

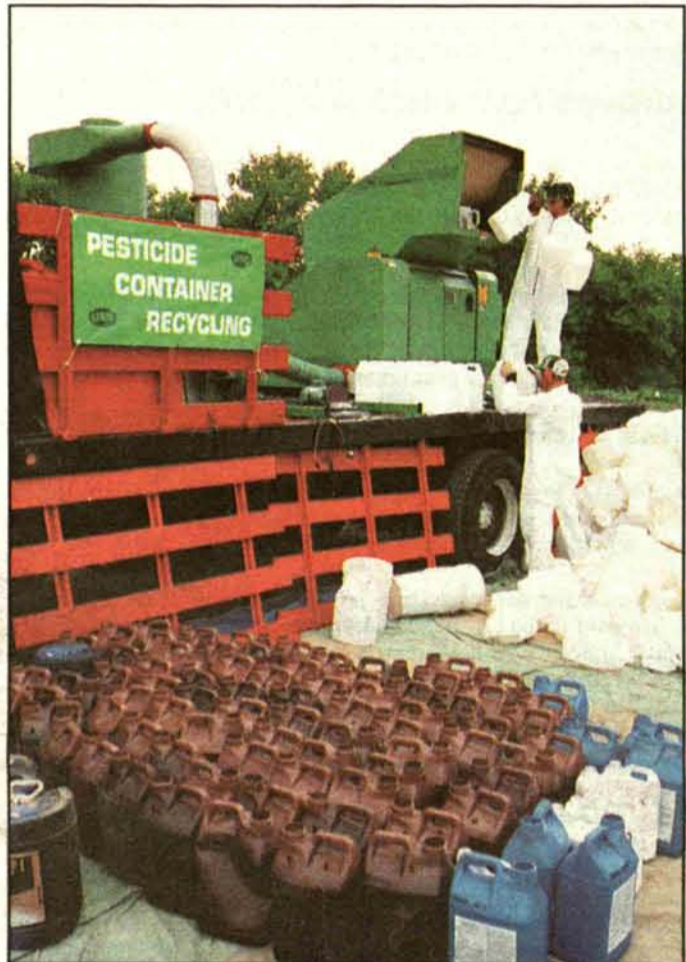
MICHIGAN FARM NEWS



May 30, 1993

Vol. 70, No. 10

Pesticide Container Recycling an Option Again in Michigan



With the success and experience of a pilot pesticide container recycling program in 1992 behind them, Grower Service Inc., Michigan Department of Agriculture, and the Michigan Agricultural Business Association are sponsoring a vastly expanded container recycling program free of charge and open to all Michigan farmers during the 1993 growing season.

According to Greg Vicary, Grower Service's regulatory services coordinator, last year's list of 16 sites has been expanded to 62 sites. "Last year, we ground close to 22,000 containers," he said. "This year, I would expect to grind 150,000 to 200,000 containers that will be reused instead of being burned or buried into a landfill somewhere. We estimate that there

were 600,000 such containers utilized in Michigan last year."

According to Vicary, interested farmers must follow three simple guidelines: make sure the containers are triple rinsed and clean; all paper and labels are removed; and that caps and foil seals are removed. Containers must pass inspection by an MDA inspector before it will be allowed into the recycling program, which can be a problem in some cases.

The overall rejection rate last year was just under 14 percent, according to Vicary. Several collection sites had rejection rates below 2 percent while some western locations had rejection rates of 30 to 40 percent.

"We had a few sites that were heavily oriented toward fruit fungicidal materials, which have stickers or bonding agents built into them to help adherence to the leaves," Vicary explained. "Those containers tend to be real hard to get clean if they're not cleaned properly right away. Generally though, we typically saw rejection rates of 6 or 7 percent in most cases."

According to MDA's Dr. Chuck Cabbage, inspectors will be on hand for the actual collection dates to verify that those containers have been adequately cleaned and prepped. "Our field staff will be looking for chemical residues, aluminum foil and

caps," he said. "A sliver of foil in remanufactured plastic can actually result in a weak spot in the wall of the container."

A slight change in the program this year will require farmers to contact their closest participating location for exact collection dates and details. With just one grinder and a narrow window of opportunity, the portable grinder, owned and operated by Grower Service Inc., will be visiting two sites each day in many cases (see schedule on page page 11), necessitating that the collection actually takes place ahead of the grind date for better utilization of equipment, personnel and time.

"I've got a capacity of about 1,200 to 1,500 containers an hour with our equipment that's been mounted to a flatbed truck," said Vicary. "Hopefully, we can pull into a site, set up and grind, and then break camp and move to the next location in the same day. That way we'll be able to keep our equipment mobile and yet cover all of the territory over a 90-day time frame."

Vicary explained that once the pesticide containers are ground, they're sent to a plant near St. Joseph, Mo., to be used either as stock for recycled containers, plastic products such as fence posts and possibly drain pipes, or as a fuel in cement kiln operations. **See Page 11 For More Details**

Estimating Alfalfa Yield Loss Due to Winterkill

Oran Hesterman, MSU Crop and Soil Science Department

Alfalfa injury due to crown rot and other conditions related to water-logged fields has been reported at several locations in central and northern lower Michigan. Although a definitive assessment of the problem has not been made, observations of the problem so far include:

1) Seedings made in 1992 seem to be less affected by the winter injury than seedings made in previous years.

(2) Any stress (e.g. fall harvesting) on the stand seems to have predisposed those plants to more injury.

(3) Stand loss seems to be worse on poorly drained fields and heavier soils. The observation that in some fields stand loss is clearly confined to areas between tile lines confirms that the plant injury is associated with excess water.

An early and reliable estimate of yield loss may help you plan to meet forage needs. Estimates of yield losses are also important when you are trying to decide whether to maintain, reseed, or plant your alfalfa field to another crop.

To estimate yield losses, you need to know: (1) typical or long term average yield for that field, (2) stand age, and (3) viable plant population.

Your own farm records are your best source of information on typical or on term average yield and stand age. Viable plant population, however, can only be determined by a hands-on inspection and count. Although the inspection procedure may seem tedious, the only difficult part is determining whether plants are viable.

Viable plants are plants that are alive and healthy enough to produce forage throughout the season. To determine viability, split open a few crowns and roots. Viable plants have firm white roots while non-viable plants have decaying yellowish-brown to black roots. Some plants may have enough carbohydrate reserves in the crown to begin spring regrowth, but their roots are dead or will die before the end of the season. These plants are not viable.

See "Estimating Yield Loss....." continued on page 9

Kleinhardt Dairy Farm Tour Part of Lesson

Nearly 100 first graders from Clare Public Schools and St. Cecilia's School made a visit to the 120-cow dairy farm of Charles and Erma Kleinhardt as part of a class lesson on agriculture. The students learned where milk comes from, and how it reaches them in the form of various products.

The tour, sponsored by the Clare County Promotion and Education Committee and Kleinhardt Farms, included a tour of the dairy facilities, petting calves, a "dairy quiz" and last, but not least, a taste of the finished product in the form of ice cream cones.

The lesson was apparently a success. One first grader, who was eating his ice cream at the time, was heard saying, "Geez, without dairy cows we wouldn't be able to eat this stuff!"



A Publication of Michigan Farm Bureau
P.O. Box 30960, 7373 W. Saginaw Hwy., Lansing, MI 48909

2



State and Federal Tax Proposals - A Contrast in Philosophy

As this went to press, the House Ways and Means Committee approved the Clinton tax plan that will siphon hundreds of billions of dollars out of our economy. Although the committee approved a partial exemption from the BTU tax for on-farm use of diesel and gasoline, this in no way eases the damage that higher income and energy taxes will inflict on agriculture.

Federal tax increases reduce output and increase unemployment, ultimately reducing total revenues to the treasury and increasing the deficit. Farm Bureau will continue to oppose all federal tax increases and push for a freeze of all federal spending at this year's level.

Contrast the negative federal tax philosophy represented by the Clinton plan with the positive change in state tax policy represented by Proposal A. In pursuit of the nebulous objective of deficit reduction, the Clinton tax will massively increase taxes in order to fuel the federal spending machine. But Proposal A has a clear and achievable goal: to transfer some of the school finance burden away from property owners and toward a broader, more equitable state-wide base in order to create a stable, balanced source of school funding.

The Clinton tax plan is a tax increase, pure and simple, that provides no benefits to hardworking taxpayers. But Proposal A, by moving some of the responsibility for school finance onto the state sales tax, significantly cuts the high property taxes that unfairly burden Michigan property owners.

The change in school finance represented by the 2-cent sales tax increase creates a \$4,800 per pupil constitutional guarantee for every school child (for school districts with 18 mills). The funding formula will make school spending per pupil more equitable - a significant benefit for rural school districts. And the assessment cap will help Michigan citizens, especially those on fixed incomes, keep their homes and property.

The Clinton tax plan increases taxes and hurts the U.S. economy. Proposal A, on the other hand, will cut property taxes and pump more than \$1 billion into Michigan's economy this year to spur investment and create jobs. The more-balanced tax structure created by Proposal A will make Michigan more competitive with other states and make Michigan a better place in which to live, work and invest.

Statewide turnout for the June 2 vote on Proposal A is expected to be light. Farm Bureau members, by going to the polls in force and voting "yes" on Proposal A, will have an historic opportunity to make a positive change for our school children and the state's economy. I urge you to take your responsibility seriously.

Jack Laurie
Jack Laurie, President
Michigan Farm Bureau

New Things are Happening at Morton Buildings!



Morton Buildings is leading the industry with:

- > New structural designs
- > New structural capabilities
- > New color combinations
- > New building styles
- > New exterior applications
- > New interior options
- > New sliding door technology
- > New gutter systems
- > New informative video tapes
- > New corrosion protection
- ✓ 50-year column and snow-load protection (with no weight limit)
- ✓ 20-year protection against red rust (including acid rain)
- ✓ 10-year wind-load protection on AlumaSteel® sliding doors (with no weight limit)
- ✓ 5-year wind-load protection on complete building (with no weight limit)

Call your local office today!

Adrian, MI (517) 263-0541
Brown City, MI (313) 346-2702
Kalkaska, MI (616) 258-2580
Rockford, MI (616) 874-6400
Three Rivers, MI (616) 279-5271

800-447-7436
MORTON BUILDINGS

In Brief...

Clinton Tax Plan Advances

The House Ways and Means Committee remained in lock-step with the administration advancing largely intact the Clinton tax plan to raise about \$246 billion by 1998. Michigan U.S. Rep. Dave Camp (R-Midland), who serves on the House Ways and Means Committee, voted against the "largest tax and spend plan in U.S. history," saying the last such increase resulted in a \$1.58 spending increase for every additional \$1 of new taxes.

The committee-approved measure would hit corporations and high salaried households hardest, but it included the energy tax which hits virtually everybody and raises to 85 percent the share of Social Security benefits taxable to all but the poorest recipients.

Largely exempt from the tax will be diesel fuel and gasoline used on farms and for other non-highway purposes, but the committee backed down from an earlier promise of exemptions for ethanol and other alcohol-based fuel additives. They pared the new tax on fuel used on the nation's waterways by half to 50 cents a gallon and shifted the burden of the BTU tax from producers to consumers by the way it will be collected.

House Panel Approves Fast-track Authority

The House Ways and Means Committee has given its stamp of approval to President Clinton's request for fast-track negotiating authority considered essential to a successful conclusion of the world trade negotiations under the General Agreement on Tariffs and Trade.

Under fast-track, Congress is permitted to vote a trade pact up or down but cannot make amendments. The present fast-track authority is scheduled to expire next month and proponents say other countries could not be persuaded to make trade agreements, if there was likelihood that Congress would amend the pact during approval.

France Still Against U.S.-EC Farm Agreement

France surprised no one with its announced opposition to the so-called Blair House agreement hammered out last November, which would have forced EC countries to cut back subsidized agricultural production.

U.S. Ag Secretary Mike Espy said the administration is "still studying this" and is not prepared to comment on it. He said if the EC persisted in its rejection of the farm pact, oilseed producers in the United States might have reason to renew their formal complaint that would be the first step to forcing sanctions against EC farm goods to compensate for losses to U.S. producers of soybeans and other oilseeds. France's continued failure to agree to the U.S.-EC pact can only further delay conclusion of the Uruguay round of trade negotiations.

Michigan Wheat Crop Down

The 1993 winter wheat crop in Michigan is expected to total 30.8 million bushels, down 13 percent from last year, according to the Federal/State Michigan Agricultural Statistics Service. Harvested acres are forecast at 570,000 acres, down 10 percent from last year. The late harvest of many 1992 crops, combined with wet weather, hampered fall seeding activities. Yields are expected to average 54 bushels per acre, down 2 bushels from last year. The forecast is based on expected yields reported by farmers as of May 1.

Sufficient snow cover, followed by a wet and cool spring, has left the wheat crop in good condition. Reports of winterkill and drownouts were scattered. Signs of nitrogen deficiencies were seen in those areas where wet soils prevented field activities.

The U.S. winter wheat production, as of May 1, is forecast at nearly 1.81 billion bushels, up 13 percent from 1992. Yield prospects average 40.8 bushels per acre, up 2.5 bushels from last year. Area for harvest as grain is forecast at 44.3 million acres, up 6 percent from 1992. Conditions are generally good but the crop is late in developing. White wheat production for 1992 is forecast at 246 million bushels, up 15 percent from 1992.

Foreign Ownership of U.S. Farmland Down

USDA figures show foreign interests owned 14.5 million acres of privately-owned U.S. farm land as of Dec. 31, 1992, down 2 percent from a year earlier, according to *Knight Ridder News*.

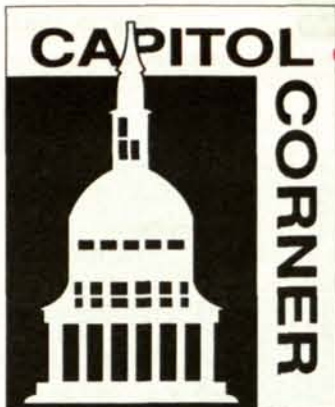
In a report on its annual survey, USDA also said Canadian investors represent the largest portion of foreign ownership, or about 25 percent of the total. Japanese investors accounted for about 3 percent of the total, USDA said. Foreign holdings represent only slightly more than 1 percent of all privately-owned U.S. farm land, USDA said. That percentage has been relatively unchanged since 1981.

Forest land accounts for 49 percent of all foreign-owned acreage, followed by crop land, 17 percent; pasture and other agricultural land, 31 percent; and non-agricultural land, 3 percent. The largest foreign-owned acreage of any state is located in Maine and is mostly timberland, USDA said.

The MICHIGAN FARM NEWS (ISSN:0743-9962) is published semi-monthly except in the months of November, December, June, and July when only one issue is printed, as a service to regular members, by Michigan Farm Bureau, 7373 West Saginaw Highway, Lansing, MI 48917. Member subscription price of \$1.50 included in annual dues of Michigan Farm Bureau regular members. Additional subscription fees required for mailing Michigan Farm News to non-members and outside the continental U.S.A. Second-Class Postage paid at Lansing, MI and additional mailing offices. Letters to the editor and statewide news articles should be sent to: Editor, Michigan Farm News, P.O. Box 30960, Lansing, MI 48909-8460. POSTMASTER: Send address changes to: Michigan Farm News, P.O. Box 30960, Lansing, MI 48909-8460.

Editorial: Dennis Rudat, Editor and Business Manager. Staff Contributors: Mike Rogers; Connie Turbin; Donna Wilber; Henry Huisjen.

Officers: President, Jack Laurie, Cass City; Vice President, Wayne Wood, Marlette; Administrative Director, Chuck Burkett; Treasurer and Chief Financial Officer, Tom Parker; Secretary, William S. Wilkinson. Directors: District 1, Jim Miller, Coloma; District 2, Blaine VanSickle, Marshall; District 3, Diane Horning, Manchester; District 4, Tom Guthrie, Delton; District 5, Mark Smuts, Charlotte; District 6, Wayne Wood, Marlette; District 7, Larry Snider, Hart; District 8, Richard Leach, Saginaw; District 9, Joshua Wunsch, Traverse City; District 10, Margaret Kartes, West Branch; District 11, Robert Wahmhoff, Baraga. At-Large: Douglas Darling, Maybee; Jack Laurie, Cass City; Faye Adam, Snover; Jan Vosburg, Climax. Promotion and Education, Paul Swartzendruber, Pigeon; Young Farmers, Kurt Inman, Sturgis.



Wetlands

MFB Position:
Supported the Bond amendment to give the Soil Conservation Service the authority to designate wetlands on agricultural land.

MFB Contact:
Al Almy, Ext. 2040

During discussion by the U.S. Senate on legislation to make the Environmental Protection Agency a cabinet-level agency, two wetlands amendments were offered.

The first amendment was offered by Sen. Kit Bond (R-Mo.) to give the Soil Conservation Service primary responsibility for designating wetlands on all agricultural land. Currently, four different federal agencies (Soil Conservation Service, Fish and Wildlife Service, Environmental Protection Agency, and Army Corps of Engineers) are involved in designating wetlands, creating considerable legal and regulatory jeopardy for landowners.

The amendment offered by Sen. Bond was amended by Sen. Max Baucus (D-Mont.) to request a study by the Clinton administration of measures to provide for a single federal agency being responsible for wetland designations and making the Soil Conservation Service the federal agency responsible for designating wetlands on agricultural lands. The study would be completed in 90 days with the results and recommendations submitted to Congress. The Baucus amendment was approved by the Senate.

During debate on the amendments, Sen. Baucus, Chairman of the Environment and Public Works Committee responsible for reauthorizing the Clean Water Act in 1993, promised to consider the Bond amendment and include wetlands reform in the Clean Water Act reauthorization.

Adams Fruit Case Bill

MFB Position:
MFB supports H.R. 1999, since extending the July 6 expiration date would put agricultural employers on the same footing as all other employers.

Michigan Congressmen who have cosponsored H.R. 1999 are Dave Camp (R-Midland), Paul Henry (R-Grand Rapids), Peter Hoekstra (R-Holland), and Fred Upton (R-St. Joseph). If your Congressman has not cosponsored H.R. 1999, please ask them to do so.

MFB Contact:
Al Almy, Ext. 2040

The Adams Fruit Case involves a group of migrant Florida farmworkers who were injured in an accident while driving from a farm labor camp to the field where they were to perform work. The injured farmworkers received benefits under Florida's Workers' Compensation Act. The farmworkers then filed suit in federal court claiming they should also be able to recover damages under the motor vehicle safety provisions of the Migrant and Seasonal Agricultural Worker Protection Act (MSWPA).

The federal courts addressed the issue of state Workers' Compensation laws being the exclusive remedy for injuries incurred on the job. Ultimately, the U.S. Supreme Court ruled that if Congress had intended for state Workers' Compensation laws to be the exclusive remedy for injured workers covered by MSWPA, Congress should have included such a provision when writing the law.

At the end of the 1991-92 Congress, legislation was enacted reversing the Supreme Court ruling until July 6, 1993. H.R. 1999 would remove the July 6 expiration date and make permanent the exclusivity of Workers' Compensation for workers covered by MSWPA.

No-Fault Automobile Insurance Reform

MFB Position:
MFB supports H.B. 4156 (H-2) and is urging Michigan legislators to make the bill effective immediately.

MFB Contact:
Darcy Cypher, Ext. 2048

In March, the Michigan House and Senate passed H.B. 4156, sponsored by Reps. Mike Griffin (D-Jackson) and Bill Martin (R-Battle Creek), reforming Michigan's No-Fault Automobile Insurance law. The bill contains numerous measures to curb lawsuits, control medical costs and reduce auto insurance premiums an average 16 percent. Even though the bill passed both chambers of the Legislature, a few members of the Senate voted against immediately implementing the reforms this year and against giving drivers insurance rate reductions.

Under the state Constitution, a bill becomes law 90 days after the last day of the year in which it is passed, unless both legislative chambers vote to make it effective immediately. A 2/3 majority - 26 votes in the Senate are needed to make this legislation effective immediately. Immediate effect is granted to more than 90 percent of all bills passed, and to virtually all important bills.

On May 13, the Senate voted for a second time and failed, by a vote of 21/14, to make auto insurance reforms effective immediately. The Senate is expected to hold the bill and work to obtain the 26 votes needed to make auto insurance reforms effective immediately. Every day the Legislature delays, costs Michigan motorists about \$1.7 million in higher auto insurance premiums.

Unpaved Road 40 MPH Speed Limit

MFB Position:
MFB is opposed to the legislation (see list of reasons at right).

MFB Contact:
Darcy Cypher, Ext. 2048

S.B. 104, sponsored by Sen. Gilbert DiNello (R-Clinton Twp.), establishes a 40 mile per hour speed limit on all unpaved roads in counties with populations greater than 400,000. Counties affected by this legislation are Wayne, Oakland, Macomb and Genesee.

Michigan's present law sets a maximum speed of 55 miles per hour unless otherwise posted. Local governments presently have the authority to post speed limits on roads under their jurisdiction. This legislation would allow four counties to lower speeds without posting speed limit signs. MFB opposes S.B. 104 for the following reasons:

- Creating a state law to enact speed limits in four counties which already have the authority to limit speeds is unnecessary.
- With limited law enforcement resources, it is questionable whether this law can be adequately enforced.
- Altering the standard state speed law for specific counties, without posting of speed signs, would require that all drivers know specific speed laws within a county (crossing unmarked county lines could cause drivers to unknowingly violate the speed law).

Michigan Farm Bureau Members: Remember to Vote Yes on Proposal A, June 2

Understanding the Impact of Proposal A

What Does Proposal A Do?

- Rolls back 1993 assessment increases to 3 percent -- throws away current property assessment.
- Limits future assessment increases to the rate of inflation or 5 percent, whichever is less.
- Cuts school operating millage to 18-27 mills (caps operating millage at 27 mills).
- Creates a \$4,800 per pupil guarantee for every child.
- Constitutionally dedicates all lottery money to education.
- Increases Michigan's sales tax by 2-cents -- from 4 percent to 6 percent.
- Locks the 2-cent sales tax increase and lottery funding for education into the Michigan Constitution.

Benefits for Students and Schools

- Gives children a greater educational opportunity.

- Makes K-12 school spending per pupil more equal.
- Reduces school funding reliance on property taxes.
- Creates a stable and balanced source of school funding.

Benefits for Taxpayers

- Property taxes are cut significantly, four out of every five districts reduced by 10 mills or more.
- Assessment cap helps people, especially those on fixed incomes, keep their homes.

Benefits to Michigan

- Makes Michigan a better place to live, work, go to school, and raise a family.
- Creates a balanced tax structure that helps Michigan be more competitive with other states.
- Pumps more than \$1 billion into Michigan's economy this year to spur investment and create jobs.

Proposal A Ballot Language

A PROPOSAL TO LIMIT ANNUAL INCREASES IN ALL PROPERTY TAX ASSESSMENTS, REDUCE MAXIMUM SCHOOL OPERATING TAXES, INCREASE THE STATE SALES TAX AND USE TAX RATES FROM 4 PERCENT TO 6 PERCENT, CONSTITUTIONALLY DEDICATE FUNDS FOR LOCAL SCHOOLS AND SET A PER-PUPIL FUNDING GUARANTEE.

The proposed constitutional amendment would:
1.) Limit for each property parcel (excluding new construction) annual assessment increases to 5 percent or the rate of inflation, whichever is less. When property is sold or transferred, adjust assessment according to current market value.

2.) Reduce maximum school operating taxes to 18 non-voted mills. Permit districts to levy up to nine additional voted mills.

3.) Reduce the 50-mill maximum property tax limit to 40 mills.

4. Increase the state sales and use tax rates to 6 percent. Dedicate this additional revenue and lottery proceeds to schools.

5. Establish a minimum state/local per pupil funding guarantee, annually adjusted for revenue changes. Provide a minimum 3 percent per-pupil funding increase in 1993-94. Should this proposal be adopted?

- Yes
- No

30-Day Forecast - Warmer and Drier Than Normal

4

Weather

Abnormally warm and dry weather developed in early May nearly statewide, with many sites breaking daily maximum temperature records. The weather finally allowed fieldwork and spring planting to begin in earnest. The cause of the weather break was a nearly stationary trough in the jetstream to our west which brought an abundant supply of warm air northward into the Great Lakes region on consistent southerly winds. This feature also was responsible for the persistent heavy rain and delayed corn planting to near record dates, especially in Iowa, Missouri, and southern Minnesota.

While a recent shift of the jetstream to a more northern direction has at least temporarily slowed growth and development of most crops and insects (and even brought some late season frost and freezing temperatures to some parts of the state), the latest National Weather Service 30-day outlook for mid-May through mid-June calls for conditions similar to those early in the month, with temperatures expected to be above normal and precipitation remaining below normal.

While this outlook bodes well for a speedy continuation and completion of spring planting, some areas may find topsoils becoming too dry for germination and establishment of some crops.

4/15/93 to 5/15/93	Temperature		Growing Degree Days		Precipitation	
	Observed Mean	Dev. From Normal	Actual Accum.	Normal Accum.	Actual (inch.)	Normal (inch.)
Alpena	48.6	+ 2.0	143	141	1.91	2.77
Bad Axe	50.4	0.0	178	213	3.56	2.82
Detroit	57.2	+ 4.0	309	247	1.38	3.19
Escanaba	46.2	+ 1.4	73	68	4.37	2.89
Flint	55.2	+ 3.3	266	247	3.07	3.19
Grand Rapids	54.9	+ 2.6	255	273	3.83	3.42
Houghton	45.3	+ 1.6	94	126	2.87	2.80
Houghton Lake	51.6	+ 2.1	203	141	2.66	2.77
Jackson	55.3	+ 2.0	271	267	1.47	3.32
Lansing	54.9	+ 2.6	262	267	4.41	3.32
Marquette	45.9	+ 2.2	130	126	3.52	2.80
Muskegon	54.3	+ 3.1	251	200	3.09	3.09
Pellston	48.0	+ 1.6	152	154	2.20	2.75
Saginaw	53.8	+ 2.2	212	213	2.62	2.82
Sault Ste. Marie	45.6	+ 1.3	92	68	3.19	2.89
South Bend	57.6	+ 3.2	319	273	3.35	3.42
Traverse City	51.8	+ 3.8	196	154	1.66	2.75
Vestaburg	52.2	+ 0.4	210	218	3.02	3.28

Observed and growing degree day totals are accumulated from March 1. Normals are based on district averages. Jeff Andresen, Ag Meteorologist, MSU

Planting Progress Reports - Making Up Lost Time!

Michigan

Field Crops - Warmer and drier weather allowed many farmers to finally get in the fields at a rapid pace. Corn acres planted as of May 17, jumped to 45 percent, up dramatically from 5 percent the previous week, according to the Michigan Agricultural Statistics Service.

Sugar beet planting also made significant headway, with 85 percent of the acres reported planted compared to just 10 percent the week before. Soybean and potato planting were at the five-year average of 20 percent and 55 percent respectively.

Fruit - Blueberries were blooming in the Southwest and were in the extended green tip stage in west central Michigan, with some winter damage reported. Early apple varieties had reached full bloom, with late varieties in the king bloom stage. Only a few scab infections had been reported thus far. Sweet cherries had advanced to petal fall, with a majority

of the tart cherries into full bloom. Peaches had reportedly suffered very little bud loss over the winter months, and grapes were sporting 1 to 4 inch shoots. Some grape berry moths had been trapped.

Vegetables - Warmer and drier temperatures had allowed vegetable planting to progress rapidly as well, with some minor wind damage to transplanted plants reported. Asparagus harvest was well underway advancing to 35 percent complete statewide. Oceana County had reported good quality and yield thus far. Early carrot plantings emerged as were onions. Celery and tomato transplantings were also reported very active.

Ohio

Ideal conditions allowed many farmers to catch up with five-year planting averages across the state, according to Ohio's Agricultural Statistics Service. As of May 17, 67 percent of the corn acreage had been planted, just short of the 68 percent five-year average. Soybeans were 30 percent planted, down from the 36 percent average. Wheat was reported mostly fair to good, with 14 percent reported excellent, 46 percent good, 30 percent fair, 8 percent poor, and 2 percent very poor.

Indiana

Nearly 42 percent of the state's corn acreage was planted during the week ending

May 17, according to the Indiana Agricultural Statistics Service, with 52 percent of the acreage now planted, down from the 75 percent five-year average. Soybeans were reported 17 percent planted compared to the five-year average of 37 percent. Winter wheat was rated 11 percent excellent, 78 percent good, 10 percent fair, and 1 percent poor.

Illinois

Corn planting had reached 41 percent as of May 17, up just 4 percent from the previous week, well behind the 86 percent five-year average, according to the Illinois Agricultural Statistics Service. Soybeans were 5 percent planted, down from the five-year average of 44 percent. Winter wheat crop development was lagging behind average, with the crop rated 3 percent excellent, 80 percent good, 17 percent fair.

Iowa

Corn planters haven't seen much action yet with continued wet conditions hampering field work activity, according to the Iowa Agricultural Statistics Service. Corn was reported as only 20 percent planted, down from the five year average of 84 percent. Soybeans were 5 percent planted, down from 33 percent average, with most planting activity occurring in the west-central portion of the state.

Michigan and Major Commodity Area Extended Weather Outlook

T - Temp.	5/30.....6/15	5/30.....7/31
P - Precip.	T.....P	T.....P
Michigan	A.....B	A.....B
W. Corn Belt	N.....N	B.....N
E. Corn Belt	N.....N	B.....N
Wint. Wheat Belt	N.....N	B.....N/A
Spr. Wheat Belt	A.....N	N.....N/B
Pac. NW Wheat	N.....N	N.....N
Delta	B.....N	B.....N
Southeast	B.....N	N/B.....N/A
San Joaquin	B.....N	A.....N

A-Above Average, B-Below Average, N-Normal, MA-Much Above, MB-Much Below, NP-No Precip. Source: National Weather Office



Serving Michigan Farm Families is Our Only Business

Since its beginning in 1971, Michigan Farm Radio Network's only objective has been to serve Michigan's farm families. This dedication to serve agriculture is shared by 29 local radio stations in Michigan. Through these stations, Michigan Farm Radio Network provides the latest in market analysis, weather and news to Farm Bureau members daily on the following stations:

Station	City	Frequency	Morning Farm	Noon Farm
WABJ	Adrian	1490	5:45 am	12:15 pm
WATZ	Alpena	1450	5:30 am	12:15 pm
WPZA	Ann Arbor	1050	6:15 am	12:05 pm
WLEW	Bad Axe	1340	6:30 am	12:50 pm
WHFB	Benton Harbor	1060	*	12:30 pm
WKYO	Caro	1360	6:15 am	12:45 pm
WTVB	Coldwater	1590	5:45 am	***
WDOW	Dowagiac	1440	6:15 am	12:15 pm
WACY	Fenton	1160	6:15 am	12:15 pm
WGHN	Grand Haven	1370/92.1	5:45 am	12:15 pm
WPLB	Greenville	1380	6:15 am	12:45 pm
WBCH	Hastings	1220	6:15 am	12:30 pm
WCSR	Hillsdale	1340	6:45 am	12:45 pm
WHTC	Holland	1450		12:15 pm
WKZO	Kalamazoo	590	**	12:15 pm
WJIM	Lansing	1250	5:05 am	12:15 pm
WWGZ	Lapeer	1530	*	12:15 pm
WNBY	Newberry	92.5		12:15 pm
WOAP	Owosso	1080	6:15 am	12:30 pm
WHAK	Rogers City	960	7:10 am	12:15 pm
WSJ	St. Johns	1580	6:15 am	12:15 pm
WMLM	St. Louis	1540	6:06 am	12:20 pm
WSGW	Saginaw	790	5:55 am	12:15 pm
WMIC	Sandusky	660	6:15 am	12:45 pm
WKZC	Scottville	95.9	5:45 am	12:30 pm
WCSY	South Haven	940		12:15 pm
WKJC	Tawas City	104.7		12:45 pm
WLKM	Three Rivers	1510/95.9	6:15 am	12:15 pm
WTCM	Traverse City	580	5:55 am	12:40 pm

* Station signs on at different times during the year. Morning farm times change with sign-on times.

** Station airs various farm reports between 5:50 and 6:20 pm.

*** Station airs various farm reports between 12:00 and 1:00 pm.

Some stations carry additional market reports throughout the market day.

ROOTS TO PROFITABILITY



INCREASE CORN YIELDS WITH ACA!!!

ACA CORN TEST PLOTS 1992 MICHIGAN

BORN TO RAISE CORN!

1992 Michigan grower test plots yielded an average of 8.9 more bushels of corn per acre where ACA was used.

ACA can be applied with your side dress, starter or preplant fertilizer program.

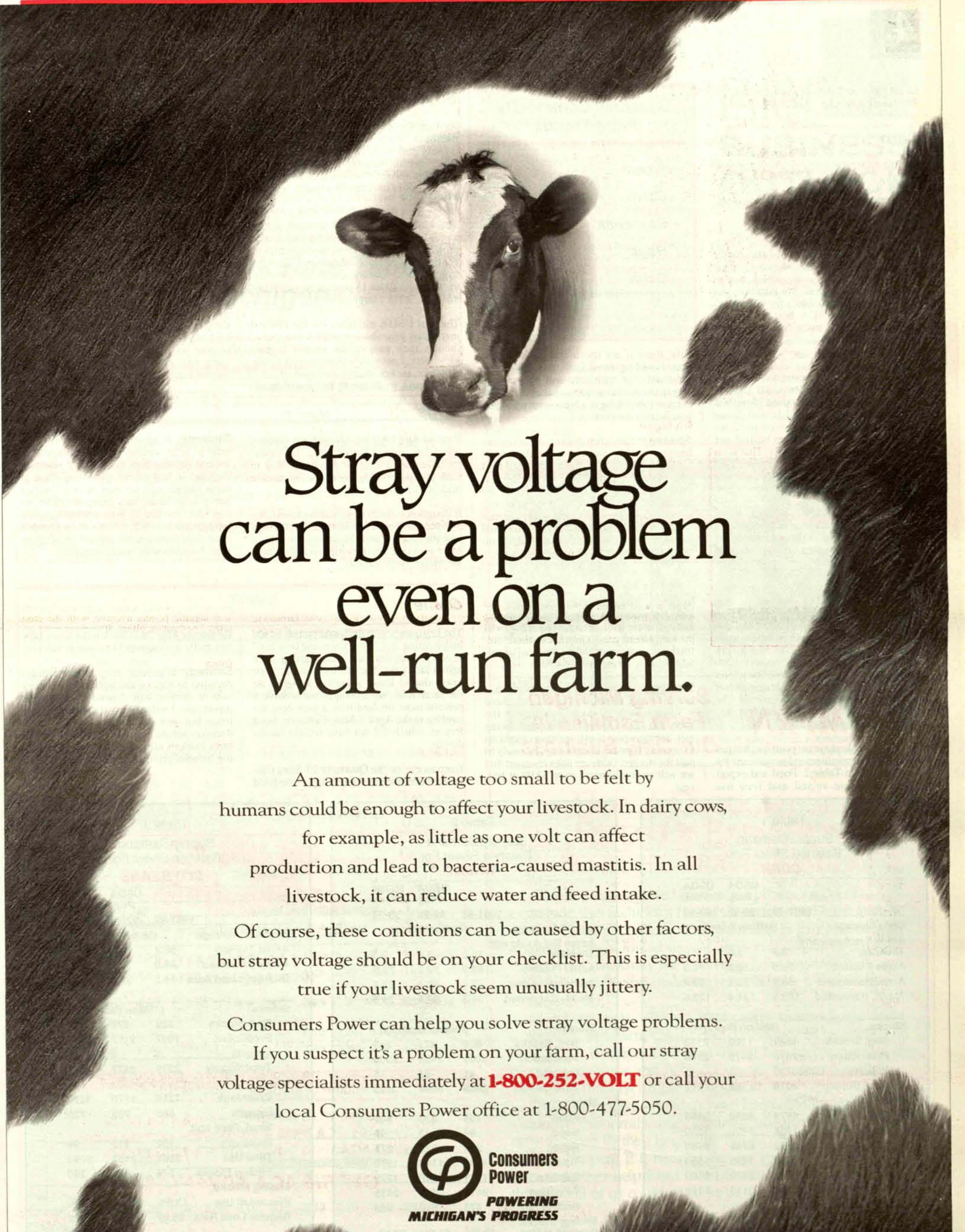
1992 ACA Yield Advantage = +8.9 bu./acre
1990-91 ACA Yield Advantage = +6.9 bu./acre
1989 ACA Yield Advantage = +7.3 bu./acre

GET THE ACA ADVANTAGE!

- Stronger more fibrous root system
- Plants are more vigorous and productive
- Easy and convenient to apply
- Enhanced spring root growth
- Enhanced drought tolerance
- Affordable and effective



Contact your local Clean Crop Dealer or call 1-800-292-2701 for additional information on THE ACA ADVANTAGE!



Stray voltage can be a problem even on a well-run farm.

An amount of voltage too small to be felt by humans could be enough to affect your livestock. In dairy cows, for example, as little as one volt can affect production and lead to bacteria-caused mastitis. In all livestock, it can reduce water and feed intake.

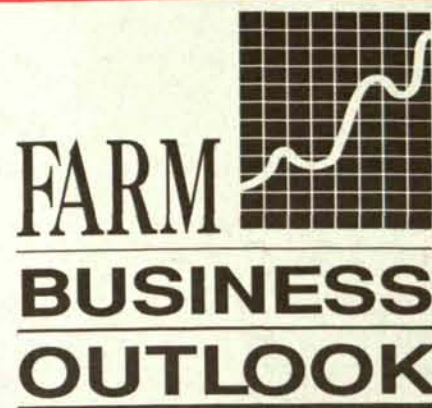
Of course, these conditions can be caused by other factors, but stray voltage should be on your checklist. This is especially true if your livestock seem unusually jittery.

Consumers Power can help you solve stray voltage problems.

If you suspect it's a problem on your farm, call our stray voltage specialists immediately at **1-800-252-VOLT** or call your local Consumers Power office at 1-800-477-5050.



Market Outlook...



Dr. Jim Hilker, Dept. of Agricultural Economics, MSU

Corn

Yes, the corn crop was and is being planted late. Does that mean we will have a poor yield? Not, necessarily. However, it probably raises the likelihood of a volatile summer with regard to prices.

The USDA released its latest supply/demand estimates on May 13 and, for the first time, released their estimates for the 1993/94 marketing year, which begins Sept. 1. Up to this time, the numbers you have been seeing in table 1 have been my projections. The USDA bottom line for 93/94 did not vary much from mine. But they are more optimistic than I on feed use and more negative on exports.

Going back to the 92/93 estimates on Table 1, the USDA made a substantial change. The export projection was raised 75 million bushel due to exports to date and future sales. In order to reach the new estimate, we will have to export 28 million bushels per week for the rest of the summer. That is on the low side of recent weekly exports. This lowers expected ending stocks, but they are still expected to be nearly 25 percent of use.

The basis has continued to tighten, which has helped slow the slide of cash relative to the slide we've seen in futures. While the market says it will pay to keep the corn until

Wheat

On May 13, the USDA released its first estimates of 1993 winter wheat production along with updated supply/demand estimates. The estimate came in below trade expectations, but it still looks like a very large crop at 1.808 billion bushels, just 200 million bushels above last year. The winter wheat projected yield of 40.8 bu./ac. is just one bushel lower than the 1984 record. The yield estimate for Michigan was 54 bu./ac., two bushels below last year.

The USDA made some net positive changes on the 92/93 supply/demand projections for wheat, shown in Table 2. Food and export projections were raised and feed use

Seasonal Commodity Price Trends

Wheat	↔
Corn	↔↑
Soybeans	↔
Hogs	↑?
Cattle	↓

Index: ↑ = Higher Prices; ↓ = Lower Prices; TP = Topping; BT = Bottoming; ? = Unsure

July, there is not much corn in Michigan that should be stored until then. If you still have old crop cash corn and you want to stay in the market to take a chance on a rally, consider switching to a basis contract where you deliver the corn now.

Strategy: New crop pricing decisions are harder (no big surprise). Fundamentals would suggest the average corn price next year around \$2.05. That would put new crop expectations under \$2.00. As of the middle of May, you could price new crop around \$2.15. However, prices this summer may be volatile. Set some trigger prices and be ready to act. Consider looking at December futures above \$2.45 to begin pricing.

lowered. Their first estimates for the 1993/94 wheat marketing year beginning June 1 were not pretty. The crop will probably be larger. Exports, and, therefore, total use, are projected to be smaller, all adding up to larger ending stocks.

Strategy: New crop prices are about what fundamentals would suggest. Again, there is some reason for some volatility in the short run, due to parts of the south being wet. Spring wheat plantings have caught up to normal. If prices do spike up, be ready to pull the trigger. Odds are not very good that we will see cash prices over \$3.00 at harvest.

Soybeans

As usual soybeans probably have the potential for the biggest surprises this summer. It is fairly easy to build either an optimistic or a pessimistic scenario. In the first USDA estimates for the 93/94 year seen in Table 3, they build a middle of the road to optimistic scenario.

The USDA made slight upward adjustments in the 92/93 crushing and export projections. As with corn, soybean exports continue to run way above last year and expectations. Ending stocks are now expected to be about 15 percent of use. While not tight, it isn't large either.

The first USDA estimates for the 1993/94 marketing year show a smaller crop, even though they project the second highest yield ever. Last year's phenomenal yields, however, are not likely to be repeated. They also expect total use to be down due to

Hogs

Year-to-date 1993 hog slaughter is running about 1.6 percent below 1992. However, we have seen a 2 to 12 percent pickup in year-to-year weekly slaughter since the middle of April.

If slaughter activity stays at these levels, the 5-6 percent projected in the March Hogs and Pigs Report will begin to look a little more accurate. But it is still a puzzle where the March hogs went to.

Cattle

The key question in the cattle market is: are they coming and, if so, when and how fast? Weekly slaughter has been running at or above last year, but production has been lower due to lower slaughter weights. At the same time, we are supposed to have 8 percent more on feed than a year ago, according to the April 7-State Cattle-on-Feed Report, which did not have weight breakdowns.

Keep an eye on the Quarterly 13-State Cattle-on-Feed Report which was scheduled

lower, yet still good, exports. Their ending stocks figure of 280 million bushels or 13.4 percent of use is fairly tight. A 1-2 bushel yield deviation in either direction, which is likely, could bring large price swings.

Strategy: The basis is tight. Move all old crop. If you're optimistic for some rallies, use a basis contract. New crop prices are in the range fundamentals would suggest as of mid-May. Consider setting some forward pricing goals that let you start locking in some new crop when November soybean futures rally above the \$6.10 mark.

Strategy: It appears that even with the year-to-year weekly slaughter increases, we are moving into the summer seasonal increase in hog prices. However, there is some chance that we may have a flood of heavy hogs which may bring discounts, so stay fairly current on your marketings. The futures markets offer some okay forward price opportunities, but are not far off from what fundamentals would suggest.

for release May 21. Check it out to see how fast cattle are expected to come to market.

Strategy: In general, keep current. But the decision to stay on the light side or heavy side of current will depend on what that report said. I will discuss it in the mid-June issue but you will want to make some decision before then. At this point, the futures markets are not presenting any exciting forward pricing opportunities.

Table 1
Supply/Demand
Balance Sheet For
CORN

	USDA Proj.	USDA Proj.	Hilker Proj.
	1991-92	92-93	93-94
Corn Acreage (Million Acres)			
Acres Set-Aside and Diverted	4.7	3.5	7.0
Acres Planted	76.0	79.3	76.5
Acres Harvested	68.8	72.1	69.4
Bu./A. Harvested	108.6	131.4	122.5
Stocks (Million Bushels)			
Beg. Stocks	1521	1100	2113
Production	7475	9479	8500
Imports	20	3	5
Total Supply	9016	10,582	10,618
Use:			
Feed	4878	5250	5400
Food/Seed	1454	1495	1550
Total Domestic	6332	6745	6950
Exports	1584	1495	1550
Total Use	7916	8470	8500
Ending Stocks	1100	2113	2118
Ending Stocks Percent of Use	13.9%	24.9%	24.9%
Regular Loan Rate	\$1.62	\$1.72	\$1.72
U.S. Season Average			
Farm Price, \$/Bu.	\$2.37	\$2.08	\$2.05

Source: USDA & Hilker

Table 2
Supply/Demand
Balance Sheet For
WHEAT

	USDA Proj.	USDA Proj.	Hilker Proj.
	1991-92	92-93	93-94
Wheat Acreage (Million Acres)			
Acres Set-Aside and Diverted	10.0	3.5	0.5
Acres Planted	69.9	72.3	72.3
Acres Harvested	57.7	62.4	62.5
Bu./A. Harvested	34.3	39.4	39.5
Stocks (Million Bushels)			
Beg. Stocks	866	472	510
Production	1981	2459	2508
Imports	41	68	75
Total Supply	2888	2999	3093
Use:			
Food	785	830	845
Seed	94	93	90
Feed	256	225	275
Total Domestic	1135	1148	1270
Exports	1281	1340	1225
Total Use	2416	2488	2435
Ending Stocks	472	510	658
Ending Stocks Percent of Use	19.5%	20.5%	27.0%
Regular Loan Rate	\$2.04	\$2.21	\$2.45
U.S. Season Average			
Farm Price, \$/Bu.	\$3.00	\$3.25	\$2.75

Source: USDA & Hilker

Table 3
Supply/Demand
Balance Sheet For
SOYBEANS

	USDA Proj.	USDA Proj.	Hilker Proj.
	1991-92	92-93	93-94
Soybean Acreage (Million Acres)			
Acres Planted	59.2	59.3	59.3
Acres Harvested	58.0	58.4	58.2
Bu./Harvested Acre	34.3	37.6	35.2
Stocks (Million Bushels)			
Beg. Stocks	329	278	325
Production	1987	2197	2045
Imports	3	2	2
Total Supply	2319	2477	2373
Use:			
Crushings	1254	1270	1275
Exports	685	765	720
Seed, Feed and Residuals	102	112	98
Total Use	2041	2152	2093
Ending Stocks	278	325	280
Ending Stocks, Percent of Use	13.6%	15.1%	13.4%
Regular Loan Rate	\$5.02	\$5.02	5.02
U.S. Season Average			
Farm Price, \$/Bu.	\$5.58	\$5.50	\$5.75

Source: USDA & Hilker

7 Custom Work Rates in Michigan

Gerry Schwab and Marcelo Siles, MSU Department of Agricultural Economics

Agriculture production is an industry fraught with time constraints. The time window for planting, harvest, and a host of other activities always seems quite short. Hiring-in custom machine services is one alternative to control more machinery and labor services to help meet these time constraints. Hiring-in custom machinery ser-

vices can be desirable, depending on the cost and availability.

One of the missions of the Agricultural Economics Department at Michigan State is to assist farm and agriculturally-related decision-makers as they make decisions to improve their well-being. We believe that better data will lead to better decisions.

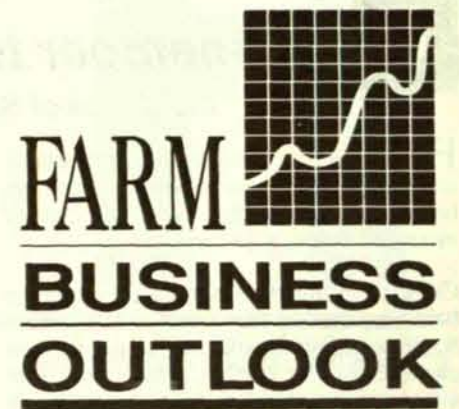
Knowing machinery costs can be helpful in deciding what machines ought to be owned

and what machine services should be hired. Preliminary data presented in this article illustrates an effort to improve the data base associated with hiring farm resources, including machine services and labor.

The data presented in this article were gleaned from approximately 700 responses to a mail questionnaire survey conducted in Fall 1992. Each table is presented in a similar style with the state average cost figure based on the number of responses indicated.

This data is followed by columns labeled 1, 2, ...9 representing the nine crop reporting districts in Michigan. Crop reporting districts 7, 8, and 9 that cover the southern third of Michigan represented approximately 60 percent of the responses. The higher the number of responses, the more representative and reliable are the sample data being presented.

This data is presented as an indicator of the current market price for the resource being hired. There is no judgement intended as to what that price ought to be. Prices for these type of activities tend to be a function of demand and supply.



As such, there can be price aberrations in a particular geographic area because of lack of information as to a fair price, and market inequilibrium whereby there can be either excess machinery services available that leads to a low price or the converse situation where the machine service increases in price.

The tables are intended to be self-explanatory. The cost figures in tables 1, 2, and 3 for tillage, planting, and pest control respectively are all in dollars per acre (\$/Acre). The labor cost data is indicated in dollars per hour for part-time help and dollars per month for full-time employees.

Custom Ag Work Rate Tables for Michigan

Table 1
Tillage Custom Rates

	No.	MI State Ave.	Crop Reporting Districts								
			1	2	3	4	5	6	7	8	9
Moldboard Plow	197	13.10	13.00	15.00	15.10	10.60	13.40	14.80	12.76	13.00	12.15
Chisel	161	10.70	9.20	11.60	11.20	6.85	10.50	11.40	11.25	10.70	10.10
Mulch-Till	78	11.60	---	20.00	8.00	7.00	10.45	14.50	11.10	12.00	11.00
Discing	117	9.20	11.05	11.00	9.75	7.20	9.30	8.70	8.70	8.35	10.60
Field Cultivator	113	7.55	11.45	10.65	7.20	6.50	7.00	7.05	7.35	6.85	8.20
Cultimulch	67	7.10	6.25	---	---	6.15	7.50	6.20	7.50	6.85	7.95

Table 2
Planting Custom Rates

	No.	MI State Ave.	Crop Reporting Districts								
			1	2	3	4	5	6	7	8	9
Conv Plant w/o Fert	73	10.00	9.80	8.90	11.00	9.00	8.10	9.90	10.35	11.00	9.05
Conv Plant w/Fert & Ins	134	12.35	7.70	12.20	11.90	10.15	12.25	12.70	11.50	13.20	14.30
No-Till Planter	163	16.35	11.25	16.15	---	13.40	16.20	13.80	15.75	17.20	16.15
No-Till Drill	166	13.10	7.85	9.35	---	9.70	11.95	11.45	14.95	13.75	12.95
Conv Drill	109	9.05	7.85	8.00	9.80	8.70	9.30	9.00	9.60	8.60	8.55
Sugar Beet	17	15.10	---	---	---	---	16.80	14.70	---	---	---

Table 3
Pest Control Custom Rates

	No.	MI State Ave.	Crop Reporting Districts								
			1	2	3	4	5	6	7	8	9
Cultivate	70	5.80	---	---	7.40	---	4.75	5.25	6.15	5.10	5.80
Rotary Hoe	50	4.20	---	---	---	---	4.25	3.90	4.85	3.45	4.65
Spray from Ground	184	4.80	5.75	8.70	5.40	4.90	4.95	4.00	4.20	4.35	5.15
Spray from Air	55	6.90	---	---	---	---	6.10	7.50	6.25	6.50	8.30
Scouting	48	5.70	---	---	---	---	7.50	2.75	5.90	3.80	4.25

Table 4
Labor Hiring Wages

	No.	MI State Ave.	Crop Reporting Districts								
			1	2	3	4	5	6	7	8	9
Part-Time (\$/Hour)	492	5.35	5.00	5.50	5.00	5.20	5.10	5.20	5.35	5.55	5.55
Full-Time (\$/Month)	255	1431	1720	1438	1284	1254	1227	1486	1471	1529	1308



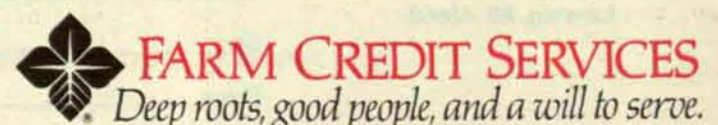
Neal, Kelly, Pat, Harold and Marty Travis operate North Valley Farms, a 300-cow dairy operation at Shepherd, MI. The four brothers farm with their parents, Pat and Evelyn Travis. The farm has a 20,500-lb. milk RHA and produces 1,000 acres of hay and corn.

HOW A DROUGHT SET SEEDS OF EXPANSION FOR THE TRAVIS FAMILY.

"We've just completed the second phase of a dairy expansion that includes a free-stall, center-feed barn and double-8 milking parlour. The expansion began in 1988 after a severe drought forced us to make some serious decisions. As brothers, we knew we wanted to farm together with our folks but a cash-crop business was too risky for all of us to depend on.

"Looking back, 1988 wasn't a pretty year to begin an expansion, but Farm Credit had confidence in us and stood behind our decision. Our loan officer has been a tremendous planning resource and helped us work through countless 'what if' situations on the computer.

"A lot of lenders wouldn't have been able to grasp our vision for this family dairy business but Farm Credit not only grasped it, they helped us figure out a better way to make it happen. If it hadn't been for the facilities expansion loan and other help from Farm Credit, there's no question that several of us couldn't be in this operation today."



Clip and Save This Page For Future Reference!

8 Remember to Protect Yourself from the Sun

Incidence of Skin Cancer One in Three for Thumb Area Farmers

Farmers today need to be particularly cautious about excess exposure to the sun because now, more than ever, they face an increased risk of skin cancer.

Growing numbers of skin cancer cases are being reported by healthcare professionals. Some scientists attribute those numbers to changes in the earth's atmosphere that allow more of the sun's ultraviolet rays to reach the earth. For whatever reason, there is a one in six chance today that an American will develop skin cancer in his or her lifetime. Among farmers in Michigan's Thumb area, the incidence of skin cancer is reported at one in three, according to an MSU College of Human Medicine survey.

But there's good news, too: It is possible to reduce the risk of skin cancer, and there is a good chance of survival -- 85 to 99 percent for individuals who get early detection and treatment.

There are three types of skin cancer: basal cell, squamous cell, and melanoma. Basal and squamous cell carcinoma spread slowly and are rarely fatal. Melanoma is the

most dangerous type of skin cancer, because it spreads quickly to infect other body organs. Fortunately, only about 5 percent of the 600,000 cases of skin cancer detected each year are melanoma.

Here are several steps you can take to protect yourself from the sun:

- Wear a cap that provides protection to the back and sides as well as the top of your head. The popular baseball-type caps given away by commercial establishments do not provide that kind of protection. Consider using a full-brimmed hat, pith helmet, straw hat, cowboy hat, or something similar. If you are bald or have thinning hair, don't choose a hat with a mesh top that allows sun to reach your scalp.
- Use sun screen with a protection factor of 15 or greater. Apply to all exposed areas 20 minutes before going outside, and reapply at least every two hours -- or more frequently when swimming or perspiring heavily. Put

the sun screen directly on your skin and then rub it in. Pouring or squeezing sun screen onto your palms first will reduce the effectiveness of the treatment.

- Protect children from the sun with sun screen, caps, and clothing. People who have had three or more blistering sunburns before age 20 have a five times greater chance of getting melanoma. One severe blistering sunburn in childhood or adolescence may double the potential for developing skin cancer.
- Cover up as much base skin as possible with long-sleeved shirts and pants. Light-colored clothing reflects the sun and is generally cooler in direct sunlight.
- Avoid midday sun when possible. The greatest potential for damage to your skin occurs whenever your shadow is shorter than you are.



From Farm Bureau Insurance

- Avoid using perfumes and colognes when you're going to be out in the sun. They may contain alcohol, which makes your skin more sun-sensitive.
- Wear polarized sunglasses to protect your eyes.
- Remember that certain medications may make you more sensitive to the sun. Check with your doctor to see if any additional precautions are necessary.

TAKE THE BITE OUT OF DENTAL CARE COSTS



Member dental insurance is the affordable way to assure that you and your family receive the dental care services you require — even when sudden and costly needs arise.

Measure the rates against your annual dental care bills and consider the advantage!
 Single \$18 per month • Couple \$32 per month
 Member/Child \$32 per month • Family \$41 per month



TO RECEIVE ADDITIONAL INFORMATION AND A BROCHURE/APPLICATION, PLEASE FILL OUT THE COUPON BELOW
 OR CALL DIRECT 1-800-292-2680 EXT- 3236

Please mail to:

Michigan Farm Bureau
 Membership Services
 P.O. Box 30960
 Lansing, MI 48909

Please Print

Name _____

Address _____

City _____ State _____ ZIP _____

Phone _____

County _____

MDA Advisory: Animal Waste Gives Off Deadly Fumes, Use Protective Equipment Near Manure Pits

All too often, farmers and others working around manure pits have succumbed to the deadly fumes of animal waste because they didn't take a few precautions to protect themselves.

The Michigan Department of Agriculture (MDA) reminds all farmers to use specialized equipment and common sense guidelines before working at or near covered manure storage pits or tanks.

When agitated, animal waste gives off methane, hydrogen sulfide, ammonia and carbon dioxide. Methane, hydrogen sulfide and ammonia are toxic and heavier than air and all four will displace oxygen just above the surface of the liquid. Inhalation of a high concentration of these materials can result in immediate loss of consciousness; inhalation of the toxic materials may also be fatal.

Farmers are advised to use special equipment consisting of a positive pressure self-contained breathing apparatus (SCBA) which will provide limited protection, a lifeline, a lift harness and a tripod, if entering a tank. The equipment should be used regardless of the temperature of humidity, or whether the tanks are full or empty.

The Michigan Cooperative Extension Service lists four safety measures to take when working around manure pits. These precautions include:

1. Test the air for toxic materials with dependable and reliable equipment;
2. Have constant and abundant ventilation of fresh air, including ventilation before entering pits;
3. Use an approved harness or lifeline on the person entering the tank with at least two people outside the tank capable of pulling the person out; and
4. Have an approved pulley and tripod ready to remove anyone who has passed out in the tank opening.

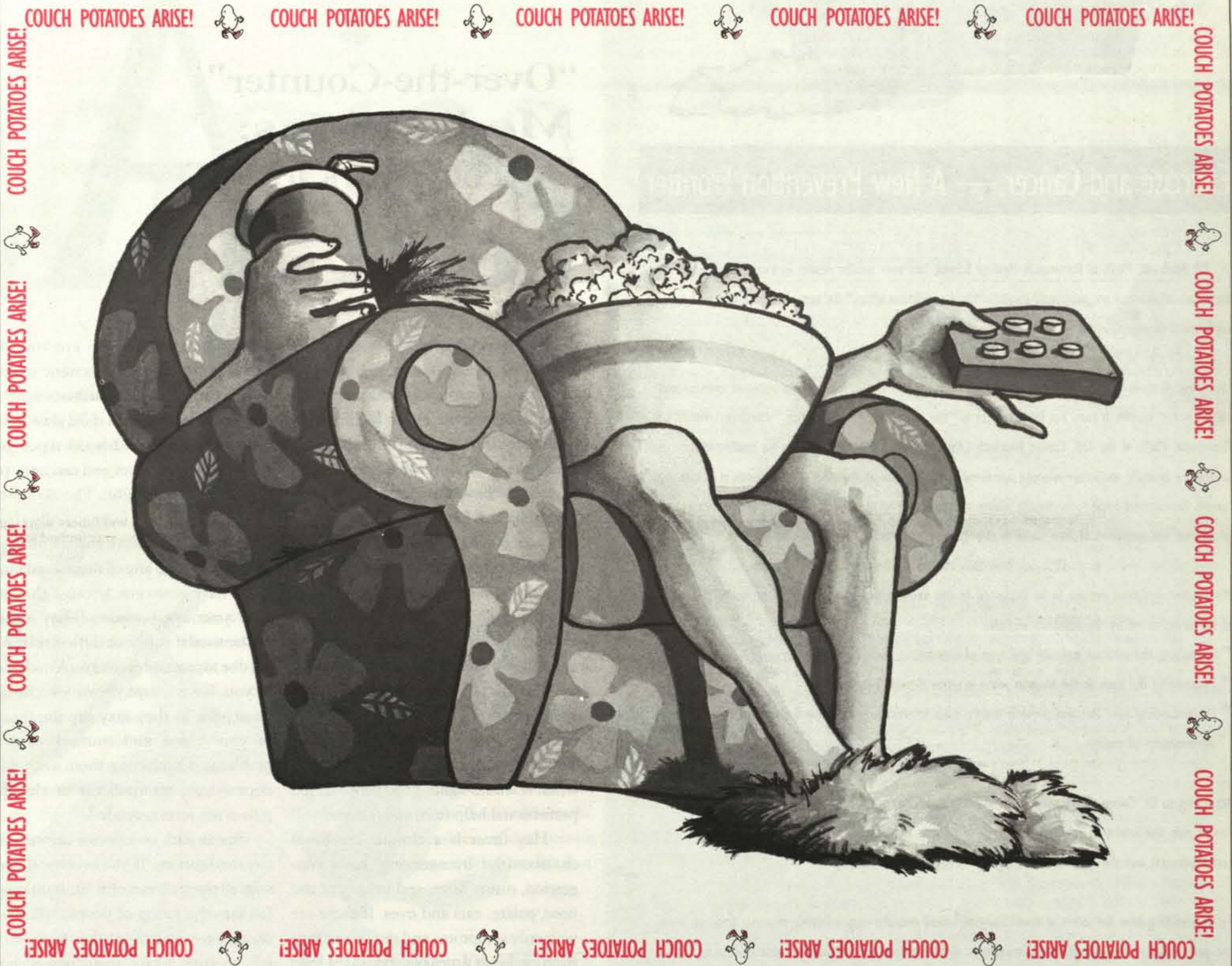
The National Safety Council ranks agricultural occupations as the most hazardous in the nation, with 48 deaths per 100,000 workers. Approximately 20 to 25 farm-related deaths are recorded annually in Michigan.

For more information, call your local county Cooperative Extension office.

HEALTH HARVEST

A Health and Wellness Publication of Michigan Farm Bureau

May 1993 VOL 8, No. 1



Exercise and Cancer — A New Prevention Frontier

Couch potatoes arise! Early evidence emerging from studies on exercise and cancer indicates that what is good for the heart may also prevent or delay the development of certain cancers. At the 1991 American Institute for Cancer Research (AICR) annual research conference in Washington, D.C., "Exercise, Calories, Fat and Cancer" scientists from across the nation discussed studies investigating the connection between exercise and cancer.

Exercise appears to have a modest effect on the development of cancer of the colon, breast and pancreas. "It's not overwhelming, but it's significant enough that it should be counted," says Leonard Cohen, Ph.D, of the American Health Foundation in Valhalla, New York. Animals allowed to exercise freely have a breast cancer rate "in the range of 30 percent" below sedentary animals, reports Dr. Cohen. (continued on next page)



COUCH POTATOES ARISE! COUCH POTATOES ARISE! COUCH POTATOES ARISE!



Exercise and Cancer — A New Prevention Frontier

Dr. Bill Roebuck, Ph.D. of Dartmouth Medical School, has seen similar results in experiments looking at the effect of exercise on pancreatic cancer. "It's a consistent effect," he says. "We see it from experiment to experiment."

Even though these results are favorable, researchers admit that the relationship between exercise and cancer is not simple. It may not be a matter of "the more exercise the better," comments Henry J. Thompson, Ph.D. of the AMC Cancer Research Center in Lakewood, Colorado. In his studies with laboratory animals, moderate exercise appeared most effective at lowering the incidence of breast cancer. Researchers hope to eventually define an optimal level of physical activity. "We're trying to address the questions of how much is enough and what type is best," Thompson says.

Many other questions remain to be explained in this exciting new chapter of cancer research. Some of the areas noted by the scientists include:

- Identifying the optimal intensity and type of exercise.
- Pinpointing the time in the lifespan when exercise is most beneficial.
- Understanding how diet and physical activity may interact together to influence the onset and development of cancer.

According to Dr. Cohen, there may be an important, and as yet unidentified, relationship between cancer risk, the intake of energy (the source of calories in the diet, such as fats, protein or carbohydrates) and the expenditure of energy through physical activity.

To determine how the stress of involuntary or forced exercise may influence research findings, tests are performed on rats, usually using treadmills. Although they aren't harmful, these tests may not reflect real-life conditions. Involuntary exercise, some scientists believe, places additional stress on an animal. "The effect of exercise-induced stress may prove important," notes Dr. Cohen.

Research on voluntary exercise has been increasing in the past few years so information is now beginning to emerge.

What do these findings mean for health conscious Americans?

Scientists are quick to caution that specific recommendations concerning exercise and cancer cannot be made for humans just yet. Such recommendations are "still in the future," says Dr. Thompson, "We're working on that."

Until more is known about exercise and cancer risk it seems the most practical conclusion to be drawn from the research is that exercise does not preclude the need for a prudent, low fat diet. According to Dr. Thompson, "Variety and moderation remain the best advice with respect to both diet and exercise as a means for health promotion and disease prevention."

Lifes

"Over-the-Counter" Medications: Do They Work for



So, it's getting to be that time of the year again for you. Days are longer, birds are chirping, trees are budding and the grass is beginning to turn green once again. Oh, oh! That spells the beginning of allergy season. If you suffer from allergies, you are probably not looking forward to the many uncomfortable days and nights you may have to endure over the next several months.

However, you can do something to make allergies more bearable. There are many "over-the-counter" (OTC) medications you can purchase without a prescription. This article will focus on which OTC drugs are available, where and when not to use these products, and when it would make good sense to see professional help from your doctor.

Hay fever is a chronic condition characterized by sneezing, nasal congestion, runny nose, and itching of the nose, palate, ears and eyes. If these are your only symptoms and they occur for a short period of time (two months or less) and you are healthy otherwise, using OTC medications might be all you need to do.

The two major classes of OTC medications are antihistamines and decongestants. Antihistamines are the mainstay of treatment. They help relieve the sneezing, itching and runny nose. They work best if you take them on a regular basis rather than waiting until you're severely suffering. Most people tolerate antihistamines well, although 20 percent will experience drowsiness.

Hay fever sufferers might try one from each of the three antihistamine classes to see which works best. The first class is alkylamines. The second class is

ethanolamines. These are readily available by brand and generic names. The newest OTC antihistamine is clemastine and offers a third class to try. Long-acting (8- to 12-hour) types give more prolonged relief and can help you get through the night. The four hour type begins working faster (usually within 20 minutes) and lasts a shorter time.

Do not take any of these medicines if you have glaucoma, because they can raise your eye pressure. They should not be used if you have difficulty urinating due to prostate problems. Avoid them if you have emphysema or chronic bronchitis, as they may dry the mucus in your chest and cause breathing problems. Combining them with antidepressants, tranquilizers or sleeping pills is not recommended.

Speak with your doctor before using any medications. If you become drowsy with all three classes of antihistamines or fall into the group of people who have another reason not to take these drugs, talk to your doctor about newer, non-sedating antihistamines. These drugs require a doctor's prescription.

Most antihistamine packages warn not to use antihistamines if you have asthma. Theoretically, they could dry the mucus in the lungs and worsen the asthma. If you wish to use these medications and you have asthma, check with your doctor first, but antihistamines can be used safely to treat nasal and eye allergies in asthmatics.

Decongestants are the second type of OTC medication useful in treating nasal and eye allergies. They are available in topical forms, eye and nose drops and sprays, and oral (liquid and tablet) forms. Such nose drops and sprays should be used for no more than three days

Style

Energies

maximum! They lead to physical addiction with rebound swelling in the nose if you try to stop them after three days. Be careful! They can raise your blood pressure even if you have normal blood pressure. Each year, several otherwise healthy adults develop very high blood pressure due to decongestant nose sprays. Their blood pressure returns to normal when they finally get off the nose sprays.

Eye drops are safer, but inasmuch as the OTC preparations do not contain antihistamines, they are not nearly as effective as combination antihistamine/decongestant eye drops available from your doctor with prescription.

The oral decongestants certainly help the nasal stuffiness and drainage, but do nothing for the itching and sneezing. They frequently cause jittering, tremors, insomnia, fast heartbeat and rapid pulse. They should not be used by people who have high blood pressure, heart problems, thyroid disease, diabetes or prostate problems.

Antihistamine/decongestant combinations, for those people who can take them, are uniformly the most effective OTC medications available for nasal and eye allergies. Beware of such combinations which also contain a pain reliever, such as acetaminophen or aspirin. Chronic use of these can lead to inflammation in the liver and bleeding from your stomach or intestine.

It is perfectly acceptable to treat nasal and eye allergies with OTC medications unless complications develop. These include recurrent sinus infections, ear infections, headaches, cough, any wheezing or difficulty with exercise. Prompt consultation with a physician is then indicated to determine the

significance of the complication and to make recommendations for management. The physician can prescribe drugs that may provide relief not afforded by the OTC medications. Other recommendations may include referral to an allergy specialist who can frequently stop the worsening of the allergic condition and often times reverse the problems.

OTC medications are also available to treat asthma. These include epinephrine inhalers and oral theophylline-ephedrine combinations. However, asthmatics should not direct their own treatment! If OTC drugs are used inappropriately, they could lead to increased blood pressure, stroke, heart attack or convulsion. In the face of huge advancements in treating asthma, it is possible to reduce hospitalization and death rates. This is one disease where the directions by a physician and a proven treatment program could literally save your life.

Joel M. Karlin, M.D., FAAI, FACAI, is assistant professor of Medicine and Pediatrics at the University of Colorado School of Medicine. He is also Senior Physician, Denver Allergy and Asthma Associates, P.C.

Reprinted with permission of the Asthma and Allergy Foundation of America, Washington, D.C.



The following questions and answers come from Lansing's Sparrow Hospital's physician referral and information service called "NurseLine". They are timely and commonly asked questions.

Q. Now that summer has arrived, I am concerned about my children getting sunburn. As much as I try to apply sunscreen to them on sunny days, they are bound to end up in the sun unprotected. If they get sunburn, what can I do to treat them at home?

A. According to Dr. Ronald Rhule, an Emergency Medicine physician at Sparrow Hospital, mild cases of sunburn can be treated at home with a cool bath or shower followed by the application of a topical antibiotic ointment (bacitracin) several times a day. If the child has developed small blisters, do not break them. Leaving the blisters intact may speed healing. However, if blisters open, you must seek medical care to avoid infection. Blistering is the first stage of second degree burning and indicates a more severe burn. Be sure to wrap them with clean gauze to promote healing. He also recommends using a sunscreen lotion with a sun protection factor of 15 or higher during all sun exposures.

Q. I live in a neighborhood with several flowering trees where each summer the bees seem to get worse. If I'm stung, how can I tell if I'm allergic?

A. There are several symptoms a person may experience if they are allergic to bee stings, said Dr. Clyde Flory, board certified allergist on staff at Sparrow Hospital. A person can tell if they're allergic if their eyes, lips, tongue or throat begin to swell, if they have generalized itching or hives, difficulty breathing, coughing, wheezing, numbness, cramping, slurred speech, anxiety, mental confusion, nausea, vomiting, or unconsciousness. Dr. Flory stresses that if a person experiences any of these symptoms after an insect sting, he or she should seek medical attention immediately. If you have an allergic type reaction be sure to talk to your allergist so it can be determined which insects you are allergic to, and if you are a candidate to receive allergy shots on a regular basis to prevent a potentially serious reaction in the future. Dr. Flory adds that if a person is allergic to certain insects and experiences the above symptoms, they are in danger of having a very serious life-threatening reaction which is preventable with proper allergy treatment.

Q. Every year I get a mammogram. Is once a year enough for a woman aged 45? How else can I help my doctor determine if I'm at a high risk of developing breast cancer?

A. According to Dr. James Herman, Medical Director of Sparrow Hospital's Regional Cancer Center, every woman over 50 requires a yearly mammogram. Women between 40 and 50 require periodic mammograms between one and two years according to the American Cancer Society guidelines. If there is a family history of cancer, then a baseline mammogram can be obtained earlier. Mammography and regular breast examinations by women and their physicians increase the likelihood of early detection and thus cure of their breast cancer.

If you believe you are at high risk for breast cancer see your physician and relate your risk factors to him or her. Risk factors for increased incidence of breast cancer can be identified through family history, previous breast cancer, early menses, late menopause, no children, late first pregnancy, and previous colon, uterus or ovarian cancer.

Breast cancer is the most commonly diagnosed cancer in women. Cure rates are related to early detection. Regular breast examination and mammography can save your life.

Q. Now that summer has arrived, I'm becoming more active in athletics. What precautions can I take to prevent a sports injury?

A. Dr. James Wessinger, an orthopedic surgeon on staff at Sparrow Hospital suggests pacing yourself when starting to become active in sports after an inactive winter. "It's important to slowly condition your body to avoid straining muscles, or over exerting your self. Be sure to always stretch before participating in athletics, drink plenty of water to replenish the body, wear supportive athletic shoes, loose, comfortable clothing, and appropriate protective equipment. He also adds that persons with medical histories of heart disease, asthma, high blood pressure or arthritis should consult their physician before engaging in any athletic activity.

If you have health concerns, questions, or need a physician referral, call Sparrow Hospital's NurseLine, an information and Physician Referral Service at 1-800-968-3838.

The above questions and answers are for general information purposes only. If you have symptoms or health related questions, consult our physician.

HIGH BLOOD PRESSURE

New classification stresses impact of hypertension on your risk of heart disease

As many as 50 million Americans have high blood pressure or are taking medication for high blood pressure (hypertension). High blood pressure is defined as systolic blood pressure of 140 mm Hg or greater or diastolic blood pressure of 90 mm Hg or greater.

A typical normal reading is systolic (top number) pressure of 120 mm Hg and diastolic (bottom number) pressure of 80 mm Hg.

Doctors have always recognized high blood pressure as a major risk factor for cardiovascular disease. Yet the latest report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure places new emphasis on hypertension's impact on your health and what you can do to control it.

Terms are important

If your doctor tells you that you have "mild" or "moderate" hypertension, you may feel little concern. After all, "mild" doesn't sound serious. That's just the connotation doctors want to change by developing a new way to classify hypertension.

The traditional terms "mild" and "moderate" don't adequately represent the role of high blood pressure as an important risk factor for development of cardiovascular disease.

The new classification of hypertension discontinues the descriptors "mild," "moderate," "severe" and "very severe." Instead it's based on four stages of hypertension and levels for "normal" and "high normal" blood pressures.

"Stage 1" hypertension, previously termed "mild," is the most common form of high blood pressure in adults. It accounts for a large proportion of the increased illness and disability due to hypertension.

All stages of hypertension are associated with an increased risk of nonfatal and fatal heart conditions, stroke and kidney disease. The higher your blood pressure, the greater your risks.

"High - normal" blood (sometimes called the "gray zone") is included because if you have systolic or diastolic blood pressure in this range, you're more likely to develop definite high blood pressure.

You're also at higher risk for experiencing cardiovascular problems compared with people who have lower blood pressure.

Lifestyle factors get more attention

In this report, the Joint National Committee also takes an expanded look at the growing amount of information dealing with how lifestyle behaviors help prevent and manage high blood pressure.

If you have high blood pressure, your goal is to lower your systolic level to below 140

Better yet, we suggest you avoid alcohol. Alcohol may reduce your heart's pumping ability and cause resistance to our high blood pressure medication.



MEDICAL FOCUS

Condition

Systolic (top no.)	Diastolic (bottom no.)
Normal less than 130	less than 85
High normal 130 - 139	85 - 89
Hypertension	
Stage 1 140 - 159	90 - 99
Stage 2 160 - 170	100 - 109
Stage 3 180 - 209	110 - 119
Stage 4 210 or higher	120 or higher

mm Hg and your diastolic level to below 90 mm Hg.

If you have high normal blood pressure, a family history of hypertension and at least one lifestyle factor that contributes to high blood pressure as you age, you're more likely to develop hypertension. To lower high blood pressure and keep it in check, the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure recommends these lifestyle changes.

Lose excess pounds - If you're overweight, losing as few as 10 pounds may cause a meaningful drop in high blood pressure. Weight loss also can enhance the blood pressure-lowering effects of medications.

Limit alcohol - If you have high blood pressure, limit alcohol to no more than 2 ounces of 100 proof liquor, 8 ounces of wine or 24 ounces of beer a day.

Exercise - Regular, moderate activity, such as 30 to 45 minutes of brisk walking three to five times a week, may help prevent and treat high blood pressure.

People who have normal blood pressure but who don't exercise and are out of shape have a 20 to 50 percent increased risk of developing hypertension compared to more active people.

If you have high blood pressure, regular physical activity can reduce your systolic blood pressure by about 10 mm Hg.

Limit sodium - Salt (sodium chloride) doesn't always cause high blood pressure. And avoiding salt doesn't guarantee you'll prevent hypertension. But an estimated 10 percent of Americans, and half of the people with hypertension, are "sodium sensitive." If you're sodium sensitive, salt may raise your blood pressure. Cutting back may lower it.

If you have Stage 1 hypertension, limit your daily sodium intake to 2,300 milligrams by avoiding the salt shaker and salty foods. Controlling salt may also enable your doctor to reduce your blood pressure medication.

Don't smoke - Smoking cigarettes doesn't cause high blood pressure. But smoking is a major factor for cardiovascular disease. That's why everyone, especially people with high blood pressure, needs to quit smoking or never start. Smoking reduces the protection healthy lifestyle practices contribute in reducing your risk of cardiovascular disease.

A lifestyle change may be enough
For many people, losing weight, exercising regularly, and limiting alcohol and sodium are enough to lower blood pressure and keep it down.

For others, these lifestyle changes may not be enough to control hypertension, but they may reduce the number and doses of medications needed to control high blood pressure.

The benefits of adopting other lifestyle changes remain unproven. These include stress management and taking nutritional supplements such as potassium, calcium, magnesium and fish oils.

Reprinted from the May 1993 Mayo Clinic Health Letter with permission of the Mayo Foundation for Medical Education and Research, Rochester, MN 55905.

Also emphasized is the use of both systolic and diastolic readings to evaluate hypertension. Doctors now recognize the impact of systolic blood pressure in classifying risk.

9

"Estimating Alfalfa Yield Loss Due to Winterkill" continued from page 1

Viable plant populations are expressed as viable plants per square foot. Counting is easier if you make a one foot by one foot square frame. Throw this frame randomly in the field and count the viable plants within. Repeat this procedure at least 20 times.

For areas larger than 20 acres, take a minimum of one count per acre (e.g. at least 30 counts for 30 acres). Calculate the average number of viable plants per square foot over the area for which the estimate is being made.

If the winter injured plants are not uniformly distributed throughout the field, subdivide the field for sampling. For example, a field might have a low spot where plants were killed and an upland area where there was little injury. In this case, take separate counts and calculate separate averages for the low and upland areas.

Table 1 at right shows the effect of stand age and viable plant population on potential yield. You can use estimates directly from this table if the field that you are evaluating had a full stand last fall. A full stand is the number of plants per square foot that corresponds to the 100 percent potential yield level for the age of stand in question (e.g. for a stand seeded three years ago, a full stand is one with at least five-six viable plants per square foot).

If the field that you evaluate had a full stand last fall, yield loss this year is estimated by the difference between 100 percent and the percent of potential yield as read from the table. If the field that you evaluate had less than a full stand last fall, then yield loss this year is estimated by the difference between percent of potential yield at the viable plant population last fall and the percent of potential yield at the plant population measured this spring.

Example 1. A 15-acre alfalfa field was covered by ice for two weeks last winter.

Employees Must Receive Annual Instruction on Safe Tractor Operation

Since 1977, employees in Michigan working on farms and orchards must receive instruction at the time of first assignment and at least annually thereafter to operate a tractor with or without a Roll-Over Protective Structure (ROPS), according to MSU's Howard Doss.

Employees must receive instruction, which includes the following information below:

Tractor Operator Instructions

1. Securely fasten your seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going, especially at row ends, on roads and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
9. When tractor is stopped, set brakes securely and use park lock if available.

In addition to these nine tractor operator instructions, employees shall be instructed on other safety practices required by the work environment (wet areas, traffic, hidden obstacles, etc.).

Note: Tractors built after Oct. 25, 1976, operated by employees, must have a ROPS. Also, the seat belt must be worn by an employee with a ROPS equipped tractor. It is the employer's responsibility to see that the employee uses the seat belt while the tractor is moving. This rule could be a condition of employment on the farm or orchard for all employees.

According to farm records, the long term average yield is six tons/acre. The field was seeded three years ago. Last fall, the plant population was seven plants per square foot (more than a full stand). This spring, the farmer found a thin stand throughout the 15 acres. The farmer randomly sampled 20 one square foot areas, finding an average of three viable plants per square foot.

From Table 1, the farmer finds the percent of potential yield with three viable plants per square foot on a three-year-old seeding is 70 percent. The estimated yield loss is 30 percent (100-70) or 1.8 tons/acre (30 percent times six tons/acre).

Example 2. A 40-acre alfalfa field was seeded two years ago. The long term average yield is five tons/acre. There were five plants per square foot last fall. This field was winter killed and is now very thin. The farmer randomly sampled 40 one square foot areas and calculated the average viable plant population to be only three plants per square foot this spring.

What is the farmer's estimated yield loss? It is calculated in three steps:

Table 1
How stand age and viable plant population affect the percent of potential alfalfa yield.

Year Seeded	Viable Plants Per Square Foot							
	1	2	3	4	5-6	7-9	10-15	>15
	-----percent of potential yield-----							
Last Year	15	25	30	40	50	65	80	100
2 years ago	30	50	60	70	85	100	100	100
3 years ago	30	65	70	85	100	100	100	100
4 years ago	50	70	85	100	100	100	100	100
>4 years ago	75	90	100	100	100	100	100	100

Step 1: Percent of potential yield last fall as 85 percent (five plants per square foot on a two-year-old seeding).

Step 2: Percent of potential yield this spring was 60 percent (three plants per square foot on a two-year-old seeding).

Step 3: Estimated yield loss this year: 25 percent (85-60 percent) or 1.25 tons/acre (25 percent times five tons/acre).

For additional information, refer to MSU Extension Bulletin E-2310, Avoiding Winter Injury to Alfalfa, or contact your local Extension agent.

WORRIED
FACES
OF OUR
INSURED.



Worry? Not them.

And why should you when you can protect your life savings with a Long Term Care Plan from AMEX Life Assurance Company?

Regrettably, two in five older adults will require nursing home care.¹ With costs averaging about \$30,000 per year² it's easy to see just how devastating this can be.

But it doesn't have to be this way.

With AMEX Life you can plan on peace of mind. AMEX Life, an American Express company, has over 16 years experience in long-term care insurance and is rated A+ (Superior) by A.M. Best.³

Don't be worried by the costs of long-term care. Call or write today for more information from your local Farm Bureau Insurance Agent on the options available to you.

Representing:

AMEX Life Assurance Company

a subsidiary of TRAVEL RELATED SERVICES

1. Consumer's Guide to Long-Term Care Insurance, HIAA 1989
2. U.S. News & World Report, Aug. 13, 1990
3. Independent analysts of the insurance industry who base their analysis on financial strength and operating performance.

TO RECEIVE ADDITIONAL INFORMATION AND AN AMEX BROCHURE/APPLICATION - FILL OUT THE COUPON BELOW OR CALL DIRECT 1-800-292-2680, EXT. - 2724.



Please mail to: Michigan Farm Bureau
Membership Services
P.O. Box 30960
Lansing, MI 48909

Please Print

Name

Address

City

State

ZIP

Phone

County

New Federal Pesticide Recordkeeping Requirements

The United States Department of Agriculture - Agricultural Marketing Service (USDA-AMS) has developed the final regulations to implement the requirements in Section 1491 of the Food, Agriculture, Conservation, and Trade (FACT) Act of 1990, which were effective on May 10, 1993. The following questions and answers are provided to assist in understanding the final regulations.

Q. Why are there regulations for restricted use pesticide recordkeeping for private applicators?

A. The Food, Agriculture, Conservation and Trade (FACT) Act of 1990, Subtitle H, Section 1491, states that the secretary of agriculture, in consultation with the administrator of the Environmental Protection Agency (EPA), "shall require certified applicators of restricted use pesticides [RUPS]...to maintain records comparable to records maintained by commercial applicators of pesticides in each state." Certified applicators include both commercial and private applicators. EPA currently requires certified commercial applicators to keep records under regulations implementing the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). EPA is prohibited from requiring certified private applicators to maintain records. However, some individual states require certified private applicators to maintain records.

Q. Does the regulation apply to all pesticide applications?

A. No. The regulations only require recordkeeping for applications of federally restricted use pesticides. Under EPA's regulations implementing FIFRA, pesticides are classified as restricted use, or as general use, or for both uses.

Q. What is the difference between a certified commercial applicator and a certified private applicator?

A. For the purpose of these regulations, a certified private applicator is one who is certified by the state to use or supervise the use of a RUP for the purpose of producing any agricultural commodity on property owned and rented by the applicator or the applicator's employer, or, if applied without compensation, other than trading of personal services between producers of agricultural commodities, on the property of another person. A certified commercial applicator is one who is certified by EPA or the state to use or supervise the use of a RUP for any purpose on any property other than as provided by the definition of "private applicator."

Some examples of commercial applicators under the regulations would be applicators certified under categories such as "forest," "demonstration and research," "ornamental and turf," "industrial, institutional, structural and health related," "right of way" and "seed treatment."

Q. How do the regulations affect private applicators who have been required by state law to keep records of RUPs?

A. If the state recordkeeping requirements for private applicators are comparable to the records kept by the commercial applicators of that state or to the federal recordkeeping regulations, then no additional requirements are necessary.

Q. How does the regulation affect private applicators currently not required by their state to keep records?

A. Private applicators who are currently not keeping records under state regulations will be required to maintain records as specified in the new federal regulations.

Q. Is a federal form required for maintaining the record(s)?

A. No. The regulations do not require the use of a standardized form. This allows applicators the flexibility to fit the recordkeeping requirements into their current recordkeeping scheme.

Q. Can a certified applicator record the use of a non-restricted use pesticide on the same record or format they record the use of a restricted use pesticide?

A. Yes. This allows maximum flexibility in a certified applicators recordkeeping program.

Q. What information shall a certified private applicator be required to maintain on a RUP application?

A. The RUP recordkeeping requirements are:
 (1) The brand or product name, and the EPA registration number of the restricted use pesticide that was applied;
 (2) The total amount of the restricted use pesticide applied;

(3) The location of the application, the size of area treated, and the crop, commodity, stored product, or site to which a restricted use pesticide was applied;
 (4) The month, day, and year when the restricted use pesticide application occurred; and
 (5) The name and certification number (if applicable) of the certified applicator who applied or who supervised the application of the restricted use pesticide.
 (6) Application(s) of RUPs in a total area of less than one-tenth of an acre occurring on the same day, shall require brand or product name, EPA registration number, total amount applied, designation of "spot application" for location, and date of application. **Item number six (6) does not apply to nursery and greenhouse applications.**

Q. How are spot applications recorded?

A. Applications of restricted use pesticides in a total area of less than one-tenth of an acre shall be required to record the following elements:
 (1) the brand or product name and EPA registration number;
 (2) the total amount applied;
 (3) the location, which must be designated as spot application;
 (4) date of application.

This provision excludes greenhouse and nursery applications, which are required to keep all data elements listed in Section 110.3 (a)(1)-(5).

Q. When does the pesticide application information have to be recorded?

A. The information required shall be recorded within 30 days following the pesticide application.

Q. What shall be recorded for "total amount of the restricted use pesticide applied"?

A. The total "amount" refers to the total quantity of pesticide product used, with each restricted use pesticide being listed separate. "Amount" does not refer to percent of active ingredient nor does it include the amount of water used as a carrying agent.

Q. How should the "location of the pesticide application" be recorded?

A. Location of the pesticide application shall be recorded as the actual location where the application of restricted use pesticide was made. USDA has provided several options for recording the field "location." These options include:

- (1) County, range, township, and section;
- (2) an identification system utilizing maps and/or written descriptions that accurately identify the location;
- (3) an identification system established by a USDA agency, such as the Agricultural Conservation Service (ASCS) or the Soil Conservation Service (SCS), which utilizes maps and a numbering system to identify field locations; or
- (4) the legal property description.

Q. What can be recorded for "size of area treated"?

A. Size of area treated should reflect label language, which provides directions for use; for example, acres for field crops, linear feet for fence rows and right of ways, square feet for greenhouses and nurseries, or other applicable designations. Recording "size of area treated" for livestock and poultry records would be entered as the number of animals treated.

Q. What is required for "crop, commodity, stored product, or site to which a restricted use pesticide was applied"?

A. Crop, commodity, stored product, or site shall include general references such as corn, cotton, wheat and not specific scientific or variety names. Commodity shall include stored products such as grain, apples or other agricultural products to which a restricted use pesticide was applied. Site includes fence row, livestock, and poultry.

Q. How long are records required to be kept?

A. RUP records must be retained for two years from the date of application by the applicator. Commercial applicators are currently required to keep RUP records for two years under FIFRA, although many states require commercial applicators to maintain records for a longer period.

Q. Which federal and/or state agencies can request that certified applicators give access to RUP records under the regulations?

A. The regulations require private certified applicators to provide access to RUP records to authorized representatives. These

representatives are individuals who are authorized by the secretary of agriculture or a state lead agency to access the record information, including USDA, state pesticide regulatory representatives, and licensed health care professionals.

Q. Who else can require certified applicators to provide access to RUP records?

A. A licensed health care professional may require commercial and private certified applicators to provide RUP record information and available label information, if the licensed health care professional determines access is necessary to provide medical treatment or first aid to a person who may have been exposed to a pesticide for which records are required to be maintained.

Q. Will the records be surveyed?

A. USDA's National Agricultural Statistics Service (NASS) is currently conducting agricultural pesticide use surveys. NASS intends to continue its surveying with the additional purpose of developing a data base on the use of RUPs. The data base developed by NASS on agricultural use of RUPs will be used to provide information relating to use of RUPs. This information could be utilized in policy discussions, to inform consumers on pesticide use and to provide annual reports on the national use of RUPs to Congress.

Q. Who is responsible for surveying the non-agricultural uses of RUPs?

A. EPA will survey non-agricultural uses of RUPs, by certified commercial applicators.

Q. Can agricultural producers be identified in reports generated from the survey?

A. No. The regulations prohibit federal or state agencies from releasing information including the location from which the information was derived, that would directly or indirectly reveal the identity of producers of commodities to which RUPs have been applied.

Q. Are there any penalties for violation of the federal pesticide recordkeeping requirements?

A. Yes. Section 1491(d) of the 1990 FACT Act provides that for the first violations, the penalty is not to exceed a fine of \$500. For subsequent violations, the penalties will not be less than \$1,000 (except that the penalty shall be less than \$1,000 if it is determined that a good faith effort to comply was made). Violators include private and commercial applicators who refuse to maintain appropriate records or provide access to authorized representatives of the secretary of agriculture or designated state lead agencies. Additionally, those individuals who break the confidentiality requirements are subject to penalty.

Q. How is the violation processed?

A. The administrator of AMS or an official of a cooperating state's agency that deals with pesticide use or environmental issues related to the use of pesticides may file a signed, written notice of violation with a presiding officer. The presiding officer shall cause the notice of violation to be served on the violator. The party against whom the action is brought shall have 30 days after the service of the notice to:
 (1) Admit, deny or explain each allegation in the notice of violation and set forth any defense asserted; and
 (2) Admit all of the allegations contained in the notice of violation; or
 (3) Admit to the "jurisdictional" allegations in the notice of violation and neither admit nor deny the remaining allegations and consent to the issuance of an order without further procedure.

Q. Can a hearing be requested on the material allegations in the notice of violation?

A. Yes. A request for a hearing may be filed within 30 days after service of the notice of violation. The request may be included in the response to the notice of violation or by separate written request.

For copies of the final regulations or answers to additional questions, you may contact:
 USDA-Agricultural Marketing Service
 Pesticide Records Branch
 8700 Centreville Road, Suite 200
 Manassas, VA 22110-8411
 Phone: (703) 330-7826

Restricted Use Pesticide Recordkeeping Form (Sample Only - No Formal Forms Are Required)

Month/ Day/ Year	Commodity, stored prod., or crop	Pesticide trade name, EPA registration number	Total amt. applied	Location of application	Applicator's name & Certification number	Size of Area treated
Notes*						

* Notes are optional and could include information such as wind speed & direction, weather, crop status, pest development stage & population density, soil type, equipment used, etc.



11 Pesticide Container Recycling Dates and Locations

Follow the proper rinsing procedure to ensure that your containers will pass a thorough inspection, both inside and out. Only absolutely clean containers will be accepted.

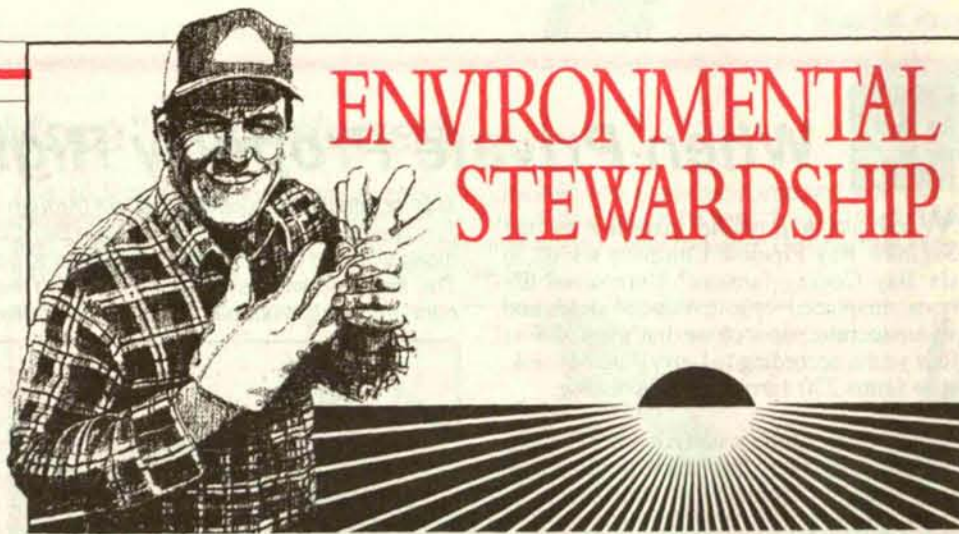
Remove all paper labels, any aluminum foil seals and container caps prior to bringing your containers to the inspection site. These materials are incompatible with #2 HDPE plastic and contaminate the recycled resin.

Containers will be inspected for evidence of pressure or triple rinse, must have no visible residue or staining and be dry. Store your containers in a secure, dry location until the collection date in your area. If inside storage isn't available, try large yard leaf bags. Separate clear or opaque containers from colored containers if possible.

Michigan Department of Agriculture inspectors will be on hand to examine every

container on the established collection date. Containers not passing inspection will be returned to the participant.

These participating dealers have agreed to host collections at their facilities and hold the containers until they're actually ground. Contact your nearest location for additional details and procedure. The program is free of charge and open to all farmers for plastic farm pesticide containers only.



1993 Pesticide Container Program Participating Facilities

Dates listed are actual **Collection Dates** which will take place prior to scheduled grinding dates. For more information and collection details, contact your nearest participating facility. The program is open to all farmers free of charge.

City	Collection Facility	Address	Collection Date	Phone
Adrian	Cutler Dickinson	507 College Ave.	June 24, 8 a.m. - 12 p.m.	517-265-5191
Ann Arbor	Vigoro Industries	885 Parker Rd.	June 23, 1 - 4:30 p.m.	313-426-8805
Ann Arbor	C. F. Braun	796 Warren Rd.	June 23, 8 a.m. - 12 p.m.	313-662-9400
Auburn	Iltner Bean & Grain	301 Park Ave.	July 21, 9 a.m. - 2 p.m.	517-662-4461
Bad Axe	Thumb Farm Service	8049 Dean St.	July 20, 9 a.m. - 2 p.m.	517-428-4116
Bear Lake	Grower Service Co.	U.S. 31	Aug. 24, 8 a.m. - 12 p.m.	616-864-2636
Benton Harbor	Grower Service Co.	1551 S. Park Rd.	July 14, 8 a.m. - 4 p.m.	616-944-1411
Birch Run	Berger & Co.	1910 Maple Rd.	July 6, 9 a.m. - 2 p.m.	517-624-9321
Bridgewater	E. G. Mann & Sons	8400 Boettner Rd.	June 22, 1 - 4:30 p.m.	313-429-7027
Britton	Britton Elevator	128 N. Main St.	June 24, 1 - 4:30 p.m.	517-451-8001
Britton	Britton Elevator	128 N. Main St.	Aug. 13, 1 - 4:30 p.m.	517-451-8001
Caledonia	Green Valley Ag.	3957 108th St. S.	June 15, 9 a.m. - 1 p.m.	616-891-0075
Carson City	Harvey Milling Co.	729 W. Main St.	June 16, 9 a.m. - 5 p.m.	517-584-3466
Coleman	E. R. Simons Co.	108 Railway St.	Aug. 9, 9 a.m. - 2 p.m.	517-465-1581
Croswell	Berger & Co.	41 Ward St.	July 19, 9 a.m. - 2 p.m.	313-679-3565
Deckerville	Berger & Co.	2109 Black River Rd.	Aug. 12, 9 a.m. - 2 p.m.	313-376-2415
East Lansing	Michigan State Univ.	3291 College Rd.	Aug. 6, 8 a.m. - 12 p.m.	517-353-6677
Edmore	Bird Fertilizer, Inc.	311 Lewis St.	July 7, 9 a.m. - 3 p.m.	517-427-5471
Fairgrove	Berger & Co.	462 N. Vassar	July 21, 9 a.m. - 2 p.m.	517-693-6145
Fowler	Vigoro Industries	1100 N. Forest Hill	July 8, 1 - 4:30 p.m.	517-593-2099
Fowlerville	Klein Fertilizer, Inc.	320 Garden St.	July 22, 9 a.m. - 12:30 p.m.	517-223-9148
Freeland	Berger & Co.	215 N. 6th	Aug. 9, 9 a.m. - 2 p.m.	517-695-2521
Grant	Klein Fertilizer, Inc.	277 S. Maple St.	June 10, 8 - 12 a.m.	616-834-5689
Hamilton	Mans Farm Supply	5476 136th Ave.	June 14, 9 - 4 p.m.	616-751-5856
Henderson	Berger & Co.	450 S. West	June 21, 1 - 4:30 p.m.	517-725-7933
Hudsonville	Vriesland Growers Coop.	4529 48th Ave.	July 12, 1 - 5 p.m.	616-669-3120
Hudsonville	Vriesland Growers Coop.	4529 48th Ave.	Aug. 25, 1 - 5 p.m.	616-669-3120
Ionia Fairgrounds	Bird Fertilizer, Inc.	301 S. Mill St.	Aug. 23, 9 a.m. - 4 p.m.	517-527-1870
Kinde	Farmers Coop. Grain Co.	338 Main St.	Aug. 11, 9 a.m. - 2 p.m.	517-874-4200
Lapeer	Lapeer Grain Co.	265 Howard	July 19, 9 a.m. - 2 p.m.	313-664-2987
Lennon	Berger & Co.	11810 E. Lennon St.	July 7, 8 a.m. - 12 p.m.	313-621-3320
Litchfield	Blondes Farm Supply	1090 Homer Rd.	July 15, 9 a.m. - 4 p.m.	517-542-2996
Mason	Mason Elevator Co.	104 S. Lansing St.	July 8, 8 a.m. - 12 p.m.	517-676-1016
Melvin	Vigoro Industries	8031 Brockway (M-19)	Aug. 11, 9 a.m. - 2 p.m.	313-387-3345
Mendon	St. Joe Valley Seed	25660 Simpson Rd.	June 17, 8 a.m. - 1:30 p.m.	616-496-2565
Merrill	Berger & Co.	246 N. Eddy St.	Aug. 9, 9 a.m. - 2 p.m.	517-643-7293
Munger	Vigoro Industries	107 S. Farley	Aug. 10, 9 a.m. - 2 p.m.	517-894-2821
Napoleon	Napoleon Feed Mill	120 Depot	June 22, 8 a.m. - 12 p.m.	517-536-8311
Nottawa	Cropmate Fertilizer Co.	25230 Hwy. M-66	July 14, 9 a.m. - 4 p.m.	616-467-7293
Nunica	Groeninks Elevator	11260 Michigan Ave.	July 12, 9 a.m. - 1 p.m.	616-837-7391
Owendale	Berger & Co.	358 Fourth St.	Aug. 9, 9 a.m. - 2 p.m.	517-678-4321
Pinconning	Berger & Co.	100 S. Mable	July 21, 9 a.m. - 2 p.m.	517-879-2511
Pinconning	Mueller Bean Co.	4040 N. Seven Mile	Aug. 10, 9 a.m. - 2 p.m.	517-879-4222
Richmond	Farmers Elevator	68336 Beach St.	July 19, 9 a.m. - 2 p.m.	313-727-3025
Ruth	Ruth Farmers Elevator	4600 Ruth Rd.	July 20, 9 a.m. - 2 p.m.	517-864-3311
Saline	Saline Valley Fertilizer	9325 W. Michigan	June 24, 8 a.m. - 4:30 p.m.	313-429-2300
Saline	Saline Valley Fertilizer	9325 W. Michigan	Aug. 13, 8 a.m. - 12 p.m.	313-429-2300
Schoolcraft	Schoolcraft Farm Service	16721 U.S. 131 S.	June 16, 9 a.m. - 4 p.m.	517-679-5226
Schoolcraft	Schoolcraft Farm Service	16721 U.S. 131 S.	Aug. 26, 9 a.m. - 2 p.m.	517-679-5226
Shelby	Cheevers, Inc.	37 W. 3rd	June 10, 9 - 3 p.m.	616-861-2526
Shelby	Cheevers, Inc.	37 W. 3rd	Aug. 24, 9 a.m. - 3 p.m.	616-861-2526
Sparta	Grower Service Co.	7861 Peach Ridge	Aug. 25, 9 a.m. - 3 p.m.	616-887-7877
St. Charles	Berger & Co.	5811 W. Alicia Rd.	July 22, 9 a.m. - 2 p.m.	517-770-4130
St. Johns	Zeeb Fertilizer, Inc.	208 W. Railroad St.	June 21, 8 a.m. - 12 p.m.	517-224-3234
St. Louis	Mueller Bean Co.	230 S. Mill St.	July 8, 8 a.m. - 12 p.m.	517-681-2129
Traverse City	NW Horticultural Station	6686 Center Hwy.	June 14, 8 - 12 a.m.	616-946-1510
Traverse City	NW Horticultural Station	6686 Center Hwy.	Aug. 23, 8 a.m. - 12 p.m.	616-946-1510
Vermontville	Citizens Elevator	870 S. Main St.	July 15, 8 a.m. - 12 p.m.	517-726-0514
Vestaburg	Berger & Co.	7465 N. Crystal Rd.	June 22, 9 a.m. - 5 p.m.	517-268-5100
Williamsburg	Grower Service Co.	11990 Munro Rd.	June 11, 8 - 12 a.m.	616-264-8316
Williamsburg	Grower Service Co.	11990 Munro Rd.	Aug. 20, 8 a.m. - 12 p.m.	616-264-8316
Woodbury	Mueller Bean Co.	211 Milburn St.	July 12, 9 a.m. - 4:30 p.m.	616-374-8859

Proper Rinsing of Containers



How To Pressure Rinse

1. Remove cap - If clean, discard. If dirty, rinse into spray tank, then discard.
2. Pour contents into spray tank. Let the contents drain until empty.
3. Press and twist tip of pressure nozzle against side of container, until tip punctures the side while holding the container upside down still draining into the spray tank.
4. Rinse - Turn water on. Twist nozzle inside container to rinse all sides. Rinse for at least 30 seconds. Rinse until all rinse water is clear.
5. Remove nozzle - If nozzle will not be used again immediately, replace tip guard.
6. Clean exterior of container of drips and splashes.

How To Triple Rinse

1. Remove cap - If dirty, rinse into spray tank, save temporarily.
2. Pour contents into spray tank. Let the contents drain until empty.
3. Fill container with rinse solution a minimum of 10 percent full. The more rinse used, the better the results will be.
4. Replace cap securing against leaks.
5. Swirl and shake container to rinse all inside surfaces and the handle cavity.
6. Remove cap and pour contents into the spray tank. Let the container drain empty at least 30 seconds.
7. Repeat twice more until container is clean. Final rinse water should be clear.
8. Clean exterior of container of drips and splashes.

Pressure rinsing is quicker and more efficient than triple rinsing. Triple rinsing, if done properly, can take four to five minutes. Pressure rinsing can be done in less than one minute.

Rinse your containers immediately. Waiting too long allows the pesticide solution to dry out within the container, making rinsing difficult and lessening the probability of meeting clean standards.

12 When Private Property Rights Are No More

What has a pipeline installed by the Saginaw Bay Pipeline Company meant to six Bay County farmers? Unrepaired tile lines, misplaced topsoil, reduced yields and a bureaucratic paper chase that's lasted over four years, according to Larry Augustyniak, who farms 230 acres near Pinconning.

Augustyniak, along with five other Pinconning area farmers, has taken the Saginaw Bay Pipeline Company to court over the shoddy installation of a 120 mile pipeline from Bay City to Kalkaska that took place in 1989. The ongoing lawsuit is currently in arbitration.

They say the substandard work not only disrupted tile lines that weren't repaired properly or not repaired at all, but it also misplaced topsoil that should have been put back on the trench once the job was done, leaving barren unproductive strips through their fields.

The relationship got off to a bad start in 1988, when the pipeline company started to purchase easements for the installation of the pipeline. After failing to get an easement from several farmers in the com-

The installation of pipeline that cut through the farms of (l-r) Larry Augustyniak, Jim Lahar, Jim Tarkowski, and Gus Pomaville in Bay County was poorly handled, in their opinion. They, along with two other neighboring farmers, have filed a lawsuit against the pipeline company. The field and woods in the background were part of a 70 foot easement obtained under condemnation proceedings against landowners.



munity for a 70 foot right-of-way, the pipeline company initiated condemnation proceedings.

"They (the farmers) were offered fair amounts for their right-of-ways, and they declined," said Mike Covington, contract

land agent for Saginaw Bay Pipeline. "The state of Michigan has an act that allowed us to condemn the property, very similar to what's done with highways."

Digging for the pipeline actually got underway in September of 1989, with the understanding that the pipeline company would keep topsoil separate and repair field tile, says Augustyniak. Unfortunately, a wet fall and an overzealous ditching crew combined to leave area farmers with a ditch six to eight feet wide and 12 to 15 feet deep, instead of the agreed 16 inch trench.

"The ditch was dug and sitting there for approximately six to eight weeks before the line was ever put in," said Jim Lahar, another farmer involved in the lawsuit. "The digging crew was running so far ahead of the pipeline laying crew, that the Public Service Commission even called them and said this was not a good practice."

According to John T. King, supervisor, Petroleum Engineering Section at the Michigan Department of Commerce, the Saginaw Bay Pipeline Company was in quite a hurry to complete construction. "The contractor ditched quite a bit ahead of the pipe-laying crew," said King. "They also used a backhoe as opposed to a ditcher, which would have given a cleaner and smaller ditch."

Covington says the excessively wet fall necessitated the abnormally wide ditch. "If we had done what we normally do, the pipeline trench would have fallen right in," he said. "We needed that extra room to work because of the saturation at that time - we have no control over the weather."

Those abnormally wet conditions also resulted in the pipeline company using topsoil, originally set aside for resurfacing once the job was done, as filler for the equipment to drive on.

"It was originally agreed to that the pipeline company would save all our topsoil," said Lahar. "However, all of our topsoil was used and moved over into their path where the equipment was being moved because they were cutting deep ruts and needed something to fill them with."

The farmers have consulted Extension and Soil Conservation Service staff for remedies to the topsoil issue. Short of hauling load after load of topsoil back in, the farmers have been advised to seed a legume, such as clover or alfalfa, on the strip and wait 10 years before using the ground in normal crop rotation.

As if adding insult to injury, the pipeline company also reneged on the placement of the pipeline through Gus Pomaville's farm. He claims the Saginaw Bay Pipeline Company had originally agreed to place the pipeline along an existing fence row to minimize damage to his fields.

Much to Pomaville's surprise, the company opted to route the pipeline across his fields, a mere 75 to 100 feet from the fence row. "Even the contractor realized it made good sense to utilize the fence row, and offered to contact the company to put the pipeline along the fence row as is normally done," he said. "When the contractor returned, he was told by the Saginaw Bay Pipeline Company that they would have nothing to do with putting the pipeline by the fence - it was going through the field, no questions asked."

According to Covington, despite his company's good intentions, they had little choice in the exact route of where the pipeline would be laid, because of the condemnation proceedings. "We were given directions as to where we could and could not go, and we could not change at that time," he said. "There was really no negotiating as to where the line was going to be put."

We helped Isiah Thomas Shape Up Michigan.

Now let us shape up your future.

When Detroit Pistons superstar Isiah Thomas wanted to teach Michigan kids the value of staying physically and mentally fit, Farm Bureau Insurance agreed to sponsor his efforts.

The result was the successful 1993 "Shape Up Michigan" campaign. It included fitness rallies for 25,000 young people in Flint, Grand Rapids, Lansing, and Detroit, and a statewide TV special.

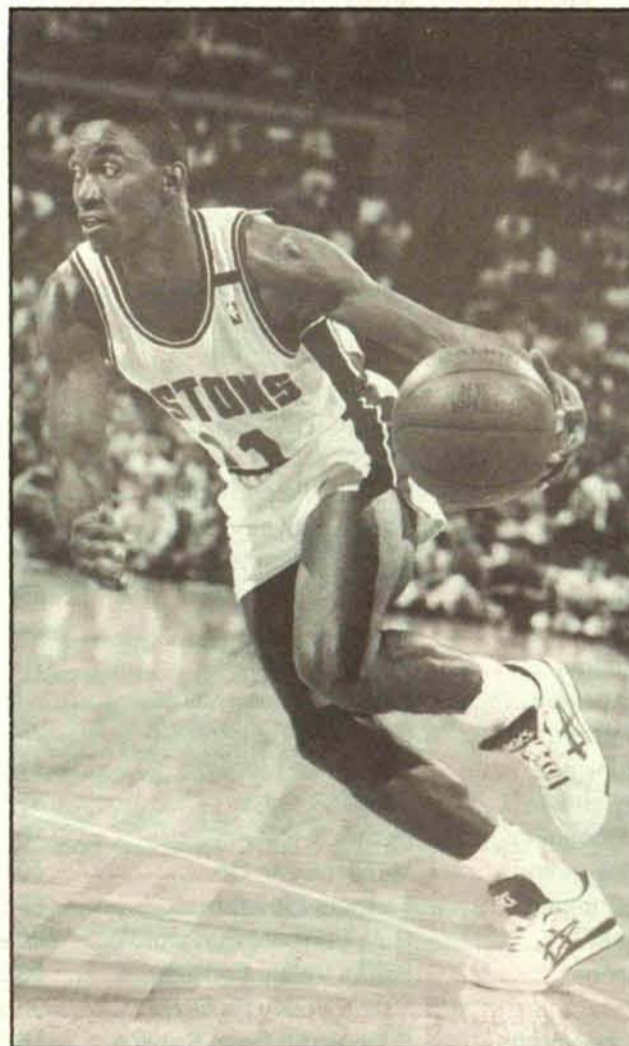
Shaping up your future is important, too, but it takes a strong, stable company to do it . . . and the superstar is Farm Bureau Life Insurance Company of Michigan.

- We are the only Michigan-based company to make the national list of 50 outstanding insurers, as prepared by Ward Financial Group. Farm Bureau Life was praised for attaining superior financial performance without sacrificing safety and security.

- Our investments are safe and secure (we have never purchased junk bonds) and our yields have outperformed the life insurance industry average in seven of the last eight years.

- Farm Bureau Life has received the A+ (Superior) rating from the A.M. Best Company every year since 1976, one of only a few life insurance companies so honored.

Choose a performance superstar. Call your Farm Bureau Insurance agent today.



FARM BUREAU INSURANCE
FARM BUREAU MUTUAL • FARM BUREAU LIFE • FARM BUREAU GENERAL • FB ANNUITY

MAKING YOUR FUTURE MORE PREDICTABLE

Continued...see next page

"When Private Property Rights Are No More"...continued

13



The 16 inch trench originally agreed to between the pipeline company and landowners grew into a ditch six to eight feet wide and 12 to 15 feet deep (at left) that was dug six weeks in advance of the pipeline laying crew (below). During that time, several heavy rains and cut field filled the ditch.



King's view of the law differs, however. "The commission does not set a precise route - it approves a general route. The rule of thumb, and it's not written anywhere, is that it can vary by a quarter of a mile either direction from where they put that line on a map to allow for unforeseen circumstances, or to help the landowner out," he said. "We prefer contractors parallel existing right-of-ways, if they can, or use fence rows."

make a commitment to operate with the overall public in mind as well as the individual landowner, and we try to help them to the best extent we can," he concluded.

Disrupted field tile, more than anything else, irritates all six farmers. Each said they'd like to either see the field tile repaired the way they wanted it repaired originally or the field completely retiled.

Lahar says that while field tile was cut and left open for six weeks, considerable sedimentation was allowed to enter the tile. Bags that had been placed over the ends of field tile in most cases were washed away by excessive rainfall. He says he battled over how the tile was going to be fixed until he was issued an ultimatum by the pipeline company of "take it or leave it."

"I finally told the tiler to go ahead and fix it, even though it wasn't the way I wanted it fixed - anything has got to be better than nothing," Lahar said. "To this day, however, that field tile is not working the way it did prior to the pipeline."

Augustyniak's battle over principles proved very costly. His opposition to the pipeline company's drain tile repair offer left him without any of the drain tile being repaired. Four years later, the 18 acre parcel's tile system, cut by the pipeline company, still isn't repaired.

"Their offer to repair the tile was not the proper way to repair it," argued Augustyniak. "They said I had to accept it and I said no because it simply would not work. The company basically said 'too bad' and filled the trench without fixing any of the field tile."

What could other landowners do to avoid similar situations? Augustyniak expressed frustration, since he believes they did all that they could to avoid the problems they've been dealt.

"I don't know what else you could do," said Augustyniak. "I really don't know what you could have done that we didn't do. When they have the right of eminent domain and condemnation proceedings, there's no way you can deal with them."

"We all realize the need for a pipeline, but what we don't understand is why the company can't repair the damage," added Pomaville. "They acted like they didn't care what we thought or what our rights were; they were coming through here anyway. I don't think any of us were treated right to begin with."

According to King, despite discussions about a brochure or landowner's "Bill of Rights," nothing currently exists from the Public Service Commission. "We try to

Drive a Great Deal.

Take advantage of Alamo's Association Program with a **FREE UPGRADE** or a **FREE DAY**. Association members drive away with a great deal everyday at Alamo. You can expect *unlimited free mileage* on every rental in the U.S., U.K. and now Switzerland as well as additional frequent flyer miles with Alaska, Delta, Hawaiian, United and USAir. Alamo features a fine fleet of General Motors cars and all locations are company-owned and operated to ensure a uniform standard of quality.

As a member, you'll receive other valuable coupons throughout the year that will save you money on each rental. You can count on a great deal with Alamo. For member reservations call your Professional Travel Agent or Alamo's Membership line at 1-800-354-2322.

FREE UPGRADE

- Valid for ONE FREE UPGRADE to next car category, subject to availability at time of rental.
- (In the U.S.) Valid on a compact car or above, excluding premium, luxury and specialty cars. (In the United Kingdom). Valid on self-drive rentals from a group B car category and above, excluding group E car category and above.
- One certificate per rental. Not valid with any other offers. Must be presented at the Alamo counter on arrival. Certificate may only be redeemed for the basic rate of the car rental. Once redeemed the Certificate is void. A 24-hour advance reservation is required.
- This certificate and the car rental pursuant to it are subject to Alamo's conditions at time of rental.
- This certificate is null and void if altered, revised or duplicated in any way.
- Offer valid through September 30, 1993, except 2/11-2/13/93, 4/8-4/10/93, 5/27-5/30/93, 7/1-7/4/93 and 7/23-8/28/93.

For reservations call your Professional Travel Agent or call Alamo's Membership Line at 1-800-354-2322. Request Rate Code BY and ID# **BY-223212** when making reservations.

U77B

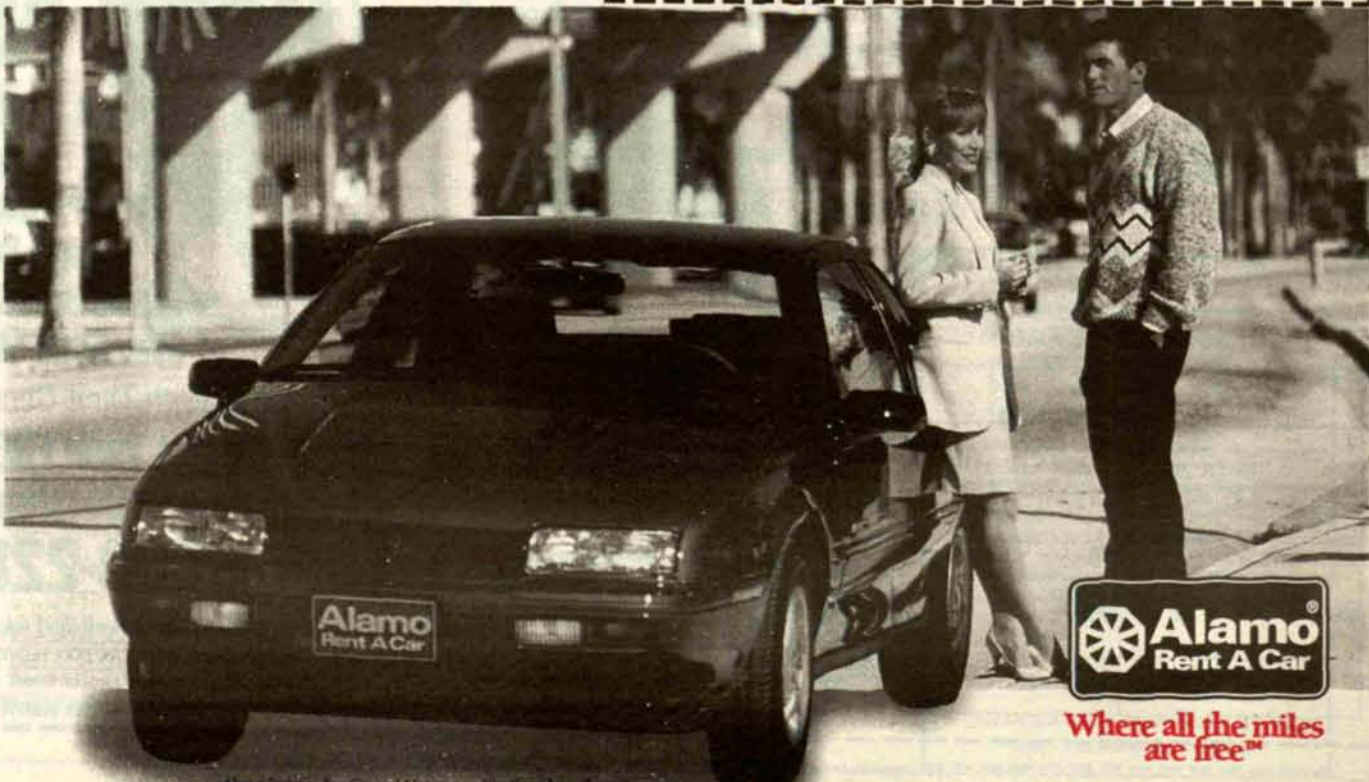


ONE FREE DAY

- Valid for ONE FREE DAY on any 2 day or longer rental
- (In the U.S.) Valid on a compact car or above, excluding premium, luxury and specialty cars. (In the United Kingdom). Valid on self-drive rentals from a group B car category and above, excluding group E car category and above.
- One certificate per rental. Not valid with any other offers. Must be presented at the Alamo counter on arrival. Certificate may only be redeemed for the basic rate of the car rental. Once redeemed the Certificate is void. A 24-hour advance reservation is required.
- This certificate and the car rental pursuant to it are subject to Alamo's conditions at time of rental.
- This certificate is null and void if altered, revised or duplicated in any way.
- Offer valid through September 30, 1993, except 2/11-2/13/93, 4/8-4/10/93, 5/27-5/30/93, 7/1-7/4/93 and 7/23-8/28/93.

For reservations call your Professional Travel Agent or call Alamo's Membership Line at 1-800-354-2322. Request Rate Code BY and ID# **BY-223212** when making reservations.

F04B



Where all the miles are free™

- Michigan Farm News Classifieds -

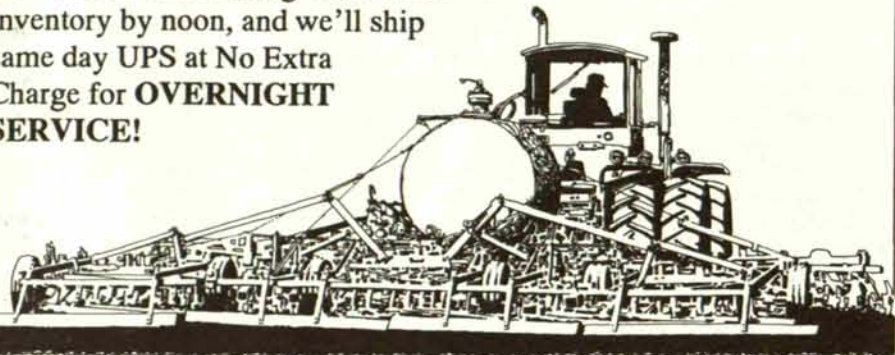
Save on High Quality OEM Certified



Tillage Parts
Cutting Parts
Roller Chains
and Lincoln Welders

Call your local vendor or order direct by calling
1-800-292-2680, ext 2015

Order from our Lansing Warehouse inventory by noon, and we'll ship same day UPS at No Extra Charge for **OVERNIGHT SERVICE!**



Deadline for next issue is June 16, 1993

Call 1-800-968-3129

to Place Your Classified Ad Today!

or use the coupon below and mail your classified ad to

Michigan Farm News
Buy Line/Daily News
P.O. Box 6
Stanton, MI 48888

Classified Ad Codes

- | | | |
|------------------------|--------------------------|-------------------|
| 1. Farm Machinery | 5. Help/Position Wanted | 9. Real Estate |
| 2. Livestock Equipment | 6. Agricultural Services | 10. Seeds |
| 3. Farm Commodities | 7. Auctions | 11. Wanted to Buy |
| 4. Livestock | 8. Building Materials | 12. General |
| | | 13. Ponies/Horses |

Name _____ Phone () _____

Address _____

City _____ State _____ Zip _____

Classified Ad Code Requested _____ Number of Issues _____

Desired Insertion Date(s): _____

Method of Payment

Check \$ _____ (payable to Michigan Farm News Classified)

Visa Card Number _____ Exp. Date _____

Master Card Number _____ Exp. Date _____

Classified Rates
\$8 for up to 24 words
30 cents each additional word

Write your ad here, including phone number and area code

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36

01 Farm Machinery

2 SELF UNLOADING chopper wagons with Decker boxes and IH running gears. Good condition, stored inside, \$1000. each. 616-943-4003 Traverse City Area.

450 FARMALL with torque wide front end. Farmall H. Hesston mower conditioner, 1091. Hesston round baler, 5580. 250 gallon sprayer with pump. New Idea 2-row corn picker, wide row. 1-517-248-3548.

BRILLION 13' Crowfoot packer with transport wheels. Good condition! Call 1-616-642-9938.

DRY CHEMICAL MIXER: 500# capacity. Use to mix feeds, seeds or any dry materials, with holding tank. Vibrating flow control, 220 watt. Call 1-517-291-5191.

FOR SALE: 2390 Case with low hours, IHC 15 tooth chisel plow, White 25' field cultivator. 3 point hitch weed sprayer 300 gallons, Dalhman potato harvester, Dalhman potato windrower, IHC 21 hole grain drill. All in excellent condition. 517-328-6741.

FOR SALE: Complete equipment needed for irrigation and pumping and spreading manure. Plummer Supply, Inc. 1-800-632-7731.

03 Farm Commodities

WHEAT: Top prices paid fast! Don't speculate our expertise. Can eliminate price risk through sound marketing. Call Michigans experts, The Smith Brothers. 1-800-878-2767.

04 Livestock

GOOD SELECTION of registered Yorkshire and Hampshire Boars. Black Fat and Loineye Figures and Days to 230#. Also, open Gilts and bred Gilts. Some caring YxH litters. Marvin Cook, Mulliken, MI. Call 1-517-649-8988.

LIVESTOCK TRAILERS: Heavy duty, bumpers and goosenecks. Call for quotation. Nobody sells for less! D.R. Sales, 9461 Talladay, Willis. 1-313-461-1414.

OSWALT ANGUS FARM 2 pure bred well balanced yearling bulls for sale. Call Gordon Oswalt, Vicksburg 616-649-0283

QUALITY ANGUS BREEDING STOCK Performance tested, Bulls semen tested. Free delivery. Also Border Collie Stock Dogs. Call today. BORDNER ANGUS FARMS Sturgis, MI 616-651-8353.

REGISTERED Polled Herefords, breeding age bulls and heifers and bred heifers. MSU

06 Agricultural Services

BIRD FERTILIZER SERVICES. 1100 N Irving, Greenville. Fertilizer, chemicals, seed, lime, feed. Soil testing, truck spreading and custom spraying. Call 616-754-3684.

EXPERIENCED Michigan agribusiness attorneys with farm backgrounds. Knowledge and experience in all farm areas; restructure, stray voltage, bankruptcy, estate planning. EAST SIDE: Thomas J. Budzynski, 43777 Groesbeck Hwy., Mt. Clemens, MI 48036, 313-463-5253; WEST SIDE: Robert A. Stariha, 40 W. Sheridan, Fremont, MI 49412, 616-924-3760.

08 Building Materials

STEELWOOD BUILDINGS, from 500 square feet, factory closeouts. Limited quantities! Call today, 1-517-647-2226.

09 Real Estate

HILLSDALE COUNTY: Vacant farmland, mostly tillable in P.A.-116. \$800 per acre. Terms! Rented for 1993 crop at \$60 per acre. Call Robin Greenway, 1-313-495-0482.

11 Wanted to Buy

SUMMER CLEANING? Sell me your old coins, comics, antiques. Call Mark at 1-517-663-4805. Leave message and number on machine and I'll be in touch.

12 General

14' CAROLINA SKIFF, fiberglass with front deck. Galvanized trailer, 25hp Mariner motor with electric start and alternator. Boat is self baling and has a 4" draft, 3 deluxe folding chairs, 2 live wells. 1-616-453-9561.

COCKER PUPS for sale. One female, one male. Buff and white spotted, with papers. Ready June 8 for new homes, \$200. Call 1-517-626-6072.

FISH FOR STOCKING Giant Hybrid Bluegills, Rainbow Trout, Walleye, Largemouth Bass, Smallmouth Bass, Channel Catfish, Perch and Fathead Minnows. LAGGIS' FISH FARM, INC., 08988 35th St, Gobles, MI, 49055. Call 616-628-2056 days, 616-624-6215 evenings.

FISH fresh and smoked on the dock. Bayport Fish Co. Perch, Whitefish, Catfish, Suckers etc. Open 9-5 seven days. 517-656-2121. Caught by or own boats daily.

FOR DISPLAY AD INFORMATION CALL 1-800-292-2680 EXT. 3201

AERIAL PHOTOS



The whole picture at half the price!

Document your most valuable investment.

Father's Day Special

11" x 14" Full Color Enlargement Photo Only \$95

Call Brooks Enterprises Today

1-800-546-1011

Offer Expires May 31, 1993

Good News!

Now You Can Save Up To 50%

On Some Of The Most Popular

✓ Prescription Drugs

✓ Medical Supplies

✓ Name Brand Vitamins

✓ Over 5000 Medications

Along With Their Generic Equivalents!

To Get Your **FREE** Discount Pharmacy Catalog Call Toll-Free

1-800-228-3353

HEARTLAND FELD DRUG
PRESCRIPTION SERVICE & MEDICAL SUPPLIES
5023 Grover Street ♦ Omaha, NE 68106

HEARTLAND/FELD IS A MEMBER BENEFIT FOR FARM BUREAU MEMBERS

Growers Should Guard Against Anthracnose in Dry Edible Beans

Anthracnose is a virulent seed-borne fungus that can damage plant vigor and reduce dry edible bean yield. The disease should be regarded as a serious threat to Michigan's dry edible bean industry, say Larry Copeland and Jim Kelly, Michigan State University agronomists.

The four known races of anthracnose are designated as alpha, beta, gamma and delta. Only the alpha race is known to occur in Michigan's bean crop at this time.

The alpha race was detected in many navy bean fields by Michigan Crop Improvement Association (MCIA) inspectors in the late 1980s. In the past few years, at least 80 percent of the black bean seed fields have been rejected by MCIA inspectors because of anthracnose contamination.

The development of anthracnose in a field is usually the result of planting anthracnose-infected seed. Once contamination occurs, it can persist in the field for several years. To minimize survival of the fungus, growers should follow good crop sanitation practices, including deep tillage, and use a three-year crop rotation - avoid planting dry beans in the same field more than one year in three.

Copeland and Kelly say growers' best defense against the spread of anthracnose is

to plant anthracnose-resistant varieties or use laboratory-tested seed.

Alpha-resistant navy bean varieties are Westland, Seafarer, Fleetwood, Laker and Crestwood. Resistant black beans include Blackhawk and Blackjack. Resistant kidney beans include Montcalm, Isabella, Sacramento and Linden.

No varieties of pinto or cranberry beans grown in Michigan are resistant to anthracnose alpha race.

Treating dry edible bean seed with fungicide has not been proven to eradicate anthracnose in seedlots. Copeland and Kelly say that seed treatment may even be counter-productive, because it could give growers a false sense of security about the seedlot they are planting.

Seed suppliers need to be cautious about distributing anthracnose-susceptible dry edible seed varieties from Michigan, Ontario, or New York and to make special effort to sell only disease-free seedlots, Copeland and Kelly say.

More information about the anthracnose fungus and laboratory testing for anthracnose in dry edible beans can be obtained from Copeland by calling him at (517) 353-9545 or by calling MCIA at (517) 355-7438.

Farmers' Loss is Food Stamp Program's Gain and Then Some

House Ag Committee Proposes Major Revision to Farm Program Spending

The House Agriculture Committee completed its budget reconciliation package that reduces farm program expenditures by \$2.9 billion, while increasing food stamp program spending by \$7.4 billion. The package was approved on a party line vote of 26 to 17, marking the first time in years that the Agriculture Committee has divided along partisan lines on a budget package.

After considerable controversy in the party caucuses and in the last meetings of the committee's budget task force, the committee convened and adopted the package recommended by the task force. The provisions of this package and the savings resulting from each are:

1. Increase unpaid flex acres to 20 percent of crop acreage base from the current 15 percent for the 1994-98 crop years.\$1.96 billion
2. Cap Conservation Reserve Program acreage at 36 million acres through 1995 and at 38 million acres thereafter. Fund the Wetlands Reserve Program sufficiently to allow 330,000 acres through 1995 and 975,000 acres thereafter.\$469 million
3. Reduce CCC purchase price for butter to no more than 65 cents per pound; non-fat dry milk price at no less than \$1.035 per pound; extend the 10-cent assessment through 1998.\$253 million
4. Tobacco marketing assessment increased by 10 percent.\$22 million
5. Sugar assessment increased 10 percent.\$22 million
5. Extend oilseed loan origination fee through 1998.\$0
6. Freeze Market Promotion Program spending at \$147 million annually.\$234 million

7. Increase recreation fees (Forest Service).\$44 million
8. Peanuts - increase assessment 1.5 cents for producers and 1.5 cents for shellers through 1998. Impose temporary import tariff at 55 cents per kilogram on peanut butter along with Section 22 import protection measures.\$118 million
9. Honey - limit marketing loan gains starting at \$125,000 in 1994 to \$50,000 in 1997.\$23 million
10. Impose payment limitation schedule for wool and mohair, starting at \$125,000 in 1994 to \$50,000 in 1997.\$40 million

Several amendments were offered and considered by the committee. The most contentious issue concerned the fact that while farm program spending cuts of \$2 billion were being approved, the committee was also proposing to increase spending on the food stamp program by \$7.4 billion.

The Republicans on the committee strongly opposed this and ranking member Pat Roberts (R-Kan.) proposed an amendment to eliminate the agricultural cuts and offset it by only increasing food stamps by \$4.4 billion. This and several other amendments on the issue of food stamps failed along party lines.

The committee approved other non-controversial amendments, including one calling for continued study of the crop insurance program to revise the method of providing federal crop insurance.

A follow up amendment would eliminate the oilseed loan origination fee and set the soybean loan rate at \$4.92 if the money required for this exchange (\$65 million) can be derived from the crop insurance revisions.

The entire package will be forwarded to the Budget Committee for inclusion in the omnibus budget reconciliation package. The Agriculture Committee is expected to consider its version of budget cuts after the Memorial Day recess.

FB Farm Bureau Members,
Kick Back and Relax!

'93 SUMMERFEST!
Farm Bureau Center, Lansing
Wednesday, July 14
3 to 7 p.m.

Charbroiled Steak Dinner (all the trimmings) • Carnival Games • Dunk Tank • Country Music

Ticket prices (non-refundable):
\$4 each if purchased by June 30
\$5 each if purchased AFTER June 30
(LIMITED TICKETS AVAILABLE)

Complete the ticket order form below to get your Summerfest Tickets. Make your check or money order payable to Michigan Farm Bureau.



'93 Summerfest Ticket Order Form

Name _____
Address _____
City/State/Zip _____
County _____

Please send me _____ Summerfest '93 tickets at a cost of \$4 each (\$5 AFTER June 30). My check/money order in the amount of \$ _____ is enclosed.

MAIL TO: Michigan Farm Bureau, Field Operations Division,
P. O. Box 30960, Lansing, MI 48909

TROY-BILT® NEW PRODUCT ANNOUNCEMENT:

THE ALL NEW "OFF-LAWN" MOWER

Introducing...the all new TROY-BILT® Sickle Bar Mower now with power steering!



- **Amazingly fast...** cuts 2,800 sq. ft. of overgrown weeds in under 5 minutes!
- **Blaze nature trails** for walking, hunting, skiing, snowmobiling.
- **Enhance the beauty** of your place by clearing unsightly suckers, vines and bushes.
- **Have a safer place, too,** without fire hazards, driveway blind spots, poison ivies, oaks or sumacs.

If you have over an acre of land, the TROY-BILT® Sickle Bar is the perfect "Off-Lawn" mower to cut grass, weeds, even light brush of any height in all types of terrain.

For Your FREE Catalog Call
1-800-453-3599 Dept. 3907
or Mail This Coupon TODAY!



TROY-BILT Mfg. Co. Dept. A3907
102nd St. & 9th Ave., Troy, NY 12180
 YES! Please send me your FREE Catalog on how the TROY-BILT® Sickle Bar Mower can help me unlock the full beauty and enjoyment of my property... plus details on prices, models and savings now in effect! 3 17
Name _____
Address _____
City _____
State _____ Zip _____

Product also available in Canada!

Tips for Managing Alfalfa Weevils in Your Fields

Doug Landis & Mike Haas, Entomology, MSU

Alfalfa weevil adults have been spotted throughout the southern and central lower peninsula of Michigan. Producers may want to monitor their fields closely and utilize the information provided below.

— Description of Life Stages —

Young larvae are cream to yellowish-green colored, legless and have a cylindrical "wrinkled" body. As the larvae grow, they turn green and have a white stripe down the middle of the back. The head is shiny black. Full grown larvae are 1/4- to 3/8-inch long.

Clover leaf weevil larvae resemble alfalfa weevil larvae, but have a brown head and are much larger when mature.

Newly-emerged weevils are gray to light brown, about 3/16-inch long, and have a broad dark band down the middle of the back which darkens as they age. Their mouthparts are in the form of a long, slender "snout."



— Life Cycle —

Alfalfa weevils overwinter as adults in plant debris in and around alfalfa fields. They become active on the first warm days of spring, feeding and laying eggs in alfalfa stems. Larvae pass through four growth stages (instars), feeding for a period of three

to four weeks. Pupation takes about 10 days, after which the adults emerge and feed before seeking a sheltered location to spend a summer hibernation period. Adult weevils become active again in the fall, and some egg laying may take place in the extreme southern counties of Michigan.

— Damage —

Adults feed on stems and leaves of alfalfa, producing round or elongated holes in leaves. Larvae feed on the leaf buds and terminal growing areas. Pinholes in upper leaves are an early indication of larval feeding. Warm areas such as south facing slopes may show this type of damage first. Older larvae feed on expanded leaves, sometimes leaving only the veins which gives the leaves a skeletonized appearance.

Adults and larvae can also cause serious damage to alfalfa regrowth after the first cutting. This can be recognized as a failure of the alfalfa to "green up" due to weevils feeding on the developing crown buds.

— Detection —

Routine inspections of fields are the best way to determine if weevils are threatening the crop. Make observations early in the season by looking for the adult insect and signs of feeding damage. Later, just prior to the bud stage, alfalfa should be monitored closely for the presence of larvae and their damage.

Survey five randomly-selected areas of the field, staying away from field edges and unusual areas not representative of the overall field. Check the tops and upper leaves of 20 plants for grubs and their damage. Continue to check every few days.

A threshold has been reached if the field will not be cut for a week or more and 25 percent (25/100) or more of the plants have feeding damage and two to three grubs per stem.

— Management —

Biological Control. Probably the greatest reduction in alfalfa weevil numbers is due to *Microctonus aethiops*, a small wasp which lays its eggs (oviposits) in the adult weevil. The egg hatches, and the wasp larva spends the winter inside the weevil adult. Weevils that carry wasp larvae become sterile and are eventually killed.

Two other wasps, *Bathyleptes anurus* and *B. curculionis*, also oviposit in alfalfa weevil larvae. Infected larvae feed for a shorter time, resulting in less damage than from uninfected larvae.

The wasp larva feed on the weevil larva's internal organs, killing it. Predators of alfalfa weevil larvae includes species of lady beetles, nabids and spiders. A fungal pathogen of alfalfa weevil larvae also reduces weevil populations.

Cultural Control. Timely cutting is the key to alfalfa weevil management. Cutting is recommended if the crop is in the early bud stage or beyond when a weevil threshold has been reached. Cutting at early to mid bud stage (flower buds) will reduce alfalfa weevil populations and present serious feeding damage.

Cutting too early, before the bud stage, does little to reduce weevil numbers and may result in extensive weevil damage to the second crop. Timely cutting augments the biological control agents and provides direct control of weevil larvae.

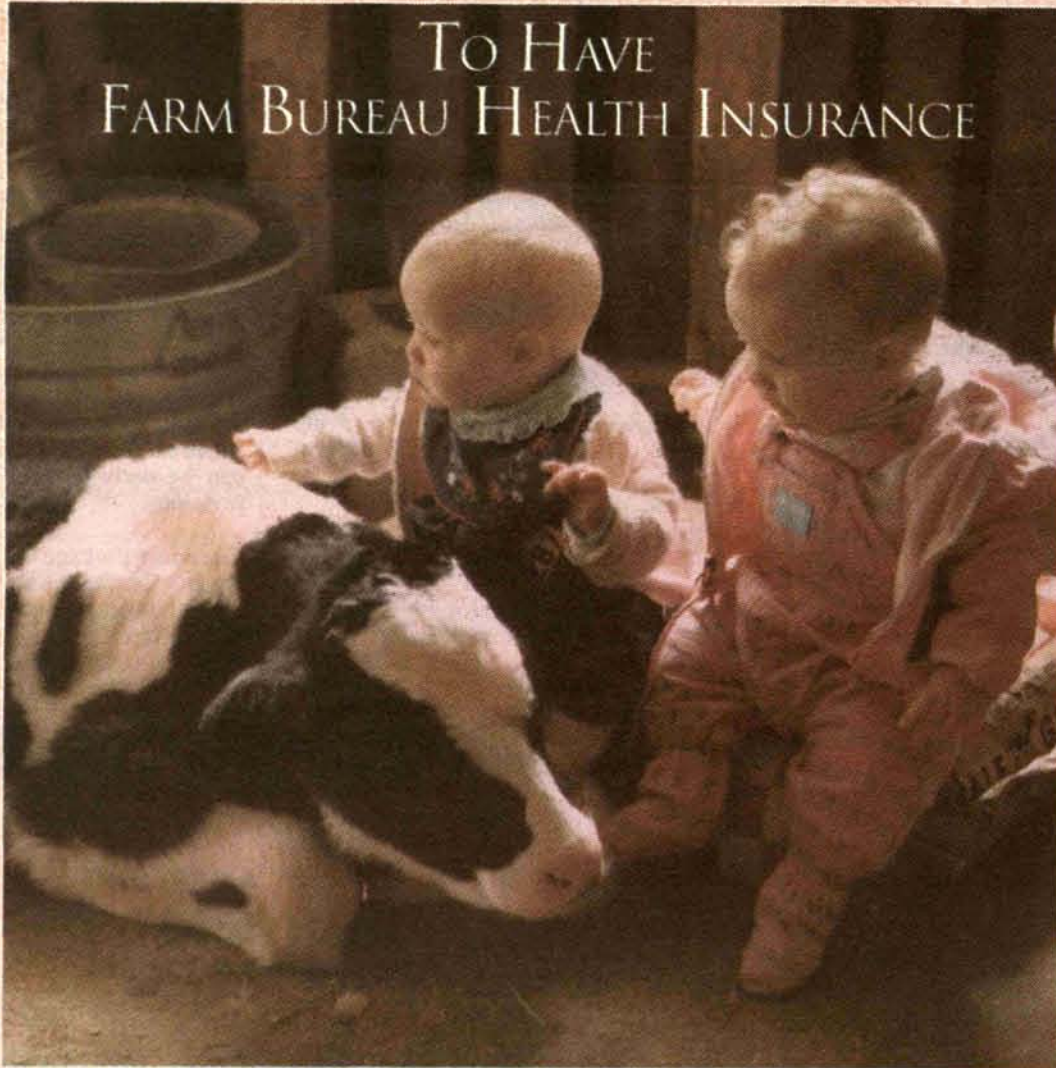
Chemical Control. An insecticide application may be necessary if a threshold has been reached, and the field cannot be cut for a week or more. Special care should be taken to avoid exposing bees to insecticides if the field is in bloom. Hay that has already been badly damaged should be cut as soon as possible without spraying.

Check fields until the regrowth from the first cutting is well established (about 6 inches tall). An insecticide application may be necessary if the field is not regrowing and grubs are readily found feeding on the stubble. Stubble applications are recommended only if warranted for weevil control, not as a potato leafhopper prevention.

Reprinted from the Michigan State University Extension Service's Crop Advisory Team (CAT) Alert, May 12 issue.

A FEW SMALL REASONS

TO HAVE FARM BUREAU HEALTH INSURANCE



For over forty years, Farm Bureau and Blue Cross Blue Shield have teamed up to provide quality health care at competitive group rates with the personalized service you would expect from a Farm Bureau family membership.

No matter what your needs... small business, sole proprietor, or individual coverage for you or your family — we have the right plan at the right price.

Blue Cross Blue Shield quality and Farm Bureau's personalized service provide an unbeatable combination that you can't afford to be without when protecting the "small" things in life that are of big importance to you.

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

 MICHIGAN FARM BUREAU

Health and Safety on the Farm

Michigan State University • Agricultural Engineering - Safety Program • Cooperative Extension Service

This publication was produced by the Michigan Agricultural Health Promotion Project

with funding from the National Institute of Occupational Safety and Health

Spring, 1993

Respiratory Protection Needed for Many Farm Jobs

Michigan farmers frequently work in areas laden with dust, molds and toxic gases that could damage their respiratory systems. Without proper protection, these farmers run the risk of developing a chronic illness that can rob them of their ability to work and enjoy life. In certain situations, such as in recently filled silos or in manure pits, even a brief exposure to the toxic gases can kill the unsuspecting farmer.

Matching the respiratory protective device with the situation is as important as selecting the right tool for the job. No farmer would attempt an engine overhaul with an adjustable wrench and pliers, so don't count on a red bandanna tied around your mouth and nose to protect you when the situation requires a self-contained breathing apparatus similar to those worn by firefighters.

Disposable Respirator Masks

These types of dust respirator masks are designed to filter nuisance dust and mold spores. Certain types of disposable dust masks contain activated charcoal that remove some troublesome livestock odors, organic vapors, mists that do not contain harmful vapors, welding fumes and paint spray particles. A less expensive type of mask, a particle mask, is only good for filtering out common nuisance dusts, but provides no protection from molds. None of these types of masks are capable of removing ammonia gas or pesticide vapors.

The cost of these types of masks ranges from less than 25 cents to \$6 each. There are disposable respirators available for anhydrous and livestock ammonia and pesticides, but not fumigants, that are available in the \$20 price range.

Farmers can ensure that they are getting a respirator that will provide the required protection by reading label instructions as to the type of particulates or vapors they are capable of removing.

Cartridge Respirator Systems

Available in half-mask or full facepiece models, cartridge respirators are capable of providing the farmer protection from a wide-range of agricultural respiratory hazards. The full facepiece models provide eye protection when there is a risk of chemical burning or splashing into the eyes.

Available in prices ranging from \$30 to \$100, these cartridge-type respirators are capable of providing protection from anhydrous and livestock ammonia, pesticides (but not fumigants), disinfectants, dusts, molds, welding fumes and other acid and organic vapors.

Farmers need to be aware that the cartridge respirator system is designed to filter out particulates and certain odors, they are not an air supply for oxygen deficient areas such as in sealed silos and manure pits, or in silos where silo gas is suspected.

Helmet Design

Air-purifying helmets are available for farmers who are seeking respiratory protection from dusts, pesticides and anhydrous ammonia, and also provide protection for the entire head. These air-pressurized helmets are equipped with a visor and a drawstring collar to eliminate contaminated air from entering under the helmet. A battery driven air pump filters incoming air and pressurizes the entire helmet.

Helmets are equipped with a rechargeable battery pack that can be plugged into the tractor's electrical system for extended wear. The battery pack provides air flow for up to four hours so the farmer can leave the tractor to load or repair equipment.

The cost of an air-purifying helmet is about \$700. Cartridge filters, which last about 100 hours and cost \$30 to \$45 per set, are available for pesticide and ammonia applications. The

helmet does not provide oxygen to the wearer, it only filters out certain gases and particulates.

The unit is not to be used in oxygen deficient

(Cont. on page 3)



An air-purifying helmet provides the wearer complete respiratory protection from dusts, pesticides and ammonia while protecting the head and face.

Handle Anhydrous Ammonia Carefully to Prevent Burns

Anhydrous ammonia is one of the most efficient sources of nitrogen fertilizer and is popular among Michigan growers because of its relatively low price. With proper precautions, it is safe to handle, but the number of accidents related to anhydrous ammonia in the United States has increased in recent years. These increases are due, in part, to older transport and application equipment becoming timeworn.

Safety devices built into anhydrous ammonia application equipment are designed to protect against a major ammonia release, but equipment failures have been reported. Operators and anyone in the area are at risk for severe burns.

The biggest risk associated with anhydrous ammonia handling is an accidental release of NH_3 . Inside the tank, ammonia under pressure remains in a liquid form that maintains a temperature of -28 degrees F. Once released, whether into the soil or the air, it immediately becomes a vapor that seeks out the most available source of moisture. Unfortunately, this

moisture source may be the body of the operator, which is composed of 90 percent water. When a human body is exposed to anhydrous ammonia, the chemical "freeze burns" its way into the skin, eyes or lungs.

Unlike wounds from a fire which tend to sear the flesh, ammonia consumes six times its own weight in moisture from any body tissue available. The only treatment is water, lots of water, and then more water. Flushing the burn with water gives the ammonia an easier source of moisture to seek out, pulling it away from human tissue. The best advice to ensure the safety of the operator is to make sure the equipment is in sound operating condition and, in the event of an accident, take every precaution to protect against a serious injury by wearing basic personal protective equipment (PPE).

Operator Protection

Most injuries occur when anhydrous ammonia is transferred from one tank to another. It is

(Cont. on page 3)

Beware of Grain Bin Hazards

Unloading stored corn from last year's late and extremely wet harvest may present health and safety hazards to farmers this year.

These hazards include the risk of being entrapped in the grain bin during unloading, or developing a respiratory disease from handling moldy corn.

Grain Bin Entrapment

Entering a bin to dislodge a grain bridge that has stopped flow to the unloader places the operator at risk for entrapment. This bridge, covering a cone-shaped hollow area below the surface, could collapse under the weight of the person, quickly burying him or her in tons of grain. It only takes a few seconds to bury an adult, crushing or suffocating the person.

Instead of entering the bin, you should attempt to break up the crusted grain from the top of the bin, safely supported by the bin ladder, with a long pole. If all efforts fail and you must enter the bin, there are several safety measures that should be taken to reduce the risk of becoming entrapped.

- Shut off the unloader. It is a good idea to lock out unloading equipment before entering

a bin to prevent someone from unintentionally starting the equipment while you are inside.

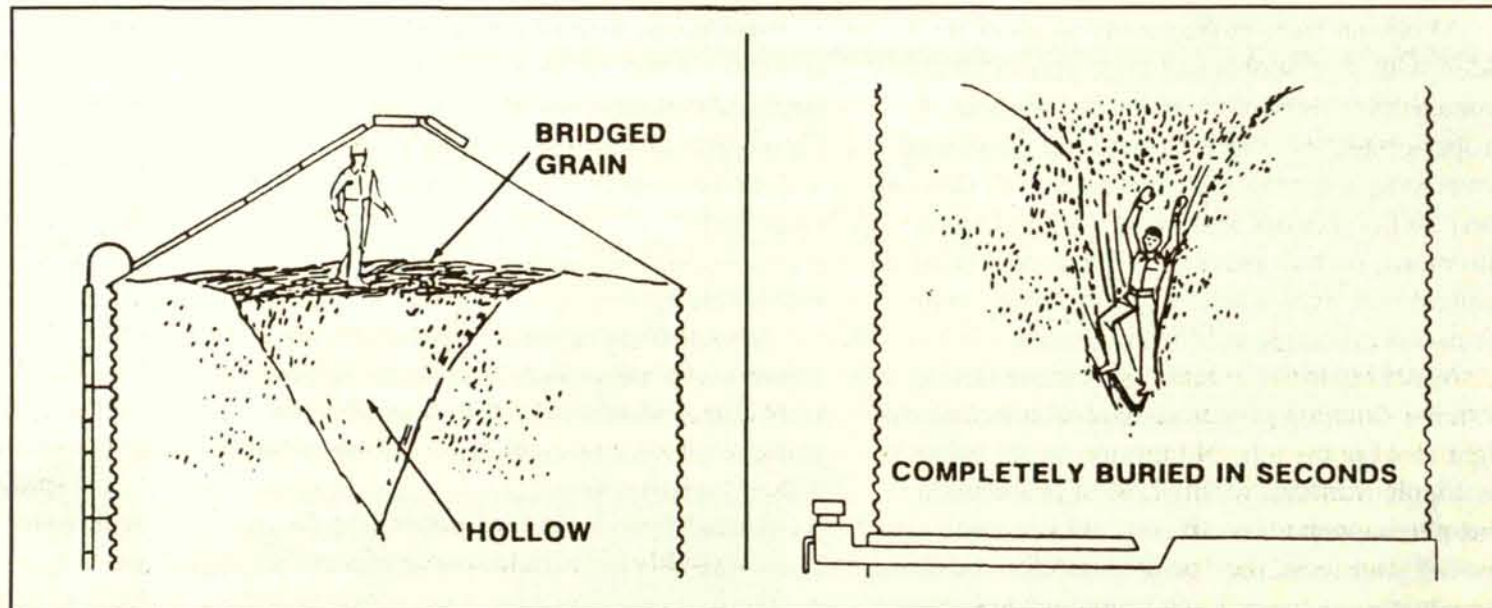
- Wear a safety harness attached to a rope. The Michigan Department of Labor Standards for Personal Protective Equipment requires employees to wear a safety belt or a safety harness and a lanyard affixed by a rope grab to a lifeline. All components must meet state requirements. The Michigan Occupational Safety and Health Administration (MIOSHA) requires a lift

tripod and harness lifeline arrangement for rescue from a grain bin for employees.

- Stay near the outer wall of the bin and keep walking if the grain starts to flow.
- Have another person, preferably two people, outside the bin to help in case you become entrapped. These people should be trained in rescue procedures and should know and follow safety procedures for entering the confined space.
- Grain fines and dust may cause

difficulty in breathing.

Anyone working in a grain bin, especially when cleaning the bin, should wear an appropriate dust filter or filter respirator (see related story on respirators). If grain has recently been fumigated, the bin should not be entered under any circumstances since no respirator provides adequate protection for fumigants. If fumigants have been applied, it will probably be cost-effective and safer to hire a professional service for grain removal problems.



A bridge across the top of a grain bin can collapse under your weight; never enter a bin without taking necessary precautions.



This is the only type of tractor a child should be allowed to ride on.

No extra riders - No exceptions

It's tough to tell that cute child "no" when he comes begging for a ride on the tractor. Those "can I come too" cries may be coming from a grandchild who's visiting the farm for the weekend, or maybe it's your own child, and "gee, it was OK to ride with dad when I was that age."

Whatever rationale you use to justify breaking one of the most important tractor safety rules, "no extra riders," think about the possible consequences. Last year four Michigan children were killed in tractor related mishaps.

Just because you rode on a tractor as a child doesn't mean it was safe, it just means that you were lucky. A nationwide study shows that 73 percent of all extra rider fatalities were children under the age of 10.

Even a tractor cab is no guarantee that the child is safe; bumps can jostle the child out an open door or window into the path of those big rear tires.

Don't jeopardize a child's life and cause a life-long nightmare for yourself by giving into pleas for a ride. No matter how much it pains you to leave the sobbing child behind, the loving thing to do is to JUST SAY NO!

Safety News

By Howard J. Doss, Agricultural Safety Leader
Michigan State University Extension

A long-standing goal of the Extension's Agricultural Safety Program is to encourage farmers to eliminate all safety and health risks on their farmsteads. While I realize that a risk-free farmstead is virtually impossible at this time, it is a goal that must continually be pursued or agriculture will remain the most hazardous occupation in the nation.

In the meantime, farmers continue to get injured or suffer illnesses directly related to farm work. In too many situations, these illnesses and injuries can force the farmer off the farm because of the physical nature of the work.

Now, with the assistance of a new project, the Michigan AgrAbility Program (MAP), farmers with disabling illnesses and injuries who choose to continue farming have the option of reviewing various types of assistive technologies to help them overcome their disability. These types of technological adaptations include hand controls for clutch and brake pedals, tractor lifts for wheelchairs, and automatic hitching couplers for connecting equipment without leaving the tractor seat.

MAP is a joint effort between Michigan State University Extension and the Easter Seal Society of Michigan, Inc., a non-profit organization. MAP is funded under a special provision in the 1990 Farm Bill. Farmers seeking assistance from MAP will have an on-site visit from an occupational therapist with an agricultural background to determine what technologies will help the individual continue farming. There is no charge for the service.

Last year, MAP was test piloted in Bay, Huron, Saginaw, Sanilac and Tuscola counties. In the first year, more than 35 farmers have been enrolled in MAP and are in various stages of receiving assistance. Some of the types of disabilities these individuals have include multiple sclerosis, vision impairments, arthritis, heart conditions and amputations.

With funding secured for this fiscal year, MAP will expand to serve farmers in Lapeer, Cass, St. Joseph, Kalamazoo and Calhoun counties.

The only qualifier is that a farmer or farm-related person be disabled, whether it is the result of an injury or illness. Farmers not in the five-county pilot project area can still contact the Easter Seal Society for assistance.

For more information about the Michigan AgrAbility Project, contact the Easter Seal Society at 1-800-292-2729.

Respiratory Protection

(Cont. from page 1)

areas such as sealed silos and manure pits, nor should it be used when applying fumigants.

SCBA

The self-contained breathing apparatus (SCBA) is a farmer's only protection when working with fumigants or in manure pits, sealed silos and other areas where oxygen is limited. This type of unit, similar to that worn by firefighters, provides the farmer with breathable air for about 30 minutes.

The cost of the unit is about \$1,600 and weighs about 45 pounds. The wearer also needs to be instructed in proper use of the unit.

Filters and Cartridges

There are two basic types of elements for purifying air, mechanical filters and chemical cartridges. Both are frequently used in combination, with the filter element first screening

out particulates and the chemical cartridge gases and vapors.

Chemical Cartridge Elements

Chemical cartridges are filled with a specially treated activated carbon that has a high absorption capacity to certain gases and vapors. As gases and vapors pass through the element, they become trapped on the carbon element, stopping them from entering the mask. The absorption capacity of the cartridge is limited, so the wearer should replace the cartridge when any taste, odor or irritation is noticed.

Mechanical Filter Elements

The mechanical filter protects the wearer from dusts and mists by trapping the particulates in the fibrous material of the mask. They become more efficient as the mask is worn, but the mask must be replaced as it becomes more difficult to breath through.

Fitting the Respirator

Beards and the physical size of the individual's face may make fitting a respirator difficult or impossible. Beards interfere with the seal of mask-type respirators and half and full-face respirators. Farmers with facial hair should consider an air-purifying helmet, which can accommodate most beards.

Banana oil ampules are available to test the fit of a respirator before entering an area with contaminated air. Crush the ampules after installing the respirator, if any odor is detected then adjustments must be made to the respirator or new cartridges are needed.

Medical Concerns

Check with your physician prior to using any respirator or self contained breathing apparatus to be sure any pre-existing medical condition(s) would not be further irritated by using a respirator or other air-purifying device.

Anhydrous Ammonia Safety

(Cont. from page 1)

during this task that operators frequently forget to take the proper safeguards to reduce the risk of injuries from ruptured hoses, valve or coupler failures, or any host of problems that can happen in a split second. Without proper protection, the operator is defenseless. Skin burns are the most common injuries reported from accidental exposure to anhydrous ammonia, but eye injuries are the most serious. To protect the eyes, wear goggles specifically designed for handling anhydrous ammonia. There are several brands available on the market that offer the protection needed in the event of an accident. Don't rely on eye- or sun-glasses to protect your eyes, the open area between the eye and the frames allow anhydrous ammonia to come in contact with the skin and eye tissue. Recommended goggles are non-vented to keep NH₃ vapors from the eyes. These goggles fit tight but allow for wearing of eyeglasses.

Loose fitting rubber gloves designed for anhydrous ammonia will protect the hands from thermal "freeze burns". Turn the cuffs of the gloves out so liquid ammonia doesn't run down your sleeve. Also, wear a heavy, long-sleeved workshirt to keep the chemical from reaching the skin. Long pants with the cuffs outside the boots are necessary for protection of the lower body.

University research shows that in 80 percent of the accidents involving anhydrous ammonia, 80 percent of the workers had access to gloves, but only 29 percent were wearing them. Likewise, 60 percent had goggles, but only 22 percent were wearing them.

Water, Water and More Water

Two or more sources of water are recommended in case of an accident. State law requires that all anhydrous transport and application equipment carry a 5-gallon container for fresh water. This water must be changed daily because anhydrous fumes that escape the nurse tank will contaminate this water supply.

A small squeeze bottle filled with clear water can be kept in your shirt pocket. This bottle will be readily available for flushing anhydrous ammonia from your eyes or for rinsing small exposures to the skin.

A third water container, carried on the tractor, is a readily accessible source of water for any accident. It becomes extremely important if an ammonia leak prevents the operator from getting to the water tank on the nurse tank.

If ammonia gets on your skin or in your eyes, flush the areas with clear water for at least 15 minutes to rinse away all ammonia. If water is not available, cool coffee, milk, cola, juice or other nontoxic liquid may provide temporary

help. An ammonia blast to the face could freeze eye lids closed. Never force eye lids open with your fingers, instead, apply water to the lids and continue flushing until they open. When ammonia is sprayed on your clothes, flush the clothing with water for a few moments until it is thawed, then remove the clothing and continue to rinse the skin for at least 15 minutes.

Always seek medical attention after an exposure to anhydrous ammonia. Proper medical treatment will reduce the severity of the injury and speed the recovery process. Never apply salves or ointment to ammonia burns. Your physician will advise you on the proper treatment of anhydrous ammonia burns.

About this publication

This publication was produced by the Michigan Agricultural Health Promotion Project (MAHPP). MAHPP is a joint project of Michigan State University's College of Agriculture and Natural Resources, the Cooperative Extension Service, the Department of Agricultural Engineering - Agricultural Safety, and the College of Human Medicine.

The Michigan Agricultural Health Promotion Project, through the Center for Michigan Agricultural Safety and Health Program (CMASH), links county Cooperative Extension Service staff and rural physicians through the state with a health and safety network at Michigan State University.

CMASH is a joint effort of faculty members from the Cooperative Extension Services, and MSU's colleges of Agriculture and Natural Resources, Human Medicine, Osteopathic Medicine, Nursing, Veterinary Medicine, the Center for Environmental Toxicology, and the Pesticide Research Center.

Information in this publication is for educational purposes. References to commercial products or trade names does not imply an endorsement by the Cooperative Extension Service or bias against those not mentioned. Cooperative Extension Service programs are open to all without regard to race, color, national origin, sex, or handicap.

MSU is an affirmative Action/Equal Opportunity Institution.

This publication was funded by Cooperative

Agreement U05/CC4506052-02, awarded by the National Institute of Occupational Safety and Health.

MAHPP Directors Howard J. Doss
Ken Rosenman, M.D.

Editor William R. McLeod

What is the CMASH program?

The Center for Michigan Agricultural Safety and Health (CMASH) takes traditional Cooperative Extension Service farm safety programs a step further by taking a holistic approach to improving the health of the state's rural residents. Under CMASH, farm safety is augmented with a program to assist healthcare professionals in diagnosing and managing illnesses common to the farm industry.

The program is a joint effort of Michigan State University's Colleges of Agriculture and Natural Resources, Human Medicine, Osteopathic Medicine, Nursing and Veterinary Medicine, the Cooperative Extension Service, Institute for Environmental Toxicology and the Pesticide Research Center.

CMASH is not a regulatory agency, it is an educational center designed to encourage agricultural producers to protect themselves from occupational injuries and diseases. Comments or questions can be addressed to: Howard Doss, Extension Agricultural Safety Specialist, MSU Cooperative Extension Service, 223 A.W. Farrall Agricultural Engineering Hall, Michigan State University, East Lansing, MI 48824.

Page two illustration courtesy of *Fundamentals of Machine Operation*. 1987. Deere & Company, Moline, Illinois.

Putting a Cap on Skin Cancer Risks

The ever-popular baseball style cap has been the standard with Michigan farmers for decades. It's hard to argue the price (as long as you're willing to advertise your favorite seed, fertilizer, or machinery supplier) and it tends to provide some level of protection in all types of weather.

In the winter it's better than nothing, but lacks the warmth needed on really cold days. In the summer it keeps the sun out of your eyes, but the back of the neck and sides of your face are constantly exposed.

The hat's not perfect, but it's good enough, right? Wrong, possibly dead wrong.

With skin cancer rates increasing, anyone spending long periods in the sun needs to cover-up as much skin as possible.

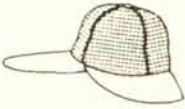
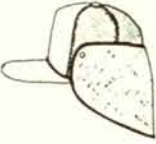


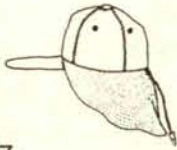



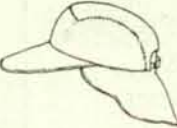

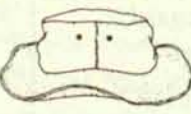
So what's the perfect hat? The simple answer is, it hasn't been made yet; likely it never will be. But there are several styles of hats available that might be just right for you.



The National Farm Medicine Center in Marshfield, Wis., had five farmers test 11 different caps and hats that provided more protection from the sun than the baseball style cap. The study was implemented after it was learned that 46 percent of the 600 farmers examined at the 1990 Wisconsin Farm Progress show had precancerous skin lesions and 8 percent had skin cancer. Skin cancer screenings at county fairs in the Thumb area this summer resulted in 25 percent of the farmers being referred to their physician or a dermatologist for a biopsy or for further examination.

The five farmers chosen for the Wisconsin test wore each of the hats for a minimum of 5 days or 25 hours of peak sun exposure during June, July and August. The hats were rated according to comfort, practicality for weather, practicality for maneuvers, appearance and cost. A dermatologist also tested the hats using studio lights to simulate the angle of the sun at various times of the day. All hats tested provided good sun protection for noon-time sun exposures, but some failed to protect parts of the face, ears and neck during mid-morning and mid-afternoon sun exposures.

Information and illustrations for this story are courtesy of the National Farm Medicine Center, Marshfield, Wis. Prices are subject to change.

 Mesh Stalker \$5	Description: Lightweight cotton with nylon mesh side panels. Available in S, M, L, XL.	Ratings: Comfortable to wear: High Practical for weather: Very high Practical for maneuvers: Very high Acceptable appearance: High Acceptable cost: Very high	Sun Protection: Some exposure of temples and lower face. Farmer comments: Very good for all types of work including milking cows. Back of bill was stiff and somewhat irritating to the neck.
 Cap Flap \$7	Description: A "button on" (metal clips) flap of heavy-weight cotton that is applied to your own cap.	Ratings: Comfortable to wear: High Practical for weather: Very high Practical for maneuvers: Very high Acceptable appearance: Medium Acceptable cost: Very high	Sun Protection: Some exposure of temples and lower face. Farmer comments: Easy to apply to standard cap. Fabric too hot but could be replaced with lightweight option.
 Kangola Spooner \$11	Description: Lightweight cotton with full front and rear bill that comes around temples. Available in S, M, L, XL.	Ratings: Comfortable to wear: High Practical for weather: High Practical for maneuvers: High Acceptable appearance: Medium Acceptable cost: High	Sun Protection: Good coverage of temples, some exposure to the lower face. Farmer comments: Good sun protection and lightweight fabric keeps the head cool. Not attractive enough to wear on regular basis.
 Pith Helmet \$16	Description: Lightweight seagrass straw with solid shape and adjustable head size band inside, terry cloth strip for sweat absorption.	Ratings: Comfortable to wear: Very high Practical for weather: Very high Practical for maneuvers: Low Acceptable appearance: Very high Acceptable cost: High	Sun Protection: Good coverage of temples, some exposure to the lower face. Farmer comments: Very good sun protection and keeps the head very cool. Comfortable to wear, but cumbersome in tight quarters or when bending over.
 Columbia Stalker \$17	Description: Lightweight cotton fabric. Back flap is longer than most, includes a clip for attachment to shirt on windy days. Available in S, M, L, XL.	Ratings: Comfortable to wear: Very high Practical for weather: Very high Practical for maneuvers: Very high Acceptable appearance: High Acceptable cost: Medium	Sun Protection: Temples and lower face are exposed. Farmer comments: Back flap fabric was soft and less irritating than other flaps. Might use the back flap clip-on. As with all flaps, there seems to be some amplification of sound.
 Kishigo Flap on Cap \$5	Description: Removable back flap of lightweight material. Attached with Velcro. Back flap available for \$2 to attach to own cap.	Ratings: Comfortable to wear: Very high Practical for weather: High Practical for maneuvers: Very high Acceptable appearance: Very high Acceptable cost: Very high	Sun Protection: Temples and lower face are exposed. New flaps are larger to protect temples. Farmer comments: Rated very high by farmers because removable flap provides the least alteration of current practice.
 Straw Hat \$18	Description: Woven straw hat with semi-firm shape, natural color. Available in S, M, L, XL.	Ratings: Comfortable to wear: High Practical for weather: Low Practical for maneuvers: Low Acceptable appearance: Medium Acceptable cost: Low	Sun Protection: Good coverage of the temples, but lower face is exposed. Farmer comments: Although cool and comfortable, it blows off outdoors or can be bumped off when doing barn chores or machinery work.
 Montana Cowboy Hat \$11	Description: Lightweight polyester hat with unique adjustable headband similar to baseball cap. Brim slips inside itself for tight fit.	Ratings: Comfortable to wear: High Practical for weather: Medium Practical for maneuvers: Medium Acceptable appearance: Medium Acceptable cost: High	Sun Protection: Good coverage of the temples, lower ears and face are exposed. Farmer comments: Comfortable, cool and appearance was acceptable to some. Not practical for dairy farm work because brim made it cumbersome for working in confined areas.
 SunShade Trek Hat \$12	Description: Heavy cotton cap with adjustable sizing and removable back flap. Similar to a baseball cap but narrower bill. Soon available in lightweight material with sun-filtering mesh.	Ratings: Comfortable to wear: High Practical for weather: Medium Practical for maneuvers: High Acceptable appearance: High Acceptable cost: Medium	Sun Protection: Temples and lower face are exposed. Manufacturer is enlarging back flap for more protection. Farmer comments: Too hot for summer work. Back flap design contours well to the neck to minimize irritation.
 Deep Bucket Hat \$22	Description: Heavy cotton twill fabric, side snap allows for lifting up sides when sun protection is not required. Available in S, M, L, LX.	Ratings: Comfortable to wear: High Practical for weather: Medium Practical for maneuvers: High Acceptable appearance: High Acceptable cost: Medium	Sun Protection: Provides good protection of the temples. Lower face is exposed. Farmer comments: Comfortable to wear and rarely blows off, fabric too heavy for summer work.
 New Zealander \$19	Description: Heavy cotton fabric with semi-soft two-inch brim, available in natural color. Available in S, M, L, XL.	Ratings: Comfortable to wear: Very high Practical for weather: Medium Practical for maneuvers: High Acceptable appearance: High Acceptable cost: Medium	Sun Protection: Provides good protection of the temples. Lower face is exposed. Farmer comments: Comfortable to wear but not practical for hot, windy weather.