

# MICHIGAN FARM NEWS

MICHIGAN'S ONLY STATEWIDE FARM NEWSPAPER

MICHIGAN FARM BUREAU



MICHIGAN FARM BUREAU

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## Weather worries growing for Michigan producers



**"Rainfall since the beginning of April is normally on the order of 4¼ inches, and we've had anywhere from 7 to 10 inches, with no extended dry period in sight!" Jeff Andresen, MSU Meteorologist**

### Milk Act measure moves in Legislature

Farm Bureau supports legislative efforts, underway this month in Lansing, to revise the state's Manufacturing Milk Act and help prevent a repeat of the losses that farmers suffered from the Pinconning Cheese plant default.

MFB President, Jack Laurie, said that reform of the act, particularly in regard to the financial security reporting provisions, is needed to help ensure that processing plant defaults are less likely to occur in the future. (See President's Column on page 2 for more information.)

Meanwhile, MFB Legislative Counsel Ron Nelson said Farm Bureau supports a lawsuit filed by Attorney General Frank Kelly and Michigan Department of Agriculture (MDA) Director Gordon Guyer against the operators of the bankrupt Pinconning Cheese plant: Dore's Pinconning Cheese Inc., of Pinconning; Dore & Associates Contracting Inc., of Bay City; Pinconning Cheese Inc., d/b/a Paul's Pinconning Cheese Inc., of Pinconning; and Real Pinconning Cheese, L.L.C., of Pinconning.

The lawsuit seeks over \$2.4 million owed to over 200 milk producers. "We think this action is very important, and we appreciate the state attorney general's action on behalf of these dairy farmers who were not paid for their milk," Nelson said.

The four counts in the complaint are breach of contract, fraud, negligent misrepresentation, and principal and surety. The first three counts allege that the defendants had contracted with and made representations to the milk producers that they would receive payment for the milk that was delivered to the cheese plant. The defendants failed to comply with the terms of the contract. The suit also cites the fact that worthless checks were issued to the milk producers to induce further deliveries of milk. The fourth count alleges that one of the defendants, Dore & Associates Contracting, had a surety agreement to cover the costs of milk received at the cheese plant.

Along with the civil case, the Criminal Division of the Michigan State Police, the Federal Bureau of Investigation and the U.S. Attorney's office are conducting a criminal investigation. No criminal charges have yet been filed.

A separate civil lawsuit has been filed against the Pinconning Cheese plant operators by some of the farmers who suffered losses. Concerns have been raised that the suits may interfere with, or be inconsistent with the suit filed by the attorney general's office and the MDA. However, David VanderHaagen, general counsel for Michigan Farm Bureau, said he does not see any difficulty. "If, however, some of the same producers who have their own civil cases are also listed on the

Continued on page 5

### DNR takes action on post-production cost controversy

**"One landowner obtained a statement for garbage collection costs, insurance costs, telephone costs — that's not post-production costs. Gas companies, basically found the golden cow, and they were milking it!" — Pete Vellenga, Charlevoix County Farm Bureau member.**

A controversial 1993 letter of agreement between the Michigan Department of Natural Resources (DNR) and the Michigan Oil and Gas Association (MOGA) allowing the deduction of post production costs (PPC) from gas leases on state-owned lands has finally been rescinded, putting a halt to further deductions on state-owned royalties from the Antrim gas formation. The announcement also sets the stage for an audit of the \$4 million in PPC deductions made from state royalty checks by gas and oil companies.

Over 400 upset landowners attending an April Natural Resources Commission (NRC) meeting in Grayling can take credit for the actions, according to NRC Chairman, Larry DeVuyst. "That meeting was kind of the culmination of statements that we had received over the last year-and-a-half on the PPC issue by citizens who felt they had been taken advantage of by something they had no control over," DeVuyst explained.

Under terms of a 1993 letter from the DNR to the MOGA on the subject of PPC, deductions could be made by gas and oil companies on state-owned leases on the Antrim gas development due to high-



Above, DNR Director K.L. Cool and Natural Resource Commission Chairman Larry DeVuyst announce DNR's decision to rescind a 1993 agreement allowing deduction of post-production costs during a recent news conference.

er costs associated with removing high levels of "CO<sub>2</sub> and other non-functional components." However, according to DNR Director K.L. Cool, the letter's intent has been considerably expanded to private landowner gas leases as well.

"Even though this process was intended to only influence PPC charges in connection with state leases, it has resulted in widespread public concerns regarding the appropriateness and legality of natural gas companies deducting certain expenses from mineral royalty payments on both private and

Continued on page 9

### COVER STORY

For many Michigan producers, the first of June will arrive much too soon this year. With only 23 percent of the state's corn acreage planted as of May 19, compared to the five-year average of 61 percent, heavy rains on May 20 and 21 have added to the frustration and anxiety levels of producers hoping to complete spring planting or, in some cases, to just get started.

"We've really got some problems," said MSU Meteorologist Jeff Andresen, who called the mid-May rains one of the most widespread heavy rains in lower Michigan in some time. "The heaviest rains fell from a corridor bounded by Grand Rapids to the south up to Muskegon to the north and then northeast toward the Saginaw Valley and northern Thumb area. Some spots in that corridor received between 3 and 4 inches over a 24-hour period."

Unfortunately, a similar weather system appears to be developing for the end of May, with tropical air moving northward and developing into a frontal boundary again over Michigan, creating the potential for even more heavy downpours, cautions Andresen.

"The weather over the next couple of weeks is apt to be highly variable, and growers will need to use, to the fullest extent possible, any breaks that Mother Nature affords them to get crops in the ground," Andresen advised. "Unfortunately, I don't think we will see any long-term breaks — one of those seven to 10-day periods of dry conditions and sunny warm weather."

Time is quickly running out for sugar beet producers and processors, who were already facing reduced acreage prospects thanks to higher-priced

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# News in Brief

## From the President



## Legislative priorities progress in Lansing

Two issues of major importance to farmers are currently being considered in the state Legislature. The first deals with efforts, which our organization strongly supports, to pass agricultural anti-disparagement legislation.

The Alar scare, almost seven years ago, caused severe economic damage to the apple industry. More recently, livestock producers have had to battle the publicity fallout from the "mad cow" scare in Britain. Both of these incidents illustrate how the agricultural industry can be severely harmed in a very short time by unsubstantiated rumors and inaccurate assertions. That's why we vitally need an agricultural anti-disparagement law. Libel and slander laws help protect our personal reputations. A company with a name-brand product can rely on trade libel laws. But producers of generic products like agricultural commodities have no specific protection against libel attacks and have difficulty recovering damages.

The House Agriculture and Forestry Committee recently approved two measures that would let farmers and commodity groups sue people who disparage agricultural products. The legislative language specifically says that "disparage" means to disseminate to the public in any manner information about an agricultural product that directly indi-

cates that the agricultural product is not safe for human consumption; and that, at the time of dissemination, the person disseminating knows the information is inaccurate and is not based on reasonable and reliable scientific inquiry, facts or data.

The legislation has been criticized for violating freedom of speech. But, in fact, the First Amendment, as evidenced by libel and slander law, does not protect false speech. This anti-disparagement legislation will not prevent anyone from stating an opinion. It will, however, make groups think twice about the truthfulness of what they say. Perhaps this will deter the unwarranted attacks on our industry, against which we have been, to this point, virtually defenseless.

Eleven other states have approved agriculture anti-disparagement legislation. Farm Bureau urges lawmakers to make Michigan state number 12.

The second important legislative issue concerns amendments to the Manufacturing Milk Act. Your organization supports efforts to revise, update and clarify the act so that the role of the Department of Agriculture is clearly spelled out and the department is given additional authority and responsibility when a question of producer security is an issue.

Milk is a very perishable commodity that must quickly be processed and sent to the grocery store shelf. That can create some potential payment problems, so it's important to assure producers that they will in fact be paid for their product. Unlike a commodity like corn, which can be stored for a long period of time, milk goes to market every day and is almost immediately consumed. Therefore, it is critically important that producers can be confident that they will be paid for their product.

There may be opportunities in the next few months for you to get involved and take personal action to help move these bills. I urge every Farm Bureau member to closely read upcoming issues of your *Michigan Farm News* and listen to the daily Farm Bureau reports on your local Michigan Farm Radio Network station to get updates on these issues as they progress through the Legislature.

*Jack Laurie*

Jack Laurie, President  
Michigan Farm Bureau

## Livestock Manure Composting Field Day offers sessions by farmers, researchers

Alternative livestock manure handling systems will be the focus of a field day to be held June 6, 1996, from 10 a.m. to 1 p.m., in northwest Muskegon County. The field day will be hosted by Bob and Kim Wackernagel, who own and operate a 100-cow dairy farm near Montague.

The Wackernagels have participated in a Livestock Manure Composting Project sponsored by Michigan Integrated Food and Farming Systems (MIFFS) for the past two years. They compost a large proportion of the manure their cows produce. Wackernagel cites weed seed kill (95 percent for properly composted piles) and volume reduction of manure (up to 3/4) as two main reasons composting is an attractive livestock manure handling method for his farm.

Wackernagel and fellow composter Joe Slater, a Newaygo County dairyman who uses compost in his greenhouse operation, will share perspectives on how composting works as a real-world manure management strategy. The field day will also feature presentations on manure storage and water quality by Natural Resources Conservation Service (NRCS) Agent Greg Mund, high quality composting and equipment by compost turner manufacturer Edwin Blosser, and windrow management and the composting process by Michigan State University Agricultural Engineer Ted Loudon.

Field day participants can also visit an on-farm demonstration site at the Wackernagel farm. Half a field was spread with compost and half with raw manure to compare the effects on weed seed germination. This demonstration was funded through the USDA's Sustainable Agriculture Research and



Compost turners such as this will be on display at the Livestock Manure Composting Field Day, June 6 in Muskegon County.

Education producer-initiated research program.

Field day sponsors include MIFFS, Muskegon Soil Conservation District, NRCS, MSU Extension, Timberland Resource Conservation and Development Council, and the Michigan Agricultural Stewardship Association.

Livestock Manure Composting is one of 10 MIFFS projects exploring community-based, innovative approaches to agricultural issues like environmental stewardship, farm profitability, food distribution and quality of life in Michigan. MIFFS is a four-year project partially funded by the W.K. Kellogg Foundation of Battle Creek.

The Wackernagel farm is located 3.5 miles west of U.S. 31 on Fruitvale Road in Montague.

For more information about the field day, directions to the Wackernagel farm or to RSVP for lunch, call Greg Mund at (616) 773-0008.

## Few opting for early buy-out

Only 300,000 acres have been freed during the early buy-out option of Conservation Reserve Program (CRP) land, according to the USDA. Under the 1996 farm bill, land previously enrolled in the program could be freed for immediate production. The government hoped the additional land would help ease tight grain supplies.

USDA, trying to remain optimistic, says only 1 million acres of land could be freed by the end of the month. Producers had until May 31 to remove CRP land for 1996 spring-crop production.

## Glickman to seek Dole's seat?

Agriculture Secretary Dan Glickman is reportedly considering running for the Senate seat being vacated by Sen. Bob Dole. According to the Washington Times, Glickman has been contacted by the Democratic Campaign Committee to consider the possibility.

Glickman, a former House member from Kansas, has reportedly been making phone calls to gauge support for a Senate candidacy.

## Delaney clause reform in the works

House Majority Whip Thomas DeLay (R-Texas) told attendees of the American Farm Bureau Federation's National Affairs Conference in Washington, D.C., that a Delaney clause reform bill will be considered by the House and Senate in the near future.

The bill could be offered for House floor consideration during a legislative week concentrated on the environment, he said. DeLay did not describe the vehicle for this potential reform, but in March, a House Commerce Committee aide told the Bureau of National Affairs that subcommittee review of such a bill could occur in May. DeLay warned the Farm Bureau leaders that if a Delaney reform bill is defeated, it could empower foes of environmental regulatory reform.

## USDA milk assessment refunds in the millions

Approximately \$82 million in refunds to U.S. dairy farmers for excess milk-marketing assessments have been made this year, the Agriculture Department announced.

The refunds were made available because last year's milk production did not exceed 1994 totals. Assessments collected through April 30, 1996 also will be refundable, USDA said.

Almost 37,900 refund applications for 1995 were filed, according to USDA, and applications for refunds based on 1996 production levels can be filed starting Jan. 2, 1997.

## British beef sales rebounding

Domestic sales of British beef have jumped back to 94 percent of the level they were before March's Bovine Spongiform Encephalopathy disease scare, according to Britain's Meat and Livestock Commission.

"British shoppers are making their own minds up and they are choosing British beef in ever greater numbers," the commission said. Commission numbers showed that beef sales in Britain dropped by 20 to 30 percent after the government announced a possible link between mad cow disease and a human equivalent. The British beef industry is still being hurt by a worldwide ban of imports from the country. British beef exports worth \$750 million per year have been cut, and it is not known when they might resume.

## CBOT withdraws price move proposal

In reaction to complaints from floor brokers, the Chicago Board of Trade has said it will probably shelve the idea to expand the allowable price move for corn futures, according to the *Chicago Tribune*. Exchange directors had approved an increase in the amount corn prices could fall or rise in one day to 20 cents a bushel. The current 12-cent limit will probably be kept.

Brokers complained the new figure would cause problems in managing customer orders.

## CRP battle brewing

The new farm bill authorizes the Agriculture Department to continue sign-ups and make mandatory payments for the Conservation Reserve Program (CRP) this year, but opponents of the popular conservation program are again targeting it for reduction and scale-back.

A group of agribusinesses, called the Coalition for a Competitive Food and Agricultural System, is asking the House Appropriations Committee to limit CRP enrollments in the coming year and subsequent years. The coalition wish-list would bar USDA from spending any money for new sign-ups in 1997, unless the land is particularly important for conservation.

The coalition says limiting sign-ups would force between one and two million acres out of the program in 1997 and more than 12 million acres out in 1998, without causing environmental damage.

"We think that would encourage growers to get back into the business of planting desperately needed acres, and for the government to get out of the supply management business," said Stu Hardy, a coalition spokesman.

## Michigan agricultural land values up

The average value of farm real estate in Michigan was \$1,329 per acre on Jan. 1, 1995. This is \$115 more per acre, or 9 percent above the value from a year ago. This information is from a report from USDA's Economic Research Service, based on a survey conducted by the Federal/State Michigan Agricultural Statistics Service. Farmland continues to increase in Michigan. The latest number represents a 32 percent increase from 1990, when the average per-acre value of farm real estate in Michigan was \$1,005. The value of farmland in bordering states was also on the rise in 1995. Ohio led the way at \$1,800 per acre, Indiana was \$1,654 per acre and Wisconsin was \$1,065 per acre. All three states' values were up 13, 10 and 10 percent, respectively. Since 1990, farmland values have increased 41 percent in Ohio, 32 percent in Indiana and 33 percent in Wisconsin.

Cropland rented for cash in Michigan was estimated at \$49.70 per acre. This represented more than a 3 percent increase from a year ago. The cropland rented for cash in Ohio, Indiana and Wisconsin was \$67.10, \$88.40 and \$46.20 per acre, respectively. The average pasture rented for cash rent had insufficient data to publish for Michigan.

The U.S. farm real estate values averaged \$832 per acre as of Jan. 1, 1995, more than 6 percent above a year earlier. Cash rents for cropland were generally higher in 1995 than in 1994, while those for pasture were generally lower. Cash rents per acre were highest for irrigated cropland in California and Florida.

## FDA to ban ruminant-to-ruminant feeding

The Food and Drug Administration will publish a proposed rule that bans the feeding of protein to cattle derived from rendered cattle and sheep.

FDA believes the feeding of animal-derived protein to cattle caused the spread of mad cow disease in Britain, and said the rule was needed to lessen the risk of an outbreak in the U.S. The proposed rule will be open for comment and it is expected a final rule will be published within one year. In the meantime, the livestock industry has voluntarily stopped feeding sheep and cattle offal to livestock.

## Wheat traders face fines by CBOT

The Chicago Board of Trade's (CBOT) business conduct committee has charged a number of grain traders with trading violations resulting from the unprecedented run-up in wheat prices in March. Prices shot up from \$5.30 to \$7.50 a bushel during the final three minutes of trading on March 20.

The charges, which have not been released by CBOT, follow on the heels of the board's decision to implement a series of measures aimed at ensuring the wheat expiration price spike doesn't occur again. The board also hopes to better handle huge increases in agricultural futures volume that in the past have produced chaotic trading conditions.

"I'm not saying anything was done wrong, but there is a sure basis for the charges," CBOT Chairman Patrick H. Arbor told the *Chicago Tribune*. The price squeeze at the March expiration remains under investigation by the exchange and the Commodity Futures Trading Commission.

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# Capitol Corner

**STATE ISSUE**

## Grain dealers/grain truckers amendments

**H**B 4333, sponsored by Rep. Gary Randall (R-Elwell), would provide different permit and financial standards for grain truckers. Currently anyone buying and selling grain is required to obtain a grain dealer's license with adequate bonding and financial security, plus annual audits.

The bill would provide a lesser standard for a grain trucker who is primarily a farmer, but also has some grain hauling business, that is incidental to the farming operation. The bill would clearly exclude farmer-to-farmer sales and farmers hauling their own grain, and would only trigger if a farmer was operating a truck in the business of buying and selling grain.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Ron Nelson, Ext. 2043.

**STATE ISSUE**

## Anti-Disparagement

**R**eps. Michelle McManus (R-Lake Leelanau) and Carl Gnodtke (R-Sawyer) are sponsoring legislation that provides for the award of damages for harm caused by false or misleading statement of fact relating to a food product. The bill specifically references "third party" and states that the third party is liable for all damages caused by the false or misleading statements of fact.

Another bill amends the revised Judicature Act of 1961 and contains more detail with the same concept. The bill requires that a person's statement be based on scientific fact and any disparaging comments that result in economic loss to producers can be rewarded by the court in the amount of up to three times the actual economic damage. In addition, it provides that an association may represent the producers that suffered the damages.

Disparaging an agricultural product means to provide information knowing that the information alleging that it is not safe for human consumption is inadequate and the statements are not based on reasonable and reliable scientific facts.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Ron Nelson, Ext. 2043.

**STATE ISSUE**

## Amendments to P.A. 116

**L**egislation sponsored by Rep. Michelle McManus (R-Lake Leelanau) passed the Senate with amendments. The House did not concur with the Senate amendments and the bill was sent to a Joint House/Senate Conference Committee. The bill contains approximately 25 House and six Senate amendments. Major issues of difference between the House and Senate include:

- A \$5,000-per-acre cap that limits the amount of money that could be spent to purchase development rights on farmland. The House supports a cap.
- The Senate amended the bill to provide a window to allow for early termination of the agreements. As passed by the Senate, the owner would be required to only repay credits received in the last seven years — without interest.

Farm Bureau supports the bill. However, Farm Bureau did oppose the section which provides a window to terminate the P.A. 116 agreement.

During the Senate floor debate on H.B. 4325, an amendment to remove a section of H.B. 4325 that was added to the bill during consideration in the Senate Agriculture and Forestry Committee allowing for a window of opportunity for farmers to terminate their contract early. Farm Bureau recommended a yeas vote on the amendment which would have removed this window of opportunity for farmers to terminate their contracts early. Farm Bureau policy opposes this form of early termination because it would weaken P.A. 116.

**Roll call on the "Window of Opportunity" amendment: Yeas-14, Nays-21, Excused-2**

Berryman, Y	Gast, N	Rogers, N
Bennett, N	Geake, N	Schuette, Y
Bouchard, N	Gougeon, Y	Schwarz, N
Byrum, N	Hart, Ex	Shugars, N
Carl, N	Hoffman, N	Smith, A., Y
Cherry, Y	Koivisto, Y	Smith, V., Y
Cisky, N	McManus, N	Stallings, Y
Conroy, N	Miller, Y	Stell, N
DeBeaussiaert, Y	North, N	Stille, N
DeGrow, N	O'Brien, Y	VanRegenmorter, N
Dingell, Y	Peters, Y	Vaughn, Y
Dunaskiss, N	Posthumus, N	Young, Ex
Emmons, N		

*Farm Bureau recommended a YEAS vote.*

**MFB Contact:** Ron Nelson, Ext. 2043.

**For more information on legislative topics in the Michigan Farm News, call 800-292-2680.**

**STATE ISSUE**

## Animal Industry Act

**R**ep. Carl Gnodtke (R-Sawyer) is sponsoring a bill to update the Animal Industry Act, often referred to as PA 466 of 1988. The purpose of the update is to reflect current management practices and also to clarify the Department's authority and role in testing of cervidae partly as a result of the tuberculosis situation.

The bill further provides that the Department of Agriculture may directly indemnify the taking of animals in the case of infectious or contagious disease by paying up to \$10,000 for each incident. In the past, the Legislature was required to appropriate any and all amounts; this gives the Department of Agriculture the authority to pay and provide money to individuals whose animals have been condemned.

The bill also provides local authorities the option for additional testing requirements for shows and exhibitions for contagious and infectious disease. The bill prohibits the feeding of garbage to swines unless the garbage is rendered.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Ron Nelson, Ext. 2043.

**STATE ISSUE**

## Amendments to General Property Tax Act

**H**B 5747, sponsored by Rep. Gary Randall (R-Elwell), seeks to clarify that breeding and grazing of captive cervidae is considered an agricultural operation for the purposes of property tax. This language would amend the classification of assessable real property.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Ron Nelson, Ext. 2043.

**STATE ISSUE**

## Amendments to the Manufacturing Milk Act and the Fluid Milk Act

**L**egislation to provide additional security to milk producers is currently awaiting Senate action. The bills would give additional authority and clarify the responsibilities of the Department of Agriculture for financial auditing, and details the action to be taken by the Department of Agriculture. The bills would require that producers be notified of the security arrangements at the time of licensing or any changes in security arrangements during the licensed year.

Suspension or revocation of license for failure to provide the appropriate security is also regulated by the Administrative Procedures Act (APA). The bill attempts to give the department authority to move in a very timely fashion in the event of substantial erosion of the financial security of a milk handler.

**MFB Position:** Farm Bureau supports the bills.

**MFB Contact:** Ron Nelson, Ext. 2043.

**STATE ISSUE**

## Maple syrup standards

**R**ep. Gary Randall (R-Elwell), is also sponsoring a bill to provide for a state standard for maple syrup and provide authority for the Department of Agriculture to take action when the product does not meet standards. Currently the product could be sold in the state which is claiming to be maple syrup. A combination of sugar and water with some maple syrup flavoring may currently be offered.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Ron Nelson, Ext. 2043.

**STATE ISSUE**

## Purchase of development rights

**S**en. Bill Schuette (R-Midland) has introduced legislation that would enable townships, counties or municipalities to administer a purchase of development rights program to protect farmland at the local level. The bills have been reported from committee to the Senate floor.

**MFB Position:** Farm Bureau supports S.B. 573, 574 and 575.

**MFB Contact:** Scott Everett, Ext. 2046.

**STATE ISSUE**

## Land Division Act

**S**en. Leon Stille (R-Spring Lake), has introduced legislation calling for revisions to the current Subdivision Control Act, including changes to address the 10.1 acre unlimited exempt divisions only (sections 108 and 109). All proposed changes to amend the platting process were dropped prior to the bill being reported out of the Committee.

Under the proposed Land Division Act:

- All parcels or "parent tract" lawfully in existence on the effective date of legislation become "Parent Parcels"
- Land Division Act — Section 108-109 — Exempt Divisions:
  - For parent parcels 10 acres or smaller, 2 exempt divisions
  - For parent parcels 80 acres or smaller in size, two initial exempt divisions (for the first 10 acres) plus one additional exempt division for each whole 10 acres above the initial 10 acres, up to 80 acres
  - For parent parcels larger than 80 acres, nine initial exempt divisions (for the first 80 acres) plus one additional exempt division for each whole 40 acres above the initial 80 acres
  - For each parent parcel (regardless of size), two additional exempt divisions if they each share a common driveway access

- Divisions creating parcels 40 acres or larger are exempt (and can be built upon). Divisions of 40 acres or more do not count toward the number of exempt parcels permitted.
- Divisions that transfer property from one parcel to another contiguous parcel or lot are exempt and do not count toward the number of exempt parcels permitted.

All exempt divisions shall be approved by a local unit of government within 30 days if the following conditions are met:

- not be larger than 2.5 acres in size or 105 percent of minimum parcel size required by a local zoning ordinance
- have a depth-to-width ratio 4:1 unless otherwise provided for by a local zoning ordinance
- not have a width or area not less than required by a local zoning ordinance
- have adequate water supply
- have adequate sewage disposal
- have appropriate easements for utility hookup
- have approved driveway access
- shall not be sold unless the deed contains a statement as to whether further exempt divisions are conveyed to the new owner.

**MFB Position:** Farm Bureau policy supports S.B. 112

**MFB Contact:** Scott Everett, Ext. 2046.

80-ACRE PARCEL — 2-ACRE MINIMUM LOT SIZE																					
Current Law — 11 exempt divisions	S.B. 112 — 11 exempt divisions																				
<p>No land available for agriculture or future subdivision platting.</p>	<p>Remaining 60 acres can be used for:</p> <ul style="list-style-type: none"> <li>• Agriculture</li> <li>• One additional 40-acre parcel</li> <li>• Platted further in 30 additional 2-acre homesites</li> </ul>																				
<p><b>Current Law</b></p> <table border="0"> <tr> <td>4 — 2-acre parcels</td> <td>\$80,000</td> </tr> <tr> <td>7 — 10-acre parcels</td> <td>\$245,000</td> </tr> <tr> <td></td> <td>\$325,000</td> </tr> </table>	4 — 2-acre parcels	\$80,000	7 — 10-acre parcels	\$245,000		\$325,000	<p><b>Exempt Divisions</b></p> <table border="0"> <tr> <td>10 — 2-acre parcels</td> <td>\$200,000</td> </tr> <tr> <td>1 — 20-acre parcel</td> <td>\$60,000</td> </tr> <tr> <td>1 — 40-acre parcel</td> <td>\$80,000</td> </tr> <tr> <td></td> <td>\$340,000</td> </tr> </table> <p>or</p> <p><b>Exempt Divisions</b></p> <table border="0"> <tr> <td>11 — 2-acre parcels remaining 58 acres platted</td> <td>\$220,000</td> </tr> <tr> <td>29 — 2-acre parcels</td> <td>\$580,000</td> </tr> <tr> <td></td> <td>\$800,000</td> </tr> </table>	10 — 2-acre parcels	\$200,000	1 — 20-acre parcel	\$60,000	1 — 40-acre parcel	\$80,000		\$340,000	11 — 2-acre parcels remaining 58 acres platted	\$220,000	29 — 2-acre parcels	\$580,000		\$800,000
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1 — 40-acre parcel	\$80,000																				
	\$340,000																				
11 — 2-acre parcels remaining 58 acres platted	\$220,000																				
29 — 2-acre parcels	\$580,000																				
	\$800,000																				
<p><b>Assumptions:</b></p> <ul style="list-style-type: none"> <li>• 2-acre lot = \$20,000 = \$10,000/acre</li> <li>• 10-acre lot = \$35,000 = \$3,500/acre</li> <li>• 40-acre lot = \$80,000 = \$2,000/acre</li> </ul>																					

**STATE ISSUE**

## Senate transportation reform package

**R**ep. Philip Hoffman (R-Horton) has introduced the following pieces of legislation:

- SJR V would amend the Michigan Constitution to eliminate the State Transportation Commission. This amendment would be on a statewide ballot question. In effect, it would eliminate a public forum for discussion of state transportation issues before MDOT.
  - SB 873 would repeal Public Act 51 of 1951. This Act provides for the current distribution of the \$1.4 billion Michigan Transportation Fund. There is no proposal to replace this formula.
  - SB 874 and 875 would allow county boards of commissioners to dissolve county road commissions. These bills will eliminate an important local unit of government. They would also make road commissioners subservient to the political whims of county boards of commissioners.
  - SB 876 would allow countywide local gas taxes. This bill would create funding inequities among counties.
  - Senate Bill 1011 is tie-barred to this year's transportation budget. It would remove various transportation distribution formulas in Public Act 51 and insert them in a two-year annual appropriations bill.
- SJR V and Senate Bill 1011 have passed the Senate Subcommittee on Transportation and are now pending in the Senate Appropriations Committee. Senate Bills 873-876 are in the Senate Appropriations Subcommittee on Transportation.

**MFB Position:** MFB is opposed to the entire reform package.

**MFB Contact:** Tim Goodrich, Ext. 2048.

**NATIONAL ISSUE**

## Health insurance deduction

**T**he House and Senate have passed different versions of H.R. 3103 known as the Health Coverage Availability and Affordability Act. Both bills include provisions to stop insurance companies from denying coverage to people with pre-existing health conditions and to prevent insurance companies from dropping people when they get sick. Both bills contain portability to help individuals maintain coverage when they change jobs. The bills include accelerated death benefits of life insurance for the terminally ill.

The bills also increase the self-employed health insurance deduction but by different amounts. The House increases the deduction to 50 percent by 2003, the Senate to 80 percent by 2006. Both bills would expand the deduction to include the cost of long-term care insurance, which Farm Bureau supports.

The House bill contains Medical Savings Accounts (MSAs) and Voluntary Health Insurance Associations (VHIAs) which are supported by Farm Bureau. The House bill also reforms medical malpractice.

The Senate bill permits withdrawals from IRAs and 401(k)s for long term care insurance and from IRAs for catastrophic medical expenses. Farm Bureau supports these provisions. The Senate bill also mandates mental health coverage be the same as coverage for physical ailments. Farm Bureau opposes mandated benefits.

President Clinton opposes the inclusion of Medical Savings Accounts. The controversy over MSAs delayed appointment of a Conference Committee to work out differences between the House and Senate versions.

**FB Contact:** Al Almy, ext. 2040.

**STATE ISSUES**

Continue on page 4

# 1996 Farm Bill



by Larry G. Hamm,  
Chairperson, Department of Agricultural Economics, Michigan State University

**T**he FAIR Act will impact Michigan's dairy industry in a few direct and immediate ways. However, the longer-term implications for Michigan and the U.S. dairy industry could be quite profound. The impacts discussed here will be divided into those that come from the dairy provisions and those that come from other FAIR Act provisions.

The act has one immediate impact on Michigan dairy producers. On May 1, 1996, the USDA stopped collecting assessments from producers. Since Jan. 1, the CCC had been collecting \$0.10 per cwt. on all milk marketed by Michigan producers. If the FAIR Act had not eliminated the assessments, the assessment would currently be \$0.18 per cwt. For 1996 alone, this action leaves about \$6.7 million in Michigan's dairy producers' income. This is roughly \$1,500 to \$1,600 per Michigan dairy farm. For future years, the act's elimination of assessments is likely to save Michigan dairy producers over \$8 million a year.

Much fanfare has been generated by the fact that the act eliminates the Dairy Price Support Program by gradually phasing it out over the next five years. Unlike other commodities, however, the Dairy Price Support Program was being phased out over the past 13 years. The CCC has not purchased dairy surplus for almost two years, and the price support has not directly impacted milk checks since 1989.

Therefore, phasing the price support program out is not going to be noticed by producers. The act does, however, allow the CCC to change the "tilt" between butter and powder support prices twice a year in order to minimize the USDA's budget exposure should milk product surpluses require CCC purchases.

## Dairy policy impacts — Federal Market Order reformulations crucial for Michigan producers

Changes in the butter price will directly impact paychecks because of Michigan's current component pricing system. The act also establishes a ceiling on manufacturing-make allowances by any state. This provision has forced California to already adjust the prices it requires processors to pay California producers for milk going into butter/powder and cheese. The effect has been to raise California producers' prices by \$0.05 to \$0.19 per cwt., depending on which market their milk is going. Ultimately, California producers got an additional price increase that Michigan producers did not get.

Finally, when the dairy price support goes in effect in the year 2000, it will be replaced with a recourse loan program for dairy product manufacturers. This case flow management tool for processors will not enhance producer incomes.

A major policy goal of U.S. dairy producers was to get public support for developing export markets for U.S. milk production. The FAIR Act has some provisions to encourage longer-term export market development. The Dairy Export Incentive Program (DEIP) is mandated to be funded at GATT maximums through 2002.

The USDA is required to assist in forming dairy export trading companies and is required to study the impacts of increased GATT-mandated cheese imports. The National Dairy Board may use funds for export market development.

All of these export provisions have the potential to help export more milk and therefore help raise U.S. milk prices, but many other factors must be right in order for milk prices to benefit from increased market development. Currently, there appears to be few impacts beyond those already accruing to the DEIP program in the next five years.

The single biggest impact of the FAIR Act on dairy will come from the inclusion of the Federal Milk Marketing Orders (FMMOs) as part of the act. FMMOs used to be outside the farm bill until 1985. Since then, flames of interregional controversy fanned out of Minnesota and Wisconsin have scorched a path to mandated FMMO reform in the FAIR Act.

Through altered and expedited hearing procedures, the FMMOs are to be consolidated into 10 to 14 individual orders by April 1999. If California producers want, they can vote to be a separate federal

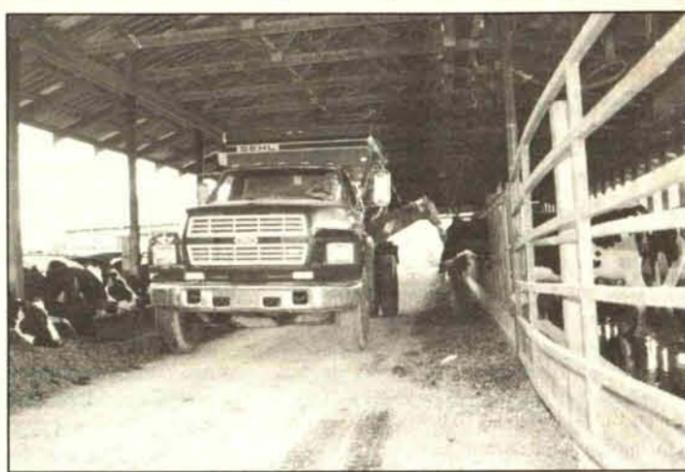
order. The act also allows for the possible use of multiple basing points and the creation of a replacement to the current Basic Formula Price (BFP).

There is room for considerable mischief by FMMO opponents during this whole process. Even the most vocal critics of orders acknowledge that eliminating the FMMOs will result in the loss of, at the very minimum, \$500 million in dairy farm revenue. This would amount to about \$5,500 to \$6,000 per dairy farm per year.

Because Michigan dairy operations are larger than the average farm and Michigan has been able to hold over-order pricing, the impact of FMMO loss in Michigan could approach \$18,000 per farm. If FMMOs survive reform, the best Michigan producers could hope for is to maintain their current general level of price structure.

Past farm bills have protected the incomes of feed grain producers, and livestock producers have benefited through lower market prices. The FAIR Act's dramatic changes in the feed grain, cotton, rice, etc., programs can affect the cost of milk production dramatically. The recent analyses of the Agricultural and Food Policy Center (AFPC) at Texas A&M University and the Food and Agricultural Policy Research Institute (FAPRI) provide a glimpse at possible impacts on representative dairy farms in various parts of the country.

The AFPC study looks at what happens to real (adjusted for inflation) net worth or equity on representative farms. Their dairy results indicated that



A major policy goal of U.S. dairy producers was to get public support for developing export markets for U.S. milk production. The FAIR Act has provisions to encourage longer term export market development.

32 percent (seven out of 22) of representative farms show severe financial stress from the FAIR Act. These farms included: three out of the four Texas operations; a moderate central New York; the large Vermont; the moderate Georgia; and the large south Florida dairies.

In general, those dairy operations are not to be considered in good financial condition after the seven-year FAIR Act are both moderate and large size dairies located in the Northeast, Southeast and Southwest. The FAPRI baseline model predicts that milk prices will decline 4.5 percent between 1996 and 2000. It also predicts that after the year 2000 milk prices will increase gradually.

Neither of these analyses assume any changes in the FMMO program. As discussed above, the FMMO changes can overwhelm any of these predicted impacts from feedgrain program changes. It is critical that those intending to make their living in producing milk in the next five years become active in the mandated FMMO reformulation process. ■

### STATE ISSUE

#### Land application of potash/wood ash

**R**ep. David Anthony (D-Escanaba) has introduced legislation to clarify in the Natural Resources Act that wood ash, as a result of burning wood (not lumber, treated lumber or other byproducts), is not solid waste. The law requires that solid waste be landfilled. This exemption from inclusion in the solid waste definition would allow for the land application of potash.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Scott Everett, Ext. 2046 or Ron Nelson, Ext. 2043. ■

### STATE ISSUE

#### Repeal license for feeding garbage to swine

**S**en. Phil Hoffman (R-Horton) is sponsoring legislation to simply repeal the license requirement for feeding garbage to swine. Garbage was commonly fed to swine and was required to be cooked to a certain temperature. The potential problem was disease, often trichinosis, which could transmit to humans eating undercooked pork. In the Animal Industry Act, garbage feeding to swines is not allowed. Also, the definition of garbage is clarified such that certain items are not considered garbage and may be fed to swine.

**MFB Position:** Farm Bureau supports the bill.

**MFB Contact:** Ron Nelson, Ext. 2043. ■

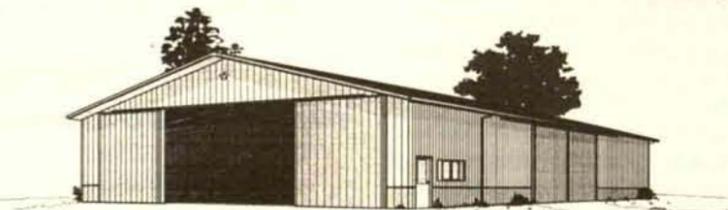


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Station	City	Frequency	Morning Report	Noon Report
WABJ	Adrian	1490	5:45 am	11:05-12:00 pm
WATZ	Alpena	1450	5:30 am	11:30 am
WTKA	Ann Arbor	1050	6:05 am	12:00-1:00 pm
WLEW	Bad Axe	1340	6:30 am	12:50 pm
WHFB	Benton Harbor	1060		12:15 pm
WKJF	Cadillac	1370	5:45 am	11:10 am
WKYO	Caro	1360	6:15 am	12:10-1:00 pm
WTVB	Coldwater	1590	5:45 am	12:00-1:00 pm
WDOW	Dowagiac	1440	6:05 am	12:15 pm
WGHN AM	Grand Haven	1370	5:45 am	12:15 pm
WGHN FM	Grand Haven	92.1	5:45 am	12:15 pm
WPLB	Greenville	1380	6:15 am	11:50 am
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	5:00-6:00 am	12:00-1:00 pm
WPLB FM	Lakeview	106.3	6:15 am	12:15 pm
WOAP	Owosso	1080	7:15 am	12:40 pm
WHAK	Rogers City	960		12:15 pm
WSJ	St. Johns	1580	6:15 am	12:05-1:05 pm
WMLM	St. Louis	1520	6:05 am	12:20 pm
WSGW	Saginaw	790	5:55 am	11:30-12:30 pm
WMIC	Sandusky	660	6:15 am	12:45 pm
WKJC FM	Tawas City	104.7		12:40 pm
WLKM	Three Rivers	1510	5:45 am	12:15 pm
WTCM	Traverse City	580	5:45 am	11:10 am

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# Projections for U.S. agriculture based on FAIR — the new farm program of 1996

by John N. (Jake) Ferris

The new "Federal Agricultural Improvement and Reform Act" (FAIR) represents a major new direction in agricultural legislation that dates back to 1933. The intent of the legislation is to provide a transition from governmental supports and controls to a more market-oriented agriculture and to establish upper bounds to federal expenditures over an extended period of time.

While new farm programs have been fashioned every four or five years, the regime has not been changed as dramatically as in FAIR. This complicates the task of generating scenarios of how farmers will likely respond to the new freedom to plant implicit in the program.

In addition, carryover levels of grains and oilseeds going into the 1996-97 crop year are at historically low levels in terms of ratios to utilization — here in the U.S. and in the rest of the world as well. How will farmers respond to corn and wheat prices that have been at record highs, and soybean prices near their past highs? Direct payments to participants in FAIR in 1996 will be on top of very attractive returns from the market.

Perhaps it is fortunate that this program will be in place in a year that the world needs expanded production and a more comfortable carryover. In the short-run, FAIR may contribute to market stability. The longer-run is another question, however.

## Long-term Projections

Difficult as it is to look ahead much beyond the coming year, we really have no choice, since many decisions are being made with some underlying presumptions about the next five to 10 years and even further into the future. Econometric models are often employed as a means to generate long-range forecasts, combining quantitative measures of past relationships with certain assumptions about the future and with a considerable amount of judgment. One such model, AGMOD, has been a tool for monitoring changes in agriculture and generating year-by-year projections for planning and policy analysis.

For the period of 1996-2010, AGMOD's projections were based on the following assumptions:

- Normal weather.
- Crop yields will increase linearly based on recent trends.
- Real per capita incomes will increase 1.3 percent per year in the U.S. and 0.9 percent per year in the rest of the world.
- Land will gradually be taken out of the Conservation Reserve Program (CRP), reaching half the peak level by 2010.
- Crude oil prices will reach \$25 per barrel by 2002 and into the high \$30s by 2010.
- Inflation will proceed at 3-4 percent per year.

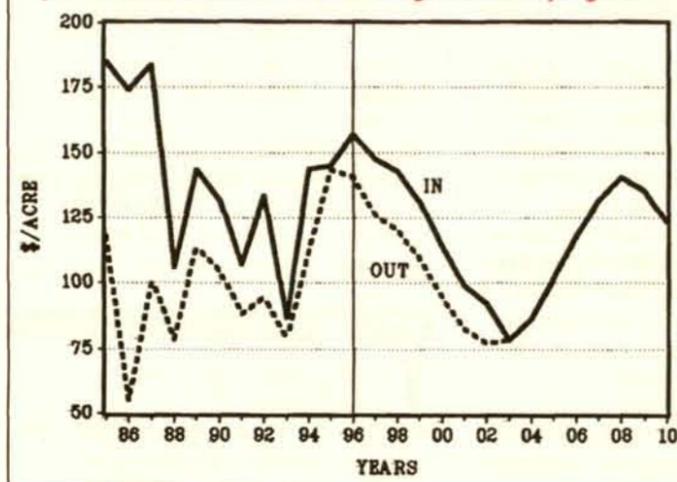
The projections are highlighted in Table 1. Corn prices will likely remain near peak levels on the 1996 crop and then decline as carryover levels increase. Soybean prices may average even higher on the 1996 crop than in 1995, but will tend to decline later on with corn. Wheat prices are likely to follow a pattern similar to soybeans.

## The CRP Factor?

These prices and the resulting gross margins over variable cash costs will encourage farmers to bring more land into production. Under FAIR, CRP contracts that have been in effect for more than 5 years would be eligible for early release.

While CRP land will be a source for an expanding land base, the rate at which CRP land and other areas are brought into production is projected to be

Figure 1 — Real gross margins over variable cash costs per acre for corn in and out of the government program\*



at a gradual pace, keeping grain and oilseed markets fairly buoyant over the next two to three years. Profits will be above average in this period and will likely contribute to increasing farmland prices.

## Crop Profit Scenario

Response to increased profits from both the market and the contract commodity payments will increase grain and oilseed production, and by the end of the 1996-2002 period, returns to participants will likely fall back to levels of recent years due to falling market prices. Some concern might be warranted by speculating what might happen after 2002 when supplies may be ample to burdensome and the contract payments end. Assuming that the commodity program is terminated in 2002, Figure 1 presents a possible scenario for gross margins on corn (in 1982-84 dollars).

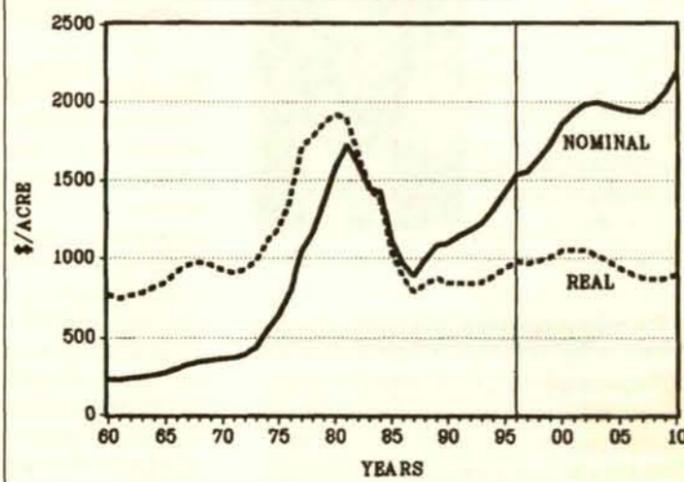
Figure 1 illustrates several points that relate to the new farm program. For one, the advantage to participation is fairly obvious. We anticipate over 90 percent of the corn and wheat base will be enrolled. The nature and timing of FAIR will tend to be somewhat de-stabilizing on prices and income. This may not be apparent in Figure 1, but the assumptions of trend yields and normal weather smooths out the projected gross margins relative to those in 1985-95. Superimpose variable crop yields on the projected margins and you would likely note increased volatility relative to the past.

In an analysis of FAIR versus a continuation of the 1990 farm program, prices and returns were more variable under FAIR. The implication is that more attention will need to be given to risk management, such as forward pricing, diversification, crop rotations, etc.

Another conclusion that might be reached from Figure 1 is that with or without a government program, profit levels tend to oscillate around some equilibrium level. In this case, the real gross margin over variable costs on corn appears to be fluctuating around the \$100-per-acre level. The perennial problem, of course, is that the system is subject to shocks that keep producers from gearing production to demands at equilibrium prices.

The projected decline in gross margins on major field crops into the early part of the next decade will likely pull down on farmland prices (Figure 2). While nominal prices may exceed the peak of the early 1980s, real prices are expected to remain well below that peak. If the run-up in land prices approaches that of the late 1970s and early

Figure 2 — Price of farmland in the Corn Belt in nominal and 1982-84 dollars



1980s, however, a major retrenchment and economic stress would emerge.

## Livestock Profit Scenario

Livestock enterprises will benefit from the lower feed prices FAIR will generate. This, too, has a downside in that expanding livestock production is accompanied by lower prices and eventually lower profit margins on livestock enterprises. Recent low cattle prices, however, will likely result in a major liquidation in beef herds in the balance of this decade and substantially higher prices.

The combination of expanded production, increased exports, and strong prices on grains and oilseeds will boost gross and net cash incomes to U.S. farmers (Table 1). However, by the end of 2002, net cash income will likely drop back to levels of recent years. Real net cash income is projected to average about 5 percent higher in 1996-2002 than in 1986-95.

The projected nominal prices and margin levels may appear optimistic. However, considering the inflation rate in consumer prices, real prices and

margins will be mostly lower in the next 10-15 years relative to the past 10-15 years. Inflation in the Consumer Price Index on Food will accelerate in the next year or two to 3.5-4.0 percent and then fall back to around 3.0 percent. The average inflation rate on food in 1986-95 was 3.5 percent.

In summary, the agricultural outlook has improved substantially for the next two or three years. For the entire 7-year period of FAIR, real net cash farm income should average modestly above the 1986-95 period. This will be due to the contract payments, increased production and expanded exports since real market prices will average lower. Major concerns remain in terms of market price volatility and a possible over-reaction that could coincide with the termination of FAIR.

These projections are designed to provide a perspective on the future of agriculture under the existing legislation. Actual events, including abnormal weather and new farm programs, will undoubtedly alter the pattern. ■

Table 1 — Projections of Selected U.S. Agricultural Variables Under "FAIR"

Item	Unit	Year									
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Farm Price*</b>											
Corn	\$/bu.	2.50	2.26	3.25	2.98	2.78	2.75	2.66	2.50	2.39	2.36
Soybeans	\$/bu.	6.40	5.48	6.90	8.12	7.93	7.74	7.30	7.10	7.16	7.35
Wheat	\$/bu.	3.26	3.45	4.50	5.21	4.44	3.65	3.12	2.99	3.20	3.65
Milk	\$/cwt.	12.86	12.97	12.74	13.65	13.71	13.78	13.86	14.05	14.25	14.45
<b>Gross Margins Over Variable Cash Costs<sup>b</sup></b>											
<b>Corn</b>											
In Program	\$/A	125	212	220	245	238	238	226	202	181	175
Out of Program	\$/A	113	166	218	220	203	200	188	167	151	146
<b>Wheat</b>											
In Program	\$/A	93	91	114	148	129	100	79	72	76	92
Out of Program	\$/A	71	75	105	128	110	79	59	53	60	76
<b>Soybeans</b>											
In Program	\$/A	136	151	164	222	199	193	177	170	172	179
<b>Farmland Prices<sup>c</sup></b>											
\$/A		1,216	1,302	1,414	1,527	1,547	1,631	1,724	1,853	1,926	1,974
<b>Gross Margins Over Feed Costs<sup>b</sup></b>											
<b>Cattle on Feed<sup>d</sup></b>											
\$/cwt.		8.54	-4.09	-0.23	-0.06	10.91	15.98	13.20	11.55	11.37	7.26
<b>Hogs</b>											
\$/cwt.		18.78	11.11	12.70	12.84	11.62	17.46	16.88	15.15	14.38	12.71
<b>Gross Cash Income</b>											
bil. \$		200	197	200	220	228	240	247	253	259	261
<b>Net Cash Income</b>											
<b>Nominal</b>											
bil. \$		58	50	51	65	74	81	77	73	71	66
<b>1982-84</b>											
bil. \$		40	34	33	41	46	49	45	41	39	35
<b>Food Price Index</b>											
% Δ		2.2	2.4	2.8	3.2	3.9	3.5	3.1	3.0	3.0	2.8

\*Seasonal average price received by U.S. farmers on crops; calendar year on milk.  
<sup>b</sup>Margins are based on national average prices and enterprise costs of production derived from the USDA and other sources.  
<sup>c</sup>Farmland in the Corn Belt.  
<sup>d</sup>Gross margins over cost of feed and feeders.

## Milk Act measure moves in Legislature

Continued from front page

claims register, which forms the basis of the attorney general's case, then at some point the defendant would be entitled to have the duplication eliminated," he said.

VanderHaagen said that the court case against the Pinconning Cheese plant defendants could take a year to 18 months to resolve. "If it results in judgments in favor of the attorney general on behalf of these unpaid producers, then obviously the issue will be whether the defendants are collectable," he said.

Farm Bureau supports making low-interest loans available to farmers affected by the Pinconning Cheese plant default, which would allow the farmers money to get through the period of time until the settlements are made. ■

## Schools hoping for more nutrient flexibility

A 1994 law forced public schools to follow stringent guidelines to comply with nutrient requirements that reduce saturated fat and sodium in student lunches. The Senate has passed a bill that would give schools the ability to take "reasonable approaches" in complying with the strict nutrient guidelines.

Since USDA set up the guidelines, school officials have complained that they are too rigid, costly and time-consuming. The purchase of computer equipment and money to train staff would drive up the cost of the meals. Under the new bill, schools now have the option of serving more vegetables, breads, grains and fruits, and baking foods instead of frying. President Clinton is expected to sign the bill. ■

## Commerce Dept. to rule on tomato dumping

American farmers are being harmed by a sharp rise in imported tomatoes from Mexico, according to a U.S. International Trade Commission (ITC) preliminary report. The commission has agreed to forward the dispute to the Commerce Department.

American producers have complained that Mexican imports are being dumped on the U.S. market at less than fair-market value. Tomato and pepper growers in Florida were hit hard this winter by such practices. The Commerce Department has the authority to set dumping duties that would raise the U.S. price on products to a competitive level with American producers. The department has until Sept. 9 to make its ruling. ITC will have the final say on whether U.S. farmers have been harmed. ■

## Super fly to help Florida poultry producers

A small, shiny fly that feeds on house flies may help Florida's poultry producers save thousands of dollars and help keep complaints from neighbors at a minimum.

By using the black garbage fly to rid poultry houses of the common house fly, Florida's poultry industry could reduce the use of pesticides, said Hillsborough County Cooperative Extension Agent Roger Jacobs, a poultry specialist with the University of Florida's Institute of Food and Agricultural Sciences.

The dump fly is slightly smaller than the house fly. It can be found in garbage dumps and poultry manure like the house fly, but it prefers darker areas like the bottom floors and manure pits. It does not typically enter the upper floors or neighboring homes. ■



# Market Outlook



by Dr. Jim Hilker,  
Department of  
Agricultural Econom-  
ics, Michigan State  
University

## CORN

There are definite signs that corn use is being cut. But the questions are: has the market already accounted for it properly; how much will it affect this year's use versus next year's; and what will the size of the 1996 corn crop be?

We are seeing lighter hogs and cattle, fewer hogs than expected, cattle placements down significantly, and ethanol plants cutting back. However, it appears to me that the USDA Supply/Demand numbers shown below account for this. Exports continue to roll right along. I still question whether or not we can have an ending stocks figure as low as the 317 million bushels shown in the middle column of Table 1 — the pipeline is bigger than that.

In their May 10 *Supply/Demand Report*, the USDA gave their first projections for the 1996-97 corn marketing year; they are shown below in column 3 of Table 1. They projected corn plantings would be 81 million, over a million acres higher than the *Planting Intentions Report*. While some are projecting 82 million acres, I feel the 81 million is on target, given the late planting in the Eastern Corn Belt.

## Seasonal Commodity Price Trends

Corn	↔ ↑
Soybeans	↔ ↑
Wheat	↔ ↑
Hogs	↔ ↑
Cattle	↔ ↑

Index: ↔ = stable prices; ↑ = higher prices; ↓ = lower prices; TP = topping; BT = bottoming; ? = unsure

They use a trend yield of 126 million. If plantings have run much behind normal in the Eastern Corn Belt, the potential yield will be lower. This would give us a 9.3-billion-bushel crop. While that would more than cover expected use, projected ending stocks would remain relatively tight at 762 million bushels. Although we would expect feed use to recover some next year, as shown, if prices keep going up this summer and the breeding stock is decreased substantially, that may not happen. And while exports are expected to decrease some, they are not expected to fall dramatically.

**Strategy:** Old crop corn prices are not expected to fall over the next month or so; supplies are short and short-run demand will be high. If you have a lot of 1995 corn left, consider moving much of it by the Fourth of July. If you have only a little left, wait for a rally. Consider having 15-30 percent of your new crop priced; wait for a push toward \$4 December futures to prices more in the short-run, but have a backup plan if further rallies don't develop.

## WHEAT

Even this late in the season the size of the winter wheat crop is very questionable. In Table 2, the USDA estimate for the 1996-97 wheat supply/demand situation is shown. Their figures show things will be almost as tight next year as this past year, and I feel they are being conservative. While they have lowered harvested acres substantially, the yield potential has probably dropped since their survey.

USDA also dropped its projected exports by a whopping 25 percent. They base this on recovery

in other wheat-growing areas of the world and the fact we will not have much wheat available for export. However, if we export just a little more than projected, the situation next year could be tighter than this year.

The latest USDA *Crop Production Report* estimated Michigan's yield would be 50 bushels per acre, down 10 from last year. It also projects we will harvest at least 40,000 fewer acres than we planted. I suspect most of that will be in the Thumb. In 1995, Michigan harvested only 10,000 fewer than it planted.

**Strategy:** If you have not priced any of your new crop wheat and your stand looks okay, consider pricing a significant portion. If you already have priced 20 percent or more, consider waiting for a September futures rally over \$6 and then price into the market.

## SOYBEANS

The USDA estimates the soybean situation will be as tight for the 1996-97 crop year as it has been for the 1995-96 crop year (as shown in Table 3). Acres are projected to be about the same — the yield higher, but the carry-in lower. Exports are expected to be down a little, but that is expected to be offset by the slightly smaller supply.

Export shipments, to date, have been running a little slower than expected, but export sales suggest we will meet the USDA projections for 1995-96. While it appears we have enough soybeans to get through this year, we will not be bringing much along to help out next year.

The market will continue to be volatile. We could get more soybean acres if it gets too late to plant corn in parts of the Eastern Corn Belt, which would increase production. Or, we could also run into soybean planting or yield problems.

**Strategy:** I would consider pricing any remaining old crop over the next six weeks. Once you have priced 20-30 percent of your new crop, wait to price more on substantial rallies and on the development of your crop.

## CATTLE

The USDA released the latest *Cattle-on-Feed Report* May 17. It showed that cattle feeder's are cutting back sharply, meaning production cuts and eventually higher prices. Or, perhaps we should say this will postpone production as more feeders are sent to grass versus put in the feedlots. Actual cattle on feed as of May 1 was down 6 percent compared to a year ago. Placed in April was down 18 percent compared to a year ago. And April marketings were up 12 percent. This is a sharp increase in slaughter even considering the two extra market days this year.

Live weights were down 10-20 pounds the first two weeks of May. But total production was still up over 5 percent due to the increases in slaughter of over 6 percent compared to the same period a week ago. Overall beef production is up 6.5 percent year-to-date.

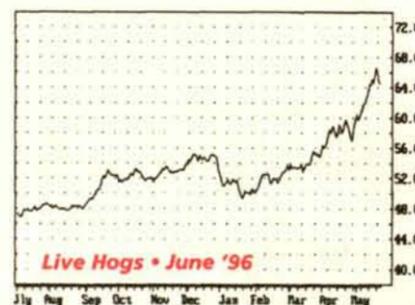
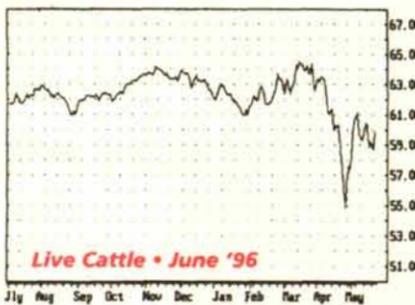
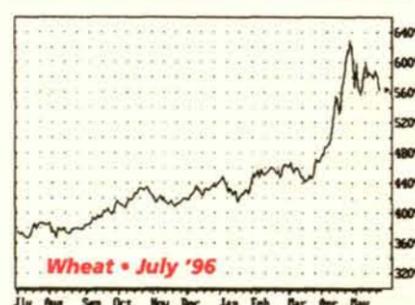
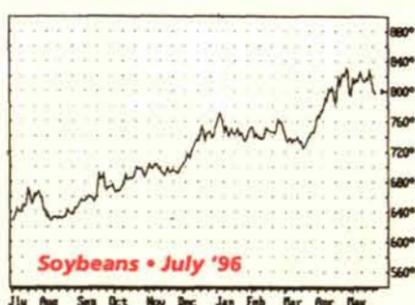
The cutbacks in placements and weights is starting to show up in futures stating late summer. Cow slaughter is running over 10 percent above a year ago. While this means more beef now, it means less down the road.

## HOGS

Pork production was running 10 percent and 5 percent below a year ago the first two weeks of May, due mostly to fewer hogs being slaughtered and lighter carcass weights, which were down a pound. Is this a temporary blip due to the heat last summer or do we really have that many fewer hogs coming for a while? The futures market seems to be saying it will continue, but there is talk that the hogs were rebred during the next cycle. This would imply the year-to-year decreases may let up some. In the meantime, there appear to be some forward pricing opportunities despite the high corn prices.

Sow slaughter continues to run way above a year ago despite the high hog future prices. Sow slaughter has been running around 12-18 percent higher than the same period a year ago since the beginning of April. This indicates that the smaller and medium sized units are looking at the future and are not convinced the high prices will continue over the long-run. There is nothing like high prices to bring low prices down the road, but if these cuts are real and not just a turnover in breeding stock, prices will not drop to long-run costs anytime soon.

## COMMODITY PRICE TRENDS



## COMMODITY SUPPLY/DEMAND BALANCE SHEETS

Table 1 — Corn

(Million acres)	Projected 1994-1995	Projected 1995-1996	Hilker's Proj. 1996-1997
Acres set-aside/diverted	2.4	6.2	
Acres planted	79.2	71.2	81.0
Acres harvested	72.9	65.0	74.4
Bu./harvested acre	138.6	113.5	126.0
<b>Stocks (million bushels)</b>			
Beginning stocks	850	1,558	317
Production	10,103	7,374	9,375
Imports	10	15	10
Total supply	10,963	8,947	9,702
<b>Use:</b>			
Feed and residual	5,535	4,700	5,150
Food/seed & ind. uses	1,693	1,630	1,690
Total domestic	7,228	6,330	6,840
Exports	2,177	2,300	2,100
Total use	9,405	8,630	8,940
Ending stocks	1,558	317	762
Ending stocks, % of use	16.6	3.7	8.5
Regular loan rate	\$1.89	\$1.89	\$1.89
<b>U.S. season average</b>			
Farm price, \$/bu.	\$2.26	\$3.20	\$2.90

Table 2 — Wheat

(Million acres)	Projected 1994-1995	Projected 1995-1996	Hilker's Proj. 1996-1997
Acres set-aside & diverted	5.2	5.2	
Acres planted	70.3	69.2	73.1
Acres harvested	61.8	61.0	58.2
Bu./harvested acre	37.6	35.8	35.6
<b>Stocks (million bushels)</b>			
Beginning stocks	568	507	305
Production	2,321	2,185	2,074
Imports	92	65	85
Total supply	2,981	2,757	2,464
<b>Use:</b>			
Food	852	870	885
Seed	89	107	100
Feed	345	175	175
Total domestic	1,286	1,152	1,160
Exports	1,188	1,300	975
Total use	2,474	2,452	2,135
Ending stocks	507	305	29
Ending stocks, % of use	20.5	12.4	5.4
Regular loan rate	\$2.58	\$2.58	\$2.58
<b>U.S. season average</b>			
Farm price, \$/bu.	\$3.45	\$4.50	\$5.00

Table 3 — Soybeans

(Million acres)	Projected 1994-1995	Projected 1995-1996	Hilker's Proj. 1996-1997
Acres planted	61.7	62.6	62.5
Acres harvested	60.9	61.6	61.5
Bu./harvested acre	41.4	34.9	37.0
<b>Stocks (million bushels)</b>			
Beginning stocks	209	335	190
Production	2,517	2,152	2,275
Imports	5	5	5
Total supply	2,731	2,492	2,470
<b>Use:</b>			
Crushings	1,405	1,360	1,370
Exports	838	825	790
Seed, feed & residuals	153	117	120
Total use	2,396	2,302	2,280
Ending stocks	335	190	190
Ending stocks, % of use	14.0	8.3	8.3
Regular loan rate	\$4.92	\$4.92	\$4.97
<b>U.S. season average</b>			
Farm price, \$/bu.	\$5.48	\$6.80	\$6.88

## Georgia peach crop hit hard

Normally, the bulk of Georgia's peach crop is shipped to distant markets in the West and Northeast. This year, most of the fuzzy fruit will not make it past the state's borders.

Hit hard by freezing temperatures this spring, the 1996 Georgia peach crop is expected to yield 7.5 million to 12 million pounds, far below the 150 million pounds produced under normal conditions.

Before the freeze, Georgia's peach crop was valued at \$31 million. It's too early to place an actual value on what's left of the damaged crop. Last year's crop was worth \$29.7 million.

## Quarterly profits up 15 percent at Deere

Deere & Company recently reported that net income for the February-April quarter rose by 15 percent over the previous year, to \$272.7 million, thanks in large part to increased returns from equipment operations, at \$217.3 million, up 13.4 percent. Six-month income company-wide totaled \$438.9 million, up from \$375.5 million a year earlier.

Net quarterly sales to dealers of all agricultural, industrial and lawn-care equipment rose to \$2.7 billion, from \$2.45 billion a year ago. Export sales from U.S. operations rose to \$723 million for the November-April period, from \$645 million a year earlier.

Export sales during the February-April quarter did not include the recently announced shipment of combines to Ukraine. Deere says the first phase of that \$187 million deal will be completed during the May-July quarter.

Net quarterly income for the financial services subsidiary was \$52.4 million, up from \$42.4 million last year.

After a 10 percent rise in the second quarter, worldwide sales to dealers are expected to rise about 7 percent in the May-July quarter, says Deere. Wall Street analysts welcome the results, saying Deere had aimed for 5 percent sales growth.

Source: Knight Ridder Financial

Source: USDA and Jim Hilker

# Business Strategies



Glenn Kole, District Extension Farm Management Agent, Michigan State University Extension

**M**any dairy operators buying old-crop corn have been asking us what changes in feeding to consider in this high-corn-price environment. Given that feed corn prices are at historic highs with no apparent downward movement in sight, it's time to address this issue.

In deciding how to approach this question, I had to make some assumptions:

- Free-stall and group feeding, probably by TMR or some modification thereof;
- On average, 1,250-pound to 1,300-pound Holsteins in second lactation.
- Forage fed, on average, is 67 percent haylage or hay-based (17 percent crude protein average), 33 percent from corn silage without NPN (on a dry matter basis).
- I used: \$4.75 per bushel corn costs; Protein supplement (SBM-44, roasted soys, and whole cottonseed primarily) is set at 125 percent of last year's prices.
- \$14 per cwt. gross milk price (net of \$13 after hauling and assessments).
- "Spartan D2" ration balancer was used.
- Vitamins, minerals and minimal bypass protein and energy were added as needed, but their relative cost in comparison to year-ago situations had very little effect.
- Change in purchased feed cost is the only cost variable in this analysis. All concentrates and supplements are presumed purchased; all forages are presumed raised (already there).

## Milk prices vs. corn prices — Should your strategy change?

■ 3.7 percent B.F. with 3.2 percent protein in milk, on average.

Given these parameters, the "Spartan" program suggests that:

- In the 100-pound milk production target group, cows needed to produce at least 93.2 pounds of milk to return a net-positive return over feed cost in that group; last year (with \$12.80 milk, \$2.50/bu corn, and protein costs at about 78 percent of costs this year), cows needed to produce 92.5 pounds (at least) to return a net-positive return over feed.
- In the 85-pound milk production target group, cows needed to produce at least 76.5 pounds to return a positive net return over feed costs; last year cows, at minimum, needed to produce 75.7 pounds.
- In the 70-pound milk production target group, cows producing at least 61.8 pounds return a net-positive return over feed costs; last year, the minimum net production figure was 60.4 pounds per day.
- In the 55-pound milk production target group, cows should produce at least 47.5 pounds per day to recover added feed costs; last year, 45.3 pounds at minimum.
- In the 40-pound group (still being fed 7 pounds of dry shelled corn on average per day) cows need to produce at least 34.7 pounds to return that concentrate cost. Last year they could produce 32.8 pounds per day and cover the feed cost for this group.

Interestingly, in high production groups (85-pound targets or more) there is relatively little difference over last year as a comparison to what production level to cut off that cow to the lower target level (less than a 1-pound difference in this study). Clearly, if a high-producing cow is responding to the feed inputs with milk production, you cannot afford to cut her corn or supplement inputs — even at around \$5 corn levels.

At lower production levels (55-pound target or lower) there is about a 2-pound difference over last year. This information suggests that farm managers need to pay particularly close attention to production in these groups. If she's not reasonably close to target (at 55 or 40 pounds), you may want to drop

her down in the next lower group. If she's not producing at least 35 pounds per day, consider dropping her into a "0" corn group or drying her off. With decent forage quality and quantity, she's not covering the corn cost at 35 pounds or less, in general.

Keep in mind this study only looks at return to added concentrate/supplement costs. As manager, factors such as poor body condition, concerns

over disproportionate drops in milk going to a lower group, social interactions, etc., may alter your decisions, too.

But for those of you buying corn, this will be a long summer. Over-feeding purchased energy or protein will be very costly this year. Relatively minor grouping adjustments, particularly at the lower production end, could save significant money. ■

## Japanese market not great for U.S. apples

**B**ecause of high prices, taste preferences and skepticism about chemical contamination, U.S.-grown apples aren't making a big hit on the recently opened Japanese market, according to the American Farm Bureau Federation. Japan has allowed the import of U.S. apples for two years now—imports of U.S. apples in the first year hit 8,497 tons—but last year's import of Washington-grown apples dropped drastically to just 803 tons of Red Delicious and Golden Delicious apples.

U.S. representatives blamed the taste and price difference for the lack of enthusiasm among Japanese consumers for the American apples. Initially, American apples were a hit, with about 7,000 tons sold in

the first month they were available. When the American apples first arrived, they were sold at considerably lower prices than the domestic varieties that fetched up to \$6 apiece in stores. The Japanese apples also reportedly have a much sweeter taste than American apples. Japanese growers adjusted, lowered their prices and have retaken the market.

U.S. growers have been trying to develop a sweeter apple, but have not been successful. American apple officials said they will not give up on the Japanese market and will continue to develop new products and attempt to again become price-competitive with the Japanese. ■

## Americans hog wild over bacon

**M**cDonald's new sandwich, the Arch Deluxe, has hog farmers across America cheering, and the folks buying the product aren't complaining much, either. Bacon has become the hot commodity at fast-food outlets in the United States, giving hog prices a boost.

"Increasingly, consumers are telling us that whatever the sandwich, it's better with bacon," said Bob Ruggles, a McCook, Neb. farmer who is president of the National Pork Producers Council

(NPPC). Just a few years ago, pork bellies, where bacon comes from, were considered by many to be one of the least marketable parts of the hog. Pork belly prices have doubled from a year ago.

The NPPC believes McDonald's will have a large impact on the pork industry. "If they have even a mild success with (Arch Deluxe), it's going to make a tremendous impact," said Ed Bass of the NPPC. ■

## House school lunch bill

**T**he House yesterday passed, by voice vote, a bill to give schools more flexibility in preparing lunches that meet federal guidelines. Schools are currently required to perform a complicated nutrient analysis to prove their lunches meet the guidelines.

The bill attempts to answer criticism from school districts who complained the rules to meet federal dietary guidelines, including rules that limit

fat intake and encourage more consumption of fruits, vegetables and grains, were too strict. Although the districts would be given more flexibility to meet the standards, they would still have to comply with Agriculture Department guidelines.

The bill is backed by the Clinton administration and has bipartisan support. The bill will now move on to the Senate. ■

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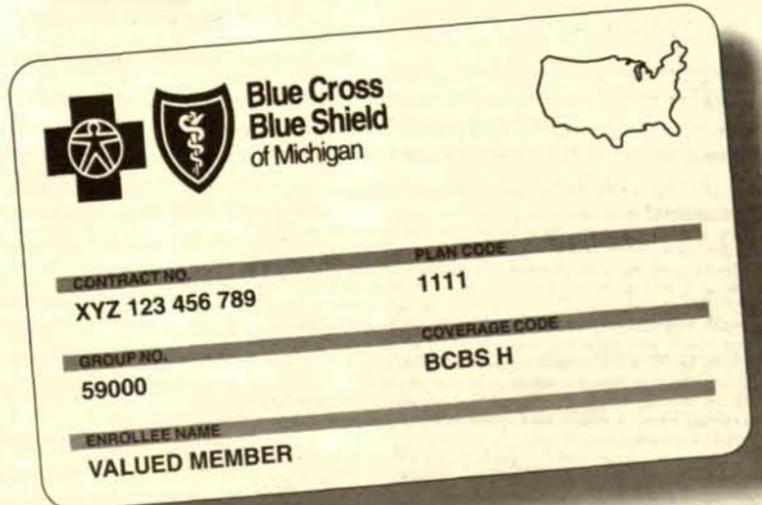
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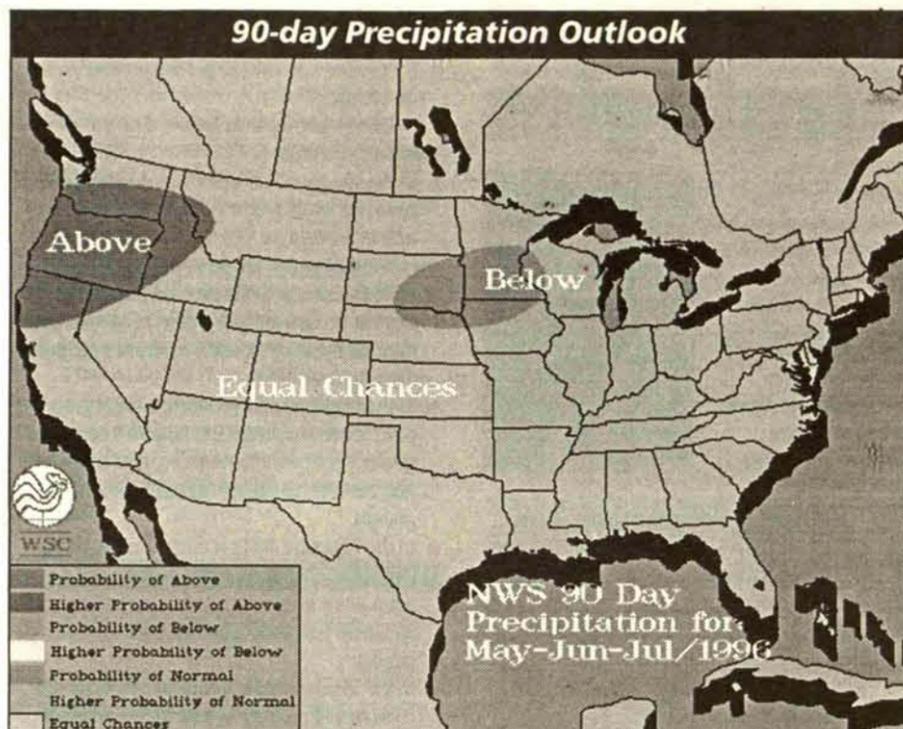
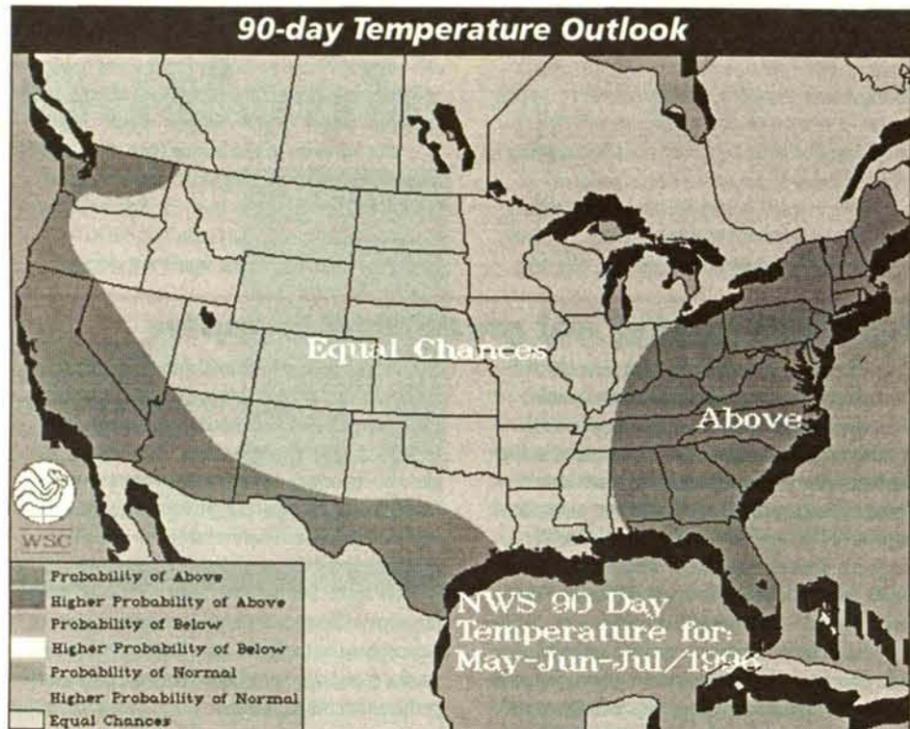
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# Weather Outlook

by Dr. Jeff Andresen, agricultural meteorologist, Department of Geography, Michigan State University

A late-season freeze occurred across southwestern sections of the Lower Peninsula on May 12-14, damaging a number of fruit and vegeta-

ble crops that had advanced into more sensitive phenological stages. The freeze was the result of a continued northwesterly jet stream flow and the series of cool, Canadian-origin air that it allowed into the Great Lakes region.

This jet stream configuration has led to much

below-normal temperatures (ranging from 2-5°F below normal for the past 30 days) and slow development of crops and insects. Seasonal base 50°F growing degree day accumulations by mid-May ranged from one to two weeks behind normal across the state, with greatest deviations in northern sections and least in the south.

The combination of the cool temperatures (both air and soil) and frequent rounds of precipitation have significantly delayed spring planting in many sections of the state, especially in northern, central and eastern crop areas.

The new Climate Prediction Center outlook for June continues to be vague, calling for near equal probabilities of above-, near-, and below normal temperatures and precipitation. Beyond that, however, the outlook indicates that normal to above-normal temperatures are favored into the mid-summer, with normal to below-normal temperatures possible by early fall.

Near equal odds of all three precipitation categories are forecast through early fall. Interestingly, below-normal temperatures are forecast for central and southern sections of the U.S. Corn Belt and previous forecasts of below-normal precipitation for the western Corn Belt/central Great Plains have been replaced by the near equal odds of below, near, above normal scenario. ■



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### Michigan Weather Summary

	Temp.		Growing Degree Days		Precip.	
	Obs. mean	Dev. from normal	Actual	Normal	Actual (inch)	Normal (inch)
4/16/96-5/15/96						
Houghton	39.3	-4.5	19	125	3.09	2.80
Marquette	38.1	-5.6	21	125	3.66	2.80
Escanaba	39.9	-4.9	14	68	1.78	2.89
Sault Ste. Marie	39.0	-5.4	16	68	3.15	2.89
Lake City	43.8	-4.9	60	150	3.13	2.75
Pellston	42.4	-4.1	49	150	3.36	2.75
Traverse City	45.4	-2.6	79	150	2.88	2.75
Alpena	42.2	-4.5	47	137	2.06	2.77
Houghton Lake	45.0	-4.6	64	137	2.10	2.77
Muskegon	47.7	-3.5	95	189	2.89	3.09
Vestaburg	47.0	-4.8	102	208	3.05	3.28
Bad Axe	46.1	-4.3	75	202	4.20	2.82
Saginaw	48.7	-2.9	111	202	4.49	2.82
Grand Rapids	49.5	-2.9	127	248	2.58	3.42
South Bend	52.2	-2.2	212	248	6.16	3.42
Coldwater	48.9	-4.3	125	243	4.77	3.32
Lansing	49.8	-2.6	142	243	3.12	3.32
Detroit	51.3	-2.0	169	227	3.76	3.19
Flint	49.3	-2.7	126	227	2.63	3.19
Toledo	52.2	-1.5	204	227	5.59	3.19

Observed totals are accumulated from April 1. Normals are based on district averages.



Fields in Ionia County were also hard hit by heavy rains in May.

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# HEALTH HARVEST



## Timeless Tooth Tips

**From the first baby tooth to adulthood, practicing excellent dental hygiene keeps the bite in your teeth.**

**A** baby's first tooth — a real joy of parenting and a screaming reminder of the agony of teething. Not only does the first tooth begin the toddler's toil toward solid food, but begins the never-ending battle against tooth decay.

As a whole, America's oral health has never been better. People are keeping more of their own teeth through adulthood than ever before. In 1960, the average American over 65 had just seven of his or her own teeth. Today, that average has grown to 18, with projections that the baby boomer generation will have at least 24 teeth beyond age 65. Following are some tips for all ages for practicing healthy dental hygiene. As always, consult your dentist about specific instructions for you or your child's teeth.

### **The First Tooth**

According to Judith Ann Tucker, N.P., dentists recommend that dental hygiene begin as soon as the first baby tooth erupts — with the goal to remove any plaque on the teeth by gentle rubbing. This can be done with a piece of gauze wrapped around a finger or a clean, damp face cloth. As your child develops more teeth, you should start brushing the teeth with a soft toothbrush.

Infants who sleep with a bottle containing anything but water are in danger of developing baby bottle tooth decay, according to the American Academy of Pediatric Dentistry (AAPD). While a child sleeps, the salivary process slows, which allows liquids remaining in the mouth to pool around the sleeping child's teeth. Sugars in the liquid combine with bacteria in the mouth to form acid that dissolves the immature enamel, which is highly susceptible to decay.

### **Brushing and Flossing**

Children need help brushing and flossing their teeth until they are coordinated enough to tie their own shoelaces, according to Tucker. By that time, their motor skills will be developed enough to warrant only a helpful hand from time to time. A small, soft toothbrush with flat bristles is recommended — letting the child pick out his or her own color toothbrush adds to the excitement of brushing twice a day.

Avoid fluoride toothpaste until your child is able to spit out the toothpaste after brushing, around the third birthday. A toddler who swallows

toothpaste can easily get too much fluoride if the teeth are brushed twice a day with fluoridated toothpaste. Older children should use a fluoridated toothpaste, and you should train them to brush twice daily — after breakfast and before bedtime. Make brushing a matter of fact routine, as much a part of the morning and bedtime activities as putting on a seat-belt is part of being in the car.

Limit snacking to three or four times a day since virtually all foods, especially snacks, contain sugars or cooked starches. Each time a child snacks, the decay-causing bacteria in the mouth become active for a minimum of 20 minutes.

The final daily ritual that is a good habit to begin developing early is flossing, especially if your child's teeth are closely spaced. When you floss, you remove plaque and food particles from between your teeth and under the gumline, where your toothbrush cannot reach. Flossing can be tricky, so it is important to help your preschooler and older children to floss daily; but don't worry, it gets easier with practice.

### **Dental Sealants**

Dental sealants are plastic coatings applied to the chewing surfaces on the back molars. A dentist uses the sealants to form a barrier that helps keep food and bacteria out of tiny grooves in the tooth enamel, places a toothbrush cannot reach.

### **Wisdom Teeth:**

#### **To Remove or Not to Remove?**

The third permanent molars, commonly called wisdom teeth, are usually the last teeth to erupt into

the mouth. For many, this occurs between 14 and 18 years of age. In some cases, the wisdom teeth may not erupt until after age 20. The location of the wisdom teeth should be between ages 16 and 19. If removal is recommended, the procedure is best completed before age 20. Removal of wisdom teeth is not always recommended; however, many teens need to have their wisdom teeth removed for a variety of reasons.

Unerrupted wisdom teeth can affect the surrounding bone, gums and neighboring teeth unless there is enough space for the wisdom teeth. Impacted wisdom teeth are not able to move into their proper position. In these instances, the teeth may remain in the bone, come in sideways or only partially erupt. Complaints of jaw pain often arise from impacted wisdom teeth. Gum infections and the infection of the surrounding bone may result. In severe cases, the infection can damage surrounding teeth.

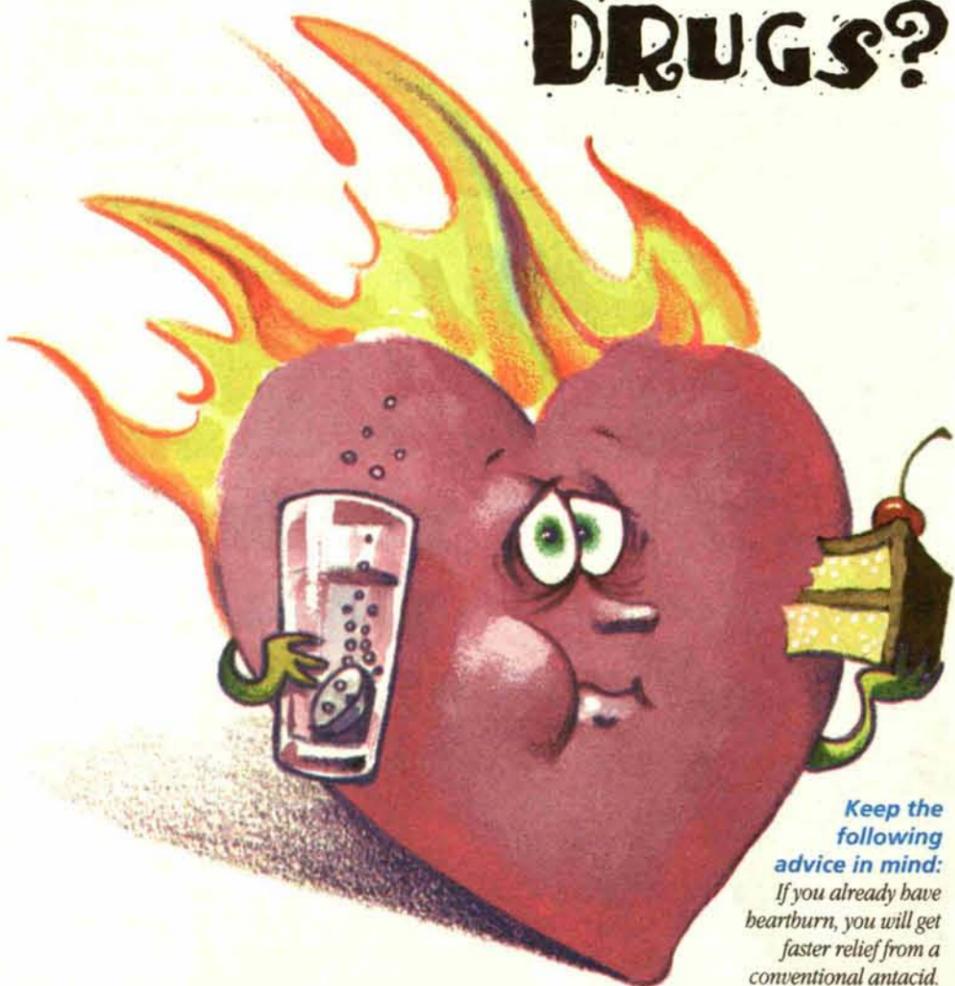
### **Tooth Development During Pregnancy**

Can an expectant mother do anything to help assure a proper start for the development of her child's teeth? According to the AAPD, what you eat during pregnancy affects the development of your unborn baby's teeth. A well-balanced diet is highly recommended. Vitamins A, C, D, protein, calcium and phosphorus are crucial to the general health and dental development of your child.

During the fifth or sixth week of pregnancy, the "buds" appear from which the primary teeth

*Continued on next page*

# HOW GOOD ARE NEW HEARTBURN DRUGS?



**Keep the following advice in mind:** If you already have heartburn, you will get faster relief from a conventional antacid.

**T**hree heartburn drugs, formerly sold only by prescription, have recently been approved for over-the-counter sale in lower-dose versions. They are Pepcid AC (meaning acid control; the active ingredient is famotidine) and Tagamet HB (for heartburn; active ingredient, cimetidine), as well as the anti-ulcer drug Zantac (ranitidine), one of the world's largest-selling drugs. The gist of the aggressive new ad campaign is: Gorge yourself; eat all the sausage, fried foods and chocolate cake you can hold — just remember to pop our pill in advance.

Americans spend about \$1 billion annually on heartburn remedies, and competition for these dollars has been fierce. Amid claims and counterclaims — "Pepcid works all day," "Tagamet is preferred by doctors" — SmithKline Beecham (Tagamet) filed suit against Johnson & Johnson-Merck (Pepcid), which countersued. Recently, a federal judge ordered both companies to withdraw their exaggerated claims or provide evidence to support them.

As the war rages on, you may be wondering if these new drugs are any better than plain antacids such as Tums, Alka-Seltzer, Maalox, and a dozen other tried and trues. Pepcid, Tagamet and Zantac are indeed different from conventional antacids. The drugs they contain, known as H<sub>2</sub>-blockers, suppress the production of stomach acid, rather than just neutralizing it the way conventional antacids do. Pepcid AC can, and does, claim to prevent heartburn as well as relieve it, if you can figure out when heartburn is about to strike and take the medication half an hour in advance. Tagamet simply claims to "reduce the production of stomach acid."

The squabble in the ads is over just how long it takes each drug to start doing the job, and how long each remains effective. But this is really a non-argument. Individual reactions to H<sub>2</sub>-blockers are quite variable. What works fast for one person may not work for another. Remember, too, that these OTC drugs contain only 50% of the minimum dosages in the prescription versions. According to testimony submitted to the FDA, dosages at these levels are only about as effective as conventional antacids.

**If you think you are going to get heartburn, H<sub>2</sub>-blockers may be worth a try, but read on:**

- Whichever brand of H<sub>2</sub>-blocker you choose, expect it to take at least 30 minutes to begin working. Take it well before trouble starts — for example, before you eat a spicy meal or cut a big piece of chocolate cake late in the evening or do anything else that you know brings on heartburn.
- Expect these drugs to keep working for about three to five hours. This can vary from person to person.
- One thing you might like about H<sub>2</sub>-blockers is that they come in pill form. You need not chew a chalky tablet or swallow a liquid.
- Don't take one of these heartburn drugs regularly for more than two weeks. You should see a doctor about persistent symptoms. If you have an ulcer, it should be diagnosed, and then can probably be cured with antibiotics, as most stomach ulcers, it is now known, are bacterial in origin.

### How to use, and how to avoid, heartburn drugs

**B**e wary of heartburn that isn't heartburn. If you have chest pain, nausea, vomiting, weakness, breathlessness, fainting and/or sweating, you may be having a heart attack.

Pregnant women, children and people with ulcers or kidney problems should consult a doctor before using any heartburn medication.

If you are taking any prescription medications, heed the fine print on the package of the heartburn medication about possible drug interactions. You might also ask your doctor or pharmacist if the antacid or H<sub>2</sub>-blocker will interact with your other drugs.

Finally, it's better not to have heartburn in the first place. Avoid overeating, especially fatty foods. Don't eat just before lying down, since this may promote gastroesophageal reflux — the backup of stomach acids into the esophagus. Avoid tight-fitting clothes. Keep your diet high in fiber to prevent constipation. You may need to cut back on chocolate, alcohol, acidic foods, highly spiced meals, and caffeine-containing beverages (although, oddly, too much decaf coffee or tea can bring on heartburn, too). Losing weight will help.

Source: University of California at Berkeley Wellness Letter, March 1996.

## Timeless Tooth Tips

**Continued from previous page**  
develop. Between the third and sixth month of pregnancy, the enamel on your baby's primary teeth begins to form. At birth, your baby has a full set of completely formed primary tooth crowns under the gums, as well as a set of permanent teeth in varying stages of development.

The AAPD states that it is crucial for new mothers to pay strict attention to their own oral health. It is possible for a mother to pass cavity-causing bacteria from her mouth to her infant.

### Older Adults and Their Needs

Your mouth changes as you age. As you grow older, you may find yourself taking more medications, but many medications can cause xerostomia, or dry mouth. Having an abnormally dry mouth can lead to cavities, since you need saliva to wash away food particles and neutralize the acids that cause tooth decay.

Your gums might recede over the years, leaving the roots of your teeth exposed and vulnerable to root decay, making your teeth more sensitive. This can be prevented by using fluoride rinses and avoiding sugary foods and drinks.

### What can be done to improve the looks of my teeth?

According to Colgate-Palmolive, three treatments are readily available to improve your smile.

**Bleaching:** A treatment that lightens teeth discolored by tobacco, food, drinks, root canal treatment, etc. The painless procedure costs less than bonding or veneers and involves a bleaching solution painted on the teeth and then activated by heat or light.

**Bonding:** An effective way to improve the appearance of your teeth by covering stains, disguising cracks or filling gaps. A composite resin (plastic) is applied and hardened with light and repairs teeth for three to five years.

**Veneers:** Thin shells are attached to the front surface of a tooth to correct very uneven, badly chipped or severely stained teeth. A small amount of enamel on your tooth is removed and a shell-like veneer, custom-made from a mold of your tooth, is applied. This procedure lasts up to 12 years.



## Measuring fitness over 40

**Y**ou may think you're fit because you run or walk several times a week. But are you really? Fitness is an umbrella term that

covers everything from muscle strength and aerobic capacity (the ability of the cardiorespiratory system and muscles to process oxygen) to flexibility and balance. You may be aerobically fit, but fairly inflexible and below average when it comes to muscle strength. Or you may have bulging biceps, but be unfit according to most standards. Finding out how fit you are, objectively, could encourage you to become more fit, tell you where you need the most improvement, and can help you chart your progress.

There are a wide variety of fitness tests and standards, but typically they've been developed for young adults (18 to 25 years old). Recently, Dr. James Rippe, a well-known cardiologist at Tufts University School of Medicine, devised 15 fitness standards for those aged 40 to 79, based on clinical tests of 350 men and women (the program was sponsored by Advil, a brand of ibuprofen). The results were arranged by the age and sex of the subjects.

Here are a few of the tests. Before starting: Always warm up for a few minutes before any strenuous exercise. And if you don't exercise regularly and/or have any medical conditions, consult your doctor before doing these tests.

### One-mile walk test for aerobic capacity

Find a flat path or track where you can walk one mile. It may be simplest to walk four times around a quarter-mile track (found at most schools), or you can measure out a one-mile stretch of road in advance by using your car's odometer. First warm up by walking briskly for a few minutes, then stretch your leg muscles. Carrying a watch (with a second hand) or stopwatch to record your time, walk one mile as fast as possible. Stop if any unusual symptoms occur, such as chest discomfort, pain in the knees or ankles. Cool down afterwards. Compare your time for your age and sex below. (Note: < means "less than"; > means "more than".)

Women (minutes:seconds)				
Age	40-49	50-59	60-69	70-79
Excellent	<14:12	<14:42	<15:06	<18:18
Good	14:12-15:06	14:42-15:36	15:06-16:18	18:18-20:00
Average	15:06-16:06	15:36-17:00	16:18-17:30	20:00-21:48
Fair	16:06-17:30	17:00-18:06	17:30-19:12	21:48-24:06
Poor	>17:30	>18:06	>19:12	>24:06

Men (minutes:seconds)				
Age	40-49	50-59	60-69	70-79
Excellent	<12:54	<13:24	<14:06	<15:06
Good	12:54-14:00	13:24-14:24	14:06-15:12	15:06-15:48
Average	14:00-14:42	14:24-15:12	15:12-16:18	15:48-18:48
Fair	14:42-15:30	15:12-16:30	16:18-17:18	18:48-20:18
Poor	>15:30	>16:30	>17:18	>20:18

### Balance

Stand on your dominant leg for as long as possible, up to 30 seconds; keep your eyes open. Compare your time to these charts.

Women (seconds)				
Age	40-49	50-59	60-69	70-79
Above avg.	>15.5	>8.7	>4.5	>2.6
Average	7.2-15.5	3.7-8.7	2.5-4.5	1.5-2.6
Below avg.	<7.1	<3.6	<2.4	<1.4

Men (seconds)				
Age	40-49	50-59	60-69	70-79
Above avg.	>14.8	>6.7	>4.0	>3.3
Average	4.1-14.7	3.2-6.7	2.5-4.0	1.8-3.3
Below avg.	<4.0	<3.1	<2.4	<1.7

### Biceps curls: upper-body endurance

Lean your back against a wall, with your arms at your sides and a 5-pound weight in your dominant hand. (If you don't have a weight, you can use a 1-gallon plastic jug filled with water just over half-way.) With your palm facing up and elbow at your side, raise the weight to your shoulder. Perform as many lifts as you can in 30 seconds. Compare the number to the charts below.

Women (number of repetitions)				
Age	40-49	50-59	60-69	70-79
Above avg.	>27	>25	>22	>21
Average	21-27	20-25	19-22	18-21
Below avg.	<21	<20	<19	<18

Men (number of repetitions)				
Age	40-49	50-59	60-69	70-79
Above avg.	>34	>33	>31	>28
Average	30-34	29-33	26-31	24-28
Below avg.	<30	<29	<26	<24

### Leg extensions: lower-body endurance

Sit on a table (tall enough so your feet dangle) with your knees just over the edge; attach a 10-pound weight to the ankle on your dominant side. (You can also use a Nautilus-type machine at a gym or health club.) Keeping the other leg immobile, extend the weighted leg fully, without locking the knee. Perform as many lifts as you can in 30 seconds. Compare the number to the charts.

Women (number of repetitions)				
Age	40-49	50-59	60-69	70-79
Above avg.	>27	>27	>25	>25
Average	24-27	23-27	22-25	23-25
Below avg.	<24	<23	<22	<23

Men (number of repetitions)				
Age	40-49	50-59	60-69	70-79
Above avg.	>31	>30	>29	>30
Average	27-31	27-30	25-29	25-30
Below avg.	<27	<27	<25	<25

For a free brochure fully describing these tests, along with advice on how to improve in each area, write to Advil Fit Over 40 Standards, 1500 Broadway, 25th floor, New York, NY 10036.

# Hay Fever Notes

**T**he symptoms of hay fever ("allergic rhinitis") include a stuffy, runny nose; watery, itchy eyes; headache; and sneezing. Biggest causes: dust, and spring and fall pollen. Treatment involves avoiding the allergen to the extent possible, and using over-the-counter or prescription medicines.

Antihistamines block the action of histamine — a substance that's released during allergic reactions. Antihistamines also have a drying effect and help relieve nasal congestion.

Common over-the-counter antihistamines include diphenhydramine (e.g., Benadryl), chlorpheniramine maleate (e.g., ChlorTrimeton), tripelemine (e.g., PBZ), and brompheniramine (e.g., Dimetane).

These four drugs are from three different classes of antihistamine compounds. Because people respond to these drugs differently, you'll have to trial-and-error to see which one works best for you.

The most common side effect of antihistamines is drowsiness — which is why you should be very careful using them prior to driving, bicycling and using machinery.

The prescription antihistamine terfenadine (Seldane) causes less drowsiness, but it may be less effective.

Decongestants (pseudoephedrine, etc.) are often added to antihistamine medication. These can help with the congestion and may help combat the sleepiness caused by antihistamines.

Source: *Take Care of Yourself* by Donald M. Vickery, MD and James F. Fries, MD

## What To Do

### Use antihistamines routinely

Take them every day as a preventive measure during the allergy season. Typically, people take them only when they're really miserable.

### Build up a tolerance

If one kind of over-the-counter antihistamine makes you really sleepy, buy one with a lower dose and take the lower-dose pill before bedtime for several days.

Then, before bedtime, take a pill with a higher dose of antihistamine. Then start taking one higher-dose pill in the morning and one at night.

This gradual dose increase can help you build up a tolerance so you won't get so sleepy.

- Take your antihistamine 30 minutes before you go outside.
- Limit outdoor activity, especially in the morning.
- Pollen counts peak between 5 a.m. and 10 a.m. Counts are lowest in the late afternoon.

### Limit nasal sprays

If you use these for more than about three or four days, you can get resistant to them and your congestion can get worse.

Alternative: Inhale salt water (1 tsp. of salt to one pint of water, plus a pinch of baking soda). Place a few drops on a spoon and sniff it up each nostril.

- Use your air conditioner (cool or fan setting); clean filters at least once a month.
- Keep your home and car windows closed.

### Beware of "pollen cling"

Wash your hair every evening to keep the pollen off your pillow at night. Don't line-dry clothes. Don't let your animals inside.

Source: *The Doctors' Book of Home Remedies II* by Sid Kirchheimer, Steve Moore, MD



Illustrations by Barbara Hanflövich

# Healthy Bites

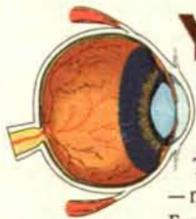
**A** person's peak bone density occurs in the early 30s. Between the ages of 11 and 30, you should get as much calcium and weight-bearing exercise as possible to help make sure your bones are as dense as possible at age 30.

Using nonfat/low-fat dairy products (and possibly calcium supplements), kids over age 10 and young adults should get between 1,200 mg. and 1,500 mg. of calcium a day.

Adults between 25 and 50 should aim for at least 1,000 mg. of calcium a day (1,200 mg. during pregnancy). One cup of nonfat milk contains 300 mg. of calcium.

Other ways to help prevent osteoporosis: don't smoke, restrict alcohol and caffeine, and get regular exercise.

Source: *American College of Obstetricians and Gynecologists*



**Y**ou cannot damage your eyes by doing a lot of close-up work, sitting too close to the TV, reading in dim light, or reading without your glasses. These things can cause eyestrain — nothing more.

Eyestrain simply means that the muscles around your eyes have become tired.

Source: *American Academy of Ophthalmology*

**R**estless Leg Syndrome — described as a restless, creepy-crawly, aching sensation in the legs that's relieved by movement — affects about 5 percent of Americans. It is the fourth leading cause of insomnia.

Problems behind this syndrome include iron deficiency anemia, uremia, diabetes, pregnancy, Parkinson's disease, sleep apnea, narcolepsy and rheumatoid arthritis — but the disorder remains poorly understood.

If you think you have this problem, be sure to get checked for iron deficiency anemia and for nerve problems in your legs. Several medications have been found to be helpful.

Source: *Journal of the American Medical Association*, Vol. 274, No. 15

**E**very adult should accumulate a total of 30 minutes (or more) of moderate-intensity exercise every day. Brisk walking (4 mph) is one way to do this. Experts say that even short bouts of exercise (e.g., taking the stairs instead of the elevator, riding an exercycle while watching TV, raking leaves) can confer important health benefits.

Exercise does *not* have to be vigorous or prolonged to be of worth.

Surveys show 30 percent of American adults are completely sedentary.

Source: *Journal of the American Medical Association*, Vol. 273, No. 5

**I**n a review of 22 scientific studies that followed the behavior of nearly 600 kids, researchers say, "There's no evidence to support the idea that sugar affects the behavior or learning of children."

In other words, scientists do not believe that giving children a lot of sugar makes them "hyper."

Teachers and parents often blame sugar for children's excited behavior. But researchers say it's probably the circumstances in which sugary foods are provided — parties, awards, treats, etc. — that cause the excitement.

Source: *Journal of the American Medical Association*, Vol. 274, No. 20



**P**oisoning — Over one-third of all potentially harmful or fatal poisonings occur in the homes of children's grandparents.

Source: *U.S. Consumer Product Safety Commission*

**I**f you don't exercise regularly, sudden, strenuous exertion can be risky.

Researchers have found that the relative risk for having a heart attack was increased 107-fold in sedentary people who engaged in sudden, heavy exertion.

In contrast, people who had been exercising five or more times a week had only a 2.4 times greater risk of heart attack after sudden heavy exertion.

Source: *New England Journal of Medicine*, Dec. 2, 1993

**V**irtually all dentists (93%) heat-sterilize their instruments between patients, according to a survey by the American Dental Association (ADA). Although many people still worry about whether they are safe from various infections in a dentist's office, a properly maintained dental office is one of the safest places there is. How do you know if your dentist sterilizes his instruments between patients? Ask. Notice such details, as office cleanliness and whether both dentist and hygienist wear disposable gloves and a face mask.

For a free brochure with more information, send a stamped, self-addressed business envelope to ADA Cares, Suite 930, 332 South Michigan Avenue, Chicago, IL 60604.

**N**ew government regulations that go into effect this summer will standardize the labels on bottled water.

The label "spring water" will mean that the water actually came from a spring. The label "mineral water" will signify a certain content of minerals.

If the bottled water comes from municipal supplies, the label will have to say so. If the water is "sterile," it must be processed to meet the Food and Drug Administration's requirements; otherwise, the label must indicate that the water is not sterile.

Americans spend \$3 billion annually on bottled water.

Source: *U.S. Food and Drug Administration*

**Q** I have tendonitis in my finger. Steroid injections relieve my pain, but my doctor says I shouldn't get them frequently. Why not?

**A** Multiple injections can have side effects. To reduce inflammation, a corticosteroid is injected into the membrane lining surrounding the tendon. However, a painful, swollen tendon may make finding the appropriate injection site difficult. If a corticosteroid is injected directly into the tendon, it may weaken or tear the tendon. Feeling less pain may tempt you to overuse your finger and cause further injury.

Corticosteroid injections can also lead to wasting of tissue and changes in skin tone around the injection site. As with any injection, infection and bleeding are other possible side effects.

In addition, a major risk of treating pain alone is the possibility of not correcting the underlying problem. Corticosteroid injections don't treat the cause of some tendonitis such as rheumatoid arthritis.

When tendonitis occurs from overuse, additional therapy includes cutting back on the activity that led to inflammation, regularly stretching and flexing your fingers to maintain range of motion and adapting activities to prevent reinjury.

# Office Calls



**S**mall studies suggest cimetidine, an H<sub>2</sub>-blocker that reduces stomach acid, can cure multiple warts.

**A** The theory is that H<sub>2</sub>-blockers boost your immune system to fight papillomavirus, the virus that causes warts. Using immune-boosting drugs to treat troublesome warts is an evolving approach.

Although cimetidine is available over the counter, it's not wise to take it as a home remedy. To treat warts, you have to take cimetidine for several weeks, longer than recommended without your doctor's supervision.

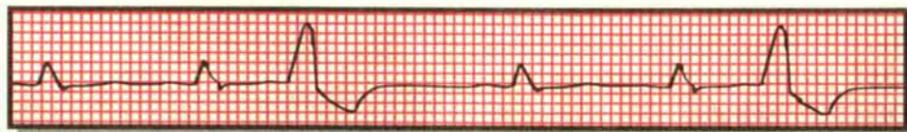
In addition, cimetidine isn't proven to work on warts. The drug is considered a last resort and is reserved for multiple warts that haven't responded to other approaches.

Sometimes, warts disappear on their own or after about three months use of over-the-counter (OTC) acid solutions. For persistent warts, your doctor may recommend regular use of an OTC solution plus periodic freezing with liquid nitrogen.

Less common options include cutting and scraping away the wart (curettage) or injecting medications into the wart.



# Medical Focus



## TOURETTE SYNDROME?

**Tourette syndrome (TS)** is an inherited, neurological disorder characterized by repeated involuntary movements and uncontrollable vocal (phonic) sounds called tics. In a few cases, such tics can include inappropriate words and phrases.

The disorder is named for Dr. Georges Gilles de la Tourette, the pioneering French neurologist who first described an 86-year-old French noblewoman with the condition in 1885.

The symptoms of TS generally appear before the individual is 18 years old. TS can affect people of all ethnic groups; males are affected three to four times more often than females. It is estimated that 100,000 Americans have full-blown TS, and that perhaps as many as one in 200 show a partial expression of the disorder, such as chronic multiple tics or transient childhood tics.

The natural course of TS varies from patient to patient. Although TS symptoms range from very mild to quite severe, the majority of cases fall in the mild category.

### What are the symptoms?

The first symptoms of TS are usually facial tics — commonly eye blinking. However, facial tics can also include nose twitching or grimaces. With time, other motor tics may appear, such as head jerking, neck stretching, foot stamping, or body twisting and bending.

TS patients may utter strange and unacceptable sounds, words or phrases. It is not uncommon for a person with TS to continuously clear his or her throat, cough, sniff, grunt, yelp, bark or shout.

People with TS may involuntarily shout obscenities (*coprolalia*) or constantly repeat the words of other people (*echolalia*). They may touch other people excessively or repeat actions obsessively and unnecessarily. A few patients with severe TS demonstrate self-harming behaviors such as lip and cheek biting and head banging against hard objects. However, these behaviors are extremely rare.

Tics alternately increase and decrease in severity and periodically change in number, frequency, type and location. Symptoms may subside for weeks or months at a time and later recur.

### How are tics classified?

There are two categories of tics: simple and complex. Simple tics are sudden, brief movements that involve a limited number of muscle groups. They occur in a single or isolated fashion and are often repetitive. Some of the more common examples of simple tics include eye blinking, shoulder shrugging, facial grimacing, head jerking, yelping and sniffing. Complex tics are distinct, coordinated patterns of successive movements involving several muscle groups. Complex tics might include jumping, smelling objects, touching the nose, touching other people, coprolalia, echolalia or self-harming behaviors.

### Can people with TS control their tics?

People with TS can sometimes suppress their tics for a short time, but the effort is similar to that of holding back a sneeze. Eventually tension mounts to

the point where the tic escapes. Tics worsen in stressful situations; however, they improve when the person is relaxed or absorbed in an activity. In most cases, tics decrease markedly during sleep.

### What causes TS?

Although the basic cause of TS is unknown, current research suggests that there is an abnormality in the gene(s) affecting the brain's metabolism of neurotransmitters such as dopamine, serotonin and norepinephrine. Neurotransmitters are chemicals in the brain that carry signals from one nerve cell to another.

### What disorders are associated with TS?

Not all people with TS have disorders other than tics. However, many people experience additional problems such as *obsessive-compulsive disorder*, where the person feels that something must be done repeatedly, such as hand washing or checking that a door is locked; *attention deficit disorder*, where the person has difficulty concentrating and is easily distracted; *learning disabilities*, which include reading, writing, arithmetic and perceptual difficulties; *problems with impulse control*, which can result in overly aggressive behaviors or socially inappropriate acts; or *sleep disorders*, which include frequent awakenings or talking in one's sleep.

The wide range of behavioral symptoms that can accompany tics may, in fact, be more disabling than the tics themselves. Patients, families and physicians need to determine which set of symptoms is most disabling so that appropriate medications and therapies can be selected.

### How is TS diagnosed?

Generally, TS is diagnosed by observing the symptoms and evaluating family history. For a diag-



nosis of TS to be made, both motor and phonic tics must be present for at least one year. Neuroimaging studies, such as magnetic resonance imaging (MRI), computerized tomography (CT), and electroencephalogram (EEG) scans, or certain blood tests may be used to rule out other conditions that might be confused with TS. However, TS is a clinical diagnosis. There are no blood tests or other laboratory tests that definitively diagnose the disorder.

Studies show that correct diagnosis of TS is frequently delayed after the start of symptoms because many physicians may not be familiar with the disorder. The behavioral symptoms and tics are easily misinterpreted, often causing children with TS to be misunderstood at school, at home and even in the doctor's office. Parents, relatives and peers who are unfamiliar with the disorder may incorrectly

attribute the tics and other symptoms to psychological problems, thereby increasing the social isolation of those with the disorder. And because tics can wax and wane in severity and can also be suppressed, they are often absent during doctor visits, which further complicates making a diagnosis.

In many cases, parents, relatives, friends or even the patients themselves become aware of the disorder based on information they have heard or read in the popular media.

### How is TS treated?

Because symptoms do not impair most patients and development usually proceeds normally, the majority of people with TS require no medication. However, medications are available to help when symptoms interfere with functioning.

Unfortunately, there is no single medication that is helpful to all persons with TS, nor does any medication completely eliminate symptoms. Instead, the available TS medications are only able to help reduce specific symptoms. In addition, all medications have side effects.

Some patients who require medication to reduce the frequency and intensity of the tic symptoms may be treated with neuroleptic drugs such as haloperidol and pimozide. These medications are usually given in very small doses that are increased slowly until the best possible balance between symptoms and side effects is achieved.

Recently, scientists have discovered that long-term use of neuroleptic drugs may cause an involuntary movement disorder called *tardive dyskinesia*. However, this condition usually disappears when medication is discontinued. Short-term side effects of haloperidol and pimozide include muscu-

lar rigidity, drooling, tremor, lack of facial expression, slow movement and restlessness. These side effects can be reduced by drugs commonly used to treat Parkinson's disease. Other side effects, such as fatigue, depression, anxiety, weight gain and difficulties in thinking clearly, may be more troublesome.

Clonidine, an antihypertensive drug, is also used in the treatment of tics. Studies show that it is more effective in reducing motor tics than reducing vocal tics. Fatigue, dry mouth, irritability, dizziness, headache and insomnia are common side effects associated with clonidine use. Fluphenazine and clonazepam may also be prescribed to help control tic symptoms.

Medications are also available to treat some of the associated behavioral disorders. Stimulants such as methylphenidate, pemoline and dextroamphetamine, usually prescribed for attention deficit disorders, although somewhat effective, have also been reported to increase tics; therefore, their use is controversial. For obsessive compulsive behaviors that significantly disrupt daily functioning, fluoxetine, clomipramine, sertraline and paroxetine may be prescribed.

Other types of therapy may also be helpful. Although psychological problems do not cause TS, psychotherapy may help the person better cope with the disorder and deal with the secondary social and emotional problems that sometimes occur. Psychotherapy does not help suppress the patient's tics.

Relaxation techniques and biofeedback may be useful in alleviating stress, which can lead to an increase in tic symptoms.

### Is TS inherited?

Evidence from genetic studies suggests that TS is inherited in a dominant mode and the gene(s)



**Georges Gilles de la Tourette** (born Georges Albert Edouard Brutus Gilles de la Tourette) in 1857, made several valuable contributions to medicine and literature. His greatest achievements were in the study of hysteria and hyp-

notism; a competent neuropsychiatrist, he was particularly interested in therapy.

With a colleague, he wrote a highly perceptive analysis of Sister Jeanne des Anges' account of her "hysterical illness" which was caused by a priest's unrequited love.

Tourette was shot by a deluded woman who had been a patient at the famous Salpêtrière hospital.

involved can cause a variable range of symptoms in different family members. A person with TS has about a 50-50 chance of passing on the gene(s) to one of his or her offspring. However, that genetic predisposition may not necessarily result in full-blown TS; instead, it may express itself as a milder tic disorder or as obsessive-compulsive behaviors or possibly attention deficit disorder with few or no tics at all. It is also possible that the gene-carrying offspring will not develop any TS symptoms. A higher than normal incidence of milder tic disorders and obsessive compulsive behaviors has been found in families of individuals with TS.

Gender also plays an important role in TS gene expression. If the gene-carrying offspring of a TS patient is male, then the risk of developing symptoms is three to four times higher. However, most people who inherit the gene(s) will not develop symptoms severe enough to warrant medical attention. In some cases of TS, inheritance cannot be determined. These cases are called sporadic and their cause is unknown.

### What is the prognosis?

There is no cure for TS; however, the condition in many individuals improves as they mature. Individuals with TS can expect to live a normal life span. Although the disorder is generally lifelong and chronic, it is not a degenerative condition. TS does not impair intelligence. Tics tend to decrease with age, enabling some patients to discontinue using medication. In a few cases, complete remission occurs after adolescence. Although tic symptoms tend to decrease with age, it is possible that neuropsychiatric disorders such as depression, panic attacks, mood swings and antisocial behaviors may increase.

### What is the best educational setting for children with TS?

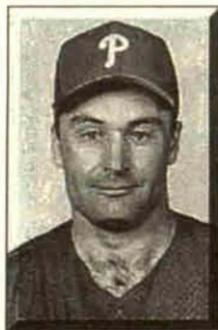
Although students with TS often function well in the regular classroom, it is estimated that many may have some kind of learning disability. When attention deficit disorder, obsessive compulsive disorder and frequent tics greatly interfere with academic performance or social adjustment, students should be placed in an educational setting that meets their individual needs. These students may require tutoring, smaller or special classes, and in some cases special schools.

All students with TS need a tolerant and compassionate setting that both encourages them to work to their full potential and is flexible enough to accommodate their special needs. This setting may include a private study area, exams outside the regular classroom, or even oral exams when the child's symptoms interfere with his or her ability to write. Untimed testing reduces stress for students with TS.

### Where can I go for more information?

The Tourette Syndrome Association Inc. is a voluntary, nonprofit organization whose members include people with TS, their families and friends, and health care professionals. The association funds research, provides services to patients and their families, and offers a variety of publications, including a newsletter, brochures and fact sheets. For further information, contact: Tourette Syndrome Association Inc., 42-40 Bell Boulevard, Bayside, NY 11361-2861; phone (800) 237-0717.

## Famous Faces with Tourette



Playing first for the Kansas City Royals and now

with the Phillies, outfielder Eisenreich is a dependable and valuable player in the lineup. Eisenreich is a wonderful model for young children with TS. He receives them in the dugout wherever he plays. He gives talks around the country about having TS, has made a public service announcement shown on the air, played in TSA charity golf and bowling tournaments, and participated in a wonderful video for children called "Handling It Like a Winner."

Eisenreich meets with hundreds of TS-afflicted kids and their families each month before home games and has started his own foundation for children with the disease. His efforts have earned him the 1996 Most Caring Athlete Award given by USA Today.

## DNR takes action on post-production cost controversy

Continued from front page

public lease agreements," Cool said. "This letter was clearly unacceptable."

As a result, Cool announced the following actions:

- Immediately rescind the Nov. 10, 1993, letter from DNR to the MOGA, which has been alleged to allow excessive latitude in identifying PPCs that were deducted from payments made to the state for drilling on state-owned lands.
- Order that independent auditing firms be retained by DNR to determine if oil and gas companies appropriately deducted PPC from royalty payments to the state. Audits are expected to be completed by Aug. 1, 1996. If improper deductions on the part of any company are found to have taken place, the state will seek reimbursement of monies owed to the Natural Resources Trust Fund and the State Parks Endowment Fund.
- Direct the DNR Real Estate Division to draft PPC language for future leases that is explicit and present the draft language to the NRC for public review and input at their June 5-6 Manistique public meeting.
- Hire a consultant as requested by the NRC to analyze changes in the oil and gas industry over the last decade, particularly as they relate to PPC. Formally present the report to NRC at their July 10-11 public meeting in Alpena.
- Consider information obtained from the Real Estate Division, along with reports and recommendations of consultants, auditors, MOGA and the public, to assist the DNR director in approving new language for future leases.
- Direct the DNR Real Estate Division to advertise and conduct a state oil and gas lease sale in July of 1996.

Charlevoix County Farm Bureau Policy Development Chairman Pete Vellenga calls the DNR actions the first step forward since companies can no longer rely on the letter as justification for taking PPC from private royalty payments.

"We now at least have a level playing field in dealing with the gas and oil companies," Vellenga said. "It also raises the question of the state's responsibility in preventing exploitation. From my perspective, the taking of PPC is exploitation."

Vellenga was instrumental in drafting local policy, which eventually became Michigan Farm Bureau policy. He contends that MFB's involvement helped to spur the DNR's attention to the issue of PPC.

"I think it's very important for all farmers to realize that from one local resolution we were able to make it a state policy, and that once we had state policy it had a definite impact with the NRC," Vellenga suggested. "This is an example of what happens when we use the policy development process and move it forward to bring statewide change."

He hopes that private landowners continue to stay involved in the PPC issue, particularly in the drafting of the new lease language. "They cannot sit back idly and hope that this process will take care of this issue," he advised.

How about private landowners being reimbursed for PPCs? Good luck, says Vellenga, who believes the only way for private landowners to get a refund will, unfortunately, rest in the form of a class-action lawsuit and/or a legislative solution.

Vellenga estimates that over \$50 million in PPC deductions were made from private royalty, meaning that landowners were seeing deductions as high as 40 to 50 percent in some cases, and as high as 87 percent in others. "We also saw some validated PPCs where gas companies were actually charging deficit PPC — in other words, they were actually sending a bill to the landowner," he said. "One landowner obtained a statement for garbage collection costs, insurance costs, telephone costs — that's not PPC. They (gas companies) basically found the golden cow and they were milking it!"

While there's little the DNR can and will do on behalf of private landowners, DeVuyst is hoping that gas companies see the DNR's action as a wake-up call to re-evaluate their PPC practices to private leases. "All we can deal with at this level are state-owned leases," DeVuyst explained. "As to the private landowners — they have contracts. If they feel they have been violated, then it'll be up to them to take civil action."

Regardless of the eventual lease language and policy on PPC, DeVuyst says it's critical that a logical audit process be built into the process to accurately reflect true PPCs. "The method of reporting is one of the things that's been in question not only by the state, but by private landowners as well," he said. "Oftentimes deductions were made without any definition, and we feel that every deduction ought to be clearly defined." ■

## Fans may help reduce dairy animal stress

Though the odds of a repeat of last summer's prolonged torrid weather are not great, dairy animals aren't comfortable when the temperature exceeds 75°F.

Dairy experts note that milk production begins to decline when temperatures exceed 85°F for more than six hours.

Using fans in the dairy barn to reduce heat stress by providing supplemental air movement may be beneficial and cost-effective when ambient temperatures combine with the cow's own body heat to reduce milk production, says George Atkeson, Michigan State University Extension area of expertise dairy agent in Ionia County.

Atkeson says the most commonly used fans in dairy barns are either 3 or 4 feet in diameter.

"Producers who are considering purchasing fans should balance the cost of the total investment against potential losses in milk production," Atkeson says. "In addition to the cost of the fans, the probable need for additional wiring and the cost for electricity should be taken into account."

Among Atkeson's recommendations:

- Open the barn as much as possible — sidewalls, endwalls, gable ends — to take advantage of any wind movement.

- Remove partitions, vegetation and other obstacles inside and outside the barn that may impede wind movement.

- Position 36-inch fans every 30 feet and 48-inch fans every 40 feet apart, aiming them so they blow over the dairy animals.

- For efficiency, consider a tensioner for belt-driven fans and a thermostat so that fans will not run when inside temperatures decline.

Atkeson says that the most important places to put fans are the holding pen, so that air flows past the cows on their way to the milking parlor; inside the milking parlor; over the feed bunk area and angled downward to help increase feed intake; and over the cow resting area.

Producers should remember that fans provide air movement, not ventilation, he notes.

Installing sprinklers or high pressure foggers for evaporative cooling probably cannot be economically justified because of Michigan's environmental conditions. If such a system is used, the sprinklers should completely wet the cows and the fans should blow over the animals continuously. The sprinklers should operate a minute or less in every 15 minutes. Using the sprinklers without fans may create health risks for the animals, Atkeson says. ■

## Feds set aside 3.9 million acres for bird

In one of the more sweeping moves to preserve wildlife habitat in the history of the Endangered Species Act, the federal government has set aside 3.9 million acres of forest in Oregon, Washington and California to help in the recovery of the marbled murrelet.

Officials, however, said the move would have little effect on the logging of federal, state or private lands. Mike Spear, of the Fish and Wildlife Service, said the action will not stop the harvest of about 10 to 15 percent of the coastal old-growth forests known to be used by the elusive bird for nesting. Much of the land is concentrated in the Siuslaw National Forest in Oregon, which has been opened to logging thanks to a measure known as the salvage rider. Congress passed the law last summer at the request of the timber industry to speed logging held up by environmental protection.

Whether those nesting trees will fall depends on the outcome of a federal court battle over the issue of how biologists determine murrelets are nesting in a specific stand of trees. The Fish and Wildlife Service designated the murrelet a threatened species in 1992, primarily due to the loss of nesting trees to logging. ■

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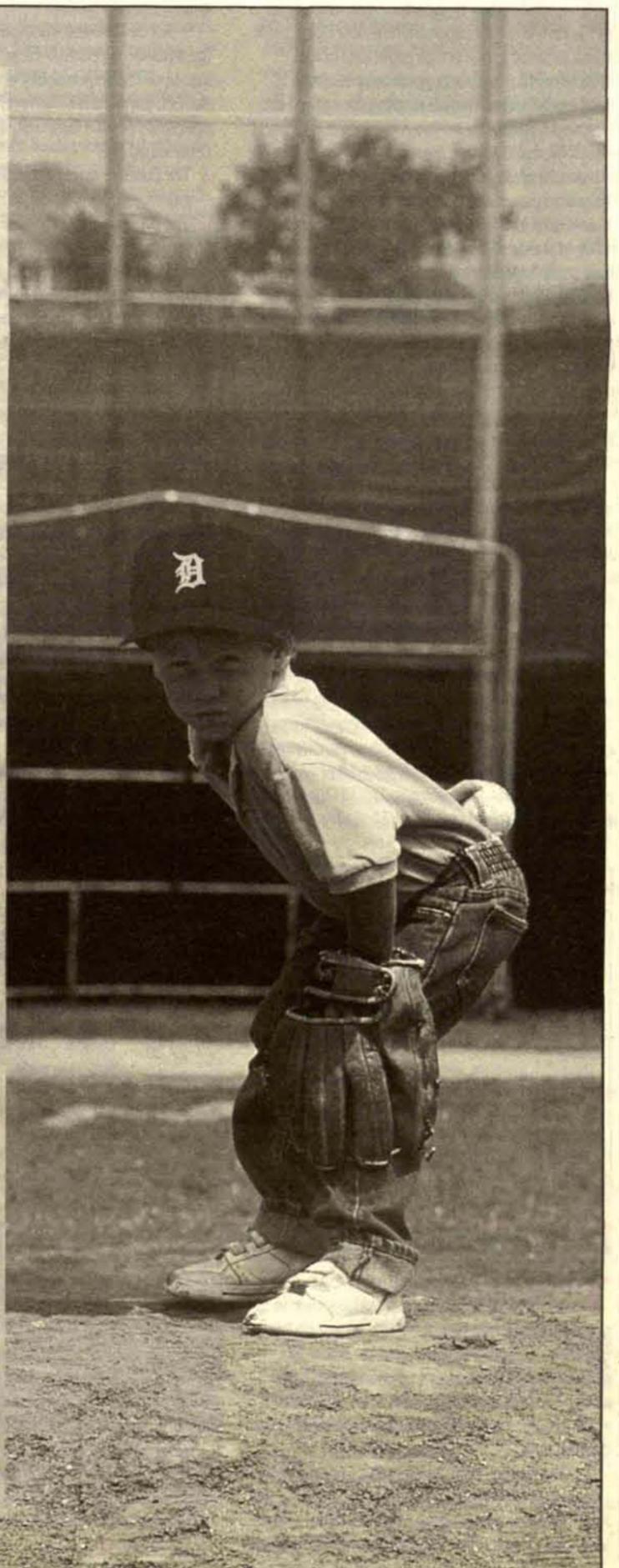
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## The 1996 Farm Bill: The EQIP livestock conservation provisions

by Sandra S. Batie, Elton R. Smith, Professor of Food and Agricultural Policy; and David B. Schweikhardt, Department of Agricultural Economics, Michigan State University

The conservation provisions of the Federal Agriculture Improvement and Reform Act of 1996 include a new program — the Environmental Quality Incentives Program, or EQIP. EQIP provides \$130 million in fiscal year 1996 and \$200 million annually for the next six years to fund technical and cost-sharing assistance for conservation practices.

Livestock-related conservation practices, including animal waste confinement facilities, will receive 50 percent of the EQIP program funding. Eligible livestock enterprises include those with dairy cattle, beef cattle, laying hens, broilers, turkey, swine and sheep. The secretary of agriculture may add to the list of eligible livestock enterprises.

EQIP will replace 4 existing programs — the Agricultural Conservation Program, Water Quality Incentives Program, Great Plains Conservation Program and the Colorado River Basin Salinity Control Program. It will be administered by the Natural Resources Conservation Service (NRCS), but private

businesses may be employed to implement eligible practices.

This legislation does not specify which livestock conservation practices will be eligible for cost-sharing funds, and the secretary of agriculture must establish eligibility criteria for livestock-related conservation practices later this year. This criteria will be developed through a rule-making process, and there will be an opportunity for public comment after the publication of the proposed criteria.

The legislation requires that the program focus on high priority areas and high priority resource concerns. These priorities will be identified by state and federal agencies in cooperation with state NRCS technical committees.

The program targets land that poses significant problems for water, soil or related resources. It is anticipated that there will be a competitive bidding process similar to that of the Conservation Reserve Program to assure that EQIP will buy the maximum amount of environmental benefits per dollar spent.

Producers may obtain 5- to 10-year contracts for eligible practices. These contracts will provide technical assistance and pay up to 75 percent of the cost of these conservation practices. However, cost

sharing and incentive payments are limited to \$10,000 per person annually or to \$50,000 over the life of the contract.

EQIP also provides cost-sharing and technical assistance for crop conservation practices, including pest management, irrigation management and erosion control. The legislation also requires that practices be carried out in a manner consistent with an approved conservation plan.

The farm bill does not allow EQIP cost-sharing funds to be used for large livestock operations, though such operations will be eligible for technical assistance. The definition of a "large" livestock operation must be determined by the secretary of agriculture. There are examples in other legislation that may serve as models for the EQIP definition of a large livestock operation. The Clean Water Act, for example, regulates large animal feedlots and defines large operations as those with more than 700 mature dairy cattle, 1,000 slaughter steers, 10,000 sheep or 55,000 turkeys. The Coastal Zone Reauthorization Amendments of 1990 define large operations as having more than 70 head of dairy cattle, 200 hogs, 300 beef cattle, 15,000 broilers or layers, 13,750 turkeys or 200 horses. In determining its

definition of a large operation, USDA may select one of these definitions, establish its own national definitions, or allow state NRCS technical committees to establish state-specific definitions.

The 1996 farm bill requires USDA to establish regulations for implementing EQIP within 180 days of enactment of the bill, and final regulations are expected before Oct. 1, 1996.

National hearings were held in nine cities during April 1996 to identify possible guidelines and eligibility criteria for EQIP, and the first public comment period is officially closed. However, comments on EQIP may still be sent to Paul Johnson, Chief, USDA, Natural Resource Conservation Service, P.O. Box 2890, Washington, D.C. 20013 (Fax 202-720-1838).

Important issues yet to be decided include the definition of high priority areas eligible for EQIP funds, the identification of livestock and conservation practices eligible for EQIP funds, and determination of the size of eligible livestock operations. Michigan producers with an interest in the EQIP program should use this opportunity to express their preferences on these important issues. ■

## Farm management/leasing implications of the FAIR Act of 1996

by Gerry Schwab, Department of Agricultural Economics, Michigan State University

An opportunity to secure a 7-year annuity for zero financial expenditure is now being made available to farmers through provisions of the 1996 farm bill. This is an opportunity to obtain a fixed annual payment (the annuity) for each of the next seven years.

The right to these payments, known as Production Flexibility Contract (PFC) and/or Market Transition payments, can be secured by enrolling your farm at the local Farm Services Agency (FSA) office in the county where your farm is located. The time period window for signing up is May 20-July 12, 1996. Please remember that this window is closed to enrollment entry after this ending date.

If unsure, you can enroll and later change your mind and exit the program. However, the converse is not true — you cannot change your mind to the affirmative for participation after the deadline. If you want to be included, you must sign up by July 12, 1996.

Eligibility for PFC payments is restricted to agricultural cropland that was enrolled in the previous acreage reduction programs (ARP) during at least one of the years from 1991 to 1995. Eligible cropland acres for Michigan growers include the base acres (now known as contract acres) for the program crops of barley, corn, grain sorghum, oats and wheat.

The responsibility for PFC payment sign-up and legal right for payment acceptance can be different depending on whether you are an owner-operator, a cash-rent operator, a share-rent operator, or the land owner entering into either a cash-rent or share-rent arrangement. The PFC payment is linked to the cropland acres and attributed to the

person(s) who carries the risk associated with the production from the crop acreage.

### Owner/Operators

For landowners who operate their own acres, the situation is relatively clear. The signature for sign-up is the responsibility of the land owner and the PFC payment is to be received by the owner-operator. For each farm unit, the PFC payment is determined by:

- The contract acreage base for each program crop grown, e.g. corn, wheat, etc. and
- The program payment base yield for each program crop.

Multiplying the contract acres times the program payment yield times 85 percent payment acres times the payment rate per bushel for the year will provide a close estimate of the annual PFC payment to be received for that crop in that year.

Tables 1 and 2 illustrate PFC payment data for one acre of corn and wheat, respectively. The corn example has a program payment base yield of 100 bushel per acre while the wheat uses 40 bushel per acre. The payment per bushel and payment per acre are presented in columns 3 and 4 for each of the next seven years through the year 2002. The financial analysis data presented in columns 5 and 6 will be discussed later in this article.

### Cash Renter

The cash renter who, in exchange for a cash payment to the landowner, controls the use of the land and accepts all the risk and financial responsibility for the crop grown, appears to be the rightful recipient of the PFC payment and has responsibility for signing up the farm in the program.

It can be expected that some written documentation, e.g., a cash farm lease, will be needed by the local FSA office to verify that the renter has a

legal right to use of the land. Presumably, signature requirements on the lease would include both the tenant and landlord. *The Cash Farm Lease*, North Central Regional (NCR) publication No. 76, can provide one blueprint for provisions of a written lease. This publication should be available in your local MSU Extension office.

### Share Renter

The share renter who shares, with the landowner, the risks and financial responsibilities of producing a crop, will also share the PFC payment in the same ratio as their share risk in the farm operation. Signature requirements for both parties, or a power of attorney from the absentee landlord to the tenant, will be required for enrollment of eligible cropland for the PFC payments.

Again, it is suggested that a written lease can be used to clarify and verify the share agreement between the landlord and tenant. *The Crop Share Farm Lease*, NCR publication No. 77, can provide one blueprint to assist reaching an agreement.

### Landlords

For the landowner who rents out his/her cropland, the farm lease can be for any time period mutually agreed upon in discussion with the tenant. Although the FAIR Act provisions are for a period of 7 years, the lease can be for a shorter time period.

These decisions are not contingent one upon the other. Remember that the PFC payments are linked to the crop land and its history of participation in the ARP program and are to be received by the person(s) who bears the risk and responsibility associated with crop production.

Some financial repercussions on cash rental rates and farmland values might be expected because of the guaranteed PFC payments associated with the Fair Act of 1996. Tables 1 and 2 illustrate that for corn and wheat, respectively, a financial analytical

technique to estimate this financial impact.

The concept of Net Present Value (NPV) is an attempt to capture in one number, measured in today's dollars, the value of a future stream of income. The PFC payments are an annual payment or annuity to be received over the next seven years.

Because of time, dollars received in the future are worth less than the dollars you have today. The dollars received in the future are discounted because of this time interval. The appropriate discount rate is chosen based on the expected return from alternative use of the dollars available and perceived risk associated with that future stream of potential income.

Columns 5 and 6 in Table 1 and 2 illustrate two alternative discount rates of 4 percent and 8 percent, respectively. Higher discount rates are often used to represent more risky investments. The row labeled NPV Sum represents the Net Present Value of the stream of income from the PFC payments. If the value of the PFC payments were capitalized into the land price, this is one estimate of its impact.

The last two lines in Tables 1 and 2 are the annual annuity that would be paid (or earned) by this NPV amount at an annual rate of 4 percent and 6 percent, respectively. The higher the rate, the more that can be paid for rights to the annuity, e.g., cash rent could represent this amount if the entire PFC payment was capitalized into land value.

### Summary

Owners and operators of farms with eligible contract acreage have an opportunity to sign up for a financial annuity represented by Production Flexibility Contract (PFC) payments. The financial cost for this annuity appears to be zero. You can choose to farm with this PFC payment or farm without the PFC payment. From the individual farm point of view, we have yet to discover any financial reasons to do without the PFC payment. ■

Table 1 — Corn Production Flexibility Contract Payment Value for 100-Bushel-Per-Acre Program Yields

Year	Year of Contract	\$ Payment/Bushel	\$ Payment/Acre	NPV@4 percent	NPV@8 percent
1996	1	0.24	20.40	19.62	18.89
1997	2	0.46	39.10	36.15	33.52
1998	3	0.36	30.60	27.20	24.29
1999	4	0.35	29.75	25.43	21.87
2000	5	0.32	27.20	22.36	18.51
2001	6	0.26	22.10	17.47	13.93
2002	7	0.25	21.25	16.15	12.40
NPV Sum				164.37	143.41
Annual Annuity Value @ 4 percent				27.39	23.89
Annual Annuity Value @ 6 percent				29.43	25.68

Table 2 — Wheat Production Flexibility Contract Payment Value for 40-Bushel-Per-Acre Program Yield

Year	Year of Contract	\$ Payment/Bushel	\$ Payment/Acre	NPV@4 percent	NPV@8 percent
1996	1	0.87	29.58	28.44	27.39
1997	2	0.61	20.74	19.18	17.78
1998	3	0.65	22.10	19.65	17.54
1999	4	0.63	21.42	18.31	15.74
2000	5	0.57	19.38	15.93	13.19
2001	6	0.46	15.64	12.36	9.86
2002	7	0.45	15.30	11.62	8.93
NPV Sum				125.49	110.43
Annual Annuity Value @ 4 percent				20.91	18.40
Annual Annuity Value @ 6 percent				22.48	19.78

### Beef outlook improving

The Agriculture Department said financial prospects for beef producers should improve in the near future with the recent bottoming out and re-escalation of prices, a higher acreage planted in corn and an improvement in pasture growth because of recent rains. The report also noted the scaling back of cattle herd numbers as a positive for the industry.

"Fed cattle prices declined from the mid-\$60s (per hundredweight) last fall to the mid-\$50s in late April-early May before rising to the low-\$60s in mid-May," USDA said. "The lag in retail prices is likely to

continue through much of the spring as large quantities of beef have been purchased to be (discounted) through Memorial Day and early summer."

The report said retail prices for choice beef averaged \$2.85 per pound through much of the last half of 1995, dropped to \$2.79 last quarter and are likely to average \$2.75 this spring. Higher prices are expected in the fall, and they should average around \$2.84 in 1997, according to USDA. The department forecasts 1996 beef production to be only about 1 percent above last year, and in 1997, production will likely be about 2 percent above this year's levels. ■

### Ice cream makers sue Illinois over BSt label issue

The ice cream maker Ben & Jerry's joined with two other dairy product makers to file suit against the state of Illinois, challenging the state's ban on labeling dairy products as "rBGH free," which they claim is prohibitive to their businesses.

Ben & Jerry's claims that labeling is needed to ensure consumers that the products they consume are "safe," despite numerous government and private findings that milk from BGH-treated cows is safe. The U.S. Food and Drug Administration approved the use of the product BSt in 1993, and

issued voluntary labeling guidelines later.

Illinois justifies its ban on the "rBGH free" label by saying it is impossible to substantiate such claims, and the state said affidavits from individual dairy farmers who say they do not treat their cows with BSt are not acceptable.

"I think this is a marketing ploy for Ben & Jerry's. It has nothing to do with safety or quality. It really is a non-issue," said Gary Barton, director of biotechnology communications for Monsanto, the maker of BSt. ■

# Late planting and hybrid selection of corn

by Steve Poindexter, Saginaw County

**G**rowers this year are faced with the need to select hybrids for a delayed planting, to manage the risk of a shortened growing season and to ensure that a hybrid planted later than normal will mature physiologically (kernel black layer) before the first occurrence of a killing fall frost.

Determination of when to switch from a full, mid- or short season hybrid can be made based on historical thermal units, better known as growing degree day units (GDD) for your area. Most seed corn companies will have a specific GDD requirement for each variety. An approximation of relative maturity in days to GDD requirements can be referenced in Table 1.

Once GDD requirements are determined for a specific variety, Table 2 can be referenced to determine the percent of the seasons the requirements exceeded the GDD number in the table, based on a June 1 planting date.

An example would be in Allegan — for a "normal" season (50 percent of the time) we would

expect 2,260 GDD or greater. Only in 10 percent of the seasons would we expect to achieve 2,435 GDD or greater prior to the first killing frost.

Remember, the tables are long-term averages and likely not to correspond precisely to any individual year. For more detailed information, request bulletin E-2471 *Using Climatological Information for Corn Hybrid Selection in Michigan* (cost 75 cents) from your local Extension office. ■

**Table 1 — Estimates of the relationship between relative maturities of corn hybrids and growing degree days.**

Relative maturity (days)	GDD requirements (planting to physiological maturity)
70-80	1,800-2,000
80-90	2,000-2,300
90-100	2,300-2,500
100-110	2,500-2,700
110-120	2,700-2,800

**Table 2 — Seasonal accumulations of base 50°F growing degree days (calculated with the 86-50 cutoff method) based on a planting date of June 1 for the period 1961-1990**

Station	95	90	70	50	30	10	5
Allegan	2,085	2,116	2,196	2,260	2,330	2,435	2,487
Alma	1,953	2,021	2,162	2,255	2,343	2,460	2,511
Alpena	1,515	1,545	1,623	1,685	1,752	1,854	1,904
Bad Axe	1,869	1,919	2,037	2,127	2,218	2,350	2,413
Caro	1,981	2,011	2,084	2,139	2,195	2,278	2,317
Chatham	1,422	1,464	1,560	1,628	1,696	1,791	1,836
Cheboygan	1,567	1,618	1,742	1,836	1,932	2,071	2,138
Coldwater	2,068	2,106	2,186	2,241	2,297	2,377	2,415
Eau Claire	2,335	2,374	2,471	2,546	2,624	2,738	2,793
Grand Rapids	2,076	2,127	2,233	2,303	2,368	2,456	2,494
Hesperia	1,781	1,817	1,901	1,964	2,028	2,120	2,164
Iron Mountain	1,522	1,567	1,660	1,725	1,790	1,883	1,928
Lake City	1,526	1,573	1,672	1,740	1,808	1,906	1,954
Lansing	2,018	2,056	2,142	2,201	2,259	2,338	2,375
Lapeer	1,965	2,017	2,126	2,202	2,277	2,386	2,438
Monroe	2,353	2,418	2,541	2,616	2,682	2,766	2,801
Saginaw	1,924	1,988	2,123	2,214	2,301	2,417	2,469
Sandusky	1,908	1,960	2,078	2,164	2,250	2,371	2,428
Stephenson	1,568	1,607	1,692	1,752	1,810	1,891	1,927
Traverse City	1,746	1,800	1,912	1,990	2,068	2,180	2,234

## Delayed herbicide application in corn

by Dr. Jim Kells, Crop and Soil Sciences, Michigan State University

**W**et weather, winds, mechanical breakdowns and other problems may prevent timely application of preemergence herbicides. Table 1 lists the herbicides and herbicide combinations that can be applied both preemergence and early postemergence. The table lists the maximum corn size and weed size along with specific restrictions for each treatment. Note: The additions to this list for 1996 are Dual II, Bicep II and Bicep Lite II.

Each of these herbicides and herbicide combinations can be applied after corn emergence. How-

ever, liquid fertilizer such as 28% nitrogen should not be used as the herbicide carrier when treating emerged corn, as these treatments will cause severe crop injury. Bladex + Dual and Bladex + Lasso combinations should not be applied to emerged corn since these treatments will injure corn.

Preemergence herbicides should be applied as soon after planting as possible. Delayed application increases the risk of poor herbicide performance, especially for grass control. When herbicide application is delayed until after crop emergence, rotary hoeing is recommended.

The rotary hoeing may be done before or after

the herbicide application, but must be done when the weeds are very small. If the delayed application includes Banvel, Marksman or Prowl, then corn safety will be greater if the rotary hoeing is done before herbicide application. Risk of corn injury will be reduced by planting at least 1.5 inches deep.

In addition to the herbicides listed in Table 1, several other postemergence herbicides are available. Growers with corn fields emerged that have not received a herbicide could consider a total postemergence strategy rather than delayed application of herbicides typically applied before crop emergence. ■

**Table 1 — Delayed preemergence — early postemergence herbicide options for corn**

Herbicide(s)	Maximum Corn Stage	Maximum Weed Stage	Restrictions
Atrazine	12"	1.5"	Add crop oil concentrate if weeds have emerged.
Lasso, Micro-Tech, Partner	5"	—	Will not control emerged weeds.
Frontier	8"	—	Will not control emerged weeds.
Lasso + Atrazine, Dual + Atrazine, Dual II + Atrazine, Bicep, Bicep Lite, Lariat, Bullet, Bicep II, Bicep Lite II	5"	2-leaf stage	Will not control emerged fall panicum, witchgrass or crabgrass.
Frontier + Atrazine	8"	1.5"	Will not control emerged fall Guardsman panicum, witchgrass or crabgrass.
Bladex 90 DF, 90 DF + Atrazine, Extrazine II 90 DF	4-leaf stage	<1.5"	Refer to label for use of additives. Do not apply Bladex 4L to emerged corn. Do not apply Lasso or Dual Plus to emerged corn as injury may occur.
Banvel/Clarity	5-leaf stage	—	Apply to small, actively growing broadleaf weeds. Banvel will not control emerged grasses.
Prowl + Atrazine, Prowl + Blade 90 DF, Prowl + Atrazine + Bladex 90 DF, Prowl + Extrazine II DF	4-leaf stage	1"	Prowl + Bladex applied to emerged corn may cause injury under cool, cloudy conditions. Do not apply Bladex 4L to emerged corn.
Prowl + Marksman + Banvel	2-leaf stage	1"	Before corn emergence, do not apply Prowl on coarse-textured soils or soils with less than 2.0% O.M.

**Do not use 28% liquid nitrogen fertilizer as the carrier for any herbicide applied to emerged corn.**

Do not use additives with any of the herbicides in this table except Atrazine, Bladex, Atrazine + Bladex, and Extrazine II. Refer to the specific herbicide label for details. Additives are not recommended with Bladex or Bladex + Atrazine applied to emerged corn, except under very dry conditions.

## Rotary hoeing for weed control in corn and soybeans

by Dr. Karen Renner and Dr. Jim Kells, Crop and Soil Sciences, Michigan State University

**T**imely rotary hoeing can make a difference in crop emergence and weed control. Rotary hoeing breaks up the soil crust, allows crops to emerge and controls small emerged and germinated weed seedlings. The optimum timing for rotary hoeing is usually five to 10 days after planting, depending on the weather. Soil-applied herbicides require rainfall for adequate performance, so if it hasn't rained in the five days since a pre-plant incorporated or preemergence herbicide was applied, the field should be rotary hoed.

Alternatively, if a driving rain has crusted the field prior to crop emergence, a rotary hoe will break up this crust. The effectiveness of rotary hoeing is improved if the soil surface is dry and the weather hot and breezy. Weed seedlings brought to the soil surface will dry and not re-root.

The major limitation of rotary hoeing is timeliness. Ideally, the crop should not be emerged or be very small to minimize crop damage. Weeds should be less than 1/2 inch tall. Large seeded weeds such as cocklebur and velvetleaf may not be controlled, and perennial weeds will not be controlled by rotary hoeing.

Most preemergence herbicide labels call for rotary hoeing if no rainfall is received within seven days of herbicide application. Rotary hoeing fields where Prowl was applied preemergence in corn may increase the risk of corn injury, but this risk is outweighed by the potential damage resulting from poor weed control if timely rainfall does not occur. ■

## Weather worries growing for Michigan producers

Continued from front page

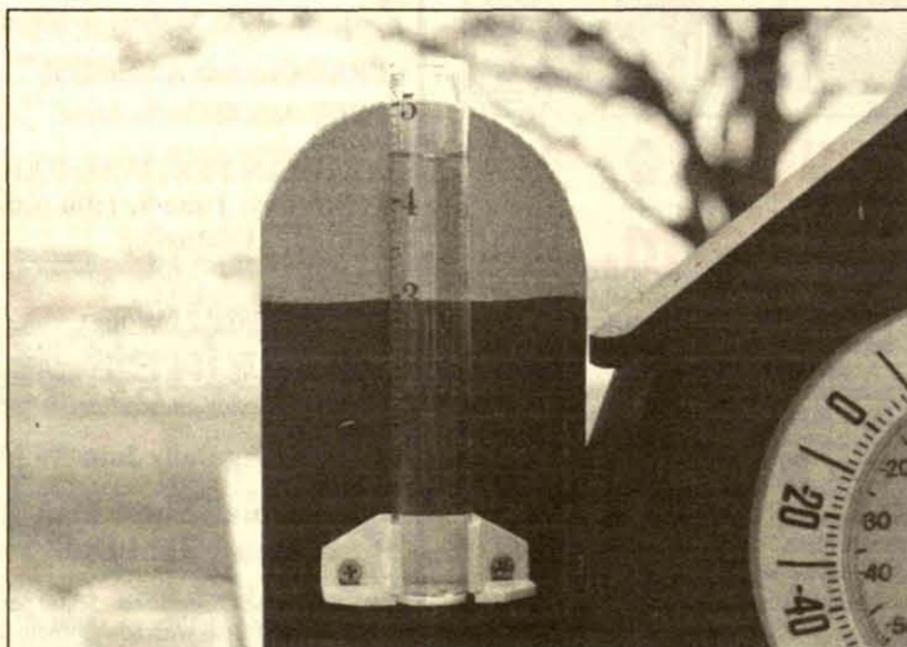
crop alternatives, namely corn and beans.

According to Kent Graf, agricultural manager at the Michigan Sugar facility in Caro, which received 5 inches of rain in a 48-hour period, roughly 75 to 80 percent of the beet acreage had been planted. He says that soil crusting could be a problem on beets that had not emerged if the weather turns hot and dry too quickly.

According to Paul Pfenninger, vice president of agriculture at Monitor Sugar, earlier-planted beets should survive; however, the verdict on the later-planted beets won't be known for at least another week.

"Producers have done an excellent job of planting in the narrow planting window that they've had," Pfenninger explained. "Most fields are tilled, and we can extend the growing season by postponing harvest until the first freeze. This shouldn't hurt us as much as people might think."

Corn and soybean producers are also under the gun, with availability of growing degree days necessary for producing mid to short-season corn hybrids quickly dwindling, warns Saginaw MSU Extension Agent Steve Poindexter. He suggests switching to shorter-season hybrid, provided



Wet weather blasted the mid-section of Michigan filling rain gauges as high as 4 1/2 inches in Saginaw County.

they're available, since a 90-day corn, for example, generally takes 2,200 growing degree day units.

"I'm almost to the point where I'd recommend that if you can't get your corn in by June 1, that you begin to think about planting more soybeans," Poindexter said. "I've seen soybeans planted as late as June 15, and still yield a respectable 40 bushels to the acre."

For some helpful management information, be sure to see "Rotary hoeing tips," "Delayed herbicide application in corn," and "Late planting and corn hybrid selection," on this page.

**Michigan Crop Progress for Week Ending May 19**

Crop	This Week	Last Year	Five-Year Average
Barley	38%	86%	85%
Corn Planted	23%	48%	61%
Oats Planted	65%	88%	89%
Oats Emerged	20%	45%	58%
Potatoes Planted	35%	57%	61%
Soybeans Planted	5%	15%	25%
Sugar beets Planted	80%	98%	96%

# Emergency haying and grazing of CRP lands

**N**RCS will assist CRP participants who wish to hay or graze by developing general purpose haying and grazing plans to be handed out by the Farm Service Agency (FSA) at the time of sign-up. NRCS may, when requested, develop plans on a site planning visit consistent with available resources.

## General Provisions of the Special 1996

### Emergency Haying and Grazing Authority:

- CRP participants may file requests with the FSA for haying and grazing in all counties in all states.
  - Producers may either hay or graze CRP acreage, but may not both hay and graze on the same acreage.
  - Emergency grazing authorization is effective immediately and extends through Sept. 30, 1996.
  - Emergency haying authorization is effective immediately and extends through Sept. 30, 1996.
  - Haying and grazing privileges may be:
    - used to feed livestock owned or leased by the CRP participant, or
    - rented or leased to a livestock producer.
- Acreage ineligible for emergency haying and grazing includes acreage devoted to:
- useful life easements;
  - wetlands enrolled in sign-up periods 8 and 9
  - land within 100 feet of a stream or other permanent waterbody.

Note: It is the responsibility of FSA to determine eligible acreage.

CRP participants may:

- request approval to hay or graze eligible acreage
- use the CRP acreage for their own livestock or lease the acreage to other livestock producers.

Fences may be erected at the producer's expense, if necessary, to ensure that the required area is ungrazed.

### Haying and Grazing Guidance

**Purpose:** The haying and grazing plans shall include sufficient measures to maintain soil erosion at the ACS level or below, to protect against ephemeral gully erosion and to maintain water quality.

In addition, based upon the land user's needs or purposes, the haying or grazing plan may include practices to achieve one or more of the following purposes:

- to improve or reduce the health and vigor of selected plants
- maintain or improve animal health and productivity
- provide habitat and cover for wildlife.

As a minimum, each state will develop a guide for livestock producers that describes the minimum stubble height that will be maintained for each key forage species or combination of species occurring in the field. The minimum stubble height for each species will be based on the amount of live, above-ground plant material that must be maintained to assure that a healthy plant community capable of providing the desired level of erosion control remains.

Grazing will not be permitted in the field until the minimum stubble height is sufficient to meet the needs of the key species. Livestock grazing will be deferred when needed to maintain the minimum stubble height.

Stubble height is based on the average height of both grazed and ungrazed key forage species in the field. The key forage species for the purposes of this use are those species that the livestock prefer and therefore become the selectively grazed forage.

### Procedures

- FSA will accept requests from CRP participants to participate in the Emergency Haying and Grazing Authority. Participants will identify to FSA the specific acreage to be hayed or grazed. The participant and an FSA representative sign Form FSA-578. The participant indicates the area to be hayed or grazed on an aerial photo.
- The participant may bring to NRCS a copy of an aerial photo with the area to be grazed or hayed marked on the photo, in which case NRCS prepares the haying or grazing plan for the participant. The plan becomes a part of the CRP contract. NRCS provides a copy of the plan

to the participant and forwards a copy of the plan to FSA, or, the participant may elect to use the general haying and grazing plan prepared by NRCS and provided by FSA at time of sign-up.

- FSA is responsible for compliance checking the CRP contracts. Failure to comply with a haying and grazing plan that is developed under the Emergency Authority is handled the same as any other violation.

### Haying and Grazing Plan

A forage inventory is needed to determine a safe stocking rate that will meet the producer's objectives. However, CRP acres were not planned for the purpose of grazing or haying.

Therefore, in the absence of a Forage Inventory and Annual Grazing Plan, a minimum stubble height shall be maintained, consistent with the recommendations of the state Agronomist or Grazing Specialist.

- When grazing CRP acreage, leave at least 25 percent of each field or contiguous fields ungrazed for wildlife, or graze no more than 75 percent of the stocking rate specified by NRCS Field Office Technical Guide (FOTG).
  - When haying CRP acreage, leave at least 25 percent of each field or contiguous fields ungrazed for wildlife.
  - All grazing and haying plans will be in accordance with standards in the NRCS FOTG for that area.
- A haying and grazing plan for emergency grazing of CRP land when prepared on site should include:
- Field number or description of area to be grazed
  - Dates of planned grazing (start/end)
  - Stocking rate
  - Quantitative or qualitative description (use prepared job sheets if available).

Other information as needed, to determine compliance with intent of the plan.

Area-wide haying and grazing plans may be used in lieu of an on-site planning visit. Additional instructions will be provided at a later date.

### Grazing Payment Reduction Rates

The FY 1997 CRP-1 annual rental payment, scheduled to be made after Oct. 1, 1996, shall be reduced by the number of acres actually grazed, regardless of the stocking rate, times the CRP per-acre annual rental payment times 5 percent for each month or part of a month that grazing occurs. The 5 percent reduction shall not be adjusted when grazing occurs for part of a month. The total payment reduction for all months grazed shall not exceed 25 percent.

The payment reduction shall not exceed a total of 25 percent for all months grazed in 1996, including those grazed from January through March.

### Haying Payment Reductions

The FY 1997 CRP-1 annual rental payment, scheduled to be made after Oct. 1, 1996, shall be reduced by the number of acres hayed times the per-acre annual rental payment times 25 percent. Unlike the grazing payment reduction, the haying payment reduction is for the privilege of haying from July 1 through Sept. 30.

### Required Spotchecks

To address the concern about the potential damage to the CRP cover under these new payment reduction provisions, additional precautions will be taken to ensure that the acreage will not be overgrazed and that wildlife will be protected.

Spot checks of at least 25 percent of the contracts approved for emergency haying and grazing will be conducted to ensure that participants are complying with the haying and grazing plans.

### Reporting Grazing Activity

Participants who remove livestock before the authorized emergency grazing period ends shall notify the county office that grazing has ended within 10 days after removing the livestock. County offices shall assume grazing is continuing until notified by the participant that it has ended. The final date for reporting the number of acres grazed is Oct. 10, 1996.

### Reporting Haying Activity

Participants are required to report the number of acres hayed by Oct. 10, 1996. ■

## USDA proposes increased inspection fees for fresh fruits and vegetables

**T**he U.S. Department of Agriculture is proposing to raise fees charged for fresh fruit and vegetable grading and certification services performed at terminal markets.

Lon Hatamiya, administrator of the Agricultural Marketing Service, said the increase is needed to rebuild the program's operating reserve and recover the pro-rated cost of developing U.S. grade standards that are applicable to users at terminal markets. While cost-cutting actions implemented in fiscal year 1995 saved approximately \$350,000, further action is needed to recover expenses, Hatamiya said.

AMS, an agency in USDA's marketing and regulatory mission area, provides official inspection, grading and certification of fresh fruits, vegetables and other food and fiber products. Use of these ser-

vices is voluntary on the part of the industry and is provided to large-scale buyers on a fee basis. In the Agricultural Appropriations Bill for Fiscal Year 1994, USDA was directed to establish a user fee program to recover the cost of developing and maintaining U.S. grade standards for agricultural commodities.

The proposed fee increases for inspections of one to four fruit or vegetable products from the same trailer or railcar are as follows:

- Quality and condition inspections for more than a half-carlot equivalent of each product would increase from \$74 to \$78;
- Quality and condition inspections for a half-carlot or equivalent or less of each product would increase from \$62 to \$65;

- Condition inspections for more than a half-carlot equivalent of each product would increase from \$62 to \$65; and
- Condition inspections for a half-carlot equivalent or less of each product would increase from \$57 to \$60.

Proposed fees for inspections of five or more products unloaded directly from the same trailer or railcar would increase from \$264 to \$277 for the first five products, and from \$37 to \$39 for each additional product.

The proposed fee to list an additional lot of a product unloaded from the same trailer or railcar on an inspection certificate would increase from \$12 to \$13.

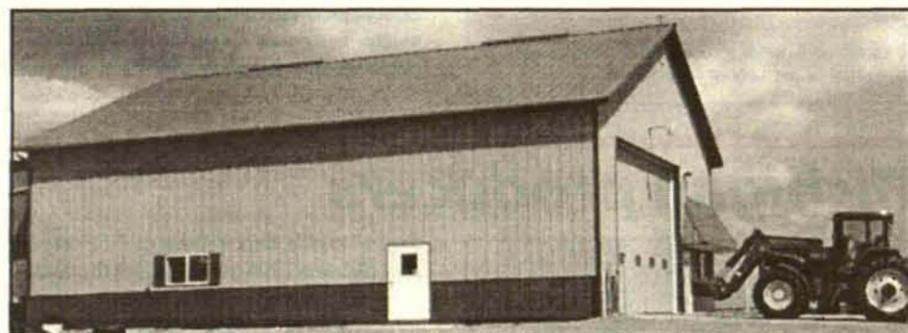
The proposed fees for small lots (50 packages or less of the same product) that are unloaded from the same trailer or railcar would increase from \$37 to \$39 for the same product, and from \$12 to \$13 for each additional lot of any product.

Fees for dock-side inspections of individual products unloaded from the same ship would remain unchanged:

- Packages weighing less than 15 pounds — 1 cent;
- Packages weighing 15 to 29 pounds — 2 cents; and
- Packages weighing 30 or more pounds — 3 cents.

The proposed minimum fee for each individual product inspected at dock-side would increase from \$74 to \$78, and from \$12 to \$13 for each additional lot of any product.

Continued on page 13



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# Weed Strategies

# Weed control in winter wheat: Current questions



Dr. Jim Kells,  
Department of  
Crop and Soil  
Sciences, Michigan  
State University

The current condition of the winter wheat crop (poor) in many parts of Michigan has led to an unusually high number of questions, and unique problems related to weed control. Without doubt, weed control in many wheat fields will be a major challenge. The following is a discussion of some of the most common questions that have been asked. Keep in mind that some of the unique problems resulting from the winter damage have not occurred before, and in many cases there are no clear, proven answers.

**Question: Can herbicide be safely applied with liquid nitrogen fertilizer (28% N) as the carrier to "marginal" wheat fields.**

**Answer:** High rates of 28% N can cause excessive leaf burn and potentially reduce yield, especially to plants already under stress. To avoid severe wheat injury, it is generally recommended that the 28% N rate should not exceed 40 lbs/A if no surfactant is used and 20 lbs/A if a herbicide requiring a surfactant (i.e., Harmony Extra) is used. It is especially important not to exceed these limits on stressed plants this year. Also, the later the application is made the greater the risk of yield loss from the leaf burn. Therefore, 28% N should be applied

before wheat exceeds Feekes stage 6.

**Question: Can Harmony Extra plus 2,4-D be applied with 28% N as the carrier?**

**Answer:** When Harmony Extra and 2,4-D are tank-mixed the surfactant rate should be reduced to 1/8% (1 pt in 100 gal) and the 2,4-D rate should be reduced to 1/2 pt/A (assuming a 4 lb/gal formulation). Either ester or amine can be tank mixed. The reduced surfactant rate may reduce velvetleaf control. Applying these tank mixes in a carrier containing 28% N should not be a problem if the nitrogen application rate does not exceed 20 lbs/A.

**Question: The wheat is extremely variable in size and annual broadleaved weeds are in the cotyledon stage. Should I treat the field now?**

**Answer:** It is very likely that more weeds will emerge after treatment if the herbicide is applied now. With marginal wheat stands, these annual weeds are likely to be very competitive with the wheat. In general, it would be best to delay application until the largest weeds are 2-3 inches tall. However, expectations for weed control in these marginal fields should be low. You will likely have weed problems in these fields regardless of what you do.

**Question: I had planned to apply 2,4-D at Feekes stage 5-6, but the wheat is now past Feekes stage 6. Can I still safely use 2,4-D on the field?**

**Answer:** The safest timing for 2,4-D is from Feekes stage 3 to 6. Beyond stage 6, risk of 2,4-D injury increases with more advanced growth stages. The greatest risk of injury occurs at boot and flowering stage (stage 9-10). At these stages, 2,4-D can cause the embryos to be aborted resulting in sterile seedheads.

The change in sensitivity to 2,4-D is gradual and conventional wisdom is that if treatment at

boot or flowering stage is avoided, measurable yield loss from 2,4-D injury is unlikely. If wheat is at or beyond stage 6 and a herbicide application is needed, there are three options (in order of preference):

- Apply Buctril or Harmony Extra. These two herbicides can safely be applied to larger wheat than 2,4-D. Both herbicides control several weed species, but the spectrum is different. Refer to the Weed Response Table on page 135 of the 1996 MSU Weed Control Guide (Bulletin E-434). Express and Stinger can also be applied to wheat past stage 6 but are usually used specifically to control Canada thistle and perennial sowthistle.
- Treat with 2,4-D as soon as possible. Some 2,4-D product labels allow application past Feekes stage 6, while some do not. Be sure to check the label before making a late application. If wheat has reached stage 6 but is not at or near boot stage, the risk of 2,4-D injury is probably not significantly greater than before stage 6 provided high rates of ester formulations are avoided. To minimize injury risk, use an amine formulation or a reduced rate of an ester (1/2 pt/A of a 4 lb/gal formulation). In most cases, where weed pressure warrants treatment, the increased risk of 2,4-D injury will be outweighed by the risk of yield loss from weed competition if herbicide is not applied. Expect similar weed control from 1/2 pt/A of an ester versus 1 pt/A of an amine. Remember, the greatest risk of injury is at stage 9-10. Do not apply Banvel to wheat that has reached Feekes stage 6.
- Leave the field untreated. In fields with marginal wheat stands, this is not a wise option. A good stand of wheat can usually out-compete annual weeds that emerge in the spring. However, annual weeds are likely to be serious problems in

marginal stands where no herbicide is used.

**Question: Can herbicides be applied more than one time to winter wheat?**

**Answer:** Although very uncommon, more than one herbicide application can be made to the same crop. However, only one application of a growth regulator (2,4-D, Banvel or Stinger) should be made. For example, if 2,4-D is applied and a second application is needed, Buctril or Harmony Extra would be the safest choices. Be careful to not exceed the maximum wheat growth stage. Also remember that a wheat crop that requires two herbicide applications for annual weed control will likely have a low yield potential. Many of these situations will require tough decisions. ■

## USDA proposes increased inspection fees for fresh fruits and vegetables

Continued from page 12

The proposed fee for other types of inspections would increase from \$37 to \$39 an hour during the grader's regular hours, and from \$55.50 to \$58.50 an hour during premium or holiday hours.

The proposed fee changes will be published in the May 14 *Federal Register*. Comments on the proposed rule, received no later than July 12, should be sent to the Fresh Products Branch, Fruit and Vegetable Division, AMS, USDA, Rm. 2049-S, P.O. Box 96456, Washington, D.C. 20090-6456.

For copies of the proposal or other information, contact Robert J. Huttenlocker at the same address. Telephone: (202) 720-0297. ■

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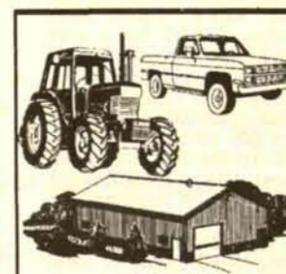
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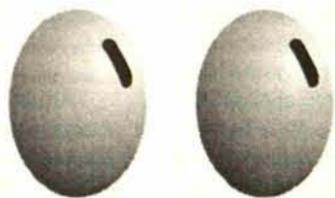
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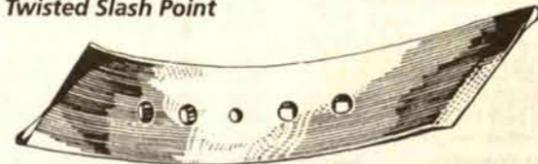
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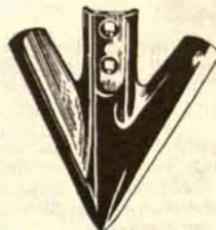
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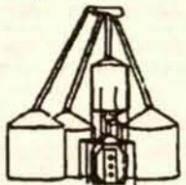
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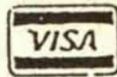
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Circulation over 46,000 in State of Michigan.

# Precision Agriculture

by Neil R. Miller

Twenty years from now we will look back at 1996 as the year that global positioning systems (GPS) took hold in Michigan agriculture. Of approximately 150 farm operations we work with, we anticipate 8 to 10 will have GPS in their combines this fall. GPS-based soil sampling is being performed by independent consultants and by fertilizer dealers in various locations in the state. Several custom applicators will also offer variable rate (VRT) fertilizer application, using GPS technology, for the first time this year.

## Will it pay?

The economic impacts of GPS technologies are still poorly understood. At present, no one can predict how they will affect the profitability of the farmers, consultants and suppliers who will be using them. I am convinced that the farmers who will benefit the most from GPS are the ones who have been doing a good job of managing conventional operations all along.

Without a foundation of good conventional management, the benefits of GPS-based technologies will be limited.

## How should farmers decide if they're ready for the jump to GPS?

Many individuals I encounter assume that a yield monitor is an inevitable feature of their next combine. If you are considering investing in a yield monitor, or paying for grid sampling and VRT fertilizer application, take the time to answer the following questions first:

- Do you keep complete records of crop inputs in an accessible form?
- Do you calibrate planter equipment before each season?
- Do you calibrate sprayer equipment before each season?
- Do you test your soils at least every three years?
- Do you vary fertilizer rates or analyses from field to field?
- Do you vary planting rates by soil type and variety?

# Are you ready for GPS?

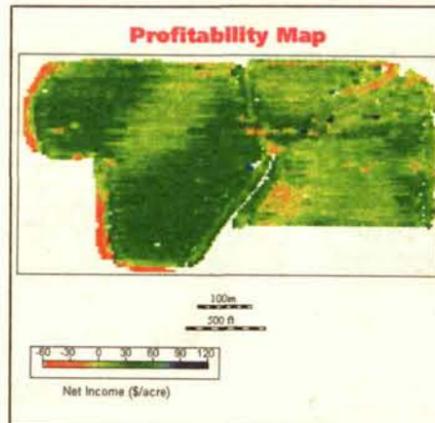
- Do you vary rates of herbicides based on soil texture and organic matter?
- Do you scout fields regularly for weeds and pests?
- Do you record crop yields accurately and in an accessible form?
- Do you have a written marketing plan?
- Do you use an enterprise accounting system?

## Why are these factors critical to the profitable use of GPS?

By combining yield monitor data with input and marketing records, I can produce profitability maps (at right) to help farmers manage scarce resources in a business with slim margins. But these maps are only as accurate as the recordkeeping and accounting systems used to track costs and returns.

Furthermore, when I map a field with unprofitable areas, I have no way of knowing whether the cause was chemical damage weed outbreaks, compaction, poor drainage, or fertility unless the producer has a good system of monitoring fields throughout the growing season.

Without such information, a yield monitor can't pay for itself through more profitable crop management. No farm operation will score high on every one of the above points. However, if you review the list and feel you've got most of the bases covered, you may well be ready for the jump to GPS. If, on the other hand, you still find it hard to keep good records, calibrate your equipment, and slow down long enough to adjust input rates from field to field, you may be wiser to address these management issues first. Remember, the foundation for any high-tech form of agriculture is an excellent system of conventional management. ■



Profitability maps, such as this one based on yield monitor data from a 1995 corn field, are only possible when good recordkeeping and accounting systems are already in place.

## Check wheat fields for cereal leaf beetle and for WSSMV

Wheat growers should begin checking their fields for potential damage from the cereal leaf beetle and for development of wheat spindle streak mosaic virus (WSSMV).

The cereal leaf beetle has a black body, head and antennae; red neck; and shiny metallic blue wing covers. It is approximately 1/4 inch long, says Mike Haas, Michigan State University Extension entomologist.

The beetles overwinter as adults and will feed in grassy borders before moving into wheat or other small grains, where they will chew elongated holes entirely through the leaves between the leaf veins.

The beetle lays yellow, oblong eggs (which soon darken) singly or in chains glued to the upper

surfaces of grain leaves. The offspring (larvae) will feed between leaf veins and chew away the upper surface of the leaf.

Feeding damage to the plant before it reaches the boot stage reduces plant vigor. If the insect feeds on the flag leaf, seed set and test weight will be reduced, Haas says.

If you find the insect in the field, count the number of eggs and larvae on 20 stems taken from five separate areas of the field. Pest control will be warranted if you find three or more eggs and/or larvae per plant or one or more larvae per flag leaf.

Haas says that using this threshold to determine whether and when to apply chemical controls helps minimize damage to the cereal leaf beetle's natural enemies and ensures optimum effectiveness. If pesticides are applied too early, the field will be reinfested, he explains, and waiting too long will allow extensive damage to occur.

Carbaryl (Sevin), endosulfan, malathion, ULV malathion, Lannate or Furadan may be applied (see MSU Extension *Wheat Facts* bulletin E-2549). For best results, apply pesticides when beetle larvae are small, Haas advises.

The appearance of WSSMV has been spurred by cool spring temperatures. WSSMV cannot be controlled with fungicides.

"WSSMV survives by infecting the fungus *Polymyxa graminis*, which inhabits the soil and the roots of many grasses," says Patrick Hart, MSU Extension plant pathologist. "The fungus invades the roots of wheat plants and transmits the virus."

WSSMV appears as yellow or bright green dashes and streaks in mildly affected plants and as bright yellow/green mottling in more severely affected plants. The dashes and streaks are parallel to the leaf veins and taper at both ends to form spindles, Hart says.

If cool field conditions persist into late May or early June, the chlorotic areas (yellowing or blanching) may appear on all plant leaves, including the flag.

Septoria lesions, however, have dark specks in the centers — chlorotic areas caused by WSSMV do not.

WSSMV can persist in the soil for at least five years and probably longer. No chemical control methods are available. ■

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