFICIENT GROWING-FINISHING IS KEY TO PORK PROFITS

Pork producers best opportunity to make more money today is to improve growing-finishing performance.

That was the message Steve Henry, a swine veterinarian from Abilene, Kan., brought to some 500 pork producers in Fairmont, Minn., recently. He spoke at the University of Minnesota's Southern Minnesota Swine Health Clinic.

"Profit per pig is what counts in the swine business," said Henry. "Grow-finish is where the dollars are. The performance of growing and finishing pigs has improved little in the past 20 years. Records show that it takes well over 200 days on average to produce a 230-pound pig. Death loss from weaning to market remains 5 to 7 percent in most herds."

Henry said he has visited European farms where feed conversion in hogs is two pounds of feed per pound of gain. "They don't waste anything there," he said. "We're still trying to get 3:1 feed conversion."

Henry said many producers still follow the practice of putting pigs in one end of a building and taking them out at the other end to sell.

"We need to get away from the continuous flow system and manage pigs in groups," he said. "Putting pigs in groups and using an

all-in, all-out system is the single most powerful tool we have to improve growing and finishing."

He noted that the nutritional needs of pigs change as they grow, and that a four to six-stage diet through growing and finishing improves efficiency. He said the nutritional needs of gilts and barrows is also different. "Split sex feeding may save \$3 per head," he said.

The Kansas veterinarian said grouping animals makes it possible to keep accurate records of groups. "Producers in the cattle feeding and broiler industries depend on and can project from group information," he noted. ",Close outs' on a pen of cattle at the feedlot are a good example of batch philosophy in animal production."

Individual identification of animals, making possible the accurate measurement of age, is crucial to analyzing the performance of individual animals and groups, said Henry. It is particularly useful to monitor pig age at slaughter, he added.

Henry advocated a growing and finishing philosophy that encourages accelerated performance in the bottom one-third of the animals in each group. "We cannot accelerate the top end to compensate for the performance in the poorest one-third of the population," he said.

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AEA,BSS,CEO,V1,V2,P1

NAGR3291

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MINNESOTA EXTENSION SERVICE

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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

**NEWS/
INFORMATION**

December 21, 1989

Source: Cathie Bergum
612/625-2722
Writer: Jack Sperbeck
612/625-1794

EASTERN EUROPEAN REFORM TO BE DISCUSSED AT GRAIN CONFERENCE

How might reform in Eastern Europe and the USSR affect U.S. agriculture? That will be one topic discussed Jan. 9 at the Grain Issues Conference on the University of Minnesota's St. Paul campus.

The Minnesota Extension Service sponsors the conference. Speakers will be from the University's Department of Agricultural and Applied Economics.

Other agenda topics include land rent markets, crop planning and production costs, midwinter analysis of grain markets and the 1990 crop, and trends in the U.S. fertilizer industry.

The conference starts at 8:30 a.m. and runs through 3:45 p.m. Pre-registration is encouraged since registration numbers are limited.

For more information, contact Cathie Bergum, Educational Development System, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108 (telephone 800/367-5363).

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AEA, BSS, CEO, V1, V2, V4, A1

NAGR3288

NEWS/ INFORMATION

105-102-70
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

December 21, 1989

Source: Shirley J. Anderson
612/625-1760
Writer: Dave McAllister
612/625-4261

PUBLICATIONS HELP BUSY PEOPLE EAT PROPERLY AT HOME AND AWAY

Whether eating at home or out, busy people don't have to forego good nutrition in their quest to save time, thanks to four new publications from the Minnesota Extension Service.

Produced in 1989 by the U.S. Department of Agriculture, the four color publications are now available locally. They are based on USDA's seven official dietary guidelines, which are basic principles for developing and maintaining better health. The guidelines emphasize balance, variety and moderation in the diet.

"Shopping for Food and Making Meals in Minutes" (item HE-BU-3847, 36 pages, \$3 per copy) tells how to prepare quick meals, including leftovers and convenience foods, and how to make wise choices when shopping for foods.

"Preparing Foods and Planning Menus" (HE-BU-3848, 32 pages, \$2.50) focuses on balance in the diet, how to prepare specific types of foods and the benefits of planning menus to fit family needs.

"Making Bag Lunches, Snacks and Desserts" (HE-BU-3849, 32 pages, \$2.50) emphasizes good nutrition in selecting snacks and in preparing school and work lunches. Choosing lunch from a vending machine is also covered.

"Eating Better When Eating Out" (HE-BU-3846, 20 pages, \$1.50) shows how it is possible to stay within USDA's dietary guidelines

when eating in restaurants. It also covers snacking, party food, car trips, picnicking, breakfast fare and "fast foods."

County extension offices throughout Minnesota have order forms for these publications. Or, write to the Distribution Center, 3 Coffey Hall, 1420 Eckles Ave., St. Paul, MN 55108. Orders should be prepaid, and shipments to Minnesota addresses require 6 percent sales tax. Orders should include the titles and item numbers of the publications being ordered. Make checks payable to the University of Minnesota.

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AEA,BSS,CEO,H1M,I1M

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NEWS/ INFORMATION

MSC 10 4270
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

December 21, 1989

Source: Lee Johnston
612/589-1711
Editor: Joseph Kurtz
612/625-3168

WEST CENTRAL EXPERIMENT STATION SETS SHEEP AND LAMB FEEDERS DAY

Profitable sheep production will be focused on Thursday, Feb. 1, at the West Central Experiment Station's 62nd Annual Sheep and Lamb Feeders Day, Morris, Minn.

The event will take place in Edson Hall Auditorium on the University of Minnesota-Morris campus. Registration will begin at 9:30 a.m. The program will run from 10 a.m. to 3 p.m. A printed report on the University of Minnesota's sheep research will be available at registration.

The morning program will include three speakers. R. M. Jordan, University of Minnesota animal scientist, will discuss "Yeast Culture, Corn Silage and Extended Light for Feedlot Lambs" and "Influence of Dietary Energy and Protein on Performance of Lactating Ewes." Lee Johnston, animal scientist at the West Central Experiment Station, will discuss "Effects of Gestation Weight Changes on Subsequent Production of Ewes." Duane Erickson, North Dakota State University animal scientist, will discuss sheep nutrition research at NDSU.

In the afternoon, Harvey Windels, animal scientist at the Northwest Experiment Station, Crookston, will discuss "Nutrition of Ewes Nursing Triplets." John Essame, a southwestern Minnesota sheep producer, will share his thoughts on "Philosophical and Technological

Approaches to Raising Sheep." Jordan will provide an overview of the sheep industry, and a short question-and-answer session will wrap up the program.

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AEA,BSS,CEO,V1M,V2,N3

NAGR3287

**NEWS/
INFORMATION**

December 21, 1989

Source: Steve Henry
913/263-2301
Writer: Joseph Kurtz
612/625-3168

VETERINARIAN: SWINE VACCINES NO SUBSTITUTE FOR GOOD MANAGEMENT

Many vaccines for swine diseases have been "miserably ineffective" because they have not been used properly, a Kansas veterinarian told 500 Minnesota pork producers recently.

Steve Henry was speaking at the Southern Minnesota Swine Health Clinic in Fairmont, Minn., sponsored by the University of Minnesota's Extension Service.

"The vaccination program I recommend is none," he said. "Antibiotics are something we need only if we make a mistake. We need a system to make drugs and vaccines unnecessary."

Henry noted how easy it is for humans to develop a psychological dependence on drugs. "With drugs given our animals today, producer expectations nearly always outweigh any realistically possible response," he said.

He said "disease" as we know it in most modern growing and finishing operations is not a discrete, tissue-damaging, single agent. It's "a hodge-podge conglomeration of pathogens, environmental toxins, immune suppressors, traumatic events and stressors," he said.

Henry cited three problems with using antibiotics as a long-term solution to a health concern. "First, is the out-of-pocket expense,"

he said. "Second is the minimal return that can be expected. Third is the risk to final product quality, either conceptually or in reality.

"This is a factor that must become a foremost concern of the swine industry and the veterinary profession. Drug use in food animals has already emerged as a societal concern, not an animal welfare or economic issue."

Henry said a philosophy of system control as the primary disease deterrent is the way of the future. The system includes such factors as facilities, environment, space, nutrition and genetics.

He said it is neither practical nor realistic to expect to eliminate from a swine herd all microbes that could have a harmful effect on hogs. It's more feasible to consider options for adjusting the system to minimize the effects of the microbes, he suggested.

"The time is long overdue for us to accept the presence of organisms with pathogenic potential in all growing and finishing herds of swine," Henry said. "We must realize the need to adapt facilities, diets, labor and efforts toward the peaceful cohabitation of pigs, microbes and people. Necessarily, this will mean less reliance on drugs for microbial elimination."

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AEA,BSS,CEO,V1,V2,P1

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UNIVERSITY OF MINNESOTA
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405 Coffey Hall
1420 Eckles Avenue
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**NEWS/
INFORMATION**

December 28, 1989

Source: Al Leman
515/832-5481
Writer: Joseph Kurtz
612/625-3168

VETERINARIAN OUTLINES SURVIVAL STRATEGIES FOR PORK PRODUCERS

Key strategies for Midwestern pork producers who want to survive and thrive in the '90s are controlling feed costs, using grow-finish records and improving herd health.

That's what Al Leman, a veterinarian with Swine Graphics of Webster City, Iowa, told a recent gathering of some 500 pork producers in Fairmont, Minn. He was speaking at the Southern Minnesota Swine Health Clinic, sponsored by the University of Minnesota's Extension Service.

"Controlling feed costs is a major problem in Midwest pork production," said Leman. "We need to watch for signals that we are spending too much for feed."

Leman said using supplements instead of base mixes or micromixes is one signal. Another is using "add packs" and "booster packs." A third is feeding lactating sows a diet that costs over \$15 a ton more than the diet growing pigs are getting. A fourth is feeding commercially prepared starter diets longer than one week.

"Have an independent nutritionist help set ration specifications and a quality control program," Leman said. "This can be a big step in cutting feed costs."

Leman predicted that grow-finish records will almost completely replace reproduction records in the next five years. He said grow-

finish records provide a basis for formulating diets and integrating financial and biological records.

Leman said grow-finish records should show, at a minimum, an inventory number and average weight, number of deaths, weight in, weight out, average daily gain, feed required per pound of gain and feed consumption per day.

Records on the sow herd should show the number of sows, number of deaths, feed consumed per day in gestation, and feed consumed per day in lactation.

Leman suggested improving herd health by repopulation, using an F1 crossbred gilt program, and finishing with an all in-all out system.

Leman, a former University of Minnesota extension and research veterinarian, said genetics are also important in efficient pork production. "Buy breeding stock from the farm with the best testing system for efficient production of lean tissue," he said. "Use lean boars, with less than a half inch of backfat at 230 pounds."

Leman recommended that producers hire specialized advisors. "It is usually better to pay for service and information," he said. "We need to separate service from products."

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AEA,BSS,CEO,V1,V2,P1

NAGR3294

MSC/9/27p

MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA
EDUCATIONAL
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405 Coffey Hall
1420 Eckles Avenue
St. Paul, Minnesota 55108

Source: Jerry Schmidt
612/624-9799

Writer: Judy Keena
612/625-7047

**NEWS/
INFORMATION**

December 28, 1989

ENJOY SPRINGTIME TOUR IN WASHINGTON, D.C.

See the sights of Washington, D.C., in April! Join an educational tour for adults and spend a week in our nation's capital. Gain a greater appreciation for our country's heritage as you learn about citizenship and watch our government in action.

This year's Know America Tour to Washington, D.C., sponsored and conducted by the University of Minnesota's Extension Service, will be April 23-28. The tour will feature visits to the Washington Monument, Smithsonian Institution, Ford's Theater, Arlington Cemetery, the United States Capitol and many more interesting places.

Cost of the tour is \$785, which includes round-trip airfare, lodging for five nights, breakfasts, dinners, tours and bus transportation while you are in Washington.

The Minnesota Extension Service has conducted the tour for the past 15 years.

When asked to evaluate it, one participant said: "I don't know how you can improve on anything as excellent as this has been."

"Everything was so fantastic, it's hard to criticize any part of the tour," said another

For more information, write to Know America Tour, Earle Brown Center, 1890 Buford Ave., University of Minnesota, St. Paul, MN 55108 or phone (612) 624-9799.

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AEA,BSS,CEO,V4M,E2M

NESP3293

UNIVERSITY OF MINNESOTA
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**NEWS/
INFORMATION**

December 28, 1989

Source: Juanita Reed-Boniface
612/625-9231
Writer: Gail Tischler
612/625-3141

GARVEY/ROESSLER RECEIVES MINNESOTA 4-H AWARD

Garvey/Roessler Communications Associates, Inc., a Twin Cities-based public relations firm, won a Partners in 4-H Award from Minnesota 4-H Youth Development. The award is sponsored by the Minnesota 4-H Federation.

Presented to Peg Roessler and Deb Garvey, partners in the firm, the award recognizes expertise in increasing the public's understanding and awareness of the Minnesota 4-H program.

Garvey/Roessler initiated a statewide Food and Nutrition Career Conference in cooperation with Minnesota 4-H and the Omni Northstar Hotel, and staged the 50th anniversary celebration of the 4-H Building at the Minnesota State Fair last summer.

4-H Youth Development, Minnesota's largest out-of-school educational program, serves 228,000 young people. It is part of the University of Minnesota's Extension Service.

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CEO, V4M, V7, YM

N4-H3298

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MINNESOTA EXTENSION SERVICE

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December 28, 1989

Source: Juanita Reed-Boniface
612/625-9231
Writer: Gail Tischler
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CENTRAL LIVESTOCK ASSOCIATION RECEIVES MINNESOTA 4-H AWARD

The Central Livestock Association (CLA) of South St. Paul won a Partners in 4-H Award from Minnesota 4-H Youth Development for its support of 4-H animal science projects.

The award, presented to CLA general manager Don Kampmeier, is sponsored by the Minnesota 4-H Federation. It honors the Association for supporting 4-H members through trips to national events, county sheep medals and beef showmanship awards.

Since 1919, the CLA has cooperated with 4-H in sponsoring livestock shows for young people. It also provides financial support and volunteer time to the annual 4-H auction, the Red River Valley Winter Shows and Greenbush Sheep Days.

4-H Youth Development, Minnesota's largest out-of-school educational program, serves 228,000 young people. It is part of the University of Minnesota's Extension Service.

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CEO, A2M, N3M, P1M, YM

N4-H3297