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Department of Information  
and Agricultural Journalism  
Agricultural Extension Service  
University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
January 2, 1979

Immediate release

THOMPSON NAMED TO UM  
EXPERIMENT STATION POST

Roy L. Thompson, an extension agronomist at the University of Minnesota, has been named assistant director of the Minnesota Agricultural Experiment Station.

The station is a statewide system of public research in agriculture, forestry, rural home and community life and several other areas. The system consists of the central station and administrative headquarters at St. Paul, a satellite station at Rosemount, and five branch stations at Waseca, Lamberton, Morris, Crookston and Grand Rapids.

Thompson's major responsibilities are to work with the branch stations, commodity research and promotion councils and other outlying programs of the Experiment Station. He assumed his new role Nov. 15.

Thompson was appointed extension agronomist in July, 1972. From 1967 until the agronomy position, he worked for the Rockefeller Foundation developing cropping systems in tropical areas of Colombia, South America.

From 1956-67 he was an agronomist at the West Central Experiment Station at Morris, Minn. He also worked as a research fellow for the University's foundation seed increase program and was a field supervisor for the Minnesota Crop Improvement Association. His agronomy experience began as a worker at the state seed laboratory.

A native of Kensington, Minn., Thompson received his B.S. and M.S. degrees from the University of Minnesota in 1951 and 1959. In 1967 he received his Ph.D. from Pennsylvania State University.

Thompson is a member of the American Society of Agronomy, Crop Science Society of America and International Society for Tropical Root Crops.

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NOTE: This news release could be broken up into several News Briefs. A single News Brief could be made up of the first paragraph and the paragraph that contains the chemical, crop variety or weed you want to discuss.

SEVERAL HERBICIDE USES  
CLEARED FOR 1979 GRAINS

New herbicides and herbicide combinations have been cleared for use in 1979 small grain crops by Minnesota farmers, according to Oliver Strand, extension agronomist at the University of Minnesota. Complete information is available from the county extension office in Extension Bulletin 400, "Cultural and Chemical Weed Control in Field Crops 1979."

Difenzoquat (Avenge) is cleared for use in a tank-mix combination with 2,4-D amine or ester on barley, winter wheat, Era spring wheat and all durum except Lakota and Wascana. The mixture may be used to control wild oat and 2,4-D susceptible broadleaf weeds.

A "special need label" allowing use of trifluralin (Treflan) in Minnesota remains in effect for 1979. It may be used for postplanting and pre-emergence use in spring wheat to control such annual grasses as green and yellow foxtail.

The trifluralin label directs that wheat should be planted 2-3 inches deep in a firm seedbed. The chemical should be applied after planting and worked shallowly with a spike tooth or flexible-tined harrow.

New label instructions for barban (Carbyne) for winter wheat permit a second application to control a second flush of wild oats. The chemical should be applied when most of the wild oat are in the two-leaf stage, at the rate of one-quarter pound barban per acre.

-more-

add 1--cleared grains

Trifluralin (Treflan) and triallate (Far-go) may be tank-mixed for foxtail and wild oat control in wheat. The suggested rate of trifluralin in the mixture is one-half pound per acre on coarse and medium-textured soils, and three-fourths pound on fine-textured soils. Triallate application is suggested as one-pound per acre.

Two clearances to watch for are diclofop (Hoelon) in wheat and barley, and propanil (Stampede 3) in spring wheat. Propanil was cleared for control of green and yellow foxtail in 1978 on an emergency label. Application for full label clearance has been made, but was not granted as of December 1978.

Testing shows diclofop to be promising for foxtail and wild oat control. Applied postemergence in the two-to-four-leaf stage, it has given effective control with little or no crop injury. Clearance for wheat and barley use had not been given as of December, 1978.

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NEW CORN HERBICIDE  
USES CLEARED FOR 1979

New herbicide uses or formulations have been approved for 1979 corn crops in Minnesota, says Oliver Strand, University of Minnesota extension agronomist.

Metolachlor (Dual) was labeled earlier as a six pound per gallon emulsifiable concentrate to use either alone or with atrazine, Strand says. "A label change for 1979 eliminates the need to grow only corn for 18 months after application, and allows rotation to small grains 4½ months after treatment."

A new eight pound metolachlor per gallon formulation has been cleared for bulk use only in 1979 on corn grown for grain, except for popcorn.

A new formulation of atrazine (Aatrex Nine-0), a water dispersible granule, has been labeled for use in corn and sorghum for 1979.

Strand said clearance was also gained for an atrazine-metolachlor liquid formulation (Bicep). The mixture contains 2 lb. atrazine and 2½ lb. of metolachlor per gallon. This product will not be marketed in Minnesota for the coming crop year.

Suggested rates for Bicep are 1 lb. atrazine plus 1½ lb. metolachlor (½ gallon of the product) per acre on coarse-textured soils with low organic matter, or 2 lb. atrazine plus 2½ lb. metolachlor (1 gallon) per acre on fine-textured soils high in organic matter. It may be applied either preplanting incorporated or after emergence.

Crops other than corn may be planted 18 months after Bicep treatment.

For complete information on weed control, consult Extension Bulletin 400, "Cultural and Chemical Weed Control in Field Crops," available from county extension agents and the Bulletin Room, University of Minnesota, St. Paul, 55108.

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SEED TREATMENTS PREVENT  
SECOND YEAR DISEASES

Controlling disease in a field crop may be as simple as a seed treatment, says Howard Bissonette, extension plant pathologist at the University of Minnesota.

Cereal crop losses from disease were high in 1978, with yields reduced as much as 50 percent in some areas, Bissonette reports. Scab disease reduced yields in wheat that had been planted in 1977-crop corn fields. Seeds from this wheat could carry damping off and seedling blight into the 1979 crop, unless they are treated.

"If some of the scabby grain from the 1978 crop is used for seeding this spring without benefit of seed treatment," Bissonette explains, "we might expect a great deal of seedling blight, resulting in poor stands."

Covered smut on oats and semi-loose smut on barley also remain a threat, but treatment would protect affected seeds through germination and give the seedling a disease-free start.

"Seed treatment fungicides can best be applied with commercial equipment," Bissonette adds. "However, where such equipment is not available, farmers may use auger applicators that coat seed with the chemical as it is moved from truck to drill box."

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Note: The source of this information is Oliver Strand, agronomist with the University of Minnesota Agricultural Extension Service.

NEWS BRIEFS . . .

New Soybean Herbicide Uses: The Environmental Protection Agency has approved two new uses for profluralin (Tolban). It may be used in combination with overlay treatments of linuron (Lorox), and naptalam and dinoseb (Dyanap) in soybeans. Rates of  $\frac{1}{2}$ -1 lb. per acre of trifluralin should be used with proper label rates of the overlay treatment, depending on soil type.

Profluralin has also been cleared as a tank mixture or overlay application with metribuzin (Sencor, Lexone) in soybeans. As a tank mixture, it should be incorporated according to the profluralin label. The chemical had been cleared in the past only as a preplanting incorporated herbicide. Details are available from your county extension offices in Extension Bulletin 400, "Cultural and Chemical Weed Control in Field Crops."

\* \* \* \*

Sugar Beet Herbicide Cleared: Ethofumesate (Nortron) was cleared by the Environmental Protection Agency in 1978 for pre-emergence control of several annual grass and broadleaf weeds in sugar beets. Rates are  $1 \frac{7}{8}$  to  $3 \frac{3}{4}$  lb. per acre depending on soil type. Ethofumesate may also be tank mixed with pyrazon (Pyramin), but the pyrazon wettable powder should be mixed with water first. The emulsifiable concentrate of ethofumesate should be added with adequate agitation in the tank.

-more-

add 1--news briefs

Ethofumesate requires at least one-half inch of rainfall after application to activate the chemical.

More details are available from your county extension office in Extension Bulletin 400, "Cultural and Chemical Weed Control in Field Crops."

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Herbicides for Establishing Alfalfa: Profluralin (Tolban) may be used during 1979 in Minnesota for controlling most annual grass weeds and a few annual broadleaf weeds in alfalfa as they germinate. Established weeds are not controlled.

Profluralin is similar to benefin (Balan) and EPTC (Eptam) which have previously been available for weed control during alfalfa establishment.

Profluralin should be used preplanting at  $\frac{1}{2}$  to 1 pound per acre depending on soil type and should be thoroughly incorporated immediately or at least within 4 hours into the top 2 to 3 inches of soil.

More details are available from your county extension office in Extension Bulletin 400, "Cultural and Chemical Weed Control in Field Crops."

\* \* \* \*

Established Alfalfa Herbicides: Metribuzin (Sencor, Lexone) may be applied in fall or spring to dormant alfalfa established for one year or more. Rates of  $\frac{1}{2}$  to 1 pound are suggested depending on weeds to be controlled (see label). Low rates may be used for partial reduction of forage grass stands in an alfalfa-grass mixture. Do not graze or harvest within 28 days after application.

More details are available from your county extension office in Extension Bulletin 400, "Cultural and Chemical Weed Control in Field Crops."

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DAIRY NEWS BRIEFS . . .

Tie Stall Surfaces. Rubber mats increased cow comfort, but did not improve cow health or performance, according to a study at the University of Minnesota's West Central Station at Morris. For many farms, the best solution may be to use concrete surfaces, but have some rubber mats for cows requiring extra protection. In the study, there was about equal chance of hock damage on rubber mats and concrete. However, cows on rubber mats may recover faster from injuries.

\* \* \* \*

Cow Health Costs. Dairy cows in the first and second months of lactation and older cows had higher health costs, according to a study at the University of Minnesota's Southern Experiment Station, Waseca. During the first and second months of lactation, health care costs were several times higher than in late lactation.

Labor and expenses for health care doubled from first to third lactation, and were three times as high for fifth and later lactations as for the first lactation. Mastitis and udder injuries, milk fever, ketosis and treatment of reproductive problems were main causes of increased health care costs with age. The possibility of increased health care costs with age is yet another reason for replacing borderline older cows with heifers, say University of Minnesota dairy scientists.

In the study, yearly expense for health care was lowest for cows that freshened in late summer and fall.

\* \* \* \*

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add 1--dairy news briefs

Free Stalls. Dairy farmers with sharp management practices can get top milk production with free stall barns and milking parlors. Four management practices are essential if you're to get good production in free stall units, University of Minnesota dairy specialists say.

- Dry treat cows with a recommended antibiotic.
- Dip teats after milking with a recommended disinfectant
- Feed dry cows a separate and balanced ration.
- Separate the milking cows into two and preferably three milking groups.

\* \* \* \*

Minerals in Ration. Feeding minerals in the ration is the best way to assure animals will eat them in recommended amounts, says University of Minnesota dairy scientist Mike Hutjens.

A recent survey of 3100 Minnesota dairy farms showed over half were using a partial or complete free choice mineral system. While animals will show a craving when their rations are deficient in salt, they apparently can't select the correct minerals in proper amounts.

In some free choice feeding situations, consumption has not met nutritional needs. In others, animals eat too much, which increases feed costs. Hutjens recommends force-feeding minerals, either in complete, blended rations or in grain mixtures. Topdressing needed minerals to cows housed in stanchions is another alternative.

If none of these are possible, a free choice system is preferred to no supplementation. This may apply to heifers and dry cows when they are on pasture or fed hay and silage with no grain to carry minerals.

If you must use the free choice system, provide adequate mineral feeder space and adequate time for animals to eat. Use reasonably priced mineral supplements that are acceptable to cattle, Hutjens advises.

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4-H NEWS

Immediate release

\_\_\_\_\_ PROMOTE  
(club)  
D-DAY CELEBRATIONS

The next major holiday in \_\_\_\_\_ County will be Jan. 25, and leading the festivities for D-Day (Don't Smoke Day) will be members of \_\_\_\_\_ 4-H Club(s).

\_\_\_\_\_, county extension (director) (agent), explains that the young people are putting up posters and handing out flyers to help inform the public about the holiday. D-Day is an effort to get all Minnesota smokers to stop smoking for a day or forever!

The 4-H'ers are also helping smokers sign pledges to observe D-Day. Their hope is that Jan. 25 will become "the first day of the rest of their non-smoking lives," \_\_\_\_\_ says.

This will be the fifth annual D-Day. A U.S. Public Health Service Survey shows that four months after D-Day, 1978, 15 percent of the pledge signers were still not smoking. Over half of them had been smoking more than a pack a day.

"These 4-H members want people to know that smoking is by far the leading cause of preventable deaths," \_\_\_\_\_ adds. "More than 300,000 men and women die each year because of their habit."

The nicotine in cigarettes constricts blood vessels and forces the heart to pump harder. A man consuming more than a pack a day doubles his risk of heart attack and has five times the risk of stroke than the non-smoker.

Other people are affected by the smoker. In homes where parents smoke, children suffer twice the number of acute illnesses, mostly respiratory. The parents also set an example to their children, who may develop the habit at an early age and have great difficulty stopping later on.

"What (this) (these) club(s) are doing is a real service to the smoker, the community and themselves," \_\_\_\_\_ concludes.

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4-H NEWS

NOTE: This release can be used as a news story naming the leaders who are taking the self-management training, or as a general feature about the management projects. For a general feature, eliminate the second paragraph.

4-H TEACHES LIFE  
MANAGEMENT SKILLS

People who want to help youth make decisions, get organized and think about values are taking "self-management leader training" offered by the Minnesota 4-H this winter.

From \_\_\_\_\_ county, \_\_\_\_\_  
(names and towns)

(will attend) (attended) the training session in \_\_\_\_\_ on \_\_\_\_\_.  
(town) (date)

Sessions are being held throughout the state in January and February.

The self-management unit titled "You're the Boss!" involves children 9-12 years old. "It is the first part of a three-unit program meant to help youth learn management concepts taught in business, farm and home management, says \_\_\_\_\_, county extension agent.

"You're the Boss!" applies the seven management principles--values, goals, standards, decision-making, resources, organization, management--to daily life. "By applying these principles, the young 4-H'er can begin to take on more responsibility at home, and make more decisions," \_\_\_\_\_ explains. "Adults will start to see them, and treat them, as independent people."

An understanding of self-management can be helpful for the entire family. Paula Lammi, the Carlton 4-H'er who won the state self-management award, explains its usefulness in her home:

add 1--management skills

"My mother was in the hospital for three weeks and couldn't do much at home for several months. I was 12-years-old and suddenly had to keep house. I really had to plan and organize to get everything accomplished. I had to decide what was most important and what could be left."

The second unit, "Living as if People Mattered," teaches social management to 13-15 year-olds. "It focuses on social skills, because these are some of the most important aspects of the early teens' lives," \_\_\_\_\_ explains. "We recommend it for the 4-H member planning to take part in Junior Leadership."

Paula Lammi's social management project was a five-day canoe trip. As one of the trip co-ordinators, she set up both short and long term goals, planned menus, equipment and food and set safety standards.

"This trip taught me that one of the things we should most value is people," Paula says. It also sharpened her decision-making, goal-setting, standards, values and organization skills.

The final unit, "Making it on Your Own," teaches life management to older teens. They practice and discuss skills they will need as self-supporting individuals--money management, job seeking, career development, finding a home and living with other people.

"After successfully completing these three projects," \_\_\_\_\_ says, "4-H youth should be well prepared to get--and give--what they want in life."

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ATTN: Extension Home Economists

KEEP SUEDE, LEATHER  
GARMENTS AT THEIR BEST

If you acquired leather or suede garments as holiday gifts, protect your investment by caring for them properly, advises Sherri Johnson, extension textiles and clothing specialist at the University of Minnesota.

Protect the neckline of leather items from makeup and hair oil by wearing a scarf with jackets and vests. Be careful, too, of decorating suede and leather with jewelry. Pin-type jewelry will punch or cut holes and this damage cannot be corrected or repaired. Similarly, shortening or repairing leather is best left to specialists who have the special supplies needed.

Between uses, do not store leather or leather-trimmed clothing in plastic bags or in warm, airless places. Leather must "breathe" to avoid drying out and losing tannery oils. Prolonged exposure to sun or other bright light also dries out tannery oils and can fade the leather.

Be wary of heat around leather. When drying suede or grain leather that has become damp, dry at room temperature and flex the garment often. After suede dries, brush it with a rubber sponge or soft-bristled brush.

If stains occur, most are best left to leather cleaning experts. Cleaning fluids, saddle soap, steel wool or other abrasives can result in ugly rings, discoloration and other damage. Mrs. Johnson says age, heat and other conditions can set some stains so don't allow leather or suede to become too soiled before having them professionally cleaned.

New suede garments tend to lose fine suede dust (crocking). Frequent brushing, particularly in areas where the garment contacts the body, will help remove this suede dust and will remove surface oil, adding luster to suede. Blotting the surface with the sticky side of cellophane or masking tape will also remove suede crocking or other lint.

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ATTN: Extension Home Economists

INTERNATIONAL YEAR OF CHILD:  
RIGHT TO LOVE TOP PRIORITY

A popular bumper sticker asks, "Have you hugged your kid today?" In more formal terms, the United Nations Declaration of the Rights of the Child lists first "The right to affection, love and understanding."

During 1979, which is International Year of the Child, children's need for love and nurturance should be spotlighted, says Ronald Pitzer, extension family life specialist at the University of Minnesota. "But creating a home that provides this center for nurturance isn't easy with the kinds of pressure everyone is under today," he adds.

Because most families have so many demands on their time, their "together time" often suffers. Pitzer thinks this can be unfortunate for families, and particularly for the children.

"If the family is to nurture, support and prepare children for the future, there has to be a positive sentiment among family members." Pitzer says. "And we know that feelings of belonging, affection, concern, commitment and caring require time together--time to exchange feelings and experiences."

What we blame on limited time may be more a problem of inclination, Pitzer says. "It is easier to blame time rather than inclination for our procrastination. Yet some families, with the same 24 hour day available, find time to spend together because they make family time a priority."

Pitzer says he hopes the attention focused on International Year of the Child will cause some families to strive for more family time. He suggests several steps that families can take to insure this.

-more-

add 1--international year of child

\*For a week or so, check on your typical family activities, Pitzer recommends.

"Just how much time does Mother spend with each of the children? Father?

Various combinations? The whole family?"

\*Next, have a family meeting to review what you have found about the time spent together. What modifications are needed? From this develop a plan with definite goals for time together and family activities.

\*As part of this goal setting, try to reduce family fragmentation and arrange opportunities to get to know each other better. Try to balance individuals time, whole family time, time for various combinations of family members and, possibly, time for the whole family to spend with others.

Pitzer adds that setting aside time to be together may nudge some family members into new skills or interests because of the value that others place on the activity. Be sure, however, that the activities meet the needs and interests of all concerned. Otherwise, some members may resist family activities because they feel that others are dictating the terms.

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4-H NEWS

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4-H COMBINES BUSINESS,  
PLEASURE AND LEARNING

Mary Hupf has learned a great deal during her 10 years in the 4-H dairy project. But she is more than a student. Like many other 4-H youth, she is a money-making member of a family enterprise.

Mary started building her Holstein and Ayshire herd when her parents turned over some purebred and grade cows "in exchange for working at home," she explains. Since then, "I have purchased two purebred and some grade animals by borrowing from the bank and repaying from my sales. I also own three animals in partnership with my sister." Mary lives near Randolph in Dakota County.

Bert Nelson, Sebeka, says he signed up for forestry out of pleasure. "It all seemed to begin with my love of the outdoors," he explains. "Is there a better place for a walk than in the woods?"

His motivation broadened, however, "because our family farm has a lot of wooded area, and we would like to see the timber grow and be more productive." Bert consulted with the local forester, who advised adding Norway pine and spruce.

The improvement project led to immediate financial gain for Bert. He thinned out the older birch and sold 10 cords of firewood. The oak he harvested led to another 10 cords, and lumber was cut from larger trees.

"The small trees now grow better, and by cutting out the underbrush, it also looks a lot better," Bert reports.

Nearly all 4-H members learn to budget and save money as part of their projects. Kris Levik, Truman, explains the thriftiness of bread-making:

"The cost of one loaf of white bread from the recipe I use is 35½ cents. When compared to a loaf of bread in the bakery at 49 cents, the saving is 13½ cents per loaf. A family of four would eat about seven loaves a week. In a year's time, this would be a saving of \$49.14."



add 1--4-H combines business,

Other members learn from expensive mistakes. Steve Duff, Farmington, usually shows a profit from his beekeeping project. Not so in 1977:

"I extracted about 500 pounds, but due to the buckwheat near two of my yards, about 200 pounds were very dark.

I was only able to sell a little of it."

Steve put the dark honey to good use, however. He fed some of it to the bees during the hard winter of 1978. "Many of the beekeepers of the area suffered up to 50 percent loss of colonies," he says. "I was lucky and only lost one hive out of 11."

Mary, Bert, Kris and Steve have more in common than their ability to make or save money. They share their knowledge with other 4-H members as project and junior leaders, says Wayne Carlson, assistant program director for Minnesota 4-H. They also take part in community affairs, using their specialized talents to aid others.

"For this all-around competence and leadership, these young people earned state and national recognition," Carlson reports. "They each won a trip to the National 4-H Congress in Chicago in November."

Much more important than a trip is the "learning by doing" all 4-H members gain from their projects, Carlson points out. "They develop goals and practice skills they will need as self-supporting, community-oriented individuals."

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CROP ROTATION  
UPS CORN YIELDS

"Kick 'em when they're down" by rotating away from corn on corn, is the advice a University of Minnesota entomologist gives for controlling corn rootworms.

"Surveys taken last summer show that populations of western corn rootworms are very low," says John Lofgren. "This is the second straight year that rootworm populations are down.

"If farmers avoid rotations of corn following corn, it will be possible to keep rootworm populations down," Lofgren explains. Costs of using pesticides can be reduced by rotating other crops with corn and using insecticides only when they're needed.

University of Minnesota research has shown reduced yields from corn following corn, compared to rotating with soybeans, wheat or wheat plus alfalfa. The four-year study was conducted at the University of Minnesota's Southern Experiment Station by Gyles Randall, soil scientist.

In the two dry years of 1975 and 1976, continuous corn yields averaged only 46 bushels without nitrogen and 66 bushels with 200 lb. nitrogen. However, when soybeans, wheat or wheat plus alfalfa were used as the previous crop, yields increased to 84 to 92 bushels per acre without nitrogen and 104 to 108 bushels with 200 lb. nitrogen.

In the two "normal" moisture years of 1977 and 1978, corn yields were also substantially higher when another crop preceded corn. When no nitrogen was applied, yields ranged from 93 bushels with continuous corn to 128 or 129 bushels with either soybeans, wheat or wheat plus alfalfa as the previous crop. At the 200 lb. nitrogen rate, yields ranged from 154 bushels with continuous corn to about 175 bushels following the other crops.

.add 1--crop rotation

The wheat plus alfalfa plot consisted of interseeding alfalfa with wheat.

"We don't know the definite reasons for the depressed yields with continuous corn," says Randall. However, he speculates that rootworms may be one factor. Others include soil moisture, the fallow effect, toxicity, microbial activity nutrient availability, compaction, tilth and nematodes.

"In some cases all of these factors may play a role," Randall adds. "In other cases perhaps only one or two factors contribute. Soil moisture may not have any direct influence in years of adequate or surplus rainfall."

"There may be interactions between factors -such as soil moisture and fallow effect -and compaction or rootworms.

Soil moisture has been shown to be higher following soybeans than after corn. Also, any crop that is removed by mid-August (wheat) does not transpire water for the rest of the season. This means that soil moisture could be recharged more quickly and completely.

Fallowing land the previous year has been shown to benefit the next year's crop. Active growth by wheat and soybeans terminates much earlier than corn, leaving a brief "rest" or fallow period.

Allelopathy is the influence of one living plant upon another due to secretion of toxic substances. Randall speculates that last year's corn roots and incorporated residue along with the secretion of toxic substances from these materials as they decompose could inhibit corn root development. On the other hand, as soybean or wheat roots decompose, organic materials may be released, creating an environment that is better for corn root growth.

Increased microbial activity, especially following soybeans, may affect root growth and nutrient availability.

-more-

add 2--crop rotation

Nutrient availability to plant roots may be influenced by both fallowing and microbial activity. "As high residue amounts from a corn crop are returned to the soil, they may tie up certain nutrients," says Randall.

Compaction may be a factor since nearly all corn is planted before soybeans. Many time soils are much wetter during corn planting and compaction from secondary tillage becomes more severe. Also, heavier equipment such as silage wagons and manure spreaders may accompany continuous corn production.

"Soybean producers have noticed that soil following a soybean crop has greater tilth. We've also noticed this effect following wheat. This could affect corn root development and growth," says Randall.

Rootworm populations build up under continuous corn cropping. Even with the best insecticides, rootworm control is less than 100% and probably less than 80%. These uncontrolled rootworms may have a depressing effect on corn yields, especially in dry years when their root feeding would decrease ability of corn plants to obtain water.

Localized, high infestations of lesion nematodes have been reported in Minnesota, especially with continuous corn. Nematodes also affect root growth and possibly yields.

Other research in Wisconsin and Iowa, plus a Watonwan County, Minnesota study also showed decreased yields from continuous corn. "Take this into account when planning your crop program," Randall advises. Expected prices, production costs, workload, and crop use plans (sell or feed) should also be considered.

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DIRECTORS TO  
LOOK AT CO-OP  
MERGER QUESTIONS

Directors of farmer cooperatives will have a chance to study the various angles of merging co-op businesses at \_\_\_\_\_ on \_\_\_\_\_.  
place and town date

The program "Let's Look at Merger--Again!" is sponsored by the Minnesota Agricultural Extension Service, the St. Paul Bank for Cooperatives and the Minnesota Association for Cooperatives (MAC). Starting time is \_\_\_\_\_.

"We had a program about merging in the mid-1960's," \_\_\_\_\_ explains. "Massive changes in our transportation system, such as railroad abandonments, bring up the possibility once again."

Speakers include Dennis Johnson, Dale Kaisershot, Allan Lambrecht, and Joy Wagner of the St. Paul Bank for Cooperatives, Allen Gerber from MAC, Frank Smith, extension economist with the University of Minnesota, and county agents from the area.

They will discuss the financial, economic and social considerations of merging. There will also be a talk on how to conduct an annual meeting.

The meeting is open to interested persons regardless of race, creed, color, sex, national origin or handicap.

January 15, 1979	Rochester	Holiday Inn South
January 29	Wheaton	Dale's Steak House
January 30	Dawson	VFW
February 5	Sauk Centre	Hi-Ho Cafe
February 20	Okabena	Legion Club
February 21	St. James	Court House
March 8	Fargo	Town House
March 9	Grand Forks	Ramada Inn

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Department of Information  
and Agricultural Journalism  
Agricultural Extension Service  
University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
January 8, 1979

Immediate release

NEWS BRIEFS.....

Insecticide Aids Quackgrass Control: Because an insect prevents herbicide from reaching all parts of the quackgrass plant, treatment with an insecticide may be needed for improved control.

University of Minnesota researchers Phil Westra and Donald Wyse found that a member of the weevil family feeds on quackgrass rhizomes. The insects destroy tissue connecting the rhizome to the main part of the plant. This prevents the herbicide glyphosate from reaching and killing the entire rhizome system, resulting in reinfestation of the treated field.

Westra and Wyse applied an insecticide to control soil-borne insects, and either 1 or 1½ lb. of glyphosate per acre. The number of quackgrass shoots per acre was greatly reduced when compared to treatments that included only glyphosate.

\* \* \* \*

Zap Rootworms: Avoiding crops of corn following corn will keep corn rootworm populations low. Corn rootworm numbers are down for the second year in a row, says John Lofgren, extension entomologist at the University of Minnesota. "It looks like we're at a low point in the western corn rootworm cycle. Kick 'em when they're down!" he advises.

\* \* \* \*

NEWS BRIEF CORRECTION: The Jan. 2 news brief "New Soybean Herbicide Uses" made an erroneous reference to the chemical trifluralin. The proper chemical is profluralin, and the sentence should read: "Rates of ½-1 lb. per acre of profluralin should be used with proper label rates of the overlay treatment, depending on soil type."

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January 8, 1979

Immediate release

NOTE: As part of the Swine Sulfonamide Residue Reduction program, the U.S. Department of Agriculture will be conducting a survey of 300 farms in Minnesota starting this winter. Dr. Hanson will be assisting USDA. As soon as details are available, a news release will be sent to your office asking for farmer cooperation.

PORK PRODUCERS AIDED IN  
REDUCING SULFA RESIDUES

Since last September, 22 pork producers have received aid from University of Minnesota extension veterinarians in reducing sulfa residues.

Eight farm visits were made to find the causes of these residues and consult with the producer, Dr. James Hanson, extension veterinarian, reports. Hanson also serves as field representative of the state Swine Sulfonamide Residue Reduction program.

Residues have been traced to inadequate feed equipment cleaning, improper withdrawal periods and failure to clean pens when converting to a non-medicated feed. "There may be enough residues in feces from pigs that have been fed sulfa-medicated feeds to cause problems during the 15-day withdrawal period if pens are not properly cleaned," Hanson says.

He adds that the program is an effort to advise swine producers. "We want to inform them of the proper use and withdrawal periods of sulfonamides." The U.S. Food and Drug Administration has agreed not to take regulatory action against those who cooperate in the sulfa residue reduction program.

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January 8, 1979

Immediate release  
Contact Donald Wyse  
(612) 373-1311

QUACKGRASS VARIETIES MAY  
SURVIVE HERBICIDE TREATMENT

A small area of cropland may have several quackgrass varieties present, some of which will survive an herbicide treatment that kills other types, University of Minnesota researchers report.

Phil Westra and Donald Wyse observed differences in plant death in a large field of bluegrass and quackgrass that had been sprayed with glyphosate. A close look showed there were different types of quackgrass patches present. The plants differed in color, awn length, leaf width, rhizome production, and growth rate.

The scientists selected ten quackgrass varieties in the field, propagated them in the greenhouse, and planted them in the field for study in 1978. The ten varieties showed extreme differences for 14 traits studied during the season.

For example, the number of rhizome buds produced per plant during one growing season ranged from 1,190 to 5,400. Some of the varieties spread further underground than others, and the number of seed heads per plant ranged from 3 to 20. The number of daughter shoots produced over the entire season ranged from 6 to 74.

Westra and Wyse also studied the ten quackgrass varieties in test plots that were sprayed with glyphosate. Twelve plants of the same variety were included in each plot to stimulate quackgrass patches in a farmer's field. They were allowed to grow for three months, clipped, and allowed to regrow to the four-leaf stage. Glyphosate was then applied at rates up to 1½ lb. per acre.

Shoot counts taken two months after glyphosate treatment showed that two of the ten quackgrass varieties were quite resistant to the chemical. At ¼ lb. per acre of glyphosate, the resistant varieties had three times more shoots per plot than the susceptible varieties. The shoot counts ranged from 39 to 130.

At 1½ lb. per acre, the resistant varieties had more than seven shoots per plot, while the susceptible ones had less than one shoot per plot.

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FEEDING SOWS FAT  
MAY SAVE BABY PIGS

Adding fat to the diet of sows may pay for itself by improving the new-born pig's chances of survival, a University of Minnesota researcher says.

Steve Cornelius, swine nutritionist, figures that "the cost of adding 15 percent extra fat during late gestation and early lactation could be easily offset by saving two-tenths of a pig per litter."

The pig is born with very little stored energy, Cornelius explains. "It seems possible that the 20-30 percent mortality we often see in baby pigs is largely caused by low energy stores at birth."

While scientists don't know for sure that added fat improves the survival rate, most research shows it is beneficial, Cornelius says. Forms of fat include lard, tallow, and several vegetable oils.

The feed-fat mixture is usually difficult to handle, with feed hanging up in bulk tanks, or fat soaking through bags. Cornelius concludes, however, that the extra trouble and expense of feeding fat to sows at the proper time "is easily outweighed by a small increase in survival rate."

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January 8, 1979

Immediate release

UM SPECIALISTS SPEAK  
AT PORK CONVENTION

Six pork production seminars featuring University of Minnesota scientists will be hosted by the Minnesota Pork Producers Association (MPPA) during its convention Jan. 25-26.

The one-hour seminars will be held Jan. 26 at the Radisson South Hotel, Minneapolis. They start at 10 a.m.

Topics include the Minnesota Sulfa Residue Reduction Program, bloody diarrheas, outdoor waste holding facilities, lameness prevention, viruses causing reproductive losses and farm partnership arrangements. University speakers include veterinary specialists James Hanson, Dave Bane, Harold Kurtz, Harvey Hilley and Al Leman; ag engineer Jim Moore and extension economist Paul Hasbargen.

A pork industry exposition will be held in conjunction with the MPPA convention. On Jan. 25 at the noon luncheon, featured speaker will be Dr. Tom Haggai of High Point, N.C.

The Jan. 26 noon luncheon speaker will be Virgil Rosendale, Augusta, Ill., past president of the NPPC. A special slide show honoring the 1979 Minnesota Swine Honor Roll and Pork All-American will be shown at the banquet that evening.

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NEWS BRIEFS...

Hogs Fed High Lysine Oats: Feeding high levels of Otee oats to hogs reduces consumption of a protein supplement without affecting average daily gain. Otee contains 0.57 percent lysine and 14.5 percent protein.

University of Minnesota researcher R.J. Meade found, however, that heavier pigs (100-225 lb.) needed more feed per pound of gain when their cereal diets contained 60 percent Otee oats.

Meade reports that in his experiment involving 120 crossbred pigs, those fed 60 percent oats and 40 percent corn in the cereal part of their diets consumed 47.5 lb. of soybean meal. Pigs fed all corn needed 76.7 lb. soybean meal. The 40 percent oat diet resulted in consumption of 57.5 lb. of protein supplement, and the 20 percent average was 68.2 lb.

\* \* \*

Hogs Prosper on 25% Wheat: Hog producers may substitute up to 25 percent wheat for corn without seriously affecting average daily gain, University of Minnesota researchers report.

A team of animal scientists including S.G. Cornelius used 240 pigs in an experiment feeding 0, 25, 50 and 75 percent wheat. Average daily gain decreased as the percentage of wheat increase, although at the 25 percent level, results were roughly the same as all-corn feeding.

Hogs ate less feed when diets contained more than 50 percent wheat. Waste of feed was also a problem with the high wheat content.

"Adding wheat will reduce soybean meal needs," Cornelius says. "The decision to substitute wheat for corn must be based on the relative prices of wheat, corn and soybean meal."

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COW-CALF DAYS  
SCHEDULED

Herd health, breeding and genetics information will be given at the  
Beef Cow-Calf Day \_\_\_\_\_ at \_\_\_\_\_  
(date) (place and town)

sponsored by the University of Minnesota Agricultural Extension Service.

Topics include breeding herd health programs, calving time, calf health management, workable crossbreeding systems, choosing breeds, and importance of herd bulls.

Speakers include R.L. Arthaud and J.C. Meiske, animal scientists; and D.L. Haggard, J.O. Hanson and H.L. Whitmore, veterinary scientists. Panels made up of area beef producers and veterinarians will also discuss cow-calf topics.

All interested persons are invited regardless of race, creed, color, sex, national origin or handicap.

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<u>DATE</u>	<u>TOWN</u>	<u>PLACE</u>
January 23	Roseau	Roseau City Auditorium
January 24	Crookston	Northwest Experiment Station
January 25	Solway	Solway "Lammers" Town Hall
January 30	Hinckley	Cassidy's
January 31	Grand Rapids	Rainbow Inn
February 5	Zumbrota	4-H Building--Goodhue County Fair
February 6	Preston	The Branding Iron
February 14	Detroit Lakes	Area Vo-Tech Institute
February 15	Morris	Edson Hall, University of Minnesota
February 16	Staples	North Campus Auditorium, Area Vo-Tech Institute
February 20	Amboy	Norman's Cafe
February 21	Lamberton	Southwest Experiment Station

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IN BRIEF. . . .

Wild Rice Meeting. The annual Minnesota wild rice symposiums is scheduled for the Rainbow Inn in Grand Rapids Jan. 26-27.

Registration begins at 9:30 a.m. Friday, Jan. 26. University of Minnesota specialists will present research reports on weed and volunteer control, fertility, varietal development and disease and insect control. Harvesting and processing research will also be discussed.

Featured speaker at the Friday banquet session will be Congressman James Oberstar. The Wild Rice Growers' Association will hold their annual meeting Saturday morning, Jan. 27.

# # # #

Corn on Corn? Research trials have shown "significant and economic yield reductions for continuous corn," says Gyles Randall, soil scientist with the University of Minnesota's Southern Experiment Station, Waseca. Soybeans, wheat or wheat interseeded with alfalfa the year before all resulted in higher corn yields the following year. Randall advises farmers to take crop rotations into account when planning crop programs. Also consider expected prices, production costs, workload and crop use plans (sell or feed).

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January 8, 1979

ATT: Extension Home Economists

Immediate release

VARYING MICROWAVE POWER  
SUITED TO ROAST COOKERY

If your microwave oven has varied power settings, use them to good advantage in preparing roasts, suggests Isabel Wolf, extension foods and nutrition specialist at the University of Minnesota.

Preliminary studies conducted at the University show that a medium power setting (about 2/3 power) works well when combined with a low setting (1/3 power) to bring the roast temperature up about the last ten degrees toward doneness.

In the studies, sirloin tip roasts were microwaved at medium power to 130° F and at low power to 140° F (medium doneness). When compared with roasts microwaved at medium power alone to 140° F, the roasts finished at low power were more uniformly heated and were tender at the medium degree of doneness. The researchers used choice grade beef for the study.

Data on chuck arm roasts yielded similar results. Those microwaved at medium power to 140° F and finished to 150° F on low were more satisfactory than those microwaved to 150° F at only one power setting.

Mrs. Wolf suggests that manufacturers' suggested cooking times for roasts are generally rough estimates. If your microwave oven has a meat thermometer or temperature probe, this is the most reliable way to gauge degree of doneness. Even heating within meat is also aided by turning the roast over about half way through the cooking time.

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January 8, 197

ATT: Extension Home Economists

Immediate release

NOTE TO HOME ECONOMISTS:  
Curriculum materials including  
teachers' manuals, discussion  
guides and student guides are  
available to accompany "Footsteps".  
If you are interested in such  
materials, contact Ron Pitzer for  
details on prices and ordering  
procedures.

TELEVISION SERIES  
FOCUSES ON PARENTING

"Footsteps", a series of 20 half-hour television programs looking at the problems of prospective parents and parents of young children, has begun on Minnesota's educational television network.

Ronald Pitzer, extension family life specialist at the University of Minnesota, says the programs are being carried on stations KTCA-2 in the Twin Cities, KWCM-10 in Appleton, WDSE-8 in Duluth, KFME-13 in Fargo-Moorhead, and KGFE in Grand Forks at 10 a.m. Thursdays and again at 9 a.m. Saturdays.

The series, which is sponsored by the U.S. Office of Education, focuses on five diverse families and their responses to many problems and challenges in childrearing. Among the themes will be children's identities, preparing for parenthood, children and television, dealing with death, discipline, play and fantasy, social skills, fears, creativity and the handicapped child.

The series is unique in its attempts to show what the child is experiencing in various situations. It attempts to explain children's behavior to sometimes-perplexed and frustrated parents, Pitzer adds.

He encourages viewing of the series as a useful part of family or group observation of International Year of the Child, a United Nations effort to train worldwide attention on the importance of families and children.

Other stations that carry Public Broadcasting Service (PBS) programming may also be airing the series although times will vary.

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January 14, 1980

Immediate Release

Source: Clif Halsey (612) 373-1060

Writer: Kathy Frank Chesney (612) 373-0714

### CONSERVATION TAX BREAKS

Landowners are no longer taxed for the state or federal payments they receive when taking part in conservation cost-sharing programs, reports Clif Halsey, University of Minnesota extension conservationist.

"Payments you receive after September, 1979, under specific programs are likely to be excludable from your gross income when determining your federal income tax," Halsey says. The payments must not substantially increase your annual income from the property involved and must be made under the following programs: Rural Clean Water Program, Rural Abandoned Mine Program, Water Bank Program, Emergency Conservation Measures Program, Agricultural Conservation Program (ACP), Great Plains Conservation Program, Resource Conservation and Development Program (RC&D), Forestry Incentives Program, USDA small watershed programs and state cost-share programs.

Tax deductions are also available for soil and water conservation expenditures. Farmers may deduct costs incurred from: (1) treatment or movement of earth such as leveling, conditioning, grading, terracing, contour furrowing or restoring fertility; (2) construction, control and protection of diversion channels, drainage ditches, irrigation ditches, earthen dams, watercourses, outlets and ponds; and (3) planting windbreaks.

For details, refer to the Farmer's Tax Guide available from your county extension office. Information about exclusion for cost-sharing payments is on page 10, and about conservation deductions on pages 47-48.

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Tel. (612) 373-0710  
January 14, 1980

Sources: Jay Meiske and  
Richard Goodrich  
612/373-1110

Writer: Kathy Frank Chesney  
612/373-0714

## CATTLE FEEDERS BRIEFS. . .

Doubling Calcium: University of Minnesota animal scientists raised their fed cattle returns \$11 per head by feeding double the recommended rate of dietary calcium in trials at the Northwest Experiment Station, Crookston.

Researcher Richard Goodrich comments, "I'm convinced, not just from this trial, but also from the work of others, that we should be feeding higher levels of calcium."

The 120 steer calves were fed rations containing from 0.3 percent added calcium in the "normal" diet to 0.6 percent in the doubled diet. Average daily gains, feed efficiency and carcass scores were higher with the ration containing the higher calcium levels.

\* \* \* \*

Hair Analysis: The mineral content of hair taken from calves and their dams is influenced by several factors other than nutrition, a University of Minnesota animal scientist reported at Cattle Feeders' Days in December.

Jay Meiske said that hair was taken from six male and six female Angus calves and their mothers at two-month intervals for a year. Mineral content varied according to body location and sex. For example, magnesium content for calves was higher in hair from the rump than from other locations. It was also higher in males than females even though both received the same ration. Most minerals were lower in tail switch hair than in hair from other locations for both calves and cows.

Hair mineral content was also influenced by season of the year in cows, and by sire in calves. "The upshot of it is that we just can't get excited about hair analysis as indicating mineral status of these animals unless we know these other factors and they are accounted for in the analysis," Meiske concluded.

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January 14, 1980

Contact: Gerald Wagner  
612/373-0725

TEXAS FEEDLOT  
STUDY TOUR

A four-day tour of Texas feedlots and ranches will examine the competition Minnesota beef producers face from southwest commercial feedlots March 11-14, 1980.

The Texas Feedlot Study Tour is sponsored by the University of Minnesota in cooperation with the Minnesota State Cattleman's Association and the Minnesota Extension Beef Feedlot Committee.

The tour will visit commercial feedlots near Amarillo, Gruver, Dalhart, and Dumas, Texas. A meeting with staff and officers of the Texas Cattle Feeders Association to learn the current status and history of the Texas beef industry is planned.

Tour group members will learn how commercial lots market cattle, observe various herd health plans, and gain new livestock and feed buying skills. In addition, the tour group will see a cow-calf ranching operation and a farming enterprise which emphasizes winter grazing.

A visit is also scheduled to the IBP Packing Plant near Amarillo which is one of the largest and most modern beef plants in the world.

Interested cattle feeders and beef industry personnel are invited to take part in the tour. Registration is limited to 43 persons. The fee of \$430 includes airfare, bus transportation, hotel room, and five meals. The full amount can be refunded on cancellations until March 10, 1980.

Further information is available from the Office of Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, Minnesota 55108.  
Phone: (612) 373-0725.

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Tel. (612) 373-0710  
January 14, 1980

Immediate release  
Source: Dottie Goss  
(612) 373-0914

CONSUMER BRIEFS. . .

Not all bargains are bargains: As inflation soars, most of us will be on the lookout for bargains. Beware of what and how you buy, cautions Dottie Goss, an extension family resource specialist at the University of Minnesota. "A bargain is never a good buy if your family won't use the discounted item, or if they won't enjoy using it."

Before going to a sale, take time to consider your needs. Determine what is important and what compromises you're willing to make; think of how you'll use the item, how long it'll be used and which special features are important to you.

"With some items, you'll want to buy as much quality as you can afford; with others, a lower quality item may meet your needs very well," Goss says. "Remember, quality and price aren't always directly related; high fashion items, for example, may be of poor quality yet demand high prices. In examining an item for quality, look at design, materials and workmanship."

\* \* \* \*

Shopping sales: Seek information about an item on sale before you get to the store, says Dottie Goss, an extension family resource specialist at the University of Minnesota. Salespeople usually have less time to help customers during sales and sometimes sales merchandise has less labeling information than regular items.

"Besides doing comparison shopping in person, check catalogs, advertising and information issued by consumer testing agencies," Goss says. "Friends who already own the item you're considering may also be helpful."

\* \* \* \*

Advertising as an information source: Advertising can provide information if it's used wisely, says Dottie Goss, an extension family resource management

add two--consumer briefs

brand names. Sometimes the special purchases are of standard quality; sometimes they're seconds or otherwise imperfect items.

Annual sales, regular stock or department manager's sales usually feature regular merchandise at a reduced cost for a short period of time. When the sale is over, the merchandise returns to the regular price.

Anniversary sales commemorate the founding of the store. The retailer's aim is to increase sales by offering a variety of goods at special prices. Usually some of the regular stock is reduced and some special purchase items are offered.

Seasonal sales usually come at the end of a season or before the new season's stock arrives. Quite often, excellent bargains are offered on appliances, furniture, furs, clothing, linens, rugs and household accessories.

Stimulation sales are held to encourage buying during slack periods. They may be billed as penny sales, dollar days, back-to-school, two-for-one, etc. Regular or special purchase items may be featured.

Grocery stores regularly feature "loss leader" items. These are items that sell below regular price to lure customers into the store to buy these and other items.

"The most important thing to remember about sales is that a bargain is not a bargain if your family won't use or enjoy the item, if the item doesn't suit your family's needs or if the item is not at a lower price than usual," Goss says. "When considering cost, include such things as the cost of cleaning, operation, repairing, installing, etc., if these are a factor."

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January 14, 1980

Source: Leonard Hertz  
612/373-1103

BERRY GROWERS SCHOOL  
SCHEDULED MARCH 16-17

The annual Minnesota Berry Growers School for producers of strawberries and raspberries will be held in St. Paul, March 16 and 17. Speakers will include a Wisconsin commercial berry grower and specialists from midwestern universities.

The opening speaker will be Bill Miller, Wisconsin strawberry grower, who will discuss strawberry culture for pick-your-own berry farms. He will speak on Sunday evening, March 16, at the Holiday Inn in Roseville, Minn.

On March 17 the conference will shift to the Earle Brown Continuing Education Center on the University of Minnesota St. Paul campus. Speakers will include Gene Galletta of the U.S. Department of Agriculture, speaking on strawberry varieties for high yield; Elden Stang of the University of Wisconsin on weed control in berry fruit and raspberry varieties and Bill Courtier, discussing pick-your-own systems and getting customers to the farm.

Other speakers will discuss pest control, renovation and the RPAR process.

For further information and to register, contact Leonard B. Hertz, Department of Horticultural Science, University of Minnesota, St. Paul, MN 55108.

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Tel. (612) 373-0710  
January 14, 1980

Source: Charles Christians  
612/373-1166

Writer: Kathy Frank Chesney  
612/373-0714

#### 4-H BEEF, DAIRY OWNERS MAY VOTE IN NATIONAL REFERENDUM

Each 4-H member who has owned a beef or dairy animal for the past 12 months has a voice in deciding whether a special beef research and information program should be established.

"Cattle-owning 4-H members and other such youth are invited to register and vote in this national referendum," says Charles Christians. He is a University of Minnesota extension animal specialist serving on the state's Beferendum committee. Youth and other producers register Jan. 28-Feb. 6 at their local Agricultural Stabilization and Conservation Service (ASCS) office, and return to vote there Feb. 19-22.

If at least half of the voters want the program, a system would be set up to collect two-tenths of one percent of an animal's value each time it is sold. That's 20 cents for every \$100. If it were collected every time a beef animal was sold in this country, \$40 million would be collected each year.

How would this money be used? The U.S. Secretary of Agriculture would appoint a board of beef producers to make that decision. They could spend it to find better ways of growing cattle, and of informing consumers about the benefits of beef. Their goal would be to improve cattle and beef markets. They could not, however, use the money to influence lawmakers.

How would you help fund the program if it passes? Every time you sell \$100 worth of beef animal, the purchaser would deduct 20 cents from your check. For instance, if you sell a \$400 calf, the purchaser deducts 80 cents. When that animal is sold as a \$800 fed steer or heifer, the slaughterer deducts \$1.60 and sends it to the beef board. If you had bought that animal as a \$400 calf, then fed and sold it for slaughter, you would also contribute 80 cents.

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January 15, 1979

Immediate release

SUGARBEET RESEARCH  
REPORTS PLANNED

Sugarbeet production research will be presented Jan. 24 at the Fargo Holiday Inn and Jan. 29 at the Grand Forks Westward Ho Motel by specialists from the University of Minnesota (UM) and North Dakota State University (NDSU) extension services.

Topics and speakers include: sugarbeet weed control--Alan Dexter and Jerry Fitts, NDSU, UM; insect control--Albin Anderson, NDSU; disease control--Howard Bissonnette, UM; production practices--Larry Smith, UM; soil fertility--John Moraghan, NDSU; tillage practices--Ed Deibert, NDSU; production costs--Roger Johnson and Steve Hvinden, NDSU; and sugarbeet harvest and storage--Darrell Cole, U.S. Department of Agriculture, Fargo.

Five finalist ideas for the growers' idea contest will be presented at each meeting, and growers will elect winners. The first educational session will start at 9:30 a.m. and the final session should end at 4 p.m.

The meetings are open to interested persons without regard to race, creed, color, sex, national origin or handicap.

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January 15, 1979

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LOWER HOG FEED PROTEIN  
RATES MAY BE PROFITABLE

The hog feeder may maximize profits by including less protein (soybean meal) in the ration than is usually recommended, even though research shows the best growth rate and feed conversion result from higher than recommended protein feeding.

A University of Minnesota research team fed eight levels of protein to 1,040 crossbred pigs during three production periods--50 to 100 lb., 100 to 150 lb. and 150 to 200 lb. The crude protein level of their soybean meal was 47.5 percent.

Growth and feed conversion were best when 19.9 percent was fed in the first period, 17.5 during the middle stage and 14.8 percent in the final finishing. "Classical requirements suggest feeding 18, 16 and 14 percent crude protein for the three periods," team leaders R. J. Meade and S. G. Cornelius point out.

At these high rates of protein feeding, small reductions will cause minor changes in weight gain. This means that the producer paying \$160-\$180 per ton of soybean meal will profit most by providing 17 percent protein in the first feeding stage, 16 percent in the second and 14 percent in the third. With costs \$200-\$240, the best levels are 17, 15 and 13 percent. The price of corn in the experiment was \$1.96 per bushel.

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January 15, 1979

Immediate release

ELECTRICAL STIMULATION  
OF BEEF CARCASSES  
NOT FOR HOME SLAUGHTER

New methods of electrically stimulating beef carcasses immediately after slaughter to improve tenderness, texture and color cannot be used safely for home slaughtering operations, according to Richard Epley, extension meats specialist at the University of Minnesota.

Epley says that the new processing technique uses 550 volts into the carcass for about 20 times in one minute. The few packing plants that are using the technique have taken extreme safety precautions to avoid electrocution of any plant workers.

"The procedure cannot be adapted to a home slaughter situation because the potential for human electrocution is too great," Epley says. "Also, the carcass jerks and contracts quite violently when current is applied. The carcass could easily fall and injure someone."

He adds that most beef carcasses can yield cuts with acceptable color, texture and tenderness if the carcass is aged for seven to ten days at 35° F.

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January 15, 1979

Immediate release

IN BRIEF....

Lambs Don't Choose Calcium: Lambs fed minerals on a free choice basis had lower daily gains and less calcium in their bones than lambs fed a complete ration, University of Minnesota researchers report.

Although enough mineral disappeared to meet individual lamb requirements, most of it may have been consumed by one lamb, research team member Richard Goodrich explains. "The results of this trial and several other studies in our laboratory indicate that cattle and sheep fed rations without calcium, with the mineral available free choice, perform poorly."

Lambs fed weekly doses of calcium in their rations gained weight as well as daily calcium-in-ration feeders. The weekly feeders had less calcium in their bones, however.

\* \* \* \*

Growing Steers Need Corn--Finishers Need Silage: University of Minnesota researchers shortened the time in the feedlot with a two-phase cattle feeding program. They fed 3 lb. high moisture corn plus a full feed of corn silage in the growing ration, and 8 lb. corn silage plus a full feed of corn grain in the finishing ration.

During the 111-day growing period, cattle fed the 3 lb. of corn grain had faster daily gains, greater feed intakes, and better feed efficiency than those fed only corn silage (plus 1 lb. supplement for both treatments).

During the 87-day finishing period, steers fed silage plus corn grain gained faster, consumed more feed and needed less feed per pound of gain than those fed only grain.

J. C. Meiske and R. D. Goodrich, animal scientists, conclude, "The results suggest that corn silage should be included in the finishing ration. Also, a small amount of corn in the growing ration shortens the total feedlot period."

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January 15, 1979

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52nd SHEEP-LAMB  
DAY SCHEDULED

The 52nd annual Sheep and Lamb Feeders Day will be held Feb. 1 at the West Central Experiment Station, Morris, Minn., starting at 10 a.m.

R.M. Jordan, animal scientist with the University of Minnesota Extension Service and H.E. Henke, station scientist, will give the program. Topics include the effect of concentrate to roughage ratio, rumen buffer and sale weight on lamb performance and profits; growth implants, feeding corn stalks to gestating ewes, varying protein levels for lambs and how to deal with higher input costs.

Frank Hinds, University of Illinois scientist, will report on his research. A Hancock, Minn., producer, C.J. Myers, will talk about his operation. A lamb dinner will be served at noon.

All interested persons are invited to attend regardless of race, creed, color, sex, national origin or handicap.

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January 15, 1979

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FLOCK BUILDING  
PROFITABLE, EVEN  
WITH \$100 EWES

Prices as high as \$125 for ewes and \$75 for lambs in 1978 seems to indicate that sheep raising is becoming a popular livestock venture, a University of Minnesota extension specialist reports.

"On the surface, \$100 ewes may appear extravagant," R.M. Jordan, animal scientist, says. "But more profit potential seems to exist now than existed years ago with \$40 ewes."

The key to turning that "potential" into real earnings is keen money and production management, Jordan explains. His bulletin on dealing with the increased capital inputs of lamb production, Extension Folder 449, is available at county extension offices. The title is "Starting or Expanding Your Sheep Herd."

"The price you pay for the ewe is not nearly as important as her ability to produce at a high level," he points out. A \$100 ewe that consistently weans 140 lb. of lamb is able to produce at a much lower cost than the \$80 animal that gives only 100 lb. of meat.

The nonfeed costs of lamb-raising now equal about one-third of total costs. These expenses, mostly the inflated ewe, building and equipment prices, "are the same whether you sell 80 lb. or 180 lb. of lamb per ewe," Jordan adds.

Feed costs can be reduced through salvage feeding. This includes grazing cornstalks and grain field regrowth. Often hay feeding can be reduced. Jordan advises that a 175-180 lb. ewe receive only 3½ lb. of good hay daily for about 3½ months of gestation.

-more-

add 1--flock building

Jordan compares three types of animals that can be purchased for flock-building. Mature ewes are seldom worth more than 50 percent the value of a yearling ewe, he says. A third alternative, ewe lambs, can be purchased for 25-30 percent less than yearlings.

"To make this alternative economically sound," Jordan advises, "the ewe lambs must be bred to lamb at 12-14 months of age." Ideally, they should be mated with a breed that will give smaller-than-average lambs to lessen birthing difficulty.

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COUNSELING GROUP  
TO MEET JAN. 26, 27

The Upper Midwest Conference on Rational Counseling and Therapy will meet at the Leamington Hotel in Minneapolis Jan. 26 and 27.

Featured speakers will include Janet Wolfe, director of clinical services at the Institute for Rational-Emotive Therapy in New York, and Dr. Maxie Maultsby, University of Kentucky Medical Center psychiatrist.

Wolfe will speak on managing one's professional life for greatest satisfaction and Maultsby will look at job stress. Other topics will include approaches to weight control, problem solving, student anxiety and behavior problems.

The conference will stress techniques in dealing with such areas as chemical dependency, time management and child rearing. In addition to therapists, those attending will include homemakers, business people, clergy and teachers.

Fee for the conference is \$30 for both days or \$20 for a single day. To register, contact Kris Nordahl, Rational-Emotive Education Center, 2416 Lyndale Ave. S., Minneapolis, MN 55405.

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January 15, 1979

ATT: Extension Home Economists

Immediate release

DIETARY FIBER  
NO "CURE-ALL,"  
FOOD SCIENTISTS SAY

"Any generalized statements about the use of dietary fiber as a drug to cure specific diseases should be looked at with reservations," according to Theodore Labuza and Isabel Wolf of the University of Minnesota's Department of Food Science and Nutrition.

The role played by fiber, or "roughage" as our grandparents called it, has recently become the subject of increased public attention, but the fiber research underlying the interest and claims is often misinterpreted, according to a recent statement by the Institute of Food Technologists (IFT), an organization which Labuza and Wolf represent in the Midwest.

Some of the complication arises from the lack of a widely accepted definition of the word "fiber." Most data quoted in tables are for "crude fiber," according to Labuza and Wolf, which is the material surviving a drastic laboratory acid/alkali treatment. "Dietary fiber," on the other hand, includes all the components of a food which are not broken down in the human digestive tract to small, absorbable molecular compounds.

The value of fruits, for example, are particularly understated by this method, according to the IFT report. "Even the word 'fiber' may be misleading, since not all of the components of 'dietary fiber' are fibrous in the usual physical sense, while foods that do contain recognizable fibers, such as muscle meats, do not yield undigestible residues."

The IFT summary lists a variety of claims made for fiber in disease prevention and cure, and describes the proposed basis for its value or the hypothesis as to its action. The one benefit it claims as proven is relief of constipation; it also lists fiber's "probable value" in treating or preventing diverticular disease.

add 1--dietary fiber

Other claims, such as reduction in serum cholesterol, prevention of various cardiovascular diseases, cancer, diabetes and gallstones, are less well demonstrated or even hypothetical, the report said.

Fiber is a catch-all term, and the dietary fiber in any foodstuff is composed of a variety of chemical compounds, each of which exerts a different effect on the body. Thus, adding rolled oats and barley to the diet has been shown to reduce serum cholesterol in rats, while adding bran does not.

"Whenever there is a surge of interest in any dietary component, there is a danger that the significance of laboratory research may be exaggerated relative to everyday dietary decisions," the IFT report stated. "Such a danger exists with respect to fiber." Potential risks cited of suddenly increasing intakes of dietary fiber by large amounts included diarrhea and other digestive complaints including enlargement and twisting of the sigmoid colon, increased blood sugar levels in diabetics, possible loss of B vitamins and some minerals by binding with the phytic acid present in certain plant-based foods, and even deficiencies of certain nutrients in persons on marginal diets, caused by the reduction in the total amount of food eaten.

The IFT summary concluded, "The feeling of urgency about nutrition prevalent today should not cause investigators to jump to premature conclusions, nor cause the public to make drastic changes in their diets, without thinking through their specific needs and the options open to them."

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January 15, 1979

4-H NEWS

Immediate release

Note to agents: This news release on 4-H discovery groups tends to show them from just one club's point of view. Other clubs may have much different reasons for organizing, and have different types of activities. You may want to talk to a discovery leader or two in your county and use their words in place of the Roseville leaders' quotes--or just use your own words if discovery groups are not organized.

DISCOVERY GROUPS  
EXCITE FUTURE 4-HER'S

Do your younger children feel "left out" when their older brothers and sisters take part in 4-H activities, or when their friends join other groups that involve seven and eight-year-olds?

Do you ever wonder if there is a way of keeping boys and girls together at that age so they learn to appreciate each other, and so you can save time and mileage by taking brother and sister to the same meeting?

Yes, there is a way of solving these problems. At the same time, you can encourage the natural curiosity and excitement of children in this age group.

"Discovering with 4-H" gives them a chance to "belong", to begin learning practical skills, and to work closely with their parents.

The Roseville Clovers discovery group of seven boys and five girls meets two Mondays each month. They begin with a general meeting the first Monday, and then split up into smaller groups for activities. They often meet right after school at the home of volunteer leader Jo Ann Archerd.

Jo Ann remembers the woodworking meeting as one of the best. One group sawed boards, while the other two played a game and studied a plant. Next, the first group stained their small board sections, while group two took up the saws. For the third step, group one varnished wood, while the other groups rotated.

add 1--discovery groups

"It was a good meeting because all the children were involved," Jo Anne explains. "Each step was exciting to them."

"Discovering with 4-H" is a sampling process, club leader Carole Bonesho, Roseville, says. "They find out what they like and don't like," she explains. A nine-year-old starting 4-H without the discovery experience is more likely to take a project that does not suit him or her. The child may feel failure if the project is not completed properly due to lack of interest.

Discoverers may learn to sew on buttons by fastening "eyes" onto puppets. They may get together with their fathers to fly kites, or make clothespin mobiles. A child may start a rock collection at a meeting, add to it at home for a few weeks, and bring it back to the group to share.

"Lots of projects go home with the child," Jo Anne says. "This gives the child something to share with their families."

The main ingredients for success are a little time and effort from the parents of each or most members. This makes "Discovering with 4-H" an exciting experience for both children and adults.

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January 21, 1980

Source: Jerry Hawton 612/373-1166  
Writer: Kathy Frank Chesney 612/373-0714

#### PIG WEANING AGE AFFECTS FEED COSTS, BUT NOT GROWTH

The cost of feeding pigs to 220 lb. was \$1.15 higher per head when pigs were weaned at three weeks than when they were weaned at five weeks in University of Minnesota trials. Growth performance and feed efficiency were virtually the same over the span of a growing period, however.

Animal scientists J. W. Rust, John Roach and Robert Meade tested 23 litters, weaning some at three weeks, some at four weeks and the rest at five weeks. They measured both production costs and animal performance.

Feed costs per pig based on actual pigs marketed within each weaning system were \$1.15 higher at three weeks and 76 cents higher at four weeks than at five-week weanings. If an equal number of pigs had been marketed per litter, costs would have been 58 cents higher for three weeks and 53 cents higher for four weeks than for five weeks.

Feed costs included that consumed by the dam of each litter during gestation, lactation and dry periods. Performance results also included her consumption. Ingredient costs for the study averaged \$90 per ton of corn and \$240 per ton of soybean meal.

Average daily gain was not significantly affected by age at weaning during the first 35 days after birth or for the entire growing period. Feed efficiency from 50-100 lb. was best for those weaned at four weeks. They consumed 2.47 lb. feed for each lb. of gain, compared to 2.58 lb. for pigs weaned at three weeks and 2.62 for those at five weeks. Averages for the entire growing period, however, showed no significant differences.

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January 21, 1980

Source: Clifton Halsey 612/373-1060

### WIND EROSION COULD WORSEN THIS WINTER

Little snow cover and strong winds could be worsening soil erosion this winter, says Clifton Halsey, extension conservationist at the University of Minnesota.

"Fall-tilled fields with little or no crop residue on the surface and no snow cover are an open-house invitation to wind erosion," Halsey says. "Fields which were in soybeans last year are especially vulnerable."

Not only does winter wind erosion make the snow look dirty, it also fills road and drainage ditches. This reduces their capacity for carrying spring runoff water and increases chances of flooding. Wind erosion reduces soil productivity too. It removes the best part of the surface soil--finer particles, organic matter, nitrogen and phosphorus.

Soils most likely to erode by wind are sandy soils, limy silt loams and silty clay loams, especially on knolls and other exposed parts of fields.

Tall field shelterbelts or rows of trees at about 20-rod intervals growing at right angles to the prevailing wind directions are very effective wind erosion control practices. Minnesota farmers are tearing out shelterbelts to accommodate center-pivot irrigation systems, however. Planting a small grain crop such as rye so it has time to grow before the first killing frost provides a protective winter cover over the soil.

Conservation tillage, if it leaves sufficient amounts of crop residues on the surface, is a very effective and practical wind erosion control practice. Many farmers prefer "clean tillage" however, because they can't prepare good spring seedbeds as early and as easily in cornstalks. Other farmers have been able to use conservation tillage to their advantage.

add one--weaning pigs

The researchers comment, "Although it is sometimes suggested that pigs weaned at three weeks will suffer more setback at weaning than those weaned at four and five weeks, and that daily gains will be lowered for the growing period, such a trend was not found in this study."

For more information on weaning ages and methods, refer to the Minnesota Swine Nutrition Research Report available through Minnesota county extension offices.

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add one--erosion

In most of Minnesota where the soil is a loam or clay loam, as little as 30 percent ground cover of straw or stalks will adequately control erosion. Sandy soils need about a 40 percent ground cover. Tandem-disking soybean or sunflower stalks just once will reduce ground cover below 30 percent cover. One tandem-disking and one chiseling of chopped cornstalks should leave about 30 percent or more of the ground covered with stalks. Fall plowing buries almost all residue leaving usually less than 10 percent ground cover.

Extension Folder 496, Wind Erosion: Its Control in Minnesota, is available at county extension offices. County agricultural extension agents and soil conservation personnel offer expert technical advice about conservation tillage and other wind erosion control practices.

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Jan. 21, 1980

Source: John Lofgren 612/373-1704  
Writer: Kathy Frank Chesney  
612/373-0714

CROP PLANNING BRIEFS. . .

Rootworm Control Planning: Rotation is the key to rootworm control--crop or chemical rotation.

John Lofgren, University of Minnesota extension entomologist, says farmers who had rootworm problems in 1979 could best avoid a repeat in 1980 by rotating away from corn in the problem field. If they plan to grow corn on old corn ground that had a beetle count of one per plant or more last August or September, they should also plan to treat that ground with a rootworm insecticide.

"We suggest that rootworm insecticides be changed from year to year," Lofgren says. "Some treatments have failed after being used continuously on plots at experiment stations and on some farmers' fields."

Lofgren says that some rootworm insecticides may lose effectiveness if soil organisms that degrade or tie up the chemical become well established after a few years of the chemical's use.

\* \* \* \*

Corn Borer Outlook: Weather conditions have a major impact on corn borer numbers. A cool spell early in the 1979 growing season kept borers from developing their potential in most of the state, says University of Minnesota extension entomologist John Lofgren.

Some farmers in west central and northwestern parts of the state had economic losses due to the borers. The potential for damage in 1980 is even lower than it was last year, but weather conditions could allow more of that potential to develop.

"I advise corn producers to keep track of the borer situation during late June and early July," Lofgren says.

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Tel. (612) 373-0710  
January 21, 1980

Source: Dottie Goss  
612/373-0914  
Writer: Cori Scarbnick  
612/373-0710

## CONSUMER BRIEFS. . .

Understanding Warranties: A warranty is basically the same as a guarantee: a promise by a manufacturer that it will stand by its product. The U.S. Magnusson-Moss Act is a federal law designed to help consumers before and after a purchase. Under the act, if a written warranty is offered, you have the right to see it before buying a product valued more than \$15. Many other items valued less than \$15 also have warranties; when shopping, ask to see a warranty if it's not readily available. Once you've made your purchase, the act makes it easier to force a company to live up to its warranty.

"It's important to understand that the Magnusson-Moss Act doesn't force a company to give a warranty," says Dottie Goss, an extension family resource specialist at the University of Minnesota. "If a product is sold 'as is' or 'with all defects,' you'll have to pay for any repairs."

With major or large items, you may want to inquire if the store offers its own guarantee along with the manufacturer's guarantee. Often large items, such as refrigerators and ovens, will be repaired by the store itself rather than the manufacturer.

\* \* \* \*

Full Warranties: There are two basic types of warranties--written and implied. And, there are two types of written warranties--full and limited. Under the federal Magnusson-Moss Act, the label "full" on a warranty means:

--A defective product will be fixed or replaced for free, including removal and reinstallation of the product if it has to be taken to a repair shop.

--The product will be fixed within a reasonable time after you complain.

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add one--crop planning briefs

Watch for Alfalfa Pests: Farmers in southeast Minnesota, northeast Iowa and southwest Wisconsin should watch their alfalfa fields for signs of economically damaging weevil activity this spring. University of Minnesota extension entomologist John Lofgren says several counties had abundant levels of the alfalfa weevil last spring. They damaged the second crop most heavily.

"Both the first and second crops should be monitored for weevils," Lofgren says. "When alfalfa regrowth for second and third crops reaches 4-6 inches, check for potato leafhoppers. I would advise spraying if leafhopper levels reach 1-2 per sweep of a net."

\* \* \* \*

Weed Control Could Keep New Pest Down: The hop vine borer has been developing as a corn pest in southeast Minnesota, northeast Iowa, southern Wisconsin and northern Illinois. Infestations seem to be limited to areas populated by grassy weeds, mainly quack grass, the previous year.

"It overwinters in the egg state in the grass," says University of Minnesota extension entomologist John Lofgren. "Improved control of these weeds would probably suppress hop vine borer numbers."

The pest is in the same family as cutworms, armyworms and stalk borers. The larvae are whitish and banded with brownish or violet segments. They tunnel in the base of plants feeding entirely underground. No effective direct chemical control is known.

\* \* \* \*

Note to Minnesota readers: Current crop insect control information is available from county extension offices. Ask for EB 388-1980.

# # # #

add one--consumer briefs

--You won't have to do anything unreasonable to obtain warranty service.

"A full warranty doesn't always cover the total product," says Dottie Goss, an extension family resource management specialist at the University of Minnesota. "In fact, the warranty may only cover parts of the product as specified in the warranty. Always check the warranty before you buy to see what is covered."

\* \* \* \*

Limited Warranties: Some products have only implied warranties. The most common example of an implied warranty is a "warranty of merchantability." This means the seller, by selling the product, promises that what you buy is fit for ordinary uses of the product. For example, a reclining chair must actually recline; a heating pad must heat.

Another type of implied warranty is a "warranty of fitness for a particular purpose." This means that when the seller uses his or her expertise to sell you a product that can be used for a special purpose, his or her advice may create a warranty.

"Unless the product is sold 'as is' or 'with all defects,' implied warranties come with a sale," says Dottie Goss, an extension family resource management specialist. "In other words, an implied warranty needn't be in writing. An implied warranty may give you the protection a written warranty doesn't offer."

\* \* \* \*

Enforcing a Warranty: You've made your purchase, fully understand the warranty coverage and have followed the prescribed use and care instructions. When the product breaks down, you call the store where you bought the item, but have little luck. What should you do?

"Make sure you've contacted the right person at the store," says Dottie Goss, an extension family resource management specialist at the University of Minnesota. "If you have no luck still, write directly to the manufacturer, keeping a record of all your calls and letters, and the names of persons contacted."

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add two--consumer briefs

"If you still are frustrated, contact the Better Business Bureau, the Chamber of Commerce or the Consumer Protection Division of the Minnesota Attorney General's office," Goss says. "These organizations may be able to assist you or contact the company on your behalf."

You do have other options, Goss says. One is conciliation court. In Minnesota, you can sue for amounts up to \$1,000 in conciliation court and you needn't hire an attorney to do so.

"Remember to read all warranties carefully before you buy and get any additional guarantees offered by the store in writing," Goss says. "This may help you save money in the long run."

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Tel. (612) 373-0710  
January 21, 1980

Source: Sherri Johnson  
612/376-1537

Writer: Deedee Nagy  
612/373-1781

### BUDGETING FOR CLOTHES? INVENTORY WHAT YOU HAVE

With family budgets stretched tight, be certain that your clothing purchases are targeted to your needs. Sherri Johnson, extension textiles and clothing specialist at the University of Minnesota, suggests taking a close look at what family members already have in their closets.

After checking current wardrobes, list the clothes each member of the family wants. Decide whether these are actual needs or simply items to supplement clothes already in the wardrobe.

Mrs. Johnson also suggests looking at seldom-worn clothing. Why do these garments gather dust? Don't they fit? Do they need repairs? Could they be updated to fit current fashions?

Be honest with yourself, but try to make use of what you already have before buying more, Mrs. Johnson advises. If you are certain you cannot--or will not--wear an older garment, get rid of it. Give it away or try to realize some cash from it by taking it to a second-hand store or a consignment shop.

"When you're ready to buy clothing, figuring out the per use cost can be a useful way to decide whether expensive, quality clothes are the best buy or if a less expensive garment will do," Mrs. Johnson says.

Cost-per-wearing is easy to calculate. Simply divide the cost of the garment by the number of times it is likely to be worn. For example, a winter coat might be worn five days a week for five months for three years, or 300 times. At that rate, a \$100-150 coat will cost about 35-50 cents each time it is worn.

A dressy outfit, however, is likely to have a higher cost-per-wearing. A \$50 outfit that is worn only 10 times costs \$5 each time it is used.

Cost-per-wearing also helps decide how many clothes to buy. For children, buy fewer garments so they receive as much wear as possible before they are outgrown. For adults, buy items they will be comfortable wearing for several years before they tire of them or styles change.

Once you have inventoried your wardrobe and developed a shopping plan, stick to it. This prevents impulse buying. If a sale garment doesn't fit into your plan, it isn't really needed and won't be the bargain it appears to be, Mrs. Johnson says.

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January 21, 1980

Source: Sherri Johnson  
612/376-1537

Writer: Deedee Nagy  
612/373-1781

### THERE ARE TRICKS TO SEWING WITH VELOUR

The cozy softness of velour fabric holds particular appeal for winter sportswear and lounging apparel. There are some tricks to working with it, however, suggests Sherri Johnson, extension textiles and clothing specialist at the University of Minnesota.

When buying velour, whether you select stretchy, single-knit velour or the firmer warp knit with a brushed surface, watch the pattern envelope guide for napped or one-directional fabric. Plan to cut out the garment with all the pattern pieces going in one direction. Before laying out the pattern, decide whether the upward direction should be darker in color or smoother and shinier. Nap running up will produce a darker color. Downward nap will be shinier and smoother in appearance.

Also watch the suggested fabrics listed on the pattern envelope. Use stretchy velour with patterns identified for stretch knits such as jogging suits and pullover tops.

Firm warp-knit velours are suitable for patterns that are not limited to knits so they can be used for a wider variety of garments. Mrs. Johnson suggests firm velours for styles that have few seams, no topstitching and few intricate details.

Before cutting and sewing velour, wash it or have it dry cleaned once, depending on the recommended care for that piece. This relaxes the fabric and may remove some factory residue that can cause skipped stitches.

Here are some additional sewing tips for the popular fabric:

- \* Long or glass-headed pins will be easier to insert and find in the nap. To control creeping, use more pins than usual and remove them just before you stitch over them.

- \* If you use a straight stitch, you may want to use a smaller than usual stitch or two lines of stitching close together for stretchy velour.

- \* A layer of tissue paper between the feed dog and the fabric also helps control creeping. A roller foot on the sewing machine is another possible solution.

- \* Leave dresses and long garments on a hanger for at least a day before marking the hem.

- \* Press velour lightly on the wrong side. Strips of paper under seam allowances will prevent press marks on the outside of the garment. Steam lightly on the right side to raise the nap.

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Tel. (612) 373-0710  
January 22, 1979

Immediate release

IN BRIEF. . . .

Iodine In Dairy Rations--Dairymen should carefully review their dairy ration and feed tags to determine the level of dietary iodine, advises Mike Hutjens, extension dairyman at the University of Minnesota.

"In the last two weeks three dairy herds were feeding near toxic levels," Hutjens says. Organic iodine (ethylene-diamine dehydroiodide) has been used at relatively high levels to prevent and treat footrot.

"Be careful not to overfeed iodine for long time periods or respiratory problems may occur," Hutjens cautions. Feeding 50 milligrams (mg) of organic iodine (E.D.D.I.) is recommended. The 1978 National Research Council (NRC) recommendation is a minimum of .5 parts per million (ppm) in the ration dry matter with a maximum of 50 ppm.

Toxic signs may appear with 50-100 ppm of iodine in rations. Young stock are more sensitive to excess iodine than are lactating cows.

Signs of toxicity include excessive tears running from eyes, excess saliva formation, watery nasal discharge, coughing, throat congestion, reduced feed intake and subnormal growth rates. One mineral supplement contained 50 mg per ounce. Feeding one-fourth lb/cow/day could lead to problems.

\* \* \* \*

PDCA Meeting--The annual Minnesota Purebred Dairy Cattle Association (PDCA) meeting is scheduled for Feb. 5, 1979 at the Lavender Inn, Faribault, MN.

Committee meetings will begin at 10:30 a.m. The annual business meeting and guest speaker program begins at 1 p.m. and an evening awards banquet with Tom Lyons, general manager of Midwest Breeders as keynote speaker, rounds out the program.

Six outstanding dairy breeders and youth dairy judging teams will be recognized. The meeting is open to interested people regardless of race, creed, color, sex, national origin or handicap.

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January 22, 1979

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IN BRIEF. . . .

Iodine In Dairy Rations--Dairymen should carefully review their dairy ration and feed tags to determine the level of dietary iodine, advises Mike Hutjens, extension dairyman at the University of Minnesota.

"In the last two weeks three dairy herds were feeding near toxic levels," Hutjens says. Organic iodine (ethylene-diamine dehydroiodide) has been used at relatively high levels to prevent and treat footrot.

"Be careful not to overfeed iodine for long time periods or respiratory problems may occur," Hutjens cautions. Feeding 50 milligrams (mg) of organic iodine (E.D.D.I.) is recommended. The 1978 National Research Council (NRC) recommendation is a minimum of .5 parts per million (ppm) in the ration dry matter with a maximum of 50 ppm.

Toxic signs may appear with 50-100 ppm of iodine in rations. Young stock are more sensitive to excess iodine than are lactating cows.

Signs of toxicity include excessive tears running from eyes, excess saliva formation, watery nasal discharge, coughing, throat congestion, reduced feed intake and subnormal growth rates. One mineral supplement contained 50 mg per ounce. Feeding one-fourth lb/cow/day could lead to problems.

\* \* \* \*

PDCA Meeting--The annual Minnesota Purebred Dairy Cattle Association (PDCA) meeting is scheduled for Feb. 5, 1979 at the Lavender Inn, Faribault, MN.

Committee meetings will begin at 10:30 a.m. The annual business meeting and guest speaker program begins at 1 p.m. and an evening awards banquet with Tom Lyons, general manager of Midwest Breeders as keynote speaker, rounds out the program.

Six outstanding dairy breeders and youth dairy judging teams will be recognized. The meeting is open to interested people regardless of race, creed, color, sex, national origin or handicap.

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NEW STRAWBERRY HERBICIDE  
CLEARED FOR 1979

The herbicide terbacil (Sinbar) has received Environmental Protection Agency approval for weed control in established strawberries, according to Leonard Hertz, University of Minnesota extension horticulturist.

Hertz says that established plants are considered those in the field at least six months.

The recommended use of terbacil is a single broadcast application of  $\frac{1}{2}$  to  $1\frac{1}{4}$  pounds per acre, which can be done immediately after the post harvest renovation but before any new growth begins. For best results, old leaves should be removed before application, Hertz suggests.

In place of the post harvest renovation treatment, terbacil can also be applied in the dormant period from late fall to early winter but before weeds are two inches tall or across. Its use is not recommended on sand, loamy sand, gravelly soil or soil with less than two percent organic matter because crop injury can result. On lighter textured soils, the lower application rate is recommended, according to Hertz.

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January 22, 1979

Immediate release

WATCH MINERAL LEVELS  
IN SWINE RATIONS

"More isn't always better" when you add minerals and vitamins to swine rations, says University of Minnesota swine nutritionist Steve Cornelius.

Since minerals and vitamins are relatively "cheap" components of swine rations, it may be tempting to add more than recommended amounts. But this can get you in trouble, Cornelius says.

"Don't go out and haphazardly add minerals to the ration," he advises. Interrelationships among minerals in the diet are very complex. For example, too much calcium will result in an improper calcium-phosphorus ratio and may limit zinc availability.

Generally, calcium levels required for bred sows and gilts are about one and a half times the required phosphorus levels. Calcium-phosphorus levels could range between 1.5:1 to 1:1.

A level of 0.85-0.90 percent calcium is adequate for breeding swine. This level is sufficient to meet the needs of pregnant swine even when they're restricted to 3-5 pounds of feed intake.

The ratio of calcium and phosphorus is important to structural soundness in swine. But composition of bone ash is a poor indicator of what ratio of calcium and phosphorus should be incorporated into feed, says University of Nebraska nutritionist E. R. Peo. The ratio of calcium to phosphorus in bone ash is 2.1 to 1. Yet this "wide ratio" in feed would bring about a lack of phosphorus, and Peo says a better indicator would be sow's milk, where the ratio of calcium to phosphorus can run from 0.6:1-1.2:1.

More detailed information is available in Animal Science Fact Sheet No. 14 (1978), "Nutrition of Bred Sows and Gilts." Copies are available from Minnesota county extension offices.

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January 22, 1979

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AFLATOXIN A DANGER  
IN HIGH MOISTURE SILOS

Aflatoxin could be a problem for livestock feeders who store high moisture corn in stave silos, according to Richard A. Meronuck, a plant pathologist with the University of Minnesota Extension Service.

"Isolated cases of this cancer-causing poison have been found this winter," Meronuck explains. "The mold that produces aflatoxin grows in stored corn with 18.5 percent or more moisture. It can grow especially well if the moisture content is 20 percent or higher, and the grain temperature is 85 to 100 degrees Fahrenheit. The mold needs air and will grow on the silage surface or throughout silage that is poorly packed."

Aflatoxin can cause unthriftiness, sickness and death in farm animals, Meronuck says. It can greatly affect milk and meat production when concentrations are high enough.

Animals start to show signs of poisoning at 100-200 parts per billion (ppb). Dairy animals under cold weather stress may be affected at even lower levels. "Beef cattle have been reported to withstand concentrations of up to 500 ppb without ill effects," the scientist adds.

The U.S. Food and Drug Administration limit for aflatoxin in feed or food is 20 ppb. Feed above the limit cannot be sold legally in interstate commerce, and should not be fed in starter or dairy rations.

The livestock producer can check for aflatoxin by shining a black light (365 nm wavelength) on a sample of cracked corn. Any bright yellow-green fluorescence could indicate the poison. These "glowers" are about the same color and intensity as firefly light. This test is not completely accurate, however.

Suspected feed samples can be sent to the Plant Pathology Department Mycotoxinology Laboratory at the University of Minnesota, St. Paul, 55108. "If animals show a persistent sickness, consult your local veterinarian about the possibility of mold toxicosis," Meronuck advises. For more information, Meronuck can be reached at the St. Paul campus, (612) 373-0725.

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January 22, 1979

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SWINE TEST STATIONS  
ARE "SHOW WINDOWS"

Central swine test stations are educational "show windows" that draw attention to specific traits.

Test stations are a place where herd weaknesses can be pointed out so that producers can design a breeding program to improve certain traits, says Charles Christians, extension livestock specialist at the University of Minnesota.

"Mathematically, central test stations have little influence on the entire swine industry since the number of pigs enrolled is not large. But the indirect effect is greater than the direct effect."

Christians says Minnesota's Central Test Station at New Ulm does progeny testing for growth rate, feed conversion, carcass quality and loin eye measurements. Either commercial or purebred producers can bring their hogs in for performance testing.

Max Waldo, a DeWitt, Nebraska hog producer, talked about his testing program at a recent swine breeders' seminar in Mankato. Waldo and his father raise about 1,400 litters of mostly purebred Duroc hogs a year and keep records on about 11,000 hogs annually. He produces SPF seedstock, which requires keeping performance records and accurate health records.

"We consider structural soundness, freedom of defects, sow productivity, reproductive traits, plus growth rate and leanness when selecting future breeding animals," Waldo said.

You need at least two or three records on each sow to make maximum genetic improvement, says Christians. "Heritability for sow productivity is low--only about five percent if you have only one record to go on. Using three records raises heritability to 30 to 40 percent.

"A producer with at least 80 to 100 sows should consider using computerized records, especially for sow productivity."

Unfortunately, Christians says, many swine producers keep no sow records and consider only the breed of boar to use without emphasizing performance traits.

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January 22, 1979

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SWINE IMPROVEMENT GROUP  
HONORS MINNESOTANS

Three Minnesotans were recently honored by the National Swine Improvement Federation (NSIF).

Carroll Plager, Austin, received the group's Distinguished Service Award. Plager was formerly manager of livestock extension for the George A. Hormel Co. and superintendent of the National Barrow Show. He was cited for his "foresight and Contributions" to the nation's hog industry. Plager was instrumental in developing the carcass evaluation concept and helped develop the swine certification program. He helped start the first central swine test station in Minnesota.

Martin Annexstad, Jr., St. Peter, was named Commercial Producer of the Year. He was recognized as a commercial pork producer who "has been actively involved in performance testing and is an outstanding supporter and leader in the pork industry." Annexstad selects only the top boars from breeders who raise the best performance tested swine available. He utilizes growth rate, feed conversion and carcass merit in selecting replacements for his sow herd and ear notches each litter for identification.

He has progeny tested each sire in his herd in Minnesota's Central Test Station and has entered barrows in every Minnesota production tested barrow contests since they were initiated.

Arno Moenning, Dodge Center, was named Producer of the Year Honoree. This is an award given to recognize seedstock producers who have developed outstanding performance testing programs. Since the late 1950's, he has operated a total herd testing program for his 100 sow herd, stressing performance and carcass merit. He has continually tested boars in central test stations and in his on-the-farm test facility.

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January 22, 1979

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CHRISTIANS NAMED  
SECRETARY OF  
SWINE FEDERATION

Charles Christians, extension livestock specialist at the University of Minnesota, has been named secretary of the National Swine Improvement Federation (NSIF).

Ed Hubly, manager of the Minnesota Swine Test Station at New Ulm was named a director.

NSIF was organized in 1975. Its purpose is to establish accurate and uniform procedures for performance testing and to assist its member organizations in developing and utilizing performance testing.

Member organizations in NSIF consist of central testing stations, on-the-farm performance testing programs, purebred breed associations and the National Pork Producer Council. Organizations not actively conducting public performance programs but with a principal interest in swine are eligible for associate membership.

NSIF publishes "Guidelines for Uniform Swine Improvement Programs" and honors purebred breeders, commercial producers and industry leaders for leadership in performance testing.

More information is available from your local test station or purebred breed association. Or, write to Charles Christians, NSIF Secretary, 101 Peters Hall, University of Minnesota, St. Paul 55108.

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January 29, 1979

ATT: Extension Home Economists

Immediate release

CONSUMER OUTLOOK  
FOR 1979

Although inflation is currently the economy's public enemy number one, ours is still a basically healthy, prosperous economy, according to Edna Jordahl, extension home management specialist at the University of Minnesota. She predicts continued economic health for 1979 although a slightly slower growth rate is likely.

Among the encouraging signs for consumers are a recent tax reduction, President Carter's anti-inflation program and the moves to strengthen the international position of the dollar.

In addition to favorable signs out of Washington, D.C., Minnesota is showing signs of a healthy economy, including a low rate of unemployment.

Here are some of her predictions for 1979 based on outlook information presented at a recent U.S. Department of Agriculture conference.

\* Credit is readily available to the consumer despite its high cost. Consumer debt loads are high, but so far consumers have been able to meet payments promptly. In 1979, continued gains in employment and earnings will support the consumer sector while a tax reduction will allow a larger share of earnings to remain in consumer's hands.

\* A strong demand for housing and a continued building boom are in sight for 1979 although higher interest rates may curb some of the building fervor. "The number of persons in the 25 to 34-year-old home buying age bracket will rise rapidly during the next few years," Mrs. Jordahl says. "Home ownership is recognized as a good investment. Young families are willing to work hard and to incur heavy initial obligations to make this investment."

-more-

add 1--consumer outlook

\* Coping with an inflation nationally, locally and within each family will not be easy. At the federal level, spending restraints will be common and rising interest rates will work against spiraling inflation. Under the President's wage and price guidelines, annual wage and fringe benefit increases are to be no more than seven percent except for workers earning less than \$4 per hour. Business firms are also expected to keep price increases below those shown in 1976-1977. Mrs. Jordahl says the hope is that compliance will slow inflation without treating any groups or individuals unfairly.

"With a reasonably successful program, the inflation rate can be held to 6½ percent or less during 1979," Mrs. Jordahl says. "If the program fails, it could lead to a recession in 1979 or 1980."

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4-H CHILD DEVELOPMENT PROJECT  
STRENGTHENS FUTURE FAMILIES

Learning about child development the 4-H way prepares boys and girls for caring about others--that vital skill/knowledge they will need as parents, spouses and friends.

"Young people who have never cared for small children have missed an education in caring," says Marilyn Olson, extension specialist in 4-H at the University of Minnesota. She was quoting Urie Bronfenbrenner, famous Cornell University professor of human development and psychology.

4-H'ers learn child development by reading and talking about it, but more importantly, by actually playing and working with a young child. They may observe and care for a younger sister or brother or a neighbor's child. They may also work with children at a 4-H project meeting supervised by a project leader.

The 4-H'er keeps a journal of his or her experiences. The writing describes the experience or activity, what the club member did with the child, and what the 4-H'er felt and learned during the visit.

The 4-H'er may also make a toy meant to be fun and to aid a child's development. Toys, baby-sitting kits, journals, books, and other "things" associated with the project may eventually be exhibited at state and county fairs. "The importance is always placed on the persons involved--the 4-H'er and the young child--and what they've learned, not the thing produced," Olson stresses.

For instance, The Childrens Center in the 4-H exhibit building during the Minnesota State Fair gives project members a chance to share what they have learned. Their "things" and ideas are not only exhibited, but are also used by the preschoolers who visit the center.

-more-



add 1--4-H child development project

"Project members find out if children are attracted to their home-made toys, if they can be creative with it, and if the toy can take lots of handling," Olson explains. Family life specialists watch the 4-H'ers play with children and then afterwards talk with the 4-H'ers about this experience.

Susan Marie Haug, an 18-year-old 4-H'er from Sacred Heart, Minn. described her child development project experiences:

"It has given me an opportunity to learn about children, and understand their development. I've used my knowledge by providing babysitting services. Accepting the responsibilities of a babysitter has been a rewarding experience. I've also enjoyed helping to organize a playschool for 3, 4, and 5-year-olds in the community."

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January 29, 1979

Immediate release

SOIL CONSERVATION BY  
REGULATION PREDICTED

Heavy topsoil loss and environmental damage caused by soil erosion will probably bring about compulsory conservation, a University of Minnesota extension conservationist reports.

"Although landowners have been getting government-financed help with conservation for more than 40 years, excessive erosion is still occurring on about half the land, and it is increasing," Clifton Halsey explains.

Several states have already adopted laws that require various degrees of soil conservation. In Iowa, persons who feel they have been damaged by sediment from erosion may file a complaint against the offending landowner, Halsey says.

In Minnesota, Benton county has a mandatory wind erosion control ordinance which outlaws removal or destruction of a field windbreak without a permit.

As a first step toward compulsory conservation, farmers may be required to follow a soil-conserving management plan to be eligible for commodity price supports, loans and other government programs. A model state act has been recommended by the Council of State Governments, Halsey adds. It requires anyone owning or operating a farm to follow a conservation plan approved by the local soil conservation district--if at least 50 percent cost-sharing assistance is available for the practice.

"Efforts to limit erosion by regulation can be expected to continue and intensify," Halsey says. "How far they go depends on the farmers' responses to financially-supported voluntary programs."

Details about agricultural erosion control legislation is available at county extension offices or the Bulletin Room, University of Minnesota, St. Paul, MN 55108. Ask for Soils Fact Sheet No. 30--1978, "Agricultural Erosion Control Legislation."

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HOME LANDSCAPE WORKSHOP  
SCHEDULED FEB. 10

Owners of new homes planting first landscapes and homeowners trying to improve existing lawns and landscaping will find helpful information at "Green Holiday -- A Look at Your Home Landscape," scheduled Feb. 10 on the St. Paul campus of the University of Minnesota.

The day-long workshop includes sessions on landscape planning, maintenance of landscape materials, landscape renovation, lawn care, planning flowering landscapes, tree and shrub selection and landscaping for energy conservation.

Sponsors are the Department of Horticultural Science and Landscape Architecture at the University in cooperation with the Office of Special Programs in the University's Agricultural Extension Service.

Among the speakers will be University faculty members, county and area horticulture specialists and other experts.

Fee for the workshop is \$12, which includes lunch, refreshment breaks and instructional materials. It will be held at the new Earle Brown Continuing Education Center, St. Paul, with registration beginning at 8 a.m. and adjournment set for 4 p.m.

To pre-register, contact the Office of Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108, telephone: (612) 373-0725.

\* \* \*

Programs of the University of Minnesota's Agricultural Extension Service are open to all persons regardless of race, creed, color, sex, handicap or national origin.

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January 29, 1979

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AG POLICY  
NEWS BRIEFS

Wheat Cartel Not Likely to Succeed

The United States, Canada and other major wheat producing countries could form a cartel to keep prices high, but such an alliance probably would fail.

This is the opinion of Alex McCalla, economist at the University of California, Davis and speaker at a recent agricultural policy issues conference held at Moorhead, and sponsored in part by the University of Minnesota's Agricultural Extension Service.

McCalla said that unlike the Oil Producing and Exporting Countries (OPEC), wheat producers deal in a renewable resource. Any success in raising wheat prices would bring other countries into wheat production, thus diluting the effect of the cartel.

Instead McCalla sees an opportunity for wheat producers in stepped up trade possibilities with the Peoples' Republic of China. Although the impact of relations with China are still uncertain, McCalla predicts considerable Chinese interest in U.S. wheat, perhaps even more than in feed grains.

\* \* \* \*

Farm Protest Groups Play a Role

Protesters such as those in the American Agricultural Movement are having an effect on farm policy decisions, according to Alex McCalla, University of California-Davis professor and speaker at a recent agricultural policy issues conference at Moorhead sponsored in part by the University of Minnesota's Agricultural Extension Service.

Recent protests in Washington, D.C. and throughout the country have focused Congressional attention on farmers' concerns, McCalla said. "They have shown that there is not a single, easily solved farm problem. Actually there are several ranging from the large operator's need for price stability to the small farmer's need for commodity programs, credit and technical assistance."

\* \* \* \*

### Taxpayer's Revolt Affects Agriculture

Although taxpayers have generally been sympathetic to the farmer's plight in the past, the taxpayer's revolt signaled by Proposition 13 in California may change that.

Alex McCalla, University of California-Davis, economist and speaker at a recent agricultural policy issues conference at Moorhead, said that growing objection to increases in all areas of public expenditure will be felt in agriculture as well. At the conference, which was sponsored by the University of Minnesota's Agricultural Extension Service, he predicted increased pressure to curb government spending in all areas, including agricultural subsidies. This probably will mean that any proposed changes in agricultural policy that carry a large price tag will have a hard time getting Congressional approval.

"This is evidence of how agriculture is likely to be increasingly susceptible to legislation in non-agricultural areas in the years ahead," McCalla said. "Agriculture is a small sector of the economy but it is highly interrelated to other sectors. A belt-tightening economic policy is going to affect agriculture."

\* \* \* \*

### What Will 1979 Hold for Agricultural Legislation?

As the 96th Congress convenes, at least one expert is predicting a relatively quiet year for agricultural legislation. Kenneth Farrell, administrator of the Economics, Statistics and Cooperatives Service of the U.S. Department of Agriculture, says several impending issues will still draw public debate. He spoke at a Moorhead Agricultural Policies Conference sponsored recently by the University of Minnesota's Agricultural Extension Service.

In the consumer area, he predicts that food safety policy will surface. Nitrites and drug use in livestock production are likely to be the focus for 1979. Food labeling regulations, particularly net weights and nutrient content, will also come under scrutiny, Farrell predicts.

In traditional agricultural areas, Farrell foresees legislative action on:

\* Comprehensive disaster insurance -- As proposed, this insurance would be elective and part of the premium cost will be borne by farmers. Still unanswered is how to set premiums so that participation will be widespread and whether Congress will resist ad hoc disaster programs to aid in situations where many farmers are uninsured.

\* Meat import legislation -- Cattle producers are hoping to keep import levels as low as possible while consumers may pressure for liberalized imports in the face of higher retail meat prices. Farrell predicts that any legislation will have to maintain a minimum import level consistent with our trade obligations, and the President will likely retain power to suspend quotas if domestic supplies are inadequate.

\* Sugar legislation -- In this complex issue, Farrell predicts that a domestic sugar program will support prices above world price levels, but the level of that support is still a major question.

\* International Emergency Wheat Reserve -- This legislation would authorize the Secretary of Agriculture to buy and hold up to six million metric tons of wheat for emergency food assistance to developing countries. This would mean that food aid would not compete with commercial sales as long as grain was in the reserve, according to Farrell.

\* \* \* \*

#### Into the '80s in Agricultural Legislation

What will the next decade yield in agricultural legislation? Kenneth Farrell, administrator of the Economics, Statistics and Cooperative Service of the USDA, told participants at an agricultural policy conference in Moorhead recently that the 1980s will see recurring issues of commodity support levels, but six broader questions will be in the spotlight.

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\* Resource use, conservation and development will be in the forefront, particularly problems of water supply, quality and pricing.

\* Land use concerns will heighten as more agricultural land is removed from production to accommodate industrial, residential and recreational demands.

\* Energy resources are of particular concern to Midwestern farmers and Farrell predicts that allocation and pricing will be prime concerns for all segments of the economy during the 1980s.

\* Farmers and others are likely to be interested in the organization and control of the food system. Many factions will probably be wrestling for greater influence on food production and distribution.

\* Rural development will be a priority, particularly efforts to maintain essential services to rural areas. Related to this will be issues of rural employment and mobility between rural and urban areas.

\* Funding for agricultural research will be a continuing outcry as more and more segments of the economy recognize the importance of maintaining U.S. greatness in this area.

\* \* \* \*

#### Inflation and Farm Policy

If this administration is going to make inroads against inflation, farm price increases will have to slow, according to John Rosine, economist with the Federal Reserve Board. Speaking at an agricultural policy issues conference at Moorhead recently, Rosine said that inflation is always associated with even higher rates of food price increases.

In 1978, food prices experienced double digit inflation for the third year in the past six years. Foods are a bellwether for the rest of the economy, he said.

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"Farm policy isn't geared toward an inflation fighting effort," Rosine said. It is intended as a support for farm incomes rather than as a manipulative tool for the health of the economy. Despite this, he predicts closer scrutiny of efforts to support farm prices because of nationwide sensitivity about government spending.

All Americans need to look beyond the short term discomforts of inflation-fighting measures. At the meeting, sponsored in part by the University of Minnesota's Agricultural Extension Service, Rosine said, "If we don't do something to slow inflation, we will all be poorer in real terms despite being richer in dollars held."

\* \* \* \*

#### Farm Income Outlook for '79

Farm income for 1979 will probably stay at about the same level as in 1978, but any predictions hinge upon the effect of unpredictables such as oil and gas price increases and the effectiveness of inflation-fighting measures by the federal government.

This is the forecast of Rex Daly, deputy director of the World Food Situation and Outlook Board of the U.S. Department of Agriculture. Speaking at an agricultural policy issues conference at Moorhead recently, sponsored in part by the University of Minnesota's Agricultural Extension Service, Daly predicted that food prices will rise less in 1979 than they did in 1978 when they jumped about 10 percent. Because the labor cost in food now represents a bigger segment than its farm value, food price increases may parallel wage increases, which are predicted to be up about six percent over 1978.

Among Daly's other predictions are:

\* The U.S. will continue to find strong world markets for grains, soybeans, livestock products and cotton despite expanded output by other world markets. Much of this activity is due to healthy world economic activity, policies to improve diets in many countries, expanding livestock production and relatively low U.S. grain prices.



\* World cattle numbers, which have been on the decline for several years, will bottom out and turn up in the coming year. The current U.S. inventory of about 112 million head is nearly as low as levels will go before beginning to build up again.

\* Pork production will be about ten percent higher than in 1978, leading to lower hog prices. A similar percentage increase is expected for poultry production.

\* Although the USSR will buy less U.S. corn and wheat this year, some of this will be offset by larger sales to the People's Republic of China.

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January 29, 1979

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HORTICULTURE INDUSTRIES CONFERENCE  
SET FEB. 26-27 IN ST. PAUL

A two-day conference focusing on aspects of turf maintenance, nursery and garden center operation, shade trees and commercial vegetable production will be held Feb. 26 and 27 at the new Earle Brown Continuing Education Center on the St. Paul campus of the University of Minnesota.

The conference is intended to acquaint persons within the horticultural industry with the latest in research results, business practices, product information and government regulations.

The general session on Feb. 26 will include talks on the tax climate for horticultural businesses, urban threats to horticultural land, the legislature's relationship to the industry, the general business outlook and OSHA regulations. There will also be exhibits and displays throughout the conference area.

The Kermit Olsen Memorial Lecture that evening will feature Abraham Halevy, horticulturalist and plant physiologist at Hebrew University, Rehovot, Israel, speaking on ancient gardening in the Bible and the use of native plants of Israel in gardening. No fee is charged for the memorial lecture.

On Feb. 27 the conference will split into special interest groups with speakers and discussion sessions scheduled on nursery and garden center operation, shade trees, turf maintenance and commercial vegetable growing. Speakers will include University faculty members from Minnesota and other states, governmental officials, garden center operators and representatives of other horticultural businesses and associations.

Fee for the conference is \$15 for both days or \$10 for a single day. To register, contact the Office of Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108.

The conference is sponsored by the University's Agricultural Extension Service, Agricultural Experiment Station and College of Agriculture in cooperation with horticultural businesses industries and associations. The University offers its programs and facilities to all persons without regard to race, creed, color, sex, national origin, or handicap.

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January 29, 1979

Contact: Jerry Fruin  
376-3563  
Kathy Chesney  
373-0714

#### UNIVERSITY TO RESEARCH RURAL TRANSPORTATION PLANNING

Moorhead, Minn.--Funding for a pilot project to improve rural transportation planning in the state--especially bulk commodity shipments by railroads--has been awarded to the University of Minnesota Agricultural Extension Service.

The grant was announced by Ronald Schrader, head of the newly organized office of transportation within the U.S. Department of Agriculture. Schrader was speaking at the Agricultural and Transportation Policy Issues Conference in Moorhead Jan. 18.

The USDA will provide \$89,200 for the two-year study to be headed by Jerry Fruin, an extension economist specializing in transportation. Cooperating agencies are the Minnesota Department of Agriculture and the Minnesota Department of Transportation.

Fruin says one project goal is to "determine which railroads are essential to the long-run requirements of agriculture and rural communities." The study will focus on an area of southern Minnesota to be selected.

"The novel thing about this project is that we will look at who really pays for changes in the transportation system," Fruin adds. "Which levels of government, the shippers, the railroads or other transporters pay the various costs of using or not using the railroad? If a rail line is abandoned, who will pay the additional highway and rural road maintenance costs from increased truck use?"

The researchers will determine the costs and benefits of alternative rail and highway systems. These include various combinations of abandonment and rehabilitation of existing rail lines.

add one--university to research

The pilot will also research the "people transportation" alternatives in the project area. Fruin hopes to provide information on funding sources available for public transportation and on ways of improving the operations and the cost effectiveness of rural people-moving systems.

The Extension Service will inform the public of the study's results through workshops in the project area and through publications, Fruin adds.

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January 31, 1979

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Media Contact: Bill Angell,  
Housing Specialist  
(612) 373-0910

NOTE TO MEDIA: We have exhausted our supply of Extension Bulletin 399, "Roof-Snow Behavior and Ice-Dam Prevention in Residential Housing." This news release is a short review of that publication, and more current information from extension specialists. Please do not encourage readers to request EB 399.

ICE DAM WATER DAMAGE  
WIDESPREAD THIS WINTER

If ice dams on the roof are causing water leakage in your home, you must find a way to remove the roof snow and ice in the safest, but more effective way possible, University of Minnesota housing specialists say.

The specialists estimate that 60 percent of Minnesota homes will be damaged to some degree by ice dam-caused water problems this winter. The total bill to homeowners could be over \$100 million.

When the bottom layers of snow melt near the peak of a roof, the water runs down the roof and freezes near the eaves. These dams prevent later snow melts from escaping the roof. Instead, the water pools and runs under the shingles.

Dripping water or water flowing between storm and interior windows, or stains showing up on walls near ceilings indicate a serious problem. Most of the snow can be removed with a "roof rake," and what's left can be brushed off with a push broom.

Extreme caution must be taken to insure personal safety, and to cause as little roof damage as possible. Do not chop through the ice down to the shingles, and do not use a blow torch.

-more-

add one--ice dam

Ice and snow can be commercially removed by a roofing contractor. This could cost \$150 to \$250 for the average home. Another possible warm day alternative may be to run hot water over the ice from a hose attached to the water heater. This could damage shrubbery, however. Electric cables may be installed along eaves and roof valleys at 90 degree angles to the dams.

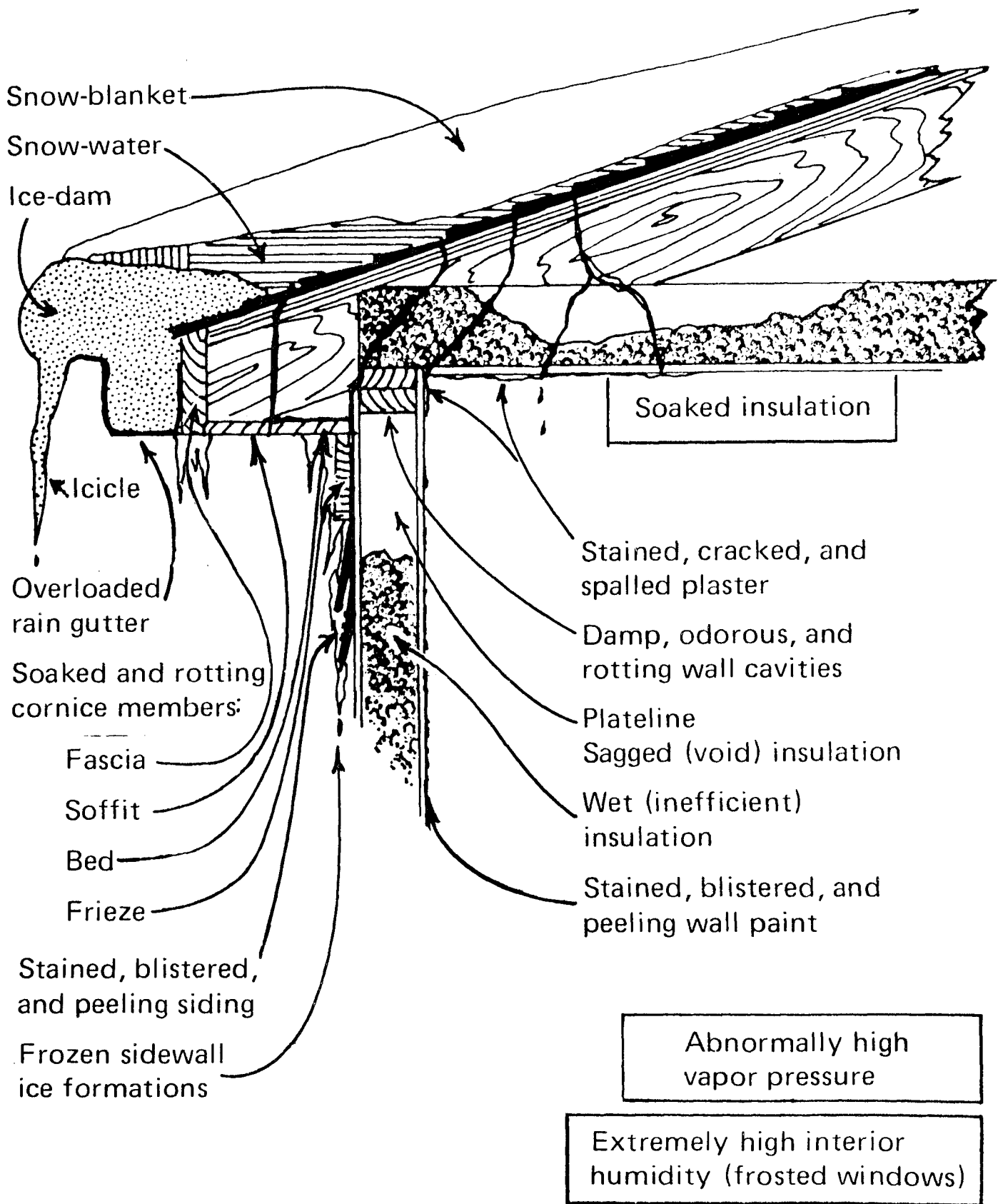
Homeowners should try to keep the roof and attic temperature down to prevent melting. This is done through proper ventilation and insulation. Make sure insulation is not covering soffit vents.

Other temporary measures are to drill 1½ inch vents between rafters in the overhang area, and to insulate all attic heat sources such as plumbing vents, fan vents, and clothes dryer vents. Chimneys and furnace flues should not be insulated without contacting local building inspectors.

Serious sidewall saturation may be caused by winter water leakage. This insulation will be ineffective, and may have to be replaced next spring. Other results may be stained or cracked plaster or sheetrock, especially in the area where inside ceilings intersect exterior walls. Exterior paint may be stained or blistered this spring.

The only permanent way to prevent ice dams is through adequate ventilation of the roof deck. While it is nearly impossible to over-ventilate a roof deck, care must be taken to insure air-flow under the overhang and at the peak. These measures minimize snow melting on the roof.

(end of news release--illustration on next page)



**Figure 2.** This sketch of the ice-dam problem identifies both the ice-dam and its damages. Of course, all the damages illustrated may (or may not) occur at any one instance. The damages illustrated here are far more common and costly than is generally acknowledged.

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University of Minnesota  
St. Paul, MN 55108  
January 1979

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The University of Minnesota,  
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Extension Service, is an  
equal opportunity educator  
and employer.

SPECIAL SHORT COURSE SCHEDULE (February 1979 - July 1979)

- Jan. 30-Feb. 1,  
Feb. 27-Mar. 1,  
Mar. 20-22, 27-29,  
April 3-5
- 1979 Home Sewage Treatment Workshops. January 30 - February 1, South St. Paul; February 6-8, Brainerd; February 20-22, Alexandria; February 27 - March 1, Hopkins; March 20-22, Duluth; March 27-29, Arden Hills; April 3-5, Bemidji. For county planners, zoning officers, contractors, public health inspectors and building inspectors. \*GW
- January 30  
Feb. 6, 7, 13
- Planning Your Dairy Future. St. Cloud Holiday Inn. A four-day workshop for the professional dairyman considering expansion, replacing obsolete and inefficient facilities or improving his profit potential by the wise use of land, labor, capital and management resources. \*GW
- Jan. 30, Feb. 6  
& 13, Jan. 31,  
Feb. 7 & 14  
Feb. 1, 8 & 15
- Managing Your Hog Future. January 30, February 6 & 13, Zumbrota; January 31, February 7 & 14, Rushford; February 1, 8, & 15, Austin. A three-day workshop for the professional hog farmer who is considering expansion, replacing obsolete and inefficient facilities or improving his profit by the wise use of his land, labor, capital and management resources.
- February 1
- Sheep and Lamb Feeders Day. West Central Experiment Station, Morris, MN +
- February 5-16
- Lumberman's Short Course. Kaufert Laboratory of Forest Products, St. Paul Campus. To bring retail lumber personnel up-to-date on new ideas and techniques; acquaint industry with the University's teaching, research and facilities; and train personnel in the building supply field. For lumber and building material industry personnel and people working with the lumber industry in support activities. \*EA
- February 5, 6, 7;  
12-13
- Quality Assurance Workshop: Owner/Manager I Course. February 5, 6, 7, Duluth; February 12-13, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- February 7
- Garden Store Operators, Virginia, MN. Updated horticultural information and current business trends and problems. For nurserymen, florists and store operators. \*RM

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\*For further information call The Office of Special Programs

CN--Curtis Norenberg	612-373-0725
RM--Richard Meronuck	"
GW--Gerald Wagner	"
EA--Eugene Anderson	"
CC--Chere Coggins	"
FH--Fred Hofer	"

+For further information call the Research or Experiment  
Station designated.



Page 2 - Special Short Course Schedule

- February 10                   A Look At Your Home Landscape. Earle Brown Continuing Education Center. Recent information on renovation existing landscaping, creating new landscapes and the care and selection of plant materials. \*RM
- February 15                   Beef Cow-Calf Day. West Central Experiment Station, Morris, MN +
- February 16-25               RRV Winter Shows - Crookston +
- February 23                   Exchange Program - International Night. \*FH
- February 26-27               HORTICULTURE INDUSTRIES CONFERENCE - Earle Brown Continuing Education Center, St. Paul Campus. February 26 - General session for the horticulture industry, including rules, regulations and business management. The KERMIT OLSEN MEMORIAL LECTURE will be in the evening. February 26 - Four Short Courses: SHADE TREE Short Course. Demonstrations and information on shade tree maintenance techniques. For arboriculturists, nurserymen, park administrators, landscape maintenance superintendents and all individuals concerned with shade tree preservation. TURF MANAGEMENT Short Course. The course will cover sod management, fertilizer rates and recommended analysis, disease control, implications of the energy shortage on the turf industry, efficient fertilizer use, grass seed availability, minimum maintenance and quality turf. NURSERY AND GARDEN STORE OPERATORS Short Course. Update horticultural information and current business trends and problems. For nurserymen, florists and store operators. \*RM VEGETABLE GROWERS Short Course. Vegetable production and harvesting in Minnesota. Special session on sweet corn and peas production; peppers and pick-your-own vegetable. \*RM
- February 27-28               Texas Feedlot Study Tour. A four-day study tour designed to inform Minnesota cattle feeders and other cornbelt beef industry people about the nature of competition they are facing from commercial feedlots in the Southwest and the implications for feedlots in Minnesota. Feedlots to be studied are at Hereford, Dumas, Dalhart, and Gruver, Texas. \*GW
- March 5                       Nutrition, Aging and You. Earle Brown Continuing Education Center. An exploration of recent research, programs and philosophies related to nutrition, aging and aged. \*CC
- March 5-6                     Minnesota Forest Soils Workshop. Cloquet Forestry Center. For foresters or forest related staff from private industry, state agencies, local government, federal agencies and others. The purpose is to provide a workshop on the use of soils information for professionals in northern Minnesota. \*EA
- March 5-8, 12-13,  
19-22, April 3-5             Commercial Applicators Pesticide Workshops: March 5-6, Rochester; March 6-7, Owatonna; March 7-8, Mankato; March 12-13, St. Paul; March 19-20, Marshall; March 20-21, Morris; March 21-22, St. Cloud; April 3-4, Crookston; April 4-5, Grand Rapids. For pesticide dealers, custom applicators, educators and regulatory personnel. The first day at each location is introductory information for persons planning to take license examination. The second day will provide update information on plant and animal pest problems and pesticide

for new and licensed applicators and will meet renewal requirements for 1980 license. \*EA

March 5, 7, 12,  
19, 20 & April 4

Municipal Tree Inspectors Workshops: March 5, Rochester; March 7, Mankato; March 12, St. Paul; March 19, Marshall; March 20, Detroit Lakes; April 4, Grand Rapids. Update training for tree inspectors. Attendance will qualify Minnesota Tree Inspectors for recertification. \*EA

March 5-7, 12-13,  
19, 20, 21, 22

Quality Assurance Workshop: Owner/Manager I Course. March 5-7, Ely; March 12-13, St. Paul Campus; March 19-22, Duluth. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC

March 6

Dairy Day, Waseca +

March 6-9

Better Process Control School. Earle Brown Continuing Education Center. Provides training, examination, and certification for employees of canning factories. \*CC

March 7-9

Minnesota Commercial Aerial Applicators Workshop - Arrowwood Lodge, Alexandria, MN. Designed for aerial pesticide dealers. To provide information of plant and animal pest problems and pesticides accreditation for retention of the pesticide applicator's license. \*RM

March 7, 8,  
14, 15

1979 Fair Management Short Courses. March 7, Owatonna Elks Club; March 8, Redwood Falls Donovan's Center; March 14, Detroit Lakes Holiday Inn; March 15, Hinckley, Tobie's Restaurant. Management principles for county fair improvement. For fair board members, fair officers, superintendents and supervisors who have management responsibilities for county, district and state fairs. \*CN

March 9

Exchange Program Participant Graduation. \*FH

March 13-14

Midwest Milk Marketing Conference, Thunderbird Motel, Bloomington. A conference for management and boards of directors of dairy processing firms, associations of dairymen, economic and marketing researchers in Universities and personnel of dairy regulatory agencies. The program will focus on education and research directed toward the solution of problems facing the dairy industry. \*GW

March 14

Dairyman's Day, Rainbow Inn, Grand Rapids +

March 14-15

Sugarbeet Growers Institute, Crookston +

March 16 & 17

Agriculture, Rural Life and Changing Values in China, Implications for Americans. \*FH

March 18-19

Commercial Small Fruit Growers, Earle Brown Continuing Education Center. For commercial small fruit growers. \*RM

March 19-21

Liquefied Petroleum Gas, St. Paul Campus. A concentrated study program on the latest technical service, and commercial developments in liquefied petroleum gas equipment and appliances. For servicemen and technicians in the Minnesota gas industry. \*CN

Page 4 - Special Short Course Schedule

- March 19, 20, 21  
22, 26, 27, 28  
& 29. April 3,  
4, 5, & 6
- Township Officers Short Course. A one-day program for town officers and others interested in town government. The purpose is to provide officers with the technical knowledge to be more effective and efficient in carrying out their duties as officers. March 19, Waseca; March 20, Rochester; March 21, Sleepy Eye; March 22, Marshall; March 26, Brainerd; March 27, St. Cloud; March 28, Willmar; March 29, Fergus Falls; April 3, Detroit Lakes; April 4, Thief River Falls; April 5, Grand Rapids; April 6, Eveleth. \*GW
- March 20
- Minnesota Livestock Industry Day and Annual Meeting, Minnesota Livestock Breeder's Association, U of M Technical College, Weseca. Latest trends and issues in the livestock industry and their implications for the Minnesota Livestock Breeders. \*CN
- March 20
- Dairyman's Day - West Central Experiment Station, Morris, MN +
- March 21
- Dairy Day - Crookston +
- March 23-24
- Beekeepers' Management Short Course For Beginners, St. Paul Campus. For persons interested in becoming a beekeeper as a hobby or commercially and others interested in bees. \*EA
- March 26-27
- Pest Control Operators Conference, Sheraton Inn Northwest, Brooklyn Park, MN. Information of identification, prevention and safe control of structural pests. Attendance will qualify structural pest control operators for recertification. \*EA
- March 31
- Annual Spring Clinic for Horsemen, St. Paul Campus. A program on a variety of horse topics. For anyone, including youth and professionals interested in care and management of horses. \*GW
- April 6 & 7
- Agriculture, Rural Life & Changing Values in China: Implications for Americans. \*FH
- April 7
- Meats Up-Dating Conference, Andrew Boss Laboratory, Meat Science, St. Paul Campus. A conference on Meat information for food educators and dietitians. To provide educational materials and reference on meats. To provide an opportunity for educators and dietitians to confer with meats and cooking specialists. \*GW
- April 9-10
- Quality Assurance Workshop: Owner/Manager I Course, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- April 20
- Food Day, 1979. Earle Brown Continuing Education Center, St. Paul Campus. Food Labels - What they mean and how we can use them. \*CC
- April 22-24
- Minnesota FFA Convention and Leadership Conference, St. Paul Campus. To promote a learning experience for vocational agriculture students and FFA members. \*CN
- April 26
- College of Home Economics Annual Conference. McNeal Hall and Earle Brown Continuing Education Center, St. Paul Campus. Color Us Successful! An exploration of color and its affect on our lives. \*CC

Page 5 - Special Short Course Schedule

- May 14-15            Quality Assurance Workshop: Owner/Manager I Course, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- May 18-20            Minnesota State Fire School, St. Paul Campus. For volunteer and paid fire department personnel, city officials and interested government and industry personnel who deal in fire safety, prevention, control and rescue and first aid work. \*EA
- May 23-26            Marital and Family Conflict. Earle Brown Continuing Education Center and McNeal Hall, St. Paul Campus. \*CC
- June 10-13           National Association of Colleges and Teachers of Agriculture Conference, Earle Brown Continuing Education Center, St. Paul Campus. \*CN
- June 11-12           Quality Assurance Workshop: Owner/Manager I Course, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- June 18-22           Remote Sensing and Image Interpretation Conference. Earle Brown Continuing Education Center, St. Paul Campus. A training conference focusing on the systems used in resource assessment. \*EA
- June 26               Crops and Soils Field Day, Waseca +
- July 12                Summer Crops and Soils Field Day, Morris +
- July 16-19            Agricultural Education Seminar, Radison Hotel, St. Paul and St. Paul Campus. For instructors and administrators of vocational and technical educational programs in agriculture. \*CN
- July 18                Crops and Soils Day, Crookston +
- July 23 -  
August 3                Beginning Administrator's Workshop, Northwestern College and University of Minnesota, St. Paul Campus. This course is intended for recently appointed administrators in agriculture, forestry, and home economics who have been nominated and supported at least in part by their home institution. Limited to approximately 20. \*CN

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February 2, 1979

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STATE PAYMENTS INADEQUATE  
FOR WILDLIFE LAND TAX LOSS

Does government conversion of private farm land into public wildlife areas erode the tax base for local governments? That depends on which level of government purchases the land--federal or state--according to a University of Minnesota study.

In the five west Minnesota counties under study, the federal government usually compensates local units for tax revenue lost from wildlife lands acquisitions. Federal in-lieu-of-tax payments are based on a formula that reflects current market value of the public land.

Ronald Dorf, the extension economist who analyzed fiscal impacts, found that the state's formula did not make up for lost revenue. The state annually pays counties a flat 50 cents per acre for State Wildlife Management Areas. A second source of revenue is school foundation aids which are increased by the loss of agricultural land. Combining both sources of revenue did not, in general, provide adequate compensation.

Dorf found that for the district as a whole, federal in-lieu-of-tax payments make up for 96 percent of lost revenue. When the increase in school aids is added, the district regains 144 percent of the tax income.

State in-lieu payments only cover 18 percent of the loss, however. Added school aids bring that total figure up to 70 percent.

Dorf found that school districts and county governments fared well under the repayment system, but that townships lost considerable revenue. Schools automatically benefit from increased school aids. In-lieu payments are sent to counties, which often place the revenue in county funds rather than reimbursing townships.

add one--state payments

"Individual taxpayers would see mill rates go up or down, depending on which township or school district they live in," Dorf says. A Lac Qui Parle county farmer who lives in Yellow Bank township, the site of a national wildlife refuge, could be assessed an additional \$133.72 for each \$100,000 of assessed property value. A landowner in a different township and school district could find the tax bill lowered by \$111.68 per \$100,000.

"If counties would redistribute the in-lieu payments back to the affected townships, we would not see this wide difference in mill rate changes," Dorf explains.

The general affects of public wildlife land holdings are under study by a task force of the Upper Minnesota Valley Regional Development Commission. The study includes Yellow Medicine, Big Stone, Lac Qui Parle, Chippewa and Swift counties. The commission analyzed the tax repayment issue in conjunction with University of Minnesota Agricultural Extension Service and Department of Agricultural and Applied Economics.

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February 5, 1979

Immediate release

BARGE PRESIDENT:  
ENVIRONMENTALISTS HAMPER  
GRAIN EXPORT EXPANSION

Expansion of export markets for agricultural commodities depends upon maintaining unrestricted transportation on the inland waterway system, a barge and towing company executive says.

John Lambert, president of Twin City Barge & Towing Co., prepared an address for a recent agricultural policy conference in Moorhead, sponsored in part by the University of Minnesota Agricultural Extension Service. His remarks were given by Leonard Franklin, a general manager at the company.

"There is a relentless campaign by environmental groups and various state and federal agencies to compromise the integrity of our navigable waterway system," Lambert said. "If agriculture intends to expand its export markets in future years, the inland water carriers are ready to meet the challenge, assuming that artificial barriers are not imposed on the system."

The barge share of export grains channeled through U.S. gulf ports was 57 percent in 1977, and will probably rise to 60 percent in 1978, Lambert said.

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February 5, 1979

Immediate release

CAPITAL SOURCES NOT ATTRACTED  
TO TRUCKING, RAIL INDUSTRIES

Two serious problems being faced by transportation industries are the inability of railroads to attract capital, and the shortage of government funding for highways, according to W. K. Smith, General Mills vice president for transportation.

Smith spoke at an agricultural policy conference in Moorhead sponsored in part by the University of Minnesota Agricultural Extension Service. He said the rail industry suffers from a deficit of \$1.3 to \$1.6 billion per year. That is the difference between income from operations and investors, and the needs for capital.

"The ability of the railroads to meet their capital needs will be substantially enhanced using competitive, market-place regulation in lieu of ICC (Interstate Commerce Commission) economic regulation," he advised.

The trucking industry also has problems attracting capital due to its "high risk" image, Smith said. Another danger awaits truckers; "If we allow the highways to deteriorate the same as we allowed rail lines, there is going to be big trouble," he warned.

Barge operators appear to be better off financially than other transporters. "Having accepted the concept of a level of user charges, they probably will have no shortage of federal funding," Smith explained. "Barge operators will probably continue to have more waterway problems with environmentalists than with sources of capital."

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#### HALVORSON NAMED STATE DHIA MANAGER

John S. Halvorson, Buffalo, Minn., has been named manager of the Minnesota Dairy Herd Improvement Association (DHIA), announces Casimir Weller, association president.

Halvorson's appointment to the newly created position was effective Jan. 29, 1979. As manager, he will direct the business of the state DHIA, which consists of 73 local associations with 6112 member dairy farmers.

Halvorson has 16 years' experience with DHI associations, including 10 years as extension director in Wright County. He was also an extension agent in Winona and Yellow Medicine counties.

Most recently he headed a department of 40 people as director of agronomy services for the Minnesota Department of Agriculture.

He has a B.S. degree in agriculture with an animal science major and a M.S. degree in public administration, both from the University of Minnesota. As a youth he was active in 4-H in Chippewa County and in the Milan High School FFA chapter.

A separate state DHIA office will be established soon. In the interim, Halvorson's office will be at 101 Haecker Hall, St. Paul Campus, University of Minnesota.

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PROGRESSIVE SHEEP  
PRODUCERS HONORED

Minnesota sheep raisers honored two fellow producers at a statewide meeting Feb. 1 for their success in adapting modern sheep and lamb production methods.

Orin Green, Greenbush, and Curtis Roos, Edgerton, were given the Silver Bell Award during the 52nd annual Sheep and Lamb Feeders Day in Morris. The award was established in 1976 and is sponsored by the University of Minnesota Agricultural Extension Service, the Minnesota Wool Growers Association, St. Paul Union Stockyards and Wilson Foods.

Green owns 225 Columbia, Suffolk and grade ewes that weaned a 152 percent lamb crop in 1978. His gross income was \$109 per ewe bred, based on 160 lb. of lamb or 8.2 lb. of wool per ewe.

R. M. Jordan, extension animal scientist and selection committee member says, "Green uses top rams, keeps production records on his ewes and follows an economical feeding program that enables him to sell lambs weighing 105 lb. at 140 days of age. The purebred breeding stock he sells has contributed to the productiveness of sheep flocks in his area."

Roos lambed 215 ewes in 1978 and plans to have 400 in production this year. He weaned a 143 percent crop. By lambing in January and February, and pushing the animals with a high energy creep ration, he was able to sell 105 lb. of lamb in late May at 70 cents per pound.

Roos's gross income was \$111 per ewe bred based on 150 lb. of lamb and 9.1 lb. of wool per ewe. His ewes are primarily grade Hampshire and Suffolk. He is crossing them with Finn/Rambouillet rams to increase lambing rate and wool production.

add one--progressive sheep

Jordan comments, "Roos lambs his ewe lambs at about 12-13 months of age and raises any surplus lambs on milk replacer. He spares no effort in attempting to maximize lamb production in keeping with capital and labor costs."

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February 5, 1979

Contact: Alan Dexter  
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SUGARBEET GROWERS EXPERIMENT  
WITH NO-HAND LABOR PRODUCTION

The number of sugarbeet producers who grew all or part of their crop without the hand thinning or weeding usually done by migrant workers increased from 15 percent in 1977 to 64 percent in 1978.

According to a survey conducted by University of Minnesota and North Dakota State University specialists, the number of acres without hand labor totaled only 14 percent in the 1978 crop year. The growers reported they would increase that acreage to about 30 percent in 1979.

"The figures seem to indicate that a high percentage of growers are experimenting," says sugarbeet specialist Alan Dexter. "They are trying to replace hand labor with chemical and cultural weed control and mechanical thinning. Currently, most hand labor is supplied by migrant workers and local teenagers."

"Increased government regulation and programs for migrants will do more than any other single factor to eliminate the use of hand labor in sugarbeets," Dexter explains. The growing cost of hand labor, along with low sugar prices also prompts growers to cut down on this major input.

Approximately 2,200 sugarbeet growers planted 411,000 acres of the crop in the Red River Valley of Minnesota and North Dakota, and in west central Minnesota last year. The 10th annual "Survey of Herbicide Use on Sugarbeets" was mailed to each grower. About 42 percent responded to the survey, representing 50 percent of the total acres grown in the two main production areas.

Working with Dexter from North Dakota State University were Galen Schroeder, program assistant, and Dennis Rasmusson, sugarbeet technician. Dexter has a joint appointment with the Minnesota and North Dakota Extension Services.

add 1--sugarbeet growers

The survey also showed that total sugarbeet acreage treated with herbicides in 1978 was 160 percent, compared to 133 percent in 1977. Several acres were treated both fall and spring, or twice in the spring, bringing the total over 100 percent.

"The greatest increase in 1978 has been the use of postemergence herbicides," Dexter says. "Since 1974, postemergence herbicide use has increased from 9 percent of the acres to 59 percent in 1978."

The largest increase in postemergence chemical use is Betanex. It was used on about 26 percent of acres, as compared to 14 percent in 1977.

Eptam and its combinations were the most widely used preplant incorporated herbicide treatments, accounting for 71 percent of all acres treated.

Nearly half the growers listed weeds as their most serious production problem. About 55 percent named redroot pigweed as the worst species.

The number of acres grown without hand thinning or weeding totaled 28,334. About 117,000 acres were thinned without hand labor, and 29,000 acres were not hand-weeded. The growers said they intended to raise 63,072 acres free of hand work in 1979.

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Immediate release

TRUCKER OPPOSES  
DEREGULATION

Small, rural towns would lose trucking service if the Interstate Commerce Commission (ICC) goes ahead with plans to deregulate the motor carrier industry, the president of Murphy Trucking Co. told an agricultural policy conference in Moorhead.

Richard T. Murphy said that surveys show 70 percent of truckers would eliminate service to some or all small communities they now serve if government regulation did not require it. The conference was sponsored in part by the University of Minnesota Agricultural Extension Service.

"Regulation of freight transportation simply means that every shipper, no matter what his size and where he is located, can get the guaranteed freight service he needs to conduct business," Murphy explained. Deregulation would bring about the "cut-throat rates, discrimination and overall chaos" that the industry experienced in the 1920s and '30s.

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February 5, 1979

Immediate Release

### Inflation & Farm Policy

Policies and programs to control inflation will dominate U.S. farm policy in 1979 and 1980, predicts Willard W. Cochrane, agricultural economist at the University of Minnesota.

The Carter administration will fight efforts to raise loan rates or target prices for grains. "The grain program will see few changes. Holding the price line on grains is central to holding the line on food prices," he says.

The administration and Congress are likely to "come to blows" over the dairy program, Cochrane says. Under present law, the Secretary of Agriculture must raise the dairy price support level on April 1, 1979--probably about 40 cents per hundred. But under present law the Secretary can drop the support level on Oct. 1, 1979.

"Congress is likely to want to eliminate this latter option and the administration will probably want to keep it," he says. The administration will also fight any congressional efforts to reduce beef imports, he predicts.

\* \* \* \*

### AAM On "Collision Course"

The American Agricultural Movement (AAM) and major divisions of government are on a "collision course," according to Willard Cochrane, agricultural economist at the University of Minnesota.

"Reception of the AAM contingent in Washington by the administration and the House of Representatives will be polite but cold this time," Cochrane says. "The urban-dominated House wants no part of a plan to raise food prices and the administration is committed to controlling inflation.

"In my judgment the AAM will find few friends and little comfort in Washington this time," he concludes.

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February 5, 1978

Immediate Release

SHORT WORLD GRAIN  
CROP COULD MEAN  
SKYROCKETING PRICES

The U.S. government must continue to achieve a slow increase in farm incomes "without rocking the food price boat," says Willard W. Cochrane, agricultural economist at the University of Minnesota.

"I don't see any important changes in agricultural policy in the near future. The government is locked into its present position," Cochrane said at a recent agricultural policy seminar in Rochester, Minn.

The government "can't take any overt action to raise farm prices, for such an action runs counter to its inflation control efforts. And it can't permit farm prices to fall as they did in 1976 or 1977, or it will incur the wrath of farm people and their agribusiness allies."

Government policy people are probably "praying" for a slow increase in farm prices, he says. "But I'm a firm believer that events dictate policy--particularly farm policy.

"In this connection the world has experienced four good grain crops in a row. I would not be surprised to see a poor world crop year in 1979, or certainly no later than 1980.

"In this event the U.S. would hope that its stabilization program efforts would pay off and that release of reserve grain stocks would moderate any large increase in world grain prices and U.S. food prices. Holding the price line on grains is central to holding the line on food prices."

But if the reserve stock program fails to moderate high world grain prices, the government is apt to "find some way to limit grain exports and act to stabilize domestic food prices. But it won't be called an embargo--they'll use another word.

"Regardless of what U.S. policy makers say, I don't see how they can avoid such an action in the event of a poor crop year. The U.S. must stabilize food prices or its inflation battle is lost," Cochrane says.

\* \* \* \*

CA, IA



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February 5, 1979

Immediate release

BERRY GROWERS SCHOOL  
SCHEDULED MARCH 18-19

The annual Minnesota Berry Growers School for producers of strawberries and raspberries will be held March 18 and 19 in Roseville, Minn., and on the St. Paul campus of the University of Minnesota. Speakers will include commercial berry growers and faculty and extension service specialists from the University of Minnesota, Cornell University and the University of Wisconsin.

The opening speaker will be Rex Moseley, Wisconsin strawberry grower, who will discuss strawberry culture for pick-your-own berry farms. He will speak on Sunday evening, March 18, at the Roseville Holiday Inn.

On March 19 the conference will shift to the Earle Browne Continuing Education Center on the University's St. Paul campus. Speakers will include Donald Ourecky of Cornell University on raspberry culture and growing strawberries for high yield and Larry Binning of the University of Wisconsin on weed control in berry fruit.

Other speakers will discuss pest control, pick-your-own operations, varieties, renovation and new berry crops.

For further information and to register, contact Leonard B. Hertz, Department of Horticultural Science and Landscape Architecture, University of Minnesota, St. Paul, MN 55108.

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February 5, 1979

Media Contact: Bill Angell,  
Housing Specialist  
(612) 373-0910

NOTE TO MEDIA: We have exhausted our supply of Extension Bulletin 399, "Roof-Snow Behavior and Ice-Dam Prevention in Residential Housing." This news release is a short review of that publication, and more current information from extension specialists. Please do not encourage readers to request EB 399.

#### ICE DAM WATER DAMAGE WIDESPREAD THIS WINTER

If ice dams on the roof are causing water leakage in your home, you must find a way to remove the roof snow and ice in the safest, but more effective way possible, University of Minnesota housing specialists say.

The specialists estimate that 60 percent of Minnesota homes will be damaged to some degree by ice dam-caused water problems this winter. The total bill to homeowners could be over \$100 million.

When the bottom layers of snow melt near the peak of a roof, the water runs down the roof and freezes near the eaves. These dams prevent later snow melts from escaping the roof. Instead, the water pools and runs under the shingles.

Dripping water or water flowing between storm and interior windows, or stains showing up on walls near ceilings indicate a serious problem. Most of the snow can be removed with a "roof rake," and what's left can be brushed off with a push broom.

Extreme caution must be taken to insure personal safety, and to cause as little roof damage as possible. Do not chop through the ice down to the shingles, and do not use a blow torch.

-more-

add one--ice dam

Ice and snow can be commercially removed by a roofing contractor. This could cost \$150 to \$250 for the average home. Another possible warm day alternative may be to run hot water over the ice from a hose attached to the water heater. This could damage shrubbery, however. Electric cables may be installed along eaves and roof valleys at 90 degree angles to the dams.

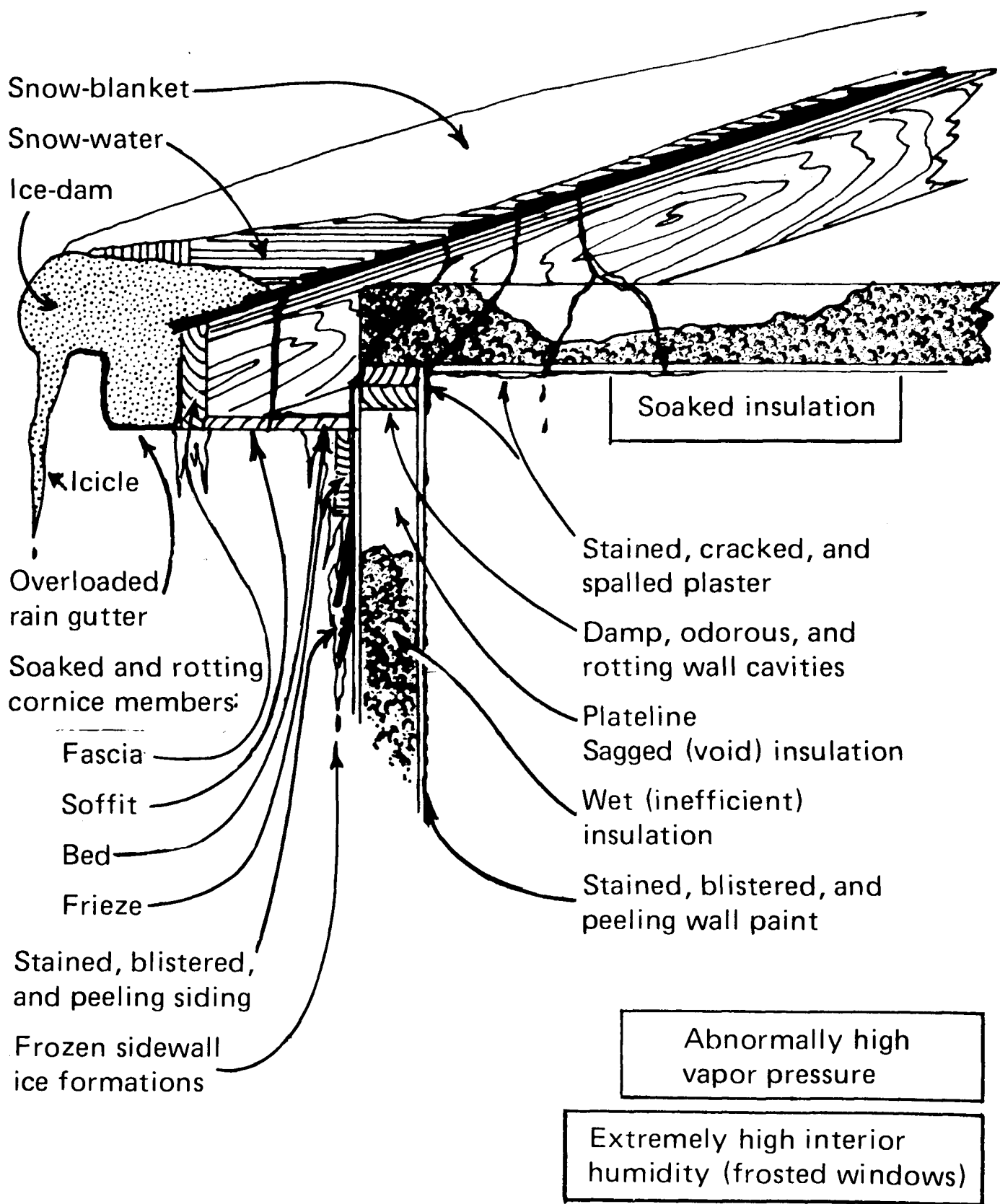
Homeowners should try to keep the roof and attic temperature down to prevent melting. This is done through proper ventilation and insulation. Make sure insulation is not covering soffit vents.

Other temporary measures are to drill 1½ inch vents between rafters in the overhang area, and to insulate all attic heat sources such as plumbing vents, fan vents, and clothes dryer vents. Chimneys and furnace flues should not be insulated without contacting local building inspectors.

Serious sidewall saturation may be caused by winter water leakage. This insulation will be ineffective, and may have to be replaced next spring. Other results may be stained or cracked plaster or sheetrock, especially in the area where inside ceilings intersect exterior walls. Exterior paint may be stained or blistered this spring.

The only permanent way to prevent ice dams is through adequate ventilation of the roof deck. While it is nearly impossible to over-ventilate a roof deck, care must be taken to insure air-flow under the overhang and at the peak. These measures minimize snow melting on the roof.

(end of news release--illustration on next page)



**Figure 2.** This sketch of the ice-dam problem identifies both the ice-dam and its damages. Of course, all the damages illustrated may (or may not) occur at any one instance. The damages illustrated here are far more common and costly than is generally acknowledged.

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CHINESE AGRICULTURE  
CONFERENCE SCHEDULED

A conference focusing on Chinese agriculture entitled "Agriculture, Rural Life and Changing Values in China: Implications for Americans," will be held March 16-17 at the University of Minnesota, Crookston.

The conference will bring together China scholars, American farmers and agricultural specialists who have recently visited China, faculty members from Minnesota universities and interested people from northwest Minnesota.

Topics of discussion will include: China's agriculture and life style continuity with the past, the transformation of agriculture and rural life since 1950, plus the ethical and value issues raised by these topics.

A number of state institutions and organizations are helping to sponsor the workshop including: the University of Minnesota, the Agricultural Extension Service, and many farmer's organizations, churches and citizen groups.

The conference fee is \$5 for adults and \$2 for students which includes conference materials. For further information and registration forms contact:

Richard Christenson  
International Student Advisor  
University of Minnesota, Crookston  
(218) 281-6510 ext. 288

Steve Krantz  
Continuing Education & Extension  
University of Minnesota, Crookston  
(218) 281-6510 ext. 243

Another conference in this series on Chinese agriculture, rural life, and changing values is scheduled for April 6-7 at the University of Minnesota, Morris.

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ATT: Extension Home Economists

Immediate release

INTERNATIONAL YEAR OF CHILD:  
FAMILY THAT PLANS TOGETHER  
BUILDS INNER STRENGTHS

Are your children part of the family?

Sounds like an odd question, but Ronald Pitzer, extension family life specialist at the University of Minnesota, says that too often children are viewed as second-class family members with little to contribute to decisions and plans.

"Being part of the family should mean more than just living at home," Pitzer says. "It should include having a voice in family affairs and decisions as well."

He advocates a family council. "This may sound a bit formal, but it needn't be," he adds. "In fact, some of the most productive discussions can take place during a meal. The important thing is that such get-togethers occur whenever anything comes up that affects family members. It should include such topics as where to go on vacation, plans for a family picnic as well as family finances. Even meal planning and chore assignments are good topics for group discussion."

To work well, Pitzer thinks a family council should include every member of the family who is old enough to express an opinion on the subject being discussed.

Pitzer says parents sometimes balk at the idea of a family council because they think that children will over-rule parents and get anything they want. This doesn't have to happen, however. "When children are young, parents must take most of the responsibility for decisions, but as they grow older,

-more-

add 1--international year of child

they should begin to withdraw their dominance and give children more and more voice in decisions. There is no better way for children to learn to handle problems they will have as adults than to get experience in handling problems and making decisions as they are growing up."

This means that an effective family council should encourage frank discussion. A question of how a family will spend money, for example, may mean that parents will have to share information about the family's financial status with the children.

"Although parents often hesitate to talk about money with their children, it's important that children understand the family situation," Pitzer says. "If they don't, they may have unreasonable demands and expectations. Being involved in a decision about family spending gives a child an appreciation of the 'why' behind a decision, even if it's a veto for something that he or she particularly wants."

During International Year of the Child, Pitzer urges families to try planning and making decisions as a group. It will "pay off" in many ways, he says.

\*It gives all members the feeling that "this is my family" and makes them more willing to take responsibility for it.

\*It probably will reduce general complaining because all members will feel they have been consulted on an issue.

\*It gives children the feeling that their parents are considering them as individuals rather than something to be exploited.

\*It provides valuable experience in decision making and learning to handle family finances.

\*It gives children experience in the democratic way of life.

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February 5, 1979

Immediate release

CONSUMER BRIEFS. . . .

What Price Clothing?

Does it seem that keeping your children clothed and shod is a strain on the family budget? Updated research from the Farm Family Living Expenditure Survey divides clothing budgets into four levels--thrifty, low, moderate and liberal. According to Edna Jordahl, extension home management specialist at the University of Minnesota, these budgets ranged from \$40 to \$120 at the thrifty level, \$60 to \$160 at the low level, \$90 to \$280 at the moderate level and \$150 to \$440 at the liberal level. The figures ranged within each category depending on the age and sex of the child.

The researchers found that at the moderate and liberal levels, costs to clothe girls were generally higher than for teenage boys. Most clothing costs increased with the age of the child.

Mrs. Jordahl stresses that this study reflects the usual clothing consumption practices of rural families based on actual expenditures during 1973 and then updated to 1977 price levels.

\* \* \* \*

Rural Child Care Needed

Quality out-of-homechild care is an urgent need in rural areas, according to research conducted at the University of North Carolina. Edna Jordahl, extension home management specialist at the University of Minnesota says a majority of the rural women favored having other-than-mother child care available and also expressed uncertainty in their attitudes toward motherhood as the primary role for women.

more...



add 1--consumer briefs

The mothers' rural communities had an average of 2.26 children  
with 1.76 years of age. Some 14 percent were household heads and  
about half were employed. Of those who did not work outside the  
home, half were planning to be employed in the future.

Dahl says, "If more and better child care facilities existed in rural  
areas, the amount of time mothers spent in child care were reduced, mothers  
would have a lot of things they want to do." She predicts that more child care  
facilities will be developed in rural areas, possibly involving cooperation  
between community planners and parents. Out of this type of planning may come  
some innovative alternatives to both in-the-home care and traditional day care  
centers.

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add 1--consumer briefs

The mothers from the rural communities had an average of 2.26 children with 1.76 under six years of age. Some 14 percent were household heads and about half of the women were employed. Of those who did not work outside the home, more than half were planning to be employed in the future.

Mrs. Jordahl says, "If more and better child care facilities existed in rural areas and the amount of time mothers spent in child care were reduced, mothers would have a lot of things they want to do." She predicts that more child care services will be developed in rural areas, possibly involving cooperation between community planners and parents. Out of this type of planning may come some innovative alternatives to both in-the-home care and traditional day care centers.

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4-H NEWS

4-H PROMOTES  
SUPER SHOPPERS

Everyone is a shopper. But someday, being just a shopper may not be good enough. As we face the prospect of more inflation and less resources, we realize our children should learn basic buying skills. They may need to be Super Shoppers for economic survival.

The 4-H Super Shopper project provides consumer education for 9-12 year-old children. Adult and teenage leaders discuss the decision-making that goes into buying something. They explain that one must consider "needs" first and "wants" second. They also stress that shoppers have certain rights such as the right to be informed about the product and the right to complain. Equally important, consumers have responsibilities; they must read labels, save sales slips, and be careful with merchandise.

As with all 4-H projects, the Super Shopper learns by doing. The child-consumer reports on buying decisions, demonstrates various labels and how to read them, and keeps records of what the stores in the community offer. The Super Shopper project is provided by the University of Minnesota Agricultural Extension Service through local 4-H clubs.

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Misc  
3A27P

#### CONFERENCE ON NUTRITION AND AGING SET MARCH 5

A day-long conference offering a variety of perspectives on the nutritional problems of aging is set for March 5 on the St. Paul campus of the University of Minnesota.

"Nutrition, Aging and You" is the conference theme. Speakers will include University of Minnesota faculty members in food science and nutrition, medicine and dentistry; nutritionists; dietitians; sociologists; and representatives of food and dietary supplement industries. E. Neige Todhunter, nationally known nutritionist from Vanderbilt University will speak on dietary problems among the elderly.

Other speakers will talk on such topics as the social and cultural factors in aging research, the physician's role in care of the elderly, vitamin and mineral supplementation in the diet of elderly persons, the effect of drugs on nutrients and dental treatment for the elderly.

The conference, to be held in the new Earle Brown Continuing Education Center, will begin at 8:30 a.m. and adjourn about 4:30 p.m. with a luncheon speaker included in the day's program. Fee for the meeting, which also includes instructional materials and the luncheon, is \$20. Students may register for \$5.50.

To register, contact the Office of Special Programs, 405 Coffey Hall, University of Minnesota, St. Paul, MN 55108 or telephone (612) 373-0725.

\* \* \*

The University of Minnesota and the Agricultural Extension Service offer their programs and facilities to all persons without regard to race, creed, color, sex, national origin or handicap.

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STATE EXTENSION SERVICE DIRECTOR TO RETIRE

Roland Abraham, director of the Agricultural Extension Service of the University of Minnesota, will retire Sept. 30, 1979.

Dr. Abraham has been director since 1968, but started his career in 1938 as an assistant county agent in Marshall County. He has been district supervisor of the northwest extension district and served as assistant and associate state director before becoming director.

During the 41 years of Abraham's extension involvement many changes have occurred--many through his dedicated effort in working with counties, legislators, and University colleagues, said William F. Hueg, Jr., deputy vice president and dean, Institute of Agriculture, Forestry and Home Economics, in accepting Abraham's decision to retire.

In addition to his accomplishments for the University of Minnesota, Abraham has been a powerful force in the North Central Region and in the United States to further Extension Service opportunities to serve all citizens. He is a forceful spokesman for providing "education where people live," Hueg said.

"His contributions are significant and his leadership will be missed. I have had the privilege of working with Roland for 23 years in several capacities, and our relationships have always been solid and cordial. Many others would say the same."

Abraham has served on many national and regional extension committees. He has been chairman of the North Central Regional Extension Directors; president of the board of directors of The Extension Journal, the professional

add one--abraham retires

extension publication; chairman of the Extension Committee on Organization and Policy (ECOP), and chairman of the extension section of the National Association of State Universities and Land Grant Colleges. He is past president of the Minnesota Adult Education Association and Epsilon Sigma Phi; national agricultural extension professional fraternity, which awarded him its Distinguished Service Ruby. In collaboration with Robert C. Clark, he is the co-editor of the book Extension Administration.

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JH 27P  
Immediate release

KNOW YOUR INSECT BEFORE  
FUMIGATING STORED GRAIN

If you don't know a weevil from a beetle, fumigating stored grain may be an unnecessary expense and an unwarranted use of hazardous chemicals.

Phillip Harein, University of Minnesota extension entomologist, and Alan Barak, research associate, started a stored-grain insect survey in 1977. Their 1978 results turned up widespread insect infestation of corn and wheat, but showed that treatments often did not match the insects found.

Farmers and elevator managers who tried to get rid of stored grain insects usually fumigated with chemicals capable of killing pests that develop inside the kernel, Barak says. These "primary" insects--weevils and the lesser grain borer--were found very rarely.

Barak did find an abundance of beetles, especially flat grain, foreign grain and larger black flour beetles. These "secondary" pests develop outside the kernel. They usually do not require fumigation.

Barak sampled 35 bins of year-old corn and 13 farm storages of year-old spring wheat in west central Minnesota. The only sample showing a primary insect infestation came from a wheat storage containing the lesser grain borer.

"Country elevators probably would have considered grain from these bins as weevily, and many would pay a discounted price to cover fumigation costs," Barak says. Farmers who wanted to avoid the discount sometimes fumigated the grain while it was in farm storage.

Fumigation is expensive and must be carried out with great caution, Barak says. "These chemicals will kill humans faster than they kill insects," he warns. "I hate to see farmers take these risks and spend this money when proper insect identification might show it isn't necessary."

add 1--know your insect before fumigating stored grain

The secondary insects should still be controlled, however. They may cause substantial loss, especially if grain is "out of condition" from mold or moisture.

A good control measure is to periodically turn over grain in long-term storage. As the grain is being moved to a new bin, malathion or pyrethrum should be applied. The bin itself should be sprayed with the protectant.

"Moving grain will break up pockets of high temperature and moisture," Barak explains. Fumigation of secondary insects may be needed if the grain cannot be moved.

Farmers should be fully aware of local elevator policies on insect-infested grain. Some elevators do not discount such grain, making fumigation unnecessary.

County extension offices can supply information on identifying stored grain insects, and on preventing and controlling infestations.

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Contact: Alan Dexter  
(701) 237-7973

2-INCH INCORPORATION IMPROVES  
SUGARBEET HERBICIDE ACTION

A sugarbeet scientist found that weed control improved when he increased the depth of herbicide incorporation from one to two inches.

Alan Dexter, sugarbeet weed control specialist with Minnesota and North Dakota Extension Services, applied five herbicide combinations at three soil depths. He measured degree of weed control and sugarbeet injury.

Increasing depth to two inches improved control to 100 percent in some cases. For instance, redroot pigweed control was 79 percent with Antor + Ro-Neet incorporated one inch. At two inches it was 100 percent. With a Nortron + Ro-Neet treatment, control increased from 83 to 100 percent. The Ro-Neet combinations were more injurious to the sugarbeets at two inches (8-13 percent injury) than TCA herbicide combinations.

TCA combinations with Antor and Nortron provided complete control of foxtail at two inches. Control of pigweed and lambsquarter was improved. Pyramin and TCA had nearly complete control of all three species. The TCA combinations injured only 3-5 percent of the sugarbeets.

Increasing incorporation depth from two to four inches gave no further improvements. Dexter used a rototiller to incorporate chemicals to the center four rows of six-row by 30-foot plots at Glyndon, Minn.

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Immediate Release

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WHY FARMER PROTESTS  
WHEN INCOME CLIMBS?

If farm income increased an average 40 percent in 1978, why are farmers again demanding higher commodity prices? Because not all farmers enjoyed higher income this past year, and because inflation of land values and machinery prices have created a serious cash flow deficit for some, an agricultural economist says.

University of Minnesota farm management specialist Paul Hasbargen suggests two reasons for the apparent paradox. "First, averages can be misleading; many farmers earn less than the average," he says. "Second, the major cause of concern is a cash flow problem rather than an income problem."

Average U.S. net farm income was up 40 percent this year over the relatively low earnings of 1977. Hasbargen expects the average net farm income in Minnesota to be even higher.

"Early analysis of farm records from southern Minnesota shows that incomes were probably up about 50 percent for Minnesota crop and dairy farmers," the economist reports. "Increases were even greater for beef and hog farmers."

Despite that generally bright picture, some farms show losses for 1978.

"Operators who have learned to manage the complex business of farming and have gained control of adequate resources did well in 1978," Hasbargen explains.

Those who did not do well may have had crop failures, sold their products during low price periods or did not control enough resources to be fully employed.

add one--why farmer protests

Many farmers face a cash flow problem despite favorable net income levels. "They have such large debt payment schedules that it is very difficult to keep up with repayments and still have enough income to pay taxes and cover ordinary family living expenses," Hasbargen says. This is especially true of the young farmer who recently purchased machinery and land. Both have inflated substantially in recent years.

Inflation raises interest rates. It also encourages people to invest in land, which tends to hold its value while the dollar loses value. This, in turn, drives land prices up further, and reduces the rate of return from the land.

Although interest rates have increased with inflation, annual net returns to farmland have stabilized at the historical 3-4 percent levels. "Therefore, the cash deficit between the interest rate that must be paid on farm mortgages and the annual return from the farmland has been increasing," Hasbargen explains.

When principle payments are added to the interest, "it can be seen that anyone buying a farm today is going to have a severe cash flow problem, unless he or she has excess earnings from livestock, another farm, or off-farm income," he adds. Beginning cash crop farmers face especially severe cash flow problems, and those hit by drought in recent years have added debts to be paid out of after-tax earnings.

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February 8, 1979

Immediate Release  
Contact: Jerry Fruin  
(612) 376-3563

ECONOMIST ADVISES GASOLINE  
SALES TAX, FEWER RURAL ROADS

Reducing the number of rural roads and basing the gasoline tax on dollar sales rather than gallon sales may help relieve inflationary pressures on the rural road system, a University of Minnesota economist reports.

"The road network of rural America is approaching a crisis in many areas," says Jerry Fruin, extension economist specializing in transportation. "Roads are deteriorating and maintenance expenses are escalating. Meanwhile, the funds for construction and maintenance are not keeping up with inflation."

The network of roads placed at one-mile intervals in most Midwest farming areas was established before motor vehicles were developed. If the Midwest were being settled today, a system designed for larger farms and motorized transportation would place roads at least two miles apart, Fruin says.

The two-mile system would increase the amount of available farmland by four acres per square mile. It would also reduce road maintenance expenses, require fewer costly structures such as bridges, and improve safety.

Fruin also suggests that the gasoline tax might be converted from a flat rate per gallon to a sales tax based on dollar value. Revenues would then increase in proportion to gasoline price raises, rather than the number of gallons sold.

"One approach would be to set a gasoline sales tax to obtain the same revenue levels as the current per gallon tax," Fruin suggests. "If desired,

add one--Fruin

increases could be programmed for the next several years as part of the national program to reduce dependence on petroleum imports."

When cutting back the number of roads, reasonable access and convenience must be maintained, Fruin says. Private drives should be provided by the public for residences and businesses served by abandoned roads. Owners of land-locked parcels should be given easements over former roadways.

Another problem of the rural road system is the poor coordination of road management policies. "A common example is the 9-ton all-weather road connecting with a 5-ton road at a county or township line," Fruin says.

Trends on the national level to increase maximum weight limits may force rural road managers to upgrade 9-ton roads to 10-ton limits. "This trend to higher load limits is extremely costly," he explains, "in terms of pavement damage to older roads and in the added requirements for new construction."

Greater emphasis must be placed on coordination and planning by local, state, and federal authorities with respect to load limits, design standards and financing, Fruin advises. His proposals are contained in "Issues in Rural Road Management," which is available from the Department of Agricultural and Applied Economics at the University of Minnesota.

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February 9, 1979

Immediate Release

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STATE FARM EARNINGS  
UP SHARPLY IN 1978

Farm earnings in 1978 will be higher than 1977 for most types of farms in Minnesota according to an early analysis of farm records.

The farm records showing these results are those of farmers in southern Minnesota who cooperate with the Minnesota Cooperative Extension Service and the Department of Agricultural and Applied Economics at the University of Minnesota.

Preliminary findings from 1978 farm records were recently released by Delane Welsch and Paul Hasbargen, extension economists in farm management at the University of Minnesota. They caution that these preliminary findings may change as more records are analyzed.

Early indications are that beef, dairy and hog farmers had record high earnings in 1978. Crop farmers also show an increase in earnings of about 50 percent over 1977, but their earnings will likely be less than their record highs in 1973 and 1974 when crop prices were at their peak.

U. S. Department of Agriculture (USDA) estimates that 1978 farm earnings were up 40 percent in the nation. Hasbargen expects Minnesota farm income to be up by even more than that figure.

The difference between the U.S. situation and Minnesota's is due to the relatively greater importance of dairy, hogs and beef as compared to most other states. Minnesota is third in dairy production, fifth in hogs and eighth in cattle feeding.

-more-

add one--state farm earnings

Cattle feeding farmers show sharply higher earnings in 1978 because many of them had losses from their feeding enterprises in 1977. Dairy and hog farmers also show substantial jumps in earnings due to higher milk and hog prices coupled with higher crop yields.

USDA farm income estimates show that average farm earnings declined between the high income year of 1973 and 1977. The peak income year, 1973, was the only year on record that the per capita income of farm people was higher than that of non-farmers. So, despite the 1978 jump in livestock prices and farm incomes, per capita income of farm families in the U.S. will likely still be below that of non-farm families.

In the 1930's, the per capita income of farmers from all sources was only 30-40 percent of that of non-farmers. After peaking at 110 percent in 1973, it dropped back to about 80 percent of that of non-farmers.

Looking ahead to 1979, USDA is expecting farm income to remain near the 1978 level. Hasbargen expects Minnesota farm income could decline somewhat in 1979 unless there is a repeat of the record crop yields of 1978.

Part II (p & b), CA, IA

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February 12, 1979

Immediate Release

### The Cost of Raising Farm Children

Raising a farm child from birth to age 18 can cost as little as \$27,000 to as much as \$88,500. These are among the findings of a recently updated Farm Family Living Expenditure Survey based on 1977 average prices for food, clothing, housing, transportation, medical care and education.

Edna Jordahl, extension home management specialist at the University of Minnesota, said that the estimates do not include costs for the birth of the child or for college. Estimated costs were higher for boys than for girls, primarily because of higher costs for transportation, and annual costs generally rose with the age of the child.

The child's estimated share of family housing was the biggest item in the budget. Food at home and transportation ranked behind housing, followed by education, medical care and miscellaneous category. Clothing and food eaten away from home represented the smallest portions of the cost of raising a farm child.

### Food Prices for 1979

Predicting food prices is always risky because of uncertainties about weather, crop diseases, marketing costs and policies of major trading nations. In looking at the outlook for 1979, good supplies of poultry and pork will be essential to upholding current estimates as will favorable weather be needed to supply abundant fruit and vegetables.

J. B. Penn, Deputy Administrator for Economics, Statistics and Cooperative Service at the U. S. Department of Agriculture, now predicts 1979 food prices at a minimum of six percent higher than in 1978. To make this forecast he assumed a slowed rate of inflation as well as favorable weather and stepped-up pork and broiler



add one--food prices

output. If, however, inflation is not slowed and the weather and pork and broiler output do not meet expectations, the figure for food price increases could rise to 10 percent. Within this six to ten percent forecast range, Penn expects an average of about 7½ percent higher food prices this year than in 1978.

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4-H MEMBERS STUDY, USE  
COMMODITY MARKETING

4-Hers can get an inside view of the marketplace through the Commodity Marketing project sponsored by the Chicago Board of Trade (CBT).

Designed for the older member, this project involves research of the marketing system of a particular commodity. For instance, the interested teenager may choose to study the economic journey of soybeans, from the field as a raw commodity, to the table as fried chicken or hamburger.

Denise Myerchin, a 17-year-old 4-H member from Crookston, Minn., describes how she benefited from the project. "I have learned a lot about basic supply and demand factors. I have also used futures in finding the right time to buy 40 lb. feeder pigs so the price is up when the time comes to sell them."

Because of her interest and ability to apply what she learned, Denise was chosen to represent Minnesota at the National 4-H Commodity Marketing Symposium in Chicago Feb. 25-28. The expense-paid trip gives her an opportunity to see the CBT in action, visit processing plants and market facilities, and meet commodity marketing professionals.

For more information, contact the 4-H Extension agent or the adult 4-H leader in your county.

CA, IA, Youth

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ANNUAL SPRING  
HORSE CLINIC

Dr. William Tyznik, a nationally recognized horse nutritionist, will be the keynote speaker at the Annual Spring Clinic for Horsemen on March 31. The conference will be held at the Phase 1 Building, Animal Science, Veterinary Medicine, on the University of Minnesota campus in St. Paul.

Dr. Tyznik is a professor in the Department of Animal Science at Ohio State University.

Additional speakers will include Dr. Robert Beecher, a private veterinary practitioner from Cascade, Iowa, who is interested in equine conditioning and endurance riding. Dr. Robert Jordan, professor, Department of Animal Science and Extension at the University of Minnesota will also address the conference.

The Horsemen of the Year award ceremony will take place at the noon luncheon held during the conference.

The Annual Spring Clinic for Horsemen is an educational program on a variety of subjects with an emphasis on equine nutrition. The program will be of interest to: horse owners and breeders, saddle club members, 4-H horse project members, stable owners and managers, members of the Minnesota Horse Council and practicing veterinarians.

The clinic is sponsored by: the University of Minnesota's College of Veterinary Medicine in cooperation with the Agricultural Extension Service.

For additional information and registration materials, contact:

Dr. Gerald Wagner  
Office of Special Programs  
405 Coffey Hall  
1420 Eckles Avenue  
St. Paul, MN 55108  
(612) 373-0725

Department of Information  
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Agricultural Extension Service  
University of Minnesota  
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Tel. (612) 373-0710  
February 12, 1979

Immediate release

PUBLIC LAND BANK  
URGED TO STIFLE  
SPIRALING LAND PRICES

A public land bank may be the only feasible way to halt inflationary farm land prices, a University of Minnesota agricultural economist says.

The public land bank should have the right to buy, hold and resell land, says economist Philip Raup, who recently spoke at an agricultural public policy seminar in Rochester, Minn. The choice is either a public land bank or private land banks held by non-agricultural investors, he added.

"People with the most at stake are farmers and lending agencies and they have little incentive to stop land inflation," he said. Farmers expect land prices to continue to go up and this encourages them to continue bidding up land prices. Lending agencies make loans in anticipation of continued land inflation values, he said.

A strong world soybean market is behind land values of \$3,000 and \$4,000 per acre land in Illinois and Iowa and \$3,000 land in southern Minnesota. Yet, Brazil, a country that has not reached its full soybean productive capacity, could capture more of the world market. And Russia is developing new single cell protein synthesis plants that will compete with our soybean exports.

It's a "false interpretation of world history" to assume the U.S. can force the world's hungry to bid high prices for our farm products, he said.

Hungry people aren't the ones buying our agricultural products--it's nations with middle class purchasing power who want our grain and soybean products to feed poultry and livestock to increase meat consumption. "Russia is buying our grain and soybeans to feed poultry, but we could price ourselves right out of that market and other world markets."

Our country's "cheap food" policy is our greatest strength in encouraging agricultural exports. "We offer the best buy for agricultural products on the world market and we can't afford to throw this away," he added.

CA, IA

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jms

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February 12, 1979

Immediate release

HIGH SUGARBEET  
POPULATIONS TESTED

Thinning sugarbeets to 150 plants per 100 feet of a 22-inch row gave the highest yield and quality of seven plant populations tested at Clara City, Minn., in 1978.

Larry Smith, University of Minnesota agronomist, designed a trial to determine optimum plant populations in southern Minnesota. Smith is located at the North West Experiment Station, Crookston.

He over-planted and hand-thinned populations of 50, 75, 100, 125, 150, 175 and 200 sugarbeets per 100 feet. The beets were planted May 5, harvested Oct. 5, and tested for quality at the American Crystal research facility at Moorhead, Minn.

"Increasing the population significantly increased yield," he reports. The highest yield, 27 tons per acre, occurred at 150 beets. At 175 and 200 plants per 100 feet, yields were lower. The beets were smaller and some were lost through the grab rollers of the lifter.

Gross sugar production ranged from 6,440 to 8,509 lb. per acre, with the maximum produced at the 150-plant population. About 10 percent of the plants died between thinning and harvest. This left an actual harvest population of 130-135 sugarbeets.

"Results may vary from year to year," the scientist says. "Conclusions drawn from one year of work may not hold true in another year." He plans to repeat the trial in 1979. Three years of study at Crookston also showed the 150-plant population as the highest yielder.

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February 14, 1979

#### STATE FARMLAND PRICE RISE SOFTENS

Average farmland values in Minnesota rose 12 percent over a year ago, according to a recent study by University of Minnesota agricultural economists.

Estimated average land values were \$889 per acre as of July, 1978, an increase \$95 per acre over 1977. Although rural land prices continued to climb, the percentage increase was the lowest in the last six years, according to U of M economists Rodney Christianson and Philip M. Raup. Their study included the 12 months from July 1977 to July 1978.

However, the statewide trend was uneven with price declines reported in about a dozen counties, mainly in south central and southwestern Minnesota.

Annual Minnesota farmland values from 1972 to 1977 increased 20, 42, 24, 27 and 19 percent, respectively. "When adjusted for inflation, the 1978 figure reflects a downturn in the farmland market in several regions of the state and an actual decline in money terms for a few southern Minnesota areas," they said.

Reported sales prices of good farmland changed "very little" over 1977. In addition, average price paid by expansion farmers for good land declined significantly from 1977 levels.

By districts, highest increases in estimated values were in the southeast and east central districts (16 and 20 percent, respectively). In the primarily cash crop areas of southwest and west central Minnesota, farmland values rose half that much (8 and 10 percent).

add one--state farmland price

"The slowdown in farmland value increases in these two western districts is apparently associated with the downward movement of cash crop prices and farm incomes over the last two to three years. Expansion buyers have also played a smaller role in these districts," the economists said.

Farmland values in the southwest continue to lead the state with an estimated value of \$1,421 per acre.

The statewide average reported sales price for the first six months of 1978 was \$980 per acre--14 percent above the 1977 average sales price. Land market activity shifted towards the more livestock, urban and recreationally oriented eastern districts. Average sales price rose by 11 percent in the southeast district, while the reported price declined one percent in the southwest.

"The 11 percent increase in the southeast returned this district to the top position in average sales price for the first time since 1973," the economists reported. "This is another indication of the weakened agricultural forces in the 1978 rural land market in southern Minnesota. Among the five most agricultural districts (excluding the northeast), the percentage rise was greatest in the west central district, where the land market is apparently recovering from the drought conditions of 1976."

There were 21.7 voluntary farm sales per 1,000 farms in Minnesota during the year ending Feb. 1, 1978. This was the lowest rate of transfers by voluntary sale since 1935.

Transfers of all types (voluntary sales, inheritance, estate settlements, foreclosures, tax sales) reached a record low of 30.2 per 1,000 Minnesota farms in 1978.

The economists' report was published in the February issue of Minnesota Agricultural Economist, published by the University's Agricultural Extension Service.

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Department of Information  
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February 15, 1979

Immediate release

TWO SUPERIOR OAT  
YIELDERS RELEASED

Two new oat varieties--one a record-breaking yielder and the other adapted to dry areas of Minnesota and South Dakota--have been released by the Minnesota Agricultural Experiment Station.

Moore exceeded all other oat varieties in yield per acre during five years of statewide trials, says Deon Stuthman, University of Minnesota oat breeder. Its average yield of 100.1 bushels from 1974-1978 was 7½ bushels higher than Lyon and nearly 5 bushels better than Noble.

Moore is the namesake of Emeritus Professor Matthew B. Moore. His work as a University plant pathologist produced the source of disease resistance used in Moore oats. Other contributors to oat development are Paul Rothman and Roy Wilcoxson, plant pathologists.

Benson, the second new variety, yielded three to four bushels per acre more than Lyon and Lodi during six years of tests (96.6 bushels). Its protein yield (pounds of protein per acre) was the highest of all varieties tested from 1973-1978.

"Benson is especially suited to western Minnesota and eastern South Dakota, where lodging is less of a problem because of lower rainfall," Stuthman says. Benson has less lodging resistance than Lyon or Lodi.

Benson is resistant to smut and moderately susceptible to crown rust. Its maturity is similar to Lyon, and it stands about four inches taller than Noble.

Moore has shown resistance to a broad spectrum of crown rust races. It is also moderately resistant to smut.

-more-



add 1--two superior oat yielders

Although Moore's groat (de-hulled seed) protein level of 17 percent was lower than other popular varieties, its superior production level makes it a high protein yielder, Stuthman explains. Benson was the highest protein producer at 19 percent groat protein and 436 lb. of protein per acre.

Moore's maturity, height and lodging resistance are similar to Lodi, but test weight and groat percentage are significantly higher.

Seeds of the new varieties are being distributed to county crop improvement members throughout the state for increase. They should be widely available for general farm use by spring, 1980.

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CA,IA, Part II (p&b), FC

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Immediate release

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St. Paul, Minnesota, 55108  
Tel. (612) 373-0710  
February 15, 1979

NEW CANARYGRASS  
DEVELOPED

A new crop variety--Keet annual canarygrass--has been released by the Minnesota Agricultural Experiment Station.

Annual canarygrass is a grain crop used in bird feed. Keet averaged three days earlier maturity and 12 percent higher yield than Alden, the only other annual canarygrass grown in Minnesota and North Dakota.

Bob Robinson, University of Minnesota agronomist, reports that Keet was tested in 1972-1978 at Rosemount, Minn. It was also tested at Stephen and Crookston, Minn.

Keet lodges less than Alden and its seed is of higher test weight. The panicles retain seed firmly so that shattering losses are usually small.

The plants head about 61 days and mature 103 days after planting. The seed weighs about 48 lb. per bushel.

The seed will be distributed to approved growers for increase by the Minnesota Crop Improvement Association. It should be available for general farm use in 1980.

CA, IA

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"Benson is especially suited to western Minnesota and eastern South Dakota, where lodging is less of a problem because of lower rainfall," Stuthman says. Benson has less lodging resistance than Lyon or Lodi.

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-more-

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February 19, 1979

4-H NEWS

Immediate release

4-H ELECTRIC PROJECT  
TEACHES USEFUL SKILLS

Learning to make simple electrical or mechanical repairs will make life easier and save money for the young people who take part in 4-H mechanical science projects.

"There are several projects that allow young people, working with an adult volunteer leader, to learn skills that will be of great use," says \_\_\_\_\_, County extension agent. "Electricity, woodworking, small engines or bicycle projects teach boys and girls to do things for themselves and their families."

In the electric energy program, for example, the youngster studies the principles and theories of electricity. The 4-H'er also learns to use electric energy efficiently and safely. He or she can explore career opportunities in electricity-related industries.

Along the way, the young person learns to make simple electric circuits and small repairs. He or she also learns to be on the look-out for unsafe situations. In a second unit, they study the role of magnetism in producing electricity.

"This practical knowledge will be useful throughout the young person's life," \_\_\_\_\_ says.

"Leader materials in this project are well organized, well written and loaded with creative ideas," \_\_\_\_\_ adds. "They are ideal for the 4-H leader who doesn't know a lot about electricity, but who is really interested in helping young people learn."

For more information about 4-H mechanical science opportunities, contact the \_\_\_\_\_ County office of the University of Minnesota Agricultural Extension Service.

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February 19, 1979

Immediate release

IN BRIEF . . .

Food Costs. More prudent shopping by consumers and increased competition in the retail food business could help soften rising food prices, according to U.S. Secretary of Agriculture Bob Bergland.

Although retail food prices have doubled in the last five years, three-fourths of the increase is due to "convenience costs" of food processing, Bergland said at the recent Minneapolis Farm Forum. Farmers received 31 cents of the consumer food dollar last year while 32 cents went to food processors, mainly as employee wages.

Many consumers can afford the luxury of frozen pizza, fresh bread and chicken with "all legs." But consumers can cut food costs by doing "more of the processing in the home kitchen," Bergland said. He hopes that retailers will offer more options for cost conscious food buyers, such as non-advertised brands and special buys on older bread.

\* \* \* \*

China Sales. China is apt to become a major customer for U.S. feed grains, U.S. Congressman Tom Hagedorn said at the recent Minneapolis Farm Forum. "While I was in China recently, I received assurances that they would import at least 50 percent of their commodity purchases from the U.S. This is encouraging, but we should seek bilateral purchase agreements so we have predictable and stable markets," he said.

\* \* \* \*

Food Exports. Developing countries that receive our food aid and development programs are potential customers for more U.S. farm products as they move up the economic scale. As U.S. businesses buy more exported produces and raw materials from these developing countries, the health of or presently sagging balance of payments will depend more heavily on our ability to sell food to developing countries, U.S. Congressman Tom Hagedorn said at the recent Minneapolis Farm Forum.

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add 1--in brief

Land Values. Although average Minnesota rural land prices rose 12 percent last year, it was the smallest percentage increase in the last six years. Estimated average land values were \$889 per acre as of July 1978, an increase of \$95 per acre over 1977. However, the statewide trend was uneven with price declines reported in about a dozen counties, mainly in south central and southwestern Minnesota.

"When adjusted for inflation, the 1978 figure reflects a downturn in the farmland market in several regions of the state and an actual decline in money terms for a few southern Minnesota areas," according to University of Minnesota agricultural economists Rodney Christianson and Philip M. Raup.

Reported sales prices for good farmland changed "very little" over 1977. In addition, average price paid by expansion farmers for good land declined significantly from 1977 levels. The economists' report appears in the February issue of Minnesota Agricultural Economist, published by the University's Agricultural Extension Service.

\* \* \* \*

Land Sales Shift. Activity in the Minnesota land market last year shifted towards the more livestock, urban and recreationally oriented eastern districts of the state. The average reported sales price rose by 11 percent in the southeast district and declined one percent in southwestern Minnesota. The 11 percent increase in the southeast district returned it to the top position in average sales price for the first time since 1973, according to University of Minnesota agricultural economists Rodney Christianson and Philip M. Raup. Average reported sales price was \$1352 per acre in the southeast district, followed by \$1321 in the southwest. "This is another indication of the weakened agricultural forces in the 1978 rural land market in southern Minnesota," the economists say. Their study appears in the February issue of Minnesota Agricultural Economist, published by the University's Agricultural Extension Service.

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February 19, 1979

Immediate release

1979 SOYBEAN EARNINGS  
BETTER THAN CORN

Soybeans are likely to be more profitable than corn throughout 1979, say Delane Welsch and Paul Hasbargen, University of Minnesota agricultural economists.

Returns over direct cash costs per acre of soybeans increased from \$186 in 1977 to \$227 in 1978, according to preliminary information from record-keeping farmers in southern Minnesota. Welsch found that farmers who have shifted to more soybeans and less corn have shown higher farm earnings.

"Farmers can now lock in returns over all costs, including the going rate for cash rent, of over \$75 per acre by contracting 1979-crop soybeans for November delivery at over \$6.15 per bushel," Welsch says.

Minnesota farmers growing either corn or beans enjoyed bumper crops and higher prices in 1978. Costs were also up, but net farm earnings of crop farmers were about 50 percent higher than the relatively low earnings of 1977.

Returns over direct cash costs per acre of corn increased from \$132 in 1977 to \$152 in 1978. It was these same farms that showed a \$41 per acre increase in the return per acre of soybeans. The economists caution that these preliminary findings may change as more records are analyzed.

Even though crop earnings were higher, net returns on investments were only 3-4 percent when figured on today's land prices, Hasbargen says. Some crop farmers are protesting against low farm prices primarily because today's high land prices cause severe cash flow problems for recent land purchasers.



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February 19, 1979

Immediate release

SHORT COURSE  
FOR BEE KEEPERS

You can learn the basics of beekeeping for profit or as a hobby by attending the "Beekeepers' Management Short Course" on March 23-24 at the St. Paul Campus of the University of Minnesota.

Information on the first steps in beekeeping will be presented. Other topics of discussion will include: the hive and the honey bee, adult bee diseases, seasonal management, and the bottling and selling of honey.

The course will be held at McNeal Hall, Room 33, on the St. Paul Campus of the University of Minnesota. The registration fee is \$25 per person and pre-registration is recommended. The fee covers course materials and meals.

For further information contact: Eugene Anderson, Office of Special Programs, University of Minnesota , (612) 373-0725.

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AGRICULTURAL STRENGTHS  
WILL HELP MINNESOTA  
IF RECESSION HITS IN '79

Minnesota is in good shape to weather an economic recession if there is one in 1979, according to a University of Minnesota industrial relations professor. Our strength in agriculture and in high technology industry should insulate us from problems that other states may experience.

Ross Azevedo of the University's Industrial Relations Center predicts that the economic slowdown that many economists foresee this year will have little effect here. He spoke at the recent dedication of the Earle Brown Continuing Education Center on the University's St. Paul campus.

"I see a bright future for Midwest farm products, particularly grains for export," Azevedo said. "With this favorable agricultural outlook plus the profit records of local industry, we may not see any decline here."

Despite his rosy predictions, Azevedo sees some potential trouble spots within the state. Consumers are taking out home mortgages at a faster rate than they are depositing savings in banks and savings and loans, "and this could mean that the well of mortgage money will run dry," he said.

If that happens, housing starts, a common indicator of economic health, will drop, he predicted.

Population is also shifting from northern states to the sun belt. This slows growth and depletes the labor supply so that jobs go unfilled and productivity suffers.

Age trends within the population may lessen this effect, however. Many Minnesotans are in their 20s, typically an age when they begin careers and increase

add one--Agricultural strengths

their productivity. It is also an age group that makes many major purchases including homes, furniture, appliances and automobiles. Heightened demand for these items will likely fuel the economy.

In general, favorable economic signs within the state outweigh the negatives, Azevedo said. "If there is a recession soon, it will have a milder impact here than nationally, and I think the state will recover rapidly."

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February 19, 1979

Immediate release

FIRE PROTECTION CONTRACT  
WORKSHOPS OFFERED

Providing rural communities with fire protection at a fair cost will be the topic of workshops at two Minnesota locations in late March.

The sessions will be held March 22 at the New Ulm Junior High School and March 29 at the Staples Area Vocational Technical Institute. Both sessions begin at 7:30 p.m.

City clerks, managers, fire department officers and other municipal officials involved in fire protection contract negotiations are urged to attend. The pre-registration fee is \$3. For more information contact the FIRE Center, 3300 University Ave. S.E., Minneapolis, 55414. Or, phone (612) 376-3535.

"Costs of running fire departments have risen dramatically the last few years," says Antona Richardson, University of Minnesota FIRE Center director.

"The result has been confusion over how best to provide rural communities with fire protection at a fair cost. Contracts for fire protection services should reflect rising costs, but they must be equitable," she says.

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February 19, 1979

ATT: Extension Home Economists

Immediate release

#### HAIR DYES MADE SAFER

Many hair dye manufacturers have modified their products to make them safer, according to Edna Jordahl, extension home management specialist at the University of Minnesota.

The changes came because of the recent hair dye-cancer controversy. A number of dye ingredients were suspect because of tests on animals conducted by the National Cancer Institute.

Although the companies claim that the ingredients are safe and that the evidence was inconclusive, they have changed their formulas to eliminate them. Most took this action to avoid carrying warning labels as proposed by the Food and Drug Administration.

Hair coloring users may find that the new formulas react differently than the products they are used to, Mrs. Jordahl cautions. A strand test is wise before any color is applied. Do this by applying the mixture to a small section of hair to "preview" the results. If the test shows a variation from your accustomed shade, you may need to alter the concentration or timing to get the desired effect.

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#### FIGHTING INFLATION

Cutting down on food bills is one of the main ways that big city families cope with inflation. Edna Jordahl, extension home management specialist at the University of Minnesota, cites a study done by the Center for the Study of Metropolitan Problems among families in New York City, Detroit, Atlanta and San Francisco.

After trimming the grocery bill, the next most common tactic was working more. According to the research, more than a third of the families tried to raise their incomes by working overtime, moonlighting or sending an additional family member to work.

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Feb. 20, 1979

### IS RECESSION LIKELY IN MONTHS AHEAD?

There is about a 50-50 likelihood of an economic recession by the end of 1979, but so far there are few signs of a cooling economy, according to Walter Heller, Regents' professor of economics at the University of Minnesota.

And even a nationwide recession may leave Minnesota unscathed because we do not rely on heavy industrial goods as much as some states, and the future for farm products, particularly feed grains, is bright, Heller added.

Speaking at the dedication of the Earle Brown Continuing Education Center on the St. Paul campus of the University, Heller said that so far most business forecasters see few warnings of a business slowdown.

"Consumers are saving at a rate lower than the average in past years, indicating their confidence in the future and their willingness to take on installment debt," Heller said. This is partly due to the age makeup of the population. A large number of young adults are in their 20s and early 30s, typically ages when they form families, buy homes and take on debts in anticipation of higher income in the future.

These young adults are also entering the labor force in record numbers "With high employment and many two-income households, consumers will continue to spend," Heller added.

Even if there is not a recession this year, Heller expects a slowing growth rate and moderating inflation rate by late 1979 or early 1980. He credits President Carter's anti-inflation program with keeping those pressures in line. "Businessmen are treating the voluntary wage-price restraints as if they were mandatory and I suspect there will be widespread conformity."

add one--Recession likely

Although wage and price controls are unpopular, Heller says they often are the only way to de-escalate inflation caused by wages and prices constantly pushing each other higher.

He foresees inflation continuing at about an eight or nine percent rate for the next six months or so, falling to about seven percent by year's end.

Unpredictable forces could alter these forecasts, Heller warns. The unsettled Iranian situation could bring about an oil shortage that would further boost prices and trigger inflation. Similarly, unfavorable weather in the coming growing season could hike grocery prices and make inflation difficult to throttle.

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February 26, 1979

Immediate release

'TIGHT' HOUSES PLUS  
FIREPLACE USE CAN  
EQUAL DANGER

Tight houses save energy, but unless combustion heating units such as furnaces, gas water heaters or fireplaces in those houses have adequate air supply, carbon monoxide danger can exist.

Extension specialists at the University of Minnesota explain that such units need oxygen entering the combustion area. The combustion heat causes a strong upward draft in the flue or chimney, carrying the dangerous gases up and out of the home.

In a tight house where the fireplace is in use, the strong upward draft caused by the fire could suction air out of the home and cause a reversing of the draft in the furnace chimney, pulling the gases from the furnace into the house. When this situation exists, gases from the furnace may not be able to escape up the furnace chimney. Instead they would enter the house endangering the lives of residents.

The safest way to avoid this problem, say the extension specialists, is to install an air supply pipe from the outdoors to each combustion unit. The air is needed in front of the furnace, but it should not connect directly to the furnace cabinet or return air duct. The state building codes requires that the inside end of the air pipe be located within 12 inches of the floor near the furnace. The pipe diameter must be equal to the chimney flue diameter.

To supply air to the fireplace, a sheet metal pipe can be run under the floor from the outside wall to an area beside or in front of the wood burning area. If the fireplace has glass doors, the air inlet should be inside the doors and it should be the same diameter as the fireplace chimney flue. Glass doors on a fireplace provide some added safety because they help keep air from being pulled out of the room.

-more-



add 1--tight houses

If you're unsure of the air supply within your home, the specialists say that it is a good idea to open a window an inch or more near a fireplace that is in use to allow air to enter the house. An open basement window near the furnace is another option.

They urge homeowners who are unsure about the safety of their furnace or fireplace to contact a furnace installer, heating contractor or a building official. Or you can call Northern States Power at (612) 330-6000 or Minnegasco at (612) 372-4670 or toll free from outstate 1-800-552-8717.

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February 26, 1979

Immediate release

UM FARM SAFETY  
AWARDED \$50,000

A one-year, \$50,000 pilot project to develop educational training packages for agricultural safety and health has been awarded to the University of Minnesota Agricultural Extension Service.

The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) grant will also fund training workshops for agricultural educators throughout the state. At these workshops county extension agents, vocational agriculture teachers and others will gain technical information and presentation ideas to aid in using the safety and health packages.

"We hope this program will help agricultural educators fit additional safety and health training into their existing programs," says Robert Aherin, extension safety specialist. "With their help, this loss prevention information should reach thousands of agricultural workers."

Farm safety demonstrations are also planned. They will be open to the public.

The project's ultimate goal is to cut the high agricultural accident rate in Minnesota. The project may become a model for other state agricultural safety programs.

OSHA recently awarded grants totaling \$6.4 million to 86 non-profit business, employee and educational organizations for developing stronger job safety and health programs in high hazard industries. "OSHA hopes this new approach will strike a balance between safety education and regulation," Aherin explains.

CA,IA,PII print

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February 26, 1979

Immediate Release

UNIVERSITY RADIO  
DEBUTS TALK SHOW

"Talk of Many Things" debuts March 1 on KUOM radio sponsored by the University of Minnesota Agricultural Extension Service.

The new hour-long show starts at 11 a.m. every Thursday. Moderator Janet Macy and her guests will discuss personal, family and community development. Listeners are invited to join in by calling area code 612, 373-1775.

During March, topics include stress, weight control, telephone counseling, anger and the powerline controversy. Guests will include at least one University specialist and one from a non-academic setting.

Radio listeners will find KUOM at 770 AM. The station reaches a radius of about 100 miles from the Twin Cities. All Minnesota radio stations will have access to a half-hour version of the program to fit into their own schedules. The half-hour program will also be made available to educationally-oriented groups that request it. Requests and feedback should be sent to:

Talk of Many Things  
433 Coffey Hall  
University of Minnesota  
St. Paul, Minnesota 55108.

Here is the schedule for March:

March 1

STRESS--Do your downers have you up the wall?

- \* Edna Jordahl, Extension Specialist, Home Management, Univ. of Minnesota
- \* Hamilton I. McCubbin, Chairman, Family Social Science Dept., Univ. of MN
- \* Ralph Underwager, Licensed Consulting Psychologist, Inst. for Psychological Therapy

March 8

WEIGHT CONTROL--Waist Not--Want Not

- \* Mary Darling, Extension Nutritionist, University of Minnesota
- \* Dixie Grace, Licensed Consulting Psychologist

March 15

TELEPHONE COUNSELING--Assistance is an arm's length away

- \* Mike Baizerman, Associate Professor, University of Minnesota
- \* Jim Brink, Executive Director YES (Youth Emergency Service)
- \* Virginia Rassieur, Director, Twin Cities Contact

add one--university radio

March 22

ANGER--Adult tantrums

- \* David Wark, Professor of Psychology, University of Minnesota
- \* Herdie Baisden, Director, Rational Emotive/Educational Center
- \* Tim Tillotson, Psychotherapist

March 29

POWERLINE--What's happening under the wires?

- \* George Donohue, Professor/Rural Sociology Head, University of Minnesota
- \* Luther Gerlach, Professor, Anthropology, University of Minnesota
- \* Mark Pearson, Regional Editor, St. Cloud Daily Times.

# # #

CA, Part II (Print)

Department of Information  
and Agricultural Journalism  
Agricultural Extension Service  
University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
February 26, 1979

4-H NEWS

Immediate release

4-H'ERS LEARN THE GOOD  
AND THE BAD ABOUT BUGS

"No one would collect butterflies if they didn't think bugs are beautiful," says entomologist Dave Noetzel. Just think how bleak life would be without insect-pollinated flowers, without honey for a special treat, without sunflowers for vegetable oil, alfalfa for hay, and many other things that depend on insects.

The 4-H and Youth Development program at the University of Minnesota offers an entomology project to help young people learn to identify and appreciate insects. Noetzel, an entomologist for the Agricultural Extension Service, helps with the project. He thinks it is a very practical learning experience.

"You can't keep house, take care of nice clothing, produce a crop, or even play ball in the summertime without dealing with insects," he says. "Our future on earth may depend on how well we understand bugs--how well we deal with our insect enemies and protect our insect friends."

"Many animals use insects for food," he adds. "They are often the first link in the food chain. Bugs help nature with its house-cleaning. They are part of the waste-removal and recycling process. Sunflowers, a promising new crop, depend entirely on insects for pollination with about half of it done by bees."

Studying bugs can help a young person become a better housekeeper, farmer, businessperson, maybe even baseball player. To find out more, contact your county extension office or local 4-H club. "If you know how to keep those pesky mosquitoes from biting during the pitch, your chances for a solid hit are greatly improved, Noetzel says.

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University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
February 26, 1979

Immediate release

1979 INSECT  
PEST REVIEW

The most serious insect problem for Minnesota farmers is still corn rootworm, but numbers are down and less damage is expected overall in 1979, a University of Minnesota entomologist says.

"There are two things to consider about corn rootworm," Dave Noetzel says. "You are most likely to have an infestation where corn follows corn. The best treatment is crop rotation."

Secondly, growers who have used Furadan on the same field for a long period should switch to a different insecticide if they expect an infestation. Soil organisms may have evolved in that field that will change Furadan and reduce its effectiveness.

"It's a good idea to rotate chemicals like you should rotate crops," Noetzel adds. "A good rotation for corn rootworm may be from Furadan to Counter or Thimet or Dyfonate."

The second most economically serious pest is corn borer. "How serious it is this year depends on what the spring is like," Noetzel says. "If we have a warm spring without sudden cold spells, there will be high corn borer numbers."

University entomologists recommend using chemical control on the first generation only. "The extended period of egg laying makes it difficult to control that second brood," Noetzel adds.

Before treating a first brood infestation, the grower should make sure the problem is bad enough to make paying for the chemicals worthwhile. "Check the percentage of plants showing early leaf feeding in the whorl, or 'shot-holing.' If from 35 to 50 percent of the plants have shot-holing, you have an economic infestation."

-more-

add one--1979 insect

Applying a granular formulation in the whorls before the tassels emerge seems to provide the best control.

The third pest to look out for this spring is cutworms. For corn, the black and dingy cutworm could cause trouble. In soybeans and sunflowers, the dark-sided could be most damaging.

"We saw a lot of dingy and dark-sided cutworm moths last August," Noetzel says. "Since that was their egg laying time, numbers could be high this year."

Early detection is necessary in catching the problem before replanting becomes the only solution. Check the entire field. "Sometimes an infestation is limited to one spot, or a corner of the field," Noetzel explains. "You can just treat that spot, and save on chemicals."

Treat corn when over 10 percent of the plants show leaf feeding or if over three percent of the plants are cut. In sunflowers, a stand reduction of 25-30 percent will not affect yield, as long as it is uniform.

In sunflowers, toxaphene is the only registered chemical for cutworm control.

Although tillage practices used in soil conservation have the potential for increasing cutworm numbers in a field, this should not be a reason for abandoning such tillage, Noetzel believes. "Decide what's best for the farm in the long run," he advises. "If you have erosion on slopes, if you get better yields with crop residues left on top of the ground, use that in making decisions."

County extension offices have access to three entomology fact sheets that give details on each of the above crop pests. They are No. 48--"Controlling Cutworms in Field Crops;" No. 14--"Controlling Corn Rootworms;" and No. 40--"European Corn Borer Control in Field Corn." Extension Bulletin 388, "Insecticide Suggestions," lists treatments for most insect pests found in Minnesota.

CA, IA, FC

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University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
February 26, 1979

Immediate release  
Contact: John Strait  
Tel. (612) 373-0760

ENGINEERS DO NOT RECOMMEND  
DIESELHOL FOR FARM TRACTORS

Using a blend of grain alcohol (ethanol) and diesel oil to power farm tractors is not feasible technically or economically, say scientists at the University of Minnesota.

Agricultural engineers John Strait, J.J. Boedicker and Kevin Johansen used various dieselhol blends to operate farm tractors doing field work and diesel engines in a laboratory. All engines were unmodified. They found that with dieselhol, fuel consumption increased, horsepower decreased, engines were noisier and the fuel did not burn as well.

No performance characteristic of the diesel engine was improved with dieselhol, Strait adds. "There appears to be no valid technical reason to recommend that farmers use the mixture in their tractor engines to replace diesel oil," he says.

A team of University economists also find that dieselhol is not economically feasible, even when fuel consumption is assumed to be the same as diesel oil. Since consumption is higher for dieselhol, the blend is even less feasible.

The engineers say that absolute ethanol (200 proof) and diesel oil could be mixed at cropping season temperatures without fuel separation. If water is present, separation is likely to occur.

Strait advises that it is possible dieselhol with 10 percent ethanol (200 proof) can be used in tractors during the cropping season, "providing the mixture is kept essentially free of water and the owner is willing to assume the risk of possible accelerated wear of the engine cylinder surfaces and fuel injection system components."



Department of Information  
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St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
April 2, 1979

Immediate release

FARMERS REPORT SUCCESS  
IN CONSERVATION TILLAGE

Conservation tillage seems to reduce soil erosion without affecting crop yields, farmers reported at a tillage clinic held at the University of Minnesota Technical College in Waseca.

A panel of four farmers from southeastern Minnesota spoke on their experiences with conservation tillage systems. All of them replaced moldboard plowing with chisel plowing as part of their systems.

One participant reported yield reductions after several years of continuous corn planted on the same chisel-plowed ground. He also said weed populations seemed to change.

Casimir Chirpich, a livestock producer near Wells in Faribault County, said he has chisel plowed bean ground for 13 years, corn stalks for a decade and alfalfa for four years. "I don't anticipate going back to moldboard plowing at all," he said.

For corn ground, Chirpich follows the combine with a field chopper. Then, the ground is chisel plowed, "going with the rows." Next spring the soil is tilled with a field cultivator before planting.

"We've seen no significant yield increase or decrease," Chirpich said. "We rotate our three main crops, and have seen no problems with corn borer carryover or volunteer corn."

Gene Rosenthal, a grain farmer near Janesville in Waseca County, started chisel plowing soybean ground in 1973. He said best performance resulted when the chisel plow was equipped with twisted shovels.

add 1--farmers report success

Rosenthal said that yields seemed to drop on ground planted to corn for four continuous years. After a one-time return to moldboard plowing, "we had a good year on that ground again." He also said that quackgrass, hemp dogbane and other weeds that spread through the root systems seemed to increase with chisel plowing.

Most participants reported using varying types of secondary tillage and machinery models. They stressed that the total farm tillage system must fit the individual soil type and cropping and fertility programs.

For more information, contact your County Extension Office or Soil and Water Conservation District headquarters.

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University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
February 26, 1979

Immediate release

PESTICIDE RULES  
GAIN FLEXIBILITY

Recent changes in pesticide legislation give farmers and manufacturers more flexibility in using and selling farm chemicals, a University of Minnesota extension specialist reports.

The U.S. Environmental Protection Agency (EPA) can now, in some cases, allow manufacturers to put a product on the market without proving the chemical is effective. "An EPA number on the pesticide label no longer insures a product will work," entomologist Dave Noetzel says.

The reason for the change is to allow new chemicals quicker entrance to the marketplace. EPA still has the power to fine manufacturers for improper labeling claims. The agency could also reinstate the efficacy requirements if problems arise.

Recent changes make it legal to use pesticides against some pests not listed on the label. Application methods different from those listed are also allowed.

Pesticides and fertilizer can be mixed. Using less than the dosage listed on the label just recently became legal.

"The major label requirement is that the farmer treat only the crop listed on the label," Noetzel adds. "I strongly advise that users check University recommendations to avoid unnecessary costs and possible damage." Recommendations are listed in Extension Bulletin 388, "Insecticide Suggestions To Control Insect Pests of Field Crops in 1979," available at county extension offices.

Most pesticide enforcement activities have been delegated from EPA to the states.

Farmers must still be sure to become certified applicators and to keep their certification up-to-date. (Recertification is required every three years.) In order to purchase one of the 1,000 products made with the 23 chemicals restricted by EPA, buyers must prove certification. County extension offices have details.

Department of Information and  
Agricultural Journalism  
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St. Paul, MN 55198  
February 1979

The University of Minnesota,  
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and employer.

SPECIAL SHORT COURSE SCHEDULE (March 1979 - August 1979)

- March 5 Nutrition, Aging and You. Earle Brown Continuing Education Center. An exploration of recent research, programs and philosophies related to nutrition, aging and aged. \*CC
- March 5-6 Minnesota Forest Soils Workshop. Cloquet Forestry Center. For foresters or forest related staff from private industry, state agencies, local government, federal agencies and others. The purpose is to provide a workshop on the use of soils information for professionals in northern Minnesota. \*EA
- March 5-8, 12-13, 19-22, April 3-5 Commercial Applicators Pesticide Workshops: March 5-6, Rochester; March 6-7, Owatonna; March 7-8, Mankato; March 12-13, St. Paul; March 19-20, Marshall; March 20-21, Morris; March 21-22, St. Cloud; April 3-4, Crookston; April 4-5, Grand Rapids. For pesticide dealers, custom applicators, educators and regulatory personnel. The first day at each location is introductory information for persons planning to take license examination. The second day will provide update information on plant and animal pest problems and pesticide for new and licensed applicators and will meet renewal requirements for 1980 license. \*EA
- March 5, 7, 12, 19, 20 & April 4 Municipal Tree Inspectors Workshops: March 5, Rochester; March 7, Mankato; March 12, St. Paul; March 19, Marshall; March 20, Detroit Lakes; April 4, Grand Rapids. Update training for tree inspectors. Attendance will qualify Minnesota Tree Inspectors for recertification. \*EA
- March 5-7, 12-13, 19, 20, 21, 22 Quality Assurance Workshop: Owner/Manager I Course. March 5-7, Ely; March 12-13, St. Paul Campus; March 19-22, Duluth. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- March 6 Dairy Day, Waseca +
- March 6-9 Better Process Control School. Earle Brown Continuing Education Center. Provides training, examination, and certification for employees of canning factories. \*CC

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\* For further information call The Office of Special Programs

CN--Curtis Norenberg	612-373-0725
RM--Richard Meronuck	"
GW--Gerald Wagner	"
EA--Eugene Anderson	"
CC--Chere Coggins	"
FH--Fred Hoefler	"

+ For further information call the Research or Experiment  
Station designated.

- March 7-9 Minnesota Commercial Aerial Applicators Workshop - Arrowwood Lodge, Alexandria, MN. Designed for aerial pesticide dealers. To provide information on plant and animal pest problems and pesticides accreditation for retention of the pesticide applicator's license. \*RM
- March 7, 8, 14, 15 1979 Fair Management Short Courses. March 7, Owatonna Elks Club; March 8, Redwood Falls, Donovan's Center; March 14, Detroit Lakes Holiday Inn; March 15, Hinckley, Tobie's Restaurant. Management principles for county fair improvement. For fair board members, fair officers, superintendents and supervisors who have management responsibilities for county, district and state fairs. \*CN
- March 9 Exchange Program Participant Graduation. \*FH
- March 12-15 Quality Assurance Workshop: Educator's Course, Student Center, St. Paul Campus. A Quality Assurance educator's course for trainers of multiple units food service operations and/or educator/consultants. \*CC
- March 13-14 Midwest Milk Marketing Conference, Thunderbird Motel, Bloomington. A conference for management and boards of directors of dairy processing firms, associations of dairymen, economic and marketing researchers in Universities and personnel of dairy regulatory agencies. The program will focus on education and research directed toward the solution of problems facing the dairy industry. \*GW
- March 14 Dairyman's Day, Rainbow Inn, Grand Rapids +
- March 14-15 Sugarbeet Growers Institute, Crookston +
- March 16 & 17 Agriculture, Rural Life and Changing Values in China, Implications for Americans. \*FH
- March 18-19 Commercial Small Fruit Growers, Earle Brown Continuing Education Center. For commercial small fruit growers. \*RM
- March 19-21 Liquefied Petroleum Gas, St. Paul Campus. A concentrated study program on the latest technical service, and commercial developments in liquefied petroleum gas equipment and appliances. For servicemen and technicians in the Minnesota gas industry. \*CN
- March 19, 20, 21, 22, 26, 27, 28 & 29 April 3, 4, 5 & 6 Township Officers Short Course. A one-day program for town officers and others interested in town government. The purpose is to provide officers with the technical knowledge to be more effective and efficient in carrying out their duties as officers. March 19, Waseca; March 20, Rochester; March 21, Sleepy Eye; March 22, Marshall; March 26, Brainerd; March 27, St. Cloud; March 28, Willmar; March 29, Fergus Falls; April 3, Detroit Lakes; April 4, Thief River Falls; April 5, Grand Rapids; April 6, Eveleth. \*GW
- March 20 Minnesota Livestock Industry Day and Annual Meeting, Minnesota Livestock Breeder's Association, U of M Technical College, Waseca. Latest trends and issues in the livestock industry and their implications for the Minnesota Livestock Breeders. \*CN

- March 20 Dairymen's Day - West Central Experiment Station, Morris, MN +
- March 21 Dairy Day - Crookston +
- March 23-24 Beekeepers' Management Short Course For Beginners, McNeal Hall, St. Paul Campus. For persons interested in becoming a beekeeper as a hobby or commercially and others interested in bees. \*EA
- March 26-27 Pest Control Operators Conference, Sheraton Inn Northwest, Brooklyn Park, MN. Information of identification, prevention and safe control of structural pests. Attendance will qualify structural pest control operators for recertification. \*EA
- March 31 Annual Spring Clinic for Horsemen, St. Paul Campus. A program on a variety of horse topics. For anyone, including youth and professionals interested in care and management of horses. \*GW
- April 6 & 7 Agriculture, Rural Life & Changing Values in China: Implications for Americans. \*FH
- April 7 Meats Up-Dating Conference, Andrew Boss Laboratory, Meat Science, St. Paul Campus. A conference on meat information for food educators and dietitians. To provide educational materials and reference on meats. To provide an opportunity for educators and dietitians to confer with meats and cooking specialists. \*GW
- April 9-10 Quality Assurance Workshop: Owner/Manager I Course, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- April 20 Food Day, 1979. Earle Brown Continuing Education Center, St. Paul Campus. Food Labels - What they mean and how we can use them. \*CC
- April 22-24 Minnesota FFA Convention and Leadership Conference, St. Paul Campus. To promote a learning experience for vocational agriculture students and FFA members. \*CN
- May 14-15 Quality Assurance Workshop: Owner/Manager I Course, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- May 17 Stakman Recognition Day, Earle Brown Continuing Education Center, St. Paul Campus. \*RM
- May 18-20 Minnesota State Fire School, Earle Brown Continuing Education Center, St. Paul Campus. For volunteer and paid fire department personnel, city officials and interested government and industry personnel who deal in fire safety, prevention, control and rescue and first aid work. \*EA
- May 23-26 Marital and Family Conflict. Earle Brown Continuing Education Center and McNeal Hall, St. Paul Campus. \*CC
- June 10-13 National Association of Colleges and Teachers of Agriculture Conference, Earle Brown Continuing Education Center, St. Paul Campus. \*CN

- June 11-12            Quality Assurance Workshop: Owner/Manager I Course, St. Paul Campus. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. \*CC
- June 18-22            Remote Sensing and Image Interpretation Conference. Earle Brown Continuing Education Center, St. Paul Campus. A training conference focusing on the systems used in resource assessment. \*EA
- June 26                Crops and Soils Field Day, Waseca +
- June 27                Crops and Soils Field Day, Lamberton +
- July 6                  Crops and Soils Field Day, Becker +
- July 11                Crops and Soils Field Day, Staples +
- July 12                Crops and Soils Field Day, Morris +
- July 16-19            Agricultural Education Seminar, Radison Hotel, St. Paul and St. Paul Campus. For instructors and administrators of vocational and technical educational programs in agriculture. \*CN
- July 18                Crops and Soils Field Day, Crookston +
- July 19                Crops and Soils Field Day, Grand Rapids +
- July 23 -  
August 3              Beginning Administrator's Workshop, Northwestern College and University of Minnesota, St. Paul Campus. This course is intended for recently appointed administrators in agriculture, forestry, and home economics who have been nominated and supported at least in part by their home institution. Limited to approximately 20. \*CN
- August 6-17           National Fire Academy Field Program, Earle Brown Continuing Education Center, St. Paul Campus. A regional presentation of sixteen professional level courses for firefighters. \*EA
- August 12-16          Educative Processes in Food Microbiology, Quadna, Hill City, MN. To explore recent advances in food microbiology, course content and educative processes. \*CC
- August 20-23          Vocational Home Economics Update. Earle Brown Continuing Education Center, St. Paul Campus. To gain awareness of and commitment of comprehensive home economics programing at all educational levels. \*CC
- August 26-31          Summer Seminar on Youth Work. Earle Brown Continuing Education Center, St. Paul Campus. To increase participants' understanding about youth and to develop greater insight and skill in their work with youth. \*CC





Department of Information  
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University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
March 5, 1979

Immediate release

DOMESTIC, WORLD DEMAND  
HIGH FOR SUNFLOWER OIL

A growing domestic demand for sunflower oil and a vast world market should maintain a profitable price for sunflower seed producers.

Fred Benson, agricultural economist, believes that growing demand for sunflower oil in this country will help maintain harvest prices at the currently profitable level. "Sunflower seeds contain a high quality oil," he explains. "Consumers are just starting to become aware of the low cholesterol and high polyunsaturate levels in this oil.

Domestic demand is encouraging expansion of U.S. crushing and processing facilities, he adds.

The projected 48 percent increase in sunflower acreage for 1979 should not depress prices. "Growers can now get contracts for harvest delivery at 10 to 11 cents," he says. "A 48 percent acreage increase will probably not result in that great of a production increase. And when you have a small total production to begin with, adding to it by half is not substantial--not as substantial as increasing soybean acreage by 3 percent."

The increase will still keep the U.S. share of the world sunflower trade relatively small. An extra 1.3 million acres planted in the U.S. is not likely to have much impact on the huge world market, he explains.

The extension management specialist advises growers to contract part of their crop. "Try to cover your out-of-pocket expenses by locking in at least 10 cents per pound," Benson says.

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March 5, 1979

Immediate release

FIRE PROTECTION CONTRACT  
WORKSHOPS OFFERED

Providing rural communities with fire protection at a fair cost will be the topic of workshops at two Minnesota locations in late March.

The sessions will be held March 22 at the New Ulm Junior High School and March 29 at the Staples Area Vocational Technical Institute. Both sessions begin at 7:30 p.m.

City clerks, managers, fire department officers and other municipal officials involved in fire protection contract negotiations are urged to attend. The pre-registration fee is \$3. For more information contact the FIRE Center, 3300 University Ave. S.E., Minneapolis, 55414. Or, phone (612) 376-3535.

"Costs of running fire departments have risen dramatically the last few years," says Antona Richardson, University of Minnesota FIRE Center director.

"The result has been confusion over how best to provide rural communities with fire protection at a fair cost. Contracts for fire protection services should reflect rising costs, but they must be equitable," she says.

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Department of Information  
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 University of Minnesota  
 St. Paul, Minnesota 55108  
 Tel. (612) 373-0710  
 March 5, 1979

UM MORRIS TO HOST  
 CHINA CONFERENCE

A conference focusing on Chinese agriculture entitled "Agriculture, Rural Life and Changing Values in China: Implications for Americans," will be held April 6-7 at the University of Minnesota, Morris.

The conference will bring together China scholars, American farmers and agricultural specialists who have recently visited China, faculty members from Minnesota universities and interested people from West Central Minnesota.

The People's Republic of China is a potential export market and an emerging world power which has radically reorganized its agriculture to feed and care for its nearly one billion people. As collective farming and communal ownership have replaced traditional village agriculture in China, a question for conference discussion is whether the individual farmer's rights in any country should be limited by the needs of the larger community.

Related topics of discussion include: China's agriculture and life style continuity with the past, the transformation of agriculture and rural life since 1950, plus the ethical and value issues.

A number of state institutions and organizations are helping to sponsor the workshop including: the University of Minnesota, the Agricultural Extension Service, and many farmer's organizations, churches and citizen groups.

The conference fee is \$5.00 for adults and \$2.00 for students which includes conference materials. For further information and registration forms contact:

Office of University Relations  
 University of Minnesota, Morris  
 306 Behmler  
 Morris, MN 56267  
 (612) 589-4322

Tom Roberts  
 Office of Continuing Education &  
 Regional Programs  
 University of Minnesota, Morris  
 (612) 589-2482

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March 5, 1979

Immediate release

RALGRO GAINS  
SMALL IN LAMBS

After nearly a decade of testing, two University of Minnesota scientists conclude that implanting 12 mg. Ralgro in either feeder or suckling lambs offers little potential for increasing growth rates.

Work by animal scientists R. M. Jordan and H. E. Hanke with a total of 987 feeder lambs showed a lack of consistency in Ralgro's performance. "During some years, one-third to one-half of the lots showed slower gains for implanted lambs than for controls," Jordan explains. "In the balance of the lots, however, the gains on Ralgro were large enough to result in an overall advantage for the implant that year."

The advantage in weight gains within a given year attributed to Ralgro varied from 14 to 0 percent. The average advantage for eight experiments was 5.8 percent for all feeder lambs.

The average weight gain advantage for implanting was 8.6 percent in wethers and 3.9 percent in ewes. "The small gain with ewe feeder lambs suggests that implanting be restricted to wether lambs," Jordan says.

Work with suckling lambs showed much more consistent results. After three trials involving 230 suckling lambs, the weight gain improvement with Ralgro was only 3.6 percent.

"These data are of sufficient magnitude and enough agreement exists between trials to suggest that 12 mg. Ralgro implants in suckling lambs did not contribute significantly to lamb production," the scientists conclude.

Ralgro did not interfere with the suckling ewe's reproductive development. However, some of the ram lambs implanted in March still showed small, underdeveloped testes and no sexual interest by September and October. No cases of rectal prolapse or urinary calculi (two conditions frequently observed among DES-treated lambs) occurred during the experiments.

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Tel. (612) 373-0710  
March 5, 1979

Immediate release  
Contact: R. Jordan  
(612) 373-0974

HIGHER GRAIN RATION MAY  
LOWER LAMB FEED COSTS

During the times of high hay and low grain prices, lamb feeders can change the ration to include more grain without adversely affecting weight gain, University of Minnesota research shows.

Animal scientists H. E. Hanke and R. M. Jordan tested two feed rations on 144 lambs. Half were fed a ration of 80 percent grain and 20 percent hay. The other half received a 60:40 ration.

Two-thirds of the time, the higher grain feed resulted in slightly faster weight gain. The average feed costs of producing 100 lb. of gain were lower with the 80 percent grain ration.

With corn at \$1.78 per bushel and alfalfa hay at \$35 per ton (plus \$7 for grinding), the scientists saved 87 cents per 100 lb. of gain with the 80:20 ration. Total costs were \$17.49 with the 80 percent grain and \$18.36 for the 60 percent grain.

"Whether feeders should use an 80:20 ration depends on several factors," Hanke and Jordan point out. "It takes more skill to feed high grain rations. Currently, grain is priced low in relation to hay. Higher grain prices would give the 60:40 ration the cost advantage."

The scientists also tested the effect of a rumen buffer on gain for each ration. They found that sodium bicarbonate increased the cost of the ration as much as 10 cents per 100 lb. without improving feed intake or weight gain for either ration.

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March 5, 1979

Immediate release

CALF HEALTH BRIEFS...

Causes of Calf Scours: Young calf scours may be caused by nutrition, bacteria such as E. coli and salmonella, and other organisms, says Dale Haggard, extension veterinarian at the University of Minnesota.

Nutritional scours occurs primarily when calves under two weeks of age consume too much whole milk or milk replacer. It happens most frequently with bucket-fed calves.

A frequent cause of scours during the first two weeks of life is the bacteria E. coli. Calves deprived of adequate colostrum shortly after birth are most prone to E. coli infection.

Scouring 3-6 week-old calves may have a salmonella or coccidiosis infection. Their feces can vary from a pasty green to a watery mucoid diarrhea and contain blood. "To prevent these stunting conditions--and others caused by disease organisms--be sure to clean pens before calving, disinfect if possible, and keep pens clean and well ventilated," Haggard says.

\* \* \* \*

Importance of Colostrum: Newborn calves should have their fill of colostrum as soon as possible after birth, says Dale Haggard, University of Minnesota extension veterinarian. Colostrum is necessary for disease resistance, energy and a laxative effect.

If the calf is not up and nursing shortly after birth, colostrum should be given through a nipple bucket or esophageal tube feeder. "We usually administer 1-2 quarts soon after birth and again in 3-4 hours," Haggard says. If the cow doesn't claim her new calf, it may help to use a calf claimer powder on the calf or an injectable tranquilizer on the cow.

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Department of Information  
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Agricultural Extension Service  
University of Minnesota  
St. Paul, MN 55108  
Tel. (612) 373-0710  
March 5, 1979

Immediate release

RUST NAMED SUPERINTENDENT  
OF GRAND RAPIDS STATION

Joseph W. Rust has been appointed superintendent of the University of Minnesota's North Central School and Experiment Station at Grand Rapids.

Rust has been in charge of the station's animal science research since 1963. From 1959 to 1963 he was a research associate at Iowa State University, Ames, Iowa. He was a dairy herdsman at the University of Kentucky, Lexington, Ky., starting in 1953.

He received a bachelor of science degree in 1953 and a master of science degree in 1957, both in dairy production at the University of Kentucky. His doctorate is in animal nutrition from Iowa State.

He has authored and co-authored numerous research papers on dairy, beef and swine nutrition.

Rust is in charge of over 30 station staff members who do research in dairy, beef, swine, agronomy, horticulture, agricultural engineering and forestry. The Grand Rapids station emphasizes wild rice and forage utilization research.

The station owns and leases over 800 acres for experimental purposes. It is one of five branch stations located throughout the state. The Minnesota Agricultural Experiment Station also conducts research at several other sites.

Rust replaces William Matalmaki, who died last August. He served as acting superintendent in the interim.

Recently completed research at the University indicates that investment in agricultural research is still paying off with high return rates. Rates of return to conventional investment in manufacturing tend to range from 12 to 15 percent. However, returns on investment in agricultural research are estimated to be two to three times higher.

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St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
March 5, 1979

ATT: Extension Home Economists

Immediate release

HOW MUCH DO WE  
VALUE OUR HEALTH?

Good health often gets top billing when families are asked to list their priorities. It tops security, prestige, business success, education and several other qualities.

Striving for good health also seems to motivate many families, according to Edna Jordahl, extension home management specialist at the University of Minnesota. A study conducted at Cornell University revealed that homemakers with pre-school children listed health most often as the reason for their activities.

Other research has shown that both fathers and mothers ranked proper food and nutrition as most important to their children's health. Less than half of each group, however, thought that eating together as a family had a positive effect on the benefits derived from food.

People seek health information from newspapers, magazines and radio and television programs, Mrs. Jordahl says. Nationally, studies show that between one-half and one-third of all people read health articles in newspapers and magazines and listen to health information on radio and television.

Health is a worry as well as a priority with most families. Studies show that parents were more often worried about the health of other family members than about their own health, and women placed health worries right behind worries about child rearing in their lists of concerns. Men ranked health worries slightly lower. They placed worries about child rearing, getting ahead and money matters ahead of health.

When men concerned themselves with children's health, the impact on children's health activities was greater than when women dealt with children.

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March 5, 1979

ATT: Extension Home Economists

Immediate release

Note to home economists: If you have family finance meetings or courses scheduled in your county, this information may be helpful in publicity efforts.

STUDYING FAMILY FINANCES  
HELPS CHANGE BAD HABITS

Classes in family finance management may be a key way for many families to understand and improve their money management skills. Edna Jordahl, extension home management specialist at the University of Minnesota, says that research on family finance courses conducted in North Carolina show many benefits to participants.

More than 1,000 individuals and families took courses to help them identify their financial problems and the resources they have to deal with them. The courses also strove to sharpen money management skills and help families reach financial goals.

About 90 percent of the participants reported changing wasteful habits and understanding their financial pictures better after taking such courses. Nearly the same number said they now plan and shop more carefully for good buys and they keep more complete records of where their money goes.

Some three-fourths of the course participants learned how to make or follow a spending plan, and how to set priorities for family needs. The same percentage also reported beginning or improving their savings plans because of the course.

More than half learned how to reduce money paid for credit costs and learned to save money by undertaking more do-it-yourself projects.

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ATT: Extension Home Economists

Immediate release

INTERNATIONAL YEAR OF CHILD:  
WORK BUILDS CHILD'S SELF ESTEEM

"Why, when I was your age I had to get up at 5 a.m. (or was it 4:30? 4?)  
to milk the cows before I walked five (three? two?) miles to school . . ."

Sound familiar? Many parents lament the amount of leisure their children  
have. Chores, they somehow feel, help youngsters grow into stable adults.

Ronald Pitzer, extension family life specialist at the University of Minnesota,  
thinks work strengthens families and teaches children valuable lessons.

"But it isn't really the chores that contribute to maturity," he says.

"It's what is learned from them. Work can bring a feeling of worth and achievement  
that comes in no other way."

Children who work at chores around the home also sense the partnership that  
goes into family life. "No matter how young the child and meager the contribution,  
being accepted as a work companion does important things for his or her self concept."

Working alongside parents also increases companionship, Pitzer says. "The  
three-year-old who wants to help mow the lawn or the four-year-old who wants to  
make dinner aren't likely to make great contributions, but their efforts are  
important. Such activities encourage a 'we' feeling between children and parents.  
Such good feelings may keep the pattern going until an age when the child is truly  
helpful."

During International Year of the Child, Pitzer encourages parents to involve  
children in household work. Even young children know when a task is "busy work"  
so make assignments meaningful and realistic, he advises.

add 1--international year of the child

For pre-schoolers, work and play are the same. Being alongside mother or father when there is kitchen work, cleaning or yard work to be done is fun. Assign tasks in small doses and be lavish with praise, Pitzer suggests. "They will develop standards later, but the important thing is for children at this age to feel that their work is valuable."

Once children develop skills and can do more tasks, be sure they aren't given only the drudgery chores. Reverse work roles with your elementary school age child occasionally, Pitzer suggests. "Take on some of the less satisfying assignments yourself and let the child have a crack at some important, satisfying ones--maybe cooking or washing the car."

Teenagers want to be grown up, so Pitzer recommends giving them responsibilities, not just single tasks. A teenager might take on the job of family secretary-treasurer, for example. Or a young driver could assume full responsibility for overseeing the care and repair of the family car.

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Immediate release

STATE LIVESTOCK FARMERS  
SHOW RECORD-HIGH EARNINGS

In their first "really profitable year" since 1973, cattle feeders enjoyed a record-breaking high income in 1978, report agricultural economists Paul Hasbargen and Delane Welsch.

The University of Minnesota farm management specialists say that both cattle feeders and hog producers had excellent incomes in 1978. Their information from southern Minnesota record-keeping farms shows earnings on these farms were even greater than the previous record set in 1973. They caution that their figures reflect current dollars, and have not been adjusted for inflation.

"Higher livestock prices, record crop yields and larger business volume all contributed to the record high net earnings," they report.

Returns over feed and cash costs were \$27 per 100 pounds (cwt.) of beef produced in 1978 compared with about \$7 in 1977 and 1973. Hasbargen explains that this large increase in returns was almost completely due to the increase in cattle prices during 1978 since feed and direct cash costs were almost the same as in 1977.

He also points out that this is the first really profitable year for cattle feeders since 1972. "In fact, losses in 1974 were about equal to the profits of 1978," Hasbargen explains. "Losses occurred also in 1976. The record returns of 1978 came too late for some previous cattle feeders who were forced to discontinue feeding because of the large losses of those years."

-more-

add 1--state livestock farmers

Beef cow herds showed good returns for the first time in five years. Losses on this enterprise were largest in 1974 following two good years. Earnings from the cow herd set a new record in 1978.

Like earnings from cattle feeding, the increase over the previous cow herd income record was great enough to more than offset the decline in purchasing power of the dollar. Hasbargen expects these two beef enterprises to show very good earnings again in 1979 because of a decline in beef supplies and subsequently higher beef prices than prevailed in 1978.

Return over feed and cash costs from the farrow-to-finish hog enterprise was \$25 per cwt. of pork produced in 1978 compared with the previous record of \$21 in 1975. According to Welsh, this is not quite enough to offset the declining purchasing power of the dollar. Therefore, specialized hog farms that have not grown in business volume during the past three years probably had earnings similar in purchasing power to that of 1975 and 1973.

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CA, Part II print, 1A, TCO

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March 7, 1979

Immediate Release  
4-H NEWS

FOUR TEENS TO ADVISE  
4-H PROGRAM DEVELOPMENT

Four Minnesota teenagers will help develop educational programs for youth during the National 4-H Conference in Washington, D.C. March 31-April 6.

The Minnesota Bankers Association sponsors the participation of Brenda Swenson, Atwater; Brad Mitteness, Benson; Charles Horsager, Verndale and Beth Bielen, Springfield. The young people will share ideas and make recommendations on various 4-H programs, policies and issues during their stay at the National 4-H Center.

The youth will also try to develop better ways to report to the public on 4-H activities and benefits. All four have served the state 4-H public relations effort in their roles as Minnesota 4-H Ambassadors.

Brad Mitteness is the son of Gerhard and Marge Mitteness who farm in Swift county. Brad is currently studying agriculture at the University of Minnesota in St. Paul. His 4-H activities have centered on livestock and citizenship.

Brenda Swenson is studying at the University of Minnesota, Morris. She hopes to work in human services as a career. Her parents, Donald and Blanche Swenson, live in Atwater. Brenda is known for her leadership both inside and outside 4-H.

Charles Horsager, who attends Verndale High School, plans to be a businessman. Clarence and Mary Horsager, his parents, farm near Verndale. Charles' project activities in 4-H run the gamut from creative arts, conservation and sheep to aerospace and safety.

Beth Bielen's parents, Mr. and Mrs. Ralph Bielen, live in Springfield. Beth attends Lakeland Medical-Dental Academy in Minneapolis in hopes of working as a laboratory assistant some day. She has been an active junior leader in 4-H.

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March 12, 1979

Immediate release

To: Agents with Youth Responsibilities  
Re: May Conference News Photography Course

Some of you are doing a 4-H/Youth column for local newspapers. Perhaps you sometimes have difficulty finding good youth story ideas. One reason for this may be that you rely on us to supply stories for you to localize and pass on to readers of your column. We have not been supplying these stories on a consistent basis recently.

In the agriculture and home economics area, we draw stories from the research and work of a large pool of state specialists and researchers. In contrast, 4-H is a locally-based program. The action and the newsworthy stories take place in the counties. They happen with 4-H members and their leaders.

If you are doing a youth column, your best bet is to write about local programs and projects that have appeal to a general audience--to people who are not now involved. You may want to advertise what 4-H has to offer that appeals to most youth, or even better, most youth and adults in your community. Listing of 4-H events, times, dates, and places--things that are of interest only to members--can be better done in newsletters or other mailings and meetings.

A newspaper article, perhaps accompanied with an action-packed picture, can attract wider interest (including that of your local editor). This approach can help build on an "action image" of 4-H. Members working on their projects, giving demonstrations, having fun at an event, are "naturals" for newspapers.

An occasional newspaper article or photo story may provide either an alternative to, or an addition to, your present column approach. To help you develop this new outlet, we are offering a news/photo course during May conference. We hope to give you some good ideas on what a good news photo is, writing the caption, picture composition and camera operation. Our goal is to encourage you--and through you members in photo projects--take more good news photos for your local newspapers. The course is available to staff members in all program areas. Thanks for your consideration of these alternatives.

Kathy Chesney  
Communications specialist

Jack Sperbeck  
Section Leader

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Immediate release

TAILOR ALFALFA VARIETY  
TO FARMING OPERATION

Choosing the right alfalfa variety from the hundreds available starts with a close look at the individual farming operation's needs, according to agronomist Neal Martin.

The University of Minnesota extension specialist reports that finding the answers to certain questions helps the alfalfa grower outline what type of new forage best fits his operations. The questions include:

1. How long do I plan for this stand to be productive?

"If you want a long-term stand, say four years or longer, choose the more winterhardy types with high levels of bacterial wilt resistance," Martin explains.

2. How do I plan to use this variety?

For grazing, the more winterhardy varieties again have advantages. They have low-set crowns that are less likely to be injured by grazing animals.

For hay, silage or de-hy production, either winterhardy or moderately winterhardy varieties work well.

For an annual green manure crop, choose non-winterhardy varieties. They grow later in the fall, fixing more nitrogen and producing more material for plow-down.

3. How many cuttings do I want?

If you plan for early cutting to improve forage quality, or a four-cutting system, select varieties with disease resistance, late fall dormancy and winterhardiness. If you plan a routine two-three cut system with all harvesting before Sept. 1, many varieties will work.



add 1--tailor alfalfa

4. What yield level do I need?

Only a few varieties, with the best management, will consistently yield 6-8 tons per acre. Many varieties sold in Minnesota can produce 4-5 tons with good management.

The producer also needs to know the winter injury potential in his area. Greater winterhardiness is usually necessary in southern and western Minnesota and in the Red River Valley. Choosing for high disease resistance also cuts the chances for winterkill in many situations. If soil drainage is poor, a variety with Phytophthora root rot resistance may be necessary.

The publication "Varietal Trials of Farm Crops" can help you select the varieties with desired characteristics. This Misc. Report 24 is available at County Extension Offices.

"Using the best varieties for your farm will provide high yields of quality forage," Martin says. "This can mean better animal performance with fewer acres planted to alfalfa, leaving more acres for cash crops."

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March 12, 1979

Immediate release

DIRECT SEEDED ALFALFA  
SHOWS ECONOMIC GAINS

Direct seeding alfalfa can equal the economic benefits of companion crop seeding while providing better establishment, University of Minnesota research shows.

Extension agronomist Neal Martin explains, "Our data indicates that direct seeded alfalfa will compete with the use of a companion crop if alfalfa hay is valued at \$60 per ton and 2.25 tons per acre are harvested during the seeding year." Herbicides were used to achieve yields above two tons.

Net returns the establishment year were \$21.13 for companion-cropped oats used for hay, \$24.59 for oats removed as grain, but \$26.43 for hay from direct seeded alfalfa. Costs were higher for the companion-cropped alfalfa.

The best first-year alfalfa yields (about 2.5 tons per acre) were obtained with preemergence herbicides benefin (Balan) and EPTC (Eptam). An herbicide not used in this test, profluralin (Tolban), has been approved by the Environmental Protection Agency for alfalfa establishment. Although the test location has both grassy and broadleaf weeds, control of grassy weeds is generally enough to obtain thick stands, Martin says.

"The companion crop limited alfalfa yield at least one ton per acre, when compared to direct seeding," he adds. "Direct seeding provides the best environment for rapid establishment."

The disadvantages of direct seeding include higher seeding costs and less erosion control in early spring. Only pure stands of alfalfa can be seeded.

Successful direct seeding requires thick stands, early planting, a preplant herbicide for areas with grassy weed problems, a seeding rate of 15 lb. per acre, and a first cutting harvest after 60-70 days of growth.

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Immediate release

SHORT COURSE  
OFFERED FOR  
TOWN OFFICERS

Township officials from \_\_\_\_\_ County have been invited to the Township Officers Short Course, a day-long educational program, beginning at 9:00 a.m. \_\_\_\_\_ at the \_\_\_\_\_ in \_\_\_\_\_. Registration starts at 8:15 a.m.  
(date) (place) (town)

Expected to attend from \_\_\_\_\_ County are (list names and offices if available.)

Insurance, liability, finance, land use, fire protection and the board of review are topics for the morning session. Separate discussion groups for supervisors, clerks and treasurers will be held in the afternoon.

The course is presented at 12 locations throughout the state by the University of Minnesota Agricultural Extension Service through the Office of Special Programs under the sponsorship of the Minnesota Association of Township Officers.

The course provides township officers with technical information to effectively and efficiently carry out their duties and responsibilities.

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Dates, locations:

- March 19, Technical College, Waseca
- March 20, Holiday Inn South, Rochester
- March 21, Orchid Inn, Sleepy Eye
- March 22, Southwest State University, Marshall
- March 26, Craguns on Pine Beach, Brainerd
- March 27, Holiday Inn, St. Cloud
- March 28, Willmar Community College, Willmar
- March 29, Holiday Inn, Fergus Falls
- April 3, Area Vocational Technical Institute, Detroit Lakes
- April 4, Best Western Motel, Thief River Falls
- April 5, Rainbow Inn, Grand Rapids
- April 6, Holiday Inn, Eveleth-Virginia

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March 12, 1979

Immediate release

Contact: Dave Noetzel  
(612) 373-1888  
Fred Benson  
(612) 373-1145

MINNESOTA'S SUNFLOWER  
BENEFITS VARY BY REGION

Most farmers in the state could profit from fitting sunflowers into their cropping systems, two University of Minnesota scientists agree. The benefits vary greatly by region, however.

The relatively new crop is especially well adapted to the west-central and north-west regions, says entomologist Dave Noetzel. "The lower moisture and higher alkaline levels in these soils make sunflowers a better choice than many other popular crops," he explains.

Sunflowers are more profitable than wheat, the most widely grown crop in the two regions, says agricultural economist Fred Benson. His study of 1979 returns for various crops projects a 10 cents per pound sunflower market and a \$2.80 per bushel wheat price. In west-central Minnesota, returns over cash costs are likely to be \$54 higher for sunflowers than for wheat, he says.

"If you assign a 20 percent risk to sunflowers, which is reasonable for a new crop, returns over cash costs are still \$14 higher than wheat," he says.

Sunflowers are also complementary to wheat in the cropping schedule. They don't compete for the farmer's time during crucial planting and harvesting periods.

Noetzel predicts that as better yielding sunflower varieties become available, south-central farmers will increase their acreage of the crop. "The potential sunflower yield is highest in these traditionally corn and soybean areas," he says. "Fierce competition between companies to develop improved sunflower yielders will benefit these farmers."

-more-

add 1--sunflowers

At the present time, however, soybeans are a more desirable crop than sunflowers in south-central Minnesota. "Returns over cash costs are \$48 higher for soybeans than for sunflowers," Benson reports. "Unfortunately, these two crops are usually planted and harvested at about the same time."

Insecticide costs are part of sunflowers' disadvantage. Proper monitoring may eliminate the \$10 per acre insecticide bill and make sunflowers more competitive, Noetzel believes. "Fitting this crop into the rotation plan may also help increase soybean and other crop yields."

Insects are not a big hazard, Noetzel says. "The sunflowers can take a 20-30 percent defoliation, or the same amount of stand loss due to cutworms without a yield reduction if the damage is evenly distributed."

Returns are higher for soybeans in the south-central region, but are about equal for the two oilseeds further west. Along the Minnesota-South Dakota border, sunflowers become the more profitable crop, Benson says.

Both scientists advise farmers to educate themselves about sunflowers. "You're always going to have problems with a new crop," Benson points out. "Get as much information as possible, so you can keep watch with an educated eye."

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Immediate Release

SEEDING TIME CUTWORM  
TREATMENTS DISCOURAGED  
IN SUNFLOWERS

Treatment of the dark-sided cutworm in sunflowers is most effective after the crop has germinated, says Dave Noetzel, University of Minnesota extension entomologist.

"Some questions have arisen about applying soil insecticides at planting time," Noetzel says. "This practice is discouraged for economic and other reasons."

Present infestation rates indicate 90-95 acres out of 100 planted do not need treatment, Noetzel says. Planting time applications of granular materials such as Temik, Lorsban, Mocap and others have not been approved by regulatory agencies. "None of the granular materials have performed as well in tests as 'rescue' sprays applied after plants emerge. And most granulars provide no cutworm control at all," he says.

The time for checking sunflowers for cutworms is immediately after germination, Noetzel says. The first feeding is on the upper surface of the seed leaves and the margins of later leaves. "This early damage suggests where potential reductions in plant stands will later occur."

Actual plant cutting takes place 20 or more days after the eggs hatch. A simple method for measuring stand reduction is to count a certain number of plants in the row (100 or 200) and mark that area of the row with stakes. Count these plants every few days and figure the percentage of stand reduction from those remaining. This marked off area should be in a part of the field most likely to be infested.

-more-

add one--seeding time

"When your monitoring shows a stand loss of 25 percent, apply toxaphene at 2 lbs per acre in 15-25 gallons of water," Noetzel says. "Apply late in the day or at night. If equipment is available to band the toxaphene on the row, do so. Apply only to portions of field which require treatment."

The darksided cutworm, Euxoa messoria (Harris), has been the major insect problem in Minnesota for the past four years. It is native to the state having one complete cycle per year.

The adults emerge primarily in August and September and lay their eggs at that time. The moth prefers to lay in loose soils, on high spots, and in slightly drier locations. There is some tendency also to lay eggs along field margins and in sites protected by trees.

The eggs winter and hatch in April. The early larval instars generally feed on grasses and weeds. This initial feeding is on the leaf margins and upper surfaces. The latter feeding causes "windowing" of the leaves as the small larval leave the lower leaf layer intact.

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Immediate release

ALFALFA BRIEFS...

Alfalfa Deserves the Best--As one of the most versatile and potentially profitable crops, alfalfa deserves the best management a grower can give, a University of Minnesota agronomist says.

"This forage serves as both a protein and energy source for livestock," Neal Martin explains. "It's great in crop rotations, probably adding more to soil fertility than most other crops. Its deep root system improves soil tilth, and provides nitrogen through fixation. The excellent ground cover protects soil that would otherwise wash down sloping farmland and pollute our streams. And the most neglected benefit of alfalfa is also the most profitable--its potential as a cash crop."

Some growers are supplying better management, judging from the year-by-year increase in overall yield. "We look for quality in everything else we produce, why not get it in our alfalfa," Martin says. "It's there for the taking, and all it takes is good management."

\* \* \* \*

Variety Choice Affects Yield--Selection of the best alfalfa variety can add 10-20 percent to the final yield harvested, says University of Minnesota extension agronomist Neal Martin.

"Yield, persistence, winterhardiness and disease resistance are the major traits producers should look for," Martin explains. "To insure varietal purity, purchase certified seed." Quality can be best maintained by storing pre-inoculated seed under cool, dark, dry conditions.

-more-



add 1--alfalfa

Select Productive Soil--Alfalfa is a deep, tap-rooted legume that grows best on well-drained soils of high water-holding capacity, agronomist Neal Martin says. Its root system and nearly complete ground-cover capacity make it especially suitable for sloping farmland. "This does not mean it should be planted on an already eroded hillside with little topsoil," Martin says. "Alfalfa needs good soil to fulfill its yield potential."

\* \* \* \*

Choose Alfalfa Companion Carefully--When establishing alfalfa, manage the companion crop to minimize competition rather than to maximize yield, agronomist Neal Martin advises.

"Many alfalfa stand failures have resulted from competition for light and moisture from spring wheat," the University of Minnesota extension specialist says. "Newer, high yielding spring wheat varieties have been selected for later maturity days and denser root systems."

"It's best to plant an early maturing species such as oats, and an early maturing variety within that species," he adds. "Producers having trouble establishing alfalfa with companion crops, and those who want maximum alfalfa yields during the seeding year, should consider seeding without the companion."

\* \* \* \*

Thick Stand Needed First Year--Producers growing pure stands of alfalfa should have at least 15-20 plants per square foot the fall of the seeding year, says University of Minnesota agronomist Neal Martin.

"I estimate that establishing a thick stand influences yield by 30 to 50 percent," he says. By the end of the second year, 10-15 plants per sq. ft is desirable.

Keys to establishing optimum stands include preparation of a firm, level seedbed that is loose on the top one-half to three-quarters inch. "Firmness is needed to maintain moisture for seedling roots," Martin explains. Seeding depth is also critical.

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BE PREPARED  
 FOR FLOODING

Deep snow this winter makes spring flooding a possibility in many parts of Minnesota.

Families in flood threatened areas should make plans in advance, advises Clifton Halsey, extension conservationist at the University of Minnesota. "Be prepared to protect your property and leave your homes temporarily. Heavy spring rains can make flash flooding with little warning an added hazard," Halsey says. He advises flood threatened families to take these precautions:

1. Know the flood warning system in your community. Find out if there will be radio announcements, sirens or public address systems.

2. Make plans for your entire family now. Include plans for evacuation or for temporarily moving to the second story of your house. Everyone should know how to quickly leave the house by walking or riding. Pick a route to follow that won't be blocked by washouts or high water.

Make a list of emergency supplies and have them ready for evacuation or movement upstairs. Place them where they're handy. Consider items like first aid supplies, emergency food, drinkable water, emergency lights, a battery radio, temporary toilet, medicines, cooking equipment and games.

Other preparedness tips:

- Be sure there's plenty of gas in your car for evacuation.
- Take pictures of your home and personal property for insurance purposes.
- Know what your property insurance covers.
- Be sure your valuables and legal papers are in a safe place.

3. When you receive flood warnings, keep listening to the radio for the latest local information.

add 1--be prepared for flooding

4. If there's time, move important items like food, furniture, rugs, appliances, clothing, books, electric motors and controls to higher elevations. Make sure that toxic chemicals and pesticides are stored where they will not get wet or into flood waters.

5. Shut off all utilities (electricity, gas, water) at main switches and valves in each building.

6. Cap openings and pipes of all disconnected appliances. Don't drain pipes.

7. Keep indoor and outdoor water levels about equal by leaving doors and windows open. This will help prevent foundations from collapsing and buildings from floating away.

8. Tie down or safely store all items that could be carried away by flood waters. This includes lumber, pipes, fuel tanks, toys and lawn chairs.

9. Evacuate immediately if you're so advised. Take necessities such as medicines, eye glasses, diet foods and suitable clothing. Take life jackets if you're going by boat.

10. Wait until authorities assure that flood dangers are over before you re-enter home premises.

Families may be able to protect their homes with sandbag and plastic dikes where floodwaters will be less than three feet deep. Directions for building plastic dikes may be obtained from county extension offices. Ask for the leaflet "Using Plastic and Dikes to Prevent Minor Surface Flooding." Extension offices also have a wall poster, "Preparing for Floods--Flood Cleanup and Salvage Steps," and a bulletin, "Face to Face With a Flood," which tell how to get ready for flooding.

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ATT: Extension Home Economists

Immediate release

DEALING WITH STRESS  
TESTS FAMILY STRENGTH

A death in the family causes a crisis that few families are prepared to meet. Edna Jordahl, extension home management specialist at the University of Minnesota, says that even with help from outside the family at such a time, it is the family's internal strength that must carry the group through and help it to reorganize without the missing person.

She describes "energized" families as often best able to cope with death. These families actively and energetically interact among their members. They also get stimulation from outside groups and encourage members to do their own thinking about family problems and to develop resources that support family goals and efforts.

Families with these qualities seem best able to rebound after a death. Mrs. Jordahl suggests that this may be because members have developed their own strengths and capacities before the crisis, and these help them deal with grief and family reorganization.

A death forces family members to examine their needs, attitudes, values and goals. Typically, family members rely on each other's strengths and resources to once again form a sound structure without the person who has died.

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March 12, 1979

ATT: Extension Home Economists

Immediate release

INGENIOUS ENERGY SAVERS  
SOUGHT IN U OF M DESIGN CONTEST

Have you ever had a brainstorm on how to save energy in your home, transportation or business? If so, the University of Minnesota would like to hear from you.

Minnesota Energy Design '79, a contest designed to draw out these ideas and reward the best of them, is open to all Minnesotans. Huldah Curl, project director says, "We encourage architects, farmers, engineers, homemakers, neighborhood associations, contractors, executives, students, backyard tinkerers and dreamers to participate."

Entries are due in May. Curl says that they can include projects already constructed and operating or ideas for projects. Content may cover renovation and new construction, alternative energy sources, transportation and distribution, recycling or any ideas to conserve energy and material resources.

Judges will choose winning entries on the basis of innovation, the potential for widespread application in Minnesota and economic and environmental practicality.

The Minnesota Energy Agency will award cash prizes of \$2,000 and \$500 to the best entries that include calculations of labor, cost and energy performance. Northwestern Bell Telephone Company has donated a \$500 prize and Ellerbe, Inc., and Land O'Lakes, Inc., has donated two \$250 awards. Ideas for which no technical calculations are provided are eligible to win these prizes.

There is no entry fee. Entries should be limited to written descriptions and illustrations and should not include models or objects. Entry forms are available from local county Agricultural Extension Service Offices or from Continuing Education in the Arts, 322 Wesbrook Hall, University of Minnesota, 77 Pleasant St. SE, Minneapolis, MN 55455.

Contest sponsors are the University of Minnesota, the Mid-American Solar Energy Center, the Minnesota Energy Agency and the state society of the American Institute of Architects.

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DEALING WITH GRIEF  
DIFFERS FOR MEN, WOMEN

The death of a spouse affects men and women differently, but adjustment problems abound for either, according to Edna Jordahl, extension home management specialist at the University of Minnesota.

She cites a study of 49 widows and 19 widowers done in Boston which found that even when the participants knew of the imminent death of a spouse, this did not reduce the impact of grief at the time of the loss. Those who anticipated the deaths were better able to pull themselves together afterwards, however.

With the loss of a husband, women often lose social status and many take on worries about money, managing a business and the legal aspects of estate transfer.

"Because so many wives eventually become widows," Mrs. Jordahl says, "It is well for all women to establish a place for themselves in society through employment, charitable work, the arts or some other outlet. This provides a status of their own instead of being Mrs. John Doe."

Women who have held jobs before their husbands' deaths have an easier time making an economic adjustment. Such women may also be more adept at relating to the business world, making the details of estate settlement easier, Mrs. Jordahl says.

Widowers often reported feeling disorganized in their work after a wife's death. Others mentioned feelings of dismemberment. Mrs. Jordahl says this underscores the role that women often play as support to their husbands' jobs. Although the men made quicker social recoveries, women recovered emotionally more quickly.

-more-

add 1--dealing with grief

For both men and women, the period right after a death is the most stressful. Feelings are not yet resolved and family role restructuring is under way. Conflict often develops between siblings or between the family and relatives.

Knowing that widowhood is a part of life for many women, Mrs. Jordahl suggests that women should prepare for it by developing their resources and knowledge. Employment skills, social contacts and business sense are useful in adjusting to life alone, and women are wise to cultivate these as they plan their futures, Mrs. Jordahl adds.

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March 19, 1979

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SPRING FASHION LOOK:  
A BLAST FROM THE PAST

Shoulder pads, cummerbands, pedal pushers and jeweled sunglasses -- sound like relics from a 1950s time capsule? Guess again. These are some of the "in" items for spring fashions, according to Sherri Johnson, extension textiles and clothing specialist at the University of Minnesota

Retro -- short for retrospective -- is the catch phrase this year as fashions look to the 1940s and 1950s for inspiration. "But it's an updated version that we'll be seeing," Mrs. Johnson said. "There will be more emphasis on comfort and easy care than there was 25 and 30 years ago.

What are some of the basics of a retro wardrobe? Suits with shoulder pads will be popular for dressy occasions and slim line pants will lead the sportswear list, Mrs. Johnson predicts. Along with the slimmer silhouette pants, skirts will be narrow with slide slits or pleats. Wrap skirts and waisted dresses will be popular for casual daytime wear.

Fabrics for spring and summer will include voiles, cotton batistes, silks, linens, flax and all kinds of fabric that include a dot pattern -- pin dot, dotted swiss and clip dots. Clingy and shimmery fabrics made popular by the disco look will continue for evening wear.

For active sportswear, terry cloth, cotton knits and chenille will be in evidence. Such classic fabrics as seersucker and piques will find their place in the naval and schoolgirl looks that several designers are featuring, Mrs. Johnson says.

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BRIGHT COLORS  
AND 'RETRO' ACCESSORIES  
ON TAP FOR SPRING

Fashions for spring and summer promise a revival of the past with a 1980s twist, according to Sherri Johnson, extension textiles and clothing specialist at the University of Minnesota.

Dubbed the "retro" look because of its retrospective accent on trends of the 1940s and 1950s, the upcoming fashion picture calls for bright colors, slim silhouettes in dresses and pants and jewelry, belts and shoes reminiscent of 30 years ago.

Attention grabbing colors such as fuchsia, red, yellow and violet will be in the spotlight. In some cases, these bright shades will be combined with more neutral shades in multi-piece suits and sportswear outfits.

Mrs. Johnson suggests that one way of incorporating bright shades into the wardrobe is to add them first to clothing in deep saturated tones. Suits and pants will stay in pastels and neutrals, often topped with vivid colors and prints.

The 1940s and 1950s saw strapless looks at their peak so this year's revival will feature lots of bare shoulders, arms, midriffs and thighs.

Accessories will also be take-offs on the past. Circle pins and large junk jewels are being shown on sleeves, hats and cummerbunds. Soft, wide sashes in bright colors will add a spot of color to cinch-waisted dresses and narrow legged pants.

Shoes will be high heeled with perforated leather and ankle straps for dressy occasions, Mrs. Johnson says.

Bright lipstick and nail polish are making a revival for summer. Hair stylists are promoting looks with hair rolled, wrapped and braided close to the head to balance the new slim silhouette.

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4-H NEWS

GARDENING FUN  
AT AN EARLY AGE

Children of all ages can enjoy gardening, but projects should be geared to the child's level and capabilities so there is a good chance of success, says \_\_\_\_\_, \_\_\_\_\_ county extension agent.

"The best lessons are learned by doing," he says, "and sowing a few seeds or setting out some plants can give children the chance to help produce food for the family."

As soon as they show an interest, encourage youngsters to have a small garden plot of their own. Help them choose vegetables or flowers that have easy-to-plant seeds and mature quickly so they won't have to wait too long for results.

"One good way for school-age children to learn about gardening is through our 4-H projects," \_\_\_\_\_ points out. "We have a vegetable project, flower and fruit projects. It's a good experience for the children--and for the adults who volunteer their leadership in these areas."

For more information, contact the \_\_\_\_\_ office of the University of Minnesota Agricultural Extension Service at \_\_\_\_\_.

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#### PLANT DISEASE BRIEFS...

Eyespot Could Cut 1979 Corn Crop: A disease that built up in corn fields of east-central Minnesota last year could reduce yields in 1979, says University of Minnesota plant pathologist Herbert Johnson.

"Eyespot is a corn leaf disease that was found in many fields last summer," Johnson says. "It started too late in the season or developed too slowly to cause much damage."

Frequent rains, high humidity and heavy dews in 1979, however, would provide the right conditions for fast build-up of the disease and possible yield reduction.

One of the best ways to avoid eyespot is through crop rotation. "This is a fungus disease, and the fungus overwinters on crop refuse," Johnson explains. Planting resistant varieties will also cut losses. If the disease shows strong development in early July or before, fungicides may be applied.

\* \* \*

The Two-Crop Fungus: Since the corn stalk-rot fungus also causes scab in wheat, growers may want to avoid planting wheat in a field that was cropped in corn last year.

Herbert Johnson, University of Minnesota extension specialist, says that the stalk-rot fungus exists in every corn field. The organism overwinters in the corn debris and will attack wheat planted on the same ground.

-more-

add 1--plant disease

"Many fields of scab-damaged wheat in west-central and southern Minnesota showed losses of 50 percent and more last year," Johnson says.

"If we have warm, wet weather next summer, wheat planted on corn ground will likely get clobbered again."

Stalk-rot and the lodging that results from it cause a 5-10 percent loss each year in Minnesota. Losses may be reduced by planting lodging-resistant varieties, planting moderate populations, maintaining good potash levels, controlling corn rootworm and harvesting early.

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#### APPLE DISEASE BRIEFS...

Spray to Prevent Scab: Scab, the most common and persistent disease of apples, can cause severe loss of leaves, reduced yield and inedible fruit.

A spraying program that starts just before blossom and continues through August is the best means to control the disease, says Herbert Johnson, University of Minnesota extension plant pathologist.

Fungicides currently approved include benomyl, captan, dodine and folpet. Sprays should be applied just before blossom, right at petal fall, and then every two weeks through August. (Higher frequency is usually necessary for commercial operations.)

Signs of apple scab include spots on leaves that appear light brown and later become black, and infected fruit with brown or black spots. If scab is severe for several years, tree vigor is reduced. The tree may eventually die from the disease.

Proper pruning helps control the disease and makes spraying easier. Hauling leaves out of the orchard may not be effective, however. "If only one percent of the fungus escapes removal, that may be enough to start a severe infection under the right weather conditions," Johnson says.

For more information, see Plant Pathology Fact Sheet No. 33, "Apple Scab" or Extension Folder 375, "Home Fruit Spray Guide" available at your county extension office.

\* \* \*

Cedar-Apple Rust: A disease that spreads from cedars to apple trees can cause damage to fruit that reduces its value for home use and lowers grade

-more-

add 1--apple disease

for commercial use. Cedar-apple rust can be controlled with certain fungicides, says Herbert Johnson.

"General purpose fruit sprays will not usually control rust unless ferbam, mancozeb, thiram, or zineb is added," the University of Minnesota plant pathologist says. "The spraying schedule is similar to scab, starting just before blossom. Spray again right at petal fall and then every two weeks until mid-June. During bloom, use fungicides only; not insecticides."

Disease spores, carried by the wind from cedar trees, germinate during moist conditions and infect apple tissue. Small yellow spots form on leaves, which enlarge during the summer. They may reach up to one-half inch in diameter by August.

Loss of leaves from the infection reduces fruit size and quality. Over the years, a recurring infection weakens the tree and reduces or stops fruit production.

For more information, see Plant Pathology Fact Sheet No. 4, "Cedar-Apple Rust"; or Extension Folder 375, "Home Fruit Spray Guide" available at county extension offices.

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SELENIUM APPROVED  
FOR DAIRY RATIONS

A trace mineral that may improve dairy herd health has been approved for use in feeding rations, reports University of Minnesota extension specialist Michael Hutjens. The toxicity of the mineral selenium requires careful mixing, however.

"Tests in Ohio showed that in some cases, adding selenium to the ration reduced the number of cows that did not clean after calving from 52 percent to 8 percent," Hutjens says. "There was also evidence of improvement in calf health."

The amount of selenium in feed supplements varies. A common recommendation is to feed one pound of selenium pre-mix per ton of the ration dry matter. "That's the right advice only if the supplement contains 90 mg. of selenium per pound," Hutjens explains. "Some are higher in content, some are lower."

The maximum limit approved by the Food and Drug Administration (FDA) is 0.1 part per million (ppm) on a complete feed or total ration basis. At levels of 5 ppm or above, selenium can be toxic.

"Mixing is important," Hutjens points out. "When we are dealing with adding milligrams of a toxic substance to tons of feed, an excellent job of mixing is required."

There are also injectable products available that contain selenium and vitamin E. If used, they should be injected 20 days before calving.

"Feed raised in the western parts of Minnesota generally contains adequate amounts of selenium," Hutjens says. "Supplementation may not be warranted when this feed is used."

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March 19, 1979

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FEED COULD BE ONE  
SULFA RESIDUE SOURCE

Pork producers and feed manufacturers must work together to reduce the rate of sulfa residue violations, says a University of Minnesota animal scientist.

Jerry Hawton, extension specialist, suggests that producers collect one-pound samples from each delivery of non-medicated swine finishing rations, and keep them for 60 days after slaughter. If sulfa residues are found in the tissues of their swine, producers could have the feed samples tested for contamination.

Hawton, who recently returned from the American Pork Congress in Indianapolis, reports that feed can be a source of the sulfa residues that continue to show up in swine carcasses. "A U.S. Department of Agriculture official, Bob Brown, said that in one of their surveys, 22 percent of commercially mill-mixed feeds contained sulfa levels of two parts per million (ppm) or higher," Hawton says. "About 13 percent of farm-mixed samples contained such residue levels."

He adds, "It only takes two ppm of sulfamethazine in the feed to eventually produce one-tenth ppm (0.1 ppm) in the tissue of the carcass." The FDA (Food and Drug Administration) tolerance level is 0.1 ppm.

Sulfa compounds are mixed with feed to help control swine respiratory diseases. Producers are required to withdraw feed containing sulfa compounds at least 15 days before slaughter, or sulfa residues in carcasses may exceed the FDA tolerance level.

Despite a widespread educational campaign, sulfa residue violations have risen. The national violation rate for January and February was 15.8 percent. For all of 1978, the rate was 9.7 percent.

"Brown told us that these violations are not just from drug misuses or poor management by the producer," Hawton reports.



add 1--feed could be one

"The producer may want to collect the first feed that comes out of the auger from the truck that delivers commercially-mixed feed," Hawton says. "All phases of the industry--producers, feed manufacturers, veterinarians--must work together to reduce this problem. There are substitutes for sulfa compounds, but they could raise costs for both the producer and the consumer."

Further steps the producers can take to avoid sulfa residues include:

1. Be very aware of what types of additives your feed contains, and adhere to withdrawal requirements.
2. If the feed is mixed on your farm, schedule processing of non-medicated feed for growing (under 150 lb.) hogs or the breeding herd after medicated feed is mixed and before the non-medicated finishing (150 lb. to slaughter weight) ration is mixed. If this is not feasible, clean out or flush feed through mixing and handling equipment after mixing with a medicated feed.
3. If hogs are to be maintained in the same pens from start to finish, the feeders and pens should be cleaned after the pigs have been switched to a non-medicated feed. "Be careful to clean under the lip of the feeder," Hawton advises.

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UPDATE: SOYBEAN  
CYST NEMATODE

The soybean cyst nematode (SCN), which was first discovered in a Minnesota field last September, has been found in 14 other state fields since then says Herbert Johnson, University of Minnesota extension plant pathologist.

Four nematode races are generally considered to be the most important soybean disease-producing organisms in several states. The Minnesota nematode, however, appears to be a different race.

Soybean plants damaged by SCN are stunted, yellow and unthrifty. The area of the field affected will generally be oval-shaped and elongated in the direction of primary soil tillage. Its appearance is similar to iron chlorosis of soybeans. "Soil testing is the only reliable method for verifying SCN," Johnson says.

He advises growers to watch for symptoms of the disease and to have soil tested from suspect areas. If fields are clean, prevent movement of machinery from infested or suspect fields. Soil on the machinery may carry the nematodes.

If SCN is present, rotate away from soybeans and other host crops for three to five years. Hosts include snap beans, dry beans, peas and several other legumes. "Safe" crops include corn, cereal grains, sugarbeets, potatoes, grasses and sunflowers. (Sunflowers, however, invite build up of the white mold fungus which also can infect soybeans.)

Chemical control has been partially effective in other states and will be tested here, Johnson says. No SCN-resistant varieties are recommended at this time. Varieties that are planted in other SCN-infested states may not be adapted to Minnesota's growing season and were bred to resist other races of nematodes.

add 1--update; soybean cyst

"The fields that are known to contain SCN are within a small area of south-central Minnesota along the Iowa border," Johnson says. "Our presently recommended, high-yielding varieties will continue to be successful for many years. It took 19 years for SCN in Illinois to travel a few hundred miles from southern to central counties."

Soil samples should be collected from the row area to a depth of 8-10 inches. A total of about one pint of mixed soil from 8-10 samples is needed. Two laboratories that do the test are:

Minnesota Department of Agriculture Greenhouse  
830 West 6th St.  
Shakopee, Minn., 55379

(Samples may be moist or dry. No charge.)

Plant Nematology Laboratory  
Department of Plant Pathology  
University of Minnesota  
St. Paul, Minn. 55108

(Samples must be moist. \$3 payment to University of Minnesota.)

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HOG NUMBERS BUILD-UP  
TO AFFECT 1979 PRICES

Rapid expansion of the nation's pork supplies will lower prices to producers throughout the year, but the influence of short beef supplies should keep 1979 hog returns above the cost of production.

That's the outlook of Ken Egertson, University of Minnesota extension economist. Pork supplies will probably peak during the first quarter of 1980, he says.

"Prices will be trending downward throughout 1979 with fourth quarter prices probably in the low-to-middle \$40 per hundredweight range," he says.

"The most intense downward pressure will not occur until 1980."

The U.S. Department of Agriculture reported the number of hogs and pigs on March 1 was about 13 percent higher than a year earlier. The 50.5 million head in 14 hog producing states was the largest inventory since 1971.

Farrowing intentions for the March-May period were reported 24 percent higher than last year. Egertson comments, "After hog producers have had a chance to assess the impact of planned expansion, the actual increase might be less than stated in March, but it will still be large."

"Prices may not drop as much as one would expect because we have a short supply of beef coming on the market at the same time as pork supplies increase," Egertson adds.

He does not expect the pork situation to have much impact on cattle prices, however. "With cattle numbers close to the low point of the beef cycle, and the general increase in overall meat demand, any impact would be small."

Hog numbers--add one

The supply of pork was about 62 lb. per person in 1978. It will probably increase to 68-70 lb. in 1979, reflecting a 10-12 percent rise in production. By early 1980, supplies could be up as much as 20 percent compared to year earlier levels, and 25 percent higher than current levels.

"Hog producers have responded quite strongly to the high income situation of the last 18 months," Egertson concluded.

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March 26, 1979

Immediate release

ECONOMIST DISCUSSES MYTHS  
IN THE LAND MARKET

There are several myths about land prices that need to be put aside, says Paul Hasbargen, agricultural economist at the University of Minnesota.

One myth is that big farmers are pushing little ones off the land.

A second myth is that tax advantages help high income people buy land away from lower income ones.

"Neither of these myths can stand up when exposed to current economic facts," Hasbargen said at a series of land value seminars last week.

Hasbargen addressed land value seminars at Sleepy Eye, Long Prairie, Wheaton, Willmar and Minneapolis.

"Too many of us like to point the finger of blame at someone else--we keep trying to find the mythical bad guy who is pushing up land prices," Hasbargen says.

"Ten years ago we tried to pin it on the 'corporate farmer'--and many states passed anti-corporate farm laws. But in the past five years, those states had more rapid increases in farm land prices than states without such laws.

"More recently we've tried to blame the 'foreign investor'. Laws are currently being passed to monitor and regulate these investments, although foreign sales have been a very small portion of total farm sales.

"Now a cry is going up that 'big farmers' are eating up little ones. Actually the long term decline in farm numbers has leveled off quite dramatically in recent years," Hasbargen says.

add 1--economist discusses myths

For years, many operators were leaving small plots of land for better job opportunities in the cities. Most of this adjustment is now over.

Higher farm earnings in recent years have helped keep farm numbers in Minnesota at 104,000 for the past five years. "Thus, the charge that big farmers are gobbling up small ones is less true today than at any time in the past 40 years."

The myth that high income farmers--or non-farmers--can bid land prices higher than lower income people because of tax advantages does not stand up to factual analysis, according to Hasbargen.

He says a computer program that determines maximum bid prices under different sets of conditions points out quite clearly that the higher the marginal tax bracket of the land buyer, the lower will be his maximum bid price given otherwise similar circumstances. This is because land payments must be made out of after-tax earnings.

"The higher marginal tax bracket person will have fewer after-tax dollars left from earnings from a new land purchase than will the lower tax bracket person who can get similar net returns from the land. A recent Iowa study reached the same conclusion.

"People who want to hobble our more successful farmers with things like a graduated land tax that make them pay higher real estate taxes should know that our federal and state income taxes are already doing some of that.

"The people pushing up land prices are operating farmers," Hasbargen says. Investment buyers purchase less than 15 percent of Minnesota farm land. And as land prices have increased in recent years, investment buyers have bought relatively less farm land.

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## FRUIT DISEASES

Controlling Raspberry Disease--If your raspberries have been severely afflicted by cane blights, leaf spots or fruit rots, you may need to spray them soon after leaves start emerging this spring.

Herbert Johnson, University of Minnesota plant pathologist, advises that lime-sulfur or Bordeaux mixtures be applied in early spring when leaves are  $\frac{1}{4}$ - $\frac{1}{2}$  inch long. Such treatment will provide additional control for severe cases of anthracnose and spur blight.

Anthracnose is one of the most common raspberry diseases. Gray to white spots up to one-fourth inch in diameter show on canes. It also may cause tiny, yellowish white leaf spots. The small stems that hold flowers and fruits turn brown and die.

For average cases of disease, apply benomyl, captan, Dyrene, ferbam, folpet or zineb in spring when leaves are fully expanded, and again at bud stage.

For optimum yields, Johnson advises spraying every two weeks until harvest. "But be sure to follow cut-off dates for fungicides," he says.

Disease-controlling cultural practices include thinning of plants to provide better ventilation and drying, and removal of old fruiting canes after harvest.

For details, see Plant Pathology Fact Sheet No. 8, "Raspberry Diseases" or Extension Folder 375, "Home Fruit Spray Guides" available at county extension offices.

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add 1--fruit diseases

Strawberry Bud Stage Crucial--If your strawberries did not seem to produce as well as expected last summer, diseases such as leaf spot, blossom blight or fruit rot may be to blame.

"Sprays to control these diseases should be applied at bud stage, just before bloom," says Herbert Johnson, University of Minnesota extension plant pathologist. "This is the most important time to spray strawberries."

Chemicals to use include benomyl, captan, dodine, folpet, zineb or thiram. Strawberries may be sprayed again during blossom with fungicides only (no insecticides), and then every week or two until the cut-off date on the label.

For brand names of sprays and other details, see Plant Pathology Fact Sheet No. 2, "Strawberry Diseases," or Extension Folder 375, "Home Fruit Spray Guide" available at county extension offices.

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March 26, 1979

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SAVING MONEY IS INCENTIVE  
FOR MOST NEW GARDENERS

Why do people get started gardening? If you are idealistic, you may answer that they want the exercise, fresh air and garden-fresh produce.

These are factors, but Deborah Brown, extension horticulturist at the University of Minnesota, says that a recent poll conducted nationwide for the National Association for Gardening, shows that saving money currently is the biggest reason for beginning a garden.

Behind the pocketbook incentive, beginning gardeners listed their interest in nutritious vegetables available at their peak if ripeness, the added and unusual varieties they could grow and their liking for outdoor, physical activities.

"Saving money can be a big factor in favor of gardening," Ms. Brown says. "An average garden about 20 feet by 30 feet represents an investment of about \$20 (not counting rental of the land itself) and may yield some \$350 worth of fresh vegetables. First time gardeners, of course, will make a bigger investment in tools and basic supplies, but even then the savings can be impressive."

Although statistics show that the interest in gardening has leveled off slightly since its peak in 1975, at least half of all households in the midwest have gardens.

Ms. Brown suggests that one of the best sources of gardening information is your local Agricultural Extension Service office. The telephone number for

\_\_\_\_\_ County residents is \_\_\_\_\_.  
county name phone number

If you live in the Twin Cities metropolitan area, gardening information is available from several University of Minnesota sources. The horticulture clinic can be reached by calling 373-1100. Plant disease information is available at 373-0936 and insect pest questions should be directed to that clinic at 373-1044.

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March 26, 1979

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PUBLIC SHOULD SHARE  
SOIL CONSERVATION COST

Farmers need greater financial encouragement to practice soil conservation measures that protect the public's food supply and water quality, according to speakers at a conference sponsored in part by the University of Minnesota.

"Soil conservation measures installed on agricultural lands provide broad benefits to society..." said William Greiner, executive vice president of the Soil Conservation Society of America. He proposed that at least 75 percent of the cost of permanent soil conservation practices be provided through government funding.

"There has been a misconception through the years on the part of some non-farmers that soil conservation payments to farmers are subsidies," Greiner said. Such payments should, instead, be considered investments in the natural resources of soil and water, he claimed.

Public conservation spending can best be defended on its ability to improve water quality, said David Unger, U. S. Department of Agriculture deputy assistant secretary. In some cases, water pollution is caused by agricultural runoff--the topsoil, fertilizer and pesticides that are washed into bodies of water.

Decisions on what portion the government should pay for soil conservation practices should be made at the local level, said Ellis McFadden, president of the Indiana Association of Soil and Water. He said that local soil and water conservation district boards, made up of local residents including

add one--public should

farmers, should set cost-share ratios.

McFadden said that local and state funding should be added to the federal money available for sharing the cost of constructing permanent conserving structures. These structures include terraces, grassed waterways, trees and stream-bank cover.

The March 15 conference in Rochester, Minn., explored ways of improving water quality through control of soil erosion.

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and Agricultural Journalism  
Agricultural Extension Service  
University of Minnesota  
St. Paul, Minnesota 55108  
Tel. (612) 373-0710  
March 26, 1979

Immediate Release

#### MANDATORY CONSERVATION LIKELY

If voluntary programs do not decrease the amount of topsoil that erodes into the nation's waterways each year, farmers may be required by legislation to practice soil conservation.

That was the outlook of speakers at a water management conference sponsored in part by the University of Minnesota in Rochester March 15.

"It appears that a mandatory soil conservation program may be the only feasible solution for combating the nonpoint pollution problems in some areas," said William Greiner, executive vice president of the Soil Conservation Society of America.

(Nonpoint pollution is a water quality problem that is sometimes caused by agricultural runoff--rain washing topsoil, fertilizer and pesticides into waterways.)

"We all recognize there are those landowners and operators who simply will not install a soil conservation practice even though they may be losing large amounts of topsoil," Greiner said. He proposed that mandatory programs be legislated at the state level, and carried out through local groups such as soil conservation districts. The first forms of compulsory conservation are more likely to be federal, however.

Farmers who do not practice good conservation may someday lose eligibility to take part in federal-level assistance programs, Greiner said. This may include the price guarantees for grain under the Commodity Credit Corporation, agricultural loans and federal crop insurance.

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add one--mandatory conservation

Ellis McFadden, president of the Indiana Association of Soil and Water, reported that a sediment control bill has passed one house of the Indiana state legislature. As one of the leaders of the \$2 million Black Creek soil and water conservation project, he found that 95 percent of farmers were cooperative. The other five percent would not install conservation practices even though costs would have been completely covered by government funding.

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HANDBOOK OFFERS STORAGE,  
OUTDOOR LIVING TIPS

Do you remember Fibber McGee's closet? If your own household storage resembles that chaotic clutter, you may find the "Home and Yard Improvements Handbook" a helpful investment.

Available from the Bulletin Room at the University of Minnesota, the publication costs \$3.12 and is intended as a do-it-yourself guide with emphasis on making maximum use of storage. It is published by the Midwest Plan Service, a cooperative organization comprised of 12 regional land grant universities and the U.S. Department of Agriculture.

The chapters on storage offer hints for kitchen, bathroom, home office, sewing room and laundry area. A bill of materials and building guide are provided for two popular outdoor storage sheds.

Also in the handbook is an outdoor living section that includes step-by-step instructions for building a wooden deck and building illustrations for patio furniture and outdoor barbeque grills. Charts and tables help the home craftsman select wood by comparing ease of working, paint and nail holding characteristics and strength.

To order, send a check or money order for \$3.12 to the Bulletin Room, Coffey Hall, University of Minnesota, St. Paul, MN 55108. Ask for Home and Yard Improvements Handbook (MWPS-21). A companion publication, "Family Housing Handbook," is available for \$2.60.

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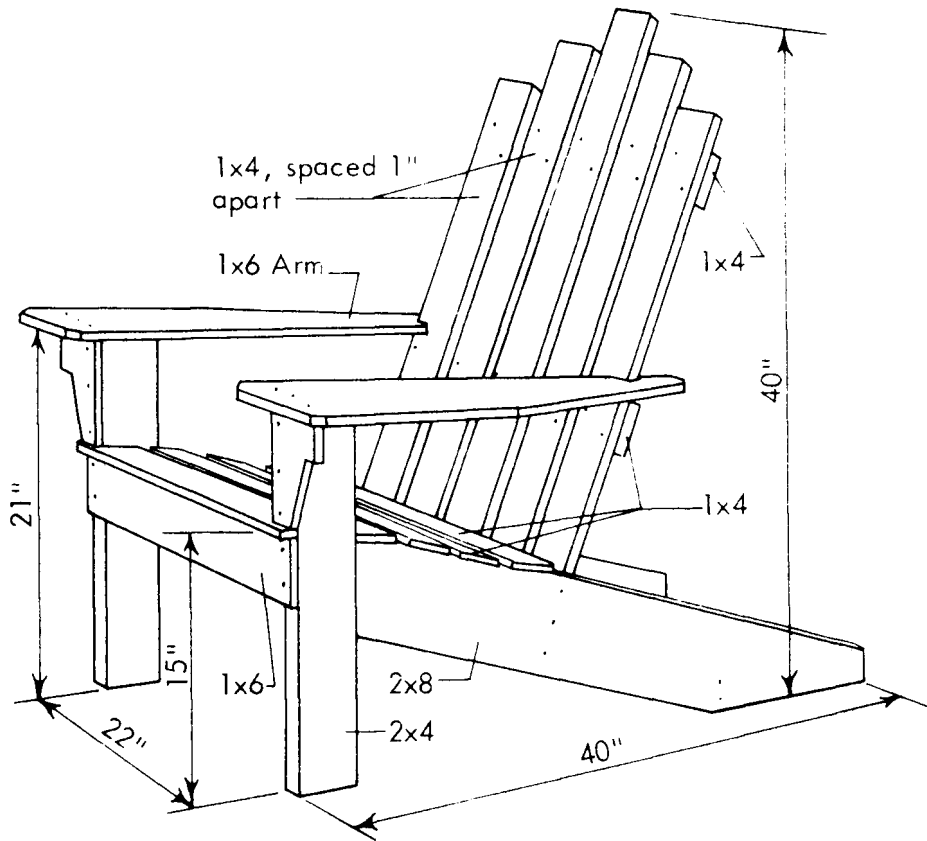
Add one--midwest plans



Rollout pantry beside refrigerator ( MWPS - 21 )



Add two--midwest plans



Building illustration for lawn chair ( MWPS - 21 )

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GRASS ADS SOUND  
TOO GOOD TO BE TRUE?  
YOU'RE RIGHT

Beware of the ads in popular magazines promising a lush lawn with little effort from Zoysia grass plugs, cautions Deborah Brown, extension horticulturist at the University of Minnesota. Like so many claims that sound too good to be true, these truly are.

"Zoysia is a poor choice for Minnesota," Ms. Brown says. "In many cases it will survive the winter, but the plugs of grass won't spread in this climate to cover your whole lawn like the ads suggest."

The grass is suited to more southerly regions, but even there it is a coarse and rather undesirable grass. In Minnesota, Zoysia will turn brown at the first frost in the fall and will turn green very late in the spring.

"Save your money," she says. "There's no way the Zoysia ad claims will work out in this part of the country."

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ATT: Extension Home Economists

Immediate release

MECHANICALLY-DEBONED MEAT ENDORSED  
BY UNIVERSITY FOOD SCIENTISTS

Mechanical processes can annually recover billions of pounds of nutritious meat from the bones of animals, fish and poultry, according to a newly released report by the Institute of Food Technologists (IFT). Theodore P. Labuza and Isabel D. Wolf of the University of Minnesota's department of food science and nutrition, IFT representatives in the midwest, said the mechanically processed meat product can be used by itself to make products such as fish sticks and poultry hog dogs, or mixed with hand deboned meat in sausage and other formed meat specialties.

According to Labuza and Wolf, more than 200 million pounds of deboned poultry meat are now being produced in the United States, as well as large quantities of minced fish. A billion pounds of red meat are potentially available by using this technique on the neck and back bones of cattle, sheep and pigs.

Mechanical deboning is a process in which a whole carcass, separate parts, or coarsely crushed bones are forced against a screen or slotted surface of a deboner. The muscle and other edible tissue passes through the openings, but the bone portion is shunted to one side and may be used for making broths or bone meal. Deboned red meat and poultry emerges from the machine as a finely ground, paste-like product.

Concern has been expressed about possible health hazards of bone particles included in the mechanically processed product. The United States Department of Agriculture, which regulates the use of mechanically processed meat products, limits the size of such bone particles. The amount of calcium from bone in

add 1--mechanically-deboned meat

the mechanically processed meat product is also limited to 0.75 percent. In addition, since the regulations limit the maximum amount of processed meat that can be used in, say, a hot dog to 20 percent, the final maximum amount of calcium from bone in any consumer product will be 0.15 percent, according to the food scientists.

Similar regulations are expected soon for poultry products.

This added calcium could logically be considered a nutritional "plus," the IFT Expert Panel on Food Safety and Nutrition, which produced the report, said. Bone meal with similarly sized particles is used as a nutritional supplement. Many nutritionists consider present diets to be deficient in calcium.

The IFT report also cited research studies which investigated other possible hazards such as pesticide or antibiotic residues, as well as of trace elements. In most instances, no significant hazards were found. Exceptions include the possible accumulation of tetracycline in bones of calves fed this antibiotic, but so far the amounts found in mechanically processed veal products have been well below safe tolerance levels.

Trace elements such as cadmium, zinc, selenium, and arsenic were not detected in the mechanically deboned meat, according to the USDA study cited by the IFT.

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4-H NEWS

Immediate release

CHILDREN STUDY NATURE  
TO LEARN ABOUT "LIFE"

"Exploring the Environment" of nature helps children understand how everything is connected--how people rely on plants, plants rely on soil--and how people rely on people.

"Exploring the Environment" is the name of a conservation project designed for 9-11 year-olds. It is offered through the 4-H program of \_\_\_\_\_ County Extension Office, says County Agent \_\_\_\_\_.

"Children in this project take trips and hikes in forests, fields and along streams," \_\_\_\_\_ says. "They learn a key concept--ecosystem. The natural ecosystem is the total relationship between people, plants, animals, soils, climate and water. As they grow older, these children will be better tuned into the human ecosystem, where everything we accomplish depends on the cooperation of other people, and everything we do affects someone else."

The first thing the members learn, however, is how to take care of themselves. They are taught to use common sense to avoid accidents, to always bring a first aid kit, and to touch only the plants they know are not poisonous. Adult leaders talk about what to wear on hikes and how to be safe.

During a one-hour walk through the woods, a child may hear or see signs of a woodpecker finding food in a tree. He or she may learn to tell an elm from a maple on an early trip, and a white pine from a red pine on a more advanced trip. With the help of sensitive, patient adult leaders, they will eventually see how the cycle of birth, growth, aging and death takes place for one animal or plant, an entire forest, and carries over into the human environment.

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March 28, 1979

Immediate Release

TOP GAINING BULLS  
GO ON SALE APRIL 21

Top gaining beef bulls from the Minnesota Bull Test Station, Truman, will be offered for sale at 1 p.m. Saturday, April 21, at the Harder Livestock Exchange, Jackson, Minnesota. The station is located 3½ miles west of highway 15 & 8 junction near Truman.

A total of 96 bulls from ten breeds are on official 140-day test at the test station and will be offered for sale. Complete growth data will be available on all bulls. Each bull will be inspected for structural and reproductive soundness, according to Charles Christians, extension animal husbandman at the University of Minnesota.

The Minnesota bull test is sponsored by the Minnesota Beef Cattle Improvement Association and supervised by the University of Minnesota Agricultural Extension Service.

For top performance bulls of Angus, Charolais, Polled Charolais, Hereford, Polled Shorthorn, Simmental, Maine Anjou, Gelbvieh, Normande and South Devon breeds contact either C.J. Christians, 101 Peters Hall, University of Minnesota, St. Paul, 55108; or Herman Vossen, Southwest Experiment Station, University of Minnesota, Lamberton 56152.

South Devon and Gelbvieh bulls were the top gainers at the test station, Christians says. Four South Devon bulls represented the top gaining breed. These bulls averaged 3.72 pounds per day the first 112 days on test and are repeat top gaining bulls by Horseshoe Lake Farms, Inc., Royalton, Minnesota. Jack Hanson, owner, consigned the top test gaining bull at 4.24 pounds per day.

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add 1

Five Gelbvieh bulls averaged 3.52 pounds per day on test. Donald Voges, Walnut Grove, Minnesota, had the top gaining bulls.

Twenty-four Charolais bulls averaged 3.25 pounds per day for the 112 day test. John Blankers, Silver Hills Farms, Holland, Minnesota, had the top Charolais bull on test with a 4.02 pounds per day gain.

Ten Simmental bulls averaged 3.25 pounds per day on 112 day test. Luhman Brothers, Goodhue, had the top Simmental bull at 3.66 pounds per day. A Simmental bull entered by J. David Fruechte, Verdi, had a high 3.43 pound weight per day of age.

An Angus bull owned by Robert Sallstrom topped all 26 Angus bull gains with 3.88 pounds per day on test. John Reed, Brooten, had bulls that ranked high on weight per day of age with 3.00 pounds.

Sixteen Polled Shorthorn bulls gained an average 3.03 pounds per day on test, with the top gaining bull gaining 3.44 pounds per day owned by James Bryan, Red Wing. Arnold Krog, Lake Benton, had a Polled Shorthorn bull that ranked high on weight per day of age with 2.86 pounds.

Ritches Herefords, Rosemount, had the top gaining Herefords. Viking Ranch, Vernon Center, ranked high with a Maine Anjou consignment and Merlin Wissing, Preston, entered three high gaining Normande bulls.

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