

Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 1, 1978

ATT: Extension Home Economists

Immediate release

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A27P

MANY CONSUMERS PUZZLED
OVER USES OF BLEACH

Bleach seems to be a laundry product with a generation gap. Wanda Olson, extension household equipment specialist at the University of Minnesota, says a recent survey shows that it is used more widely by persons over 30 than by younger persons.

She thinks, however, that many consumers in the 18 to 30 year-old category are just beginning to use bleach and are confused about its function amid all the other laundry products. "Bleach is useful on many colored stains and it helps to remove some soils," she explains. "Chlorine bleach is usually liquid and oxygen bleach is powdered and the two products differ greatly in use."

Oxygen bleach is safe on any fiber, but chlorine bleach could damage spandex, silk and wool. Mrs. Olson recommends checking the permanent care label on any garment before using bleach. Color fastness is another consideration. To check a fabric for this with chlorine bleach, apply one drop of a bleach solution made by adding one tablespoon bleach to one-fourth cup water. Apply the solution to an inconspicuous portion of the fabric and wait one minute to check for any color change.

When using oxygen bleach, dip an unexposed part of the garment up and down in a solution of one tablespoon bleach to one-half gallon of hot water. Check for bleeding or color change.

The two types of bleach also differ on their sanitizing abilities. Chlorine bleach is an effective sanitizer in any water temperature or hardness, but the oxygen bleaches available to the consumer are not.

Chlorine bleaching action takes only two to four minutes so it is usually added to the end of a wash cycle. It can reduce the benefits from brightening agents and enzymes in a detergent.

-more-

page 2--uses of bleach

Oxygen bleach is more effective and faster acting when used in hot water. It requires more time than chlorine bleach--eight to ten minutes in a normal wash cycle, longer in warm or cool water.

Mrs. Olson says chlorine bleach poses special use considerations and she suggests following instructions precisely. These generally suggest one to one and one-fourth cups of bleach per washer load or one-eighth cup for each two gallons of wash water.

Never allow undiluted bleach to contact the fabric, Mrs. Olson advises. Dilute it before adding it to the wash, or if your washer has a bleach dispenser, add the bleach before the clothes are in the machine. This will prevent bleach from spilling onto the clothes while you are filling the dispenser.

She also cautions consumers against using chlorine bleach in water with a high iron content. This could cause yellow staining. And never mix liquid chlorine bleach with ammonia, rust removers or toilet bowl cleaners, Mrs. Olson says. The combination will release hazardous gases.

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MINNESOTA PERFORMANCE
BULLS BRING TOP DOLLAR

Minnesota Central Tested Bull Sale grossed \$41,625 with 54 bulls averaging \$770 at Lake Benton on April 22, says Charles J. Christians, University of Minnesota extension animal scientist. This compared to an average of \$660 last year.

A Simmental bull owned by Howard Krog, Lake Benton, topped the sale at \$1,450. This bull had a 3.89 average daily gain, highest for all bulls on the official 140 day test and was purchased by Dennis Solvie, Hancock, MN. Fifteen other Simmental bulls averaged \$828.

The second top selling bull brought \$1,425. It was a Charolais consigned by John Blankers, Holland. He gained 3.68 pounds per day, second highest for the 140 day gain test. The buyer was James Volz, Elmore, MN. Fourteen Charolais bulls sold for an average of \$798.

The top selling Angus bull was consigned by Merle Aamot, Kennebec, South Dakota, and sold for \$1,075. This bull gained 3.50 pounds per day while on test with a 1,121 lb. adjusted yearling weight. Richard Motter, Elkton, South Dakota, was the buyer. The second highest selling Angus bull was consigned by Robert Sallstrom, Winthrop, with a \$1,050 selling price. Nineteen Angus bulls averaged \$712.

The top gaining Polled Shorthorn bull on test. consigned by the University of Minnesota West Central Experiment Station, Morris, gained 3.04 pounds per day on test and sold for \$900. Bert Hanson, Vernon Center was the buyer. Seven Shorthorn bulls averaged \$712.

The Minnesota test is managed by Jack Delaney, Minnesota Beef Cattle Improvement Association, and supervised by Christians and Herman Vossen, both of the University of Minnesota Agricultural Extension Service.

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BEEF EXPORTS
EXCEED IMPORTS

The value of all U.S. beef exports in 1977 was \$350 million greater than the value of beef imports. The U.S. Department of Agriculture reports that the total value of beef exports in 1977 was almost \$1.4 billion.

University of Minnesota Agricultural Economist Paul Hasbargen suggests that those who have been concerned about beef imports should know that our beef exports exceed the value of beef imports.

"Trade is a two-way street. You can't export without importing," says Hasbargen. "And the facts are that most farmers are selling more produce abroad compared to imports of competing products.

The two largest beef export components were tallow and hides--each accounting for over 500 million.

The value of beef, veal and variety meats exported came to \$238 million. The value of live cattle exports was \$67 million.

On the import side, meat and live cattle imports accounted for almost all the value. Beef, veal and variety meat imports had a value of \$836 million. Live cattle imports were worth \$190 million.

Even if our large crop exports are ignored and we look only at U.S. exports and imports of all livestock, meat and meat products--the total value of exports exceeded the value of imports by \$241 million.

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FERMENTED COLOSTRUM
CAN BE EMERGENCY
DISEASE PROTECTION

Fermented colostrum can be an emergency source of disease protection for newborn calves in cases when the dam's colostrum isn't available, say University of Minnesota dairy scientists J.A. Foley, A.G. Hunter and D.E. Otterby.

Occasionally, maternal colostrum may not be available for a newborn calf. Possible causes include the dam dying at calving time or having calved without benefit of a dry period, when colostrum accumulates in the udder.

In addition, cows milked out before calving to relieve pressure due to udder edema won't give "true" colostrum after calving.

Many farms have fermented colostrum on hand, and researchers found that calves fed fermented colostrum survived without health problems. However, calves fed fermented colostrum plus sodium bicarbonate (common baking soda) acquired higher levels of disease protecting antibodies in their blood.

So if it becomes necessary to use fermented colostrum to supply antibody protection to newborn calves, the Minnesota scientists recommend neutralizing the acidity of the colostrum with common baking soda.

Add one teaspoon of baking soda to each quart of colostrum fed. Newborn calves will oftentimes refuse fermented colostrum, so it may be necessary to force the mixture, preferably with a stomach tube. The mixture should be fed three times during the first day of life, two quarts per feeding, if possible.

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FIRST ANNUAL MINN.-N.D. FEEDER
PIG SHOW IN ALEXANDRIA

Dairy farmers selectively breed their herds to get cows that produce the maximum amount of milk. Why shouldn't pork producers selectively breed their animals to produce the biggest and best quality product?

That's the rationale behind the annual Minnesota-North Dakota Feeder Pig Show and Sale planned for the Runestone Center at the Douglas County Fairgrounds in Alexandria on May 17, as explained by Robert Blackwell, a member of the State Pork Producers' executive board and show chairman.

"Pork producers need to improve the quality of their breeding stock. If we can provide a better quality meat at the supermarket counter, we will have greater confidence from consumers, and they in turn will buy more of our products," explained Blackwell.

C. J. Christians, University of Minnesota extension specialist, feels that the show is long overdue. "Minnesota is second in feeder pig production, behind only Missouri," he said. "This show gives a pork producer a chance to see his hogs compared to other producers."

Over \$1200 in incentive prizes will be offered to exhibitors during the show. Christians says each exhibitor will be encouraged to consign at least one barrow, weighing between 40 and 55 pounds, to the New Ulm Test Station of the Minnesota Pork Producers.

At the New Ulm Test Station, the barrows will be observed and tested beginning June 1st. All barrows will be eligible to be shown live at the Minnesota State fair.

-more-

add 1--first annual MN.-N.D. feeder pig show

The \$1 entry fee per head will be refunded for that commercial pen if one barrow is consigned to the New Ulm Test Station. "This should provide the incentive to pork producers to improve their herds," said Blackwell.

A barbecue awards banquet will be held at 6 p.m. Wednesday evening. The guest speaker will be Bill Buller, National Pork Producers' Council vice-president from Brookings, South Dakota.

Entertainment will be provided by the Reachout Singers from Alexandria. The Minnesota and North Dakota Pork Queens will also be in attendance.

More information can be obtained about the May 17 sale and show by writing to: Minnesota-North Dakota Feeder Pig Show, Box 536, Alexandria, Minnesota 56308.

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OWNING HORSES A POPULAR, EXPENSIVE VENTURE

After hitting a peak in 1916 and then a long valley of lows, the horse population in Minnesota is on the rise. Pegasus would be proud.

According to Malcolm Purvis and Dan Otto, University of Minnesota agricultural economists, the horse's role in Minnesota life has changed since its zenith in 1916. Instead of being a beast of burden, the horse's station in life has been elevated to that of a recreation vehicle--carrying proud owners through honeysuckled bridle paths.

The two economists noticed that sometime during the equine's population depression, folks stopped counting the number of horses in the nation. And since nobody really knew just how many of the animals are in Minnesota--or their consequences--Purvis and Otto began a study to find out answers to these questions. They confined their study to Anoka County.

As a result of their investigation, the two uncovered about 3,500 horses in Anoka county--and almost all of the steeds were kept for recreational purposes. The researchers found that most of the horses (81 per cent) were boarded on their owner's property--usually in the non-urban parts of the county. And surprisingly, most of the horse owners were not directly involved in agriculture--in fact, most frequent occupations category listed by the owners were skilled operators, including truck driver; craftsmen; followed by owner-managers, salesmen and professionals. Average income of the horse owners was about \$15,000 per year--slightly above the mean for the state.

Add one--owning horses

The typical horse owner who boards his animal at home has about 3 horses, and \$6,243 worth of equipment for the horses, including trailer, barn, saddles, bridles, riding clothing and tack supplies. The owners buy 295 bales of hay and nearly two tons of grain during the year and spend a whopping \$797 on veterinarian, farrier, maintenance and special fees.

Purvis and Otto note that after including transportation costs and a 10 per cent capitalization charge on horse and equipment, the annual cost of owning horses for these 'typical' suburban households is over \$1,432 per year, representing nearly 8 per cent of their reported incomes.

Since equestrians who board their horses off-the-homestead, usually have fewer horses (usually one), they spend considerably less on their horse activities--about \$720 per year.

Using the figure of 3,500 horses in Anoka county, Purvis and Otto estimate that the horseowners have about \$4.1 million invested in capital equipment such as barns, trailers, saddles, bridles and supplies. Annual cash outlays including feed, veterinarian and farrier expenses, horse shows and related fees are estimated at \$1.7 million for the county.

Horse owners seem to be a dedicated lot, Purvis and Otto point out, with nearly 88 per cent responding they plan to continue to own horses in 4 years and nearly 70 per cent planning to own horses in 10 years.

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ANHYDROUS AMMONIA
CAUTIONS TOLD

Minnesota Extension Safety Program Specialist Robert Aherin says anhydrous ammonia can be an extremely dangerous chemical if not handled properly.

This chemical is normally stored under pressure in liquid form and when it is released to the atmosphere it vaporizes quite quickly. Because ammonia boils at -28 degrees F. it has a drastic cooling effect when it vaporizes.

Ammonia striking the skin can freeze the flesh almost instantly. Also, anhydrous ammonia has a very strong attraction for water, which helps keep it in the ground by dissolving the soil moisture.

Because the tissues of the respiratory tract, eyes and skin contain a high percentage of water they are very susceptible to caustic burns from contact with ammonia. If ammonia comes in contact with any part of the body it seeks out the moisture and destroys the tissues in a very short time.

Follow these precautions when handling anhydrous ammonia:

1. Basic protection for a person transferring ammonia or operating an applicator includes rubber gloves and chemical goggles and/or a full face shield. The most important time to wear this protection is when transferring the ammonia or when working on the equipment. If you store bulk quantities of ammonia on the farm a rubber suit and a gas mask with ammonia canister should be on hand to permit emergency work.

2. Check all relief valves, hitch pins and applicator tubes to make sure they are in good operating condition.

- more -

add 1--anhydrous ammonia cautions told

3. Check all hoses and couplings for breaks and cracks before using.

4. A minimum of five gallons of water should be available for flushing in case of accidental contact with anhydrous ammonia. Water is the only first aid for anyone who comes in contact with this fertilizer.

Ideally a five gallon water supply should be available on the nurse tank, applicator, and tractor. Also, anyone applying anhydrous ammonia should carry a small squeeze bottle of water in their shirt pocket to use in an emergency for temporary relief until they can reach a larger water supply. The water should be changed daily and remember any injury must be flushed with water for at least 15 minutes before going for emergency help. Never use salves or ointments on any anhydrous injury.

5. Work up wind when possible.

6. Ammonia fittings on filling and transfer lines are designed to be hand tightened. Do not use wrenches.

7. Carry filler hose only by the valve body or coupling, but never by the valve handle.

8. Make sure that hose and fittings are free of dirt and loose rust.

9. Check that all bleedvalves are closed before opening valves for filling.

10. Stay in attendance during transfer or filling to prevent overfilling.

11. Open bleedvalve and wait for bleeding to cease before disconnecting couplings, make sure the bleed hole is away from you.

12. Check anhydrous equipment for wear and damage before accepting it from your dealer. Also do not accept equipment that does not have a five gallon water supply on it. If your dealer does not supply personal protective equipment ask him where you can obtain it.

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WINGED APHID FLIGHTS
MAY BE SOURCE OF MDMV

A virus-caused corn disease that reached epidemic proportions in late-planted sweet and field corn in Minnesota last year recently was confirmed as maize dwarf mosaic virus (MDMV), report Richard Zeyen and Erik Stromberg, plant pathologists at the University of Minnesota. The epidemic was responsible for \$2.5 million in sweet corn production losses.

Minnesota was not the only northern corn belt state to report the occurrence of MDMV last year. The virus was reported for the first time in North Dakota, Wisconsin, and Michigan.

Questions confronting corn growers are: Why did MDMV, which is a typically southern virus, suddenly occur in the northern corn belt and will it strike again? The scientists say that currently there are no concrete answers. However, Zeyen and Stromberg offer several hypotheses to explain why the virus suddenly occurred last year.

--The virus may have been seed-borne. Plants grown from contaminated seed may have served as a source of the virus for spread by local aphid populations.

--The virus may have been here in the past and become established in perennial grasses which serve as a virus reservoir for aphids.

--The continuous planting of corn on the great Plains may have allowed the aphids to spread the virus progressively northward from infection centers in the Missouri River, Mississippi River, and Ohio River Valleys.

-more-

add 1--winged aphid

--Large populations of winged aphids may have been blown from southern regions on low-level jet stream winds during the months of July and August and rained out by thunderstorm activity on the northern corn belt.

The distribution of virus-infected fields and the pattern of infected plants within fields during the 1977 epidemic did not follow patterns typical of seed transmission nor of spread from roadside grasses, according to the researchers. "Planting dates and stage of plant development at infection indicated that most of the viral inoculum had arrived in Minnesota during the first week of July," explain Zeyen and Stromberg.

"Therefore, we began to investigate the possibility that low-level jet stream winds had blown large quantities of winged aphids from the southern U.S. into the northern corn belt where thunderstorm activity caused the aphids to rain out over large areas." After checking climatological data for last summer with Earl Kuehnast, state climatologist, the scientists found that on July 2 and 3 a constant stream of air was moving from the Missouri River Valley northward into Minnesota, the Dakotas, and Wisconsin. Weather data also indicated that the flow of southerly winds was interrupted by thundershower activity on July 3 which ran from Moorhead, Minn., down through the Twin Cities and into Wisconsin.

"After comparing the route of the thunderstorm activity with the results of the 1977 summer survey for the virus, we concluded that the two events may have been related," say Zeyen and Stromberg. "It is possible that the source of inoculum for the 1977 epidemic came from the southern Great Plains on winged aphid flights which were rained out over the northern corn belt in July."

Massive aphid flights and aphid rainouts on the Great Plains have occurred in the past. In fact, Minnesota entomologists reported a similar relationship between aphid flights and barley yellow dwarf virus in the late 1950's and early 1960's.

add 2--winged aphid

The scientists say that this hypothesis for the arrival of MDMV on winged aphid flights is attractive, but it is complicated by the length of time aphids can retain the virus. The reported retention time for the virus in aphids is about four hours. But a slightly longer time period may be required for low-level jet streams to arrive in Minnesota.

Experiments designed to retest how long the aphids can retain the virus have begun at the St. Paul Experiment Station. It is hoped that the research conducted during the 1978 growing season will determine the source of MDMV.

While MDMV poses a threat to corn production in the northern corn belt it is too early to be alarmed over its sudden appearance, according to the researchers.

There is the possibility that an epidemic like that which occurred in 1977 may not happen again.

If the problem persists they suggest that farmers may be able to use varieties of sweet and field corn that already have some tolerance to MDMV, until highly resistant northern corn belt varieties are developed. Both public and commercial breeders of northern adapted corn varieties are well aware of the potential problems and some have started breeding programs this year.

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DATES SET FOR
FIELD DAYS

Dates for summer crops and soils field day events at University of Minnesota
experimental stations and farms are as follows:

- June 27, Southern Experiment Station, Waseca
- June 28, Southwest Experiment Station, Lamberton
- July 6, Sand Plain Irrigation Research Farm, Becker
- July 12, Irrigation Center, Staples (small grain, forage handling)
- July 13, West Central Experiment Station, Morris
- July 19, Northwest Experiment Station, Crookston
- July 20, North Central Experiment Station, Grand Rapids
- July 27, Irrigation Center, Staples (horticulture tour starting at 6:30 p.m.)
- Aug. 17, Irrigation Center, Staples (annual irrigation field day)

More detailed information will be available from branch experiment stations
in the specific areas listed.

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MINIMAL LOSSES FROM
POST EMERGENCE LIQUID
NITROGEN-HERBICIDE

Post emergence applications of 28 percent liquid nitrogen and herbicide combinations will probably have only minimal losses under cool spring weather conditions.

"Many people suggest that 28 percent liquid nitrogen be incorporated. This safety measure prevents volatile losses," says Curt Overdahl, extension soils specialist at the University of Minnesota. However, incorporation isn't possible when liquid nitrogen is in combination with certain herbicides for post emergence application.

Liquid 28 percent nitrogen is about half ammonium nitrate and half urea. "Some people have frowned on surface application of this material due to the urea content," Overdahl says.

However, an 18-year trial at the Southwest Experiment Station, Lamberton, showed no significant losses due to lack of incorporation with fall-applied urea. Observations from this trial were as follows:

--When soil temperatures are warm, losses will occur when urea is not incorporated. There will probably be only low losses when soil temperatures are below 60 degrees F.

--If soil pH is above 7.5, you need to incorporate within a few days. Herbicide-liquid N combinations may not be satisfactory on these soils. With a pH of 6.5 or lower, losses should not be a big factor if soil temperatures are cool.

--Since liquid 28 percent nitrogen is only half urea, losses due to urea content shouldn't be as great as with urea alone.

--Rains from .1 to .2 of an inch will soak urea into the soil; this amounts to about the same as incorporation.

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BEEF CATTLE CONFERENCE
SET FOR JUNE 6

A beef cattle conference is scheduled at the University of Minnesota's St. Paul Campus starting at 9:30 a.m. Tuesday, June 6. Cattle producers, extension agents, vocational agriculture instructors and other interested people are encouraged to attend.

Current trends in beef cattle selection will be discussed. Cattle breeds to be evaluated and exhibited include Angus, Hereford, Polled Hereford, Shorthorn, Charolais, Simmental, Limousin, Maine Anjou, Marchigiana, and South Devon. There will be a special program for women.

For more information contact your county extension agent or C.J.Christians, extension animal husbandman, University of Minnesota, St. Paul 55108. In conjunction with the event, three prominent Minnesota cattlemen will be honored at an award dinner sponsored by the Minnesota Beef Cattle Improvement Association.

They are Leo C. Schuster, Alberta Charolais breeder, who will receive the Minnesota Purebred Cattleman of the Year award; Morris Kuschel, Sebeka, who will receive the Minnesota Commercial Cattleman of the Year award; and Greg Butman, Pipestone Angus breeder. Butman is being recognized as the state's outstanding young beef producer less than 30 years of age.

"Many prominent statewide beef producers were nominated for these awards," says Christians. Applicants were selected for excellence in beef performance records and service to their community and the livestock industry.

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LOW OR HIGH PIPELINES
FOR TIE STALL BARNES?

Dairymen can get clean, high quality milk using a pipeline system located at the front of tie stalls, just a few inches above the floor.

In fact, milk from low pipeline systems is less apt to taste rancid than high pipeline milk since it's subjected to less agitation, say University of Minnesota dairy scientists. Surveys have shown that milk obtained through high pipelines (about 7 feet) approaches being rancid due to milk lift and air agitation.

Most new milking parlor milk lines are installed below udder level to improve vacuum stability and milk quality. However, essentially all stanchion barn milklines are above head height for convenience and a more sanitary appearance.

Some low line milk inlets may need to be protected from nuzzling of curious cows. "But our unit did not require extra additional protection for sanitary purposes," says Dennis Johnson, dairy scientist at Minnesota's West Central Experiment Station, Morris.

Minnesota research compared effects of height for two pipeline units, located six inches or seven feet high, on milk quality, udder health, chore time and milking machine performance.

Teat end health was better with the low line since a lower vacuum setting was possible. Regarding mastitis, no definite conclusions can be drawn, although those measurable characteristics of a milking system known to affect udder health favor the low line system, the Minnesota reseachers said.

-more-

add 1--low or high pipelines

The high line system is more convenient, but not necessarily time saving, since the milk valve is nearer standing eye level. "An around-the-barn low line system would increase the difficulty in moving cows, feed and people unless you developed a system of ramps.

"Such a system would be most practical when installed in new barns specifically designed for it. If you install a high pipeline, minimize pipeline height and install adequate vacuum pumps and milk lines of high capacity," the scientists recommend.

Installation plans must be approved by state health authorities before construction starts. Johnson, along with Bob Appleman, Ralph Farnsworth, Vern Packard and L. K. Lindor were the researchers involved in the study. The research was conducted over 13 continuous months.

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ATT: Extension Home Economics

Immediate release

BEWARE OF MOLDS GROWING
IN THE FRIDGE, CUPBOARDS

The fuzzy green mold that you sometimes find growing on bread, cheese or other over-the-hill foods in your home could be more than just unpleasant to look at. Isabel Wolf, extension foods and nutrition specialist at the University of Minnesota, says some moldy foods contain toxic substances including aflatoxins, potent cancer-causing compounds.

She cites findings from a study at the University of Wisconsin where scientists collected food from homes and swabbed refrigerator surfaces for mold. They found mold capable of producing aflatoxins in two out of 30 samples of cheese, in a cake of yeast and in three out of 15 bakery products left unrefrigerated. In addition, other toxic substances besides aflatoxins were discovered.

"Consumers should be cautious about consuming food from which mold has been removed," Mrs. Wolf says. "I personally would not recommend using moldy food."

She suggests that consumers should be more wary of molds in stored foods. They should clean refrigerator surfaces regularly and practice good management of leftovers and foods stored for long periods.

"I question the wisdom of buying bread that contains no mold inhibitors, especially if it's not consumed quickly," Mrs. Wolf says. "I certainly would rather consume sodium or calcium propionate than the known toxic products of some molds."

If you buy bread with no mold inhibitors, keep it refrigerated, she advises. Within a week, aflatoxins from bread mold can penetrate two or three inches into the dough for bread or gingerbread.

Among refrigerated foods, those posing the greatest risk of mold contamination are dairy products and unprocessed fruits and vegetables. Nonrefrigerated foods include spices and bakery products.

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AS GARDENING SEASON NEARS
VOW TO CONTROL DISEASES

This is the month when gardeners put away seed catalogues and take up their trowels. Frank Pflieger, extension plant pathologist at the University of Minnesota, says with some simple cultural practices and the wise use of fungicides, gardeners can keep vegetable diseases to a minimum and yields of quality produce high.

He says that one aspect many gardeners overlook is selecting disease resistant cultivars whenever possible. Another pre-planting precaution is to buy only disease-free seeds, bulbs and transplants. It's also best to avoid transporting plants from diseased to disease-free areas, Pflieger advises. Garden tools and equipment are other possible carriers of disease organisms.

A soil analysis to help determine nutrient deficiencies is an aid to the serious gardener, Pflieger says. This will be a guide to fertilizer use. Varying the place where vegetable types are grown will help prevent problems from soil-borne organisms when related crops are grown in the same spot each year.

Weeds harm more than just the looks of a garden. They are hosts for many disease organisms as well as competitors for soil nutrients and water, Pflieger says. Similarly, insects cause damage by feeding on plants and, in some cases, by spreading virus diseases.

When used properly, fungicides kill fungus spores, but Pflieger cautions that these chemicals are protective. They will not cure existing problems. He suggests applying fungicides as a seed treatment prior to planting or foliage treatment. Sprays generally give the best plant coverage.

Diseased plants should be removed immediately and destroyed or they will serve as a source of infection. For that reason, slowly rotting compost problems can pose disease spreading problems unless the decomposition is speeded up.

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SEASON BEGINS FOR
HEARTWORMS IN DOGS

The arrival of mosquito season is the cue for dog owners to begin heartworm prevention measures for their pets, says Michael Pullen, extension veterinarian. An annual blood test and preventive oral medication beginning now and continuing through the summer and fall can prevent heartworm infection.

Pullen says heartworms develop from infective larvae introduced into the dog's system by an infected mosquito. These larvae mature into adult worms in the animal's heart and blood vessels in about five months. These mature worms then give birth to infective embryos, (microfilaria) which are then ingested by other mosquitos when they bite the infected dog thus renewing the life cycle.

Although canine heartworm infection has been reported throughout Minnesota, it is found most commonly in the Twin Cities area. Pullen says a blood test early in the spring is important in determining whether treatment or preventive measures are needed. Both prevention and treatment require close veterinarian supervision. Canine heartworms is not considered of public health significance.

Heartworms can result in rapid tiring, exhaustion and soft coughing. Later dogs develop dry, rough hair and they may lose weight, become anemic and collapse on exercise. As adult heartworms lodge in the heart, pulmonary arteries carrying blood to the lungs become thickened and obstructed. The animal's liver and kidneys can be destroyed as the disease progresses.

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THREE COUNTY EXTENSION
DIRECTORS RECOGNIZED

Three Minnesota county extension directors have been nominated to present papers at a national meeting in Boise, Idaho this August.

They are Albert Page, Grand Rapids; J. David Radford, Carlton; and John W. Peterson, Gaylord. They have been nominated to present papers in professional improvement sessions at the annual meeting of the National Association of County Agricultural Agents (NACAA).

Page submitted a paper on "Farm Income--Varied Approaches to Horticulture Programs." He said, "We have helped people do a better job growing vegetables by suggesting varieties best suited for the area. We have helped with insect and disease problems and made gardening, flower and vegetable, more rewarding. People have told us this."

Radford submitted his paper on "Carlton County's Well Kept Secrets or Why we Like it Here." He tells about Agate Days and Art Fair, Gem and Mineral Club, and organized Park Commission and Parks. He said, "The Lake Superior Agate is Minnesota's state stone and one of Carlton County's biggest promoters' assets."

Peterson submitted a program in "4-H Record Improvement." He said, "From 1956 to 1966 only two 4-H members received national club congress trips. From 1967-77 five 4-H members received trips to the national club congress based on their records. Girls in 1976 and 1977 were among the top six in the nation and received silver trays."

"If selected by the vice chairman and his committee from the North Central Region, they will be asked to give their papers at the annual meeting in Idaho this August," reports Erven Skaar, Cambridge, Minnesota extension programs committee chairman for the NACAA.

Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 15, 1978

Immediate release

WARM WEATHER MAY
BRING STORED GRAIN
INSECT PROBLEMS

With warm weather on the way, now is the time for people with corn or wheat in farm bins to check for stored-grain insects.

Corn sampled last fall, after about one year in storage, had a high rate of insect infestation. Over 30 percent was graded as infested (USDA weevily), according to Alan V. Barak, University of Minnesota entomologist. Grain sampled this spring has had a very low rate of infestation to date.

However, when the grain temperatures increase to 55^oF the insects will begin to reproduce and feed. Start now to check your stored grain for the first signs of insect activity even though your primary interest is getting your field work completed, Barak advises.

Grain that is "peaked" or overfilled and grain bins with heavy spout lines or dockage are more apt to be infested. Such grain is difficult to aerate and cannot be fumigated properly. Look for insect webbing, insects on the surface, and damp or sprouting surface grain.

Grain that becomes infested with insects may have to be moved, cleaned and protected, or even fumigated before it is sold to avoid getting docked for being infested. See Entomology Fact Sheet No. 9 "Insects In Stored Grain" for details.

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St. Paul, MN 55108
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May 15, 1978

Immediate release

IN BRIEF. . . .

Garden, Corn Field Problems. "It happens every year. When a farmer is planting that corn field up by the house he shuts off the seed and marks the rows for the family garden," says John Lofgren, extension entomologist at the University of Minnesota. "After the garden is planted someone remembers that the insecticide or herbicide attachment was still going and they have some rootworm insecticide in the radishes or cucumbers."

And there's no way out of it, Lofgren says. "If the pesticide is not registered on that crop, it's a misuse. The only advice we can give is to plow it up and put in a crop for which the chemical is registered--perhaps sweet corn."

* * * *

Fruit Insects. From mid-to late-May and early June is a prime time for spraying apple trees. One of the most important periods in the fruit spray schedule is the petal fall stage and the two or three week period just following petal fall. Three insects--the codling moth, plum curculio and leaf roller are active at this time, says John Lofgren, extension entomologist at the University of Minnesota.

For strawberries and raspberries, the key time for controlling Lygus Bugs, strawberry weevils and sawfly larvae is the bud stage (before the blossoms open).

In order to protect bees, don't apply insecticides when the crop is in bloom. More information is available in Extension Pamphlet 184, "Home Fruit Spray Guide," available from county extension offices.

* * * *

-more-

add 1--in brief

Cankerworms. Cankerworms may attack leaves of trees soon after the leaves open. By the end of May the leaves appear lacy and heavily infested trees may be completely defoliated. Cankerworm hatch was detected by scientists on the University of Minnesota's St. Paul Campus on May 9. Where it's necessary, chemical control should begin in about two weeks. Cold, wet weather right after hatch can severely reduce cankerworm populations. A single season's defoliation will have little effect on a healthy tree. However, several complete defoliations in successive years or defoliation of a small or recently transplanted tree can cause damage.

Consider weather plus a tree's condition and history before spraying, advises Mark Ascerno, University of Minnesota extension entomologist.

* * * *

Dairy Judging. Potential dairy judges and people interested in sharpening their judging skills are invited to the 11th Annual 1978 Dairy Judges' Workshop sponsored by the Purebred Dairy Cattle Association of Minnesota. The day-long workshop is scheduled for June 7th at Willow Wells Venture Swiss Farm and RKO Holstein Farm near Hutchinson, Minnesota. Howard Voegeli, noted national Brown Swiss breeder and judge, will be the official judge. For more details and a registration form, contact PDCA, 101 Haecker Hall, University of Minnesota, St. Paul, MN 55108.

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University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 15, 1978

ATT: Extension Home Economics

Immediate release

USE AIR CONDITIONERS RIGHT
FOR MAXIMUM COMFORT

Is your air conditioner ready for the sweltering days ahead? Better to find out now than to be surprised and hot under the collar in a few months.

Roger Peterson, extension energy specialist at the University of Minnesota, suggests a pre-season check for both room and central air conditioners. Filters should be cleaned or changed and grills, coils and cooling fins should be vacuumed.

If you have a room air conditioner, lubricate it according to manufacturer's instructions. For central air conditioning, a tune-up by a qualified service person is advisable. This should include oiling the bearings on the fan or compressor. Checking the pulley belt tension, looking for refrigerant leaks and checking electrical connections, thermostat accuracy and dampers.

Once in good condition, Peterson recommends setting your thermostat at 78^oF. (or higher) and leaving it there. You will save up to three percent of your cooling bill for every degree you raise the thermostat. Running your air conditioner when you're not home is a waste of energy, too.

Because humidity control is as vital to comfort as temperature control, Peterson recommends saving showering and washing for the coolest part of the morning or evening. An air conditioner will dehumidify best with the fan switch on automatic. Exhaust fans in the kitchen and bathroom also help remove moisture.

If an additional dehumidifier is used in non-air conditioned rooms, check the unit regularly. The condenser coils should be clean and not encrusted with mineral deposits. Set your dehumidifier for a maximum of 60 percent relative humidity, Peterson suggests.

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University of Minnesota
St. Paul, MN 55108
Tel. (612) 373-0710
May 22, 1978

Immediate release

NEW ULM SWINE
OPEN HOUSE SET
FOR JUNE 15

About 60 pens of Minnesota's leading swine breeding stock will be on display Thursday, June 15, at the New Ulm Swine Evaluation Station.

The day's activity will begin with an evaluation of pens on test and an evaluation contest at 1 p.m., according to C.J. Christians, extension livestock specialist at the University of Minnesota and supervisor of the station. Special awards will be presented to those individuals who score nearest the actual cutout information on the pigs evaluated.

The Minnesota State Fair central production barrows will also be featured. The barrows started their official gain test on June 1, says Ed Hubly, test station manager.

In addition, John Phillips of George A. Hormel and Co. will present a slide summary of the 1977 National Barrow Show central test division. According to Phillips, the Minnesota State Fair central test barrows will be evaluated in the same manner as the National Barrow Show individuals, where all barrows are ranked on pounds of muscle gain per day on official test at the New Ulm station.

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Immediate release

THINKING OF BUYING
A MINI-COMPUTER
FOR YOUR FARM?

If you are considering a mini-computer for your farm business, you will be joining a small but growing group of Minnesota farmers. "A half-dozen people have contacted me about computer purchases over the last four months," says Earl Fuller, extension economist in farm management at the University of Minnesota.

An old farm management adage says, "Be not the first on which the new is tried nor the last to lay the old aside." This probably applies to computers as much as it did to new combines or beet thinners, says Fuller.

The first ones out get obsolete pretty fast--new ones will come along quite rapidly to replace them. "But the people I have been in touch with have some pretty good ideas on how to make these new \$8,000 or so machines pay for themselves," Fuller says.

The problem is that someone is going to have to develop some new software (instructions) to make them work. (Software costs could easily equal hardware costs). People and firms are developing software but there is little a farm can use.

Until farm applicable software is available, says Fuller, things will go pretty slow; yet the computer potential for gaining better control over your whole farm business is there! Another consideration is that repair and maintenance, while likely infrequent, will not be available early for many farms.

-more-

add 1--thinking of buying

Computer work in the land grant universities has focused primarily on how to use computers in the planning process. The new mini-computers, while useful in planning, probably have greater usage in terms of capturing and monitoring the data which controls the on-going business. One role the university could plug is that of a clearing house for software availabilities, says Fuller.

Certain hardware (computer) features seem necessary for most farm applications, says Fuller. The ease in speed with which floppy disks can load and unload data makes them a worthy consideration. Terminals that print hard copy will be necessary for some applications.

Computers that have the capability of hooking into large time-share systems will make a lot of sense. For now, Fuller suggests being sure that the computer has the proper wiring so that this could be done later.

Most of those on the market now only permit one language--BASIC. One that can be adapted to other languages as well should be considered. Meanwhile, lots of people can write BASIC, but you will have to write out for them exactly what you want done--a real challenge in itself.

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Tel. (612) 373-0710
May 22, 1978

Immediate release

EARTHWORM RAISING
SCHEMES FRAUDULENT

Beware of advertising claims for earthworm raising schemes to make money, advises David Noetzel, extension entomologist at the University of Minnesota. These slick promotional pieces fail to mention that these worms are not found naturally in gardens or farm land, they can't be used successfully in garbage decomposition and they are too small to sell for laboratory use.

Noetzel says that the worms being advertised are manure worms (Eisenia foetida) found naturally only in manure piles and thus not adapted to life in the soil as are nightcrawlers or leafworms (common angle worms). "Their only value to agricultural land would be the increased fertility from their death and decomposition," Noetzel says.

Nightcrawlers and angle worms are found in farm land and are used in teaching laboratories, but it is only these specific worms that are of value for these purposes. And, according to Noetzel, neither variety of worm lends itself to culture production. Manure worms don't occur nor survive in the soil so they don't deserve any of the credit for soil aeration, organic matter decomposition or other soil changes brought about by angle worms or nightcrawlers.

Noetzel stresses that raising manure worms is not practical if the worms are intended for field, garden or laboratory use. And besides, manure worms still take more than a year to mature.

"Prospective producers should be very cautious about investing in this enterprise," Noetzel concludes. "There is no practical outlet for most manure or red worm production."

CA,IA,TCO

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May 22, 1978

Immediate release

WOODPILES THREATEN
HEALTHY ELMS

The woodpile that was so welcome last winter may actually be a hazard this spring, say extension specialists at the University of Minnesota. According to extension plant pathologist Asimina Gkinis and extension entomologist William Phillipsen, any woodpiles containing elm logs with the bark intact are very likely to contribute to the spread of Dutch elm disease.

Two species of elm bark beetles--native and European--are the primary transmitters of the Dutch elm disease fungus. And both types like to breed under the bark of dead or dying elms. Consequently, any elm logs left over from last winter pose a threat for two reasons. They may contain fungus-carrying bark beetles that have not yet emerged and, fungus infected logs and non-infected logs are potential breeding sites for this spring's adult beetles.

Homeowners can help by checking their woodpiles carefully for elm logs and immediately destroying any that they find. Elm is usually easily identified by the alternating light and dark layers of the bark visible in a cross section. If homeowners do not wish to part with their elm wood, then they must debark the logs. Local tree inspectors or county extension agents can help with elm log identification and disposal.

Gkinis and Phillipsen emphasize the need to get rid of elm logs as soon as possible. The native beetles emerged around April 1 and are already moving around infecting healthy trees. European beetles will emerge by June 1, but any efforts now to dispose of dead wood will reduce the number of beetles available to spread the disease. Both types of beetles can breed and produce second generations this summer, therefore, prompt removal of all elms that are

-more-

add 1--woodpiles threaten healthy elms

dead or dying from any cause should be a continuous process. European beetles will reproduce themselves by July 15, so special efforts should be made to dispose of wood before that date.

Elm stumps with bark intact and elm trees with dead branches are equally good breeding sites for the beetles. These also should receive special attention as soon as possible. Stumps should be debarked or removed and destroyed, while the deadwood should be pruned from the healthy trees and also disposed of.

Many communities have ordinances allowing tree inspectors to take away elm logs on private property if homeowners do not dispose of the elm wood themselves. Homeowners are urged to get rid of their elm so that local officials do not have to intervene.

For more information contact your county extension office or: Linda J. Camp, University of Minnesota, Agricultural Extension Service, St. Paul, Minn. 55108, Tel. (612) 373-1785.

CA,TCO

Department of Information
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Agricultural Extension Service
University of Minnesota
St. Paul, MN 55108
Tel. (612) 373-0710
May 22, 1978

ATT: Extension Home Economists

Immediate release

COOKBOOK RECALL
TEACHES SAFETY LESSON

Cars, yes. But the recall of a Random House cookbook recently was a first. A recipe in Woman's Day Crockery Cuisine called for heating an unopened can of sweetened condensed milk in a crockery slow cooking appliance.

Food industry sources protested the recipe and the publisher has withdrawn an estimated 13,000 copies of the book from wholesalers and retailers. They pointed out that any unopened food can explode when overheated.

Borden Foods, one of the largest manufacturers of sweetened condensed milk, reports that this technique is similar to one that homemakers have been risking--and sometimes losing at--for years. Many homemakers have been injured making a caramel custard by placing an unopened can of sweetened condensed milk in boiling water for a lengthy period. The method often resulted in spattered stoves, walls and chefs, but still the method was used and passed on by word of mouth.

Borden Foods says the cookbook recall publicity will have served a function if it squelches these recipes. A caramel custard dessert can be made easily and safely by pouring one can of sweetened condensed milk into an 8-inch glass pie plate and placing it, covered with foil, in a shallow pan of water in a preheated 425° F. oven. Bake an hour or until thick and slightly caramel colored. Remove the foil, cool and chill before serving.

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Tel. (612) 373-0710
May 22, 1978

ATT: Extension Home Economists

Immediate release

FOR ENERGY WISE SUMMER COMFORT,
TAKE A LESSON FROM WINTER

Remember how you worked last winter to keep warm air in and cold air out? Roger Peterson, extension specialist in residential energy at the University of Minnesota, says many of the energy-saving improvements that save heating cost will also serve you well this summer, particularly if you have an air conditioner.

Insulation, caulking and weatherstripping are as important to comfort in the summer as the winter. Peterson recommends attic insulation with an R value of 38 or better.

When building, remodeling or redecorating, consider light colors for shingles and siding. They will reflect, rather than absorb heat, according to Peterson.

Adjust shades and draperies throughout the day. Close them during the heat of the day and open them, and windows as well, when temperatures drop at night. Outdoor shading devices such as awnings and reflective screens can reduce heat gain through windows by as much as 80 percent.

Peterson also suggests leaving storm windows on when they don't need to be opened or when rooms are air conditioned. Storm windows and insulating glass help keep heat outside.

Open attic windows or louvers allow hot attic air to escape. If the attic is still too hot, a wind turbine requires no electricity and takes advantage of even the slightest breeze to rid the attic of built-up hot air and humidity.

Another attic cooling method is to install a power fan in a window or through the roof. Some fans have thermostats that automatically turn them on when the attic gets too hot. This feature saves energy by running the fan only when necessary.

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St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 22, 1978

ATT: Extension Home Economists

Immediate release

CHECK EER RATINGS
TO BE ENERGY WISE
AND STILL KEEP COOL

If you're cheering the ever-rising thermometer this spring, think ahead to its final destination--temperatures in the 90's with humidities to match. It's this thought that spurs air conditioner sales and sets power company officials to worrying.

Indeed, air conditioning can account for half or more of a family's energy bill during the summer. But Roger Peterson, extension energy specialist at the University of Minnesota, says wise selection and use of air conditioning can save energy and dollars.

If you're going to buy an air conditioner, look carefully at the energy efficiency ratio (EER). Although this rating is voluntary, many air conditioner manufacturers post them on their units. Peterson says the higher the EER, the more economically it will cool. A unit with an EER of five uses twice as much energy as a similar unit with an EER of 10. The Minnesota Energy Agency recommends buying only air conditioners with EER measures of 8.0 or above.

"Energy efficient air conditioners may cost a little more, but they save energy and money in the long run," Peterson says. "If you want to check the EER of your present air conditioner, simply divide the BTU rating by the watts it takes to operate. An 8,000 BTU/hour unit consuming 1,000 watts has an EER of 8, for example."

In terms of your electricity bill, this 8,000 BTU air conditioner with its EER of eight will cost about five cents an hour to operate while the same size unit with an EER of six will cost 6½ cents an hour. If your house is centrally air conditioned with, for example, a 30,000 BTU, 2½ ton unit, an EER of eight translates to about 19 cents an hour to operate while an EER of six means about 25 cents an hour.

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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
May 22, 1978

4-H NEWS

To: Agents with youth responsibilities

LOCAL ADULT, JUNIOR
LEADERS TO ATTEND
CONSERVATION CONFERENCE

_____ will attend the 4-H
(names, addresses)

Conservation Leadership Conference June 5-9 at Itasca State Park.

(Provide details about the local leaders--major areas of interest, projects,
etc.)

Theme for the conference is "Conservation in a Changing World." says

_____ extension agent
(name of county)

(name)

Animal plus plant and soils resources will be emphasized during the week long conference. Featured will be bus tours of the park conducted by University resource specialists. Special topics covered will include wildlife management, aquatic ecology, compass and pacing, insect collections, wild edible plants and leaf collections, exploring the environment, selecting suitable uses for land and recreational use of firearms.

This year's program is dedicated to the memory of Dr. William R. Miles, University of Minnesota extension forester, who died August 10, 1976. Miles taught forestry and environmental education to thousands of 4-H'ers during his 15-year tenure as resource person for the conservation workshop.

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Department of Information
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University of Minnesota
St. Paul, Minnesota 55108
July 8, 1974

ATT: Extension Home Economists

Immediate release

MSC
GA27P

**DON'T OVERLOOK PORK
FOR BACKYARD BARBECUES**

Pork may be the unsung hero of the outdoor barbecue grill. Its natural tenderness suits it to the dry heat of a charcoal fire, says Richard Epley, extension meats specialist at the University of Minnesota.

Open air chefs who think only of beef may be delighted with the taste of pork steaks, chops or ham cooked over charcoal. Rib or loin lamb cuts also grill well and promise tender, flavorful eating.

Epley says pork and lamb adapt well to outdoor cooking because they come from young animals and, unlike beef, are tender throughout. Pork picnic cuts are about the only ones he advises against. The greater amount of connective tissue in picnic cuts makes them more suitable for slow moist-heat cooking.

Some people may avoid cooking pork on an outdoor grill because they fear the organisms causing trichinosis may go unchecked at the temperatures the meat attains. Although only one in 11,500 pigs is infected, the consumer can eliminate any risk by cooking pork to at least 137 degrees, a much lower point than the 170 degree internal temperature recommended to develop full flavor in the meat.

Most people overcook pork, Epley says. The 185 degree internal temperature once recommended to develop pork flavor and drive out excess fat will result in very dry pork if used on today's leaner meat.

Any meat destined for charcoal grilling should be thawed before cooking. Otherwise the outside may become charred before the inside cooks. Epley recommends thawing meat in the refrigerator at 32 degrees. That temperature greatly slows bacterial growth within meat and allows refreezing if it isn't used as planned.

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Department of Information
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Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 30, 1978

4-H NEWS

Immediate release

MSC
3A27P

SCHOLARSHIPS AVAILABLE TO 4-H'ERS

Agents: this is a fill-in-the-blank story for you to use in letting your publics know about scholarship availability through National 4-H Council. Be sure to fill in the blanks and have the story retyped before you submit it to your editors.

Nearly a quarter million dollars in scholarships are available to 4-H'ers and former 4-H'ers this year through the National 4-H Council, according to _____ county extension agent for _____.

"A total of 273 scholarships are being offered this year by various companies and foundations and will be administered by National 4-H Council. Applicants must be or have been 4-H'ers," he/she said.

The value of the scholarships varies from a small stipend to as much as \$1000 per year, _____ said. Some scholarships are reserved for applicants from certain geographic areas of the nation, while others are available to all applicants. Scholarships are usually awarded in late summer, however, dates for application varies.

To find out more about scholarships offered through the National 4-H Council, the 4-H'er should contact the county extension office.

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Agricultural Extension Service
University of Minnesota
St. Paul, MN 55108
Tel. (612) 373-0710
May 30, 1978

BEEF PRICES TO FALL

Cattle prices which have been escalating in the past few months are in for a slide within the next month or so, according to Paul Hasbargen, University of Minnesota extension economist.

"The old adage that what goes up must come down, applies to the cattle prices. Historically, we have seen many rapid upsurges in the price of live cattle, only to be followed by an equally fast decline," Hasbargen said.

During the past three weeks, Hasbargen noted, the price of choice steers has zoomed up \$8.00 per hundredweight, putting choice steer prices \$8.00 to \$10 higher than is suggested by current supply and demand conditions. However, prices may climb even higher before they peak, Hasbargen said.

According to Hasbargen, the recent hike in prices will decline soon, when processors find that they are unable to pass the higher carcass prices on to retailers and consumers. Simply, the consumer will curtail buying of beef to an extent causing the price for live animals to drop to a level where the consumer will again increase beef purchasing.

Consumers should not become overly concerned about an impending beef shortage, Hasbargen said, since beef supplies per person will be down only a few pounds from last year. Also, Hasbargen suggested that while meat prices are higher than they have been in the past, the increase in price will offset the lower cattle and beef prices experienced during 1976 and 1977 years when cattle prices were depressed.

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May 30, 1978

(WITH GRAPHS)

CATTLEMEN: ACT FAST ON HIGHER PRICES

Cattlemen wanting to take advantage of the current higher cattle prices should act now, according to Paul Hasbargen, University of Minnesota extension economist.

During the past three weeks, the price for choice steers has increased \$8 per hundredweight and may go even higher before peaking and falling again. The price fall will likely come within a month or so, Hasbargen said.

Cattlemen wishing to capitalize on the higher cattle prices should make plans to cull cows now, and perhaps sell or contract to sell yearling feeder cattle based on the futures market for later months. Also, he said, now would be a good time to contract ahead on this year's feeder calves if they are to be sold this fall.

Cattle feeders, Hasbargen said, may want to stay current on selling slaughter cattle out of their feedlots. They also may want to consider contracting ahead or hedging on cattle not yet ready for market. Cattle feeders may want to avoid purchasing feeder cattle for the next month, Hasbargen said. Reasons: the high prices may drop and in addition May-June is the normal seasonal high on feeder cattle prices.

"Historically, rapid increases in cattle prices have been followed by equally quick decreases. Using our experiences during other rapid increase times, we can predict that prices will fall when processors find that they cannot pass on the increased price to retailers and consumers. Current demand is still strong; however, resistance is likely to set-in in the next several weeks," Hasbargen said.

Add one--cattlemen: act

Harbargen cited the 1973 zoom in cattle prices, when fat cattle prices moved up \$20 per hundredweight from the beginning of the year to the middle of August. The last \$10 of the increase came between mid-July and mid-August. Cattle prices started down and the \$10 came off just as fast as it went on. In fact, he explained, by the end of September a full \$15 per hundredweight drop had occurred in the fat cattle market.

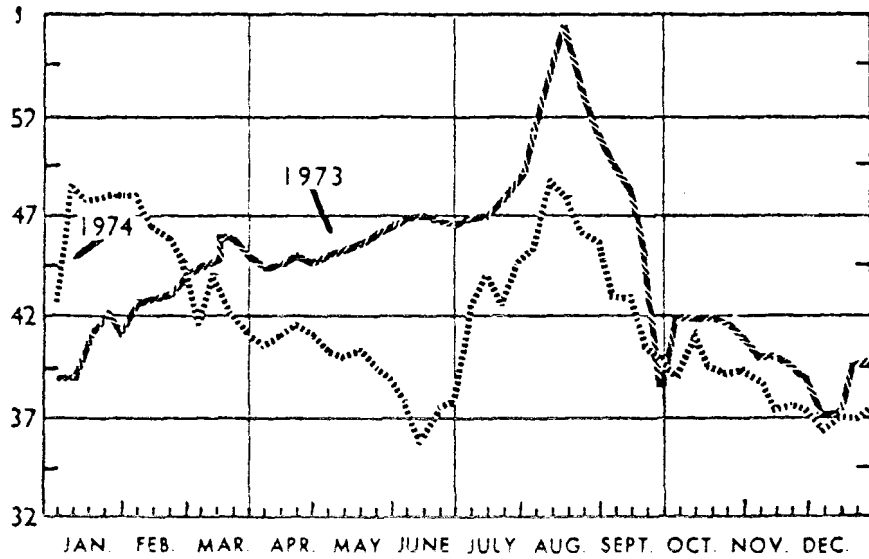
Again in mid-1974, there was a rapid increase in live cattle prices--\$12 in a seven-week period in July and August. Most of the gain, he said, was lost in the next seven-week period.

"Looking at recent history of beef prices, it appears that rapid price declines happen when live cattle prices move up as rapidly as they have in the past couple of weeks," Hasbargen said.

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CHOICE STEERS - OMAHA

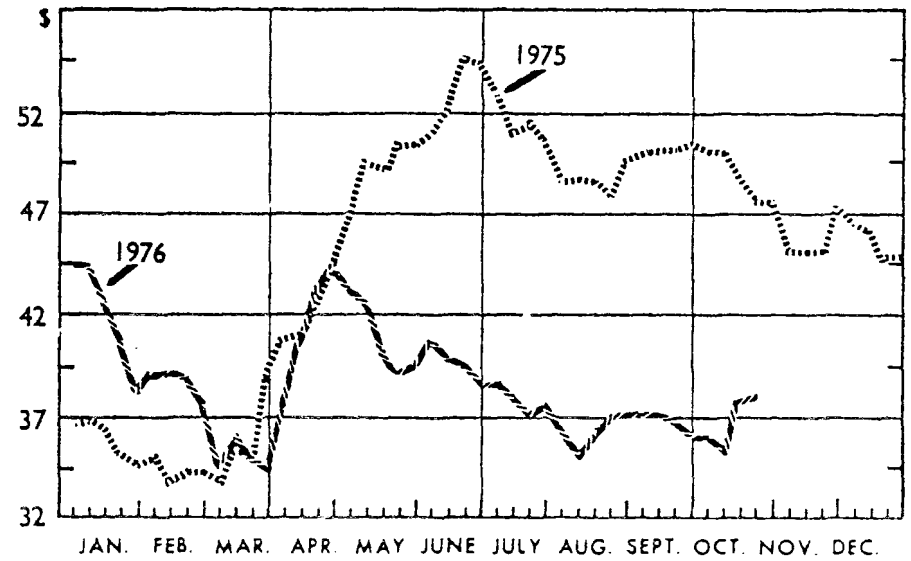


*STEERS SOLD OUT OF FIRST HANDS FOR SLAUGHTER.

DEPARTMENT OF AGRICULTURE

LIVESTOCK DIVISION - AMS

AVE. PRICE CHOICE SLAUGHTER STEERS—OMAHA 1100—1300#



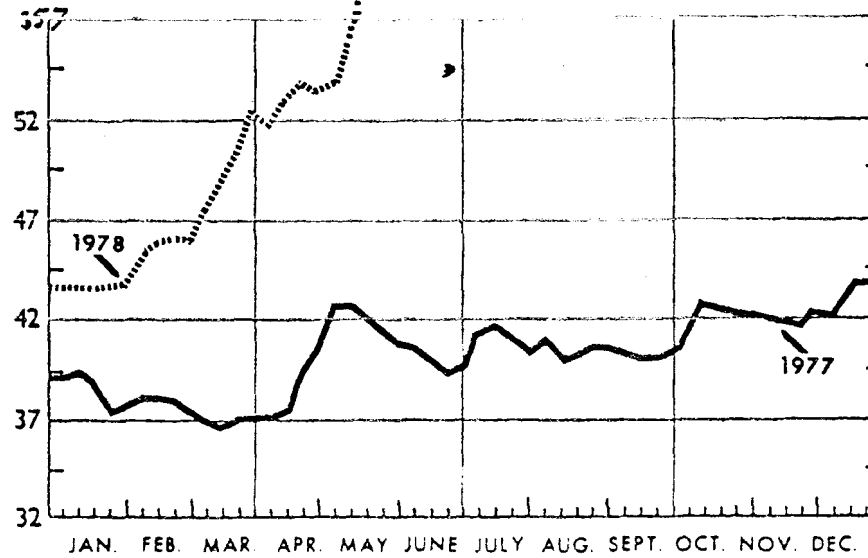
U.S. DEPARTMENT OF AGRICULTURE

LIVESTOCK DIVISION - AMS

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AVE PRICE CHOICE SLAUGHTER STEERS-OMAHA 1100—1300#



U.S. DEPARTMENT OF AGRICULTURE

Livestock, Poultry, Grain & Seed Division - AMS

Department of Information
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University of Minnesota
St. Paul, MN. 55108
Tel. (612) 373-0710
May 30, 1978

Immediate release

GUARD TOMATOES NOW
AGAINST FUTURE WOES

Even if you've just planted your tomatoes, there are some things you can do to guard against blossom end rot, the most common problem in homegrown tomatoes. Deborah Brown, extension horticulturist at the University of Minnesota, says blossom end rot is easily recognized as the black areas developing on the side of the tomato opposite the stem.

It is caused by interruptions in the plant's water supply. Gardeners may unintentionally cause the condition by hoeing for weeds around the tomato plant, thus breaking up small roots and interfering with water uptake. Another cause could be pounding a stake near the tomato after it is well established. This, too, cuts roots and stresses the plant.

Irregular and shallow watering also leaves tomato susceptible to the condition, according to Ms. Brown. Thorough watering is better than quick daily dousings. Run a soaker hose or sprinkler for several hours when you water.

Mulching is an important step that gardeners can take now to avoid future problems. Grass clippings, straw or wood chips keep weeds down and moisture in. Pile them several inches deep and add additional mulch throughout the summer if earlier layers get packed down. Water from rain or the sprinkler will penetrate the mulch easily and will evaporate much more slowly than it would from bare ground.

Excessive pruning and over-fertilization also promote blossom end rot. Never exceed the recommended concentrations or frequency of fertilization as printed on package directions, she cautions.

CA,TCO

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Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 30, 1978

Immediate release

THERE'S AN ART
TO LAWN WATERING

If you think proper lawn watering is as simple as turning on your sprinkler for an hour or so each evening, you're all wet.

Deborah Brown, extension horticulturist at the University of Minnesota, says the key to proper watering is thoroughness. This encourages deep rooting and a healthy stand of grass.

Lawns need about an inch of water each week and it's better if this comes in one good soaking than in daily sprinkles, Ms. Brown says. She suggests putting coffee cans in the area you're sprinkling. Let the sprinkler or soaker hose go until you've accumulated about an inch of water in the can, typically for about four hours. Then move the sprinkler and give another area the same treatment. After such a good soaking, a lawn can go a week without additional water.

"Many people think that watering during the heat of the day is harmful, but actually it cools the lawn and is as good a time as any to water," Ms. Brown says. She adds that evening watering may encourage disease, but that it is done commonly without encountering problems from the practice.

Despite the effort that's involved during a dry spell, it is worthwhile to keep watering so that your lawn stays green. Ms. Brown says that bluegrass, the most common type in Minnesota lawns, will stop growing and turn brown without moisture. When rain or a sprinkling occurs, the grass will turn green and begin growing again, but in doing so it uses up its nutrient reserves. After several cycles of turning brown and then greening up, the grass will weaken and may even die out.

CA,TCO

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University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
May 30, 1978

Immediate release

KEEP FARM RECORDS
FOR YOURSELF, IRS

A farmer should keep records for himself as well as for the IRS, according to Delane Welsch, professor and extension economist in farm management at University of Minnesota.

"While the IRS requires farmers to keep at least minimal records, the wise farmer keeps a more detailed accounting of costs and profits for his own use," Welsch said.

Well-kept farm records can help the farmer see where he's been and help him decide where his operation should go. Farm records are almost a necessity if more than one person is involved in the farming operation, such as a partnership, where costs and profits must be carefully divided. Records are required by law for corporate farming ventures, he added.

A farmer who keeps a good set of records year after year is able to compare his progress from one year to the next and is able not only to find out how far he is getting ahead, but also the reasons why he is or isn't making progress.

"It is becoming increasingly important for farmers to plan ahead and records are the best source of information on cost and returns on farm operations a year or more into the future," Welsch said.

Maintaining a credit profile with your major lender is crucial to the process of obtaining adequate credit and your farm records are one of the best ways of maintaining credit profile, Welsch suggested. However, he cautions, a farmer should keep just enough records to understand his situation.

"Too many farmers set up a record system that is so time consuming that they quickly get frustrated and quit keeping any records at all. If you are just beginning to keep records, keep only the necessary records at first and then increase the sophistication of the system as needed," he suggested.

For more information concerning how to keep good farm records, contact your county extension office.

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May 30, 1978

Immediate release

MANY TREES HAVING
A TOUGH SPRING

If your maple or fruit trees are sparsely leafed or partially bare this spring, they're in good company. Deborah Brown, extension horticulturist at the University of Minnesota, says many homeowners have noticed the problem. In some cases, whole sections of the trees will fail to get leaves and in others, the buds or flowers began to develop, then dried up and fell off.

These trees are reacting to the drought of two summers ago followed by the past two winters, which have been extremely cold with little protective snow cover. Ms. Brown says water and patience are the best treatments.

Distressed trees should get thorough soakings each week. This is also critical for young trees, but in a dry period should apply to all trees. Run sprinklers or soaker hoses for four hours or more to provide a week's supply of moisture.

"We're not sure how well these trees will recover from the stress," Ms. Brown says. Conditions and care this summer may make the difference between a return to health and continued decline.

Reassess your trees at the end of summer and prune out dead wood at that time.

CA,TCO

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May 30, 1978

ATT: Extension Home Economists

Immediate release

CHANGES AHEAD IN OUR
HOMES, FURNISHINGS

Energy shortages will mean more than smaller cars and lowered thermostats. They will yield changes in the ways we construct and furnish our homes as well, says Linda Reece, extension interior design-furnishings specialist at the University of Minnesota.

One major change, she predicts, will be smaller homes with more efficient use of each square foot. "Our homes have grown amazingly in the past 20 years," she says. "We will have to re-think how much space we really need and how many items we need to fill those rooms."

Already, furnishings manufacturers are bowing to energy and raw material shortages. Ms. Reece says current lines are smaller with emphasis on simple, classic styles that will likely hold their appeal and value. There will be fewer faddish items and colors will be basic and earthy rather than bright and bold.

"Fine woods are becoming as scarce a resource as fuels so I anticipate thinner veneers on wood furniture and fewer items of solid wood," she says. "The solid wood furniture currently in our homes may become the collectors' items of tomorrow."

Along with smaller homes and rooms will come smaller scale furniture. Ms. Reece predicts lessened interest in king size beds, massive chests of drawers and huge couches. Instead, modular seating and storage units that adapt to many sizes and shapes of rooms will gain the spotlight.

-more-

add 1--changes ahead in our homes, furnishings

Rooms, too, may take on new functions. Ms. Reece foresees kitchens, perhaps with adjoining family rooms, becoming the central activity area for the house. That way, rooms that are used less can be closed off and heated only minimally during the winter. In new homes, kitchens and family rooms may have large southern exposures to tap the warmth of winter sunshine.

"But this has implications for furniture quality," she says.

"Everything will have to stand up to heavier use if we're living in less space."

As more women work outside the home, there will be less time for upkeep on furnishings but more money available in family budgets. Ms. Reece says this may mean a new willingness to pay for high quality items that will wear well and require little maintenance.

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Immediate release

GET READY FOR SUMMER
WITH EASY DECORATING TIPS

You can make your home more comfortable during summer's heat with a little decorating know-how, says Linda Reece, extension interior design-furnishings specialist at the University of Minnesota.

For example, she suggests using slip covers of smooth, absorbent fabrics over furniture of such nonabsorbent materials as leather, plastic and wood. Without slipcovers, these furnishings will seem sticky and uncomfortable on hot, humid days.

Window treatments are critical to mid-summer comfort. Lined draperies, particularly on south and west windows, help keep heat out. In unlined draperies, the heavier and more tightly woven the fabric, the better it will resist light and heat penetration. And the same thing applies in the winter when your concern will be to keep heat in and drafts out, Ms. Reece says.

If you have many windows or sliding glass doors, tightly fitted shutters of styrofoam insulation board and plywood are good barriers to heat. Windows admit eight to ten times more outdoor heat than well insulated walls so it's worth looking critically at how energy efficient your window coverings are, Ms. Reece suggests.

Attractive window insets can be made from styrofoam insulation cut to fit tightly inside the window frame. Either slip the panels in and out of the window or add magnetic latches to hold them securely. The panels can be covered with fabric for design appeal. Storage must be planned for the panels when not in use. Some people have used the fabric covered panels as wall hangings during the day.

-more-

add 1--get ready for summer

Roller shades and blinds are most effective when they are on an outside mount and overlap the window frame. Ms. Reece says there are a variety of sun screen products either to apply directly to window glass or to use as roller shades on particularly sunny windows.

New foil-like woven and vinyl fabrics will be on the market soon for use as an under-drapery. Ms. Reece says the manufacturers recommend facing the shiny side to the outside to bounce back summer sun and then turning the fabric around in the winter to reflect heated air back into the room.

The important thing to remember with windows is that each layer of fabric, shade, shutter or any covering will help keep summer heat out and winter heat in. Ms. Reece says that trapped air spaces are the key to energy efficient windows. Studies done at the University of Georgia show that a double glass bare window has an R (resistance to heat passage) value of 1.81.

A drapery valence, draw draperies and shade increased the R value by .09. When the valence or cornice was closed across the top, the R-value increased to a total of 2.03. By closing the draperies and sealing the sides and bottom edges against the woodwork and the overlap against itself, the R value increased .30 to a final total of 2.33.

The use of styrofoam core insulated panels used with a double-glazed window or door can result in an R-value of 9.59.

Even with all these measures, windows still transmit heat much more readily than exterior walls, but their energy waste can be reduced, Ms. Reece says.

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St. Paul, Minnesota 55108
June 1978

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

SPECIAL SHORT COURSE SCHEDULE (July - December 1978)

- June 27 Crops and Field Day, Waseca+
- July 10-21 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
- July 19 Crops and Soils Day, Crookston +
- July 27-29 Management Overview for Fire Officers, Holiday Inn, Roseville. For fire officers to increase the effectiveness of the fire service in Minnesota. *EA
- August 2-3 Athletic Field Maintenance Short Course, North Star Ballroom, St. Paul Campus. Discussion on the construction, care and maintenance of athletic fields. *RM
- August 2-6 7th Annual Minnesota Dairy Study Tour. For dairy farmers, spouses, and others interested in learning about the feeding, breeding, housing marketing and management of dairy enterprises in the Seattle area extending from Rainer Park to the Canadian border. Also an opportunity to see the scenic wonders of the Pacific Northwest. *GW
- August 7,8,9 Vocational Home Economics Update, Radisson, St. Paul. To gain awareness of and commitment of comprehensive home economics programming at all educational levels. *CC
- August 23, 24 Dietitians' Update - Nutritional Care of the Geriatric Patient. Sheraton Inn Northwest, Brooklyn Park, MN. To explore recent advances in the nutritional care of the aged. *CC
- September 7,8 1978 Agriculture Engineering Experiment Station Conference. Waseca, MN +
- September 14-15 Sanitarian's Conference, Sheraton Inn Northwest, Brooklyn Park, MN. To discuss a variety of developments in dairy and food plant sanitation and field work. *CC

*For further information call Office of Special Programs
LF--LaVern Freeh 612-373-0725
CN--Curt Norenberg "
RM--Richard Meronuck "
EA--Eugene Anderson "
GW--Gerald Wagner "

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

Page 2 - Special Short Course Schedule

- September 18, 19 Thirty-ninth Annual Minnesota Nutrition Conference, Thunderbird Motel, Bloomington, Minnesota. This is a North Central regional conference of animal nutritionists for the purpose of presenting research and current information on animal and poultry nutrition in two symposia and a number of supplementary topics. For animal, nutritionists representing producers, industry, universities, research, adult vo-ag instructors, farm editors and technical feed seed representatives. *GW
- September 20-22 North Central Regional Home Economics/Community Resource Development Workshop. Northstar Inn, Minneapolis, MN. To explore and define the interface between Home Economics and Community Development to improve the effectiveness of extension programs in community improvement for family well-being. *CC
- September 21 Extension Homemakers' Day on Campus, McNeal Hall, St. Paul Campus. A day of exploration in the College of Home Economics to probe, question, offer comment on the education offered by the College of Home Economics. *CC
- October 5 Technology Transfer in Small Business Administration, Earle Brown Continuing Education Center, St. Paul Campus. This course is intended to present the technology, know-how, product and process information services available to aid independent inventors, agribusiness and business people directly involved with the identification, acquisition, research, development, disposition or management of technology. *CN
- October 5 Beef Cattlemen's Institute, Crookston +
October 9-14 American Association of Housing Educators - 1978 Annual Conference, Radisson Downtown, Minneapolis. To further the educational and communicational expertise of housing educators, researchers and persons in related areas. *CC
- October 13-14 Nutrition and Dental Hygiene: Current Concepts in Nutrition, (location to be announced). To explore basic introductory nutrition, nutritional counseling and current controversies in foods and nutrition. *CC
- October 20-21 North Central Regional Conference for College and University Teachers of Foods and Nutrition. Earle Brown Continuing Education Center, St. Paul Campus and Thunderbird Motel, Minneapolis, MN. To explore current research and innovative educational processes in foods and nutrition. *CC
- October 23-26
October 30-November 2 Property Valuation Short Course. A program for certified assessors to continue their education in the assessment field and for town board members to be brought up to date on problems concerning the board of review process. First date locations will be held at St. Cloud, Hibbing, Thief River Falls, Fergus Falls, Willmar, Marshall, Rochester and Eden Prairie. (Exact dates and location to be announced). *GW

Page 3 - Special Short Course Schedule

- October 23-26 Management Training & Development Conference; Bank for Cooperatives, Marquette Inn, Minneapolis, MN. A three day conference for recently appointed junior officers of the Bank for Cooperatives. The course is intended for junior officers and analysts of the 13 Bank for Cooperatives in the United States. *CN
- October 24 Commercial Flower Growers, Earle Brown Center, St. Paul Campus. For commercial flower growers, garden store operators and greenhouse managers. *RM
- October 25-26 Grain and Food Pest Management Training Conference, Sheraton Inn Northwest, Brooklyn Park, MN. For food processing and manufacturing, pesticide applicators, commercial fumigators, country and terminal grain elevator personnel and structural pest control operators. *EA
- November 1-2 Annual Fall Conference for Veterinarians, Earle Brown Continuing Education Center, St. Paul Campus. For practicing veterinarians, animal technicians, college faculty and students. Program will feature large animal medicine on one day and small animal medicine on the other. *GW
- November 2 Institute of Agriculture, Forestry and Home Economics Faculty Reception, Earle Brown Continuing Education Center. *CC
- November 3 High School Visitor's Day, McNeal Hall, St. Paul Campus. To expose students to career opportunities in home economics as well as student life on the St. Paul Campus. *CC
- November 11 1st Annual Dairy Goat Conference, Earle Brown Continuing Education Center, St. Paul Campus. For dairy goat farmers to learn to: 1) Select and buy dairy goats more effectively, 2) Select economical feeds and balance rations, 3) Develop a herd health program, 4) Develop a profitable marketing system, 5) Determine production costs, 6) Learn what a classification program is and how to use it best, 7) Learn what is happening in the goat industry. *GW
- November 20-22 Farm and Individual Income Tax, Radisson Downtown Hotel, Minneapolis, MN. For tax practitioners and consultants, accountants, lawyers, bankers, insurance agents, real estate agents, educators and others involved in preparing income tax returns. *CN
- November 28 3rd Marine Industry Conference, Sheraton Inn Northwest, Brooklyn Park, MN. This course is for the marine industry of Minnesota. The purpose is to bring together the marine operators of the state to talk about federal and state regulations and the business outlook. *RM
- December 11-13 Combined Soils, Fertilizer and Agricultural Pesticides Short Course, Minneapolis Auditorium. To present information on soils, fertilizers, and pesticides used in the production and marketing of food and fiber. For professional and technical personnel and those engaged in production agriculture. *EA
- December 12 Beef Day, Waseca, MN TENTATIVE +

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June 5, 1978

4-H NEWS

11:5
3A27p
Immediate release
(Agents: There's still time to use
this for radio roughly as is. Or,
you can turn it into a coverage
story--after the event--by adding
some local names)

TEEN BIKERS TO
MEET JUNE 12-15

Some 450 teens from across the state will be convening June 12-15 at Camp Lincoln at Nisswa, Minn., for the 4-H Pedal Power Conference, according to Tom Powell, University of Minnesota 4-H program specialist.

"At the four-day event, the youths will learn bicycle safety and repair from experts at the University of Minnesota and from Minnesota State Troopers," Powell said.

The workshop is for teens 15-17 years old who are cycling enthusiasts and who are willing to share their workshop experiences with other youths in their home counties, he explained.

"A special feature of the camp is two bike hikes. The first hike is 15-miles in length and each camper is responsible for planning his trip, including checking his cycle and preparing for necessary maintenance while on the road.

The second bike hike is 40-miles long and the riders practice what they learned from the shorter trip," Powell said.

The climax of the 4-H Pedal Power Conference is a bike skill test organized to help the youths improve their riding and bike handling skills. Skill-test participants are timed and scored. Prizes and ribbons are awarded to top cyclists.

After the bicycle camp is over, the teens return to their home counties to instruct other cyclists about bicycle care and safety, he said.

"In some of the urban communities, the Pedal Power graduates have conducted bicycle driver education programs, he said. They cooperate with the local police and court systems by instructing their peers who have been ticketed for breaking bike laws and who are required to appear before this informal bike education group. Thus, they gain knowledge of law enforcement and judicial processes in their communities," Powell said.

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June 5, 1978

ATT: Extension Home Economists

Immediate release

JUNE IS MONTH
TO FREEZE STRAWBERRIES
FOR FUTURE ENJOYMENT

The beautiful strawberries you are enjoying this month can linger through next winter if you freeze some for future use. Shirley Munson, extension horticulture specialist at the University of Minnesota, says strawberries are an easy June garden crop to freeze.

Select berries that are fully ripe but not soft or mushy, she advises. Sort out immature and defective berries. Wash and hull the strawberries in cold water and drain thoroughly. Slice each berry into about three pieces. Although sliced berries tend to be more flavorful, you can freeze smaller berries whole.

Strawberries are best packed in sugar. Use seven to eight cups of hulled, whole berries to one cup of sugar. Sprinkle the sugar over the sliced fruit; stir gently with a rubber spatula, making certain that all the fruit is sugar-coated.

Pack the berries into clean containers. Label, date and freeze immediately. Mrs. Munson says that a 24 quart crate of strawberries will yield about 28 pints of frozen berries.

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ATT: Extension Home Economists

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MATCH CLOTHING QUALITY
TO USES FOR IT

If asked, we would all opt for quality in our clothing. But Lois Goering, extension textiles and clothing specialist at the University of Minnesota, says the kind of quality a person wants or needs in clothing depends largely on how a garment will be worn.

"Good construction is more important in clothes that are worn frequently than in those worn once in a while," Mrs. Goering says. "Appearance, durability and comfort aren't of equal importance in every clothing buy."

She says some quality garments have luxurious linings, lots of handwork in the finishing details and beautiful fabric. Others of equal quality might have concentrated on simple but solid construction, features for long wear and comfort.

When gauging a garment's quality, Mrs. Goering suggests asking yourself several questions:

* How often will it be worn? Good construction is more important in a winter coat than in a prom dress.

* What kinds of activities will you wear it for? For strenuous activities, look for reinforcement and added strength designed into the garment.

* Can you wear the garment the way you want to? If you want to wear the collar unbuttoned, is it sewn so no unfinished seams will show?

* Can it be altered if you are likely to change size?

Quality in appearance is shown by such features as well matched plaids and stripes; smooth seams, darts, necklines and cuffs; evenly placed zippers; inconspicuous hems and even, suitable topstitching or other decorative stitching.

Signs of durability include reinforced seams in areas of strain, finished raw edges in ravelly fabric, reinforced zipper and pocket openings, linings attached to garments at seams and securely stitched hems.

For comfort, look for fabric that is cut on the grain so it won't pull or twist, seams bound and yokes and collarbands lined if the fabric could irritate the skin and lined sleeves in jackets and coats so the garment will slip on and off easily.

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PROGRAM SET
FOR IRRIGATION
FIELD DAY

Managing irrigation water will be emphasized at the Sand Plain field day near Becker Thursday, July 6.

The program starts at 9 a.m. at the University of Minnesota's Sand Plain Irrigation Research Farm.

Fred Bergsrud, University of Minnesota extension agricultural engineer, will discuss methods and equipment for irrigation scheduling.

Minimum tillage experiments on corn, soybeans and potatoes will also be available for viewing. This experiment is the only University minimum tillage plot on irrigated sandy soils in the state.

Potato research will include breeding, selection, production testing and spacing trials. Irrigated blueberries and strawberries will also be on display.

Other trials available for viewing include potato diseases, nematodes on corn, new irrigated crops, soybean variety testing and direct seeding of alfalfa on sandy soil. Soils research includes nitrogen inhibitors on corn and wheat, nitrogen rate and time of applications, sewage sludge as fertilizer and foliar fertilization studies on soybeans.

For more information, contact area county extension offices or Jim Swan, extension soils specialist, University of Minnesota, St. Paul 55101, Tel. (612) 373-1061.

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Immediate release

TIME TO PRUNE
SMALL EVERGREENS

This is a good time to give the junipers, arborvitae and yews in your yard some pruning, suggests Jane P. McKinnon, extension horticulturist at the University of Minnesota. Many of these evergreens are showing injury signs from the cold winter and fluctuating temperatures just past.

Mrs. McKinnon recommends selectively pruning out the brown areas left by the severe winter. Green buds are now visible on live wood and dead tips are obvious. By cutting back to healthy wood, tips can grow to renew a desirable shape to the evergreen. Any brown foliage left on green branches can be brushed off gently without hurting the plant.

Spreading junipers and yews should be pruned to keep a layered form with bottom branches wider than top shoots. Branches shaded by overhanging shoots will drop needles and become bare and woody.

Following pruning, an application of evergreen fertilizer and ample watering will help restore your plantings to peak condition.

This is also the time to prune the candle-like growths on Mugho pines. Prune before the candles become woody or dead stubs may result.

Mrs. McKinnon suggests pruning one-half to two-thirds of the new growth to promote dense, compact specimens. The more you cut away, the more compact your pine will be. Pruning should not go into last year's growth, just behind the candle formations.

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CHEMICAL FLY CONTROLS
IN DAIRY "WORTHLESS"
WITHOUT SANITATION

Chemical treatments are worthless to control flies in the dairy without proper sanitation, according to L. K. Cutkomp, University of Minnesota entomologist.

"Sanitation and good management are essential to an adequate insect control program in the dairy. Manure piles, strawstack bottoms, feed wastes and rubbish diminish the effectiveness of any chemical control program," Cutkomp said.

Because houseflies are now resistant to most insecticides, it is even more important that sanitation be the basis for fly control programs. Proper sanitation in addition to baits and baited sprays will often be needed to make wall residuals fully effective, he says.

Wall residuals are most effective when applied early in the summer--when the first fly is seen. Correct timing of this first spray will prolong its effectiveness in reducing early season fly populations.

Cutkomp cautions dairymen to keep all animals out of the building for at least four hours after spraying. Cover all feed, feed troughs and drinking cups prior to spraying. Apply spray just to the point of runoff, being sure that all wall surfaces, window ledges and ceilings are covered.

"Another common practice is to stanchion animals and mist the room in which they are held. Synergized pyrethrins at .1 percent to .2 percent concentration provides rapid knockdown of flies under these conditions." However, Cutkomp points out, no residual effectiveness of such a treatment can be expected.

-more-

add 1--chemical fly controls

Regardless of chemicals used in the milkhouse, farmers should be careful to avoid contamination of milk or equipment. Do not store insecticide containers in the milk room.

For more information concerning insect control in the dairy, contact the county extension office for a copy of Fly Control for the Dairy Herd, Entomology Fact Sheet, No. 35--1978, Cutkomp says.

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Immediate release

REDUCE DISEASE
PROBLEMS IN
THE GARDEN

Home gardeners can use several cultural practices to help minimize disease problems in the garden. Here are some tips from Francis Pfleger, extension pathologist at the University of Minnesota.

--Allow as much space as possible between and around plants in the garden. Adequate space between rows and between plants allows for good air movement and will help reduce high relative humidity in the plant canopy. Remember that extended periods of high humidity or free moisture on plant leaves is required for disease development.

--Rotate with unrelated crops as often as possible and avoid successive crops of the same vegetable side-by-side in the same season. Crop rotation is one of the oldest and most effective means of plant disease control. Successive cropping of the same or related vegetable results in higher population levels of the pathogen in the soil. This may cause plants to be killed or yields and quality to be reduced.

--It is important to control weeds in and around the garden. Weeds serve as hosts for many pathogens, especially viruses that can easily be transmitted to the vegetable crops in the garden.

--Emphasize early season insect control, especially aphids on cucumbers, melons, peppers, tomatoes and lettuce. Aphids are vectors for viruses that can cause serious problems on these crops.

--Always plant disease resistant varieties whenever possible.

-more-

add 1--reduce disease problems in the garden

--Late afternoon and evening irrigation should be avoided so the leaves do not remain wet overnight. Such practices will only create favorable environmental conditions for disease development and spread.

--Diseased plants or plants removed from the garden should be discarded and not kept near or around the garden area.

--A sprayer in good working condition should be kept on hand to apply fungicides to such crops as tomatoes, cucumbers and melons. If a wettable powder fungicide is used, the solution must be agitated frequently to prevent the material from settling out. Sprayers used for weed control should not be used to apply fungicides. This means you should have two separate sprayers--one for herbicides and one for fungicides.

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Immediate release

AG COORDINATING COUNCIL REELECTS OFFICERS

The Minnesota Council for Coordinating Education in Agriculture has reelected its present slate of officers for another year.

They are Paul Day, state supervisor of agricultural education, Minnesota Department of Education, chairman; Leo Keskinen, acting president, Itasca Community College, Grand Rapids, vice chairman; and James Tammen, dean, College of Agriculture, University of Minnesota, recorder.

They make up the executive committee of the council, along with James Babcock from Southwest State University, Marshall, who is an officer-at-large; and Ed Frederick, provost, University of Minnesota, Waseca, immediate past chairman.

Clyde Ingle, Minnesota Higher Education Coordinating Commission, is an ex-officio member of the committee as well as a member of the Council.

The Minnesota Council for Coordinating Education in Agriculture was established in November 1973, by representatives from all educational institutions offering agricultural education programs in Minnesota.

The council is a voluntary body, with its members appointed by the chief administrative officers of the systems and institutions they represent.

Purposes of the council are to:

--Provide a formalized but voluntary way to coordinate resources committed to agricultural education in Minnesota.

--Provide a structure for improving communication between those responsible for agricultural education programs and courses in Minnesota.

add 1--ag coordinating council

--Serve in an advisory capacity to the Minnesota Higher Education Coordinating Board.

--Coordinate agricultural education offerings with agricultural needs in Minnesota. And, to assist agriculture and its related industries in utilizing agricultural education offerings and graduates.

Ultimate goal of the council is total coordination of all resources at all educational levels, including effective transmission of educational programs, courses and activities to the people of Minnesota.

The council uses ad hoc committees and task forces to accomplish its purposes. Membership for these committees is drawn from all sections of agriculture and education--both the public and private sector.

CA,IA
Grand Rapids, Marshall
and Waseca papers

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Immediate release

MINNESOTA NUTRITION
CONFERENCE SEPT. 18-19

The latest research in livestock and poultry nutrition plus a symposium on the rumen function will be presented at the Thirty-Ninth Annual Minnesota Nutrition Conference on Sept. 18 and 19. The conference will be held at the Thunderbird Motel in Bloomington, MN.

The program will provide information on livestock and poultry nutrition to all participants with the goal of helping representatives of ag businesses and industries make better decisions regarding animal nutrition. A panel discussion by nutrition specialists is planned each afternoon to answer audience questions.

Animal nutritionists representing producers, industry and universities, plus research and adult vo-ag instructors, farm editors and technical feed sales representatives are invited to attend the conference.

The University of Minnesota's Department of Animal Science and Office of Special Programs, the American Feed Manufacturers Association, and the Northwest Agricultural Dealers Association are sponsoring the conference.

The registration fee is \$25 per person in advance or \$30 the day of the conference. For further information or to register call 612-373-0725 or write: Office of Special Programs, University of Minnesota, St. Paul, MN 55108.

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Immediate release

IN BRIEF. . . .

Nitrogen Fertilizer. A new publication, "Effect of Nitrogen Fertilizer on Corn Yield and Soil Nitrates," is available from Minnesota county extension offices. The publication describes experiments conducted in Waseca and Martin counties with broadcast rates of nitrogen to soils typically used for corn production.

The optimum rate of nitrogen in the two locations studied varied from year to year, depending on weather variations. On the average, 150 to 200 pounds N per acre at Waseca County and 100 pounds N per acre at Martin County were optimum. There was little accumulation of nitrates when the broadcast nitrogen rate did not exceed 200 pounds N per acre at Waseca County or 100 pounds N per acre at Martin County.

* * * *

SLIP RESISTANT CONCRETE FLOORS. Slippery floors are a common problem in confinement livestock operations. Now, the Midwest Plan Service has a one sheet publication that suggests ways to roughen floors to prevent injury to livestock.

Chemical and mechanical methods are discussed. Techniques are for new or existing floors. Working drawings of homemade hand tools for roughening new floors are included.

AED-19, "Slip Resistant Concrete Floors," is available from the Extension Agriculture Engineering Department of Agricultural Engineering, University of Minnesota, St. Paul, MN 55108 for 50¢.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 12, 1978

ATT: Extension Home Economists

Immediate release

FAT CONTENT LABELING
AIDS COMPARISON SHOPPING

Two packages of margarine vary widely in price, but you notice on the nutritional label and ingredient listing that the products have similar fat composition. Knowing this, you can base your purchase on flavor preferences or price without puzzling over fat content.

Mary Darling, extension nutritionist at the University of Minnesota, says changes in ingredient listing requirements for products containing fat now aid the consumer. The source of the fat must be identified.

Ms. Darling admits, however, that sometimes this additional information may pose as many questions as it answers. For example, some products list the fat sources as "any or all" of a lengthy list. This is little help to persons trying to avoid palm and coconut oil, vegetable oils that are both high in saturated fatty acids.

A key piece of information on the nutritional label is the analysis of grams of saturated and polyunsaturated fatty acids per serving. In the case of margarine, for example, this would be given in grams per tablespoon of the product. Ms. Darling says for the person trying to reduce intake of saturated fatty acids or to include more polyunsaturated ones, this information is helpful.

"You may find that products may be quite similar nutritionally and this will leave you free to base your choice on other considerations such as price," Ms. Darling says.

Although margarine and mayonnaise have standards of identity set by the Food and Drug Administration, the information on the fatty acid composition has not been readily available. Some mayonnaise-type salad dressings have different compositions, but because consumers use them interchangeably, the label information permits an informed choice.

Dessert toppings and coffee whiteners are examples of other items with fat contents including some of the vegetable oils that contain saturated fatty acids. But when the voluntary nutritional label is present, the consumer can judge health, price and taste considerations more accurately.

CA

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 12, 1978

4-H NEWS

Immediate release

START PREPARING NOW
FOR 4-H DAIRY SHOWS

Successful 4-H dairy exhibitors begin fitting and training animals two months before the show.

Separate your show animals from the rest of the herd if they're on pasture or in a large dry lot, advises _____
(name) (name of county)

County extension agent.

Some heifers will grow faster than others, so carefully observe her growth pattern. Your goal is to keep your animal growing and exhibiting dairy character without excess fat.

Daily brushing will encourage the hair to lie flat and appear smooth and sleek. Cover the animal with a thick blanket to loosen the hair and keep the animal clean.

Don't clip the animal's entire body unless she has an extremely rough hair coat, stained areas, excess sun bleaching or has not lost her winter hair coat. Normally, daily brushing will correct this problem. Never clip the entire body if the show is less than two months away.

More detailed information on nutrition, clipping, hoof trimming, washing, showing and leading and tips at show time is in 4-H dairy project literature available from the county extension office. Get a copy of Dairy Husbandry Fact Sheet No. 13, Fitting and Showing Dairy Cattle.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 19, 1978

Immediate release

1977 FARMER PROGRAM PAYMENTS--
1977 or 1978 TAXABLE INCOME

A recent change in the tax law permits farmers to report 1977 crop wheat and barley deficiency and disaster payments received in 1978 as 1977 taxable income, according to University of Minnesota Extension Economist Earl Fuller.

"It seems that officials became concerned that farmers might otherwise have to report two years' payments in one year (1977). The revised tax law allows farmers to file an amended return (Form 1040-X for 1977) and report payment for the 1977 crop," he explained.

Cash flow wise, this is probably not the best time for a farmer to file an amended return unless he reported a business loss and could file to receive an earned income credit refund. Otherwise, Fuller said, it might be more appropriate to wait at least until tax estimating time in the fall. By that time, the farmer will know whether he really wants to report these payments as 1977 or 1978 income.

"The 1978 crop isn't made yet, and given that we are still in the fifth of a predicted seven drought years in the weather cycle with current predictions of a warm and dry summer, it may be better to wait until the end of 1978 to make an amended return," Fuller said.

The option will still be open at the time of 1978 tax filing. However, he cautions, the longer a farmer delays the less the value of the tax saving.

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and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 19, 1978

Immediate release

SOYBEAN YIELD
CONTEST SET
FOR MINNESOTA

The 1978 Minnesota soybean yield contest will stress production practices that give maximum economic returns to growers.

"We're encouraging farmers from every soybean producing county in the state to enter," says Lee Hardman, extension agronomist at the University of Minnesota.

Farmers will be encouraged to choose production practices such as row spacing, proper varieties, pesticides, fertility and planting dates that will give top yields, using field scale practices.

For example, Hardman says that yields normally increase 5 to 10 percent when you go from 38-inch to 30-inch rows. Going from 30- to 20-inch rows should increase yields another five to eight percent.

Research shows that good weed control practices in 40-inch rows will result in a three or four percent yield increase, opposed to poor weed control.

Earlier planting also raised your yield potential. "In southern Minnesota, planting in mid-May opposed to late May or early June should mean another two or three bushels per acre," Hardman says.

"When these top yields in the contest are documented along with the production practices used they will have educational value for every soybean farmer in the state." Soybean growers will be able to use the applied research information available to them through the University of Minnesota's Experiment Station and Extension Service and encourage its wider use in production agriculture.

Aside from the University, sponsors include the Minnesota Soybean Growers Association, the Minnesota Department of Agriculture, and the Minnesota Crop Improvement Association.

Entry deadline is Aug. 15. Entry blanks will soon be available from county extension offices. Any crop producer in Minnesota who grows at least 10 acres of soybeans can enter.

CA, IA

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Immediate Release

Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 19, 1978

U M AG REUNIONS
SCHEDULED

Alumni members and former students at the University of Minnesota's School of Agriculture, St. Paul campus, will gather for four district reunions on four Sundays in July.

Members of the board of directors of the School of Agriculture Alumni Association will be present at each meeting. A potluck picnic dinner will begin at 12:30 p.m. and a program is scheduled at 2:00 p.m. at each location. A recording of portions of Secretary of Agriculture Bob Bergland's speech at the spring reunion will be broadcast.

The reunion for District 1 (Southeastern Minnesota) will be at the Wanamingo Park, Junction Highway 60 and Highway 57. Officers of the district association are: president, Myron Alberts, Pine Island; secretary-treasurer, Mrs. Maurice Vrevig, Cannon Falls.

District 2 reunion (Southwestern Minnesota) will be July 16 at University of Minnesota Lamberton Experiment Station. Officers of the District 2 association are: president, William Paulsen, Redwood Falls; vice-president, Carl Husen, LaVerne; secretary-treasurer, Mrs. William Paulson, Redwood Falls.

The reunion for District 3 (Northern Minnesota) will be July 23 at Lake Koronis Community Park, south of Paynesville on the south shore of the lake. Officers of the association are: president, Glen Dahlgren, Bird Island; and secretary-treasurer, Mrs. Lyle Bishman, Dassel.

District 4 reunion (Twin Cities area) will be July 30 on the St. Paul campus near the Home Economics Building. Arrangements for the reunion are being made by Sidney Nelson, chairman, St. Paul; and Hugo Smith, secretary-treasurer, Arden Hills.

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CA,IA

Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 19, 1978

ATT: Extension Home Economists

Immediate release

RETIREMENT PLANS
HELP TEMPER
INFLATION'S BITE

Inflation is a beast that strips all of us of buying power for our dollars. In addition, rising federal and state income taxes take increasingly larger bites from our paychecks.

Edna Jordahl, extension home management specialist at the University of Minnesota, says tax sheltered retirement plans can help many persons deal with and cope with these economic facts of life. She explains that over a long period, plans such as the Keogh Plan or an Individual Retirement Account can offer financial advantages to persons who otherwise might not have funds set aside for retirement years.

The Keogh Plan is for the self-employed person. Fifteen percent of a person's income or up to \$7500 maximum yearly can be tax-sheltered. Interest earned is also sheltered and remains in the account. Withdrawals can be made beginning at age 59½ if the person is ready for retirement. Although income tax must be paid as the money is withdrawn, it usually will be at a lower income tax rate. If withdrawal is delayed until age 70½, the money must be taken out and taxes paid on it at that time.

Individual Retirement Accounts are for workers who are not covered by pension plans as part of their jobs. This includes about half of all workers, Mrs. Jordahl says. Such employees can invest 15 percent or up to \$1,500 each year. If a wife is not employed, that amount can be increased to \$1,750 a year. The earned interest remains in the account. The money is subject to income tax when withdrawn during retirement but persons would be in a lower tax bracket then. There is no estate tax on funds in an individual Retirement Account. In case of bankruptcy, this fund cannot be attached. Should a couple divorce, each person would be entitled to half the account.

Mrs. Jordahl urges persons eligible for either of these plans to get details from an investment firm, insurance company or bank.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 19, 1978

4-H NEWS

For release week of June 26

COUNTY 4-H'ERS
ATTEND 4-H JUNIOR
LEADER CONFERENCE

NOTE TO AGENTS: This is a fill-in-the-blanks story for you to use in telling your publics about your county's participation in the JLC. Be sure to retype the story before you submit it to your editors. Also, you may want to add more to this story--feel free to do so.

_____ County teen 4-H'ers were among
(number) (county)
some 1,000 4-H delegates from across the state attending Minnesota 4-H Junior Leader Conference in St. Paul last week.

Those attending from _____ County were: _____
(county) (names)

Keynote speaker for the week-long conference was Dorothy Benham, Miss America 1977, who delivered the address: "We Can Build." Other speakers at the conference were: Leah Hoopfer from Michigan State University who spoke on "Interpersonal Communication," Ed Frederick, provost University of Minnesota Technical College-Waseca, speaking on the topic, "Who Am I?" Also featured on the program was Ray McGee, Washburn Child Guidance Center who lead a discussion on the topic, "I Like Myself."

The delegates to the conference voted for Federation officers for the 1978-1979 year before returning to _____ County, June 23.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 26, 1978

Immediate release

IN BRIEF

Sand Plain Field Day will be July 6 at Sand Plain Irrigation Research Farm, near Becker. Fred Bergsrud, University of Minnesota extension agricultural engineer, will discuss methods and equipment for irrigation scheduling. Trials available for viewing will include potato diseases, breeding and production, nematodes on corn, new irrigated crops, new tillage methods, soybean variety testing and direct seeding of alfalfa on sandy soil. Soils research includes nitrogen inhibitors on corn and wheat.

* * * *

Participating in the DHI Program is smart management, according to Bill Mudge, University of Minnesota animal scientist.

"Through use of the DHI records for improved dairy management, dairymen average \$266 more labor income per cow than dairymen not participating in the program," he said.

Currently some 6,100 herd in Minnesota are enrolled in the program, which accounts for about 31 percent of all cows in the state, Mudge said.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 26, 1978

Immediate release

CORN GROWN ON
SANDY SOILS NEEDS
NITROGEN FERTILIZER

Growing corn on sandy, irrigated soils requires meticulous fertilizer management for optimum yields, according to Bob Shoper, assistant extension soils specialist at University of Minnesota.

"Sandy soils have a low water holding capacity, are low in organic matter and have a limited nitrogen release potential. Due to this low fertility, the correct amount, form and time of application of fertilizers is extremely important," he says.

Because sandy soils may quickly lose nitrogen fertilizer to leaching, the farmer wanting to make the best use of his fertilizer dollar should apply nitrogen at four stages, Shoper says.

Depending on the production potential of the soil, the farmer should expect to use about 1.2 pounds of nitrogen for every bushel of corn he expects to produce. For example, a farmer wanting to produce 150-bushel per acre corn, would want to apply 180 pounds of nitrogen per acre.

Using the 150-bushel goal, the farmer would distribute the 180 pounds of nitrogen according to the following schedule, he says.

The first application should be made at planting time with about 30 pounds of nitrogen per acre applied. Later, when the corn is up and in the 8-leaf stage, the demand for nitrogen is beginning to accelerate and the addition of another 30 pounds of fertilizer nitrogen supplies plant needs for approximately the next 10 days.

-more-

add 1--corn grown on sandy soils

When the corn is in the 12-16 leaf stage (prior to tassling), the nitrogen requirement is at its peak. Ninety pounds of nitrogen should be applied during this stage. Depending on the method of application, this amount of nitrogen can be applied in one or several applications over a 3-week period beginning at the 12-leaf stage. A nitrogen shortage in the plant during this growth period could reduce yields significantly.

"Since this is the most critical time, we suggest that these 90 pounds be applied in several smaller applications because a rain could quickly wipe out the effect of the nitrogen application," Shoper says.

When the corn begins to tassel, he advises, apply another 30 pounds of nitrogen to assure adequate nitrogen for proper ear development.

"All common nitrogen fertilizer material gives equivalent response if properly handled. It is necessary to weigh the cost advantage of any form of nitrogen against handling ease," he says.

Additionally, he cautions, the injection of nitrogen fertilizer through an irrigation system may result in pollution to the water supply. This hazard he says, can be avoided if proper anti-pollution devices are present such as interlocks to assure both irrigation pump and injection pump stop simultaneously.

For more information concerning growing corn on sandy, irrigated soils, contact your county extension office for a copy of Corn Fertilizer on Irrigated Sandy Soils, Soils Fact Sheet No. 31--1978.

CA,IA,FC

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 26, 1978

ATT: Extension Home Economists

Immediate release

MICROWAVE OVENS
SAFEST KITCHEN APPLIANCES

Besides being quick and convenient, microwave ovens are among the safest kitchen appliances. Wanda Olson, extension household equipment specialist at the University of Minnesota, assures consumers that regulations set by the Bureau of Radiological Health specify maximum emission levels from the ovens. Two safety interlocks are also standard equipment and an interlock monitor prevents the oven from operating if either interlock fails.

Mrs. Olson points out that any form of energy use involves some level of risk. Like light and infrared rays, microwaves are non-ionizing radiation, which means that they can cause temperature change. They are quite different from such ionizing radiation as x-rays and gamma rays, which can cause chemical changes in the cells and can build-up over time.

Emission standards for the microwave oven industry specify the maximum leakage level, and manufacturers must meet these standards. One set of standards applies to new ovens and another is for used ovens, but Mrs. Olson says research shows that the ovens change very little through use. The more lenient emission standard for used ovens is seldom approached.

Mrs. Olson says microwave ovens bear warning statements. These tell consumers not to try to operate the ovens with items caught in the door, when the door does not close properly or when the door, hinge, latch or sealing surface are damaged.

"In the history of microwave ovens, there has never been an injury due to microwave exposure in the home. How many of us can say the same thing about our conventional ranges?" Mrs. Olson asks.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
June 26, 1978

Immediate release

SOVIET AGRICULTURISTS
ARRIVE IN MINNESOTA

Three young soviet agricultural specialists will be arriving in Minnesota this week to study Minnesota agriculture and farm life as part of the Young Agricultural Specialists Exchange Program (YASEP).

After a two-week orientation session at University of Minnesota Institute of Agriculture, the three Soviets will depart for rural Minnesota to spend three weeks living and working with Minnesota farm families.

Nurmukhambet Kushevaev, chief agronomist at Lenin Collective Farm, Bolgogradsky Oblast, will spend 10 days with Mr. and Mrs. Jim Pfarr in Sibley County and the remaining time with Mr. and Mrs. Bert Winger of Otter Tail County.

Janis Muizhneiks, director of State Farm "Kurishi" in Latvia will spend 10 days with Mr. and Mrs. Floy Bolstad in Polk County and the remaining time with Mr. and Mrs. Darrel Janes, Dodge County.

Nikolay Petrovich Philonenko, chief engineer of the Collective Farm XXI Coneress of SPSU, Odessa Oblast, will live with the John Conzemius family in Dakota County before spending another 10 days with the Thomas Labben family in Nobles County.

The YASEP program is a joint project between United States and Soviet Union for the exchange of young agricultural specialists. Each country sends 12 representatives for intensive study of the other's agricultural system.

The United States representatives began training in Washington, D.C. for their Soviet experience in March with three months intensive Russian language training. They departed for Moscow June 4.

The Soviet representatives in Minnesota will spend similar time in five other midwestern and western states before returning to USSR in Mid-August.

CA, IA

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MINNESOTA SCIENCE NOTES

June 28, 1978

Vince Becker
Experiment Station Editor
Department of Information
and Agricultural Journalism
University of Minnesota
St. Paul, MN 55108
612/373-1579

CONTINUOUS CORN REDUCES YIELDS

Lamberton, Minn.--Reports of yield reductions from the practice of growing corn on the same fields year after year created a high degree of farmer interest at the summer crops and soils field day held here today.

University of Minnesota researchers speaking at the Southwest Experiment Station cited data that show yield reductions of up to 40 bushels per acre by growing continuous corn compared to rotating corn with soybeans every other year. Direct causes of reductions have not been determined yet. However, a long-term corn hybrid/soybean rotation study was started this spring at both the Southwest Experiment Station and the Southern Experiment Station in Waseca, according to the scientists.

"We will be studying yield differences between continuous corn and corn followed by soybeans and the factors that may influence yield reductions," says Dale Hicks, agronomist. Six different corn hybrids and one soybean variety were planted on trial plots eight rows wide and 180 feet long. Next year the trials will be repeated to establish a cropping base at each location.

Some potential causes of yield reduction that scientists will be investigating include pathogens and toxins in the soil, corn nematodes, and the continuous use of the same corn hybrids.

"If the hybrid itself has an effect on yield reductions, a farmer might be able to maintain high yields by changing hybrids each year," says Hicks.

--more--

Farmers attending the field day took part in five concurrent tours at the Experiment Station. University scientists and Agricultural Extension specialists answered questions on new crop varieties and crop management practices. Among the subjects covered were corn and soybean breeding, diseases, and insects; weed control in corn, soybeans, and wheat; small grain diseases; alfalfa and sunflower varieties; nutrient movement in plants and in the soil; and silage making.

In addition, three special clinics were offered on plant problems, grain hedging, and soybean nodulation. "The field day tours and clinics give area farmers the opportunity to see firsthand the kinds of research we're doing and obtain information on results of Experiment Station research directly from scientists involved in the projects," explains Wally Nelson, superintendent of the Southwest Experiment Station.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
July 3, 1978

DON'T SPRAY WEEDS
UNTIL WEATHER COOLS,
WINDS SUBSIDE

If you spray 2,4-D herbicide for dandelion control on hot, windy summer days, you could be responsible for damaged gardens throughout your neighborhood, cautions _____, _____ County extension agent, (or (name) Jane McKinnon, extension horticulturist at the University of Minnesota.)

Homeowners, including those who pay for weed control services to spray their lawns, should delay 2,4-D applications until cool, still weather. When the herbicide is carried by the wind, it can severely damage many kinds of broadleaf plants nearby. These include tomatoes, roses and other common garden plants.

Hot weather also makes plants particularly susceptible to 2,4-D damage. Such spraying should be done only on a calm day when the temperature is between 60° and 80° F.

Besides, 2,4-D has no effect on crab grass and other weed grasses that are in evidence during the summer. The herbicide can be applied in the fall to control dandelions and plantain for the following spring with little risk to neighboring plants. Always read and follow label directions carefully.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, MN 55108
July 3, 1978

Immediate Release

UM RESEARCHERS RECEIVE GRANTS
FOR RESEARCH ON TURKEYS

Minnesota Turkey Research and Market Development Council and Minnesota Turkey Growers have awarded \$155,000 in grants to University of Minnesota scientists in animal sciences and veterinary medicine to conduct research on turkey production, according to Keith Huston, director of University of Minnesota Agricultural Experiment Station.

The grants will support research in 13 project areas related to the turkey industry. Projects include: research into fowl cholera, preservation of frozen semen, viral respiratory and enteric diseases of turkeys; field evaluation of factors concerning fuel efficiency in production; nutrition of market turkeys; nutrition and light regimens on breeder hens; endocrinological studies on growth and broodiness of turkeys; control of E. coli bacteria; airsacculitis; field rickets and detection of aspergillus in turkeys.

The studies will be carried out during the 1978-1979 year, Huston said.

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CA, IA, 4P (Poultry)

Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
July 3, 1978

Immediate Release

CONTROLLING FIRE BLIGHT
IN TREES

Fire blight, a serious bacterial disease of apple, pear, mountain ash and crabapple trees, is beginning to be seen again this summer in Minnesota, according to Laura Sweets, University of Minnesota plant pathologist.

"The disease is first noticed when leaves on the diseased tree turn dark brown or black and appear as if they had been burned. Unless control measures are taken quickly, the disease will spread and kill other parts of the tree," she said.

Since the disease is caused by a bacteria, it may be controlled by pruning the affected areas, making sure that pruning equipment is disinfected with household bleach after each cut. Also, the disease may be controlled by spraying the tree every seven days until mid-July with a streptomycin spray at a concentration of 50 parts per million.

Additionally, she recommends, avoid applying nitrogen fertilizer to the tree after the disease is seen. Nitrogen fertilization seems to exacerbate the disease, she says.

For more information concerning the control of fire blight in trees, contact the county extension office for a copy of Fire Blight, Plant Pathology Fact Sheet No. 17, revised 1978.

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Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
July 3, 1978

Immediate Release

BEWARE OF MUSHROOMS
GROWING IN WET LAWNS

Don't take a chance on eating any mushrooms growing in your lawn. By far the safest way to have mushrooms for the table is to buy them at the supermarket, according to Laura Sweets of the University of Minnesota's extension plant disease clinic.

She says recent heavy rains have spurred the growth of these mushrooms. While they do little damage to the lawn and can be safely raked away, they can be dangerous if you mistakenly identify them as edible.

She recommends raking the mushrooms and discarding them where children or pets can't get to them. The plant disease clinic staff will not attempt to identify mushrooms from information supplied over the telephone.

Mushroom growth is a symptom of rotting organic matter beneath the soil and this is hastened by wet weather. Ms. Sweets says lawns that are seven to ten years old often have mushroom stands caused by rotting material that was buried at the time the lawn was started. Because of rotting root systems, mushrooms are also common where trees have been removed.

If mushroom stands become so thick that they leave bare spots in the lawn, reseeding may be necessary.

She stresses that if you have an interest in mushroom identification, there are local societies and study groups where you can learn to hunt wild mushrooms with less risk. Mushroom gathering requires considerable skill. The statement "A little knowledge is a dangerous thing" certainly applies to mushroom identification.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
July 3, 1978

Immediate Release

IN BRIEF.....

Summer Field Day at West Central Agricultural Experiment Station will be Thursday July 13. Registration begins at 8:30 in the farm shop building at the Experiment Station east of Morris. Visitors will be able to see and hear discussion of the following experimental work: varietal trials of oats, spring wheat, barley, flax; small grain diseases and winter wheat establishment; chemical weed control trials on corn, soybeans, wheat and wild oat control; nitrogen fertilization on corn; manure application on corn; and three SEA studies concerning tillage, corn rootworm and residue effects on soil temperature.

* * * *

Starting the fire for the barbecue isn't the most pleasurable part of the picnic. But the task has been made easier. Instead of using liquid fire starter to start the flame, use briquets dipped in paraffin. Here's how to dip the briquets to prepare them for use: melt one bar of paraffin in top of a double boiler and then pour the warm paraffin into cardboard egg cartons. Fill each pocket until half full and place a briquet in each pocket. When the paraffin has cooled break the pockets apart and store the briquet in a cool place until you need them.

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and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, MN 55108
Tel. (612) 373-0710
July 3, 1978

ATT: Extension Home Economists

Immediate Release

BEING AWARE OF HEALTH
FIRST STEP TO STAYING HEALTHY

Health is not a phantom that comes and goes for no reason. Edna Jordahl, extension home management specialist at the University of Minnesota, suggests that each person is responsible for his or her life style and that often determines health.

"Our bodies 'talk back' to us when we push too hard, never relax and don't make an effort to get in touch with our social, psychological and spiritual needs," Mrs. Jordahl says. "Each of us can take steps toward better health by working on our own self-examination and self-healing abilities."

She says the health professions, too, are urging people to accept much of the responsibility for their health, to improve their life styles and to acquaint themselves with basic health education.

Books such as How to Be Your Own Doctor (Sometimes) by Keith W. Sehnert, M.D. are winning the approval of many health professionals because of their emphasis on the individual's responsibilities for maintaining health.

"In addition, most of us have learned the simple rules of good health in grade school and they are as basic now as ever," Mrs. Jordahl says. These include:

1. Eat regular meals (no snacks)
2. Eat breakfast
3. Get eight hours of sleep each night
4. Maintain normal weight (not over or under weight)
5. Don't smoke
6. Limit drinking to no more than two alcoholic beverages a day
7. Exercise regularly.

Mrs. Jordahl calls these stepping stones to better care of ourselves, but she stresses the need for constant self-monitoring of our emotional "temperatures" as well. Taken seriously, these steps can help us restructure our lives and routines for better health today and years from now.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, MN 55108
Tel. (612) 373-0710
July 3, 1978

Note to 4-H agents: This news article, accompanied by a photo in most cases, has already been sent to daily newspapers and weeklies with circulations over 2,000. You may find it useful for other news outlets or as background for when you interview and prepare feature stories about any 4-H exchangees in your county this summer.

1,000th 4-H International Exchangee Welcomed

The 1,000th 4-H exchangee from another country has arrived in Minnesota, marking a milestone in 30 years of youth exchanges between the U.S. and 70 other nations.

The symbolic 1,000th exchangee is part of a group of 170 Norwegian 4-H members who will be staying with Minnesota host families in 67 counties for the next three weeks. Welcoming the exchangees was the Honorable Olaf Solli, Consul General of Norway.

"Exchange programs such as these offer priceless experiences to both the young exchangees and their host families," says Marlene Stoehr, extension 4-H Youth Development specialist at the University of Minnesota. "Participants develop skills in cross-cultural communication that lead to mutual understanding and good will among the people of the world."

Next month 170 Japanese students will begin three-week stays in 46 counties, bringing this season's total to nearly 350 foreign exchangees living with families in 70 Minnesota counties. With the accelerating pace of the exchange, 4-H officials expect to welcome the 2,000th exchangee within three or four years.

Since the 4-H exchange program began in 1948, nearly 400 Minnesota 4-H youth delegates have traveled to a total of 52 countries. Japan and Norway lead in both the numbers of exchangees sent to Minnesota and in the numbers of Minnesota 4-H'ers that the countries have hosted.

Exchange programs yield long-term benefits for Minnesota agriculture, Mrs. Stoehr says. "Increasingly, the decisions made in foreign capitals--many of them influenced by people who at one time experienced America through an exchange program--affect the Minnesota farm and agribusiness community. This is true today and will be felt even more profoundly in years to come."

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University of Minnesota
St. Paul, Minnesota 55108
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July 10, 1978

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Immediate release

GOVERNOR PROCLAIMS
MINNESOTA FARM
SAFETY WEEK

"Manage to Prevent Farm and Ranch Accidents" is the theme of National Safety week, July 25-31.

"Safety should be considered an important part of the farm management program," says Bob Aherin, extension safety specialist at the University of Minnesota. There were 66 deaths from farm-related accidents in Minnesota during 1977. And of the many farm-related injuries, 70 percent are serious enough to warrant medical attention.

In conjunction with National Farm Safety Week, Gov. Perpich has signed a proclamation declaring the same week Minnesota Farm Safety Week. The proclamation reads as follows:

Whereas: all people depend on agriculture for their food and fiber needs;
and

Whereas: agriculture is Minnesota's biggest industry, contributing vitally to the state's economy and to the nutrition of the world; and

Whereas: anything that diminishes the ability of farmers to supply these needs because of farm accidents; and

Whereas: accidents can destroy the lives and bodies, as well as the economic resources of farm families; and

Whereas: farm safety leaders believe that most farm accidents can be prevented with greater care in controlling hazards and unsafe practices.

Now Therefore: I, Rudy Perpich, Governor of the State of Minnesota, do hereby proclaim the week of July 25-31, 1978 as

MINNESOTA FARM SAFETY WEEK

and urge all men and women who operate Minnesota farms to regard safety as an integral part of all their activities.

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July 1978

FOR RELEASE - JULY 17

UM HORTICULTURALIST WINS NATIONAL AWARD

A University of Minnesota horticulturalist has been awarded the Alex Laurie Award in floriculture, ornamental and landscape horticulture for 1978, according to J. Cecil Blackwell, executive director of American Society for Horticultural Science.

Harold Wilkins, UM horticulturist, and Seung Moon Roh, former horticultural graduate student at UM, jointly received the award at the Society's 75th annual meeting in Boston, July 17, for their research paper, The Effects of Bulb Vernalization and Shoot Photoperiod Treatments on Growth and Flowering of Lilium Longiflorum Thunb. cv. Nellie White. Wilkins previously won the award in 1968.

The researchers found that temperature and photoperiodism could be controlled to induce more flowers to be formed on the growing point of Easter lily plants. By using their findings, commercial producers will be able to control the number of flowers formed on lily plants and increase the value of each plant.

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CA, IA

TREE WATCH

Destroy Elm Wood Before July 15

July 7, 1978

Efforts to remove and dispose of dead and dying elm wood between now and July 15 can have a significant impact on the spread of Dutch elm disease this summer, says extension entomologist William Phillipson of the University of Minnesota. Communities have the opportunity now to substantially reduce the numbers of elm bark beetles available to transmit the Dutch elm disease fungus from infected to healthy elms.

Elm bark beetles breed beneath the bark of elms that are dead or dying from any cause. When the brood wood has been infected with Dutch elm disease, the new generation of beetles that emerges will carry the fungus to the healthy trees where they go to feed. If the breeding sites are destroyed before the new beetles come out, then healthy trees are less likely to become infected.

Phillipsen urges communities to step up their wood removal efforts before July 15 because that is about the time a second generation of elm bark beetles will appear. "The first generation of adults started moving around during the first part of June," he commented. "Since then, some have had time to reproduce themselves, and it is these new adults that we are concerned with now. Other new beetle populations will be produced later in the summer, and we'll need to be concerned about them as well. However, in the next few weeks we have the chance to get rid of a large number of the beetles."

Homeowners can help by looking for and helping to destroy all potential breeding sites, such as standing elms that are diseased or dying, elm fire wood piles, dead branches in elms and elm stumps with the bark intact.

If people want to keep their elm wood for any reason, they must debark it so it will be unsuitable for beetle reproduction. However, debarking elm is difficult, and such efforts will have to be started immediately if they are to be completed by July 15.

Destroy elm wood
Page 2

For more detailed information about elm bark beetle control and Dutch elm disease, write for extension publication, "Extension Folder #211: The Dutch Elm Disease" available through county Agricultural Extension Service offices.

For more information contact:

Linda J. Camp
(612) 373-1785

(Name and number are not for
publication.)

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WET WEATHER PROMOTES
TOMATO DISEASES

Humid weather and abundant rain are bringing tomato disease problems to many home gardens, according to Ward C. Stienstra, extension plant pathologist at the University of Minnesota.

Both *Alternaria* blight and *Septoria* leaf spot are showing up in many areas. They can be controlled with a spray program using a chemical containing maneb. These are available under a variety of trade names and all should be applied according to label directions to leaves, stems and fruits of the tomato plants.

Stienstra says *Alternaria* fungus causes a spotting of leaves and fruits and, in severe cases, defoliation and fruit rot. It is easily recognizable by the characteristic dark brown or black leaf spots in concentric rings forming a target pattern.

Septoria leaf spot usually does not appear until after fruit is set. Infection usually is restricted to leaves, but fruit infection can occur. Defoliation is common after a heavy infection.

During periods of frequent, heavy rains, you may need to apply the maneb-containing chemicals after each rain, Stienstra says. If label directions offer several concentrations for mixing, use the strongest, he advises.

Never use a sprayer that previously contained a hormone-type substance such as 2,4-D. Tomatoes are very sensitive to these chemicals. Rinsing the sprayer with water will not remove the chemicals, Stienstra cautions.

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WEIGH AIR CONDITIONERS
COSTS AGAINST COMFORT

On a hot, muggy summer day it may seem that air conditioning is worth any cost. But is it really? Roger Peterson, extension residential energy specialist at the University of Minnesota, says the decision to air condition should be based on both the original cost of the unit and the cost to operate it.

If you are considering installing a new air conditioner, ask your dealer to estimate the amount of cooling you need in terms of BTUs per hour. Purchase a unit with the highest EER (energy efficiency ratio) that you can afford. Peterson recommends an EER of 8.0 or higher.

To figure your cost of air conditioning per summer, you will need to know the summer time charge for electricity as well as the number of hours of operation. Many utilities now charge higher summer rates because they must use more expensive fuels such as oil and gas to meet high demands.

As an average, a properly sized unit would be used about 500 hours per summer, Peterson suggests.

To figure your operating cost, work this formula:

$$\text{Cost per hour} = \frac{\text{BTU capacity} \times \text{kilowatt hour electricity rate}}{\text{EER} \times 1,000}$$

$$\text{Cost per year} = 500 \text{ hours per year} \times \text{cost per hour}$$

For example, a 12,000 BTU/hr window air conditioner with an EER of 8 will cost nine cents per hour to operate if your electric rate is six cents per kilowatt hour. The same unit with an EER of 10 will cost 7.2 cents per hour. In an average season of 500 hours of air conditioning, the 8-rated EER unit will cost \$45 to operate while the 10-rated one will cost \$36. Savings would be \$9 per year. The savings would be greater for larger capacity units. For example, the same EER comparison of 24,000 BTU/hr units would result in a savings of \$18 per year.

Peterson says many Minnesotans may be able to do without air conditioning because days that are both hot and humid are relatively infrequent. Ventilation and shading can relieve some heat problems, but humidity control may warrant the investment.

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TO: Home Economists

From: Deedee Nagy, Extension Information Specialist

The Society for Nutrition Education will hold its annual meeting in Minneapolis beginning July 16. Speakers for the four-day meeting to be held at the downtown Radisson Hotel will include Dr. Jean Mayer, president of Tufts University and nationally syndicated nutrition columnist, and Dr. E. Neige Todhunter, former president of the American Dietetic Association and a nutrition professor at Vanderbilt University's School of Medicine.

The meeting's theme, "Perspectives for Action", will focus on consumerism, education, industry, legislation and recent developments in nutritional science. Other featured speakers will include State Senator Robert M. Benedict, chairman of the State Senate Nutrition Subcommittee.

Members of the press are invited to attend the meeting. A press room will be located in the Radisson Room adjacent to the exhibit area.

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SUMMER POSES
STAIN PROBLEMS

Summer weather and outdoor activity can lead to several common but stubborn stains.

What can be done about them? Lois Goering, extension textiles and clothing specialist at the University of Minnesota, offers this advice:

GRASS STAIN: Attack the stain as soon as possible. Work detergent into it and rinse. If the fabric's dye is safe for it, sponge with rubbing alcohol. (To be sure the dye is safe, try some alcohol first on a hem or somewhere that it won't show.) If the stain remains, use bleach.

TAR: Sponge the stain with a grease solvent and repeat until the stain comes out.

MILDEW: Wash the stained item thoroughly in detergent and dry it in sunlight-- not in a clothes dryer. If the stain persists, use bleach.

FRUIT, BERRY STAINS: Soak in cool water immediately. Then if it is safe for the fabric, pour boiling water through the stain. Finally, work detergent into the stain and launder. Don't pour boiling water through heat sensitive synthetic fabrics or you may damage the fabric.

PERSPIRATION: Work detergent into the stain and let it stand for a while. Then wash normally. If the stain persists, use ammonia and then rinse. If the stain is an old one, use white vinegar instead of ammonia.

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4-H PETRO POWER
PROGRAM STRESSES SAFETY

Safety first is one of the lessons stressed in the 4-H petroleum power program now open for enrollment in _____ County, according to _____, County Extension (Agent) (Director).

Because so many young people are responsible for lawn care and gardening chores, the project focuses on safe handling of mowers, tillers and other small gasoline-powered equipment. Other areas of emphasis include fuel conservation, engine maintenance, career exploration and leadership.

Here are some mowing safety tips from 4-H members:

- * Wear long pants and sturdy work shoes--not sneakers or sandals.
- * Check the lawn for rocks, large sticks or any object that could be thrown by the mower blades.
- * Read the operating manual to become familiar with the mower controls. Know how to stop the engine quickly.
- * Fill the fuel tank before starting to mow. Never fill the tank when the engine is hot.

For more information on this 4-H project, which is open to 4-H members from ages 9 to 19, contact the _____ County Extension Office.

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Food for Better Health Program



An Expanded Food and Nutrition Education Program in Home Economics Extension

July 10, 1978

ATT: Extension Home Economists

Immediate Release

GET READY
FOR CORN-ON-THE-COB

When you serve hot buttered corn-on-the-cob in season you're a real gourmet cook says Isabel Wolf, University of Minnesota extension food and nutrition specialist. Getting fresh corn from your own garden is the best, but you may have to rely on a roadside stand or the produce department of your food market.

When you are picking or shopping for fresh sweet corn, here are a few reminders:

- *Purchase or pick your corn-on-the-cob just before eating. As corn stands, the sugars start turning to starch and the taste changes.
- *Choose or pick ears that are well filled out.
- *Look for husks that are fresh and green.
- *Avoid worm damage. Sometimes this is hard, but check the area where the silks are.
- *Store fresh corn in the coolest part of your refrigerator. If you prefer to shuck the corn, wrap the ears or put them in a plastic bag. This keeps them fresh.

* * * *

Corn-on-the-cob

Remove husks, and then with a stiff brush, remove silks. Rinse well and cook covered in enough boiling water to cover the corn. Cook about 6 to 8 minutes. Pierce kernel with a fork to see if it is tender. Don't overcook. Serve immediately with butter or margarine with salt and pepper or favorite seasoning. And, better cook plenty!

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NORTHERN MINNESOTA BEEF
PROJECT SHOWS PRODUCERS
BETTER MANAGEMENT PRACTICES

Northern Minnesota farmers are learning that they can produce beef more profitably through improved management practices advocated by the Northern Minnesota Beef Project.

Initiated four years ago through a grant from the Upper Great Lakes Regional Commission, the purpose of the project is to help cattle producers of the 39 Minnesota counties of the Upper Great Lakes region to produce beef more economically through improved management practices. Now in its fourth year, the project is making money for the cooperators who are participating in the project.

Eight cooperators were selected from the 39 counties as representative of typical farming operations in the area. Once cooperators were selected, extension specialists from University of Minnesota worked closely with them analyzing and setting goals for their farms and helping them implement the improved management practices.

And according to Ray Arthaud, extension beef specialist working with the project, the improved management practices are paying off for the cooperators. The average increase of the eight cooperators' incomes from their farming increased \$5,700 from previous years.

"While the project is improving the eight cooperators' incomes through the better management practices, it also is helping other producers of the area who view the projects and adopt the better management practices. We estimate that at least 12 percent of the 12,000 cattle producers of the area already have adopted some of the advocated practices," he said.

-more-

add 1--northern minnesota beef

To show the effectiveness of pasture management on production, the cooperators and researchers have divided the cows and calves in the project into three groups. One group of cows and calves is grazed on unimproved native pasture, while another group grazes on fertilized native pastures. Still a third group grazes on improved, fertilized pastures that are rotationally grazed. Thus far, Arthaud said, the net return from the improved, rotationally grazed pastures has been three times greater than from the unimproved pastures.

Since the intent of the project is to demonstrate improved management practices that farmers of the area could adopt to increase their incomes, the eight demonstration operations are typical of the area--ranging from small to large (200 to 1,500 acres)--from full-time to part-time operations.

"We believe that the farms and the cooperators are typical of the area and that any farmer can benefit from the demonstrations," Arthaud said.

For more information concerning the improved management practices advocated by the Northern Minnesota Beef Project contact your county extension agent, Arthaud said.

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SHEER SUMMER CLOTHES
MAKE CAMISOLES POPULAR

If you like the summer look of sheer, gauzy fabrics, a quick-to-sew camisole may be a handy undergarment to have. Lois Goering, extension textiles and clothing specialist at the University of Minnesota, suggests using tricot, batiste, or some other slippery, opaque fabric.

A camisole is simply a tube-shaped garment with elastic at the top and shoulder straps. Mrs. Goering recommends cutting a rectangle 18 inches long and about two inches wider than either your bust or hip measurement, whichever is larger. Sew one lengthwise seam for the center back. Run elastic through a casing at the top to keep the garment comfortably snug.

Straps, if you want them, should be 1½ inches wide when finished. Center them over the bra straps before stitching in place.

These camisoles are pretty enough to use without any trim or you may want to add some lace or ribbons for added daintiness.

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CONSERVATION CONCERNS
INCREASED SINCE 1972

Since the passage of the Federal Water Pollution Control Act of 1972, conservation leaders have been increasingly concerned about erosion on farm lands, according to Clifton Halsey, University of Minnesota Extension conservationist.

"Before 1972, farmers generally were concerned about the economic benefits of retaining surface soils on their land. However, since 1972, the emphasis has shifted toward effects of eroded sediment on the quality of water in lakes and streams," Halsey said.

The Federal Water Pollution Control Act of 1972 established rigorous national goals for water quality and provided water management plans that would control all point and non-point sources of pollution, he explained. Section 208 of that act requires state and local agencies develop area-wide plans for implementing the management provisions, including pollution from farms.

In Minnesota, agricultural erosion control still relies on voluntary cooperation from farmers. This effort was intensified by a 1977 amendment to the Soil and Water Conservation District's law. This amendment states that the state soil and water conservation board shall prepare a program plan including determination of high priority areas for erosion control.

Additionally, the amendment provides for the allocation of cost-sharing funds for erosion control practices to be administered by the state board and through individual conservation districts. The amount appropriated for the current biennium is \$3 million.

add 1--conservation concerns increased since 1972

"Efforts to limit erosion can be expected to continue and probably intensify, as more stringent water quality standards go into effect," Halsey said.

"How far this goes depends on the effectiveness and acceptance of existing regulatory programs and on farmers' responses to financially supported programs," he explained.

For more information concerning erosion control legislation, contact the County Extension office for a copy of Agricultural Erosion Control Legislation, Soils Fact Sheet No. 30--1978.

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BARLEY GROWERS ENCOURAGED
TO REEVALUATE VARIETIES

Many Minnesota barley growers will suffer yield losses from smut disease and lodging that could have been easily prevented by planting different varieties.

"The technology for preventing smut losses is here. It's just a matter of applying the controls," says Roy Wilcoxson, plant pathologist at the University of Minnesota. Larker barley is widely grown in the state, mainly because it's preferred by the malting industry. A 10- to 20-cent premium per bushel for Larker opposed to other varieties has been common.

However, yield reductions in Larker due to smut, another disease called spot blotch, and lodging will usually more than offset premiums. "Last year 25 percent yield reductions in Larker due to smut and spot blotch disease were common," Wilcoxson says.

In addition, seed that's suspected of being infected can be tested and treated. The embryo test for barley will tell the percentage infection of a seed lot. Seed infected with loose smut can be treated with the chemical Vitavax.

"Seed treatment with Vitavax is very effective if you get the proper dosage on and do a good treatment job. Poor results have been due to insufficient dosage or improper application," says Wilcoxson.

Manker barley has good resistance to leaf diseases and is high yielding. Trials at the University's Crookston Experiment Station last year had Manker averaging 80 bushels per acre compared to 60 for Larker.

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FARMERS SUFFER
WET WEATHER WOES

Recent hot, humid weather has brought with it many disease problems for farmers in Minnesota, according to Laura Sweets, director of University of Minnesota Plant Disease Clinic.

In Renville County, some sugar beet farmers are finding that their sugar beet plants are wilting and dying because of root rot. This disease not only kills some of the living plants but also causes sprangled roots at harvest, she said. No sugar beet variety is immune from the soilborne fungus, she noted, and once the fungus is established in the soil, farmers may expect the disease to continue when wet conditions occur.

Some wheat farmers have noticed bacterial leaf blotch in their wheat fields, she said. This disease is seen as bare patches of ground from five to 10 feet in diameter. The disease is caused by a soilborne bacteria and infection occurs during wet field conditions.

Another disease of wheat being exacerbated by the wet weather is wheat scab. The warm, humid and rainy weather in many areas has been favorable for the disease, she said. It occurs on the wheat heads as a bleached color on individual florets, parts of the heads, or entire heads. The color may be pink, salmon colored or yellow to nearly white. It is caused by infection by a species of Fusarium that also causes root rot of wheat and root and stalk rot of corn.

Rust has been found on dry beans in the Red River Valley. Regular fungicide applications before the disease gets out of hand can keep the losses to a minimum, Sweets said.

Corn leaf spot disease also is being seen throughout the state, she said. The disease is caused by a bacteria and although it is usually not damaging to the crop, producers may confuse it with other, more deleterious diseases.

Phytophthora root rot in soybeans has been seen this season, she said. The disease causes a reddish-brown discoloration of the stem at the soil-line and then moves up the stem. Some varieties are resistant, she noted.

If you are having problems with diseases in your crops, contact your county extension agent to help identify and control the disease, Sweets said.

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Immediate release

ARMYWORMS ON THE MARCH

More armyworm infestations in small grain have been reported last week. And according to John Lofgren, University of Minnesota entomologist, the question is whether to spray or not to spray.

"Each field is a separate case and needs an individualized judgment. We believe that an infestation of more than five worms per square foot has the potential for causing losses greater than the cost of control," he said.

The decision depends to some extent on what the worms are feeding on, stage of growth of the grain, likelihood of additional egg hatch and whether the straw is to be harvested, he said.

In general, it's easier to kill small worms than large ones, so if the economic threshold is present, it is often best to spray and not worry about whether another batch of eggs is going to hatch.

"This year we have had an extended period of moth activity and egg laying so several age classes of worms are and will be present," Lofgren said.

Any spraying should be done in late afternoon or evening since larvae come up to feed at night. Malathion should be used if the straw is to be harvested. Toxaphene may be used if the straw is left in the field. Carbaryl (Sevin) is not registered for use on small grain but may be used on corn, he said.

Although the corn infestations reported have not been as extensive as the infestations on small grain, farmers should be watching closely--especially on fields located near grassy weeds--for armyworm infestations, he said.

Evidence of armyworm damage on more than 10 per cent of the plants is the economic threshold for control on corn. Farmers who believe they have such an infestation on their corn should make sure that the worms they see are indeed armyworms before they decide to spray. The armyworm in corn is easily confused with the common stalk bore, he said. If armyworm infestation is confirmed in corn, the farmer may use trichlorfon (Dylox, Proxol) or methomyl.

For more information concerning the identification and control of armyworms contact the county extension office for a copy of Entomology Fact Sheet No. 12--1976, Lofgren said.

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MARINE EDUCATION
AGENT APPOINTED

Bruce H. Munson has joined the University of Minnesota Sea Grant Extension Program Staff as area extension agent for marine education, it has been announced.

The Winona, Minnesota native earned a master of science degree in zoology from the University of Minnesota, Duluth in 1975, following undergraduate work in biology at Macalester College, St. Paul.

Munson brings with him experience in the environmental education field, having worked as a state park naturalist for the Minnesota Department of Natural Resources, as a secondary science teacher and community development officer in Melbourne, Australia, and for the Carlton County Extension Office as agricultural and forestry assistant.

Working with teachers and school administrators in the area, Munson will help develop courses at primary and secondary school levels to increase student awareness of Minnesota's Lake Superior marine resources.

Other informal program work will feature marine education for youth groups -- such as 4-H -- along with helping youth leaders to develop educational materials and projects for their groups.

"Program emphasis this year will include adult marine education as well as projects to fill the needs of civic and community groups," Sea Grant Extension program director, Dale R. Baker, explained.

The Minnesota Sea Grant Extension Program is a cooperative effort of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, and the University of Minnesota.

Munson may be contacted at: Minnesota Sea Grant Extension Program, 109 Washburn Hall, University of Minnesota-Duluth, Duluth, Minnesota 55812. Tel: (218) 726-8106.

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HOUSEPLANTS ON VACATION?
THEY NEED ATTENTION TOO

If many of your houseplants are vacationing on a porch, patio or in the garden this summer, don't forget about them, advises Deborah Brown, extension horticulturist at the University of Minnesota.

For pots that are plunged to their rims in the garden, twist or lift them once or twice a month to discourage rooting through the drainage hole. Summer is also the time to do some pinching and pruning to help shape plants that have grown vigorously outdoors. This new growth also may call for repotting before summer ends. Ms. Brown recommends doing this a week or two before bringing the plants indoors in late summer. This should help minimize the shock of transplanting.

Plants that are growing rapidly may need fertilizer every four to six weeks. Never fertilize resting or dormant plants, she states. When applying liquid fertilizers, use enough of the water-fertilizer solution to wet the entire soil mass. She cautions, however, that many houseplants get an excess of fertilizer rather than too little. Symptoms of too much fertilizer include stunted plants, burned or dried leaf margins and wilting. Fertilizer deficiencies are marked by pale foliage, leaf loss, few flowers and shortened or hardened plants.

If you have many houseplants, the simplest way to provide for them while you're on vacation is to have a friend check them for watering needs regularly. If you have only a few, consider putting them out "on loan" at a friend's home.

If these suggestions are impractical, wrap the pots in polyethylene plastic and fasten the plastic around the base of the plant. Be sure to water the plant thoroughly before wrapping the pot up, Ms. Brown says. Place the plants in a cool

add 1--houseplants on vacation? they need attention too

location out of direct sunlight. This will slow down the rate at which moisture is lost through the leaves.

Bring houseplants back indoors when nights begin to cool off in late summer. Inspect them carefully first to be sure you aren't bringing any insects in with them. Once inside, put them in the brightest possible windows to lessen the shock of coming indoors again. Gradually move them to the desired locations in your home, she says.

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FUSARIUM BLIGHT AND SLIME
MOLDS BEING SEEN ON LAWNS

Fusarium blight and slime mold on lawns are being seen again this summer, according to Laura Sweets, director of UM plant disease clinic.

Fusarium blight symptoms are again appearing on lawns three years old and older that have a developed thatch layer. The spots start as a circular area three to four inches in diameter and are pale green to tan and often appear as wilted grass, she notes.

The spots may enlarge to several feet in diameter with the grass in the center often appearing as healthy green turf. To control the disease, avoid high nitrogen fertilization, remove the thatch, water only slightly and mow to a minimum height of two inches. Have soil tested for nematodes, she advises.

Slime molds creep over grass and other low-growing vegetation in round to irregular patches as a greasy white or yellow or gray slimy mass. The mold plant material dries, forming a blue-gray, cream, gray, dirty yellow or black powdery mass that easily rubs off, she says.

Hose, rake or brush the unsightly growth. The disease does not harm the lawn and in fact may be beneficial since the mold forms useful humus matter, she adds.

For more information concerning lawn diseases, contact your county extension agent.

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CATTLE PRICES TO DROP
IN NEXT TWO MONTHS

It is likely that cattle prices will dip more than the normal seasonal 10 per cent during the next three months, according to Paul Hasbargen, University of Minnesota extension agricultural economist.

Reasons for the expected dip are that fed cattle marketing numbers are expected to remain steady while demand is likely to weaken, he noted.

"The drop could be fairly large if the unusually strong demand of the past several months subsides. I put the odds at two to one that choice steers will drop below \$50 per hundredweight in the next two to three months," Hasbargen said.

It appears that feeder cattle purchased during the past six weeks, and heavy feeders purchased at current prices aimed at October-November markets will probably fail to cover feedlot costs, Hasbargen said.

"Furthermore, continued strong demand for smaller supply of feeder cattle will tend to keep feeding margins tight for the next few years. If slaughter prices do dip this fall as predicted, feeder cattle may be priced lower in October and November of this year than they will be for the years to come," he said.

Although Hasbargen expects prices to decline in the next few months, he projects that cattle prices will regain current levels in the mid-\$50 per hundredweight by early 1979.

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ATT: Extension Home Economists

Immediate release

NEW CANNING METHOD
SAVES TIME, ENERGY

A simpler, speedier way to home can many foods has been developed by food scientists at the University of Minnesota.

Edmund A. Zottola, extension food microbiologist, and Isabel D. Wolf, extension food and nutrition specialist, have tested and approved as safe a way to process foods in a pressure canner using 15 pounds of pressure rather than the commonly recommended 10 pounds of pressure.

According to the two food scientists, the method maintains good quality and nutritional values and, because it takes less time, it saves energy as well.

Zottola and Wolf tested 12 low acid foods using several sizes of home pressure canners. They calculated the heat treatment time necessary to destroy harmful bacteria, particularly the spores of Clostridium botulinum which causes deadly botulism food poisoning. Using the 15 pounds of pressure, times could be reduced to achieve the same safety levels. Fruits, pickles and tomatoes -- high acid foods -- can safely be processed without pressure in a boiling water bath or at five pounds of pressure.

The scientists tested both low and high acid foods at the 15 pound pressure reading. The vegetables used were peas, asparagus, beans, corn, carrots and squash. The fruits were pears, peaches and apples. Controls were run at conventional pressure levels: 10 pounds for vegetables and 5 pounds for fruits.

Safety and taste panel tests showed little difference in texture, color or flavor between samples processed at 15 pounds of pressure and those processed at lower levels for longer periods. Protein foods such as meat and soybeans showed no change in protein efficiency ratio values or amino acid profiles.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
July 24, 1978

ATT: Extension Home Economists

Immediate release

TIPS ON THREAD USE
TO PREVENT SNARLS,
KNOTS, BREAKS

Sewing can be a more pleasant activity if you are spared snarls, knots and breaks in thread, suggests Lois Goering, extension textiles and clothing specialist at the University of Minnesota.

She offers these tips for hand sewing:

* Cut polyester and cotton-covered polyester strands 18 inches or less. They may snarl more easily because of their elasticity.

* Thread the needle so the thread is used in the same direction it comes off the spool. An easy way to remember this is to thread the needle and then cut the thread. Knot the end just cut.

* When a double thread is needed for buttons or reinforcing corners, thread the needle with two threads so both will be used in the same direction that they came off the spool. This puts the twist of the threads in the same direction and reduces knotting and snarling.

* Sew loosely, pulling thread through the fabric smoothly. Jerking and pulling too tightly causes thread to snarl or break.

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Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
July 24, 1978

Immediate release

ATT: Extension Home Economists

FRUIT RIPENING BOWLS
SCIENTIFICALLY BASED

Covered, clear plastic bowls being advertised as "fruit ripening bowls" are, in fact, based on scientific principles. They will hasten fruit ripening and keep the fruit from drying out, says William Breene, associate professor in the University of Minnesota's Department of Food Science and Nutrition.

He says, however, that except for the convenience and attractive appearance of the bowls, the consumer probably could achieve similar results in a homemade device such as a paper bag or a plastic bag with ventilation holes punched in it.

Breene says the bowls trap the ethylene gas normally given off by ripening fruit. The presence of the ethylene gas speeds ripening while ventilation in the bowls allows some carbon dioxide to escape. In a tightly covered bowl, excessive carbon dioxide build-up could produce off flavors in the fruit. Fruit ripening bowls provide ventilation through either holes drilled in the lid or a lid that fits slightly ajar to allow air movement.

The bowls are particularly useful because they keep ripe fruit from drying out, which they do quickly if left uncovered at room temperature. Many fruits such as peaches, plums, avocados, papayas, cantaloupe, pears, tomatoes and bananas are picked at a mature, green unripe stage so they will withstand shipping better. Once in the grocery store or the consumer's home, however, several days of ripening at room temperature usually improves the fruit texture and flavor. It's during this ripening period that the bowls are handiest, Breene says.

He cautions that vegetables, particularly green, leafy ones, do not do well in the bowls. Ethylene can promote yellowing and aging in vegetables so they should not be included along with fruit in the bowl. Most vegetables are mature when purchased and should be eaten quickly for peak flavor.

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add 1--new canning method saves time, energy

In another aspect of the canning project, Zottola and Mrs. Wolf developed a new and simplified method of canning tomatoes and applesauce at 15 pounds of pressure. The process is simply to bring the canner up to 15 pounds of pressure and then to remove it from the heat source. When the pressure has returned to zero, the person can remove the petcock or pressure regulator, wait 10 minutes and take the top off the canner.

They found, however, that peaches and pears canned by this process were somewhat soft. They are best canned in the boiling water bath or at five pounds of pressure in the pressure canner.

"Home Canning of Fruits, Vegetables and Meats" is a new publication now available at local county Agricultural Extension Service Offices or by writing to the Bulletin Room, 3 Coffey Hall, University of Minnesota, St. Paul, 55108. Ask for Extension Bulletin 413.

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University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
July 31, 1978

Immediate release

SUGARBEET BY-PRODUCTS
AS CATTLE FEED

Sugarbeet by-products can be fed to cattle with success, according to research released from University of Minnesota agricultural scientists.

According to George Marx, dairy scientist at UM, sugarbeet by-products including the tops are potentially valuable feeds for cattle, are highly palatable and compare favorably with oatlage and alfalfa haylage in the performance for growing cattle.

In one trial, researchers fed two comparable groups of holstein steers sugarbeet toplage and ensiled oatlage harvested in the late boot stage respectively. After four months, the difference in growth between the groups was nonsignificant. Thus, Marx says, the sugarbeet ration gave equal performance to the oatlage ration.

In another trial, the researchers fed one group of yearling beef steers, ensiled beet top-beet pulp combination ration and another group alfalfa haylage. The haylage was third cutting alfalfa, cut in a pre-bloom, late-bud stage and ensiled at a dry matter of 53 percent in an oxygen-limiting structure. The beet tops were mixed with beet pulp in a ratio of 40:60 by weight and ensiled in an oxygen-limiting structure at a dry matter content of 47 percent total mixture. Although the animals fed alfalfa haylage gained 12.9 percent faster than those fed beet tops ensiled with beet pulp, they required 6.2 percent more feed dry matter per pound gain. Additionally, carcass quality for the two groups was nearly identical.

In a third trial, calves were fed a standard grain starter of 50 percent corn, 35 percent barley and 15 percent soybean meal. Another comparable group was fed the grain starter except that it contained 20 percent dried fodder-beet meal in place of an equal percentage of corn. Gains for the groups were practically identical, he says, demonstrating that dried fodder-beet meal can be used in dairy calf starter rations without adverse effects.

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Immediate release

ENJOY CUT FLOWERS
AT THEIR PEAK IN AUGUST

August is a month to enjoy the bounty of your flower garden for bouquets and arrangements. Deborah Brown, extension horticulturist at the University of Minnesota, says a little extra care when you're cutting and handling flowers will insure extra days of beauty in the home.

Timing is important. Cut flowers early in the morning when the air is cool and the plants are full of moisture. Evening is another good period.

Ms. Brown suggests taking a pail of warm water into the garden with you. Plunge stems into the water immediately. If you wait before putting the flowers into water, air will be "sucked" into the flower's conducting tissues, plugging them. Cut flowers that have been out of water for more than a few minutes should have a small portion of the lower stem cut off so that water will move freely up the stem when it is returned to water. Remove all foliage that would be submerged in water.

Keep the flowers in this water in a cool place for several hours or overnight before arranging them in vases or bowls. During this brief period in the water as it slowly cools, the flowers will take up almost as much water as they will for the balance of their lives. The refrigerator is a good place for this cooling and a good spot for flower arrangements at night. Just be sure there is no ripening fruit in the refrigerator. The ethylene gas produced by such fruit ages flowers, Ms. Brown says.

Floral preservatives in the water also help prolong life, stabilize color and slow the growth of microorganisms in the water. Ms. Brown says floral preservatives are available at florists and garden shops. Such folk remedies as adding an aspirin, wine or pennies to cut flowers will not help them to stay fresh longer.

Keep bouquets or arrangements out of hot spots such as the tops of TV cabinets. Flowers also suffer if placed in direct sunlight, she says.

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Immediate release

APPLE SCAB
CONTROL

Home apple growers should be on the alert for apple scab in their orchards, according to Herbert G. Johnson, extension plant pathologist at University of Minnesota.

"Apple scab is a fungus disease that can be extremely severe causing loss of leaves, reduced yield, and inedible fruit. And in Minnesota, it is the most common disease seen in apple trees," Johnson said.

Signs of apple scab infection include spots on leaves that appear light brown and later become black and infected fruit with distinct brown or black spots with margins that are often irregular. When severe, the fruit splits open and irregularly shaped fruit results, he said.

If scab is severe for several successive years, tree vigor is seriously reduced. Production is at first reduced and eventually stops and the tree may die primarily from severe scab.

At least two of the new varieties (Prima and Priscilla) are scab resistant; however, all of the older varieties are highly susceptible to apple scab, Johnson explained.

Proper pruning of trees will help control scab; however, Johnson said, the best method of controlling apple scab is spraying with proper fungicides thoroughly and on a proper schedule.

Fungicides currently approved for use for controlling apple scab includes benomyl, captan, dodine, and folpet. Application of the spray should be just before blossom, right at petal fall and then every two weeks through August, he said.

For more information concerning prevention and treatment of apple scab, contact your county extension agent for a copy of Apple Scab, Plant Pathology Fact Sheet No. 33--1978.

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Agricultural Extension Service
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St. Paul, Minnesota 55108
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ATT: Extension Home Economists

Immediate release

HIGHER HIGHWAY SPEEDS
CLAIMING MORE LIVES

Despite 55 mile an hour limits, we're driving faster and it shows in the number of traffic fatalities last year, according to Edna K. Jordahl, extension home management specialist at the University of Minnesota.

She cites data from the U.S. Department of Transportation showing 47,671 traffic deaths in 1977, a 4.7 percent increase over 1976. When the 55 mile an hour limit was imposed in 1974, fatalities fell by about 9,000 in the first year, but as speeds have inched up and the volume of traffic has grown, so have accidents. Also, there are more bicycles, motorcycles and mopeds on the road and deaths related to these have increased.

Traffic accidents are the sixth largest cause of deaths in the U.S. and they are the leading killers among five to nine-year-olds and 15 to 34-year-olds. They rank second among killers of those nine to 14 years of age. In addition, hundreds of thousands of Americans are injured, some permanently, in car accidents each year.

Highway fatalities drain more than \$43 billion from the national economy, Mrs. Jordahl says.

* * * *
TRAVELING?
HOW'S YOUR INSURANCE?

If you are traveling abroad, the Health Insurance Institute has some advice for you, according to Edna K. Jordahl.

The Institute suggests that if you become ill or injured and are uncertain about local medical standards, contact the nearest U.S. Embassy or Consulate for help.

Get medical bills in duplicate if you need treatment. Most health insurance policies will cover you for illness or injury anywhere in the world, but you will have to pay the bills locally and send duplicates to your insurance company for reimbursement when you return home.

-more-

add 1--traveling?

Some travelers add to their insurance while in other countries. It's available through low premium, short-term special risk policies. Such policies are usually available for 180-day periods with benefits primarily for accidents.

* * * *

CHECK SALES TAX
ON PURCHASED ITEMS

By law, sales tax in Minnesota can only be charged on products, not on services, says Edna Jordahl, extension home management specialist at the University of Minnesota. When you receive a bill on an item like carpet installation, furniture delivery or equipment, check whether the tax is on the item alone and not on the service part of the bill.

Labor costs are high and the service part of the bill could be a substantial amount, Mrs. Jordahl cautions.

* * * *
METRICS:
WRITE IT RIGHT

Consumers as well as reporters and editors are grappling with the language of metrics. Edna Jordahl, extension home management specialist at the University of Minnesota, says the symbol for gram is one of the most abused. It is just plain "g" with no period.

Here are four rules for writing and punctuating metrics:

- * Use lower case except C for Celsius and L for liter.
- * Omit commas---14 000 not 14,000.
- * Use no periods after symbols and always leave a space between the number and the metric symbol--thus, 14 cm.
- * Never use an "s" after a symbol. Let the numeral preceding the abbreviation indicate whether it is singular or plural.

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Department of Information and
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The University of Minnesota,
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SPECIAL SHORT COURSE SCHEDULE (September 1978 - February 1979)

- August 23,24 Dietitians' Update - Nutritional Care of the Geriatric Patient. Sheraton Inn Northwest, Brooklyn Park, MN. To explore recent advances in the nutritional care of the aged. *CC
- August 28,29,30,31 International Agriculture, Analysis, Formulation, Policy, Evaluation Seminar for International Communications Agency - A.I.D. middle management participants from Ministries of Agriculture in nine countries. *FH
- September
 (specific dates
 to be announced) Quality Assurance Workshop: Owner/Manager I Course. Minneapolis, St. Paul, Duluth, Rochester, Marshall, Moorhead locations. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. *CC
- September 7-8 1978 Agriculture Engineering Experiment Station Conference, Waseca, MN +
- September 11 Quality Assurance Workshop: Owner/Manager II Course. Student Center, St. Paul Campus. An eight hour update on quality assurance for recertification. *CC
- September 14 Corn & Soybean Day, Waseca. +
- September 14-15 Sanitarian's Conference. Sheraton Inn Northwest, Brooklyn Park, MN. To discuss a variety of developments in dairy and food plant sanitation and field work. *CC
- September 18-19 Thirty-ninth Annual Minnesota Nutrition Conference. Thunderbird Motel, Bloomington, MN. This is a North Central regional conference of animal nutritionists for the purpose of presenting research and current information on animal and poultry nutrition in two symposia and a number of supplementary topics. For animal nutritionists representing producers, industry, universities, research, adult vo-ag instructors, farm editors and technical feed seed representatives. *GW

*For further information call Office of Special Programs
 LF--Lavern Freeh 612-373-0725
 CN--Curt Norenberg "
 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

- September 18-22 Quality Assurance Workshop: Educators' 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
- September 20-22 North Central Regional Home Economics/Community Resource Development Workshop. Northstar Inn, Minneapolis, MN. To explore and define the interface between Home Economics and Community Development to improve the effectiveness of Extension programs in community improvement for family well being. *CC
- September 21-24 Exchange Program Registration Retreat, Itasca State Park. *FH
- September 21 Extension Homemakers' Day on Campus, McNeal Hall, St. Paul Campus. A day of exploration in the College of Home Economics to probe, question, offer comments on the education offered by the College of Home Economics. *CC
- October 5 Technology Transfer in Small Business Administration, Earle Brown Continuing Education Center, St. Paul Campus. This course is intended to present the technology, know-how, product and process information services available to aid independent inventors, agribusiness and business people directly involved with the identification, acquisition, research, development, disposition or management of technology. *CN
- October 5 Beef Cattlemen's Institute, Crookston +
- October 7 Harvest Bowl, Earle Brown Continuing Education Center, St. Paul Campus. *CN
- October 9-13 American Association of Housing Educators - 1978 Annual Conference, Radisson Downtown, Minneapolis, MN. To further the educational and communicational expertise of housing educators, researchers and persons in related areas. *CC
- October 9-10 Quality Assurance Workshop: Chefs' Food Preparation Workers' Course. St. Paul Campus Student Center. Directed at kitchen operations, the course includes discussion of Food and Drug Administration and Minnesota sanitation regulations and how to write quality assured, microbiologically safe recipe procedures. *CC
- October 14 Housing and Urban Development Consumer Forum "Housing Costs and Affordability". Earle Brown Continuing Education Center, St. Paul Campus. To explore the concerns of the young first time home buyer, the buyer who needs/wants a larger home and persons young and old who need apartments--and of their difficulties in achieving their goals because of rapidly escalating housing costs. *CC
- October 20-21 North Central Regional Conference for College and University Teachers of Foods and Nutrition. Earle Brown Continuing Education Center, St. Paul Campus and Thunderbird Motel, Minneapolis, MN. To explore current research and innovative educational processes in foods and nutrition. *CC

Page 3 - Special Short Course Schedule

- October 23-26
October 30-November 2
Property Valuation Short Course. A program for certified assessors to continue their education in the assessment field and for town board members to be brought up to date on problems concerning the board of review process. First date locations will be held on October 23, St. Cloud; October 24, Hibbing; October 25, Thief River Falls; October 25, Fergus Falls; October 31, Willmar; October 30, Marshall; November 1, Rochester; November 2, Eden Prairie. *GW
- October 23-26
Management Training & Development Conference: Bank for Cooperatives, Marquette Inn, Minneapolis, MN. A three day conference for recently appointed junior officers of the Bank for Cooperatives. The course is intended for junior officers and analysts of the 13 Bank for Cooperatives in the United States. *CN
- October 24
Commercial Flower Growers, Earle Brown Continuing Education Center, St. Paul Campus. For commercial flower growers, garden store operators and greenhouse managers. *RM
- October 25-26
Food Pest Management Training Conference, Sheraton Inn Northwest, Brooklyn Park, MN For food processing, wholesale selling and manufacturing pesticide applicators, commercial fumigators, and structural pest control operators. *EA
- October 27-28
Minnesota Home Economics Association Legislative Workshop, Quadna Mountain Lodge, Hill City, MN. To explore current issues and strategies for impacting on legislative processes. *CC
- October 31
November 1 & 2
Beginning Income Tax, (exact locations with dates to be announced). *CN
- November 1
Forage Seed Dealers Forum, Earle Brown Continuing Education Center, St. Paul Campus. For breeders, wholesalers, and retail dealers to promote communication between seedmen and researchers. *EA
- November 1-2
Annual Fall Conference for Veterinarians, Earle Brown Continuing Education Center, St. Paul Campus. For practicing veterinarians, animal technicians, college faculty and students. Program will feature large animal medicine on one day and small animal medicine on the other. *GW
- November 2
Institute of Agriculture, Forestry and Home Economics Faculty Reception, Earle Brown Continuing Education Center. *CC
- November 3
High School Visitor's Day, McNeal Hall, St. Paul Campus. To expose students to career opportunities in home economics as well as student life on the St. Paul Campus. *CC
- November 10
Department of Food Science and Nutrition Advisory Council Meeting and Public Symposium. Earle Brown Continuing Education Center, St. Paul Campus. To explore the new national dietary goals and their effect on the food industry, academia, and consumers. *CC

Page 4 - Special Short Course Schedule

- November 11 1st Annual Dairy Goat Conference, Earle Brown Continuing Education Center, St. Paul Campus. For dairy goat farmers to learn to: 1) Select and buy dairy goats more effectively, 2) select economical feeds and balance rations, 3) develop a herd health program, 4) develop a profitable marketing system, 5) determine production costs, 6) learn what a classification program is and how to use it best, and 7) learn what is happening in the goat industry. *GW
- November 13-14 Quality Assurance Workshop: Owner/Manager I Course. St. Paul Campus Student Center. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. *CC
- November 20-22 Farm and Individual Income Tax, Radisson Downtown Hotel, Minneapolis, MN. For tax practitioners and consultants, accountants, lawyers bankers, insurance agents, real estate agents, educators and others involved in preparing income tax returns. *CN
- November 28 3rd Marine Industry Conference, Sheraton Inn Northwest, Brooklyn Park, MN This course is for the marine industry of Minnesota. The purpose is to bring together the marine operators of the state to talk about federal and state regulations and the business outlook. *RM
- December 6-7 Stored Grain Pest Management Training Conference, Sheraton Inn Northwest, Brooklyn Park, MN. For country and terminal grain elevator personnel and others using chemical methods of pest control in stored grain. *EA
- December 11-12 Quality Assurance Workshop: Owner/Manager I Course. St. Paul Campus Student Center. The fifteen hour course emphasizes Food and Drug Administration and Minnesota Department of Health sanitation regulations and food microbiology. *CC
- December 12 Beef Day, Waseca. +
- December 12-13 Combined Soils, Fertilizer and Agricultural Pesticides Short Course, Minneapolis Auditorium. To present information on soils, fertilizers, and pesticides used in the production and marketing of food and fiber. For professional and technical personnel and those engaged in production agriculture. *EA
- January 2 Exchange Program Study Period Orientation, St. Paul Campus.
- January 8-9 Quality Assurance Workshop: Chef's Food Preparation Workers' Course, St. Paul Campus Student Center. Directed at kitchen operations, the course includes discussion of Food and Drug Administration and Minnesota sanitation regulations and how to write quality assured, microbiologically safe recipe procedures. *CC
- January 9 Swine Day, Waseca TENTATIVE. +

Page 5 - Special Short Course Schedule

- Jan. 9-11, 17-19, 1979 Home Sewage Treatment Workshops. Jan. 9-11, Owatonna;
Jan. 30-Feb. 1, Jan. 17-19, Anoka; Jan. 30-Feb. 1, Inver Grove Heights;
Feb. 6-8, 20-22, Feb. 6-8, Brainerd; Feb. 20-22, Alexandria; Feb. 27-Mar. 1,
Feb. 27-Mar. 1, Hopkins; March 20-22, Duluth; March 27-29, Arden Hills;
March 20-22, 27-29, April 3-5, Bemidji. For county sanitarians, zoning officers,
Apr. 3-5 contractors, county planners, public health inspectors and
building inspectors. *GW
- January 12 Quality Assurance Workshop: Owner/Manager II Course. St.
Paul Student Center. An eight hour update on quality assur-
ance for recertification. *CC
- January 15-16 Quality Assurance Workshop: Owner/Manager I Course. St. Paul
Student Center. The fifteen hour course emphasizes Food and
Drug Administration and Minnesota Department of Health sani-
tation regulations and food microbiology. *CC
- January 16 Nature Photography Short Course. Winter Photography. Student
Center, St. Paul Campus, 7 - 9 p.m. For amateur photographers
and naturalists interested in recording the natural world with
a camera. *EA
- January 30 Winter Crops Day, Waseca. +
- February 5-16 Lumbermen'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 Uni-
versity'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 10 Green Holiday Short Course, Earle Brown Continuing Education
Center. (subject to be announced).
- February 16-25 RRV Winter Shows, Crookston. +

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Immediate release

GULLIES POTENTIAL
SAFETY HAZARD AT
HARVEST TIME

Unusually heavy rains of June and July washed away topsoils from many Minnesota fields causing deep washouts and gullies that will be potentially hazardous at harvest time, according to Clifton Halsey, University of Minnesota extension conservationist.

"Before proceeding with harvest, the farmer should inspect fields for impassable gullies and temporarily repair them. If it is impossible to fill-in the ditches before harvest, the farmer may have to harvest parts of his fields by turning around in the middle of them," Halsey said.

Correcting the damage caused by heavy rainfall is imperative if the farmer is to keep gullies from increasing in size. Repairs to existing waterways and construction of new waterways need to be started as soon after harvest as possible, Halsey said.

"Spring construction and repair may suffice, however, heavy rains may washout the newly-grassed waterways. Thus, it is best to construct the waterways in the fall so that the grass has a chance to establish itself before any heavy rainfall," he said.

Waterways should be saucer-shaped and wide enough to contain the runoff from most storms. Grass should be cut and removed at least twice each growing season to prevent the accumulation of silt and debris which seriously cut-down the lifetime of a waterway. It may be necessary to reshape the waterway every few years because of the silting problem, he said.

"In addition, a good conservation program on the rest of the watershed will reduce silting problems in the waterway and extend its useful life," Halsey noted.

While waterways are relatively expensive to construct, they should be considered an investment to be written off over several years use, Halsey said. Cost sharing is available from the soil conservation district offices and the Agricultural Stabilization and Conservation Service.

"Properly constructed and maintained grassed waterways, coupled with a good soil conservation program on the rest of the land, will keep the soil on the land--where it is needed--and make farming a lot easier for the farmer and his machinery," Halsey said.

For more information concerning repair and construction of grassed waterways contact your county extension office, Halsey said.

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Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
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Immediate release

CHICKEN MANURE--ANIMAL
FOOD OF THE FUTURE?

With global population soaring, agricultural scientists throughout the world are rushing to find ways to increase food production from the earth's limited land mass. And University of Minnesota scientists have demonstrated that one way to increase nature's efficiency is to recycle chicken manure.

Researchers at University of Minnesota's Northwest Experiment Station at Crookston have shown that a ration of chicken manure and sunflower hulls--both byproducts of food production--produces beef nearly as well as more expensive feedstuffs such as alfalfa.

In a study conducted by G. D. Marx, animal scientist, and E. C. Miller, agricultural engineer, equal amounts by weight of pure chicken manure from caged birds and sunflower hulls were mixed and ensiled in an oxygen limiting structure. The ensiled mixture, 58 percent dry matter, was fed following a three-week fermentation period to Holstein steers. Control animals were fed alfalfa haylage with both groups receiving 10 pounds of ground barley daily per animal.

Animals fed the chicken manure-sunflower hulls mixture gained 2.03 pounds daily and those fed alfalfa haylage gained 2.29 pounds daily. Carcass quality of the two groups was the same, according to Marx.

In other observations, the scientists found that the experimental ensiled chicken manure-sunflower hulls mixture created no unusual problems of unloading or feeding. Additionally, Marx added, the odor of the ensiled mixture was similar to well-fermented and preserved silage feeds.

"In the future, greater numbers of animals will be fed poultry and cattle wastes. Currently, some feedlots are feeding up to 20 percent of the dry matter of the ration in the form of manure. The only caution that must be exercised is that the manure must be free from illegal compounds or drugs that could end up in meat or milk," Marx said.

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Immediate release

NEW BARLEY VARIETY
AVAILABLE TO GROWERS

Morex, a new high yielding barley with good malting characteristics, will be available to barley growers for 1979 plantings.

Morex was developed and released to certified seed growers by the Minnesota Agricultural Experiment Station in February, 1978. It is doing well in growers' fields, researchers say.

Morex is averaging about 8 bushels more per acre than Larker, the most widely grown Minnesota variety. "It has advantages for both farmers and consumers," says Don Rasmusson, University of Minnesota plant breeder. "Higher yields, plus lodging and disease resistance make it a more dependable variety for farmers. It also appears to have excellent malting characteristics, which means that it should be well accepted by the malting and brewing industry."

Morex has a high level of resistance to stem rust and loose smut and is moderately resistant to spot blotch, according to Roy Wilcoxson, plant pathologist at the University of Minnesota. These are probably the most important barley diseases in Minnesota. In comparison, Larker is only resistant to stem rust.

Spot blotch is causing yield reductions of up to 25 percent on Larker, according to Wilcoxson. Malsters have been paying a 10- to 20- cent per bushel premium for Larker. But yield reductions due to lodging and diseases will usually more than offset premiums.

"We're optimistic that Morex will replace Larker as the standard of malting and brewing quality in Minnesota," says Rasmusson. This optimistic outlook about its malting quality is based on extensive testing in both public and private laboratories.

add 1--morex barley

Morex is a smooth awned variety. As barley growers become more familiar with Morex, they may note its awns fall off at maturity under some growing conditions. This should not influence its performance.

The name Morex (more extract) was chosen because the variety has a two to three percent higher extract than other Midwestern six-row varieties. This means that malsters and brewers may ultimately prefer Morex over Larker. Other malting characteristics such as color, and grain protein, and enzymatic activity appear to be satisfactory.

"You should be able to get Morex seed for 1979 planting if you plan ahead and line up seed supplies early," Rasmusson says.

Much of the variety testing work in Minnesota was done at the University's Northwestern Experiment Station, Crookston.

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INSECT CONTROL--SQUASH VINE BORERS,
IRIS BORERS AND WASPS

Three insects--squash vine borers, iris borers and wasps--are creating problems for Minnesota gardeners and homeowners, according to Richard Biege, University of Minnesota entomologist.

Squash vine borers are being seen in melon and squash patches right now and are lethal to the tender vines, he says. Evidences of squash vine borer damage includes wilted plants with a watery exudate being present at the base of the plant. Often an orange exudate is also present. Control measures include splitting open the vine and removing the borer (a worm) and then covering the wound with moist dirt, Biege says. Prevention includes spraying or dusting with malathion or Sevin weekly throughout the growing season.

Iris borer damage is also seen in iris beds. Signs of iris borer presence include browning of leaves and presence of caterpillars in the roots. For control of the pest, Biege advises, spray or dust with Cygon (dimethoate) in the spring when the shoots are about five inches tall. In the fall, rake up and destroy the dead plant matter around the plants.

Wasps are a yearly nuisance for homeowners in Minnesota. However, Biege warns those plagued by wasps to consider the advantages of wasps before destroying the insects. He explains that wasps are predatory insects that attack and kill other insects such as spiders and grasshoppers. Unless the wasps are in an inconvenient place, such as next to a door or entrance, the homeowner should ignore them.

If the wasps are causing a problem, they can be eradicated by spraying the exposed nest with a wasp and hornet spray in the evening hours. If the nest is not exposed, he suggests the use of Sevin sprayed around the entrance to the nest. The residual effects of the spray will eventually kill the wasp population, he says.

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Department of Information
and Agricultural Journalism
Agricultural Extension Service
University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
August 7, 1978

MSC
3A 27P
Immediate release

PARENTS AFFECT
CHILD'S ATTITUDE
TOWARD SCHOOL

School bells will be ringing soon and the attitudes that children carry with them into the classrooms deserve at least as much spit-and-polish as the new shoes and notebooks they sport.

Ronald Pitzer, extension family life specialist at the University of Minnesota, says that parents play a big part in deciding whether school will be a good or bad experience for a son or daughter.

Parents' attitudes about school rub off on their children, he says. "Whether we like it or not, children are copy cats. The models they most often copy are their parents," he says.

If parents found school enjoyable and challenging, their children probably will too. If parents disliked school and remind their children of the fact, the children likely will balk as well.

Pitzer says some parents unconsciously hold a double standard. They want their children to like school and to do well there. But in the opposite vein, many seem to assume that the children won't like it.

He suggests taking the positive approach. Assume that they will like school and enjoy learning. Children have a way of living up to parents' assumptions about them, either positive or negative.

"If for some reason, a dislike of school does develop, search out the reason and look for remedies," Pitzer urges. "Don't add to the problem by telling others in the child's presence, 'Johnny just hates school.'"

Pitzer says that even parents with the best of intentions sometimes make two common mistakes in preparing their children for school. Some use school discipline as a threat--"They won't let you get away with that." Or they may overstress the fun--"You'll take trips, play games, make lots of new friends."

If the child expects nothing but fun, he or she will be disappointed. But it's equally true that a child whose parents have stressed the structure and discipline of school--listening to the teacher, learning a lot--may fear he or she won't be able to make the grade, Pitzer states.

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CHILD'S SCHOOL
NEEDS INCLUDES
EMOTIONS, TOO

Don't be so busy readying your child's clothes and school supplies for the start of school that you overlook his or her emotional needs at this important time.

This is the advice of Ronald Pitzer, extension family life specialist at the University of Minnesota. It applies to older children as well as to "first timers" beginning kindergarten or first grade, but he points out that it is particularly critical for young children.

He says age six is a difficult time for youngsters and first grade is a giant step because of the changed pattern of life it brings. Although many children just starting school may seem confident and self-sufficient, they still have a great need to give and receive affection. "Perhaps it's this impression of self-sufficiency that allows some of their emotional needs to be overlooked," Pitzer states.

"The six-year-old probably isn't receiving the kind of attention he or she did as a toddler," he says. "But in this time of change, he or she needs to know even more than before that he or she is loved and valued by the family."

Unlike when a baby takes its first steps or says its first words, parents may take the first school accomplishments for granted. Pitzer emphasizes, however, "None of us is so old that we don't like a little appreciation."

Research has shown that as children grow past the nursery school age, they tend to receive less praise and more disapproval from parents. Parents may ignore them until they do something wrong.

add 1--child's school needs

"True, six-year-olds are past the stage of lap sitting and wanting to be cuddled--at least not in public--but parents can show the same interest and affection in different ways," he says.

He offers some suggestions on how to provide the emotional support that children just beginning school need in such big doses.

*Share time and activities with your school child. A bedtime story is still a treat even though the child may soon be able to read. Similarly, time set aside for a walk, a game of catch or just a shared trip to do an errand indicates interest and concern.

*Listening is critical. Pitzer says, "Listening with interest tells another that we value him or her as a person and that we really love them. Being cut off with 'we're too busy to listen' may deflate the confidence that the child will need in the teen years."

*Encourage a hobby. Whether your six-year-old shows an interest in rock collecting, making model airplanes or sewing doll clothes, try to help him or her keep that interest alive.

*Play games or devise similar activities that will pull all family members together both physically and emotionally. Pitzer suggests games such as dominoes, checkers, guessing games and riddles for six- to eight-year-olds. Other children enjoy games that involve reading, math, geography and spelling.

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PRACTICAL STEPS
FOR SCHOOL READINESS

Do you have a child beginning school for the first time this fall? Besides hoping that he or she is emotionally ready for the new experience, there are some practical things that parents can do to ease the transition from pre-schooler to student.

Ronald Pitzer, extension family life specialist at the University of Minnesota, suggests these as a place to start:

- *Teach your child to tell his or her full name and address.
- *Print the child's name in the lining of the coat, boots and other outerwear.
- *Provide clothing that is easy for the child to manage in dressing, using the bathroom and changing.
- *Check to be sure that clothing is appropriate to school activities so they can be messy if that's what the occasion calls for.
- *Teach safety precautions--how to cross the street if appropriate, when to leave school and with whom (bus driver, friend, brother or sister).
- *Teach the child the route to school if nearby, and what to do if he or she gets lost.
- *If your child rides a bus, teach him or her the bus procedures and rules.
- *Visit the school beforehand with your child.
- *Have a complete medical and developmental exam for the child.
- *On the big day, let the child have a say in what he or she wears or brings to school.

Pitzer reminds parents that after a day in school, no matter how much freedom of activity the school permits, the average child will need some time "to let off steam." He or she will need to express his freedom and enjoy some adult contact.

"You may find that he or she needs a little time before telling you what happened at school that day, or he or she may be so full of the day's events that he cannot wait for you to take time to listen. In either case, you can be sure that your child is changing, learning and growing," Pitzer says.

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Immediate release

MISC
2/12/78

KENHY FESCUE MAY
HOLD PROMISE FOR
MINNESOTA BEEF PASTURES

Kenhy, a new variety of tall fescue may have potential as pasture for beef cows in Northern Minnesota, according to D.L. Rabas, University of Minnesota North Central Experiment Station at Grand Rapids.

"Tall fescue varieties have been used extensively in southern states with apparent success. Although they have not been fully evaluated in Minnesota, early research indicates that Kenhy can be grazed longer each year and produce more pounds of beef per acre than Orchardgrass," Rabas said.

During 1976 and 1977, Kenhy and Orchardgrass pastures were evaluated using a stocking rate from one to two yearlings per acre, with heaviest stocking during early summer. Although during both years Orchardgrass pasture produced the highest average daily gain, Kenhy produced more beef per acre, he said.

"While these two trials look promising for Kenhy, it must be pointed out that both 1976 and 1977 were atypical years in respect to weather conditions. Extreme drought in 1976 reduced over-all pasture performance during the summer and made it necessary to remove the animals in early September. An unusually severe winter in 1976-1977 greatly disrupted stands of Orchardgrass and to a less extent damaged the Kenhy pastures," he said.

Kenhy has an unusually late fall growth, providing a potential to extend the grazing season later into the fall than is possible with other pasture species. Additionally, it can be used as early fall pasture or stockpiled for late fall grazing, he said.

Tall fescues, such as Kenhy, are considered to be less palatable than many other grass species, although several studies show that palatability improves when Kenhy is grown during cool, fall months, he said.

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Immediate release

HARVEST BOWL
SET FOR OCT. 7

The second annual Harvest Bowl celebration to recognize Minnesota agriculture is scheduled for Saturday, Oct. 7, 1978.

The program starts at 8:30 a.m. in the new Earl Brown Continuing Education Center on the University's St. Paul Campus. There will be a special careers program for youth.

The noon luncheon will feature Minnesota food products. Afternoon activities will include the Minnesota-Oregon State football game.

A recognition awards dinner and dance will be held in the evening. Representatives of Minnesota producer and youth agricultural organizations will be honored for their contributions to Minnesota agriculture.

Mark the date on your calendar. More detailed information will soon be available from the University of Minnesota's College of Agriculture.

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University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
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ATT: Extension Home Economists

Immediate release

SOME CANNING REMINDERS
AS THE SEASON BEGINS

Canning under pressure is a must for some foods. Low-acid foods such as vegetables must be processed in a pressure canner or pressure cooker to destroy certain heat-resistant bacteria. No matter how long a low-acid food such as meat or vegetables is processed in a boiling water bath, it may not keep because certain types of bacteria may not be destroyed. Different strains of bacteria are present in the soil and air from time to time. This may explain why low-acid foods processed in a boiling water bath may keep some years but spoil in others.

If you plan to can vegetables or meat, always use the pressure method. Timetables for processing are given in Extension Bulletin 413, Home Canning of Fruits, Vegetables and Meats. For a copy ask at your local county extension office or write to the Bulletin Room, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108.

* * * *

To salt or not to salt? Is that your quandary at canning time? Vegetables canned without salt will keep just as well as those canned with it. Salt is not a preservative in the small amounts used in canning. It may just as well be left out of the jar and put in the kettle when you reheat the vegetable for serving.

* * * *

Don't cut corners on the final cooling recommendations for home canned foods or you may ruin your efforts. When you remove jars from the canner, place them right side up on a folded dry towel or a pad of newspapers to prevent breakage either from cold metal or from stray drops of water. There is less danger of breakage if you place the hot jars on wood, paper or cloth since they are all poor conductors of heat.

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Tel. (612) 373-0710
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Immediate release
CONTACT: 373-1780
4-H NEWS

UM 4-H ENERGY
DEMONSTRATION SEPT.
2-4 AT STATE FAIR

An entertaining, audience-involving demonstration on energy will be presented by 4-H Assistant Extension Specialists Bob Anderson and LaDonna Riste, Sept. 2-4 at the 1977 Minnesota State Fair, St. Paul.

The 40-minute demonstration-lecture will be at 10 a.m. and 2 p.m. Sept. 2; 10 a.m. Sept. 3; and 10 a.m. and 2 p.m. Sept. 4 on the center platform, first floor of the 4-H Building. It is entitled "Energy Today and Tomorrow."

Anderson involves the audience by having them power several appliances with a bicycle generator to demonstrate energy creation and utilization. He also uses a miniature smoke precipitator, a movie projector, a recycling trash can, a solar can, a many-pocketed energy conservation coat and an electric motorcycle. The program is dramatic, fast-paced, entertaining and educational.

Anderson received special training at Oak Ridge Associated Universities, Oak Ridge, Tenn., which provides the program materials. Northern States Power Co., Minnesota Power and Light Co., Otter Tail Power Co. and Interstate Power Co. provide funds to cover the program costs.

"Energy Today and Tomorrow" will be presented at high schools throughout Minnesota in 1977-78 and in the metropolitan area January-April through 4-H Youth Development and local county extension offices. The program also will be at the Energy Savers Show Sept. 8-11 at the Minneapolis Auditorium.

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Immediate release

4-H NEWS

4-H'ERS READY
FOR FALL
LIVESTOCK SHOWS

Minnesota state 4-H animal science judging and educational programs start with the Minnesota State Fair Aug. 24 through Sept. 4 and conclude with the State 4-H Market Livestock Show Sept. 18-20.

About 1,300 4-H'ers will participate in livestock and poultry activities at the 1977 Minnesota State Fair at the fairgrounds in St. Paul, according to Sharon Gilsrud, University of Minnesota extension youth specialist.

Livestock exhibitors will arrive at noon Friday, Sept. 1, with the Lamb Lead at 6:30 p.m. and sheep judging at 7:30 p.m. in the Sheep Barn.

On Sept. 2 dairy judging starts at 8 a.m. in the Coliseum and the swine show judging starts at 8 a.m. in the 4-H Building. At noon Sept. 2 rabbit and poultry judging start in the Poultry Barn and beef judging starts in the Coliseum.

Herdsmanship Awards will be presented in the Sheep Barn at 3:30 p.m. Sept. 4.

4-H general livestock and dairy judging teams will compete at 7:30 a.m. Thursday, Aug. 31, for top honors. The dairy judging teams will be in the Coliseum and the general livestock teams will meet in the Livestock Pavilion on the University's St. Paul Campus adjoining the fairgrounds. The top general livestock judging team at the State Fair will compete in the National 4-H Livestock Judging Contest at the North American Livestock Exposition in Louisville, Ky., in November. The second place general livestock judging team will compete at the American Royal Judging Contest in Kansas City, Mo. Both trips are sponsored by the Minnesota Livestock Breeders Association and the Minnesota State Fair. The third place team will represent Minnesota at the Western National Stock Show at Denver, Colo., with its trip sponsored by the Minnesota State Fair.

The first place dairy judging team will represent Minnesota in the 4-H judging contest at the National Contest in Columbus, Ohio with the trip sponsored by the Minnesota State Fair and the Minnesota Livestock Breeders.

The second opportunity for 4-H livestock project members to participate in a state event comes Sept. 18-20 at the State Fairgrounds for the Minnesota 4-H Market Livestock Show. The State 4-H Horse Show is Sept. 17-19 at the fairgrounds in St. Paul.

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University of Minnesota
St. Paul, MN 55108
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August 14, 1978

Immediate release

4-H NEWS

County Director--Once again the 4-H News Bureau will be located outside the south entrance of the 4-H Building for the State Fair, Aug. 24--Sept. 4. Contact the 4-H News Trailer at 645-2781, ext. 388, during the fair or preferably me at (612) 373-1780 before the fair if you have any special news coverage/arrangement requests. I will have judging results in the trailer during the fair.--Randy Weckman

4-H'ERS GET AWARDS
AT 1978 STATE FAIR

Several 4-H members from _____ County received awards for excellence in demonstrations and exhibits at the Minnesota State Fair, Aug. 24-Sept. 4, says _____ County Extension Director _____.

Receiving purple ribbons were:

Receiving blue ribbons were:

Selected for the Court of Honor in the 4-H Fashion Revue from _____ County were (was):

4-H'ers throughout the state modeled clothes they handcrafted at the Fashion Revues.

Local 4-H'ers receiving top awards in 4-H livestock shows at the State Fair were:

Dairy--

Beef--

Sheep--

Rabbit--

Poultry--

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Department of Information
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University of Minnesota
St. Paul, Minnesota 55108
Tel. (612) 373-0710
August 16, 1978

FOOD AND NUTRITION CONFERENCE SET IN NOVEMBER

The Governor's Conference on Food and Nutrition, a forum for farmers, consumers, processors, distributors and food and nutrition experts and professionals, has been set for Nov. 17 and 18 at the St. Paul Civic Center.

The conference is intended to promote discussion and public awareness of current issues in food and nutrition and to present these issues and recommendations to the Governor and State Legislature.

Five task forces on land and water use, processing, distribution, consumption and government policy are working to identify key issues to be presented at the conference. An additional rural task force also will be organized.

Further information is available from the Governor's Conference on Food and Nutrition, 690 American Center Building, 160 E. Kellogg Blvd., St. Paul, MN 55101.

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Department of Information
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University of Minnesota
Tel. (612) 373-0710
August 21, 1978

CHECK FIELDS
BEFORE HARVEST

Spending some time checking your corn and soybean fields before harvest may give you some good ideas for next year's crop.

Check results of your weed control program, advises Dale Hicks, University of Minnesota extension agronomist. A good record of your weed control program helps. "If you're getting different weed problems than in the past perhaps your herbicide isn't controlling the major weeds. Or, perennial weed patches may be developing. In this case you can do something about it after harvest."

Look at leaves for possible insect feeding. There's also a chance you may have some corn leaf diseases, although they have not been widespread over the state. Some corn eyespot disease has been reported in central Minnesota.

If a large amount of leaf tissue is destroyed you're probably getting yield losses, says Hicks. If there's a significant eyespot damage you should consider rotating the field out of corn or fall plowing with a moldboard plow. Fields that were in corn the previous year that were prepared with minimum tillage operations are more subject to eyespot disease buildup.

You may also want to check corn leaves for nutrient deficiency symptoms. Most farmers do a good job with fertility programs so there won't be widespread deficiency symptoms on many fields. However, some coarse textured soils in central Minnesota are suffering from a nitrogen deficiency since it was too wet for farmers to sidedress nitrogen.

Inspect ear development as it relates to plant population. If there are too many barren ears you may want to adjust the plant population to the hybrid you're growing. Checking kernel development can give you a good idea of anticipated yields.

Stop at the hybrid yield plots you see along highways, Hicks urges. "Take advantage of these demonstration plots. Then you'll have a good feel for the physical appearance of various hybrids when the seed corn salesman comes around."

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Immediate release

COMBINE PREPARATION
FOR FALL HARVEST

Prepare your combine properly before you start harvest. That's the advice of Jack True, University of Minnesota Extension agricultural engineer.

"Most combine troubles are caused by improper adjustments. The ounce of prevention required for care-free combining is frequently just proper preparation of the machine," True said.

A basic, thorough lubrication and inspection to check chain and belt drives for wear and tension, and replacement of worn parts are the first steps. Then set the machine to the general specification for the crop to be harvested, he said.

Check the machine operating speed with an r.p.m. counter on the beater shaft. The proper speed is given in the owner's manual. Engines on self-propelled machines must be operated at full throttle and p.t.o. machines at rated p.t.o. speed--540 or 1,000 r.p.m.

Cylinder speeds for corn should be 450 to 750 r.p.m. with a 22-inch cylinder, with small cylinders slightly higher. Soybeans should thresh well at 500 to 875 r.p.m. Use the slowest cylinder speed that will effectively thrash the grain. The cylinder-concave clearance recommended for corn is 1 inch to 3/4 inch and 5/8 to 5/16 inch for soybeans, he said.

Open chaffer and shoe sieves just enough to allow the grain to fall through but not the chaff and straw parts. Use as much wind as possible without blowing grain out the back, he noted.

The cylinder, concave, sieve and wind settings are interrelated. Cylinder settings too fast and too close will produce excessively small straw or cob pieces and chaff that overload the sieves. Changing cylinder settings may also require a sieve and wind change.

Cylinder and concave settings need to be changed as crop conditions change. Tough crop conditions call for higher cylinder speeds and closer concaves to remove the grain from the pod or ear. Drier conditions need slower cylinder speeds and wider clearance to avoid cracking the grain, he said.

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Immediate release

THREE CORN-SOYBEAN
FIELD DAYS SCHEDULED

Corn and soybean field days have been scheduled for the middle of September at three University of Minnesota Experiment Stations.

The first in the series will be at West Central Experiment Station (Morris) and will be September 12, beginning at 9:00 a.m. and continuing until 1:30 p.m. It will feature tours of University research being conducted at the field station including soybean varieties testing; N-serve and foliar application on corn; sunflower production practice; soybean management; nematode research; and fall tillage techniques.

On September 13, Southwest Experiment Station (at Lamberton) will host the field day, with tours concerning variety trials, fertility practices, weed control, and nematode research. The tours begin at 9:00 a.m. and continue until 2:00 P.m. A market outlook discussion will be included at the field day.

The Southern Experiment Station Field Day will be September 14 at Waseca. Tours will include corn breeding studies; weed control; new varieties in soybeans; soils research, including nutrient movement in tile lines, use of nitrogen fertilizers and additives; and foliar fertilization of soybeans. Additionally, a soybean and livestock market outlook discussion will be featured at the field day.

A plant problem clinic will be included in all three field days. All field days are open to the public.

IA,CA,Crops, Livestock

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Immediate release

GUARD AGAINST
SILO GAS DANGER

Silo gas poisoning is a serious farm hazard, but trouble can be avoided by taking several common-sense precautions, according to University of Minnesota Safety Specialist Bob Aherin.

"Green corn silage is particularly likely to give off dangerous nitrogen dioxide for the first week following filling. Breathing even small amounts of the gas can damage lungs," he said.

Be especially wary if the green silage was cut while immature or while vigorously growing, he said. Take the following precautions to avoid danger:

--When filling the silo, be alert for tell-tale yellowish brown fumes in or near the silo, and stop working and leave the area immediately if fumes are detected visually or by their bleach-like smell.

--If the silo is attached to a barn, keep doors between the silo and livestock housing area closed and ventilate the silo room thoroughly.

--Run the silage blower for 15 to 20 minutes before re-entering a partly-filled silo. Ventilate the chute and remove chute doors down to the silage level to prevent gas accumulation.

--Leave the area immediately if you experience even slight throat irritation or coughing while in the silo.

--Warn family, employees and visitors about the potential danger.

"By taking these precautions, you could prevent the loss of livestock or more importantly, your life," Aherin said.

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Immediate release

HARVEST SAFETY
ON THE ROAD

A hazard to farm equipment operators and motorists is presented at harvest time with increased travel on public roads and earlier sunsets, says Bob Aherin, University of Minnesota Extension safety specialist.

He suggests the following safety rules for on the road operation of farm equipment:

- Allow only licensed drivers to operate farm equipment on public roads. Skill, maturity and knowledge of rules of the road are needed for safe operation.
- Allow traffic to pass and pull over to the shoulder of the road, if necessary.
- If you are using a traffic lane, take it all but no more. Do not tempt motorists to squeeze by with insufficient space.
- Maintain and use bright, clean SMV emblems and use lights, flashing lights and reflectors at both day and night when moving equipment on public roads.
- Lock brake pedals together when transporting and avoid high speeds with heaving loads.
- Do not pull more weight than the tractor braking system is designed to handle. You could easily lose control of the equipment in a sudden stop or when going down a hill.
- Use the same gear going down a steep hill as you would use going up it.
- Do not allow extra riders on farm equipment.

When using equipment in the field, stop machines for adjustments and clearing clogs. Thorough maintenance before harvest operations will prevent mishaps. Also, he advises, take frequent rest breaks from the tedium of operation machines.

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Immediate release

PREVENT DISASTROUS
HARVEST ACCIDENTS

Simple precautions can prevent disastrous farm machinery accidents, according to Bob Aherin, University of Minnesota extension safety specialist.

"Each year we see a substantial increase in farm accidents at harvest time. Farm families are under great pressure to harvest the crops quickly and accidents happen because they are not concentrating on what they are doing," he says.

He advises that all machinery operators and harvest workers should become acquainted and follow these rules:

--keep children off and away from farm machinery.

--don't carry extra riders. There is no safe place on farm machinery for extra riders.

--make sure the person operating the machinery has been well-trained and is physically able to operate the machinery safely. Supervise the operation until you are satisfied that the operator is competent and will operate it safely.

--discourage horseplay and showing off. Use farm machinery only for its intended function.

--avoid fatigue. Take frequent breaks.

--provide roll-over protection for your tractor. Consider the comfort as well as safety of a protective cab. Tipping is responsible for nearly half of all tractor accidents, he notes.

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Agricultural Extension Service
University of Minnesota
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Tel. (612) 373-0710
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ATT: Extension Home Economists

Immediate release

CAULKING, WEATHERSTRIPPING--
QUICKEST RETURN ON \$\$ INVESTED

Caulking and weatherstripping may not be the glamour jobs of home renovation, but they can pay off your investment faster than almost any other home improvement. Roger Peterson, extension residential energy specialist at the University of Minnesota, says that from 15 to 40 percent of the heating or cooling your house needs is due to air exchange. Warming the air that seeps in during winter and cooling the hot air that leaks in all summer take energy and cost you money.

Peterson says a variety of materials and methods are used for weatherstripping. Most is bought by the foot or in kits complete with the seal and fasteners for a single door or window.

Caulking compounds come in a range of prices. Peterson says some manufacturers state the life expectancy of their product when installed, but generally the more expensive compounds--silicone, polyurethane, neoprene, acrylic and vulcanized butyl rubber--last longest. You can expect 20 or more years from some of these caulking materials but only three to five years from the least expensive products.

Peterson suggests choosing caulking material that adheres to wood, glass, metal, plastic and masonry because this type expands and contracts without loosening. Resistance to weathering, cracking, water and mildew are other considerations.

Caulking is a cool weather project. Do it on a day when temperatures are between 45^o F and 55^o F. At these temperatures, expansion and contraction at joints are at a midway point, Peterson states.

Surfaces to be caulked should be clean, dry and grease-free. Remove dust, loose particles and old caulking before applying new sealing materials. Prime all surfaces before applying the caulking compound.

Even if you select the most costly caulking material, don't skimp when applying it, Peterson cautions. Use enough material to fill the crack or seam. If it shrinks during drying, reapply.

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ATT: Extension Home Economist

Immediate release

DEAD AIR IS KEY
TO WEATHER-WISE WINDOWS

Dead air. It sounds like something to avoid--a blistering hot attic on a hot summer day or the smoke-filled room of a political strategy session.

Instead, it can mean success in weatherizing windows and doors for both winter and summer comfort. Dead air space between panes of glass or plastic is the key to keeping cold air out in the winter and hot air from turning your home into an oven in the summer, according to Roger Peterson, extension residential energy specialist at the University of Minnesota.

He recommends insulated windows incorporating two panes of glass with air space between for all new construction. About a 3/4 inch gap between the panes is best.

Either prefabricated metal windows or wooden storm windows also do a good job of keeping your home comfortable during extremes of weather. As an economy measure, plastic covers for windows and doors can give you almost the same effective insulation as permanent storm. Peterson suggests that if you can't afford to add plastic or permanent glass outer windows to your whole house, start with the side that faces most winter winds, generally the north and west. He adds that permanent storm windows and doors, although expensive, add value to a home while plastic window covers do not and must be replaced about every three years.

When you buy storm windows and doors, look for the following points:

- * Good design to assure easy and efficient handling and tight fit.

- * Sturdy main frames and frames for the glass or screen inserts.

- * Weathertightness to keep out water, cold air, dust and insects. However, an opening or weep system is standard at the base of all storm windows to release excess moisture.

- * Ease of removing all inserts from inside the house. This makes house cleaning easier and requires no outside climbing.

- * Gaskets to prevent metal-to-metal contact when metal framed storm panels are mounted on metal windows.

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HARVEST BOWL WILL RECOGNIZE MINNESOTA AGRICULTURE

Minnesota's second annual Harvest Bowl Saturday, Oct. 7, 1978, will recognize agriculture, the state's most important industry.

A symposium on the future of Minnesota agriculture, a fun afternoon at the Minnesota Gophers football game and an awards banquet for Minnesota's outstanding agricultural producers are only some of the events planned. There will be a special program for 4-H and FFA members.

The event will be held in the new Earle Brown Continuing Education Center on the University of Minnesota's St. Paul Campus. Registration begins at 8:30 a.m. and the program will begin at 9:30.

Leading off the morning program will be symposium entitled "A Healthy Agriculture--Minnesota's Future." Moderator will be James Tammen, dean of the University's College of Agriculture. Presentors and their topics at the session include:

--Hazel Reinhardt, state demographer, "Impact of a Declining Population on Rural Family Life."

--Ralph Hofstad, president of Land o' Lakes Inc., "The Changing Nature of Farm Business."

--Vern Freeh, assistant dean of the University's Institute of Agriculture, Forestry and Home Economics, "Minnesota Agriculture as an International Resource."

Reacting to the presentations will be Coralee LaSell, Minnesota farm wife representative; Lloyd Peterson, Paynesville farmer and U of M regent; and Chuck Lilligren, farm director of WCCO radio.

A special program for youth will be held concurrently during the morning session. 4-H and FFA groups have been contacted and informed of details.

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add one--harvest bowl

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The University of Minnesota Alumni Marching Band and cheerleaders will perform at the end of the morning program.

The noon barbecue luncheon will feature Minnesota food products donated by producers and food processors.

There are two options for the Saturday afternoon program. You can attend the Minnesota-Oregon State football game as part of Harvest Bowl activities, or tour the College of Agriculture plant and soils departments.

A harvest banquet will be held in the evening. Awardees selected by agricultural producers associations will be honored.

Entertainment will be furnished by 4-H and FFA talent groups.

Order forms for Harvest Bowl ticket reservations will be available from county extension offices and high school vocational agriculture departments throughout the state. Or, write for order forms to the College of Agriculture, University of Minnesota, St. Paul 55108. Tel. (612) 373-0715. Youth groups qualify for discount football tickets.

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SAVE MORE
SOYBEANS
THIS FALL

Prepare your combine before soybean harvest by adjusting it according to the operator's manual, advises Jack True, Extension Agricultural Engineer at the University of Minnesota. Add any attachments that you think will help you harvest more soybeans.

Soybean growers usually lose an average of 10 percent of their crop through improper harvest practices and management. Much of this loss can be saved by proper combine operation and adjustment, True says.

"One of the most important things, after you've initially adjusted the combine, is to make adjustments throughout the day according to changing moisture and field conditions," True says.

Here are more reminders to help harvest more of your soybeans:

--Begin harvest when moisture in the soybean seeds reaches 13 percent; higher moisture content may result in mold in the bin; lower moisture content will result in increased losses due to shattering, lodging and cracking. Your local elevator can probably arrange to give you a moisture test--if you check with them and take in the size sample they desire.

--Cut soybeans as close to the ground as possible. You lose from one-half to 1.4 bushel of soybeans per acre for every inch of cut above the ground.

--An accessory and big improvement in saving soybeans is a floating flexible cutter bar extension which is mounted below and about ten inches forward of the original cutter bar. It is free to float and flexible to follow the contour of land.

-more-

add 1--save more soybeans

--To reduce shatter, a variable speed reel permits feeding the beans to the cutter bar with minimum shatter loss. For example, in heavy growth, you can slow the speed of the reel as you slow your ground speed.

--A hydraulic reel height control to feed tall or short beans into the auger is necessary to lower or raise the reel while the combine is moving.

--Some combines use an automatic height control on the header. Its "sensing fingers" operate a hydraulic lift for controlling cutting height.

A quick way to measure soybean field losses is to simply measure 10 square feet in an average area where beans have been combined and count the beans left. For every four beans per square foot, there is a loss of about one bushel per acre. You get a better average by measuring an area one foot wide and 10 feet long across the direction of travel of the combine. A count of 40 beans or less in this 10 square foot area indicates a good job of combine operation. More than this means corrective operation and adjustment is necessary.

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GRAIN DRYING
FOR THE FUTURE

With the prospects of rising energy costs, farmers will need to consider carefully the full costs of drying grain, including ownership and operation costs, according to research recently released from University of Minnesota agricultural economists.

In a study comparing various methods of grain drying, the researchers cost-analyzed seven "case farms," ranging in size from 100 acres to 2,000 acres of grain harvested each year. For each of the seven case farms, they also projected average energy costs for the next 20 years.

For the farm drying 10,000 bushels per year, and with either a modest or significant energy price increase over time, clearly the low temperature method is the most economical. For a farm with annual production of 20,000 bushels, the batch-in-bin method has a slight edge over the low temperature and dryeration methods with most of the energy price increases projected, the researchers noted.

Dyeration with an automatic batch dryer is the least-cost system for farms drying 40,000 bushels each year if modest energy price increase prevail. However, if energy prices increase significantly, the most economical method will be the low temperature system.

For a farm with 60,000 bushels or more dried each year, the lowest cost system for each of the energy price schedules is dryeration with a continuous flow dryer, they found.

Currently, the costs of fuel do not comprise a large portion of the total cost of drying and storing operation. However, as energy prices increase fuels become an increasingly larger proportion of the real annual costs. Thus, the researchers conclude, the least-cost system of drying and storing today may not be the least-cost method a few years from now.

For more information concerning the study, contact Department of Agricultural and Applied Economics, 231 Classroom Office Building, University of Minnesota, St. Paul, MN., for a copy of Economics of Owning and Operating Corn Drying and Storage Systems With Rising Energy Prices.

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SAVE ON
FARM FUEL

Farmers can save fuel at harvest time by implementing the following suggestions recommended by _____, _____ County extension agent for _____.

Keep the fuel storage tank painted white or aluminum to keep the tank as cool as possible. Place the storage tank in the shade if possible. Underground storage also cuts evaporation during warm weather. Use pressure vents and filters on storage tanks.

Tune all engines for peak efficiency. Adjust the carburetor. Replace spark plugs, points and condensers. Clean diesel fuel injectors. Have your diesel service man adjust the fuel injection pump for most efficient power and performance. Check engine timing.

Clean or replace the air filter. It takes 8,000 to 10,000 gallons of air to burn one gallon of gasoline. Plugged air filters act like a choke on gasoline engines and cut power on a diesel.

Watch the exhaust stack on your tractor for excessive black smoke. This is a sign the engine is using excessive fuel.

Minimize the number of trips across the field. Use minimum tillage or machinery "ganging" techniques to reduce trips over a field.

Plan for adequate fuel storage on your farm. Adequate is 1/12th of your annual supply.

Use clean filters on transfer (nurse) tanks to prevent dirty fuel from entering the engine, causing repairs and needless down time.

Do not let tractors or trucks idle for long periods when not in use.

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CHECK SILO
FILLING EQUIPMENT

Now is a good time to check your silo filling equipment and locate bottlenecks in the filling process, John True, University of Minnesota extension agricultural engineer, says.

"Harvesting corn silage is an annual ritual for most dairymen and one that may seem pretty routine. The process has not changed over the years, but some of the equipment has," he adds.

Make sure the capacities of the forage harvester, transport and blower match. An old blower that can't quite keep up can nullify any advantage gained by using a high capacity harvester with a large new tractor.

Also, running one wagon short to save money can be expensive when you cause both the harvester and blower to be idle when time is short and the crop is ready, the agricultural engineer says.

Don't let bottlenecks at the silo slow you down. Arrange traffic patterns for easy access to the blower. Be sure the blower is running at its recommended speed and that the blades are adjusted close to the housing without hitting. Keep the blower pipe as straight and as near vertical as possible. Rinse off the blades with water if gum accumulates. Use a distributor in the silo to prevent separation of leaves and stalks and uneven pressures in the silo, which will make for better operation of your unloader.

Take a look at how you are transporting silage. Have enough wagons with roofs to reduce blow-over when loading and when traveling. Smooth travel lanes and roadways for safe, rapid travel and to save wear and tear on you and your equipment.

add 1--check silo

Check out your field operation. Simplify hitching and unhitching of wagons to the harvester. Keep knives sharp, since dull ones can double the amount of power required. Keep the shear-bar square and knives adjusted to it. Even sharp knives will tear and pull against a rounded shear-bar.

Don't cut too short. Changing from one-eighth-inch cut to one-quarter-inch will reduce power requirements by about nine-tenths horsepower-hours per ton. Changing from one-quarter to one-half-inch cut will save another seven-tenths horsepower-hours per ton. So if you cut nine tons per hour, you need six to eight horsepower less to do the job with each change. Cut short enough so cattle won't separate out the cobs. A distributor in the silo helps avoid separation of material and air pockets with coarser chopping.

A good pre-harvest maintenance check can prevent trouble. Inspect chains and sprockets for wear. (It's easier to change worn parts than to replace broken ones under stress a mile and a half from the shop.) Check slip clutches and make sure they will slip, since too often they are tightened to keep another poorly adjusted mechanism going. Follow lubrication recommendations in the operator's manual.

Inspect your entire operation to make sure safety controls work and tractors and running gear are in good shape. Use coffee breaks and change-off jobs to avoid fatigue. Operate the blower to ventilate the silo before entering it. Ventilate the silo room after filling, and be aware of silo gas problems. Too often wagon hauling jobs are given to less qualified persons. Wagons rate high on the list of machines involved in farm accidents. Be sure all equipment operators are qualified.

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QUALITY TO BE PRIME FACTOR
IN FALL/WINTER HAY PRICES

Quality will be the important factor affecting Minnesota alfalfa hay prices this fall and winter, according to Paul Hasbargen, University of Minnesota extension farm management specialist.

"Favorable weather conditions of May and June created substantial growth in alfalfa, although rains reduced quality in the hay harvested. This factor, coupled with declining numbers of cattle expected this fall and winter, will tend to make quality an important factor in pricing alfalfa hay," he says.

As of July 15, alfalfa hay prices in Minnesota averaged \$47.00 per ton--higher than in Wisconsin (\$37.00 per ton) and South Dakota (\$32.00 per ton). This is due to higher cattle numbers in May, he says, and quality reduction of first harvest during the rainy weather.

Overall, U. S. pasture and range conditions are excellent at this time--with drought reported only in southwestern Texas. Thus, hay production is likely to equal or surpass last year for the country as a whole. Total U. S. harvested acreage is expected to be up by 17 percent to some 61.3 million acres in production. Yield is expected to be up substantially because of favorable growing conditions, he noted.

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KNOW YOUR APPLES
FOR FALL EATING PLEASURE

Many people think of apples as the products of Washington, New York and Michigan and overlook this state's contributions to autumn eating pleasure.

Leonard B. Hertz, extension horticulturist at the University of Minnesota, says Minnesota grows a large number of apples that are commonly available at roadside stands, local orchards and in many supermarkets.

Because some Minnesota apples are newly introduced varieties, he offers this guide to several of the more popular varieties.

Beacon--This early maturing apple is sometimes dubbed the "State Fair" apple. Use it for fresh eating, pie and sauce.

Wealthy--An older variety that matures in mid-September and keeps well. It is suited for fresh eating, pie, sauce, freezing and baking.

Red Baron--This new cherry red, mid-September apple is good for fresh eating, pie, sauce and freezing.

McIntosh--Ripening in late September, this variety is striped or splashed with red. It has very white flesh and is juicy and aromatic. Use it for fresh eating, sauce, baking, pie and freezing.

Honeygold--New since 1970, Honeygold's are large, golden or yellow-green apples with a red blush. The flesh is crisp, yellow and juicy with a flavor similar to a Golden Delicious. It is ideal for fresh eating, pie, sauce and freezing.

Haralson--This is an old variety that ripens in early October. It is mildly acid and is recommended for pie, sauce, freezing, fresh eating and baking.

Fireside--This large, round apple matures in early October. It has a mild flavor that approaches sweetness. It is excellent for fresh eating, baking and salads.

Regent--Developed in 1964, this quality apple has a flavor suggesting Red Delicious, which is part of its parentage. It has a sprightly taste, crisp texture and considerable juice. It is used for fresh eating, pie, sauce, freezing and baking.

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ATT: Extension Home Economists

Immediate release

FTC TAKING COLD LOOK
AT DOWN-FILLED GARMENTS

Many consumers who pay a premium price for down-filled garments may not be getting their money's worth of warmth in return, according to preliminary findings by a Federal Trade Commission regional office. Investigators there have found that many down-filled products are mislabeled. In fact, some contain little or no down.

In light of this information, the FTC has begun a formal investigation of the \$500 million a year down products industry. Current FTC guidelines require that products labeled or advertised as "down" contain at least 80 percent down.

Sherri Johnson, extension textiles and clothing specialist at the University of Minnesota, says that the amount of down in a product is significant. The higher the down content, the warmer the garment.

She adds that with down-filled items, the consumer has no way of testing the contents before or after purchase so accurate label information is important.

The FTC plans to notify importers and manufacturers of down-filled products of the consequences of misrepresenting their items. Fines for violations could be up to \$10,000 per incident.

FTC investigators will be looking for manufacturers who:

- * misrepresent the filling contents of their products
- * attach false or inaccurate labels
- * deliberately mislead consumers in their advertisements for the down-filled items.
- * fail to disclose when they include used or second-hand filling materials in their products.

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4-H NEWS

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4-H MARKET LIVESTOCK SHOW
AND AUCTION SCHEDULED

The 60th Annual State 4-H Market Livestock Show will be September 18-20 at the state fairgrounds in St. Paul, according to Sharon Gilsrud, University of Minnesota extension youth specialist.

"Currently, some 21,000 4-H'ers throughout the state are exhibiting meat animals in an elimination process at their county fairs. Only the top three percent of these entries in the beef, pork, lamb, rabbit and poultry competition will be selected to be exhibited at the show," she said.

Live poultry and rabbit judging will be at 2:30 p.m. September 18. Swine judging and sheep judging will be at 8:30 a.m. and 8:50 a.m. respectively on September 19. Beef judging will be at 8:20 a.m. on September 20.

A public auction, the first since 1964, of selected top exhibits on beef, swine, sheep, rabbit and poultry will be at 3:30 p.m. on September 20 in the swine barn at the fairgrounds, she said.

All animals exhibited at the show will be slaughtered and carcass evaluations on each will be made. Donors may not buy specific animals for promotion purposes or for home consumption, she said. All exhibitors will receive market prices for their animals based on carcass value. Premiums to exhibitors will be paid from the proceeds of the auction, she said.

"The livestock show and auction is the culmination of a year's hard work for the 4'H'ers. By limiting the number of animals eligible for competition, we believe we are recognizing truly outstanding efforts in the youths who do exhibit their animals at the show," Gilsrud said.

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