

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

ATC
6/23/85

July 3, 1985

Source: Deborah Brown
612/376-7574
Editor Sam Brungardt
612/376-8182

PROPER WATERING HELPS FORESTALL GARDEN PROBLEMS

You've probably heard it's bad to water your grass or garden during the heat of the day. Well, that's just not so, says Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service.

And, you may have heard you should never water the lawn at night. Under certain circumstances, Brown says, it can be done with no ill effects.

Consider daytime watering. Brown says, "The major drawback is that more of the water will be lost to the atmosphere and less will reach the ground if you run your sprinkler during the hot, midday sun. On the other hand, it cools the plants and if you run the sprinkler long enough, you can water deep enough to supply the necessary moisture for good root development."

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Brown says there's a lot of truth to not watering at night; plants that go into the evening moist have a greater likelihood of developing diseases. "However," she says, "no harm will be done if your sprinklers run straight through the night or are set to turn on in the wee hours of morning, then turn off when the sun is already up to dry the plants quickly. The trick is to have water constantly wetting the plants up 'til the point where they will dry rapidly once you stop."

Heavy, regular watering is always best, according to Brown. Frequent, light irrigation encourages only shallow root development, which leaves plants vulnerable to heat and drying. The one exception is handling lawns with patch disease problems. Such lawns should be watered frequently and lightly to prevent the wilting of shallow-rooted turf.

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1A,P2,4H,

NAGRO740

July 3, 1985

Source: Deborah Brown
612/376-7574
Editor: Sam Brungardt
612/376-8182

DON'T LET GARDEN PLANTS SET SEED

Vegetables and flowers should be picked regularly to prevent seeds from maturing, advises Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service.

"Once the seeds mature, the plant tends to slow down and become less productive," she says. "This means that cukes, zucchinis, beans and broccoli should be harvested even though they've become too large or overgrown to be useful as food."

Brown says flowering annuals should be "deadheaded" every few days. Do this by clipping off the fading flowers as soon as they are no longer fresh and attractive. When plants are deadheaded, they will continue to send out more and more flower buds in an attempt to develop mature seeds.

"Perennials should also have faded flowers removed," Brown adds. "Some will send out a second flush of blooms, but even if they don't, the plants' energy won't be wasted on seed production."

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"It's the same story with turf grass. Keep it mowed so it doesn't go to seed. That seed rarely is able to germinate in the lawn anyway. Once the grass sets mature seed, it slows down rather than spreading vigorously by sending out tillers or rhizomes."

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P2,4H

NAGR0737

July 3, 1985

Source: Dave Pace
612/373-1083
Writer: Jennifer Obst
612/373-1579

4-H INTERNATIONAL PROGRAMS PROMOTE PEOPLE-TO-PEOPLE ENCOUNTERS

Over 100 Minnesota 4-H families will host youth and professional staff from other countries this summer. Most will be coming from Japan; others will be from Finland, Botswana and other countries.

In return, Minnesota 4-H'ers will be visiting host families in foreign countries. Twenty-three will spend a month in Norway and 14 others are going to India, the Netherlands, the Peoples Republic of China, Botswana and several other nations.

The number of Minnesota 4-H'ers involved in exchanges is fewer this year than in previous years due to tough economic times across the state, according to Dave Pace, 4-H Youth Development Specialist with the University of Minnesota's Agricultural Extension Service. "We used to have 100 going to Norway from our state alone," he says. "This year, the number has dropped to 69 4-H delegates from the five midwestern states, with 23 of those from Minnesota."

Despite the damper economic conditions have put on this travel, cultural exchange remains an important illustration of the 4-H strategy of "learning by doing" --cultural understanding

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through immersion in the host countries' homelife. "When the exchangees and our 4-H'ers go into individual homes, they learn another way of life by living it," Pace says. "It's an opportunity for persons of different cultures to establish close relationships through people-to-people encounters."

Since 1948, 4-H delegates have gone to 59 countries. More than 2,500 youths and adults from other countries have stayed with Minnesota 4-H families and more than 740 Minnesota 4-H'ers have taken outbound experiences.

One such program with Japan began in 1973 in cooperation with the Labo International Exchange Foundation. "Since then we have hosted 1,200 students from Japan." Pace says. This year 65 Japanese students, ages 12 to 18, will be staying with host families in Minnesota from July 25 to Aug. 19. Before dispersing to their host families, they will receive orientation on the St. Paul campus, according to Jodi Owns, 4-H Community Program Assistant.

Some of the friendships made in this initial contact and through home stay experiences last for many years, continuing with letters and further visits of family members between countries, according to Pace.

To increase this kind of cultural experience, Pace has been exploring the possibility of establishing an exchange of professional youth development people between Minnesota and the People's Republic of China. This summer Stephen Censky, a Minnesota 4-H Youth Exchange representative, is one of two U.S. 4-H representatives going to China to further those discussions.

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July 3, 1985

Source: Dave Pace
612/373-1083
Writer: Jennifer Obst
612/373-1579

367 MINNESOTA 4-H'ERS TO ATTEND CITIZENSHIP WASHINGTON FOCUS

This month, 367 4-H members ages 15 to 17, county agents and volunteer leaders will travel to Washington, D.C. for an intensive workshop on citizenship. The first group of 89 left Saturday, June 29, and the next three groups will leave on consecutive Saturdays in July. A fifth group of younger 4-H'ers--ages 12 to 14--will leave July 27.

They will spend one week at the National 4-H Center in Washington with other 4-H'ers from across the nation. Along with the workshops, they will visit landmarks of American heritage including Gettysburg, Mount Vernon, the Smithsonian, and visit with their senators and representatives on Capitol Hill.

The number of Minnesota 4-H'ers going to Washington for this annual event is down this year. 4-H staff members speculate this is due to the depressed financial condition of the state. "A few years ago we sent 500 from Minnesota to Washington," says Sandy Rand, 4-H staff member helping coordinate the event. "But despite the economic difficulties, many kids work toward this trip throughout their 4-H career and are not willing to forgo achieving this goal. For most 4-H'ers, this is the highlight of their 4-H career."

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CEO,1A,P2

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N4-H0749

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

MJC
5-20-85

July 11, 1985

Source: Sherri Johnson
612/376-1537
Writer: Deedee Nagy
612/373-1781

SWIMWEAR FABRIC CONTENT IS CLUE TO ITS USE, CARE

Look beyond the style and color when choosing swimwear advises Sherri Johnson, textiles and clothing specialist with the University of Minnesota's Agricultural Extension Service. She adds that some of the best clues on how the suit will fit, wash and last can be found in the labels telling the fiber content.

Nylon/Spandex is a popular swimsuit fiber because it is tough, long wearing and quick drying. Spandex is superior to rubber in resisting sunlight and deteriorating from perspiration, cosmetics and oils, but it will lose strength when exposed to chlorine in pools. A new chlorine-resistant spandex is just coming onto the market and it may be available from manufacturers this season or next, says Johnson.

Textured nylon and polyester produce very elastic fabrics that are popular for swimwear. Such suits generally wear well and are inexpensive. Woven polyester and cotton blends are used for men's boxer style suits and skirted styles for women where no stretch is needed. The fabric is durable but compared to others it is heavy in the water and is slow to dry.

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Nearly all suits use some elastic containing rubber. Rubber breaks down when exposed to oils, lotions, petroleum solvents and heat. Johnson advises care in using suntanning oils, lotions and other chemicals on your skin that could affect your suit. Suits should be laundered as soon after wearing as possible. If that is impossible, she suggests rinsing the suit thoroughly in fresh water to remove salt, sand, lotion and chemicals that can weaken fabric and dull colors.

Swimwear is best laundered by hand in lukewarm water using mild soap or detergent. The gentle cycle in the washing machine using lukewarm water is also acceptable. Johnson recommends hanging a suit away from heat and sunlight to allow it to dry. It's not wise to dry a suit in a dryer or to leave a wet suit rolled in a towel to dry.

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Agricultural Extension Service
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MSC
8/27/85

July 11, 1985

Source: Sherri Johnson
612/376-1537
Writer: Deedee Nagy
612/373-1781

PROPER CLOTHES CAN KEEP YOU COOL FOR SUMMER JOGGING

Summer heat and humidity needn't put the damper on your jogging or other strenuous outdoor sports, says Sherri Johnson, textiles and clothing specialist with the University of Minnesota's Agricultural Extension Service. Proper clothing, selected to allow air flow to carry off body heat, can keep you active and comfortable despite the thermometer.

She adds that there is controversy on the cooling properties of natural fibers such as cotton and wool as compared to synthetics such as polyester, nylon and polypropylene. "The fiber that is best for you depends on your own needs -- how heavily you perspire and what feels most comfortable next to your skin," she notes.

Many athletes favor cotton, but Johnson notes that its ability to absorb moisture may result in a heavy, soggy garment that sticks to the wearer after a workout in hot weather. Wool absorbs moisture well and holds it up off the skin surface so the garment doesn't cling and the wearer may feel drier.

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Synthetic fibers carry moisture to the outer layer of fabric where it can evaporate. This leaves the wearer and the garment dry. Polypropylene is a new fiber that is being promoted for its ability to transport moisture away from the skin, Johnson says. It is most often used for linings of shorts and warm-up jackets because it acts like the stay-dry lining of a disposable diaper, keeping the skin dry while the moisture is held in an outer layer of the garment.

Johnson cautions that running gear made from synthetic fibers should be woven as meshes or thin knits so that air can pass freely around the fibers. Low-cut necklines and wide armholes and hemlines also increase the flow of air and provide cooling.

Foul-weather running complicates the clothing picture, according to Johnson. Fabrics are becoming available now, however, that provide waterproofing and water resistance while still retaining the ability to move perspiration away from the skin. The tiny size of the pores in the fabric allows perspiration vapor to pass outward but prevents rain droplets from reaching the skin. These "microporous" fabrics are sold under such trade names as Goretex, Klimate, Entrant, Imtrex and Matrex, Johnson adds.

Because the lightest fabric possible is best for warm weather running, Johnson suggests that runners should compare the weights of various garments before making a selection.

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St. Paul, Minnesota 55108

MCC
8-1-85

July 11, 1985

Source: Ken Egertson
612/376-2936
Writer: Jack Sperbeck
612/373-0715

CANADIAN PORK IMPORTS EXPECTED TO CONTINUE

Canadian hog and pork imports are expected to increase again in 1985--despite restrictive measures by the United States. That's assuming the U.S. dollar remains strong.

"There's little doubt that rising hog imports have had a negative effect on the U.S. hog industry," says Kenneth E. Egertson, economist with the University of Minnesota's Agricultural Extension Service. Egertson has calculated price effects of different import levels from Canada and other countries.

He assumed that hog prices respond by about 1.8 percent for each one percent change in hog supplies. Price impacts for 1984 used \$48.90 per hundred prices and showed the following increased U.S. prices under these assumptions:

- Zero change in world imports from 1983, +\$2.12 cwt.
- Zero change in Canadian imports from 1982, +\$1.32 cwt.
- Zero imports from Canada, +\$3.43 cwt.
- Zero imports from any sources, +\$6.86

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First quarter 1985 imports were high for both Canada and other exporting countries. As a percent of total U.S. hog supplies, figures were 10.6 percent for the world and 5.6 percent from Canada. They were down in April due to a temporary duty on live and pork products from Canada and from a ban by some Midwest states due to the drug chloramphenicol used in hog feeding in Canada. However, May imports of live hogs from Canada reached 124,000 head, an increase of about 34,000 head over April imports.

The U.S. Commerce Dept. has suggested permanent duty levels of \$3.29 (U.S. dollars) for live hogs and \$4 per cwt (U.S. dollars) for pork products. The ruling goes to the International Trade Commission, which is expected to rule that this level becomes permanent on July 25.

The chloramphenicol drug will probably be banned in Canada. Despite these restrictions, Egertson says Canadian imports will be back up again in summer and fall figures unless the U.S. dollar loses value.

There are two main reasons for increased hog and pork imports from Canada and Europe:

--Canadian hog production has been increasing in recent years as a result of a Canadian government subsidy of about \$3.75 per cwt. This program increased supplies and lowered domestic Canadian hog prices.

--The rise in the value of the U.S. dollar against the Canadian dollar and European currencies. This has cheapened Canadian hogs and European pork products for U.S. packers and meat distributors. It took only 70 cents to buy a Canadian dollar in March, 1985. In 1981 it took 90 cents. And in March 1985, it took only 7 cents to buy a Danish Krona. In 1981 it took 17 cents.

Most of the pork from Canada is either live, fresh or frozen. Most of the pork from countries like Denmark, Netherlands, Poland and Great Britain is processed.

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CEO,1A,P2,4L

NAGR0770

MSC
8-1-85

July 11, 1985

Source: Deborah Brown
612/376-7574

Editor: Sam Brungardt
612/376-8182

GARDENING HINTS FOR JULY

Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service, offers Minnesota gardeners some gardening tips for July:

--Stop harvesting rhubarb and asparagus in early July. The large rhubarb leaves and ferny asparagus fronds are needed to replenish the stored energy in the plants' root systems so the plants will be productive again next year.

--Water newly planted trees and shrubs including young boulevard trees thoroughly each week unless there's been ample rainfall. Don't, however, water every day or every other day; you can damage roots by keeping the soil that moist.

--Help prevent blossom end rot in tomatoes by mulching with 4 to 6 inches of grass clippings or straw. The mulch reduces water loss through evaporation and eliminates the need for cultivation near the plants. This helps prevent the interruption of moisture to the developing fruit, thus reducing the incidence of blossom end rot.

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--Don't prune shrubs after mid-July. Pruning encourages new growth at a time when the plants should be slowing down in preparation for the coming winter. You can, however, prune after the leaves have dropped in late autumn, unless you plan to prune down almost to the ground. That should be saved for early spring, before the plants leaf out.

--Flowers and vegetables planted in containers outdoors need regular fertilizing over the growing season. Use a water-soluble plant food every two or three weeks or mixed very diluted with each watering. Harvest vegies as soon as they ripen and cut off faded flowers to keep your plants showy and productive.

--When crabgrass patches become obvious, it's usually too late to effect good control chemically. Instead, catch your grass clippings to minimize the amount of crabgrass seed that falls to the ground. Plan to use a pre-emergent herbicide early next May to prevent crabgrass seeds from sprouting. The crabgrass you see this summer will die at the end of the season.

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FB1,P2,4H,TCO

NAGR0752

mcc
8/2/85

July 11, 1985

Source: Jill Pokorny
612/373-0937

Editor: Sam Brungardt
612/376-8182

MINIMIZING STRESSES REDUCES CYTOSPORA CANKER THREAT TO SPRUCE

Are the lower branches on your spruce tree dying? Is sap oozing from them? If so, the tree may have Cytospora canker, says Jill Pokorny, plant pathology educator with the University of Minnesota's Agricultural Extension Service.

She says, "Although this fungal disease is rarely fatal, it can destroy a tree's beauty. Colorado blue spruce is most commonly affected, but white and Norway spruce are also susceptible."

The first symptom of Cytospora canker is a change in the color of the needles. The needles on infected branches turn yellow, brown or purplish and eventually drop off. If one looks closely at symptomatic branches, one will see localized dead areas. These are often sunken with a ridge of callus tissue around them. Excessive sap flow is usually associated with the cankers, which interrupt the flow of water and nutrients within the branches and cause tip dieback from the point of cankering outward. Occasionally, one or two scattered branches become diseased, but usually the disease infects lower branches first and spreads upward.

Cytospora canker invades trees that are weakened by environmental stresses. The fungus infects the tree through weakened tissue such as wounds or dead branch stubs. Once established, the fungus produces fruiting structures on dead tissue. In wet weather, these release gelatinous threads of spores. The spores are spread to other branches by rain, wind, humans and possibly insects. The fungus can overwinter on the infected tissue and then cause re-infection the following spring.

Pokorny says, "There is no chemical control for Cytospora canker. Since trees under stress are prime targets, the best way to prevent this disease is to maintain good tree growth and vigor. Care should be taken to select a proper site. Avoid places where trees can become crowded--too close to buildings or spaced too closely together, for example. Ornamental spruces should be planted in well protected sites to minimize winter injury. Water trees regularly during dry periods to alleviate drought stress. Remember, this is believed to be the most important stress factor predisposing spruce to Cytospora canker. Occasional fertilizing will also improve tree vigor."

Heavily cankered branches cannot be saved, according to Pokorny. She says they should be pruned 4 to 6 inches ahead of the canker or at the point of the branch's attachment to the main stem. Prune only when the foliage and wood are dry to reduce chances of spreading the disease, she cautions.

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11/22
3/7/85

July 11, 1985

Source: Bob Geneve
612/373-1540
Editor: Sam Brungardt
612/376-8182

SUMMER PLANTING FOR AN AUTUMN HARVEST

Your garden can be more productive if you plant fast-maturing vegetables in the space vacated by early-harvested crops. Vegetables that mature in the cooler weather of early autumn are often higher quality and better tasting.

Special germination problems exist with summer seeding, says Bob Geneve, horticulturist with the University of Minnesota's Agricultural Extension Service. He says, "Soil temperatures may be too high for good germination. Summer weather is also drier than spring weather and one cannot rely on rainfall to supply the water needed for germination. To aid summertime germination, supply adequate water through irrigation to cool the soil. Soaking seed overnight before planting often helps seeds germinate. This is especially true with beets. Lettuce seed germinates poorly at high soil temperatures. Cool the seeding area before planting lettuce by shading the soil with black plastic or an organic mulch. Remove the mulch before seeding."

One way to avoid germination problems is to use transplants. Geneve says, "Start the transplants in a cold frame or other

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suitable area and move them into the garden as space becomes available. Remember, the small soil volume in a transplant container can dry out quickly in the summer heat and may need watering as frequently as twice a day."

Gardeners can extend the growing season past the first killing frosts by planting crops that can withstand cold temperatures. They can extend the season even further with protective row covers, made by stretching clear polythylene film over heavy-gauge wire frames fashioned into hoops. Vent or remove the row covers if the temperature under the row cover reaches 84 degrees F, Geneve advises.

PLANTING SELECTED VEGETABLES FOR AUTUMN HARVEST

Crop	Avg. no. days to harvest	Last seeding date before first frost	Last transplanting date before first frost
Beets	50	8 weeks	6 weeks
Broccoli	50-75	15 weeks	10 weeks
Carrots*	60-80+	10-12 weeks	---
Cauliflower**	50-90	8-10 weeks	6-8 weeks
Kale	45+	8 weeks	4-6 weeks
Kohlrabi	45-55	6-8 weeks	4 weeks
Lettuce	45-60	8 weeks	4-6 weeks
Peas***	50-75	8-10 weeks	---
Onion (green)	50-70	8-10 weeks	6-8 weeks
Radish	25-35	4 weeks	---
Rutabaga	80+	12 weeks	---
Swiss chard	30+	4-5 weeks	2-4 weeks
Turnip	35-50	6-8 weeks	---

*Suggest early hybrid carrots that color quickly

**Suggest early-maturing variety (e.g., Snow Crown)

***May not do well if temperatures are too warm

Example: The first autumn frost date in your neighborhood is Sept. 21. Seed beets at least 8 weeks before Sept. 21 (before July 21).

news

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m5c
5/2/85

July 11, 1985

Source: Jane P. McKinnon
612/373-1759
Editor: Sam Brungardt
612/376-8182

MIDSUMMER'S A TIME TO CATCH UP ON PRUNING

Midsummer can be catch up time for gardeners who were so busy with soil preparation, planting and early pest problems that they've been unable to do some pruning, says Jane McKinnon, horticulturist with the University of Minnesota's Agricultural Extension Service.

She says, "Japanese yews had considerable tip-burn last winter, and taking off brown shoots was an obvious improvement in late May. But yews, junipers and arborvitaes take advantage of the whole Minnesota growing season, and by July there are long, slender tips on all branches of healthy plants."

McKinnon says spreading yews and junipers often develop open centers and long, heavy branches as they grow. They can become so wide that they brush against house walls, overhang nearby walks and are good candidates for breakage under next winter's snow. Many junipers, especially, can grow wildly and too open in early summer.

"Upright arborvitaes, junipers and yews can develop many-branched, thin tops, usually taller than needed for a

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well-shaped plant," she continues. "The remedy is simple: a gardener with a pair of sharp pruning shears and time to snip young growth until the plants are as compact as needed. You don't have to wait for a particular month or change of the moon or anything else to prune these evergreens."

Overgrown viburnums, ninebarks, mockoranges, lilacs, weigelas, Van Houtte and garland spirea, and other spring-flowering shrubs can be pruned in midsummer, according to McKinnon. Removing about a third of the large shoots at ground line will encourage young growth, let light into the plant and help control pests that thrive on weak, shaded, thick foliage. A small pruning saw with a curved blade makes this kind of pruning easier.

"But don't take a hedge shears to the tops of flowering shrubs," McKinnon cautions. "It will take two or three years to get new bloom if you do!"

With some exceptions, dead and broken branches can be removed from landscape plants at just about any time. McKinnon says plant disease experts suggest that the pruning of plants known to be susceptible to fire blight, Dutch elm disease and certain cankers be left until cold weather, after the end of the growing season.

"When storm damage and other breakage occurs, immediate repairs are often necessary," McKinnon says. "Keep plants in their natural shapes, sized to fit the space they occupy and convenient for your use of your property."

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Source: Jane P. McKinnon
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ENJOY SUMMER LANDSCAPES AT MINNESOTA'S HIGHWAY REST STOPS

Garden tours and park visits are traditional vacation pleasures for many Minnesotans. Surprisingly, some of the more accessible and pleasant small parks in the Midwest are Minnesota's highway rest stops, says Jane McKinnon, horticulturist with the University of Minnesota's Agricultural Extension Service.

She says, "Landscape plans for these green spaces have been carefully designed to fit into Minnesota's natural scenery, using both native and well-adapted, introduced plants. Shady spots and open places are not accidental; sheltered paths and open views have been arranged to give visitors a refreshing break from the glare of concrete freeways. These miniparks have won national awards, but their exceptional qualities may not have been appreciated by travelers in a hurry."

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So, McKinnon urges, take time to look at the Japanese tree lilacs, American highbush cranberry and nannyberry viburnum planted into the wood edge at the rest stop on I-94 south of Monticello. The Kettle River stop on I-35 features river birch, a southern species, planted with birch, balsam and maple native to northeastern Minnesota. At the stop south of St. Cloud on I-94, paths are shaded by ironwood, underplanted with hardy azaleas. Amur maple and Ohio buckeye are growing well with native oaks and ash at Cass Lake. And, one of the prettier views of Minnesota hills and fields is at the stop on Highway 10 near Frazee.

McKinnon says, "Wherever the Department of Transportation landscape architects have worked, you can see small parks sensitive to Minnesota's rich choice of plants and sites, with careful attention to the needs of travelers. We can learn many skills for our own landscape work at home by studying these excellent public examples."

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FB1,P2,4H

NAGRO742

ms
9/2/85

July 18, 1985

Source: Jeffrey Hahn
612/376-3377

Editor: Sam Brungardt
612/376-8182

GOOD SANITATION KEEPS PICNIC BEETLES OUT OF THE GARDEN

Gardening is an enjoyable and rewarding experience if you manage to win the Battle of the Bugs. One pesky insect with which gardeners must contend in the summer are picnic beetles.

Jeffrey Hahn, entomology educator with the University of Minnesota's Agricultural Extension Service, describes picnic beetles as small, black insects with orange spots.

Picnic beetles, Hahn says, are attracted to fermenting or souring smells. They are found on overripe and rotting fruits and vegetables, such as corn, melons, berries and tomatoes. However, they also can attack fruits and vegetables that haven't finished ripening.

Hahn says the best way to keep picnic beetles away is to avoid leaving overripe and rotting produce laying around. "By picking up overripe and rotting fruits and vegetables and disposing of them, picnic beetles will be less attracted to your garden," he says. "Insecticides do not provide effective

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control. If you try to spray these beetles, you will kill only the ones that are in your garden and the insecticide residual that's left on the plants will keep you from harvesting anything right away. By the time it's safe to pick something, new picnic beetles will have come into the garden. In the end, it is better to observe good sanitation practices to keep picnic beetles out of your garden."

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1A,P2,4H

NAGRO738

news

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Source: Jane P. McKinnon
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SPRING'S NOT THE ONLY TIME TO PLANT TREES, SHRUBS, PERENNIALS

Sometimes it's apparent by midsummer that an old shrub or tree just has to go. Landscape plants have a useful, attractive life, but when that span of time has passed, the creative solution is to thank the old friend for its service and start over, says Jane McKinnon, horticulturist with the University of Minnesota's Agricultural Extension Service.

She says, "A detailed discussion with a nurseryman about the kind and size of plant that you need is worth your time. Many landscape plants grow far bigger than we expect. Smaller varieties are now available for most of our favorites, and Minnesota nurserymen feature them as well-grown container stock that can be planted any day you are in the mood. You can find dwarf mockoranges and small spireas such as Daphne, Anthony Waterer or Alpina (a ground cover). Compact Amur maple is considerably smaller than the species and Emerald Mound honeysuckle isn't over 3 feet tall when mature."

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"Fitting Trees and Shrubs into the Landscape" is a publication that can help one select plants of the size and shape needed. The folder, item number AG-F0-0604, is available from county extension offices or from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108 for 50 cents. The Distribution Center has a \$1 minimum order.

Planting during the summer gives a gardener the great advantage of seeing exactly where something new should be added for shade, privacy or a spot of interest, McKinnon says. When existing trees and shrubs are fully leafed, one can see how much space is open, where shadows fall, or where a new color or texture might be either distracting or delightful.

Midsummer is also the time to plant some spring-flowering perennials because they are semidormant at this time of the year, according to McKinnon. Oriental poppies and old-fashioned bleeding hearts die back before sending up a crown of fresh leaves in early fall. Both can be dug and divided in July and August. Nurseries offer iris and daylilies after they bloom. Lilies-of-the-valley often need separating and replanting in enriched soil. These useful shade plants are big feeders, and they bloom much better after organic materials and fertilizers are provided for their garden space. Primroses (primulas) can be cut apart with a sharp knife, since several sections of the crown are apparent as new leaves develop. There's nothing wrong with a primrose path bordering your azaleas; both need acid soil and plenty of water.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

July 18, 1985

Source: Jeffrey Hahn
612/376-3377
Editor: Sam Brungardt
612/376-8182

KEEPING BIRCHES VIGOROUS IS BEST DEFENSE AGAINST BIRCH BORERS

It's the time of the summer when bronze birch borer damage may start to become noticeable.

Jeffrey Hahn, entomology educator with the University of Minnesota's Agricultural Extension Service, says the adults of this insect pest emerge from birch trees in June and July and lay eggs in birch shortly after they emerge.

"Bronze birch borers can only survive in birch that are weakened or stressed," he says. "This occurs more often than most people suspect. Birch, native to the northern forests of Minnesota, enjoys cool, shaded conditions. Too often, though, birch is planted in the open with little or no ground cover to protect its shallow roots. As a result, the birch doesn't grow as healthily or as vigorously as it could. When this happens, it is susceptible to attack from secondary borers such as bronze birch borer."

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The larvae of the bronze birch borer, which are about 1/2 inch long when full grown, tunnel in the inner bark and often girdle branches, causing them to die back to the point of girdling.

Hahn says there are no effective insecticides labeled for bronze birch borer. He says, "When damage to small branches is noticed, wait until August to prune and destroy them. Prune them back 2 feet beyond the point of damage to insure that all of the borer larvae are removed. If damaged branches are pruned out earlier in the summer, the tree will still be susceptible to attack by bronze birch borer adults. Pruning wounds also heal better in August because of reduced sap flow."

If the borer larvae girdle a large limb, Hahn says pruning will not help; the tree is most likely too far gone to be helped.

Hahn says, "The best way to protect your birch from bronze birch borer attack is to keep it as healthy as possible by watering, fertilizing and applying mulch when necessary. Bronze birch borer cannot survive in a healthy tree and will not attack one that remains that way."

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P2,4H

NAGRO739

July 18, 1985

Source: Dale Hicks
612/373-1181
Writer: Jack Sperbeck
612/373-0715

DROUGHT IS LOWERING CROP YIELDS IN SOUTHEASTERN MINNESOTA

Dry weather is affecting crop yields in southeastern Minnesota. In Minnesota, the affected area goes from the Iowa border to the Twin Cities and west to roughly Interstate Highway 35, says Dale Hicks, agronomist with the University of Minnesota's Agricultural Extension Service.

Yield losses are extremely variable within individual fields, Hicks says. "There are parts of many fields that are not hurting much. If it rained today, yields would be excellent. But sandy spots on the same field where plants have been wilting for 7 to 10 days could have a 100 percent loss," Hicks says.

He speculates there could be a 5 percent yield loss in southeastern Minnesota. Weather during the next two weeks will be crucial since corn is fast approaching the critical tasseling and silking stage.

Research has shown that corn plants wilting for four days during the silking process had yield reductions of 20 to 50 percent. Much of the corn in southeastern Minnesota should be silking starting July 20, Hicks says.

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"Farmers with severely stunted corn should not harvest it for silage yet. Even though it's suffering from lack of water, the plants have too much moisture to make good silage. A plant moisture content of 65 to 70 percent is optimum for silage," Hicks says.

"The time to make silage from drought stressed corn is when it's past the point of any recovery from rains. Drought stressed corn plants will be ready for silage when leaves are brown and plants look completely dry," Hicks says.

Heavier soils with good water holding capacity around Waseca are in better shape. But Hicks says corn plants around Waseca are starting to wilt during the day. "This hasn't hurt yields yet, but the critical factor is whether we get rain before pollination time," he says.

County agents in southeastern Minnesota have a publication on using drought-stressed corn. "What we all hope is that it rains so we won't need to use it," Hicks says.

Farmers who harvest drought-stressed corn and green chop it for animal feed should have it tested for nitrite toxicity. Corn with a high nitrate content can be diluted with other feed. Observe animals closely for signs of nitrite toxicity. These include increased pulse rate, faster respiration, heavy breathing, muscle tremble, weakness, staggered gait and blindness. Change the feed source if any of these symptoms occur.

Ensiling drought-stressed corn is the best way to use it for animal feed since one-third to one-half the nitrate accumulated in the plant can be lost during fermentation.

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

July 18, 1985

Source: USDA Food Safety
And Inspection Service
800/535-4555
Writer: Deedee Nagy
612/373-1781

USDA HOTLINE OFFERS FOOD SAFETY ADVICE, INFORMATION

Although Americans enjoy the safest and most wholesome food supply in the world, thousands of us still become ill from food poisoning each year. A new toll-free telephone hotline is now being run by the U.S. Department of Agriculture to provide consumers with food safety information, particularly concerning the safe handling of meat and poultry.

By calling (800) 535-4555 consumers can report problems with meat or poultry products, get advice on safe meat cooking and storage times and temperatures, get help in understanding food labels and find out what to do with stored food if a refrigerator or freezer stops working. The hotline operates between 9 a.m. and 3 p.m. weekdays. It is staffed by U.S. Department of Agriculture home economists.

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If you prefer to write to the hotline, the address is: The Meat and Poultry Hotline, USDA-FSIS, Room 1163-S, Washington, D.C. 20250.

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CEO, 4HE

NHEC0779

(Note to home economics agents: To this news release, you may wish to add information about your own availability to answer food handling and preservation questions, possibly including your hours, phone numbers and/or any mention of food preservation classes, pressure gauge testing or other programs you are sponsoring locally on this topic.)

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

MEC
KASIP

July 25, 1985

Source: Ron Pitzer
612/376-3851
Editor: Mary Kay O'Hearn
612/373-1786

CHECK PLAY EQUIPMENT FOR A CAREFREE, FUN SUMMER

Summer should be a carefree, fun time for children. Be sure the play equipment in your yard adds to the fun rather than poses a hazard.

Ron Pitzer, family life specialist with the University of Minnesota's Agricultural Extension Service, mentions some things to look for when buying play equipment or supervising children on public playground equipment: "The size of the equipment should match the size of the child. Preschoolers should use low slides, for instance. Be sure that assembly instructions come with any purchased equipment. Before making a final selection, look for these danger points: pinch-crush parts; exposed screws and bolts; sharp edges; rings; hard, heavy swing seats and "S" hooks."

Children should always be told how to use swings, slides, climbing apparatus and seesaws correctly. "Don't just assume they have learned from watching others," Pitzer says. "It's very important that adults supervise children's play on playground

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equipment because they can spot unsafe situations and correct them before accidents occur."

Pitzer suggests remembering these points when installing, repairing or doing maintenance on play equipment:

--Install swing sets at least six feet away from fences, building walls, walkways and other play areas such as sandboxes.

--All types of anchoring devices (legs of monkey bars, for instance) need to be placed below ground level to avoid a tripping hazard. They can be set in concrete for stability.

--Install play equipment over a relatively soft surface such as sand or grass, not concrete, brick, blacktop or cinders.

--Make a maintenance check on home play equipment every two weeks; school playground equipment--which gets harder use--should be checked more often. Playground supervisors or school safety patrols would have that responsibility.

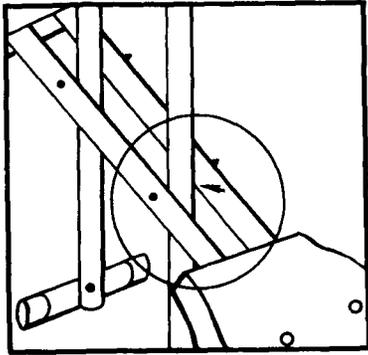
When doing maintenance checks, tighten any loose nuts, bolts and clamps. Inspect hangers, hooks, frames, connections and suspension. Apply tape over protruding bolts and screws. Replace rusted and worn or broken parts. Oil metal parts often. Repaint as necessary. Check wooden equipment for splinters. Check landing pits to see if they need refilling. Check the wear around equipment supports. Make immediate repairs; broken equipment should not be used until it is repaired. "Shut it down, put an OFF LIMITS sign on it so it won't be used," Pitzer advises.

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BE PARTICULARLY AWARE OF THESE NINE PLAYGROUND EQUIPMENT DANGERS:

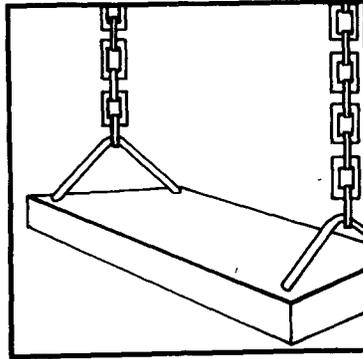
Pinch-Crush Parts

Moving parts particularly on gliders and seesaws can pinch or crush fingers.



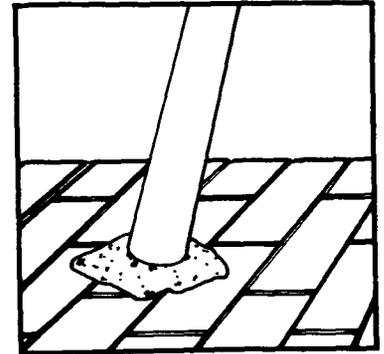
Hard, Heavy Swing Seats

Hard, heavy swing seats can strike a dangerous blow. Choose a set with lightweight seats or purchase such seats separately and replace the hard seats. Metal seats should have smooth, rolled edges.



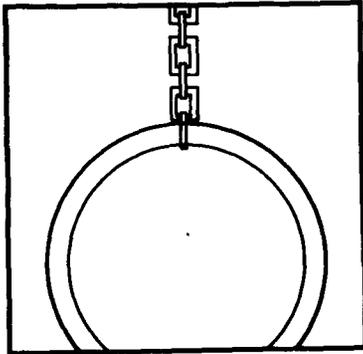
Hard Surfaces

Do not install the set over hard surfaces such as concrete, brick, blacktop or cinders. Grass or sand is better.



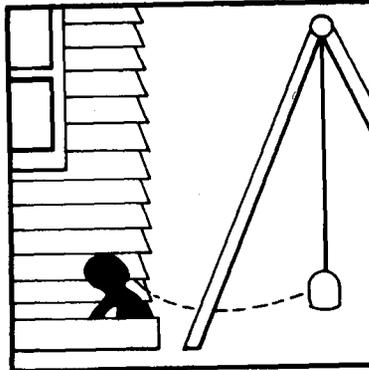
Rings

Swinging exercise rings with a diameter between five and ten inches can entrap a child's head. Remove such rings and discard them where children will not find and play with them.



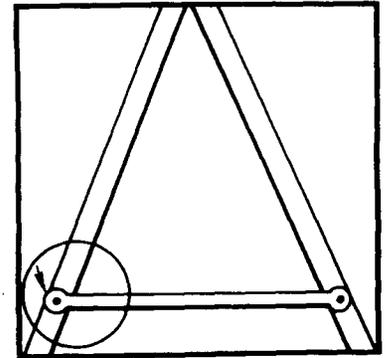
Inadequate Spacing

Install the set a minimum of six feet away from fences, building walls, walkways and other play areas such as sandboxes.



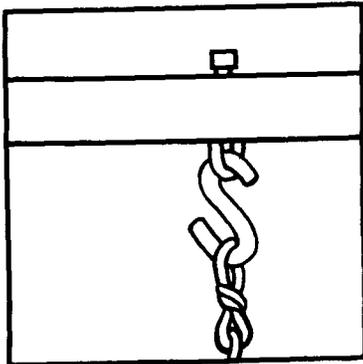
Sharp Edges

Some sets have sharp edges on points where the parts fit together. Tape over these areas with heavy tape and inspect the taped areas regularly for weather damage.



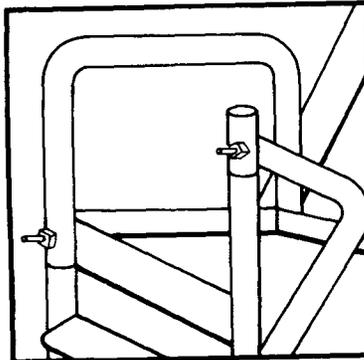
"S" Hooks

Open-ended hooks, especially the "S" hooks on swings which can catch skin or clothing, should be avoided. If a set has such hooks, pinch the ends in tightly with a pair of pliers.



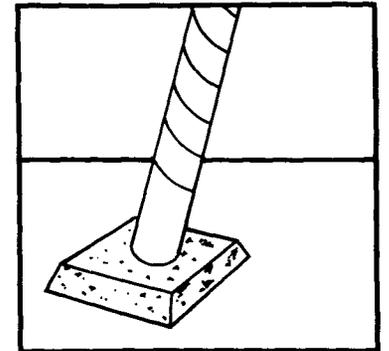
Exposed Screws and Bolts

Most sets include protective caps to cover screws and bolts. When protective caps are not included, tape over all exposed screws and bolts, even those which appear to be out of the child's reach.



Improper Anchoring

Legs can be set in concrete for stability. All types of anchoring devices should be placed below ground level to avoid a tripping hazard.



MDC
7/27/85

July 25, 1985

Source: Marilyn Olson
612/373-1083
Writer: Hank Drews
612/373-1250

MINNESOTA 4-H RECEIVES BREAD EDUCATION GRANTS FROM NABISCO

Nabisco Brands, Inc. will fund three bread education programs in Minnesota with grants totaling more than \$3,400. The grants, for 4-H groups in Ramsey and Beltrami Counties and the State 4-H Office, are designed to help develop new and different activities beyond the usual 4-H youth experiences.

In Ramsey County, a \$752 grant will be used to establish new 4-H clubs and leadership in St. Paul. The urban 4-H staff will recruit volunteers and train leaders in fun and fitness activities about the nutritional value of cereals and breadmaking. The goal will be to increase knowledge and skills, while maintaining the enthusiasm of new leaders and involving about 2,000 volunteers.

Volunteers using special teaching kits will conduct a six-week breads project for youth. A six-lesson packet will be developed for junior high school students and a correspondence course will be developed for day care providers.

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In Beltrami County, a \$700 grant will be used to integrate 4-H on the Red Lake Indian Reservation with the overall 4-H program and to achieve regular participation of American Indian volunteers in the county leadership system.

This will be accomplished in four phases. First, training for 10 new leaders will focus on the purpose of 4-H, life skills and understanding youth, objectives of 4-H bread education and leading an activity. Second, a 4-H Food and Fitness Activity Day will be held for potential new members and leaders, youth and parents. The third phase will involve a Food Service Careers field trip. The last phase will be a 4-H Family Night for project participants, families and volunteers.

A \$2,000 grant will be used to conduct a statewide workshop to demonstrate how the old-fashioned art of home bread baking can be beneficial to a modern lifestyle. A home economist who has researched and developed recipes for fast-rising yeasts will demonstrate breadmaking skills. Participants in this workshop at the University of Minnesota will make bread using regular and fast-rising yeast, whole wheat, all purpose, half and half, and bread flours, hand mixing, electric mixer dough hooks, food processors and plastic bags for mixing and rising. The breads will be baked in six types of ovens and skillets.

Nabisco Brands has awarded grants totaling more than \$25,000 to 4-H groups in 16 states for bread education programs. Nabisco Brands has sponsored the national 4-H bread awards program for 34 years through its Fleischmann Division.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 1, 1985

Source: Sherri Johnson
612/376-1537

Writer: Deedee Nagy
612/373-1781

KEEP TAPE MEASURE HANDY FOR BACK-TO-SCHOOL SHOPPING, SEWING

If you're gearing up for sewing or buying ready-to-wear for the start of the school year, your tape measure can be your closest ally. Sherri Johnson, textiles and clothing specialist with the University of Minnesota's Agricultural Extension Service, suggests that children's height and measurements for back length and pants length may be the best guide to size.

If your children aren't along to try clothing on, she recommends measuring the garments and comparing those dimensions with your child's measurements. Sizes can vary considerably, and some manufacturers' garments are proportioned more generously than others'. Clothing offered at garage sales or in second-hand shops may not be marked accurately for size so measurements are particularly important then.

Johnson says that children's clothing patterns basically come in five sizes: infants', toddlers', children's, girls' and boys'. You may also find patterns for chubby girls and husky boys.

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Readymade garments come in size ranges with similar names, but they may differ markedly in proportions from patterns for clothing sewn at home. This is when a set of measurements is handy. Update them often, especially when children are young and growing rapidly, she suggests.

She also recommends looking for garments that give a young child growing room. Some features to look for are: no defined waistline, raglan or kimono sleeves, knit cuffs and neckbands, elastic at waistlines and deep hems.

If you are sewing your children's back-to-school wardrobes, Johnson suggests finding one or two patterns that fit well and are pleasing to the child. You can then make a number of garments from those patterns by varying the fabrics.

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CEO,P2,4HE,TCO

NHEC0804

Aug. 1, 1985

Source: Sherri Johnson
612/376-1537

Writer: Deedee Nagy
612/373-1781

LOOK FOR DURABILITY FEATURES WHEN BUYING KIDS' CLOTHES

No one else puts clothes to the test the way children do, so add the word "durable" to the list of qualities you want in back-to-school garments.

Sherri Johnson, textiles and clothing specialist with the University of Minnesota's Agricultural Extension Service, says, "Children's clothes must stand up to active wearing and frequent laundering so they should be well constructed and have high quality workmanship."

Some characteristics to look for in readymade children's garments include:

--True grainline. Check to see that threads are running in a straight line. If garments are not made on true grainlines, they will not hang straight or retain their shape.

--Flat seams that allow for growth and won't irritate the child's skin. Seams should be at least 1/2 inch wide and finished to prevent unraveling.

Page 1 of 2

--Reinforced stitching at points of stress such as elbows, knees, underarms and plackets. Bar tacks at the ends of buttonholes will prevent them from ripping.

--Hems that are even and wide enough for growth.

--Evenly spaced machine stitches without puckering or broken threads.

--Colorfast, securely sewn trim and fasteners. They should be washable like the rest of the garment.

--Tags that indicate the garments are washable, colorfast, shrink resistant and possibly even stain resistant.

Johnson suggests letting children take part in selecting their clothing. Parents may want to pick several possibilities and then let the child make the final decision. Giving children a vote may help them learn to make decisions. It may avoid the problem of parents selecting clothes that children refuse to wear either because the clothes aren't what their friends are wearing or because they aren't of a color, fabric or style the child likes, Johnson adds.

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CEO,P2,4HE,TCO

NHEC0805

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 1, 1985

Source: Sherri Johnson
612/376-1537
Writer: Deedee Nagy
612/373-1781

PLAN YOUR CHILDREN'S SCHOOL CLOTHES BEFORE YOU BEGIN TO SHOP

With the start of school looming, August can be a big month for children's clothing expenses. Sherri Johnson, textiles and clothing specialist with the University of Minnesota's Agricultural Extension Service, suggests an orderly approach to outfitting children for the coming school year.

First, she recommends inventorying the clothes your children already have. What still fits? Can you add something new to stretch the wardrobe combinations? Maybe a new top will work with several old pairs of pants for an updated look. Or maybe you can achieve a new look by changing a hem or a sleeve length.

Once you've checked last year's clothes, make a list of the new garments the child will need. What colors will mix and match most successfully with what he or she already has? How much can you afford to spend? Will that force you to set some priorities?

Johnson recommends taking your child shopping with you. "Children like to have a say in what they wear. They usually like clothing that is similar to what their friends are wearing. Shopping can teach them decision-making," she says.

To make those decisions easier, Johnson suggests choosing three or four garments within your price range and letting your child make the final decision.

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

Things to consider in planning clothing purchases include:

--the number of changes of clothing the child has

--how fast the child is growing

--whether the garment will be passed on to another child

--whether the garment is a classic that will stay in style or
a fad

--the type of care the garment will require

For the preschool or early elementary school-age child, Johnson advises looking for growth features. Important ones are adjustable shoulder straps, deep hems, undefined waistlines in one-piece garments, roomy armholes and elastic waistlines.

Planning for growth is wise, but Johnson cautions that a garment that is too big looks sloppy and can be a safety hazard.

Look for construction quality in children's clothes, particularly those that will be worn a lot and will be used for active play. Ask yourself these questions:

Is the garment reinforced at points of strain?

Is the garment finished with closures that are flat, securely attached and easily used?

Is the garment designed for easy care?

If you can spare the time, Johnson recommends comparison shopping to get the best buys. If time is at a premium, at least check out some prices, styles and features on catalog clothing. You will be a better informed shopper whether you buy the catalog items or go to a department or discount store instead.

#

Aug. 1, 1985

Source: Deborah Brown
612/376-7574

Editor: Sam Brungardt
612/376-8182

HERB BUTTERS ARE EASY TO MAKE

It's fun to make a number of herb butters to try on French bread or crackers. And it's a good way to learn the distinct flavor differences between the herbs that can be grown in Minnesota, says Deborah Brown, horticulturist with the University of Minnesota Agricultural Extension Service.

To make herb butter, Brown says to use two tablespoons of a fresh herb or two teaspoons of a dried herb with one-half cup of butter. Cream the herb into the butter with a few drops of lemon juice. Cover and keep the herb butter refrigerated, but allow it to soften at room temperature before using it. This allows the herb's full flavor to develop.

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P2,4H,4HE,TCO

NHEC0786

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 1, 1985

Source: Deborah Brown
612/376-7574
Editor: Sam Brungardt
612/376-8182

HARVEST HERBS NOW TO ENJOY THEM NEXT WINTER

To capture the greatest amount of their essence, harvest herbs while they're still growing vigorously. That's the advice of Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service.

She says, "You may cut plants close to the ground, then hang them upside down by the stems to dry or you can strip leaves off, then dry them in trays. Speedy drying will help retain maximum flavor."

Once the leaves are totally dry, they may be stored in wide-mouth containers with tight covers. If any moisture appears on the inside of the jars, Brown says to open them and dry the herbs a few days longer. She says most dried herbs begin to lose flavor within three to six months.

"Herbs that are grown for their seeds should be picked just before the seeds start falling from the dry flower heads," says Brown. "Spread the seeds and their attached parts and let them

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dry until you can separate the seed from the plant debris.

Clean, dry seeds are then stored the same way as dried leaves."

Brown says some herb plants can be dug up, potted and kept indoors over the winter in a bright, sunny window. Chives, parsley, rosemary, mint and basil are a few that might make it. She says, "They will need thorough watering, but should be allowed to get fairly dry between times. They also need all the light you can give them. It's not a bad idea to pinch the plants back before bringing them indoors because the growing conditions simply won't be as good as they were outdoors."

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P2,4H,4HE,TCO

NHEC0787

Aug. 1, 1985

Source: Roger Machmeier
612/373-0764

Editor: Mary Kay O'Hearn
612/373-1786

BUFFER ZONE BETWEEN LAWN AND LAKE HELPS PROTECT WATER QUALITY

It looks neat--a manicured lawn right down to the water's edge, but it may be detrimental to lake water quality. Consider establishing a buffer zone between your lawn and the lake.

"A closely clipped lawn allows surface runoff carrying grass clippings, leaves and other debris with nutrients directly into the lake," explains Roger Machmeier, agricultural engineer with the University of Minnesota's Agricultural Extension Service. "Excess nutrients are the chief cause of deteriorating lake water quality."

What's needed is a buffer zone of long grass to trap grass clippings and leaves and to slow surface runoff to catch much of the sediment. The buffer should be 8 to 10 feet wide and can consist of natural vegetation or grass, allowed to grow without mowing. Machmeier says, "Vegetation need be only 12 inches high and the top of the grass could be clipped with a scythe or a weed whip. It is important that the buffer zone be as dense as possible near the ground surface to act as an effective nutrient trap."

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CEO,1A,FB2,P2,TCO

Page 1 of 1

NAGR0809

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Aug. 1, 1985

Source: Tom Reis
612/376-9829

Writer: Mary Kay O'Hearn
612/373-1786

SOUTHEAST ASIAN FAMILIES NOW OWN COOPERATIVE FARM AT FARMINGTON

It's three years later and refugee families from Southeast Asia are leaving Minnesota's welfare rolls, firmly believing they can make a living by operating a cooperative farm on 60 rented acres near Farmington, Minn.

The three-year, working-learning phase is over--at least for the University of Minnesota Agricultural Extension Service personnel who helped train the refugee families in the Minnesota Agricultural Enterprise for New Americans (MAENA).

"We've turned over \$90,000 worth of tractors and trucks and picking crates to the cooperative," explains Tom Reis, project director for MAENA. "Nearly all of the equipment was second hand. This was part of the agreement the university made with them when they joined MAENA."

Reis's job is over, too. He's heading for Harvard University and graduate school. His experiences with MAENA haven't diminished an interest in wanting to work with Third World countries.

The university's goal in MAENA--admittedly a risk--was to provide a unique business and training program for 55 refugee families, Vietnamese, Cambodians and Laotians who helped the U.S.

military during the war in Southeast Asia.

Twenty-six families were graduated in the program last November and 30 more will be this November. Not all have stayed in the newly formed cooperative; some have part-time jobs, some have moved to California, one couple farms independently and others are in jobs completely apart from farming.

As faces have changed in the MAENA project so have the crops. This year, Jalapeno and other varieties of peppers, sugar peas, bok choy and kale have joined the tomatoes, bell peppers, lettuce, spinach, green onions and cucumbers that continue to be field staples.

There is a contract with a pickle company this year. Other produce is marketed to wholesalers and some is being sold this summer in two stalls (labeled Hmong Farming Cooperative) at the Minneapolis Farmers Market and at a stand on Highway 50 west of Farmington, at the edge of the co-op's fields.

The MAENA project will be over in December. Appearing more relaxed than he's seemed in three years, Reis reflects on the past. There'd be some changes if it were going to begin again, knowing what he knows now.

"For one thing, we would have started out smaller," he says. "It was 160 acres to start; this year it is half that size. Agriculture is a very complicated business. We would have involved competitive growers more in what we were trying to do." (There were some objections from independent growers that university help to the Southeast Asians was hurting established markets.)

"Philosophically, this was a good program that the university can be proud of, but we tried to do too many things too fast."

Rollercoaster weather was one of the hazards encountered. Reis calls last year a bad marketing year. Add to this cultural and language differences between the Americans directing the program and the Southeast Asians. Then there were the bureaucracies to deal with: the welfare system--state and federal--and the university's, too. "We were learning as we went along," Reis says to all this. "But the motivation and intent were really good. We should be proud of what's been done."

Perhaps some of those receiving instruction on the St. Paul campus in English as well as farming techniques during the winter thought they should have learned faster. It just wasn't possible to learn to take apart and reassemble a tractor in the time available, given the language difficulties. "They felt we were superhumans and that just wasn't true," Reis says of his staff.

Reis has no regrets for the risk the university took in sponsoring the program. He's thankful for the additional community investment (grants) to help the program. And, he's happy the university didn't back down when the program came under pressure.

"We found out we aren't the experts we think we are and we need more outside contacts," he sums up. There was learning all around, for the students and the teachers.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 1, 1985

Source: Distribution Center
612/373-1615
Writer: Hank Drews
612/373-1250

EXTENSION INFORMATION IS AVAILABLE BY MAIL

Remember those great informational folders which people always picked up from the county extension agent on lawn and garden problems, home canning, meats, farm financial management and other topics? Now, they are also available by mail.

While county extension offices sometimes give out these handy, "how-to" publications free of charge, there is a small fee when they're mail-ordered from the university. They cost from 25 cents to a few dollars, with a minimum charge of \$1 per order.

If stopping at the county agent's office isn't convenient, contact the University of Minnesota about any specific topics you need information about. Write the Distribution Center, 3 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108 or call (612) 373-1615.

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CEO,1A,FB2,P2,TCO

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NEXT0801

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

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

Aug. 1, 1985

Source: Gail D. McClure
612/373-1790
Writer: Sam Brungardt
612/376-8182

\$1.9-MILLION KELLOGG GRANT TO FURNISH SEED MONEY FOR U OF M TELECOMMUNICATION DEVELOPMENT CENTER

The University of Minnesota has received a grant of \$1.9 million from the Kellogg Foundation to establish a telecommunications development center. The five-year grant is the largest the foundation has ever given the university.

The money will be used to create a center within the university's Institute of Agriculture, Forestry and Home Economics to train faculty and staff to plan, design and deliver instructional programs that use telecommunications technologies such as radio, television, computers and teleconferencing. The goal is to improve the university's ability to respond to the growing educational and information needs of rural and urban clients. Cooperation between the university and public and private sector in developing outreach projects will be encouraged.

Each year the center will fund three to seven grants to institute faculty with ideas for outreach educational projects. The unit within the institute most involved in outreach efforts is the Agricultural Extension Service.

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

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Gail D. McClure, associate director for the university's Agricultural Extension Service and principle investigator for the grant, said, "The Agricultural Extension Service has long been a source of unbiased, low-cost information and educational programs. However, most extension personnel are not trained in the use of the new telecommunication technologies or in developing programs that use them. The center will broaden our outreach capability and make the university's educational resources more accessible to the people of Minnesota."

The center will also conduct workshops and seminars on the use of new communication technologies. Other universities and the private sector are expected to participate in these activities.

The center will have a classroom designed for videoconferencing, a laboratory equipped with computers and interactive communications devices, production studios for taping and duplicating programs and a microwave satellite dish for connecting the university with a nearby television station.

The new facilities will be in the Earle Brown Center for Continuing Education on the university's St. Paul campus. A national search is under way for a director for the center.

The W. K. Kellogg Foundation, established in 1930 to "help people help themselves," has distributed more than \$768 million in support of programs in agriculture, education and health. Areas of emphasis include adult continuing education; betterment of health; communitywide, coordinated, cost-effective health services; a wholesome food supply; and broadening leadership

capacity of individuals. In Michigan only, projects are supported for economic development and opportunities for youth. The foundation is one of the larger private philanthropic organizations in the nation. It supports programs in the United States, Latin America and the Caribbean, as well as international fellowship programs in other countries.

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1A,FB2,P2,SN,TCO,SELMED

NEXT0800

Aug. 1, 1985

Source: Jeffrey Hahn
612/376-3377
Editor: Sam Brungardt
612/376-8182

WHITEFLIES, A MINOR GARDEN PEST, NEED TO BE CONTROLLED INDOORS

Most gardeners who grow tomatoes have probably seen very small, white insects on the plants at one time or another. Although they resemble tiny moths, these whiteflies are actually more closely related to aphids and scale insects, says Jeffrey Hahn, an entomology educator for the University of Minnesota's Agricultural Extension Service.

"Whiteflies are subtropical insects, but they can occur on garden plants during the summer in Minnesota," Hahn says. "They are found on the bottoms of leaves, feeding on plant sap. They also thrive in greenhouses and on houseplants. When tomatoes are transplanted into the garden, whiteflies can come along with them. Fortunately, they very rarely damage tomatoes. Since they are subtropical, whiteflies are not able to survive winters in Minnesota."

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

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Hahn says controlling whiteflies on vegetable plants outdoors is difficult, rarely justified and not suggested. However, they can be serious pests on houseplants and in greenhouses. Washing the whiteflies with a mild detergent solution (1/2 teaspoon per quart of water) can give effective control if the problem is caught in the early stages. Resmethrin or Orthene in an aerosol or pump spray or malathion (1/2 teaspoon 50% emulsifiable concentrate per quart of water) will also control whiteflies on houseplants.

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P2,4H,TCO

NAGRO792

Aug. 1, 1985

Source: Bob Geneve
612/373-1540
Editor: Sam Brungardt
612/376-8182

STEAL SOME EARLY VEGETABLE GARDEN DELIGHTS

Be adventurous! Sneak into your garden and steal some delightful vegetables before they are fully mature.

"Several vegetables, when harvested early, are sweeter and more tender than their mature counterparts," says Bob Geneve, horticulturist with the University of Minnesota Agricultural Extension Service. "Schedule your garden raids to take advantage of 'new potatoes', 'baby' beets, sweet onions and whole, 'no cut' green beans.

"Begin your thieving by uncovering a few hills of potatoes and removing some of the larger tubers any time after the middle of July. Take only enough potatoes for one or two meals because the skin is still thin on these tubers and they will not keep well. The flavor of new potatoes is excellent and there's no reason to wait until September to enjoy potatoes from your garden."

Geneve says many gardeners look forward to harvesting baby beets for a delightful summer vegetable or to can whole for fancy pickled beets. Baby beets are harvested when the roots reach the diameter of a quarter. Simply trim and cook the beets whole. There's no need to slice them because they are so tender and sweet.

"It's unfortunate that many gardeners wait until their onions are fully mature and drying before they begin to enjoy them," Geneve says. "Onions can be used any time after the bulbs begin to swell. Actively growing onions are sweet with a crisp texture that's too good to omit from summer salads or quick fry dishes."

Impatient gardeners can also harvest green beans a little earlier, while they are still pencil thin and before the seeds swell. Geneve suggests serving these beans whole. He adds, "Early harvested green beans can also be pickled with dill and vinegar much like cucumbers. Select young, straight pods that fit attractively into pint canning jars. Such beans will be fiber free and remain crisp when pickled.

"Don't feel guilty about robbing the vegetable garden early. You just might discover a delightful new way to enjoy some old friends," Geneve concludes.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 1, 1985

Source: John True
612/373-0764

Editor: Mary Kay O'Hearn
612/373-1786

KNOW WHAT THAT ORANGE TRIANGLE MEANS

It's easy to forget from season to season, when you are driving country roads that you haven't been on for some time, just what that orange triangular sign on the back of tractors and other farm equipment means.

"Nonrural motorists need to be able to recognize and know the meaning of the slow-moving vehicle (SMV) emblem, that it designates a vehicle moving at no more than 25 miles per hour and usually a good deal less than 25," says John True, agricultural engineer with the University of Minnesota's Agricultural Extension Service.

The National Safety Council urges motorists to slow down when approaching a slow-moving vehicle and to be prepared to stop. Then pass with care. If there's a farmstead driveway or field entrance nearby, a motorist should be alert to the possibility that the farm vehicle may turn.

SMV emblems should be displayed with the point of the triangle facing up.

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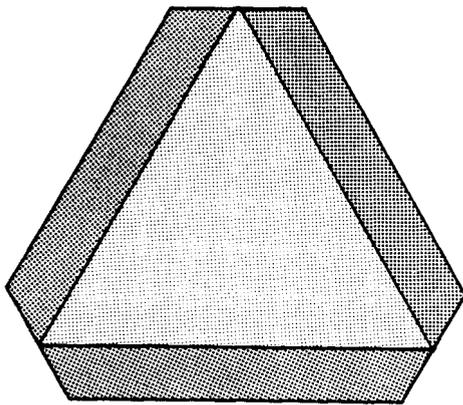
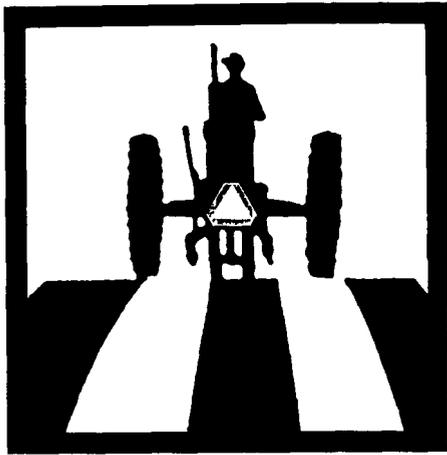
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NAGRO790

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Aug. 8, 1985

Source: Sherri Johnson
612/376-1537

Writer: Mary Kay O'Hearn
612/373-1786

SEWING BY SATELLITE '85 IS SET FOR NOV. 2 IN BLOOMINGTON

Do you have a best sewing tip, a humorous sewing experience or a creative solution to a sewing problem? If so, send it with your registration to the American Home Sewing Association (AHSAs), and it might be included in the AHSAs's videoconference, "Sewing by Satellite '85".

Fifty locations across the nation will receive the five-hour satellite program simultaneously on Saturday, Nov. 2. In Minnesota, it will be held at The Registry Hotel, 7901 24th Ave. South, Bloomington, beginning at 10 a.m.

Clothing and textile specialists from the U. S. Department of Agriculture's Cooperative Extension Service are co-sponsoring the event with the AHSAs, a nonprofit organization representing the sewing industry's effort to encourage the public to develop sewing skills.

"It's the third year of the program on a larger-than-life screen. The program is designed for professionals--home economics teachers, persons who sew as a home-based business, retailers and extension agents," says Sherri Johnson, textiles

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

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and clothing specialist with the University of Minnesota's Agricultural Extension Service and facilitator for the Bloomington event.

Registration forms for the videoconference can be obtained from the American Home Sewing Association, Inc., J.A.F. Post Office, Box 2186, New York, NY 10116 (phone: 212/736-8820). Cost is \$65 for registrations received before Oct. 12. Those who register by Sept. 23 will be eligible for early-bird bonus prizes. Registration at the door on Nov. 2 will be \$85.

Participating in the program beamed from Washington, D.C., will be names and faces familiar in the world of sewing, including Gail Brown, Roberta Carr, Marlene Carroll, Irene James, Charles Kleibacker, Ann Person, Herman Phynes, Cindy Piccoli, Donna Salyers, Joyce Smith, Erica Wilson and Nancy Zieman.

"Sewing by Satellite '85" will be broadcast both live and in videotaped format from Washington. New program content is based on research from the more than 10,000 participants of the two previous videoconferences. Johnson says those were held locally in Minneapolis, with 242 attending in 1982 and 197 in 1983. The Nov. 2 program provides a chance for interaction through a two-way audio system so ideas can be exchanged with other educators, dressmakers and sewing enthusiasts.

A special focus of this year's program will be applying sewing products, techniques and creative ideas to participants' lifestyles. Here are some of the program segment titles:

Fashions Spring '86--a fashion show featuring advantages of custom making garments for perfect fit and quality workmanship

Silhouette by Fabric--how to work with various fabric weights and the seasonless principles of sewing

Time to Sew--the busy person hears sensible ways of creating more time and space to be a creative sewer

Fit the Curves--adjusting garments (both in patterns and ready-to-wear) for figure curves around the waist

Sew for Profit--how to set up and maintain a profitable business (whether out of the home or on main street) including pricing, liability, supplies, advertising and more

Creative Embellishments--personalizing apparel and decorative items

Home Decorating, Techniques for New Fabrics, Advice from a Pro, What's New in Sewing Machines: Sergers/Overlocks, What's New in Sewing/Fashion Notions will be other program segments.

"Each registrant attending will receive The Companion Workbook to reinforce what's been seen on the screen and for year-round reference," Johnson says.

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CEO,P2,4HE

NHEC0822

Aug. 8, 1985

Source: Janis Kieft
Deborah Brown
612/376-7574
Writer: Deedee Nagy
612/373-1781

MANY TREES ARE SHOWING IRON CHLOROSIS SYMPTOMS

Minnesota homeowners are reporting many instances of trees having yellow leaves with prominent green veins. These trees are suffering from a nutrient deficiency known as iron chlorosis, says Janis Kieft, horticulturist with the University of Minnesota Agricultural Extension Service's Dial-U Insect and Plant Information Clinic. Iron chlorosis, she adds, is often associated with alkaline or heavy clay soil or a site where the soil is compacted by soil fill or nearby construction.

Kieft says that trees with this deficiency often take on a yellow-green hue. The condition is most prevalent in some oaks, maples and birches although other tree and shrub species can be affected.

Treatment is to provide iron to the distressed trees by one of three methods. Of these only foliage spraying and soil incorporation are options for the do-it-yourselfer. Trunk injection is best left to a trained professional because of the special equipment and procedures involved, Kieft says.

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Foliage spraying, which uses an iron chelate-water mix, brings quick but temporary results. Large trees may need to be treated by a tree company with powerful sprayers that can reach upper branches. Among the products for this type of treatment are Greenol, Mir-Acid and Acid-Gro.

Incorporating iron into the soil is a slower but more lasting treatment. Elemental sulfur or iron sulfate are used to make the soil more acid, which enables tree roots to take up iron from the soil. Iron sulfate is placed in holes made every 2 feet, beginning 3 feet from the trunk and extending beyond the dripline, which is the point on the ground directly below the outer edges of the branches.

Elemental sulfur is spread on the ground near the trunk and then incorporated into the soil to a depth of at least 6 inches.

Kieft says that even these methods have shown mixed results. Some trees and shrubs with severe chlorosis may continue to show yellowing and poor growth despite treatments.

She adds, "In many cases, this problem could have been avoided if the trees planted had been better suited for existing conditions. Oaks, particularly pin oaks, and other acid-loving species shouldn't be planted in soils with a high pH."

Homeowners who are uncertain about their soil type should check with their Agricultural Extension Service county agent for information about soil testing.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 8, 1985

Source: Roger Machmeier
612/373-0764

Editor: Mary Kay O'Hearn
612/373-1786

WILL ADDITIVES HELP SEPTIC TANKS?

Hardly a day goes by without some new product being promoted to improve septic system performance.

Since the cost of some of these products may be more than a regular cleaning of the septic tank by a qualified service company, Roger Machmeier says some questions need answers before buying new products.

"We don't have any proof other than testimonials of manufacturers," Machmeier says of the advertising claims. He is an agricultural engineer for the University of Minnesota's Agricultural Extension Service. "The Environmental Protection Agency states that septic tank additives have not proved to be of benefit in carefully controlled tests and recommends that homeowners not use additives."

Machmeier suggests that homeowners find answers to the following questions before considering use of a septic tank additive:

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--Are the additive claims supported by independent laboratory research or merely justified by testimonials?

--Will introducing the additive damage other portions of the sewage treatment system such as flushing solids out of the septic tank and clogging the soil absorption system?

--Does the additive contain harsh chemicals which could percolate downward and contaminate groundwater supplies?

Avoid use of additives unless you find satisfactory answers to all three questions, says Machmeier.

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CEO,1A,P2,TCO

NAGR0815

Aug. 8, 1985

Source: Richard Meronuck
612/373-0937
Editor: Mary Kay O'Hearn
612/373-1786

Note to agents: You may want to mail this release to growers in your county.

8 PESTICIDE INGREDIENTS WILL BECOME RESTRICTED SEPT. 1

Beginning Sept. 1, 1985 restricted use product labeling on pesticides containing eight active ingredients goes into effect by order of the Environmental Protection Agency.

"What it means is that any user of these pesticides, which were previously sold without restrictions, must be certified by the Minnesota Department of Agriculture to purchase or use them," says Richard Meronuck, plant pathologist and pesticide education coordinator with the University of Minnesota's Agricultural Extension Service.

Pesticides containing the following ingredients will be restricted Sept. 1: aldicarb (Temik), carbofuran (Furadan), disulfoton (Di-Syston), ethoprop (Mocap), fensulfotion (Dasanit), fonofos (Dyfonate), phorate (Thimet) and terbufos (Counter).

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

Training programs leading to Private Applicator certification for use of these pesticides will be taught through the University of Minnesota Agricultural Extension Service, says Meronuck. Certification can be obtained by attending a county extension-sponsored training session or by completing a correspondence study course. After completing the course, a certification application is sent to the Minnesota Department of Agriculture, which issues the certification card needed to purchase restricted use compounds. The Private Applicator certification is good for five years.

"Cost of the training will be kept as low as possible, but is yet to be determined," says Meronuck. County offices of the Agricultural Extension Service will have information about classroom and correspondence study certification training programs. Or, information about correspondence study only can be obtained by writing: Private Applicator Training, Office of Special Programs, 405 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108.

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CEO,AA,1A,FB2,P2

NAGR0823

Aug. 8, 1985

Source: Paul Hasbargen
612/373-1145
Writer: Jack Sperbeck
612/373-0715

CONTRACT FEEDING COULD HELP SMALL HOG PRODUCERS

Contract feeding hogs may be "good" or "bad" for the hog industry, depending on how you look at the issue and how the trend develops.

Custom contract feeding of hogs increased rapidly in the corn belt during the past year, says Paul Hasbargen, farm management economist with the University of Minnesota's Agricultural Extension Service. "Some call it 'vertical integration' and say it's bad for the industry. Others see it as a way of getting credit at reduced risk during the current financial crisis and call it good," Hasbargen says.

He lists these advantages of contract feeding:

--It greatly reduces risks involved in hog feeding. Only two of the last six years (1982 and 1984) have been profitable for hog finishers.

--It removes the need for operating credit for hog finishing enterprises. Most programs supply both pigs and feed.

--It accelerates cash flows by allowing the hog finisher to sell his home-produced feed earlier. The complete hog producer

Page 1 of 3

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

can also accelerate cash from the enterprise by selling his pigs to the contractor--but keeping them on the farm under the custom feeding program.

--It provides the marketing service--both buying the feeder pigs and selling the market hogs. When these tasks are done by specialists, a larger gross margin is likely over time.

--It can provide a start-up opportunity for the beginner who is short on capital.

--It can increase profits from the hog enterprise. "Some have criticized the current average payment of about \$8 per hog fed to cover labor and facilities as being below cost," Hasbargen says. "But this about equals the average returns to labor and facilities we've seen on hog finishing farms with records the past five years."

Hasbargen sees these disadvantages of contract feeding:

--Facilities may not be fully utilized. Farmers considering contract feeding may want some written assurance that pigs will be provided on a regular basis.

--The contract may require additional time and management input. For example, more detailed records may be required.

--The contract feeder will need to cooperate with the contractor's fieldman. There's the question as to whether the fieldman will be a consultant or a boss.

--Participating in a contract program may give a "poor image" by suggesting financial trouble. But Hasbargen says this image

is likely to change as it has in cattle feeding where one must be a good manager to attract customers. And, the value of custom feeding as a risk management strategy is recognized.

--If average production costs are reduced, the industry-wide impact will tend to increase supplies and lower prices.

The future of contract feeding depends partially on how good a management job contractors do in the next few years.

If a significant number of contractors deliver on the potential "advantages" listed by Hasbargen, contracting will become firmly established as a specialization. It will be recognized for reducing credit needs and risk exposure while providing an acceptable return to labor and facilities.

"Performance related bonuses may be required to attract and hold good managers with superior facilities," Hasbargen says.

Estimates are that about 5 percent of hogs now on feed are under contract. Advantages offered by contracts under current conditions will encourage expansion in the next few years.

"If contractors effectively use specialized talent to increase returns for their farmer cooperators and themselves, expansion will continue. In fact, contracting might keep more small hog producers in the business who otherwise would not be competitive with the large specialized units that already use specialists in nutrition, breeding, health and marketing," he says.

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Aug. 8, 1985

Source: Roger Machmeier
612/373-0764

Editor: Mary Kay O'Hearn
612/373-1786

TROUBLE-FREE SEPTIC TANK REQUIRES REGULAR CLEANING

To keep a septic tank system trouble free, the only maintenance needed is a regular cleaning of the tank.

"Keeping your septic tank clean is the best way to prolong the life of an onsite sewage system. A 1,000-gallon septic tank serving a family of four should be cleaned every two years. If a garbage disposal is used, the cleaning might be needed yearly or even more oftener."

What Roger Machmeier, agricultural engineer with the University of Minnesota's Agricultural Extension Service, is talking about is "cleaning the tank and not just pumping it out."

He says, "Proper cleaning of a septic tank requires the tank manhole be open or that a portion of the tank cover be removed."

Machmeier says anyone who claims to be able to clean a septic tank through a 4-inch inspection pipe really doesn't understand the proper tank-cleaning procedure. The scum layer floating on

the top of the tank often needs to be broken up with a long-handled shovel. And, air agitation of the tank is often needed to break up the scum layer and this can only be done when the tank manhole is open for air to escape. If the air doesn't escape, sewage may be forced back into the house through the sewer.

Inlet and outlet baffles can also be inspected through the open tank manhole and replaced if missing, Machmeier says.

He warns, "Homeowners should never go down into a septic tank. This is a job only for trained and qualified professionals. Poisonous gases in the tank can cause serious illness and even death."

Having a written service contract with a septic tank cleaning firm is a good idea. "Their records will remind you when it's cleaning time. Remember, have it cleaned, not just pumped," Machmeier concludes.

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CEO,1A,P2,TCO

NAGRO814

Aug. 8, 1985

Source: Jeffrey Hahn
612/376-3377
Editor: Sam Brungardt
612/376-8182

FALL WEBWORM DAMAGE IS MOSTLY AESTHETIC

In the latter part of summer, one can find trees with webs at the ends of their branches. This is the work of the fall webworm, says Jeffrey Hahn, entomology educator with the University of Minnesota Agricultural Extension Service.

Hahn says the webworm caterpillars, which occur in groups on the branches, spin a silken web around the leaves they feed upon. The web helps protect them from natural enemies and insecticides.

Fall webworms first appear in late July or August. However, they are not usually noticed, Hahn says, until they are larger and the webbing more prominent. This pest can be especially troublesome because it feeds on many kinds of shade trees, he adds.

"Although the fall webworm can defoliate trees, it usually does not severely damage established trees," Hahn says. "The injury is more aesthetic than actual. Control is usually

Page 1 of 2

attempted only for the appearance of the tree. Insecticides should be applied before the caterpillars enclose themselves in their web. Unfortunately, they are very small at that time and usually not noticed. Affected branches of smaller trees can also be cut out and destroyed. However, nothing will control this insect in larger trees after the caterpillars have constructed their web."

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P2,4H,TCO

NAGRO793

Aug. 15, 1985

Source: Roger Machmeier
612/373-0764
Editor: Mary Kay O'Hearn
612/373-1786

DON'T NOURISH LAKES WITH LAWN FERTILIZERS

Lawns should be lawns and lakes should be lakes, and it's bad when the two get mixed up.

There is this danger if lakeshore lawns are overfertilized, says Roger Machmeier, agricultural engineer with the University of Minnesota's Agricultural Extension Service. "The excess fertilizer washes off in rains and heads right for the lake, resulting in growth as weeds and algal blooms," he says.

"It is estimated that 1 pound of phosphorus (fertilizer) can generate up to 500 pounds wet weight of algal blooms and weed growth. Lakeshore property owners should use every precaution to prevent fertilizer from washing into their lake."

If a heavy rain and runoff occur shortly after water-soluble fertilizer is applied to the lawn, many of the nutrients will be flushed into the lake. While additional phosphorus won't harm the soil, phosphorus placed on lakeshore lots and washed into lakes can harm water quality, Machmeier says.

A study conducted by the University of Minnesota Soil Testing Laboratory showed that about 95 percent of the lawn soils it tested did not require any phosphorus fertilizer. Lawns usually need only one or two applications of nitrogen fertilizer per year and at rates not to exceed 1 pound of nitrogen per 1,000 square feet of lawn area.

Machmeier says it's a good idea to have a soil test made to verify that nutrients are needed before adding them to the lawn. "Be sure to check out phosphorus needs; don't apply if it's not needed," he says. "It's the wise use of shoreland property and prevention of nutrient runoff that has the greatest effect on the water quality in our lakes."

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CEO,CON,1A,P2,TCO

NAGR0816

Aug. 15, 1985

Source: Shirley Munson
612/373-1561
Editor: Sam Brungardt
612/376-8182

SOME FOODS DO NOT FREEZE WELL

Although many foods can be frozen successfully, some types of food do not freeze well.

For example, certain frozen fruits and vegetables become very soft when thawed, according to Shirley Munson, associate professor of Horticultural Science and Landscape Architecture at the University of Minnesota.

She says, "What you're really doing when you freeze fruits and vegetables, is freezing the water contained within the plant cells. This water makes up more than 90 percent of the total weight of most vegetables and fruits. When the water freezes, it expands and causes the cell walls to rupture. Consequently, when the food is thawed, its texture is much softer than before."

Munson says the difference in texture is especially noticeable in products that are usually eaten raw. For example, when a frozen tomato is thawed, it turns into a pile of mush and liquid. That's why foods such as tomatoes, lettuce and celery are not usually frozen. However, tomatoes and celery can be

Page 1 of 2

satisfactorily frozen if cooked first. Frozen fruits that are eaten raw also become very soft, but if they are eaten before they have completely thawed, the effect of freezing on the fruit tissue is less noticeable.

Cooked vegetables can also lose quality when frozen. Munson says, "Pieces of potato, particularly Irish potatoes in soups and stews, may become soggy or grainy or may darken. Vegetables and macaroni that are cooked well done before freezing are likely to be mushy and have a warmed-over flavor after being reheated. With the exception of french-fried potatoes and onion rings, fried foods lose some of their crispness and become soggy."

Spices and other flavorings can also cause problems in frozen foods, according to Munson. Pepper, onion, cloves, synthetic vanilla and some herbs cause strong and bitter tastes after freezer storage. Munson says one way to prevent this is to use half the amount of seasoning called for in a recipe. Or add the seasoning to taste at serving time. Salt, unlike other spices, loses its flavor in the freezer.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 22, 1985

Source: Tom Milton
612/373-1299
Writer: Sam Brungardt
612/376-8182

NAMES SOUGHT FOR UPDATED MINNESOTA FOREST PRODUCTS DIRECTORY

If you manufacture any kind of wood product or run a sawmill, it may pay to take the time to get listed in the "Minnesota Forest Products Directory--1985", which is now being compiled by the University of Minnesota's Agricultural Extension Service.

Tom Milton, forest products area extension agent, hopes to include in the directory all Minnesota individuals and companies that derive a substantial part of their income from the manufacture of wood products. He says, "It's difficult to find out about all the small wood product manufacturers in the state, especially with many Minnesotans getting into wood product manufacturing to augment their incomes. We hope to find as many manufacturers as possible, whether they make lumber, furniture, woodenware, craft items, pallets or cabinets."

According to Milton, this directory has proven to be an excellent "tool" for wood product manufacturers and sawmills to use in marketing their products and locating raw materials. It has also helped woodlot owners know who buys timber in their area.

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

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The last directory was compiled in 1982. Individuals or businesses who wish to be listed in "Minnesota Forest Products Directory--1985" may call (612) 373-5661 collect or write to Tom Milton, 204 Kaufert Laboratory, 2004 Folwell Ave., University of Minnesota, St. Paul, MN 55108. Deadline for applications for inclusion in the directory is Oct. 1, 1985. There is no charge for being listed in the directory and all persons and companies listed in it will receive a complimentary copy.

#

1A,FB2,P2,4F,TCO

NCRD0843

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 22, 1985

Source: Wayne Carlson
612/373-1083

Writer: Hank Drews
612/373-1250

ENJOY AUTUMN MORE SAFELY

"As fall approaches, many people enjoy the outdoors by hunting, collecting dried plants or just hiking, without a thought to danger," says Wayne Carlson.

Carlson, a 4-H Youth Development specialist, and wildlife specialist Jim Kitts work together each fall on the 4-H Shooting Sports/Wildlife project offered by the University of Minnesota's Agricultural Extension Service.

Carlson and Kitts agree that outdoor activities can be much safer and more enjoyable if a few common sense rules are followed. They say that all hunters, especially beginners, should take a firearm safety course, such as the one the Department of Natural Resources requires of minors seeking their first hunting license, and the 4-H program.

Gun safety aside, Carlson and Kitts have three main safety tips for enjoying the outdoors safely during the fall:

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Avoid hypothermia. "People forget that more deaths due to exposure occur when the temperature is above 32 degrees than when it's below," Kitts says. "You don't have to freeze your body like a block of ice--just lose a few degrees of body temperature and you're in trouble."

Kitts recommends dressing as skiers do, with layers of clothing that can be removed or added as needed. He also advises wearing a hat. He says, "The old saying, that when your feet are cold you should put on a hat, is true. A large percentage of body heat is lost through the head."

Dress for safety. "During the big game season, anyone who goes afield in Minnesota is required to wear blaze orange or bright red clothing to cover the body, arms and hands. If a hat is worn, it, too, must be of those colors," says Carlson. "This rule applies even if you aren't actually hunting."

Kitts says that while there are no similar legal requirements during the small game hunting seasons, it's wise to wear colors that don't occur in nature to make yourself more visible to others hunting nearby.

Carry a compass and survival kit. "There's always a possibility that you may become lost," says Kitts. "The first rule is not to panic. You can remain calm easier if you are prepared." He also suggests learning basic orienteering techniques, especially use of a compass.

Survival kits can be purchased in sporting goods stores or can be made up at home. They should include matches, high-energy foods such as candy bars, a lightweight blanket and materials to start a fire.

"Your best equipment can be common sense," says Carlson. "Take the time to plan ahead and autumn outdoors can be more fun."

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CEO,1A,P2,40S,TCO

N4-H0837

Aug. 22, 1985

Source: David Davis
612/373-1566
Luther Waters
612/373-1102
Writer: Monica L. Brodersen
612/373-8182

NEW UNIVERSITY OF MINNESOTA COWPEAS MAY INTEREST HOME GARDENERS

Minnesota home gardeners looking for something different may add cowpeas to their vegetable plots in the future.

Because they are warm-season plants, cowpeas have traditionally been more popular in the southern United States. But now the University of Minnesota's Agricultural Experiment Station has released two extra early-maturing varieties--MN 13 and MN 150--that are adapted to Minnesota's climate.

David Davis, the horticultural scientist who developed the new varieties, said there should be good potential for Minnesota home and market gardeners to grow these early-maturing varieties.

Luther Waters, a horticulturist with the University's Agricultural Extension Service, said that cowpeas are a highly nutritious food source.

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

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Waters recommends sowing cowpeas when the soil temperature is above 60 degrees. Cowpeas have the same insect problems that green beans do and should be treated similarly.

Cowpeas usually may be harvested by mid-August. The pods can be harvested immature and prepared like green beans or harvested later, shelled and prepared like fresh or dried peas.

The greatest demand for cowpeas will probably be near major metro areas by people originally from the South, Waters said. Davis predicts that smaller commercial growers would also be able to successfully produce cowpeas as a specialty crop if there is a demand for them.

Some seed companies carry southern types of cowpeas such as black-eyed peas and clay peas. However, these types are frost sensitive and require a longer growing season.

Davis said that MN 13 and MN 150 are now available to researchers as breeding material. Seed may be available to the public in several years if the seed industry decides to offer the new varieties.

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CEO,1A,P2,4H,TCO

NAGR0838

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 22, 1985

Source: Carol Shields
612/373-1083

Writer: Hank Drews
612/373-1250

FREE STATE FAIR SHOW DISPLAYS MINNESOTA TEENS AT THEIR BEST

"We think it's the best free entertainment at the Minnesota State Fair," says Carol Shields, proud of the performance of 90 teenagers who had just participated in a dress rehearsal of the show they will put on in the 4-H Building during the fair.

The 4-H'ers who participate in the show come from all over Minnesota. They do it all: on-stage actors, musicians, singers, dancers, off-stage costume designers, clowns, puppeteers, journalists and lighting and stage hands. The show gives them the chance to develop talents while making new friends. They had just six days together in mid-August, a week called 4-H Arts-In, to rehearse the show.

"They really become involved," says Shields, a 4-H Youth Development specialist with the University of Minnesota's Agricultural Extension Service. "Their opening number, 'Celebrate Youth,' is full of energy and color. Their message is clear: you don't have to be young to feel young."

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The show will run the first nine days of the fair, with as many as four performances daily. It will be presented on the center stage of the 4-H Building, the tall, white, square building along Snelling Avenue on the east side of the fairgrounds. A show schedule will be posted in the 4-H Building and in the daily fair information sheets.

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CEO,FB1,P2,4Y,TCO

N4-H0836

Aug. 22, 1985

Source: Fred Bergsrud
612/373-1305
Editor: Mary Kay O'Hearn
612/373-1786

NIEBER JOINS U OF M AGRICULTURAL ENGINEERING FACULTY

John L. Nieber has joined the faculty of the University of Minnesota's Department of Agricultural Engineering.

Nieber moved to Minnesota from Texas A & M University, where he was involved in hydrology and water resources-related research, and also taught undergraduate and graduate courses in the soil and water area.

Nieber's appointment at the University of Minnesota, split between the department and the Agricultural Experiment Station, is as associate professor. He will conduct research pertaining to drainage, ground water pollution and water shed hydrology. He will also work with an interdisciplinary group on campus at the Center for Natural Resource Policy and Management.

Nieber received his B.S. degree in forest engineering from Syracuse University, his M.S. in civil and environmental engineering and his Ph.D. in agricultural engineering, both from Cornell University.

Page 1 of 2

He is a member of the American Society of Agricultural Engineers,
American Geophysical Union, Soil Conservation Society of America and
the American Society of Agronomy.

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CEO,1A,P2,CON

NAGRO825

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 22, 1985

Source: James Kitts
612/373-1016

Editor: Mary Kay O'Hearn
612/373-1786

BLAZE ORANGE SAID SAVING LIVES

Wearing blaze orange--a fluorescent color similar to that worn by road construction crews--is credited with reducing the number of hunting accidents, particularly in the mistaken-for-game category.

James Kitts, wildlife specialist with the University of Minnesota's Agricultural Extension Service, says, "Minnesota is among the states and Canadian provinces that have instituted mandatory blaze orange clothing regulations. In Minnesota it applies to hunting big game: deer, black bear and moose. It is paying off, according to the National Safety Council, for the 1.06 fatal hunting accidents for every 100,000 hunting licenses compared to the 2.2-per-100,000 fatality rate for boating and swimming." Kitts also assists Wayne Carlson, a 4-H Youth Development specialist, with the 4-H Shooting Sports Wildlife Project.

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

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According to the National Shooting Sports Foundation, some 10 percent of all hunters have color vision deficiencies. Red clothing, for example, is no longer recommended because red may not be seen by hunters who cannot distinguish color properly, and because it blends in with natural colors in poor light. Blaze orange is the only satisfactory color for hunters to wear under all weather and light conditions. Faded blaze orange garments need to be replaced, Kitts says.

"Accidents in which the victim was mistaken for game rank very high on the list of accidents in most states," Kitts says. Yet, this type of accident has decreased dramatically, thanks to state laws requiring the wearing of blaze orange.

Blaze orange is also a help in keeping track, visually, of hunter companions, especially when moving through dense brush or woods.

According to the statistics, there has been no decline in hunter success with game in states that require blaze orange.

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CEO,1A,P2,40S

N4-H0832

Aug. 22, 1985

Source: James Kitts
612/373-1016
Editor: Mary Kay O'Hearn
612/373-1786

SIGN UP FOR FIREARMS SAFETY CLASSES THIS FALL

Thirty-six states, Minnesota among them, require young, first-time hunters to pass a firearms safety class before being allowed to hunt with a permit and later with a license.

In September and October, many county extension offices in Minnesota will begin sign-up for 4-H Youth Development leadership and recreational shooting in the Shooting Sports Wildlife Project, according to James Kitts, wildlife specialist with the University of Minnesota's Agricultural Extension Service, who assists 4-H specialist Wayne Carlson in the statewide program. In some counties, this instruction leads to certification by the Department of Natural Resources (DNR).

"Young people between ages 12 and 16 must pass the DNR test before they hunt," Kitts says. Instruction includes proper handling of firearms (and archery equipment), beginning marksmanship, hunter ethics, wildlife identification and conservation and elementary first aid.

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

In some states first-time hunters, regardless of age, must pass an approved firearms safety class before they are issued a hunting permit or license.

Kitts says the Consumer Product Safety Commission, which ranks recreational activities by the number of injuries, ranked activities involving guns 17th in a list of 26. Most hazardous was bicycling. Football, baseball, basketball, fishing, tennis, hockey, soccer and volleyball were activities in which the incidence of injuries exceeded that of recreational shooting. Rifle and pistol marksmanship, trap, skeet, hunting and plinking (informal target shooting) are classified as recreational shooting.

Firearms accidental deaths occurred 0.3 times per 100,000 population. Swimming, boating, air transport and falls in public places all had higher death rates, according to the Consumer Product Safety Commission.

For up-to-date hunting information, Kitts suggests calling the DNR's enforcement office in St. Paul at (612) 296-4771. For information on the start of firearms safety classes nearest you, contact your local county extension office, the DNR or a local sportsman club for specific details.

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CEO,P2,40S,4Y

N4-H0831

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Aug. 29, 1985

Source: John True
612/373-0764
Editor: Mary Kay O'Hearn
612/373-1786

THINK HEALTH + SAFETY = \$UCCESS

"Main Street's businesses" are losers every time an accident strikes a member of the community--whether a farm or town resident.

And that's part of the chain reaction National Farm Safety Week, Sept. 15-21, hopes to prevent in reminding the nation of its 1985 theme, Health + Safety = \$uccess. President Ronald Reagan has officially proclaimed the 42nd annual farm safety event cosponsored by the National Safety Council and the U.S. Department of Agriculture.

"Hardly anyone thinks of the community as a loser in accidents, but nothing happens in a vacuum," says John True, agricultural engineer with the University of Minnesota's Agricultural Extension Service. Understandably, accidents drain individual and family energy, time and dollars. While a hospital may benefit from some patient days, think of the community losers, True says. The family suffering the accident has entirely new directions for its dollars. Shelved is the TV that

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was going to be replaced, the visit to the implement dealer for a trade-in, even the occasional family treat at the local restaurant. And when the local business feels the loss so do the persons depending on the business for their employment.

True quotes William D. Hanford, manager of the safety council's agricultural department, who says preliminary estimates of 1984 totals attributed 1,700 deaths and 180,000 disabling injuries to agricultural work accidents. The total cost of fires and accidents to farming families approaches \$5 billion annually. This does not count the thousands more farm residents who are seriously or fatally injured in home, highway and recreation accidents.

This year's theme, Health + Safety = \$uccess recognizes that success in farming requires physical and mental competence unhindered by an accident or illness.

#

CEO,AA,1A,FB2,P2

NAGRO845

Aug. 29, 1985

Source: Gerald Heil
612/296-1486
Rollin Dennistoun
612/296-2810
Writer: Sam Brungardt
612/376-8182

FARMERS' COOPERATION SOUGHT WITH MINNESOTA AG DEPARTMENT SURVEY

The Minnesota Department of Agriculture is conducting, with cooperation and financial assistance from the University of Minnesota Agricultural Extension Service and the State Board of Vocational-Technical Education, a survey of farm financial conditions.

On Sept. 6, the department will mail some 25,000 Minnesota farmers Farm Financial Survey questionnaires, which will ask about their current financial situation and about actions they may be taking to alleviate their credit situation.

The survey will be the most exhaustive farm financial survey ever conducted by the state; one of every four Minnesota farmers will be asked to participate. Only those who operate more than 80 acres are being included in the sample in order to focus on those whose principal occupation is farming.

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

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Farmers who receive the survey are urged to understand the importance of the information requested and to cooperate by filling out and returning the questionnaire by Sept. 23. Strong cooperation will help make the final report accurately reflect the situation in the state. The survey will measure debt-to-asset ratios, whether farmers are current on their financial obligations to lending institutions and other economic indicators.

Individual survey reports will be confidential. Individual reports will be combined with those of other producers and questionnaires will be destroyed.

The final report will be submitted to a legislative task force created by the 1985 legislature to study the farm financial situation. The department will have the survey results available later this year.

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1A,FB2,P2

NAGR0882

Aug. 29, 1985

Source: Richard J. Sauer
612/373-0734
Writer: Sam Brungardt
612/376-8182

U OF M AGRICULTURAL EXPERIMENT STATION TO OBSERVE CENTENNIAL

It's been 100 years since the Minnesota legislature appropriated funds for an agricultural experiment station at the University of Minnesota "for the purpose of promoting agriculture in its various branches by scientific investigation and experiment."

The Minnesota Agricultural Experiment Station will observe its centennial Sept. 20, with Nobel laureate Norman E. Borlaug the guest of honor at the event. Earlier in the day, Borlaug will speak on the topic, "Why the Difference? Food Abundance versus Scarcity" at the Earle Brown Center on the university's St. Paul campus. After that, the new building that houses the university's Departments of Soil Science, Agronomy and Plant Genetics, and Plant Pathology, will be named in his honor.

Says University of Minnesota Vice President Richard J. Sauer, "Those early Minnesota legislators were far sighted without question; they established our experiment station two years before Congress allocated funds to set up agricultural experiment stations at Land Grant universities in each of the states."

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

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Sauer says the Agricultural Experiment Station's name is rather misleading: "The mission of the station grew over the years as new needs became apparent. It's true that many of our scientists conduct research on the production, processing, marketing, distribution and quality of food and other agricultural products. However, others conduct research that seeks to improve Minnesota's forests and forest products, public policy, human nutrition, family and community life, recreation and tourism, and overall environmental quality."

Today, the Minnesota Agricultural Experiment Station supports and coordinates the research of more than 300 scientists from the university's Colleges of Agriculture, Forestry, Home Economics, Veterinary Medicine and Biological Science. State appropriations account for almost 62 percent of the station's research resources; federal funds, about 13 percent; income from the sale of the by-products of the station's animal and crop research, 7 percent; and gifts and grants, 18 percent.

Says Sauer, "Through the years, Minnesotans have helped themselves by investing in Agricultural Experiment Station research. We're very proud of the ways in which our scientists' research has benefited Minnesota's economy and quality of life and we're preparing to play a vital role in meeting the challenges of the future."

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CEO,AA,EXP,1A,FB2,P2,TCO

NEXP0856

Aug. 29, 1985

Source: Phillip K. Harein
612/373-1705

Writer: Mary Kay O'Hearn
612/373-1786

DEC. 31 IS DEADLINE FOR DISPOSING OF CANCELED GRAIN FUMIGANTS

On Dec. 31, 1985, the Environmental Protection Agency (EPA) will remove from use the following fumigants which are currently registered for use in Minnesota on stored grain: Dowfume 75 Fumigant, Vertifume Fumigant, F.I.A. "80-20" Grain Fumigant with SO₂, Douglas Topkote "77", Douglas Grainkote, Weevil-Cide, Activated 80-20 Grain Fumigant, Max Kill High Life and Formula 82-H (FC-14) Grain Fumigant.

These 10 fumigants should be applied to kill insects in stored grain before the grain cools below 50 degrees F this fall. "Using these fumigants according to the label is our best disposal method," says Phillip K. Harein, entomologist with the University of Minnesota's Agricultural Extension Service.

Farmers who might have supplies of eight other fumigants containing ethylene dibromide (EDB) that the EPA canceled for use earlier should return them to their suppliers for refunds.

"There's an indemnity clause and the farmer should ask to be paid for returning it," Harein says. EPA, in turn, will reimburse the dealer who makes the refund.

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

The canceled fumigants containing EDB are Douglas Tetrafume, Douglas Tetrakil, Weevil Killer Fumigant, Gordon's 914 Weevil Killer and Grain Conditioner, Formula 635 (FC-2) Grain Fumigant, Formula 815 (FC-3) Grain Fumigant, Grain Storage (FC-4) Fumigant and Chlorofume (FC-30) Grain Fumigant.

Herein points out that the following fumigants can be used on stored grain in Minnesota beyond Dec. 31, 1985: Methyl Bromide Fumigant, Methyl Fume, Meth-O-Gas, Terr-O-Gas 98, Dawson 100 Fumigant, Brom-O-Gas, Bro-Mean-C-2R, SMCP Chloropicrin, Soweco Brand Chloropicrin 100, Detia Gas Ex-B, Detia Tablets and Pellets, Fumitoxin New Coated Tablets, Fumitoxin Coated Pellets, Degesch Phostoxin New Coated Tablets, Degesch Phostoxin Coated Pellets-Prepac, Degesch Phostoxin Coated Pellets, Degesch Fumi-Cel Plates, Degesch Fumi-Strip, Phos-Kill Pellets, Gastoxin Fumigation Tablets, Gastoxin Fumigation Pellets and Degesch Calcium Cyanide G-Fumigant.

Herein says it is safer, less expensive and usually more effective to have stored grain fumigated by a licensed and certified professional fumigator than to do it yourself. A professional fumigator will have fumigating knowledge and experience, the special equipment required and will be aware of safety devices (such as gas masks and concentration monitoring equipment). EPA's proposed Label Improvement Program for fumigants may eliminate fumigation by nonprofessionals in 1986.

#

Aug. 29, 1985

Source: Jim Kitts
612/373-1016
Writer: Deedee Nagy
612/373-1781

INCREASED BAT ACTIVITY IN FALL WORRIES HOMEOWNERS

Cool, fall weather brings increased activity to Minnesota's bats as they seek hibernation spots. This produces a rash of calls to University of Minnesota specialists and local exterminators as worried homeowners try to find out how to get rid of bat colonies in attics and crawl spaces.

Jim Kitts, wildlife specialist with the University of Minnesota's Agricultural Extension Service, says homeowners looking for a quick solution to their bat problems should follow a two-step program to first locate their entry points into the house and then systematically seal them so the bats cannot return to their roosts.

He counsels homeowners to be skeptical of anyone who promises results from a treatment of moth crystals in the attic. This is often ineffective and may only cause the bats to move to another part of the house. In addition, homeowners may have to live with the odor of moth crystals in their homes for many weeks.

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

Bats don't deserve their bad reputations as health hazards, Kitts says. He thinks homeowners are wise to try to rid their attics of the animals, but says this is primarily because the droppings can cause structural deterioration and an odor problem.

Bats can carry rabies, but they are the fifth most common carrier of the disease after skunks, cows, dogs and cats. There have only been eight bat-related deaths in the past 30 years in the United States and Canada, Kitts says.

"People find bats very distasteful," he says, "but really there's nothing they do that should make humans want to kill them. They are excellent controllers of insects. For example, little brown bats eat half their weight in insects each evening."

Kitts says bats can enter homes through openings as small as 3/8 inch by 1 inch or through circular openings the size of a dime. These openings are common where siding has warped, cedar shingles have pulled loose, flashing around chimneys or roof edges has loosened, or attic ventilation openings have developed holes in screens or metal mesh.

To get rid of bats, first determine where they roost. Then, search for all possible entry points, Kitts suggests. Repair these holes, beginning with the smallest first. The bats will change their entry patterns as holes are plugged, but leave the largest, most obvious entries until last. When there are only one or two openings left, watch the bats leave the house right after sundown. Within a half hour, Kitts says, they should all be out of the house. Then, plug the largest holes.

Kitts suggests using the commercial deodorizer Neutroleum Alpha in the former roosting area. This should rid the house of bat odors, which also lessens the chance that bats will return to the house to roost in the future.

This method eliminates the need for chemical extermination. If homeowners continue to check their homes for openings that could allow bats to enter, they should be able to prevent future bat infestations as well, Kitts adds.

#

CEO,1A,P2,4HE,TCO

NHEC0859

Aug. 29, 1985

Source: Ronald Pitzer
612/376-3852

Writer: Deedee Nagy
612/373-1781

PARENTS' DUTIES CONTINUE ONCE SCHOOL BEGINS

Whew--the kids are back in school. That sense of let down and relief after a busy summer is natural, suggests Ronald Pitzer, family life specialist with the University of Minnesota's Agricultural Extension Service.

However, he cautions against signing over all responsibility for the kind of education your children receive. "No matter how active we have been in a child's informal education at home, we lean heavily on the schools where his or her more formal learning will take place," Pitzer says.

"Thoughtful parents want to know what's happening at the school, what the aims of the teachers are and how they, as parents, can help their children get all they can out of their school years."

Parents should make school visits, Pitzer suggests. The visits help teachers get a feeling for what the child's family and home life is. Children sense that when parents take the time

Page 1 of 2

to visit school or attend parent-teacher meetings that school is important. This can help keep their attitudes fresh and eager.

By keeping in touch with school, parents may also find that they can supplement what goes on there. For example, Pitzer says, a parent who sits in on a social studies class may be reminded of a map or pictures at home that the child might want to bring to class. Or discussion of a certain area could prompt family members to say, "Why don't we drive there some Sunday and learn more about it?"

Pitzer adds, "Parents need to be on the alert to foster children's interests and abilities, any one of which may have an influence on vocational choices."

#

CEO,P2,4HE,TCO

NHEC0861

Sept. 5, 1985

Source: Deborah Brown
612/376-7574
Editor: Sam Brungardt
612/376-8182

FALL GARDENING TIPS

If squirrels are a problem when you plant tulips, lay a strip of chicken wire over the soil above the newly planted bulbs, advises Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service. The squirrels won't be able to dig up the bulbs, and the tulips' leaves and stems will grow through the wire quite nicely next spring.

#

Prune out any distorted witches' broom growth on your honeysuckle shrubs this fall. Then, remove the debris and rake up the leaves to help reduce the number of overwintering honeysuckle witches' broom aphids. You'll still need to spray for the aphids next May, but there shouldn't be as large an infestation, says Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service.

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

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Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service, urges homeowners to wrap the trunks of young, thin-barked trees to protect them from sunscald. Light-colored wrapping helps to reflect winter sunlight so that heat doesn't build up on the south or southwest side of the tree. Keep the wrapping on until spring.

#

Fall is the time to dig garden herbs and repot them for winter use, says Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service. Prune them back so they're trim and compact, then put the potted herbs in a sunny window. The plants won't need to be watered as often indoors. In fact, they should be allowed to dry several days between waterings.

#

Water young trees and shrubs every 7 to 10 days this fall unless the soil is moist from rains, advises Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service. Continue to water them until the ground freezes. Don't forget to help the young boulevard trees as well as those in your yard. Brown says many of them are scrawny and simply don't make it due to neglect.

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1A,P2,4H,4HE,TCO

NAGRO855

Sept. 5, 1985

Source: Shirley T. Munson
612/373-1561
Writer: Deedee Nagy
612/373-1781

OBSERVING ORCHARD ETIQUETTE IS ESSENTIAL FOR PICK-IT-YOURSELFERS

Most Minnesota orchardists sell their fruit to wholesalers or at roadside stands, but a few offer families the opportunity for pick-it-yourself adventures.

If you're lucky enough to have such an orchard in your area, Shirley T. Munson, horticultural crop food scientist with the University of Minnesota's Agricultural Experiment Station, suggests following a few points of orchard etiquette to increase your enjoyment and to protect the privilege for others:

--Contact the grower before starting out. Sometimes the supply may be limited, picking may be by appointment only or the weather may preclude picking.

--If you're planning a real family outing, don't assume you can picnic in the orchard. Always get permission to eat on the property and tidy up before leaving.

--When picking, lift and turn the apple slightly to remove it. Careless and hasty pulling of the fruit will remove leaves and fruit buds needed for next year's crop.

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--Don't climb trees. The boughs are heavily weighted already and they will break under extra weight. Fruit buds and foliage can be snapped off and you risk personal injury.

--Most orchards are mowed and kept clean for your safety and picking enjoyment. There may be poison ivy or other weeds present that cause allergic reactions. If you are sensitive to some of these, inquire if there are areas where you can pick and yet avoid them.

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CEO,EXP,P2,4H,4HE,TCO

NAGRO887

Sept. 5, 1985

Source: Shirley T. Munson
612/373-1561

Writer: Deedee Nagy
612/373-1781

ROADSIDE APPLE STANDS MEAN GOOD EATING AHEAD

Take a drive in the country some time soon. If you are in an apple-growing region of Minnesota, chances are roadside apple stands will be too good to pass by. Some Minnesota orchard owners also sell their apples to supermarkets, making good fall eating even more convenient.

Shirley T. Munson, horticultural crop food scientist with the University of Minnesota's Agricultural Experiment Station, says one key to enjoying apples is to select a variety that meets your needs. Some are better suited to eating out of hand and others lend themselves to sauces and pies.

Munson adds, however, that guides to apple tartness and texture can be too simple. In many cases, it isn't the variety but the maturity that affects taste and texture. Look for firmness and good color when buying apples, she suggests.

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Apples ripen much faster at room temperature than when refrigerated. To preserve freshness longer, store them in a cool place or refrigerator. Apples keep best at between 30 and 32 degrees F. During cooking, overly ripe apples will become mushy.

While apples, like other fruits, tend to hold their shape better when cooked in a light syrup, too much sugar spoils the natural flavor. Apple juice or cider will enhance natural flavor when added as part of the liquid in some recipes.

When buying apples, remember that there are about two large, three medium or four to five small apples in a pound. Six to eight medium-size apples will fill a 9-inch pie. A bushel is about 40 pounds of apples or about 120 apples 2-3/4 inches in diameter.

Small and medium-size apples are usually cheaper and a better size for dumplings, lunches or snacks. Large apples are most appealing for baking.

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CEO,EXP,P2,4HE,TCO

NHEC0889

Sept. 5, 1985

Source: Shirley T. Munson
612/373-1561
Writer: Deedee Nagy
612/373-1781

APPLE JUICE, CIDER SPELL 'FALL' BY ANY NAME

A bountiful apple harvest means apple cider and juice to many consumers who want to capture some of autumn's essence for enjoyment later.

Shirley T. Munson, food scientist who does research on horticultural food crop quality for the University of Minnesota's Agricultural Experiment Station, says many people are confused about the difference between apple juice and cider. Apple juice is natural and unfermented. Usually, it is pasteurized or treated with preservatives to keep it from fermenting. "Sweet cider" can be another name for apple juice.

However, sweet cider sometimes refers to unpasteurized apple juice, such as the kind sometimes available at apple orchards. Fermented apple juice is called hard cider.

Munson says the best apple juice or cider is made from a blend of a variety of apples. Many people particularly favor juice from moderately sweet apples such as Honeygold or McIntosh.

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

To make juice, use only sound, firm-ripe apples that have been washed well. A bushel of apples will yield about three gallons of juice. If you have an apple press, crush or grind the apples first. If you will use a blender or juicer instead, core the apples and remove the seeds.

After extracting the juice, strain it through several layers of cheesecloth or muslin to remove coarse material. Another method of clarifying juice is to allow it to stand for 10 to 15 hours, while some of the suspended material settles. After that has happened, drain off the juice without disturbing the sediment.

Juice should be cooled promptly to about 32 degrees F. Unfiltered juice will keep in the refrigerator for about two weeks. To save juice longer, freeze it. Stored at 0 degrees F or lower, apple juice will keep about one year.

Pasteurized apple juice will keep several months without fermenting. To pasteurize, heat the juice to 170 degrees F and hold it at that temperature for 10 minutes. Pour the juice into clean containers, seal, cool and refrigerate.

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CEO,EXP,TCO,4HE

NHEC0890

Sept. 5, 1985

Source: Carol Shields
612/373-1083

Writer: Kristine Johnson
612/642-2388

YOUNG ARTISTS' WORKS CRITIQUED IN NEW STATE FAIR COMPETITION

New to the 1985 Minnesota State Fair was the 4-H Juried Art Show. The show is unique in the Minnesota 4-H program because state-level creative arts projects were not judged like a competition with the traditional ranking of ribbons; instead, each project was judged on its merit.

The paintings, sculptures and pottery entered in the show were evaluated on design elements and art principles just like a regular fine art show. In fact, after their projects were evaluated, the 4-H'ers toured the fair's Fine Arts Show to compare qualities.

"4-H'ers in the creative arts project are exposed to art concepts, various art mediums and materials while they're at the state fair," said Carol Shields, 4-H youth development specialist with the University of Minnesota Agricultural Extension Service.

Page 1 of 2

The projects were critiqued by a panel of three judges: Hank Drews, chosen for his commercial and fine arts experience; Marlene Stoehr, chosen for her design background as well as being an educator; and Bill Svendsgaard, chosen for his art teaching, project leadership and batik artistry.

"The project is critiqued on how the medium and subject were handled--what the artist set out to do and whether that was accomplished," Drews said.

Ten pieces of the total 160 received "Award of Excellence" ribbons. Those were made by Heather Kusilek of Goodhue County; LeAnn Butkiewiez and JoAnne Hansen, St. Louis County; Anja Kohler, Washington County; Bradley Phillips, Blue Earth County; Sara Kryzer, Winona County; Patricia Sullivan, Anoka County; Lisa Johnson, Roseau County; Pauliann Crandall, Mahnomon County and Beaulin Liddell of Isanti County. Every participant received a merit ribbon.

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CEO,TCO,P2,4Y

N4-H0894

Sept. 5, 1985

Source: Basil Furgala
612/373-1716

Writer: Mary Kay O'Hearn
612/373-1786

MINNESOTA'S HONEY INDUSTRY SHOULD BE SAFE FROM KILLER BEES

If all the agencies involved with keeping African killer bees from getting any hold on the U.S. honey industry, play their roles correctly--and Basil Furgala believes they will--that feared threat won't happen.

Furgala, an entomologist who does research on honeybees for the University of Minnesota's Agricultural Experiment Station, serves with the 10-member, national Technical Committee for African Honey Bees and Parasitic Bee Mites. On his St. Paul campus desk is an action plan for African honeybees, dated September 1983. That plan, now being implemented in California, is the basis for his confidence. He has kept informed of the national bee and parasitic bee mite situation via phone and written reports.

"Dr. Orley Taylor at the University of Kansas began monitoring movement of Africanized bees in South America," Furgala says. "He predicted they would reach U.S. borders between 1989 and 1993 and his predictions have been pretty

accurate. They have traveled 200 to 300 miles a year."

These "killer" bees were first reported in Brazil as early as 1956. In 1971, the U.S. Department of Agriculture (USDA) became concerned and sent a team there to study the problem.

How might the bees, now being tracked in Kern County, California, arrive in Minnesota? "Migratory beekeeping could bring an isolated problem here," Furgala says. Should Africanized bees become established in a warm state (Florida or Texas, for example) and a beekeeper move colonies in hives north to Minnesota in May, it could happen.

When Furgala speaks of everyone in the regulatory agencies playing their roles, he means state agriculture departments, which require permits to move bees across state lines, as well as federal animal and plant health inspectors at ports (New Orleans and Duluth, for example) who inspect incoming cargoes. Furgala recalls a ship that put in at an eastern port a few years back. The cook on board was feeding a swarm of bees hoping to reap some honey, but inspectors cut that beekeeping short.

Minnesota is a honey-producing state, probably among the top five in the nation, although government statistics aren't collected as they once were, Furgala says. A few years ago, California led in honey production with North Dakota, South Dakota, Florida and Minnesota following. "The sunflower crop in the Dakotas caused their honey production to bypass ours," Furgala remarks.

"The discovery of a wild Africanized honeybee swarm in California represents an isolated introduction, not the long predicted invasion of 'killer bees'," he says. But California and USDA officials are concerned because the wild colony or remains of it showed up in an area where Africanized bees could become established, either multiplying by swarming or by "Africanizing" commercial honeybees by hybridizing with them. That's why all Africanized honeybee colonies in the Kern County area are being sought and destroyed. Says Furgala, "Resmethrin is being used to kill the colonies. When a wild colony is found, a 20-square-mile area around the colony is searched for every wild and commercial colony it contains."

Africanized colonies are unpredictable and very defensive. For instance, vegetable seed producers can't rely on them for pollination. "Bee colonies from other western states are sent to California at crucial times to help with pollination--especially for the almond crop," Furgala says. "Apple growers and producers of vegetable seeds also depend on honeybees. With onion seed producers, as many as 180 colonies of bees (a colony can have 45,000 bees) could be brought in for a specific number of days to pollinate a 20-acre plot. It's a very precise, scientific, timed operation."

African bees can exist year around, protected in a hole in the ground, but they couldn't live through winter in Minnesota. European bees (the type raised in the United States) will sit in the hive and starve when things get rough but the African bees will take off to find new honey-gathering areas, according to Furgala. Africanized bees are more dangerous to humans and animals because of these instincts. Furgala says, "If we can keep our honeybee queens free of Africanization, the impact in Minnesota will be insignificant."

Furgala has no information on how extensive damage to bee colonies might be from the tracheal mite (which infests honeybees' breathing tubes) and the varroa mite (which lives on the African killer bees and damages honeybees' flying and nectar gathering abilities). The national committee to which he belongs gathers information on these pests.

At the university's Agricultural Experiment Station at Rosemount, Furgala conducts basic research with three queen bee stocks: Starline (a hybrid developed 30 years ago), Buckfast (from Texas) and Koana (developed in Hawaii). He is looking at defensive behavior, productivity and brood production as part of the research he carries out on managing honeybees for crop pollination and honey production.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Sept. 5, 1985

Source: Jeffrey D. Hahn
612/376-3377
Editor: Sam Brungardt
612/376-8182

THERE'S LITTLE NEED TO SPRAY YELLOWJACKETS, HORNETS IN THE FALL

The early spring Minnesotans enjoyed last March and April resulted in an above-average season for yellowjackets and hornets, according to Jeffrey Hahn, entomology educator with the University of Minnesota's Agricultural Extension Service.

He says, "Fortunately, as we enter into fall, their days are numbered. In the latter part of summer, it was common for yellowjackets and hornets to be driven inside houses, especially when homeowners attempted to control colonies outdoors.

"As we get closer to our first hard freeze, it becomes less important to try to control yellowjacket and hornet nests. Most of the colony will die after the first hard frost, making insecticide applications unnecessary. Subsequent freezes will certainly finish off any remaining workers. Only the newly mated queens will survive the weather. They will escape the colony to find a sheltered place to stay for the winter."

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1A,P2,4H,4HE,TCO

NAGR0851

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Sept. 5, 1985

Source: Roger Machmeier
612/373-0764

Editor: Mary Kay O'Hearn
612/373-1786

DON'T BLAME SEPTIC TANKS FOR LAKE WATER QUALITY PROBLEMS

Eliminating septic systems on lakeshore lots won't solve lake water quality problems, according to a University of Minnesota Agricultural Extension Service agricultural engineer.

"These are just the facts," says Roger Machmeier, quoting environmental impact statements for the Environmental Protection Agency on a number of lakes in Minnesota and other states.

"Studies show that septic systems do not contribute a significant amount of nutrients to lakes. Even when some septic systems are failing, other nutrient sources are more significant factors in lake water quality."

Installing a collector sewage system around a lake won't have the effect most homeowners believe, and it is considerably more expensive to construct and maintain than septic systems, he says.

"Rather than improving lake water quality, the sanitary sewer installation may have an opposite effect," Machmeier says. One or more of the following could happen:

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--Substandard lots not suitable for septic systems may be developed with sanitary sewer.

--Seasonal residences will convert to year-round residences because of higher taxes to support the sewer system.

--Additional land near the lake may be developed, creating more impervious surfaces which promote runoff into the lake.

"Human activities which foster closely clipped lawns, removal of aquatic vegetation, increased surface runoff, heightened nutrient and sediment flows are the chief contributors to lake water pollution," Machmeier says. "Blaming the septic systems for lake water quality problems is a look in the wrong direction. Research shows that well-designed and installed septic systems effectively remove all disease-causing bacteria and nutrient phosphorous from home sewage."

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CEO,CON,TCO,1A,P2

NAGR0886

Sept. 5, 1985

Source: Shirley Munson
612/373-1561
Writer: Deedee Nagy
612/373-1781

LOCAL VARIETIES SIGNAL START OF APPLE SEASON

Oriole, Duchess, Beacon, Wealthy--their names are like music to Minnesota apple lovers. These are among the earliest varieties to appear at orchard fruit stands, followed shortly by fall varieties such as McIntosh, Jonathan, Haralson and Fireside.

Shirley T. Munson, a scientist who conducts research on the quality of horticultural food crops for the University of Minnesota's Agricultural Experiment Station, says that the local apples available now, unlike later varieties, don't store or ship well because their skins are tender and bruise easily. They also become overripe quickly. However, many apple fanciers consider them among the best for pies, sauce and jelly, Munson says.

"Early apples are fully mature," she says. "They are not the 'green' apples associated with summer complaint and upset stomach. They have a higher acid content and are a bit more tart than apples that mature later and this, plus their 'first of the season' appeal, makes them popular."

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Munson suggests cooking apples with their skins on for applesauce and jelly. Most of the pectin is located in the skin and the fruit color turns the final product an appealing pink.

Apples and applesauce can be canned successfully. They must be processed in a boiling water bath. Freezing is another popular way of preserving the orchard's bounty, but Munson adds that frozen apples will have a softer texture than fresh or canned pie apples. And, unless they have been treated with ascorbic acid or sodium bisulfite, frozen apples will darken quickly after thawing. They will also produce more juice than fresh apples do when cooked, so pies may require more flour or cornstarch for thickening.

Munson recommends buying apples that are the degree of tartness your family prefers. If you must use up some that are blander than you like, a teaspoon or two of lemon juice added to the mixture can give it needed tartness. Honey, molasses or light brown sugar also may be used in place of white granulated sugar for most apple recipes.

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CEO,EXP,P2,4HE,TCO

NHEC0888

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Sept. 5, 1985

Source: Jim Lewis
612/373-1083
Writer: Hank Drews
612/373-1250

STATE FAIR IS DONE, BUT 4-H HORSE SHOW WILL DRAW NEW CROWD

Minnesota's largest youth horse show, the 15th Annual State 4-H Horse Show, will be Sept. 16 through 18 at the state fairgrounds in St. Paul. Admission to the show will be free.

More than 400 youth and their horses, finalists from county fair 4-H horse shows across the state, will participate in the show. The 400 horsemen and horsewomen represent more than 5,000 young Minnesotans enrolled in the 4-H horse program.

A new feature will be competition in the advancement program, which encourages 4-H'ers who have perfected their horsemanship skills to start a colt and train it for a specific type of riding.

One highlight of the show will be the Tuesday night program, which starts at 6 p.m. in the Coliseum. After a grand entry parade, championship classes will be run and awards presented. The top 4-H horse project member in Minnesota, Sarah Sheehan of Milaca, will receive the coveted Dan Patch Award. Sheehan, who

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exemplifies 4-H leadership, horsemanship and community service, will represent Minnesota's 4-H horse program at the National 4-H Congress in Chicago this November.

A regular feature will be the State 4-H Horse Judging Contest, which brings more than 60 teams to vie for trips to national judging contests. In 1984, the top five teams competed in Arizona, Colorado, Ohio, Oklahoma and Pennsylvania. The judging contests help 4-H'ers develop decision-making skills, public speaking abilities and their knowledge of quality horses.

Come see immaculate horses, decorated barns and accomplished young showmen and showwomen at the Minnesota State Fair Coliseum, Sept. 16 through 18. The State 4-H Horse Show is conducted by the 4-H program of the University of Minnesota's Agricultural Extension Service.

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CEO,TCO,1A,FB2,P2,4Y

N4-H0893

Sept. 5, 1985

Source: Jim Bowyer
612/373-1210
Writer: Monica L. Brodersen
612/376-8182

STRUCTURAL PARTICLEBOARD IS USED OFTEN IN PLACE OF PLYWOOD

Softwood plywood isn't the only choice for do-it-yourself home improvements and construction anymore. New structural panels made from wood strands and wafers are a good alternative, says Jim Bowyer, University of Minnesota forest products scientist.

The new products, known as structural particleboard, waferboard and oriented strand board (OSB), are as good or better than materials like plywood that were used in the past for floors, decking and wall and roof sheathing, according to Bowyer.

He says, "Structural particleboard is more uniform in strength than plywood and has a good nail-holding capacity."

In some cases, structural particleboard need not be as thick as plywood because of its strength. For example, 7/16-inch aspen OSB can be substituted for 1/2-inch Douglas fir or southern pine plywood for roof decking.

However, Bowyer noted that use of structural particleboard does have limitations. Because all particleboards, including the

new structural panels, swell irreversibly when exposed to moisture, they should not be used under long-term or repeated exposure to water such as rain or ground water.

It is also important that structural particleboard panels be installed with space between them to allow for limited swelling.

Users should follow manufacturers' specifications regarding various uses and installation.

According to Bowyer, structural particleboard should not be confused with conventional particleboards. Because they are made from wood shavings or sawdust, conventional particleboards are typically smoother but not as stable under damp conditions or as strong as structural particleboard.

"Traditionally used for floor underlayment and cabinet tops, conventional particleboards are manufactured with urea resins and some may emit formaldehyde," Bowyer says, adding that structural particleboard does not because it is bonded with phenolic resins.

The University of Minnesota Department of Forest Products is one of two university research labs in the United States which have worked to improve production processes and the properties of the new structural panels since the early 1970s, when they were invented by a private researcher. At the University of Minnesota, R. O. Gertjejansen and other forest products scientists conduct research to improve structural particleboard technology for the Minnesota Agricultural Experiment Station.

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Sept. 5, 1985

Source: Mark Ascerno
612/373-1059
Writer: John Colmey
612/373-8182

DON'T BRING INSECTS ON HOUSEPLANTS INDOORS

If you put your houseplants outside for the summer and are bringing them in soon, take care that is all you bring in; aphids, spidermites and whiteflies are likely tag-alongs, says Mark Ascerno, entomologist with the University of Minnesota Agricultural Extension Service.

According to Ascerno, many of the insects found on houseplants are brought inside when plants are moved indoors for the winter.

Here are a few simple precautions that will keep the pests outside:

--While the plants are still outdoors, move them into direct sunlight and closely examine (use a magnifying glass, if available) the lower leaves and leaf undersides, watching for movements, spots or webs. If the plants have been on the ground,

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look on the soil surface for tracings and beneath the pot for signs of insect colonies. Worms, millipedes and sowbugs can enter a pot through the drain hole and could eventually damage the root system.

Since even the suspecting observer can miss small insect populations, Ascerno suggests moving plants to an isolated location inside, where they can be watched for a few weeks. If insects appear during that time, isolation will ensure other plants are not infested.

In addition to checking houseplants that have summered outdoors, inspect plants that have been inside near open windows; as the weather cools, insects and spidermites can move inside through screens. Remember that insects can move on people too; if you have been outside in the garden, clean up before handling houseplants.

For more information on insects and how to treat them, ask your county extension office for a copy of publication number AG-FS-1031, "House Plant Insect Control." The publication is also available for 20 cents from the Distribution Center, 3 Coffey Hall, University of Minnesota, 1420 Eckles Ave., St. Paul, MN 55108. The Distribution Center has a minimum order of \$1. Checks should be made payable to the University of Minnesota.

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CEO,1A,P2,4H,TCO

NAGRO883

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Sept. 5, 1985

Source: Deborah Brown
612/376-7574
Editor: Sam Brungardt
612/376-8182

FERTILIZE THIS FALL FOR THICK, HEALTHY GRASS NEXT SPRING

Fall is the most beneficial time for lawn fertilization, says Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service.

She says, "Ideally, one should fertilize twice, first in early September, then again in late October or early November, when the grass no longer needs to be mowed. The late application really encourages growth in the underground portions of the grass which are not yet dormant. This results in grass that is thicker and healthier the following spring."

Brown says for many people a special kind of fertilizer should be used for fall feeding. However, the University of Minnesota's turf specialist says it's fine to use fertilizers that have the same ratio of nutrients whether it's fall or spring. Brown says the general recommendation is for a fertilizer with approximately

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four parts nitrogen to one part phosphorous and two parts potassium (4-1-2 or 20-5-10). One might find fertilizers with a similar analysis--say, 24-6-12--that will do the job also. "The numbers needn't be exact," Brown says, "but try to approximate that 4:1:2 ratio."

She adds, "You can find out exactly what your lawn needs by having a soil test made. Check with your county extension office or, if you're in the Twin Cities metro area, you can call the Soil Testing Lab at the University of Minnesota's Department of Soil Science for information."

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1A,4H,P2,TCO

NAGR0852

Sept. 6, 1985

Source: Paul Hasbargen
612/373-1145
Writer: Jack Sperbeck
612/373-0715

NEW FARM BILL WON'T SAVE MANY FARMS

The 1985 farm bill is not likely to improve the short-run price and income situation for farmers. That's the economic and political reality facing agriculture, according to agricultural economists.

Agriculture as an industry will continue to be the major economic sector of this region, says Paul Hasbargen of the University of Minnesota's Agricultural Extension Service. Land values, rental rates and machinery investment per acre are adjusting to where the farm business can be economically viable again.

However, economic recovery for agriculture will involve difficult resource adjustments--both in farming and rural communities. Hasbargen and Norbert Dorow and Mark Edelman, agricultural economists with the Cooperative Extension Services of North Dakota State University and South Dakota State University, respectively, have written a more detailed analysis of currently debated agricultural policy options. It will be in the Ag Outlook section of the Sept. 21 issue of "The Farmer/The Dakota Farmer" magazine.

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CEO,1A,FB2,P2

Page 1 of 1

NAGR0902

Sept. 6, 1985

Source: Paul Hasbargen
612/373-1145
Writer: Jack Sperbeck
612/373-0715

FARMERS NEED LONG-RANGE FARM PLANS

Farm operators need long-term farm plans in addition to cash flow projections.

Annual cash flow plans are now in vogue--perhaps at the expense of longer term farm plans, says Paul Hasbargen, economist with the University of Minnesota's Agricultural Extension Service. "Creative cash flows can come up with positive numbers in the short run by not replacing capital assets or by reducing inventories," he says. "But to remain viable in the long run, the farm business needs to be profitable."

University of Minnesota extension economist Richard Hawkins says county agents and vocational agriculture teachers in Minnesota now have computer programs that can help farm families do longer term planning as well as cash flow projections.

Hasbargen and Hawkins have written a more detailed article on farm planning. It's found in the Ag Outlook section of the Sept. 21 issue of "The Farmer/The Dakota Farmer" magazine.

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CEO,1A,FB2,P2

Page 1 of 1

NAGR0896

Sept. 6, 1985

Source: Paul Hasbargen
612/373-1145
Writer: Jack Sperbeck
612/373-0715

MINNESOTA FARM INCOME IS AT 30-YEAR LOW

Average earnings of full-time Minnesota farmers dropped to a new, 30-year low in 1984. Every area of the state except the Red River Valley in northwestern Minnesota showed sharply reduced farm earnings, according to Paul Hasbargen and Michael Boehlje, economists with the University of Minnesota's Agricultural Extension Service.

Farmers in northwestern Minnesota had their highest earnings since 1980 due to record high grain yields and excellent returns from sugarbeets, Hasbargen says.

Statewide, full-time farmers had average earnings of \$6,183 in 1984, compared to \$15,627 in 1983. In 1980, earnings of full-time farmers averaged more than \$32,000.

There was a much smaller drop in income for all Minnesota farmers. "These figures include small units with sales from \$1,000 to \$40,000, who borrow little money," Hasbargen says. "They didn't get caught in the interest rate jump in 1981 and are heavily dependent on nonfarm earnings." All Minnesota farmers had estimated earnings of \$8,500 in 1984, \$13,479 in 1983 and \$14,145 in 1980.

For 1985, high crop yields and government deficiency payments will

bring receipts higher than had been predicted. But the livestock sector--especially beef producers--will show another drop in earnings that will mean a drop in area feedlot numbers. Overall farm earnings will remain depressed in 1985, Hasbargen says.

The 1985 farm bill and other proposed legislation such as special credit packages will have a big influence on farm income over the next four years. "Farm earnings could double or triple if a mandatory supply control program is enacted and voted on by producers," Hasbargen says. "But area farm income could drift even lower under a market-oriented agriculture bill."

Without a farm bill that sets higher commodity prices next fall, 1986 farm income will probably show only a slight increase over this year's.

"Minnesota is losing a higher percentage of farms than the national average since the financial crisis is more severe in the Corn Belt than in other areas," Hasbargen says. At mid-year, it was estimated that there were 5,000 fewer Minnesota farm operators, the largest drop in the nation.

About one-third of Minnesota's farmers have significant cash flow problems. In many cases, lenders will not receive their full principal and interest payments scheduled this year. "Renegotiating financial arrangements and longer repayment schedules will help a number of financially stressed farmers. But some will find that property sales or conveyance to the lender may be necessary," says Michael Boehlje, new head of the University of Minnesota's Department of Agricultural and Applied Economics.

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news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Sept. 12, 1985

Source: Michael Pullen
612/373-1126
Writer: Sam Brungardt
612/376-8182

IF YOU HANDLE GAME, TAKE PRECAUTIONS TO AVOID TULAREMIA

Although it's called "rabbit fever", tularemia is a disease that people can contract from other animals as well.

Michael Pullen, veterinarian and meat hygienist with the University of Minnesota's Agricultural Extension Service, says several other animals that are hunted or trapped in Minnesota, including beaver, muskrats and water rats, can contract tularemia as well.

Humans infected with tularemia may develop lesions and swollen lymph nodes or typhoid symptoms, including gastroenteritis, fever and toxemia as well as ulcers in the mouth, throat and intestines. About 30 percent of all infected persons develop bronchopneumonia. When properly treated the disease is rarely fatal. Only about one case of human tularemia is identified in Minnesota each year.

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The livers of rabbits, hares and rodents infected with tularemia may have white spots, but this is not the only cause of such lesions.

What precautions can a hunter, trapper or anyone who handles game animals susceptible to tularemia take to avoid the disease?

Humans can become infected from handling, skinning and cleaning infected wildlife; from eating incompletely cooked infected meat and drinking contaminated water and by being bitten by certain insects.

Pullen says, "A person who handles an infected animal is most likely to contract tularemia if he or she has open wounds--cuts, broken spots or other abrasions--on the skin." He suggests taking the following precautions:

--Do not kill or handle a wild rabbit or hare that's too sick to run or that's caught by a dog.

--Wear rubber gloves while dressing or skinning rabbits, hares and aquatic fur animals.

--Thoroughly cook the meat of game animals susceptible to tularemia. The causative agent is destroyed within 10 minutes at 140 degrees F.

--Do not drink untreated water.

--Avoid fly, mosquito and tick bites by using repellents and wearing protective clothing.

#

Sept. 12, 1985

Source: Zata Vickers
612/373-1098

Writer: John Colmey
612/376-8182

U OF M STUDY SHOWS BEER DRINKERS PREFER REAL BEER

Beer drinkers prefer real beer to near beer according to a taste test recently completed at the University of Minnesota.

Zeta Vickers, food scientist with the university's Agricultural Experiment Station, conducted the test with 100 university students in response to recent reports in the news media and by industry that people who enjoy drinking beer but do not wish to consume alcohol have a readily available alternative in dealcoholized beer.

Vickers found that most of the students who took part in the taste test preferred regular beer to dealcoholized beer. The students were given samples of 10 beers--5 regular and 5 dealcoholized--to taste and asked how well they liked each sample and whether they could identify which were dealcoholized. About half of the students could tell whether a sample contained alcohol, and those who could tell preferred the real beer.

There was little difference between the answers given by men and women students, even though evaluations of the students showed that the men tended to drink beer more frequently.

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Vickers says near or "select" beers are typically made by a normal brewing process, after which the alcohol is removed by vacuum distillation. The process, which requires heat and additional postfermentation handling, reduces both calories and alcohol content. Unfortunately, says Vickers, taste also seems to suffer in the process.

#

EXP,TCO,P2,4HE

NEXP0913

Sept. 12, 1985

Source: Deborah Brown
612/376-7574

Writer: Deedee Nagy
612/373-1781

WHAT TO DO ABOUT YOUR APPLES AS IT GETS COLD? PROBABLY NOTHING

Apple tree owners shouldn't worry about chilly nights that promise light frost. Temperatures in the low 30s will not harm apples still on trees, but homeowners who handle apples after a frosty night risk bruising them, says Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service.

Brown urges apple tree owners to leave their fruit alone until it is ripe enough to pick or until a hard frost--temperatures in the mid-20s--is forecast. Temperatures that low will harm fruit.

"Light frost doesn't hurt apples," she says. "Just allow the fruit to warm up again as it hangs on the tree. If you handle the fruit when it has frost crystals, you'll cause bruises."

Some homeowners mistakenly believe that some varieties of apples need frost to ripen, she says. This is not the case. She says the confusion may arise because Haralson, Regent, Fireside

and a few other late-maturing apples ripen at about the time that Minnesota begins to get frosty nights. The frost does not contribute to the ripening, however.

To tell if your apples are ripe and ready for picking, Brown offers these check points:

--Ripe apples pull off the tree easily. Don't wait until fruit begins to drop to harvest your apples.

--The background color on ripe apples should be light or yellowish, not green.

--Seeds must be brown.

--The taste should be characteristic of ripe fruit, not starchy or sour.

#

CEO,1A,P2,4H,TCO

NAGRO860

Sept. 12, 1985

Source: Jeffrey Hahn
612/376-3377
Editor: Sam Brungardt
612/376-8182

DETERGENT SPRAY REDUCES BOXELDER BUG NUISANCE

As the weather begins to cool in late summer, boxelder bugs look for a sheltered place to spend the winter. These black and orange insects, which are found on seed-producing, female boxelder trees during the summer, often cluster around the foundations of homes in late summer. Some may get inside and, although they cause no damage, they are a nuisance.

It's not necessary to spray insecticides to kill the boxelder bugs that may get inside, according to Jeffrey Hahn, entomology educator with the University of Minnesota's Agricultural Extension Service. He says a mixture of 1/2 cup of powdered detergent in 1 gallon of water can be sprayed directly on the boxelder bugs that accumulate along the foundation.

Some types of siding may be discolored by the soap and water spray, so Hahn recommends testing it by spraying on a small, inconspicuous spot before spraying the entire area.

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He says, "Apply the spray as often as needed. Those boxelder bugs that do manage to get inside will not live long and cannot reproduce inside. If you cannot wait for them to die, simply use a vacuum cleaner to get rid of them."

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1A,P2,4H,4HE,TCO

NAGRO849

Sept. 12, 1985

Source: Jeffrey D. Hahn
612/376-3377
Editor: Sam Brungardt
612/376-8182

SOWBUGS, MILLIPEDES SEEK SHELTER INSIDE IN THE FALL

Boxelder bugs are not the only insects that try to get inside in the fall. Sowbugs and millipedes also try to get into homes to seek shelter for the winter. They can be driven indoors also if rains render their normal environment--moist areas outdoors, under leaf litter and other plant debris--too wet.

Sowbugs and millipedes normally enter homes through cracks in the foundation and frequently live in basements, says Jeffrey Hahn, entomology educator with the University of Minnesota's Agricultural Extension Service. Sowbugs do not eat clothes or food and are harmless to people. Like boxelder bugs, they are pests only because they are a nuisance.

Hahn says, "Most sowbugs and millipedes die shortly after entering buildings because it's too dry. If you consistently see numbers of them that are alive, it means that the area where you find them is too damp and that there's an easy access for them to get inside."

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Reducing inside humidity often results in the death of most sowbugs and millipedes, according to Hahn. He also advises caulking cracks in the foundation so they will be less likely to be able to migrate inside.

He adds, "A good preventative measure is to rake up leaves that are close to the house. This reduces the number of hiding places close to the house and gives less opportunity for them to get inside. Also, a temporary insecticidal barrier of 25 percent diazinon (8 ounces of diazinon to 3 gallons of water) can be sprayed in a 5-foot band along the foundation."

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1A,P2,4H,4HE,TCO

NAGRO850

Sept. 12, 1985

Source: Roger E. Machmeier
612/373-0764
Editor: Sam Brungardt
612/376-8182

GOOD SURFACE DRAINAGE PREVENTS WET BASEMENT PROBLEMS

There are many causes of wet or damp basements, but often this problem can be corrected by maintaining good surface drainage around the foundation of a home.

Roger Machmeier, agricultural engineer with the University of Minnesota's Agricultural Extension Service, advises homeowners to check the lot after a heavy rain or in the spring, when the snow melts, for water standing near the house or anywhere else on the lawn. If there's a pond on the lot, all other surface water should drain toward it.

He says, "Eave troughs reduce the amount of water that falls near a house. But downspouts must be located where surface drainage carries the water away from the house. The lot must be graded to have no low spots or depressions so all surface water flows away from the house and off the lot."

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Even with good surface drainage, if soils around a home are naturally saturated sometime during the year, drain tile must be placed along the outside of the footing to prevent wet basement problems. The tile may use a gravity outlet or have a sump pump to deliver the water to where it will flow away from the house.

Any water which can easily infiltrate the soil or which stands in pools close to the house will move down through the soil along the foundation wall and seep into the basement.

Machmeier says, "Rock or bark mulches for shrubbery next to the house collect water, allowing it to soak down along basement walls. Any water which can easily infiltrate the soil or which stands in pools close to the house will move down through the soil along the foundation wall and seep into the basement. Unless there are foundation drains and waterproofing compound on the outside of the basement walls, it's much better to have grass right up to the foundation.

"Carefully tamp and compact all backfill next to the foundation wall," he advises. "The top 12 inches of soil around the concrete wall of a house should be heavy silt or clay. This type of soil restricts the movement of water through it and surface water will tend to run off before it soaks in. The soil should be firmly compacted and covered by grass, and there should be at least 6 inches of drop from the surface at the foundation wall to 1 foot beyond the dripline of the eaves."

Concludes Machmeier: "A water-tight basement isn't difficult to achieve and is relatively inexpensive if measures are taken when a house is built. No home should have wet basement problems if proper construction practices are followed."

Homeowners wanting further information may order a bulletin, "Correcting Basement Moisture Problems," from the Distribution Center, 3 Coffey Hall, University of Minnesota, St. Paul, MN 55108. Cost of the bulletin, item number HE-BU-1369, is \$1. Checks should be made payable to the University of Minnesota.

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CEO,TCO,P2,4HE

NHEC0908

Sept. 19, 1985

Source: Deborah Brown
612/376-7574

Editor: Sam Brungardt
612/376-8182

CHRISTMAS CACTI NEED SPECIAL CONDITIONS TO BLOOM

Christmas cacti are beautiful when you buy them in bloom, but sometimes it's difficult to get them to produce a repeat performance of showy flowers.

Deborah Brown, horticulturist with the University of Minnesota's Agricultural Extension Service, says two distinct variables control the blooming of a Christmas cactus: night temperatures and length of darkness each night. She says that short days and cool temperatures trigger flower bud formation.

"Christmas cacti should be kept in a bright, sunny location during the day," she says. "If night temperatures are cool enough--55 to 60 degrees F--you needn't worry about daylength. They'll bloom automatically in five or six weeks.

"If the temperature at night is between 60 and 65 degrees, you'll have to make sure the plant is in total darkness for 12

hours each night to have blooms in about six weeks. You can accomplish this by moving the plant to a dark place or by covering it with black plastic or a light-excluding box each night, then putting it back in the sun during the day."

Brown says that if the night temperature is 70 degrees or warmer, it's unlikely that even long nights will force a Christmas cactus to bloom; it's simply too warm. Sometimes a plant will develop buds only on the side close by a window because that's the only part of the plant that gets cool enough at night.

"If you keep your Christmas cactus in a cool room to initiate flower buds but want to keep it in a warmer room when it blooms, make the change as soon as you see little buds forming at the ends of the branches," Brown advises. "If you wait until the buds are about to open, they may drop off because of the increased temperatures."

#

1A,P2,4H,4HE,TCO

NAGR0853

news

Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

Sept. 19, 1985

Source: Jim Krile
612/376-3854
Writer: Jennifer Obst
612/373-1579

(Note to Editors: This story reports the results of a study that may have been conducted in your locale. A list of the sites where meetings were held is attached to this release. If your community was one of the sites, this story may be localized by adding your town's name in the lead paragraph.

RESULTS OF STUDY SHOW RURAL INFORMATION NEEDS STILL UNMET

The results of an analysis of rural telecommunications needs conducted at 26 locations across Minnesota, including here in _____, show that the potential of telecommunications is still largely untapped.

Says Jim Krile, a member of the University of Minnesota's Rural Sociology Unit involved in the project, "While the rural position has improved in the last 30 years, the access to timely, accurate information is still not as good as it is in urban areas."

The study revealed, says Krile, that the hope that telecommunications could solve some of the traditional problems in rural areas of time, distance and the resulting costs, has not yet been realized. Telecommunication may instead be falling into

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the same pattern as other kinds of rural development. "The traditional problem of getting electricity and telephone, for example, out to rural areas was that the per unit cost was high because of low population density," Krile says.

"The implications that this has for economic development in rural communities are significant," says Randall Young, former executive director of the state Telecommunications Council, who is now with the State Planning Agency. "So much of the economic development that can be beneficial to nonmetropolitan Minnesota relies on telecommunications. That's why it is crucial that Minnesota takes a very serious look at the telecommunications systems in the state to make sure that they can handle our future needs at affordable costs."

The Telecommunications Council commissioned the University of Minnesota's Agricultural Extension Service to conduct the assessment. Meetings were held in at least two sites in every regional development area. Questionnaires and small group discussions were used to allow rural community leaders to identify their needs in their own words.

The study investigated the needs of 14 categories of telecommunications providers and consumers in rural Minnesota, including the telephone and broadcast industries and the print media. It examined information delivery methods and needs from libraries, retail and agribusiness, local government, financial

institutions, schools, the medical and legal professions, farming and neighborhood groups.

Krile says the results showed clearly that information flows from the city to the rural areas, but less of it goes in the other direction. Seventy-five percent of the respondents in the study said they are likely to go beyond the local community when seeking information they need. But only a little over 30 percent gave information to others outside their community.

The study revealed that one overwhelming concern was the cost of telecommunications, "which in rural areas are seen as high and may be seen as prohibitive." Other issues identified as most important were the availability of timely, accurate information and the need for more knowledge about telecommunication technologies and how to best use them.

Changes in availability of computers, mail service and local and long distance phone service were most frequently perceived at both the state and regional level as having an impact on the rural communities.

The study showed some regional variation depending on local information sources, such as proximity to a college or computer resources, but, "patterns such as concerns about availability and costs, we found across the state," Krile says.

One conclusion is that the rural experience with telecommunications is different than the urban one, and that has consequences for planning. "If we are going to look at telecommunications as a development tool, the challenges and opportunities are different in rural areas than they are in urban areas. So, we have to look at strategies that are different from urban strategies for using it in rural areas," Krile says.

These efforts, which the Telecommunications Council began before its termination in August, are being continued by the State Planning Agency. "We plan to examine the issues which the council felt were important to Minnesota's future," says Tom Triplett, director of the agency. "There needs to be a coordinated effort on the part of the state to pull together all of the elements of this issue. The study which the Agricultural Extension Service has just completed will certainly aid us in setting state policy on telecommunications."

#

CEO,1A,P2,SN

NEXT0932

Locations of Rural Telecommunication Needs Assessment Meetings

Alexandria
Austin
Bemidji
Blue Earth
Braham
Brainerd
Caledonia
Duluth
Grand Rapids
Hallock
Hibbing
Hinkley
Ivanhoe
Litchfield
Mankato
Montevideo
Moorhead
Olivia
Ortonville
Park Rapids
Rochester
St. Cloud (suburban)
St. Cloud (urban)
Slayton
Staples
Thief River Falls

telecom

Sept. 19, 1985

Source: David French
612/373-0853
Writer: John Colmey
612/376-8182

CHESTNUT BLIGHT IS DISCOVERED IN MINNESOTA

The first report of chestnut blight in Minnesota has been confirmed by David French, plant pathologist with the University of Minnesota's Agricultural Experiment Station.

Endothia parasitica, the fungus that causes chestnut blight, has been found in Olmstead County, in the southeastern part of the state. The stand of American chestnuts in which it was discovered was established in 1880. The fungus has infected all the trees (which range from 7 to 22 inches in diameter) in the stand, and eight have died. Other American chestnuts within 10 miles of this stand appear to be disease free.

The American chestnut was a superbly beautiful and useful component of the eastern U.S. hardwood forest until blight from the Orient reached the United States about 1904. The blight moved quickly and by 1950 the American chestnut was all but erased from its entire natural range. Trees that exist today in Minnesota and Wisconsin, outside the American chestnut's natural range, were established by settlers who arrived in the late 1800s.

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In 1984, Charles Burnham, a plant breeder and geneticist now retired from the University of Minnesota, and others interested in saving the American chestnut from extinction established the American Chestnut Foundation. Purpose of the foundation is to breed a blight-resistant chestnut by continuing experiments initiated by the USDA when the blight first appeared.

USDA geneticists made thousands of crosses between the American chestnut and blight-resistant Chinese and Japanese chestnuts, hoping to find offspring that had the timber characteristics of the American tree and the blight resistance of the Asian trees. No such trees were produced, and USDA abandoned the project in 1960.

Plant pathologist French says the USDA might have been successful had it had the information available today. He says research now being carried out by the foundation at the University of Minnesota and throughout the country is making progress toward attaining a blight-resistant American Chestnut.

French says the discovery of chestnut blight in Minnesota offers an opportunity to study the disease in more detail. He does not believe that the blight is a serious threat to Minnesota's remaining American chestnut trees due to their sparseness and isolated locations.

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EXP,TCO,P2,4F,4H

NAGR0926

Sept. 19, 1985

Source: Deborah Brown
612/376-7574

Editor: Sam Brungardt
612/376-8182

CHRISTMAS CACTI NEED SPECIAL CONDITIONS TO BLOOM

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hours each night to have blooms in about six weeks. You can accomplish this by moving the plant to a dark place or by covering it with black plastic or a light-excluding box each night, then putting it back in the sun during the day."

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1A,P2,4H,4HE,TCO

NAGRO853

Sept. 25, 1985

Source: Richard J. Sauer
612/373-0734
Writer: Jennifer Obst
612/373-1579

U OF M EXPERIMENT STATION HEAD SEES CHALLENGES FOR AG RESEARCH

Despite current difficulties, agriculture's future is bright, believes Richard J. Sauer, University of Minnesota Vice President for Agriculture, Forestry and Home Economics and director of the Minnesota Agricultural Experiment Station.

Speaking at a celebration Sept. 20 commemorating the centennial of the Agricultural Experiment Station, Sauer pointed out that bucking the odds has been part of the station's 100-year history.

"Research accomplishments have helped make Minnesota agriculture the fifth largest in the nation, against some overwhelming climatic and geographic odds," Sauer told an audience of over 400 at the Radisson University Hotel in Minneapolis.

"Today, research in agriculture is experiencing some criticism and scrutiny brought about by its very success. Some people view technology as responsible for the decline in rural communities and the quality of rural life. They insist it has generated unemployment and forced people off the farm and has been directed towards helping agribusiness and large farmers rather than family farms.

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"The problems are not strictly those of production and they will not be solved by scientists alone," Sauer said. "Scientists can do little directly about the problems of uneven resource distribution, population growth, political instability, federal deficits, the relative strength of the dollar and international trade imbalances."

Sauer said he accepts one criticism of past agricultural research, born of the optimism of scientists, that all the results from research would be positive. "We assumed that if we introduced a new technology, there would be no negatives--for example, no negatives from using a synthetic chemical or fertilizer," he said.

Sauer believes that research in the experiment station's second century will be more complicated and costly than it was during the station's first 100 years. "In one sense, we've solved the easy research problems," he said. "Now we need to talk about both research to maintain current production systems and the research needed to develop new breakthroughs."

Although Sauer sees a potential for biotechnology research in agriculture, he said biotechnology should not be used "to add new increments of pedigree improvement to the high-tech, high-yield system...exacerbating its vulnerability and its side effects." Rather, "it should help us reduce production costs for farmers, broaden the genetic and economic base of agriculture and reduce negative environmental and public health side effects."

The experiment station director also sees more research emphasis in the future on biochemistry, microbiology and on the total ecological system, "renewing our soils, conserving our water supplies, minimizing pesticide use, maximizing biological nitrogen fixation and recycling by-products."

Sauer gave five main reasons why Minnesotans need to continue to finance basic agricultural research:

--to supply consumers with safe, high-quality food, fiber and forest products from reliable, domestic sources at a reasonable cost,

--to bring production costs into line with returns to the farmer,

--to compete effectively in the world market, so the United States can remain a net exporter of food and fiber rather than a net importer,

--to maintain the productive potential of our natural resources, and

--to contribute to the relief of suffering and the development of sustainable agriculture in nations now unable to feed their people.

Looking towards the next 100 years, Sauer believes that "Minnesota and Midwest agriculture in 2085...will be stronger, healthier, more compatible with society and the environment and vitally important to our heirs and successors."

#

Sept. 26, 1985

Source: David French
612/373-0853
Writer: John Colmey
612/376-8182

PRUNING FOR DUTCH ELM DISEASE SAVES DOLLARS AND TREES

Minnesota's urban foresters should reconsider therapeutic pruning for Dutch elm disease as a way to save money and trees, say scientists with the University of Minnesota's Agricultural Experiment Station.

When elms across the Midwest first began dying from Dutch elm disease in the late 1960s, urban foresters wrote off pruning as a costly and ineffective method of containing the disease. However, findings from research completed recently by University of Minnesota plant pathologist David French and Frank Baker, extension forester with Utah State University, suggest that if pruning had been employed, thousands of dollars and trees could have been saved.

Urban foresters have contended that therapeutic pruning--cutting back branches that show signs of Dutch elm disease--does not save trees, but only prolongs their removal. Therefore, they say it's cheaper to remove trees immediately upon detection of the disease and avoid the high administrative costs

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of pruning. They also consider therapeutic pruning to be poor sanitation because of delays involved in the lengthy bidding processes they must go through to secure private contractors to do the pruning.

French and Baker now believe the opposite to be true: pruning is cheaper, faster and more efficient if done promptly upon detection. In their study, conducted in Falcon Heights and Inver Grove Heights, Minn., between 1981 and 1983, 32 trees of a combined American elm population of 3,400 trees were pruned. Of those 32, 25 are still alive. Pruning costs averaged \$33.60 per tree, removal costs for the 7 trees that died were \$781 per tree and the total cost of the project was \$1,856. If the usual procedure had been employed--removing all 32 trees immediately upon detection--total costs would have been \$5,351, or an additional \$3,495.

So, why spend money to prune trees that may die and have to be removed anyway?

The answer lies in what economists call the power of compound interest. In the case of the study, if the difference between total pruning costs, \$1,856, and total possible removal costs, \$5,351, had been reinvested at 10 percent interest, it would take less than three years to recover the pruning costs. Thus, if trees did not become infected during the next three years, the community would be making money in addition to having more trees to enjoy.

Urban foresters keep administrative costs to a minimum by securing the services of a contractor, based on hourly rates for pruning and tree removal, through one bidding process each year. This precludes the cost of multiple bidding processes and reduces the response time for pruning and removal, which means better sanitation. French says the response time for pruning in his study was as little as 24 hours versus a normal response time of three to five days.

Incidental to reducing costs, trees are saved and this, French believes, is the primary goal in therapeutic pruning.

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EXP,TCO,P2,4F,4H

NAGRO925

Sept. 26, 1985

Source: Warren Gore
612/373-1323
Writer: Mary Kay O'Hearn
612/373-1786

EVERYONE LISTENS, BUT HOW WELL?

Much of life is spent listening, whether it's with an ear to the telephone, as a student in class, at a party, in front of the TV or as a job applicant.

"Seven of every 10 minutes of our waking hours are spent listening and 75 percent of what we hear is either inaccurate, distorted (in the replay) or forgotten within 48 hours," says Warren Gore, communication specialist with the University of Minnesota's Agricultural Extension Service and professor of rhetoric.

"Perhaps because listening is something we've done since we were infants, it's overlooked and we need to relearn it as adults," Gore says, adding that babies react to sounds that startle them, give them pleasure or keep them anticipating what comes next.

"I think of listening as the multipurpose vitamin of the four central learning abilities: reading, writing, speaking and listening," says Gore, who will teach an adult continuing

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education class in effective listening this fall and next spring at the university.

Gore calls listening "the most used skill, but the least taught" when one considers the emphasis put on reading, writing and speaking. He says, "Just because we have always been able to listen, we may think learning how, can be ignored. None of us listens as well as we might."

It was Ohio State University researcher Paul Rankin who studied all sorts of people before the 1930s and found that in an average day, 9 percent of their time was spent writing, 16 percent reading, 30 percent speaking and 45 percent listening. Many Minnesotans will also remember University of Minnesota professor emeritus of rhetoric Ralph Nichols, who was among those who did early research on listening.

Careful listeners, Gore says, learn to avoid distractions, detect the central theme of what they are hearing, maintain emotional control (despite eloquent delivery of politicians or preachers, for instance) and evaluate the message (distinguish between full and empty messages).

Gore says more effective listening reinforces reading, writing and speaking. All four skills--the interpersonal skills, he calls them--provide the means to bridge differences and make the connections the world needs to continue, glued together. He puts it simply: "Failing to make these connections is failing to communicate."

#

Sept. 26, 1985

Source: Jill Pokorny
612/373-0937
Editor: Sam Brungardt
612/376-8182

TAKE ACTION THIS FALL FOR HEALTHIER VEGETABLES NEXT YEAR

Take heart if you experienced losses from plant diseases this summer which not only dwarfed yields but also your enthusiasm for vegetable gardening.

You can reduce those losses, says Jill Pokorny, plant pathology educator with the University of Minnesota's Agricultural Extension Service. She says, "Time spent this fall thoroughly cleaning up infected plant debris and weeds, selecting resistant varieties and planning a rotation schedule will result in fewer disease problems next season. That will mean higher yields, lower chemical costs and, most importantly, a more satisfying gardening experience."

Pokorny urges gardeners to thoroughly clean up their gardens in the fall. Remove all garden plants and weeds that were diseased. Infected plants harbor disease organisms, allowing them to overwinter and cause new infections the following spring.

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Among the diseases that can be carried over on infected plant debris are the fungal leafspots of tomatoes (Septoria and anthracnose), bacterial leafspot and anthracnose of cucurbits and bacterial leafspot of beans.

Don't put infected plant debris in the compost pile. Many compost piles are poorly constructed or maintained and allow disease organisms to survive for extended periods. It's best to bag, discard or bury all infected plant debris, including weeds.

Pokorny says growing disease-resistant vegetable varieties is the best way to control diseases. Unfortunately, she adds, resistant varieties aren't available for all the diseases.

"As you browse the seed catalogs this fall, look for varieties with disease resistance," she advises. In the case of tomatoes, disease resistance is indicated in capital letters after the name of the variety: "V" for Verticillium wilt resistance, "F" for Fusarium wilt resistance, "N" for nematode resistance and "T" for tobacco mosaic virus resistance. Select varieties with at least "V" and "F" after their names.

Pokorny says urban gardeners can learn a valuable lesson from farmers by practicing crop rotation. This is especially helpful in controlling certain soil-borne diseases. By planting crops that a specific disease cannot infect, a gardener can "starve out" the disease organism by eliminating its food source. Since

many disease organisms survive in the soil for one to three years, a general rule of thumb is to use a three- to four-year rotation schedule. This means that related crops (which are susceptible to the same diseases) should not be planted in the same location more than once every three to four years.

Crops from the same plant family are said to be related. Tomatoes, potatoes, eggplants and peppers all belong to the family Solanaceae and should not be planted in succession. Other plant families include the crucifers (broccoli, brussels sprouts, cabbage, cauliflower, kale, kohlrabi, rutabaga and turnip) and the curcurbits (cucumbers, melons, pumpkins and squash).

Pokorny concludes, "Take time this fall to sketch a quick diagram of your planting scheme. Annual sketches provide an ongoing record of where each crop is located from year to year and enable you to rotate crops accordingly."

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Agricultural Extension Service
Communication Resources
University of Minnesota
St. Paul, Minnesota 55108

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Source: Wanda Olson
612/373-0913
Harold Alexander
612/373-0931
Delores Ginthner
612/373-1035
Writer: Deedee Nagy
612/373-1781

CARE, HOUSING OF HOME COMPUTER ARE IMPORTANT CONSIDERATIONS

Bringing a computer into your house can be a little like bringing home a new baby or acquiring a pet. It will require space and other special considerations to enable it to fit well into the home and family.

Three University of Minnesota experts caution that if the space set aside for a computer isn't right, both the computer and those who use it may suffer. They are Wanda Olson and Harold Alexander, household equipment and interior design specialists with the university's Agricultural Extension Service, and Delores Ginthner, assistant professor of design, housing and apparel.

Olson says that computers, printers and display screens or television sets wired into a system must operate on a 110- to 120-volt, 15-amp circuit. The computer should never be on the same circuit as motorized equipment such as a refrigerator or air conditioner. Plugging a computer system into a voltage surge suppressor will prevent pulses of power that can damage the computer or the stored information.

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Airborne dust or grease and high or low temperatures can cause problems for a computer. Low humidity and some kinds of carpeting contribute to a build-up of static electricity. Humidifiers and antistatic mats help remove static build-up.

Alexander says the best place for a computer is where it can accommodate all potential users without disturbing or limiting the activities of other family members. "Family rooms and kitchens are common locations, but a computer and its disks must be protected from dust and grease," he says. "Remember, too, that computers are fairly quiet, but printers are not."

If several family members will use the computer, you may need to buy adjustable furniture to bring the keyboard and screen to a comfortable level for everyone. A good keyboard height for many adults is 27 inches, which is lower than most desks.

To prevent eye strain, a computer work area needs good lighting. This may mean a desk lamp. If the room light or a window reflects off the screen, move or tilt it to prevent this.

Olson, Alexander and Ginthner are the authors of a folder that explains some of the special considerations involved in bringing a computer into the home. One may purchase a copy of the folder, item HE-F0-2646, from the Distribution Center, 3 Coffey Hall, 1420 Eckles Ave., University of Minnesota, St. Paul, MN 55108. The price is 50 cents, but the Distribution Center has a \$1 minimum order.

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