

MICHIGAN FARM BUREAU

RURAL

Living

Spring 1992:

- Lyme Disease
- Food Irradiation
- North American Trade
- Produce Availability Guide





President's Column

Like many others in the agricultural community, I was shocked and stunned by the violence done Feb. 28 to the mink research facilities at Michigan State University (MSU). The arson and vandalism at Anthony Hall and the mink research farm did an estimated \$125,000 worth of damage.

But more importantly, this pointless act of terrorism to a public building threatened the lives of innocent people. Although the fire in Anthony Hall was quickly extinguished, it's easy to imagine the disastrous impact this arson could have had on the crowded university campus.

Also of significance is the fact that these terrorists destroyed over 30 years of research by Dr. Richard Aulerich. This respected scientist was studying nutrition and the decline of the natural mink population in the wild. As pointed out by Dr. Fred Poston, dean of the College of Agriculture and Natural Resources, the vandalism was aimed toward a long-standing research program geared toward helping the mink, not destroying them.

The mink research also assisted in projecting the impact to human beings in various water-quality studies because of the mink's natural sensitivity levels to naturally occurring toxins and micro-toxins. Many of the water quality standards in the U.S. are the result of this research. In addition, Dr. Aulerich was working with a strain of genetically deaf mink as part of a joint research project with the University of Michigan to study deafness in humans.

A shadowy animal rights group called the "Animal Liberation Front" took credit for the attack, alleging animal abuse at the MSU facility. But University officials said Dr. Aulerich's research was done strictly according to government guidelines and that the animals were humanely treated.

As a farmer, I strongly support animal welfare — the belief that animals should be well cared for and treated humanely. The bogus philosophy of animal rights, on the other hand, argues that animals are subject to all the rights enjoyed by humans. Animal rights activists claim that an animal life is equal to a human life.

In order to stop man's alleged tyranny over animals, animal rights groups have resorted to increasingly violent and illegal tactics, like the arson at MSU.

To stop these extremists, Farm Bureau is supporting H.R. 2407. This bill, which has 253 congressional co-sponsors, makes it a federal crime to disrupt, destroy property or steal animals from a biomedical facility, agricultural research facility or farm.

Your help is needed. Contact your congressional representative and urge him to join the list of Michigan congressmen (William Broomfield, Dave Camp, Bob Davis, Paul Henry, Carl Pursell, Guy Vander Jagt and Howard Wolpe) who are H.R. 2407 co-sponsors. Only the concerted action of reasonable people who understand the importance of animal research can prevent future terrorist acts like the one at MSU.

Jack Laurie

Jack Laurie, President
Michigan Farm Bureau

YPCS Student Search is On...

Outstanding high school students attending the Michigan Farm Bureau Young People's Citizenship Seminar, June 15-19, at Olivet College will be participating in one of the finest programs offered for young people in Michigan. YPCS "graduates" return to their communities with the knowledge, commitment and enthusiasm for participating in the democratic process.

Eligible students are:

- High school juniors and seniors in the 1992-93 school year.
- Interested in government, social and economic issues, and/or politics.
- Potential leaders or those who participate well in large group settings.
- Articulate and willing to speak to groups after the seminar.
- From either a farm or non-farm background.

During the conference, over 200 young men and women will participate in mock voter registration, political party conventions, campaigns, and voting. Dynamic speakers, recognized as experts in the fields of economics, world cultures, and governments, and personal growth will background the students on their role as citizens of the United States and the world.

The selection process varies from county to county, according to program manager, Julie Chamberlain. "Some students may be asked to prepare a written essay or take part in a personal interview," she said.

County Farm Bureaus' pay registration fees with the support of local businesses, leaving only transportation costs to be covered by the students themselves.

For application and program information, contact your county Farm Bureau office. But hurry! Registration deadline is May 1, 1992.



**MICHIGAN'S
FARM BEST**

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Photo: Michigan Travel Bureau

Rural Living



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Spring 1992

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Of Special Interest

Special Center Insert

HEALTH HARVEST

Introducing a health and wellness publication from Michigan Farm Bureau

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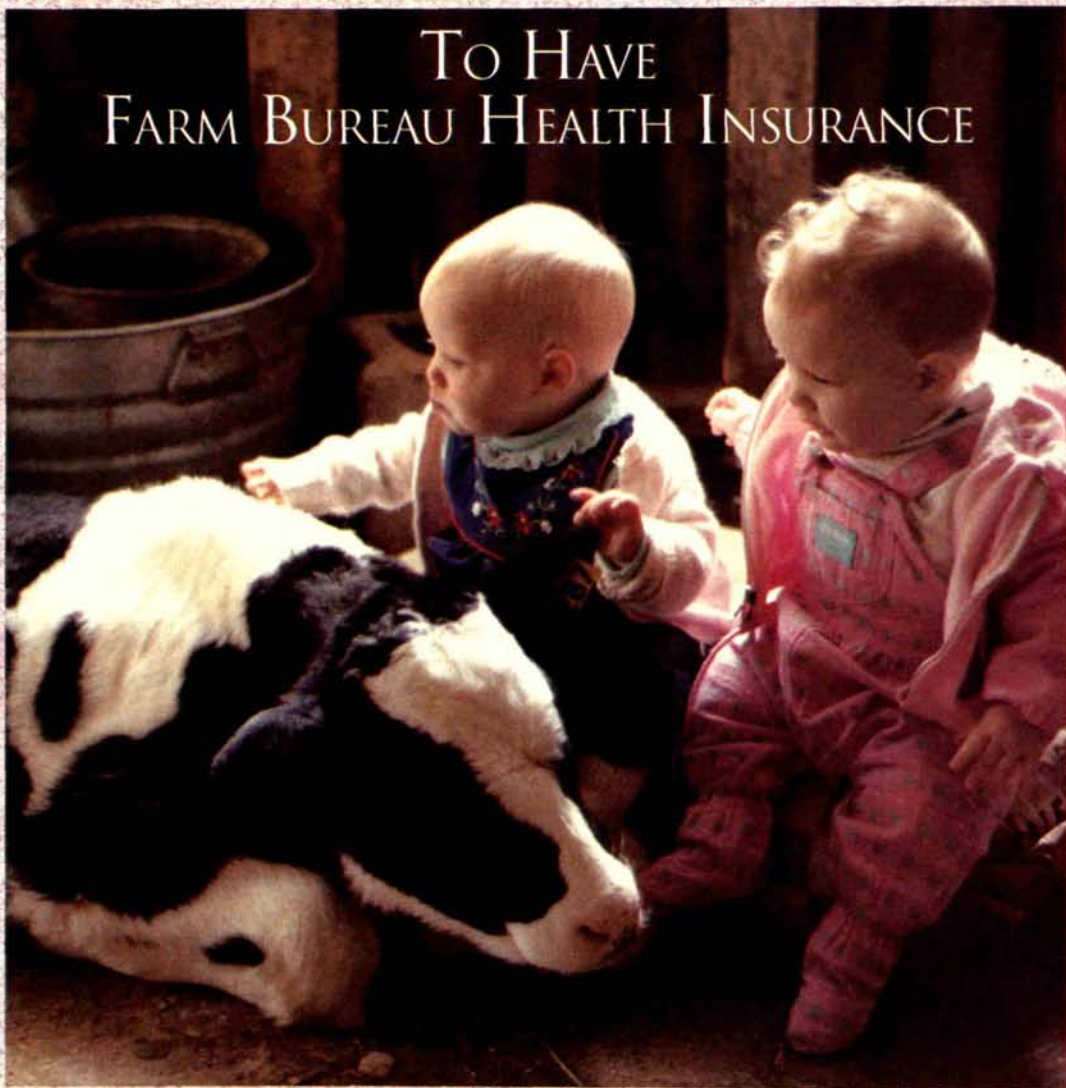
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A FEW SMALL REASONS

TO HAVE FARM BUREAU HEALTH INSURANCE



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For information, call 1-800-292-2680 or contact your local Farm Bureau agent.

 **MICHIGAN
FARM BUREAU**

New Bulletin Features Environmentally Friendly Tips for Homeowners and Gardeners

Reducing insecticide applications while maintaining a beautiful home, yard and garden, is the focus of a new Extension bulletin.

The bulletin HYG-001, "Michigan Insect Pest Management Guide, 1991," is now available at your local Extension office.

This bulletin challenges homeowners to utilize the same methods used by farmers to minimize the environmental effects of insecticides while managing insect populations at an acceptable level. Utilization of these methods is called Integrated Pest Management (IPM), which includes mechanical, biological, cultural and chemical controls.

The bulletin includes tips for scouting insects and the number of insects allowed before a pesticide should be applied. Proper pesticide selection, use, storage, handling, mixing and disposal are also covered.

Chemical and non-chemical control measures for vegetables, flowering plants, trees, shrubs, lawns and households are displayed in tables which are easy to follow.

For more information about the new bulletin, contact your local cooperative Extension service office.

GOOD WORDS ABOUT PESTICIDES

by C. Everett Koop, Surgeon General of the U.S., 1981-1989

Back in my former incarnation as a surgeon, I was distressed when cyclamates were taken out of soft drinks. I had found Fresca very much to my liking. The reason these substances were banned was because of experiments on rodents. The scientists found that high doses of cyclamates cause cancer in rats.

Translating these scientific studies to someone my size, I would have had to drink four bathtubs full of Fresca daily for about eight years to have an equivalent dosage. Those who read murder mysteries know that with poison, it is the dose that counts. With coffee, it takes 96 cups to deliver a toxic dose of caffeine, and with turkey, 3.8 tons to deliver a toxic dose of malonaldehyde.

In the early days of my surgical career, the state of art in detecting the concentration of toxins was beginning to approach a sensitivity of one part per million. Anything below that was considered to be zero residue. In 1965, we were able to test for parts per billion; by 1975, parts per trillion. And now, we are approaching the time when we will be able to test for parts per quadrillion. Even parts per million is a minuscule measurement. Converted to time, it is one second per two years. Parts per billion converts to one second every 32 years. And parts per trillion comes out in time to a sensitivity of one second every 32,000 years.

Americans are concerned because they are confused. They are confused because no one sorts out for them various components of what has become the food safety issue.

The public does not have a very good grasp of the relationship between the dose of a toxic substance and its risk in human beings. Their information comes from those who revel in scare tactics instead of science to warn the public about dangers in the food supply. These scare tactics lead us down the wrong path. We end up creating concern where

it isn't necessary and ignoring real concerns.

For instance, some people think that all man-made substances, such as pesticides, should be removed from our food supply, and that everything occurring in nature is beneficial. To sell nothing except foods untreated by pesticides would not only leave storekeepers with rotting food, but would also fail to protect the consumer against molds that in high enough concentration can be lethal.

People who are worried about pesticides fail to realize that cancer rates have dropped over the past 40 years. Stomach cancer has dropped more than 40 percent, while rectal cancer has dropped more than 65 percent.

In the food supply, as in all other public health questions, we need better understanding of the difference between risk and hypothetical risk. There is risk in almost everything we do, so we need to concentrate on the differences. The chances of your being killed in a motor vehicle (one in 6,000) are much more real than are threats from pesticides. Yet that doesn't keep us off the road, either as passengers or pedestrians.

By focusing on hypothetical risk, like that from pesticides, not only do people find their anxiety levels elevated, but by focusing on a straw man, they also feel that they are doing something to improve their health.

In so doing, they often neglect all the other things that they could be doing more readily, more legitimately, and with greater effect, such as paying attention to smoking, alcohol, exercise, balanced diet and so on.

Our food is not only the safest but also the most abundant in the world. Science and good sense will eventually prevail, but not until the pesticide terrorists have had another lick or two.

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LYME

An electron micrograph of a deer tick nymph, showing its segmented body and legs in detail. The tick is positioned centrally, with its legs extending outwards. The background is a light, textured surface.

**EPA Approves
Insecticide to
Control
Deer Ticks,
Carriers of
Lyme Disease,
on Horses
and Dogs**

An electron micrograph (approx. 250 times actual size) of a deer tick nymph.

The Environmental Protection Agency (EPA) has approved Permethrin II insecticide for controlling and killing deer ticks, carriers of Lyme disease, on horses, dogs and their premise areas.

Boehringer Ingelheim Animal Health, Inc., recently gained the EPA's approval to add "controls and kills deer ticks (carriers of Lyme disease)" to the label of its Permethrin II line of products, which includes Permethrin II, Permethrin II Horse and Stable Spray and Permethrin Pet, Yard and Kennel Spray. The insecticide already is widely used in agriculture and contains the active ingredient permethrin, a synthetic pyrethroid insecticide.

Permethrin II insecticides have a high toxicity for insects but a low toxicity for people and other mammals, which allows for their use on the animal as well as a premise spray.

Lyme disease is believed to afflict thousands of horses, dogs and livestock in the

United States every year. According to the national Centers for Disease Control, 30,000 cases of human Lyme disease have been reported nationally since 1982.

The disease is common in regions that provide an ideal climate...high humidity and dense vegetation...and areas that are inhabited by the specific hosts of the ticks, which include white-tailed deer in the Northeast, Midwest and Southeast. In recent years, however, reports have shown that the disease has been found in 46 states, including the Eastern seaboard states and Texas.

In addition to controlling deer ticks, the insecticides also effectively controls other insect pests, such as flies, lice, fleas and mites.

According to Doctor Philip Widel, D.V.M., senior staff veterinarian for Boehringer Ingelheim, pests are most effectively controlled by use of a premise insecticide because the ticks move from animal to animal

rather than resting in one place for long periods of time.

The peak season for Lyme disease is May through mid-fall, with the highest incidence occurring in July, and according to the American Veterinary Medical Association, there is a resurgence of the ticks in mid-September. Spraying should begin in early spring, when the ticks are in the second year of development and can parasitize medium to large mammals, such as livestock, poultry, swine, horses, pets and humans, Widel said.

Headquartered in St. Joseph, MO., Boehringer Ingelheim Animal Health, Inc., is a major manufacturer and marketer of animal health products for companion animals and commercial livestock. Permethrin II is distributed under the Bio-Ceutic brand name through veterinarians and under the Anchor brand name to the over-the-counter marketplace. For more information on the product or distributors of the product call: Wayne Cole, toll free (800) 821-7467.

DISEASE

FACT SHEET

Lyme disease affects humans and a wide range of animals

- Dogs, horses, cattle and cats.

"A Great Imitator"

- Lyme disease believed to be the leading vector-borne infectious disease in the U.S.
- Lyme disease is difficult to diagnose clinically, because symptoms often imitate the flu.
- In humans, the disease occurs in three stages. First, a ring-like rash (erythema chronicum skin lesions) develops and flu-like symptoms set in. The second stage is typified by neurological disorders such as meningitis, encephalitis and facial paralysis, as well as cardiac abnormalities. During the third stage, arthritis sets in, taking weeks or even years to develop.

Diagnosis in animals is difficult and often in later stages of disease

- Symptoms of the disease in animals include fever, lethargy, lameness, joint swelling and a decrease in appetite.
- Skin lesions and abortions have occurred in infected cattle.
- Lameness is often associated with Lyme disease in dogs.
- In horses, the disease can cause eye problems.

Lyme disease is year-round threat

- First "recognized" in 1975, after a cluster of cases appeared among children in Lyme, Connecticut.
- In the United States, 80 percent of the cases occur from May through August, with peak incidences in July. A resurgence of the disease occurs in mid-September through November.

Most prominent in the Northeast, North Central and Pacific Coast

- Areas with high humidity and dense vegetation provide an ideal climate for the ticks.
- 8,000 cases of Lyme disease have been reported in 46 states, with eight states in the Northeast, North Central and Pacific Coast accounting for 81 percent of the total number of cases to date. This figure represents a 16-fold increase in annual cases since 1982.
- Canine infections occur most frequently in regions that report a high incidence of infection in humans.
- Deer ticks are the size of poppy seeds.
- Deer ticks are the vectors or carriers of Lyme disease, transmitting bacteria spirochetes, or micro-organisms through attachment to the host's skin.
- Adult deer ticks are approximately the size of a sesame seed, making them significantly smaller than most ticks.

- Lyme disease is usually transmitted when deer ticks are in the nymphal stage of life (spring through summer), which is also the time when humans are the most active in wooded areas.
- Preferred hosts required for development of deer ticks include white-footed mice, and white-tailed deer.
- Other hosts the deer tick will use include rabbits, raccoons, migratory waterfowl, skunks, dogs, cattle, horses, cats and humans.
- The black-legged tick and western black-legged tick are also associated with the transmission of the disease.
- It has been indicated that a minimum feeding time of 12 and possibly up to 48 hours is required before the bacteria is transmitted by the tick to its host.

The Center for Disease Control recommends the following procedures:

- Check household pets daily
- Avoid all situations of exposure
- Wear long pants in areas inhabited by deer ticks, and seal bottom of pants
- Check your body twice a day, especially the neck and scalp
- When a tick has been found, grab the tick close to where its mouth is entering the skin and pull slowly.

Agricultural Institute For Educators

NOW AT TWO LOCATIONS

Summer Institute for Educators, originally created and sponsored by the Michigan Farm Bureau and the Department of Agricultural and Extension Education, Michigan State University, is going through growing pains.

That's good news for teachers interested in learning how to integrate agriculture into their K-12 classroom curriculums, according to MFB Promotion and Education Department Manager Julie Chamberlain.

"Teachers can now either attend a summer institute in central Michigan at the Kinawa Middle School in Okemos, June 22-30, or in southeastern Michigan at the Michigan State Fair Exhibition Center, July 7-15," explained Chamberlain. "Through a series of lectures, presentations and tours, participants will have the opportunity to examine concepts and materials drawn from the food and fiber industry, natural resources, economics and life sciences."

The institute originally kicked off three years ago with approximately 25 teachers participating. One of those teachers, Lansing Northwestern third-grade teacher Mary Schultz, has integrated a tremendous amount of those ideas learned at that first institute into her curriculum. She received a recognition award in 1991 from the Michigan FFA during its state annual meeting for her agricultural literacy efforts.



MSU's Dr. Eddie Moore reviews institute information with two teachers and a student from the former Soviet Union, in Lansing recently as part of the St. Petersburg Educational Exchange Program, visiting the classroom of Mary Schultz, a former institute participant.



Ingham County Farm Bureau member Kathy Lott, (at right) explains feed rations, manure management and the complexities of producing milk on the Lott dairy farm, to 25 educators participating in the 1991 Summer Institute for Educators.

Schultz's classroom was also recently visited by a delegation of teachers from the Commonwealth of Independent States (CIS) to learn more about her teaching process. While visiting, the CIS teachers were able to witness first-hand, how Schultz utilizes agriculture and natural resources into her third grade curriculum.

According to Chamberlain, the institute is intended for K-12 teachers, school administrators, counselors, librarians, and, yes, even school board members. While gaining exposure to some great ideas to take back to the classroom, teachers can also earn three MSU continuing education credits.

Topics covered include national public education goals, science and technology, global/international education, programs for gifted students, international trade, economics of the food and fiber system, classroom activities that work, Michigan's food and fiber system, and new and emerging career opportunities.

Teachers interested in learning more about the 1992 Summer Institute can contact Chamberlain at 1-800-292-2680, ext. 3213, or Dr. Eddie Moore, professor, Department of Agricultural and Extension Education, MSU, at (517) 355-6580.

TRAVEL SPECIALS

Canadian Rocky Mountain Adventure

This adventure is for those who want to escape from the normal "hustle bustle" of daily life. Upon arrival at Calgary's airport, an automobile and directions to your first night's lodging will be provided. The next day, with a detailed map and itinerary in hand, you're off on the adventure of a lifetime.

Regular rate for Off Peak:
\$699.pp*

Regular rate for Peak: \$899.pp*
Farm Bureau rate: \$685.pp*
Farm Bureau rate: \$881.pp*

"Mainstreet" in Harbor Springs

This unique bed and breakfast offers hospitality and charm that is unmatched. Your innkeepers Donna and Jerry open their house and their hearts to each guest. Once you've settled in, take a stroll along the waterfront and visit the many shops and restaurants that make Harbor Springs unique.

Regular rate: \$90.pp* (lg. room)
Regular rate: \$70.pp* (sm. room)
Farm Bureau rate: \$85.pp*
Farm Bureau rate: \$65.pp*

Breathtaking Bermuda

This excursion jets you to a private pink sand beach where you'll spend 3 nights at the luxurious Sonesta Beach Hotel & Spa. The hotel features rooms with balconies, 2 restaurants, a nightclub, 3 lounges, a health spa, 2 pools, and tennis courts. Airfare is provided from Detroit. Rate includes transfer and hotel tax. A \$15 Bermuda departure tax is not included.

Regular rate: \$819.pp*
Farm Bureau rate: \$800.pp*

Washington: History in the Making

Visit our nation's capital and experience our country's past firsthand. This 4 day getaway includes dinner at Hogates restaurant, a one day pass on the mobile tour, plus 2 half day tours of the city. Round trip airfare is additional. An estimated fare from Detroit would be \$220.

Regular rate: \$250.pp*
Farm Bureau rate: \$245.pp*

Atlantic City — nonstop from Detroit

This is an exciting day full of gambling and adventure. Your trip begins in Detroit on Wednesday at 8:30 a.m. with arrival in Atlantic City at 9:45 a.m. A transfer takes you to the dazzling Bally's Park Place Casino Hotel and Tower. The hotel is known for its 9 restaurants, world-class spa and great entertainment. Included is a \$15 food credit, \$20 coin credit and \$10 future flight credit. The flight out of Atlantic City is at 10:00 p.m.

Regular rates: \$99.pp*
Farm Bureau rate: \$95.pp*

Boston Weekend Package

Depart Friday evening from Lansing and arrive in Boston where you will transfer to the 57 Park Plaza Hotel. The trip includes 2 nights at the hotel; plus a Hertz sub-compact car. Airfare is via American Airlines (not available from Detroit). Rates are based on double occupancy.

Regular rate: \$470.50 pp*
Farm Bureau rate: \$459.pp*

Princess Cruise for 7 Days

Depart from Anchorage or Vancouver with highlights that include stops in Skagway, Juneau, and Ketchikan. You'll visit the plush Denali National Park, breathtaking Fairbanks, and see "crystal like" glaciers. Add on airfare from Detroit is \$495 pp. Prices vary depending on the type of cabin, ship and the time of year. We recommend combining this cruise with a land package. Farm Bureau Members can receive a 2% discount on any cruise/tour package.

*Per person

SPRING 1992

SUMMER TRAVEL SPECIALS

- Grand Ole Opry Weekend • Toronto Weekend
- California Fly-Drive Package • Aruba
- Bed & Breakfast London Package

For additional information on any of the tours
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All packages are subject to availability.
Prices are subject to change or variation

FOOD IRRADIATION..... THE CO

What if you found out that those fresh fruits and vegetables everyone keeps telling you to eat more of might kill you...because supermarkets have started selling radiation-exposed foods?

Sound frightening? It's supposed to. Part of a radio advertisement released by a consumer group called Food and Water, the words are designed to turn the public against food irradiation, a process that kills harmful bacteria and insects in such items as poultry and fruit. The ad debuted in Florida, where a company called Vindicator of Florida began operating the nation's first commercial food irradiation plant at the beginning of this year.

While the Florida plant is new, the controversy over the safety of irradiation is not. Six years ago, when the Food and Drug Administration first approved the process for fruits and vegetables, anti-irradiation groups started picketing supermarkets test marketing irradiated produce. They charge that irradiation can lace a food with cancer-causing by-products, decrease its nutritional value, and threaten the environment. The FDA as well as many independent scientists, on the other hand, say the process is a safe and effective means of protecting the food supply from harmful organisms.

Much of the controversy comes from the process's name. To many, "irradiation" conjures up images of radioactivity, atomic bombs, and nuclear reactor sites such as Three Mile Island, fueling the emotionally charged issue. But, whether irradiation is harmful or not has nothing to do with its sounding scary. Only a good, hard look at the facts can resolve the issue.

No nukes

One fear many people have about irradiation is that it makes foods radioactive. But, that's simply not the case. It's true irradiation involves putting food on a conveyor belt that carries it through a sealed room,

where it is then exposed to low doses of radiation. The radiation, also referred to as ionizing energy, breaks chemical bonds in organisms such as insects and several types of bacteria, thereby killing the pests and preventing them from causing spoilage or posing other health hazards. Most of the radiation rays pass through the food, however, rather than remain inside it, and the minuscule amounts that the food does absorb to destroy the insects along with the bacteria are "used up". That is, once the process is completed, no radioactive residues are left behind.

But that might not be enough for anti-irradiationists. A second concern they often voice is that exposing food to radiation creates within it new substances called radiolytic products that can threaten the health of the person who swallows them. Yet while irradiation does lead to the creation of radiolytic products, the tiny amounts produced have never been shown to be harmful...a good thing since most types of radiolytic products are not unique to irradiated foods. An estimated 90 percent have also been found in raw as well as heated foods that have never been exposed to radiation. Of the remaining 10 percent, says an FDA committee of food irradiation experts, many may simply have escaped detection by scientists because non-irradiated foods generally are not subject to the scrutiny irradiated foods undergo.

Not in my backyard

Food safety isn't the only aspect of irradiation that frightens people. With nuclear disasters such as the incidents at Chernobyl and Three Mile Island lingering in the backs of many minds, the possibility of an irradiation plant being built in the neighborhood becomes yet another source of alarm. Consumers associate it with a nuclear power plant.

An irradiation plant, however, is completely different and for a number of reasons. One

is that irradiation facilities, like nuclear power plants, do contain radioactive materials, but they lack explosive substances or potential environmental contaminants. Specifically, they usually treat food with cobalt 60, which cannot explode as used. Another distinction is that irradiation uses much lower levels of energy than nuclear plants and generates far less heat.

Those who remain skeptical should bear in mind that medical equipment has been sterilized for years via irradiation that involves higher doses of radiation than are allowed to treat foods. More than 50 percent of all sterile medical supplies undergo irradiation, as do consumer items that include cotton swabs, contact lenses, saline solutions, tampons, and teething rings.

But why bother?

Ironically, some who are convinced irradiation is safe may still argue that it's unnecessary. After all, they might say, the United States doesn't take full advantage of the irradiation process now, and our food supply is the safest in the world. Why treat food in a way that makes so many people nervous, even if their fears are misguided? The reason, as numerous public health officials explain, is that it has the potential to combat major causes of food-borne illness much more efficiently than current practices. Irradiation is capable of killing Salmonella safely and effectively, helping to prevent many of the estimated 24 to 81 million cases of illness along with thousands of deaths that occur each year due to harmful organisms in food. And Salmonella is just one strain. Irradiation also kills contaminants, such as Trichinella Spiralis, the parasite sometimes present in pork and pork products that causes trichinosis.

A further advantage of irradiation is that it offers a viable alternative to pesticides and other chemicals used to fumigate fruits, vegetables, and spices. Because spices carry large amounts of pathogens, for ex-

CONTROVERSY HEATS UP

ample, those that do not undergo irradiation must be fumigated with a gas called ethylene oxide...an expensive, toxic chemical that is carcinogenic and explosive. Thus, unlike irradiation, treating spices with that gas poses a hazard to workers, may pollute the air, and in some cases leaves a chemical residue on the spice. (Ethylene oxide fumigation, incidentally, was used to sterilize the majority of medical supplies at one time. Today, because of the dangers of the gas, irradiation has largely taken its place.)

Finally, irradiation can kill insects in grains, fruits, and vegetables as well as delay ripening and thereby prevent spoilage. Given that some countries lose more than half their harvest as a result of pests and spoilage, the process could make a significant impact on the world food supply.

Food manufacturers have their own reasons to fear irradiation

Scientists have been conducting research on food irradiation for 40-odd years, making it the most carefully examined food preservation process available.

Since 1955 nearly 9,000 scientific documents on irradiation have been published, which taken together, indicate that the process is safe and effective. That's why at least 35 countries now allow food irradiation and why the technology has been given the proverbial stamp of approval not only by the FDA but also by a number of public health organizations that include the World Health Organization, the Food and Agriculture Organization of the United Nations, the Council for Agricultural Science and Technology, the Institute of Food Technologist, and the American Medical Association, to name a few.

Despite its approval and usefulness, however, most food processors remain leery of adopting irradiation. With the public afraid of the technology, large manufacturers hesitate to put their own "necks" on the

line, so to speak. At one point a group of food companies did form a Coalition for Food Irradiation to counter anti-irradiationist propaganda. Many leading firms such as Kraft and the Campbell Soup Company dropped out, however, fearing an onslaught of negative publicity stirred by anti-irradiation activists.

Kraft and Campbell's are not alone in their hesitancy to support or use irradiation. Borden Foods, Gerber, H.J. Heinz, Kellogg's, Quaker Oats, Ralston Purina, ConAgra and Tyson Foods, all say they do not use or sell irradiated food products. The same goes for McDonald's and Kentucky Fried Chicken. As for grocers who cringe at the thought of history repeating itself in the form of 1986 picket lines protesting irradiation, many small chains and national giants like A&P-Supermarkets make it a policy to keep irradiated foods out of their stores.

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Symbol Added

Since 1986 the FDA has required that irradiated foods carry this internationally used logo on their labels. Originally applied to labels in the Netherlands, the logo's solid circle represents an energy source; the two petals, food; and the five breaks in the outer circle, rays generated by the energy source in the middle.

Which foods are allowed to be zapped?

While the irradiation controversy did not reach a fever pitch until 1986, when the Food and Drug Administration began allowing the treatment to be applied to fresh fruits and vegetables, the process actually started to be approved for use on foods in 1963.

Here's a look at when various foods were approved for irradiation in the U.S. and why. (Bear in mind that just because a category of food may by law, be irradiated, that doesn't necessarily mean it is. Most companies, largely because of consumer fears, elect to forgo the process.)

PRODUCT PURPOSE OF IRRADIATION DATE OF RULE

Wheat and wheat powder

Kill insects
August 21, 1963

White potatoes

Extend shelf life
November 1, 1965

Spices and dry vegetable seasonings

Destroy potential contaminants, kill insects
July 5, 1983

Pork carcasses or fresh non-cut processed pork

Control *Trichinella spiralis*, the parasite that causes trichinosis
July 22, 1985

Fresh fruits and vegetables

Delay ripening and prevent spoilage, kill insects
April 18, 1986

Dry or dehydrated aromatic vegetable substances, such as herbs, seeds, and spices

Destroy potential contaminants
April 18, 1986

Poultry

Control illness-causing micro-organisms, including *Salmonella*
May 2, 1990

Dairy Farmer Gives Newspaper Another Purpose

In February of 1990, after six months of study and research, Huron county dairy farmers Bob and Martha Thuemmel decided to try using shredded newspaper in their calf pens and barns for the over 230 milk cows and 100 head of livestock they raise.

Now in the second year of the recycling experiment, Bob has abandoned earlier doubts he had about the project that Martha had promoted so enthusiastically. Bob reports that with the shredded newspaper, his livestock are cleaner and healthier, than when he used more conventional animal bedding, such as straw.

"We didn't even bale straw last year because chopping newsprint allows me to bring in and store only what I'll need for two or three months at a time," explained Bob. "I chop and blow the newspaper when its needed. It's proven very cost effective for me and its good for the environment."

Martha who is extremely active in solid waste management and recycling efforts in Huron county and in the region, constantly encourages more livestock operators to choose newsprint for bedding. She claims the practice would help tremendously in solving the problem of disposing of old newspapers, instead of burying them in landfills.

She's a member of the Huron county's Solid Waste Management Advisory Board which is overseeing implementation of a five-year solid waste management plan. She also serves as an officer of the Solid Waste Task Force for Tuscola, Sanilac, Huron, and Lapeer Counties, and is chairperson of the 15 county Resource and Conservation Development project for recycling and water quality.

According to Martha more use of newsprint as livestock bedding would overcome a major difficulty recycling centers face. "If newspaper was used in all dairy and livestock operation in Huron County, we'd be importing newspaper from outside the county to meet the demand," she said.

"We know markets are the biggest challenge to recycling. We can collect like crazy, but we've got to have research and development of new products and new uses for the paper and other recyclable materials, to make it complete" she concluded.



On the Thuemmel dairy farm, newspaper is donated or purchased for about \$10/ton compared to straw bale prices of about \$40/ton. Primary sources of the newsprint comes from daily newspaper overruns, the county recycling center, and the Lutheran Church that conducts a newspaper collection project as a fundraiser.

The newsprint is chopped into two to three inch squares and blown directly into calf pens or stalls with a chopper that Bob purchased. He estimates that his total investment in equipment totals nearly \$12,000, but he says the investment paid for itself in the first year because of a higher absorption rates, cost savings compared to

straw, and overall better herd health.

Thuemmels use nearly two pounds per day per animal in newspaper. When applied to the fields as manure after being used for bedding, the newspaper manure breaks down so well there is little if any difference from conventional bedding. Examination of the soils where newspaper based manure has been applied has shown excellent decomposition, with little evidence of newsprint in the soil, since the decomposition begins as soon as the paper begins absorbing manure and moisture.

As the Thuemmels researched the feasibility of using newsprint for livestock bedding, their primary concern was that of toxicity to animals from newsprint ink. Research results from Penn State University, University of Minnesota and Ohio State removed those fears, but also cautioned against the use of clay coated paper (slick or glossy sheets), and paper products with metal staples.

Results from Penn State trials reported that no animal health or milk quality problems were encountered. A study at the University of Minnesota on bacterial growth in various types of bedding materials supported the finding with the determination that bacteria grew the slowest in newsprint bedding. With those assurances in hand the Thuemmels began an experiment that will be a part of their farm operation for many years to come. "Studies are important to back up the decision making process for farmers and to provide information about new management practices to government environmental agencies," says Bob.

HEALTH HARVEST

A Health and Wellness Publication of Michigan Farm Bureau

Mar. 1992 VOL 2, No. 1

THE IDEA OF PULLING ON A PAIR OF SNEAKERS AND JUMPING INTO A POOL TO GO JOGGING MAY SOUND ABSURD.

Walking, running, or doing aerobics in water provides a safer and, in most respects, a better workout than the very same exercise on land.

Water workouts can burn calories faster and work your heart harder than similar land-based exercises. That's because your body encounters much more resistance in all directions - your arm doesn't just drop by itself, for example - more muscles get exercised. (To add even more resistance, cup your hands or use special webbed gloves, paddles, or fins, available at some pools and athletic stores.)

In addition, water workouts are easier on the joints. On land, your foot strikes the ground with the force of two to five times your weight. That impact can strain your back, hips, knees, or ankles. In waist-deep water, you weigh only about half as much as on land; in shoulder-deep water, only one-tenth as much. The milder impact is especially good for pregnant women, overweight people, older people, and anyone with an aching back or stiff joints.

Shoes protect the soles of your feet, ensure good traction, and offer extra support - both in and around the pool. Traditional cotton sneakers with non-marking soles work for most people. You can also buy shoes designed expressly for water workouts.

One caution: Don't substitute water workouts for all the exercise you may already be doing on land. Research suggests that weight-bearing exercise is necessary to prevent bone loss.

WATER WALKING OR JOGGING

You can get a complete workout just by walking or jogging in the water. Those exercises will give your upper body in particular a far better workout than they'd provide on land. Here are some pointers for the pool:

- Start in waist-deep water; work up to deeper water as you get in better shape.
- To work your muscles evenly and add variety to the workout, walk or jog forward and backward for equal amounts of time. You can also work your muscles more fully by moving sideways.
- Fight the natural tendency to stay on your tiptoes in the water; that stresses the lower legs;
- Don't lean forward.
- Swing your arms.

(CONTINUED NEXT PAGE)



DIVE IN



DIVE IN CONTINUED

WATER AEROBICS

The following water aerobics routine, suggested by water fitness pioneer Jane Katz, methodically exercises the muscles in your upper body, midsection, and legs. You can get a complete water workout with these four exercises alone. Or you can mix in some walking or jogging to add variety and intensity.

LEG SWINGS

Stand with your back against the corner of the pool, one hand on either edge. Lift your legs to create an "L" with your body. Then swing your legs from side to side. If that's too hard, try it with your knees bent.

JUMPING JACKS

Stand in chest-deep water with your arms at your sides and your feet together. Rotate your palms forward and then outward. Keeping your arms straight, force them up out of the water and touch them overhead. At the same time, jump up to spread your legs in an inverted "V" position. Then turn your palms outward again and bring your arms back to your sides as you bring your legs back together.

ARM SWIRLS

Stand in shoulder-deep water, then bend your knees slightly so that your arms and shoulders are fully submerged. Extend your arms out to the side and rotate them forward in a circular motion, then backward. You can increase the intensity by flexing your wrists up and down; by cupping your hands to increase resistance; by making larger, more vigorous circles; or by walking or jogging as you move your arms.

LEG LIFTS

Stand in water slightly above your waist with your back against the pool wall. Lift your legs one at a time as high as they'll comfortably go, keeping your legs straight. For an easier workout, bend your knees. To increase resistance, use a special float.

Another Reason

Life

To Drink Your *Milk*

The calcium in milk and other dairy products may do more than help build strong bones and teeth. It looks more and more as if that mineral also plays a role in keeping down blood pressure, a theory scientists have been looking into for years. The latest evidence suggest a calcium/blood pressure association even for children.

Upon monitoring the diets of nearly 80 three- to five-year-olds, researchers at Boston University found that those who took in the most calcium had the lowest blood pressure. Specifically, for each 100 milligrams of the mineral consumed per 1,000 calories, there was an average drop of two millimeters in systolic pressure. Systolic pressure is the top number in a blood pressure reading of, say, 140 over 90 and a measure of the pressure exerted on the artery walls each time the heart contracts to pump blood out to them.

Calcium may also keep down the blood pressure of pregnant women. A report published in the *New England Journal of Medicine* suggests that expectant mothers who take calcium supplements have a reduced risk of high blood pressure during the nine-month stretch.

Babies born to mothers who take in plenty of calcium might benefit too. Scientists working in Providence, Rhode Island, discovered that mothers-to-be who ate relatively large amount of foods rich in calcium (as well as magnesium and potassium) bore babies whose blood pressure readings were lower than those of other babies throughout the first year of life.

It should be pointed out that all the evidence is still preliminary, certainly not definitive enough to persuade experts to make blanket recommendations to pregnant women or very young children to take calcium supplements. But consumers would do well to view the findings as further inspiration to eat at least three daily servings of high-calcium foods, including not only milk, yogurt, and other dairy products but also broccoli, kale and turnip greens as well as canned salmon and sardines with bones.

Style

'LIGHT' SNACK FOODS



NEW

When marketers call their chips "light" they must mean weight. Fat content remains high.

Believe the labels on salty snack foods these days and you'd think food companies had turned them into carrot sticks. They're light! They're wholesome! They're nutritious! They're no such thing! Nearly all the major "light" brands of chips, puffs, and popcorn are as oily as their advertising.

The best way to judge the fat content of a food is by the % of total calories that comes from fat.

To calculate the percentage of total calories from fat in a food, first check the package label for the number of grams of fat per serving. Convert fat grams to fat calories by multiplying by nine. Then divide the result by the total number of calories in the serving. According to guidelines from health organizations and Government agencies, no more than 30 % of your daily intake of calories should come from fat.

Chips

On average, regular potato chips get 61 % of calories from fat; cheese puffs, 57 %; corn chips, 52 %; and tortilla chips-from chips that are first baked then fried-also 52 %.

The major brands of "light" chips or puffs may be lighter than their "regular" brandmates, but they're hardly "low" fat foods. Except for Doritos Light Tortilla chips, which get around 30% of calories from fat, the major "lights" all get around 40% or more from fat. Bachman's All Natural Thin 'n Light Potato Chips get 56% of calories from fat, almost the same as regular chips.

One specialty brand of cheese puffs, Health Valley Cheddar Lites, boasts: "Only 2 calories per puff! Baked not fried!"

But those puffs add up: An ounce of them contains 160 calories, about the same as regular puffs. And

baked does not mean grease free: A hefty 45% of those calories comes from fat.

Some manufacturers have tried to make their chips nutritionally respectable by using whole grains, fruits or vegetables. Frito-Lay's new Sun chips Multigrain Snacks, for example, claim to be "a special blend of whole wheat, corn, and other natural grains." But the smaller print in the ingredients list, where stricter labeling laws apply, gives an entirely different order: Corn and oil come before the whole wheat, rice, and oat flour. That means the two main ingredients are the same as those in corn chips. The modicum of added whole wheat doesn't add a noticeable amount of fiber: Sun chips have 1.1 grams per ounce, compared with about 1 gram in regular corn chips.

The package also says that Sun Chips have less fat than American cheese. That's not saying much: American cheese gets 76% of its calories from fat. Sun Chips weigh in at 48% from fat.

Even in fruit chips (such as Nature's Favorite Apple, Peach and Pear Chips, and Tastee Apple Chips) around 40% or more of the total calories are provided by fat.

Popcorn

Popped in hot air rather than oil, popcorn makes a great snack, averaging only 8 % of calories from fat and 4 grams of fiber per ounce. So "air-popped" has become a label come-on for "light" popcorn. Most manufacturers, however, soak the kernels in oil after air-popping them. As a result, air-popped popcorn can get as much as two-thirds of its calories from fat. That's more than most oil-popped brands, which average about 50% of calories from fat.

The package of Frito-Lay's "totally natural" Smartfood Kentucky Popcorn with White Cheddar Cheese claims: "We DON'T drown our kernels in oil." But between the cheese and the oil added to this air-popped corn, cheddar Smartfood gets 56 % of its calories from fat.

Pretzels

You can now get pretzels that contain no fat at all, such as Fat Free Mister Salty Pretzels and Snyder's Hard Sourdough pretzels. But pretzels never had much fat in the first place-an average of 8 % of their calories comes from fat. Two brands that highlight their low fat content-Bachman Thin 'n Light Pretzels and Frito-Lay Gold Gold Pretzel Rods-are actually somewhat fatter than average, with 16% from fat.

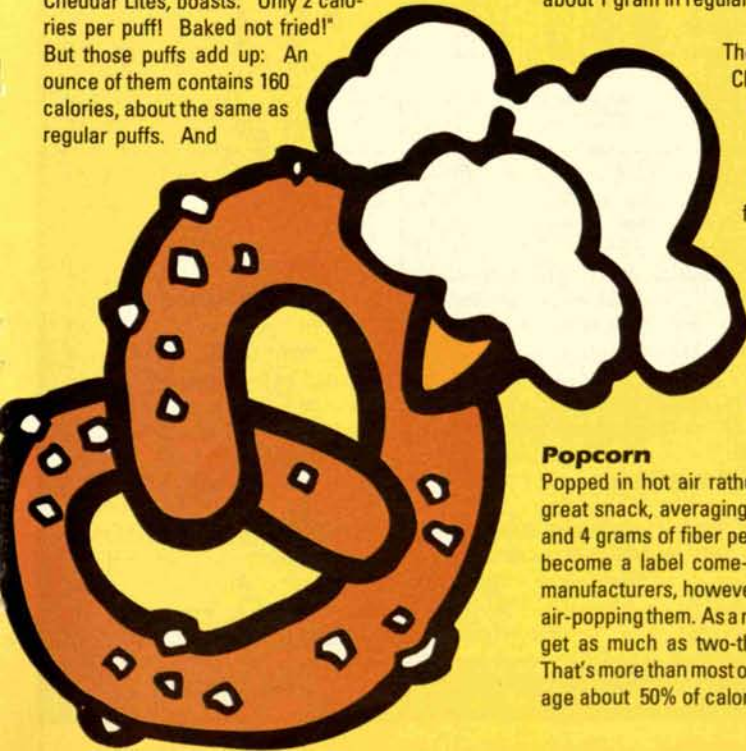
Ordinary pretzels do have a high sodium content. However, the many new low- or no-salt brands make pretzels a sensible snack for just about everyone, including those who are watching their sodium intake.

The Salt Story

Chips, puffs and popcorn taste saltier than they actually are, probably because all the salt lies on the surface. Actually, potato chips and tortilla chips, with respective averages of 133 and 140 mg of sodium per ounce, meet the current FDA definition of a moderately low-sodium food. Corn chips average 233 mg and popcorn 235 mg-less than Cheerios or Rice Krispies (290 each). Cheese puffs average 344 mg.

Pretzels are relatively high in sodium. They average 459 mg per ounce, and range as high as 900 mg. Eat several ounces of pretzels and you could easily reach the daily limit of 2400 mg recommended by the National Academy of Sciences.

Chips, puffs, popcorn, and pretzels that claim to have no salt or less salt (generally half the amount in regular brands) are now commonly found grocery shelves. By and large, those claims are reliable.



High Blood Pressure & Your Kidneys

High blood pressure and kidney problems

pose a double threat to your health. On one hand, high blood pressure can lead to problems with your kidneys; on the other hand, kidney problems can cause high blood pressure. A combination of the two conditions can create a downward health spiral that can take years off of your life.

What is high blood pressure?

Blood pressure is the force of the blood against the walls of the arteries. When the pressure within these blood vessels becomes too high, a person is said to have high blood pressure or hypertension. High blood pressure and hypertension mean the same thing. However, having hypertension does not always mean you are a hyper individual.

What causes high blood pressure?

There are many different diseases that may contribute to high blood pressure, but 90% of the time no cause is known. This is called "primary" or "essential" hypertension. There is evidence which shows the importance of the kidneys in blood pressure regulation. In the remaining 10%, an underlying process can be identified to explain the high blood pressure. This is referred to as "secondary" hypertension. Among the causes are obstruction of a renal artery (renal refers to the kidney), hormonal abnormalities, various kidney diseases and infrequently from drugs, such as birth control pills.

How does high blood pressure effect the kidneys?

High blood pressure that causes kidney damage is called "primary" hypertension, and is incurable, but controllable. High pressure in the blood vessels of the kidneys causes them to become sclerotic (thickened). As this reduces the blood supply to the kidneys they can no longer function efficiently. They become less effective in removing waste products from the body. Salt is retained instead of being properly eliminated, which causes fluid retention. This extra fluid puts a burden on the heart causing it to fail. This creates a vicious cycle, as the heart then supplies the kidneys with less blood, causing the kidneys further damage.

How do kidneys work?

The major function of the kidneys

Farm Bureau Member Urges Donor Awareness

For most of us, 10 months slip by in the blink of an eye. For Berrien County Farm Bureau member, Ed Heyn, 10 months in 1987 and 88 seemed like a lifetime—literally. Heyn was working full-time off the farm and farming as well, growing a variety of vegetables, cherries and alfalfa hay when, in 1987, doctors informed him that his kidneys were only 37% functional. Within 6 months, Heyn's kidneys had failed him completely. As a result, Heyn's life experienced turbulence most only imagine. He gained 30 pounds in 30 days, was put on kidney dialysis, and eventually had to go on disability in November of 1987. "I was 46 years old and this doctor was telling me 'I don't think you're ever going to work again,'" explained Heyn. "I told him he was crazy, and that I'd be back to work within 3 months." Heyn's optimism dwindled while waiting for a suitable kidney donor. After a 10 month wait, a transplant operation and a bout with an organ rejection that now requires daily medication, Heyn is on disability, but hopes that he can someday return to full employment. Improved matching of potential recipients and organs along with new anti-rejection medication such as Cyclosporine, have boosted the success rate of organ transplants dramatically. Kidney transplants experience a 90% to 95% success rate, liver transplants are 75% to 85% successful, and heart transplants are now getting into the 90% range, claims Heyn. Unfortunately growth in success rates has not been accompanied by growth in donors, says Heyn. "Right now there are 25,000 people on a waiting list at the United Network of Organ Sharing, in Richmond Virginia," he said. "In 1991 there were only a total of 4,500 organ donors, during which time 2.2 million people across our nation died. We need more public awareness." Most people assume that once they sign the back of their drivers license, that they will be willing participants in an organ donor program. Not so, says Heyn, explaining that hospitals need a signed consent form from the next of kin before surgically removing organs. "I've had experiences in my discussions about the importance of organ donors, where spouses didn't even know that their mate had signed the back of their drivers license," Heyn exclaimed. "It's important that people tell their next of kin that they want to be an organ donor at the time of death, or their good intentions will not be fulfilled."

MEDICAL FOCUS

is to filter wastes from the body into the urine. Kidney damage from high blood pressure can also include the gradual destruction of the minute filtration units of the kidney (called nephrons) where the urine is formed. Along with the process mentioned above, this destruction of nephrons leads to further decline of kidney function. Eventually, total kidney failure may follow, with uremic poisoning and death. This type of kidney damage happen if the blood pressure is uncontrolled. However, it can be prevented if high blood pressure is controlled.

What can I do about high blood pressure?

First of all, find out if your blood pressure is normal. Since high blood pressure has few symptoms, many people have high blood pressure and do not realize it. If your first blood pressure reading is

high it is important to have it measured again. A single abnormal reading does not necessarily mean you have high blood pressure.

If you have high blood pressure, your doctor will probably prescribe medication. You may need to try several different medications to get your blood pressure under control. It is very important that you take your medications as ordered. You will likely need to take medication for the rest of your life.

Most forms of high blood pressure can be treated successfully. Early detection and long term treatment are the keys to a longer and healthier life.

Home Water Treatment Systems - Buyer Beware!

If a credible water test shows your water is unsafe or unacceptable for household uses such as drinking, cooking, bathing and laundering, you are probably wondering what your alternatives are.

Drilling a new well is one, says William Robb, Allegan County Extension Director. The cost, however, is high, and there's no guarantee that water from a new well would be free of problems. Buying bottled water is another choice, but the cost and transportation headaches need to be weighed against in-home treatment.

The four most common types of in-home treatment are filters, water softeners, reverse osmosis units and distillers. The best type for your situation depends on the type or types and amounts of contaminants in your water and the cost of the equipment, operation and maintenance.

Filters - Filters remove dirt, sediment and odors from water. Because the material removed from the water builds up in filters, they need to be replaced regularly. Filter units may be small enough to fit on a kitchen faucet or large enough to treat all the water coming into your home.

Water Softeners - Water softeners remove calcium and magnesium, the minerals that make hard water "hard," and some irons from water. Water softeners can be used to treat all water coming into the house or only the hot water. They add sodium, so anyone on a sodium restricted diet should consult a physician before installing a softener.

According to Robb, softening water increases the ability of soaps and detergents and prevents scale buildup in water heaters and other appliances. This can cut operating costs and extend the usable life of the appliances.

Reverse Osmosis - A reverse osmosis unit is effective in removing a wide variety of inorganic chemicals, such as nitrates, calcium and magnesium. It also removes beneficial chemicals such as fluoride, according to Robb.

A reverse osmosis unit is typically combined with a prefilter to remove sediment and an activated carbon filter to remove odors and taste. Such a unit is usually used to treat water for drinking and cooking. You need to match the capacity of the unit to household water needs.

Distillers - Distillers boil water and then condense it, leaving most contaminants and impurities — and flavor — behind, says Robb. Maintenance is fairly simple — removing scale buildup from the boiling tank. The cost of producing distilled water may be fairly high, however, depending on the wattage the unit requires and the local electric rate.

Within each of these types of home water treatment systems, costs can vary greatly. Because not all systems do an equally effective job of removing all contaminants, you may have to combine two or more types to achieve a safe, high quality home water supply.

Potential water buyers need to start with a water analysis from a reputable source and then ask lots of questions about operating capacity, operating costs, maintenance and warranties before investing in a system, cautions Robb.

Robb suggests looking for a National Sanitation Foundation (NSF) rating. Because testing programs are expensive, only the largest manufacturers tend to carry the NSF seal of approval on their products, so the NSF list may not necessarily include all the good ones. Like the Underwriter's Laboratory seal on electrical equipment, however, the NSF seal is worth looking for.

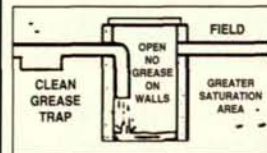
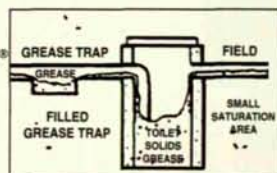
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Auto manufacturing has its Big Three. College sports has its Big Ten. Floriculture—the production of flowering plants—has its Big Six. And Michigan is one of those top six flower-producing states.

According to Will Carlson, Extension horticulture specialist at Michigan State University, those six states—Michigan, Ohio, Pennsylvania, Florida, California and Texas—account for 58 percent of the bedding plants, 71 percent of the cut flowers, 78 percent of the foliage plants and 47 percent of the potted plants produced each year in the United States. In 1989 (the latest year for which figures are available), Michigan produced more flats of bedding plants than any other state except California. In dollars and cents, the wholesale floriculture industry is valued at nearly \$2.5 billion. Michigan's share totals about \$112 million each year.

A large share of that—more than \$47 million in 1989—is bedding plants:

annual and perennial flowers, herbs and small fruits such as strawberries that are grown in green houses for use outdoors.

Bedding plant production is a growth industry in Michigan and elsewhere in the United States because growing plants as a leisure activity continues to grow in popularity, Carlson says.

"It gives people a chance to be creative and to improve their homes and surroundings," he observes. "Bedding plants are very affordable, so if you don't like the way things turned out this year, it doesn't cost much to do it differently next year. A minimal investment provides you with enjoyment from May through October."

Though Michigan has several hundred commercial bedding plant growers, the industry tends to be concentrated in three areas: around Grand Rapids, in Kent and Ottawa counties; around Detroit in Wayne, Washtenaw, Monroe, Macomb

and Oakland counties; and in Kalamazoo County, in southwestern Michigan. Kalamazoo County has nearly 100 growers who produce the largest number of flats annually. Between one-fifth and one-fourth of the state's 541 acres of greenhouse space is in Kalamazoo County.

The most popular bedding plants sold are impatiens, petunias and cutting geraniums, Carlson reports. These three crops account for about half of all the bedding plants sold. Other plants popular with consumers are marigolds, vinca, begonias and seed geraniums. At the top of the list of vegetable transplants are tomatoes and peppers.

Because of its economic contribution to the state, floriculture is a very important part of Michigan agriculture, Carlson points out. It generates jobs and income and contributes to the tax base. On a more personal level, it produces beauty for everyone to enjoy.

PLANTING A

"Green" Screen

Many people have moved to the country in an attempt to get away from it all, only to have hoards of neighbors move in with the same idea. In addition, emphasis on protecting and maintaining a healthy environment is becoming a growing concern.

Rural homeowners wishing to obtain privacy and/or to simply enhance their properties are turning to growing green screens to protect themselves from the urban sprawl. Many are discovering a side benefit in reduced heating and cooling costs, some by as much as 25 percent. Recognizing the benefits of a natural shelter, many homeowners are establishing green growing screens with Austrees. Austrees are the fastest way to develop a natural break between property lines or from natural elements like the wind.

The original Austree clones were "genetically engineered" and tested over the last 30 years, to provide a fast growing, disease resistant tree that could be easily established in diverse climates. Extremely hardy, the trees now grow in all the continental United States and in every province in Canada. Austrees are grown for re-sale purposes and are delivered to the customer as a root-product through the mail. Austrees typically grow 8 to 18 feet in a single season. They grow tall and upright with lateral branches all the way to

the ground when left to their natural growing pattern. They are easily shaped and maintained by routine pruning practices.

The trees can be side trimmed, root pruned, and/or topped to conform to view or space restrictions. They do not spread by seed or sucker roots, so there is no potential control problems.

If left untouched, the trees will reach 60 to 80 feet in height and grow to a width

Fodder tree clone, which grows to only 25 feet in height. Austree staff offers assistance in planning a beautiful and useful green screen. They can be reached at 1-800-638-1441.

Developing the Screen

Proper soil preparation is the most important factor in establishing an effective screen from bare root plants. The size of the hole, soil condition and tree placement all influence survival and

growth. Trees don't thrive in competition with grass and weeds, making their removal critical, especially in drought conditions.

A mulched seed should be prepared, using cut grass, wood chips, straw or black plastic. Ample water should be provided throughout the first growing season to assure adequate growth, until the tree's root system is firmly established.



of 7 to 10 feet. Usually the trees are pruned to a useful size for the specific sight. A properly planted screen would usually be 10 feet tall in its first year, reaching full maturity in about 7 years.

Planning the Screen

Different tree clones provide different results. If you intend for your screen to be full size, then the all purpose clones are the best. If your screen height is to be limited, then Austree suggest considering the Kinyanghi clone or their Super

Every shipment of the trees comes with a complete set of detailed planting instructions, and suggestions for a successful planting. Austree recommends planting trees three feet apart in single rows, or five feet apart in a staggered two-row arrangement.

The best time to plant is after there is no threat of a hard frost. Ground temperature is the most important factor in making sure trees get off to a good, quick and healthy start.

Farm Leaders Glimpse Future

of North American Trade

Mexican farmers, using state-of-the-art technology to produce fruits and vegetables for U.S. consumers. Mexican consumers, shopping in a state-of-the-art supermarket for American jeans, housewares and processed foods.

It's the future of international trade, glimpsed by Michigan Farm Bureau President Jack Laurie and four other state Farm Bureau presidents during a six-day tour of Mexico's agricultural region in March. The group, which included American Farm Bureau Federation President Dean Kleckner, visited the Mexican states of Sonora, Sinaloa and Baja, California. They toured produce and livestock operations and processing facilities.

"There's nothing like standing in another farmer's field, or walking in his shoes, to really make you appreciate his point of view," said Laurie. "That's especially true when it comes to understanding farmers from another culture and country, like Mexico."

The focus of the trip was to gain some perspective on the impact of the North American Free Trade Agreement (NAFTA) currently being negotiated between the United States, Canada and Mexico. "One of the things that struck me is that Mexican farmers have some of the same concerns about agricultural trade that we do," Laurie said. "They are afraid that their government, in the process of negotiating the NAFTA, will tend to neglect the interests of the individual grower in favor of the interests of the overall economy. Mexican farmers are also worried about competition for their agricultural products. They are worried, much as the Canadians are, about being overwhelmed by a huge U.S. 'production machine.' So it appears to me that there is a great deal of public relations effort to be done in the grower community in all three countries before we can maximize the positive impact of a NAFTA," he said.

That positive impact can include new markets for U.S. farm crops. In any given year, Mexico is the United States' third or fourth largest customer for agricultural products. In 1990, we exported about \$2.5 billion



American Farm Bureau Federation President Dean Kleckner (left), and Michigan Farm Bureau President Jack Laurie (right), inspect Mexican grown asparagus at a packing facility during a recent trade trip to Mexico.

worth of farm goods to Mexico. The U.S. sells over 90 percent of the live animals, meats, cereals, fruits and vegetables and food oils purchased by Mexico, and at least three fourths of its oilseeds. One advantage of a NAFTA would be the preference the U.S. commodities would enjoy in the Mexican market by virtue of having to pay no import tariffs. Similar commodities from other competitors would continue to face such restrictions.

In 1990 the U.S. purchased \$2.6 billion of agricultural products from Mexico, taking more than 90 percent of Mexico's agricultural exports. Eighty percent or more of Mexico's exports of fruits and vegetables are purchased by the U.S., mostly during the winter months when production is low in our country. Mexican horticultural products now make up a major part of total agricultural products from Mexico and have shown the most rapid growth of all U.S. agricultural imports from Mexico.

As the volume of trade between the two countries has increased, transportation and other infrastructure constraints at the border and in Mexico could become obstacles to trade expansion. Mexico's transporta-

tion infrastructure has had difficulties handling the large increase of trade in recent years, and without improvement, this could limit trade volume between the two countries.

Some U.S. environmental groups have criticized a NAFTA, saying that Mexican farmers would export crops grown with chemicals not approved for use in the United States. But Laurie said the Mexican farmers he talked with are acutely aware of our country's strong food safety standards. "They are following the same Environmental Protection Agency regulations as we do," he said. "Their produce is closely inspected at the border, and they don't want to take the slightest risk of losing access to our markets."

Other critics have pointed to the allegedly low Mexican labor costs as an unfair trade advantage. "We often hear our U.S. growers raise the concern that labor costs less in Mexico," said Laurie. "But the bottom line when we talk to Mexican growers is that they, like U.S. farmers, are concerned about how much labor is costing them. Workers are paid only \$5 a day, but they are highly inefficient. Labor makes up about one third of their cost of production, about the same that it does here for U.S. farmers."

Farm Bureau supports a free trade agreement with Mexico, but only if such an agreement provides for fair and equal competition. Farm Bureau policy states that current U.S. grades and standards should not be lowered to accommodate Mexican imports; the agreement should standardize pesticide regulations so they are uniform between the two countries; and especially important for Michigan growers, import-sensitive crops should have a longer phase-in period.

"I stood on the shipping dock in Nogales, Mexico, and heard that they normally run 600-700 semi's a day into the U.S. through that port of entry," Laurie said. "So it's clear that we already have vigorous trade with Mexico. The question is: won't we all be better off if we have some type of agreement that addresses market demands and trade in an effective, controlled manner?"

Availability Guide For Michigan Grown Fruits & Vegetables

This chart is a buying guide for fruits, vegetables and other food and horticultural products grown in Michigan. It shows a range of availability because the season for fruits and vegetables vary from year to year, and from one area of the state to another.

The solid bars in the chart refer to the peak periods of availability. These dates are longer than the actual harvest dates when a significant portion of the crop is stored and marketed after harvest. Usual peak harvest dates are shown within the bar.

To take full advantage of Michigan's bountiful growing season, be sure to order a copy of the Michigan Department of Agriculture's "Farm Market and U-Pick Directory," by calling (517) 373-1058. The directory, with over 300 listings of farm markets and U-pick operations, is available at no charge.

VEGETABLE												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ASPARAGUS					MAY 1- JUN 30							
BEANS (green & snap)							JUL 7- SEP 20					
BEETS								AUG 1- OCT 20				
BROCCOLI							JUL 10- OCT 15					
BRUSSELS SPROUTS										OCT 1- NOV 15		
CABBAGE							JUL 1- OCT 31					
CARROTS							JUL 20- OCT 31					
CAULIFLOWER								AUG 1- OCT 31				
CELERY							JUL 15- OCT 31					
CORN, SWEET								AUG 1- SEP 21				
CUCUMBERS (for pickles)								AUG 1- SEP 15				
CUCUMBERS (salad)							JUL 7- SEP 21					
GREENS (turnip, mustard, collards & kale)						JUN 1- SEP 30						
LETTUCE, HEAD						JUN 15- SEP 15						
LETTUCE, LEAFY (leaf, bibb, Boston, & Romaine)						JUL 1- SEP 15						
MUSHROOMS												
ONIONS									AUG 25- NOV 15			
ONIONS, GREEN						JUN 15- SEP 30						
PARSNIPS									SEP 1- OCT 15			
PEAS, SUGAR						JUN 1- JUN 30						
PEPPERS, GREEN							JUL 15- OCT 15					
POTATOES, WHITE								AUG 1- OCT 31				
RADISHES							JUN 15- OCT 31					
RUTABAGAS										SEP 15- NOV 30		
SPINACH							JUN 15- OCT 15					
SQUASH, SUMMER*							JUL 15- SEP 15					
SQUASH, WINTER**										SEP 15- NOV 30		
TOMATOES (field)								AUG 10- SEP 30				
TURNIPS						JUN 10- NOV 15						

FRUIT												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
APPLES (fall)									AUG 25- OCT 31			
APPLES (summer)							JUL 10- AUG 31					
APRICOTS						JUL 1- 1-15						
BLACKBERRIES							JUL 1- AUG 31					
BLUEBERRIES							JUL 20- AUG 31					
CANTALOUPE								AUG 7- SEP 20				
CERRIES, RED TART							JUL 7- AUG 1					
CERRIES, SWEET							JUL 1- JUL 31					
GRAPES									SEP 1- OCT 15			
NECTARINES								AUG 25- SEP 15				
PEACHES								AUG 1- SEP 15				
PEARS								AUG 25- SEP 20				
PLUMS									SEP 1- SEP 30			
RASPBERRIES							JUL 1- JUL 31		AUG 25- SEP 30			
RHUBARB (field)					MAY 1- MAY 31							
STRAWBERRIES						JUN 7- 30						

DATE PEAK AVAILABILITY (Usual peak harvest date is noted within solid bar.)

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*soft shell
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MICHIGAN FARM BUREAU

Cooperative Extension Service
Michigan State University
Extension Bulletin E-1942 (New) February 1986

MEAT & HEALTH INFORMATION KIT AVAILABLE

To help today's health-conscious consumers make informed nutritional choices, the National Live Stock and Meat Board is offering the new Meat and Health Information Kit.

The kit includes "Exploring Meat and Health," the Meat Case Calculator and "Facts About Beef." The 26-page "Exploring Meat and Health" brochure is a comprehensive guide to a variety of meats' nutrients, role in a well balanced diet and relationship to heart disease and cancer. The Meat Case Calculator is an easy-to-use slide-rule type device that helps shoppers and meal preparers compare calories, fat, cholesterol, protein, iron and other nutrients in different retail cuts prepared a variety of ways. "Facts About Beef" specifically focuses on beef, and includes nutrient data, cooking tips and recipes.

By reviewing the nutrition basics of balance, variety and moderation, the Meat and Health Information Kit is a reminder that beef, eaten in moderation, can and should have a place in today's healthier lifestyles.

Consumers can receive the Meat and Health Information Kit by sending their name, address, and \$1 in a check or money order to:

Meat and Health Information Kit

P.O. Box 8542

Prospect Heights, IL 60070

(Limit one kit per household)

What's Really **Real** In the Dairy Case?

Looks can be deceiving, even in the dairy case. Not everything you see there is **REAL**.

The number of imitation and substitute dairy products is staggering and can be confusing if a consumer doesn't know how to recognize a real dairy product. Being made from milk or another dairy food is what makes it a "REAL" dairy product. REAL product foods do not contain vegetable oil in any amount.

The label is the key to understanding. First, look for the REAL seal symbol, a stylized drop of milk encircling the word "REAL". It tells at a glance that the product is a real dairy product. However, not all real dairy products display the seal, so you may need to read the ingredient list to know for sure.

Real vs. Imitation

Imitation and substitute products are found interspersed with the real dairy foods in the dairy case. These products can look remarkably similar to real, but the similarity stops there. Differences in nutritive values, flavor, texture and cooking properties become very apparent when you use these products.

An **imitation** dairy product, as described by the Food and Drug Administration (FDA) looks like and is intended to replace the traditional counterpart, but is nutritionally inferior to it. A **substitute** food product resembles the traditional food, and also meets the FDA's definition of nutritional equivalency. Examples of imitation and substitute dairy prod-

ucts include: imitation cheeses, non-dairy chocolate drinks, non-dairy whipped toppings, sour cream substitutes and non-dairy frozen desserts.

Also, imitation and substitute foods have no legal standards of identity. Standards of identity were established by the FDA and some state governments to assure uniformity, value and wholesomeness. For example, standards of identity regulate such characteristics as the moisture content of cheese, the weight per gallon of ice cream and the milk fat content of cream.

Because there is no standard of identity for imitation or substitute products, ingredient composition may vary.

Why Choose REAL?

REAL dairy foods contribute significant amounts of several important nutrients, including 76 percent of the calcium in the American food supply. As a major food group, dairy products contribute the highest percentage of riboflavin and phosphorus to the food supply and the second highest percentage of protein. Imitation cheese, for example, might meet the FDA protein quality standards, but still may not match the protein quality or the vitamin and mineral content of real cheese.

Also, there is no substitute for the superior taste and texture of real dairy products, both for cooking and eating purposes. An imitation cheese may not have the same smooth melting qualities as real cheese, for example, and cakes made

with margarine will not have the flavor that butter provides.

New Products - Are They REAL?

In 1991, over 900 new products and line extensions were introduced by dairies nationwide. At first glance, one might question whether some of them are real. Again, the label is the key.

* Frozen desserts that look like ice cream, but aren't called ice cream, boast reduced fat and calories, low cholesterol. Are they REAL? They might be. Some of these products are real dairy products even though they don't meet the standards of identity for ice cream. Some, of course, will be imitation products, so read the label to be sure.

* Light counterparts for sour cream, cream cheese and Ricotta cheese tout reduced fat, calories and cholesterol. Check the label. Often skim milk has been used instead of whole milk or cream to help make these reductions. Such products are still REAL dairy products.

* Natural cheeses which contain less fat and fewer calories than their traditional counterparts are REAL, too. (Remember, imitation cheese will likely show vegetable oil as an ingredient.)

The list goes on - cordial-style milk drinks, flavored cold pack cheeses, microwaveable milk shakes. Many basic dairy products now offer consumers a choice - a REAL choice!

Always look for the "REAL" Seal on packaging; it's your assurance of quality dairy products.



FOOD PRODUCTS REMAIN A GOOD BUY

A consumer food price survey completed by the American Farm Bureau Federation shows remarkable stability in prices paid for food in grocery stores across the country.

This year's first quarterly survey of 16 popular food items, priced in 53 locations covering 20 states, revealed an average market basket price of \$29.58. That is just 2 cents higher than the same items in the fourth quarter of 1991, and \$1.37 lower than the first quarter of last year.

The items, studied on a quarterly basis since 1989, include ground chuck, sirloin tip roast, pork chops, bacon, whole fryers, eggs, whole milk, cheddar cheese, red Delicious Apples, Russet Potatoes, Cheerios, 5 pounds of flour, white bread, Mazola Oil, Crisco Oil and Kraft Mayonnaise.

The average price of the market basket stayed almost constant from \$28.49 to \$29.29 in the four quarters of 1989 and went only to a high of \$31.15 in the third quarter of 1990, indicating that retail food prices have remained quite stable over the three-year period and into the beginning of the fourth year.

"Naturally prices vary from state to state and even within states," said Marsha Purcell, AFBF director of program development. "But, the survey clearly shows that food remains a good buy."

With a total average market basket price almost the same as the fourth quarter of last year, most products are nearly the same in price. Ground chuck was 8

cents a pound cheaper, pork chops were up a dime, fryers were a nickel a pound less and eggs were down 12 cents a dozen.

Milk was 6 cents a gallon higher and cheese was down 7 cents a pound, on the average. Apples and potatoes were slightly higher and Cheerios remained about the same as in the previous quarter.

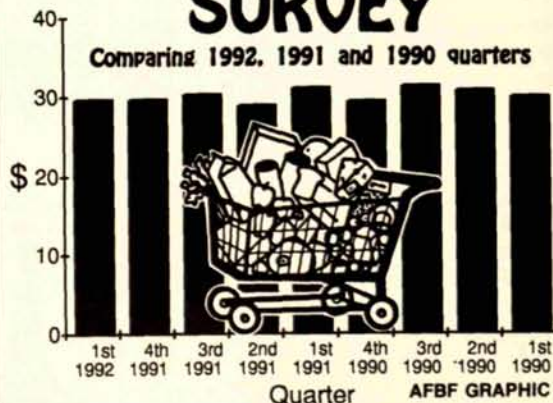
Flour increased 8 cents per pound and white bread, 8 cents a loaf. Mazola oil was up a penny and Crisco down 9 cents. Mayonnaise was unchanged at \$2.22, which also was the price of that product a year earlier.

Compared to the first quarter of last year, meats were slightly lower, except for pork chops, which went up 3 cents a pound. Eggs were down, milk was 11 cents a gallon higher and cheese was down 9 cents a pound.

Potatoes were cheaper by almost 25 cents a pound. Cereal remained constant in price, but flour and bread were both higher. The cooking oils were substantially cheaper than a year ago.

Market Basket SURVEY

Comparing 1992, 1991 and 1990 quarters





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Orlando, Florida



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- Pleasure Island
- Opryland



To take advantage of these discounts, call or write your county Farm Bureau office TODAY!



Kings Island



TERRORISM

Animal Rights Terrorists Strike MSU's Mink Research Center

Animal rights terrorist activity. You read about it, you hear about it, you talk about it, but it never happens here in Michigan.

That was until Friday, Feb. 28, when a fire was discovered in room 132 Anthony Hall on the Michigan State University campus. The early-morning fire totally destroyed the office of Dr. Richard Aulerich and substantially damaged three other interior offices, which serve as the center for mink research at MSU.

The East Lansing Fire Department quickly responded to the fire, preventing further damage to the rest of Anthony Hall. Damage to the offices in room 132 was estimated at between \$50,000 and \$100,000.

A breaking and entering also took place at the mink research farm located on Jolly Road east of the main campus. The building was forcibly entered by tearing off roofing and climbing through the attic, and entering through a ceiling access door. A substance determined to be sulfuric acid was poured on all the mechanical equipment in the research facility, according to MSU's Department of Public Safety (DPS).

"From what we've seen it appears that there was some level of planning that went into this," said DPS's Dr. Robert Benson. "It wasn't just an amateur situation where someone just walked off the street and did this; it involved a fairly high degree of sophistication."

The walls of the building were also spray painted with the initials "A.L.F." which stands for the Animal Liberation Front, and a threat that "the otters are next." Destruction was confined to the office, feed mixing area, and feed storage areas of the research facility, with damage estimated at \$20,000 to \$25,000. Mink cages were opened, but fortunately none of the mink escaped.

In the words of Dr. Fred Poston, Vice Provost of the University and Dean of the College of Agriculture and Natural Resources, the activity was not only costly but senseless, since mink are extremely sensitive to abnormal activity, making them easily prone to stress and even death in severe cases.

According to Poston, the research at MSU focused on nutrition and the decline of the natural mink population. "This terrorist activity was aimed toward a long-standing research program largely geared toward helping the mink, not destroying them," said Poston. "If the goal is to help animals, it's a loss to me why one would target a research program geared toward protecting mink populations in the wild."

According to the Animal Science Department Chairman Dr. Maynard Hogberg, the mink research also assisted in projecting impact to human beings in various water-quality studies because of the mink's natural sensitivity levels to naturally occurring toxins and micro-toxins.

"Look at some of the work done with the EPA several years ago, and you'll find a lot of the water quality standards in the United States today were the result of the work done with this research unit," Hogberg said.



MSU workers, dressed in protective gear, spent two days cleaning up damage caused by the sulfuric acid that was poured over the feeding equipment at the mink research facility, causing an estimated \$25,000 damage.

According to Hogberg, a current research project involving a strain of genetically deaf mink was part of a joint research project at the University of Michigan to use the animals as a model to study deafness in humans. "This is going to be a setback to a number of current projects," he said.

Hogberg was visibly upset by the misguided efforts of the terrorist activities, comparing their apparent lack of concern over the safety of the mink and human life against Dr. Aulerich's concern. "When the farm manager called to inform us of the damage at the research facility, Dr. Aulerich's first question was 'Were any of the animals hurt?'" related Hogberg. "I think that shows the sensitivity he has for the animals themselves."

Efforts to protect against similar occurrences in the future will be difficult, says Poston, since MSU is considered a public institution. "We keep these facilities open to the public," explained Poston. "It would not be difficult for somebody that was planning to do this type of thing to literally walk through the facility."

According to DPS's Lt. William Wardwell, who's heading the investigation along with the Michigan State Police and the Federal Bureau of Investigations, the individuals responsible will be facing at least three felony counts for arson, breaking and entering, and malicious destruction, as well as possible federal charges, since the group responsible was believed to have crossed state lines.

Legislation pending at the federal level would make such incidences a federal offense for breaking into any animal research facilities, and according to MFB President Jack Larue, is needed to curb future animal rights terrorists activities.

"Successful passage of this legislation will send a clear signal to A.L.F. and so-called legal animal rights groups that serve as their mouth piece," said Larue. "When those responsible for this senseless criminal activity are caught, full restitution to the University and taxpayers should be made, and maximum criminal charges filed to remove these activist that are a threat to society."

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	120 mg	100's	49.50	15.95		10 mEq	100's	13.50	7.95
Clinoril Tabs	150 mg	100's	73.50	49.95	Motrin Tabs	400 mg	100's	15.50	7.95
	200 mg	100's	89.25	59.95		600 mg	100's	20.25	10.95
Coumadin Tabs	2 mg	100's	39.95			800 mg	100's	24.75	15.95
	2.5 mg	100's	41.25		Ortho-Novum Tabs	1-35	21 or 28	19.50	8.95
	5 mg	100's	41.75			1-50	21 or 28	19.50	8.95
	7.5 mg	100's	63.75		Persantine Tabs	25 mg	100's	25.95	5.95
	10 mg	100's	65.75			50 mg	100's	39.25	7.95
E.E.S. Tabs	400 mg	100's	19.95	15.25		75 mg	100's	51.95	9.95
Entex LA Tabs		100's	49.95	12.95	Premarin Tabs	0.3 mg	100's	20.25	10.95
Eryc Caps	250 mg	100's	28.50	16.95		0.625mg	100's	26.95	13.95
Flexeril Tabs	10 mg	100's	74.25	50.95		1.25 mg	100's	35.75	15.95
Inderal Tabs	10 mg	100's	20.75	5.95		2.5 mg	100's	61.95	29.95
	20 mg	100's	28.25	6.95	Proventil Tabs	2 mg	100's	30.75	10.95
	40 mg	100's	35.95	7.95		4 mg	100's	43.25	15.95
	60 mg	100's	47.75	9.95	Provera Tabs	10 mg	100's	46.75	16.95
	80 mg	100's	53.75	10.95	Slow-K Tabs		100's	16.75	8.95
Isoptin Tabs	80 mg	100's	37.25	12.95	Synthroid Tabs	0.025 mg	100's	13.25	6.95
	120 mg	100's	48.75	15.95		0.05 mg	100's	14.50	7.95
Lanoxin Tabs	0.125mg	100's	9.75	2.95		0.1 mg	100's	16.25	3.95
	0.25mg	100's	9.75	2.95		0.15 mg	100's	18.95	4.95
Lasix Tabs	20 mg	100's	13.75	5.95		0.2 mg	100's	21.75	5.50
	40 mg	100's	17.75	6.95		0.3 mg	100's	28.50	5.95
	80 mg	100's	28.50	11.95	Tegretol Tabs	200 mg	100's	29.95	13.95
Maxzide Tabs		100's	55.95	10.95	Theo-Dur SA Tabs	100 mg	100's	14.50	8.95
						200 mg	100's	19.25	10.95

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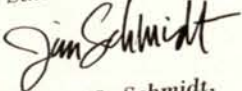
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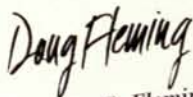
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Sincerely,



James L. Schmidt,
Illinois Agricultural Assoc.
Director
IFB Travel Program



Douglas E. Fleming,
Michigan Farm Bureau
Manager
Field Operations Division

Alaska

July 16-27, 1992

Experience the ultimate in service, cuisine, and hospitality as we tour Alaska on the Pacific Princess - the Love Boat, Alaska, U.S.A. offers you glittering fjords, dazzling peaks, incredible glaciers, and the American Frontier. After our inside passage cruise, visit the land of the Midnight Sun and home of the Eskimo culture on our Princess land package, featuring the luxury full-dome rail transportation of the Midnight Sun Express. This five-day package takes us through the interior wilderness of Alaska to Anchorage, Denali Park and Fairbanks.

Our package includes round trip air from Chicago, 7-day/4-night land itinerary including tours, transfers, and accommodations. Also included are port charges, prepaid on-board gratuities, a welcome of fresh cut flowers, and a bottle of fine champagne. All this for as low as \$3,199.

The Alps of Switzerland & Austria

October 1-9, 1992

Come join us as we visit two of the prettiest and most picturesque countries in Central Europe. Experience the charm and beauty of Salzburg, Munich, and Octoberfest, Oberammergau, the Linderhöf Castle, Lichtenstein and much, much more.

Our package includes round trip air service, deluxe motor coach transportation, hotel accommodations, European-style buffet breakfast, and a welcome dinner, all for \$1,253 per person.

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Our cruise package includes 25% discount on all cabins, all meals and entertainment, free air transportation from the U.S., \$25 Bar/Boutique credit, group cocktail party, 1 bottle of wine per cabin, plus prepaid, on-board tip and gratuities. Cabin prices begin as low as \$3,374.

Canadian Rockies/ Calgary Stampede

July 1-12, 1992

This unforgettable, 12-day tour of the Canadian Rockies will not only visit the great and growing cities of the northwest and majestic beauty of the Rockies, but also includes unique features designed to give it special appeal. Special attractions include the Calgary Stampede Celebration - rodeo, chuckwagon races, state show spectacular, a ride on a giant snowmobile on Athabasco Glacier, a gondola ride to the top of Sulphur Mountain, and overnight stays at the beautiful Lake Louise Chateau and Banff Springs Hotel.

Our package includes round trip jet transportation from Chicago, first class or deluxe hotel accommodations, 20 meals, all sightseeing and admissions, and a professional guide. Member price is \$2,449 and nonmember price is \$2,469.

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Rus Gardner

1991 Distinguished Sales Award



Oakland County agent Rus Gardner continues to break company records with his outstanding sales and service. For the fifth year in a row, he has earned the Distinguished Sales Award, recognizing him as our top agent in the state. He has reached levels of production that are unmatched in company history.

Charlie Elzinga

1991 Elton R. Smith Award



Charlie Elzinga, an agent in Charlevoix for over 30 years, received this important award for his dedication to his profession, his community, and Michigan Farm Bureau. The annual award, named in honor of past MFB president, Elton Smith, recognizes Charlie as a highly-regarded leader in Farm Bureau and the community.

In each generation, there are men and women who strive for excellence. Farm Bureau Insurance is fortunate to have so many of them, including the four pictured here.

They are recipients of four major awards presented at the company's 1992 sales convention, held recently in Traverse City.

These four, and our more than 400 other agents in Michigan, are a big reason why Farm Bureau Insurance is a leading insurer throughout the state.

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Tom Carter, ChFC, CLU

1991 Distinguished Management Award



This prestigious award recognizes Tom Carter as our top agency manager in Michigan. Tom, who manages 21 agents in Saginaw, Bay, and Arenac Counties, also earned this top award in 1982 and 1987. Tom's quality management is reflected by his agency's outstanding sales and service, and his development of new agents.

Margaret Dziadziola

1991 Michigan Farm Bureau Membership Award



Wayne County agent Margaret Dziadziola earned this major award for her outstanding membership work last year. The award honors the agent who produced the most new Michigan Farm Bureau memberships during the past year. As our top membership producer of 1991, Margaret signed up 203 new MFB members last year.