

MICHIGAN FARM NEWS



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Ethanol: Bag Big Oil With Your Seed Corn Tags

Don't throw away those seed corn tags!

Under intense pressure from big oil, 47 U.S. senators and 135 U.S. representatives have signed a letter condemning the Environmental Protection Agency's "Renewable Oxygenate Requirement" proposal, jeopardizing ethanol's inclusion in the Reformulated Gasoline (RFG) program, according to Michigan Corn Grower Association Executive Director Keith Muxlow.

To counter the big oil campaign, a widespread effort has been launched by National and State Corn Grower's Associations, American Farm Bureau, Michigan Farm Bureau and a host of other groups. They're encouraging farmers to send their seed corn tags to President Bill Clinton, USDA Secretary Mike Espy, and their respective U.S. congressmen to remind them of the commitments they've made and the benefits of ethanol in the RFG.

"President Clinton had proposed a Renewable Oxygenate Requirement (ROR) as part of the RFG program set to begin Jan. 1, 1995 in a number of major cities nationwide," Muxlow explained. "Under this agreement, renewable fuels such as ethanol must be used to replace a minimum of 30 percent of the oxygenates required for reformulated gasoline. This directive has the potential to double, possibly triple, the corn usage for ethanol by the year 2000."

The EPA had published the proposal and accepted public comments until the Feb. 14 deadline. Since that time, however, the oil industry has launched an intense campaign to stop this proposal dead in its tracks. In addition to lobbying U.S. congressmen to sign a letter to EPA opposing the ROR, they've also placed advertisements in major publications and threatened lawsuits if the proposal is enacted.

"We in the agricultural industry need to rally like never before to show our support for ethanol and, in particular, the Renewable Oxygenate Requirement," said MFB President Jack Laurie.



"Since corn farmers all across Michigan are now either in the field or getting ready to go, this is an ideal opportunity to remind our president and U.S. congressmen just how important this issue is by sending them the seed tags from their farm along with a handwritten note."

Muxlow suggests farmers include a note when they mail their seeds tags stating in effect, that "The seed from this bag will produce 750 gallons of renewable fuel," and/or "Each tag represents about 300 bushels of corn this fall. Renewable ethanol provides a market for that corn, please don't let us down."

"I would advise farmers to send all of their seeds tags in this spring," Muxlow said. "The more tags they send in, the bigger impact it will have. The handwritten notes don't need to be long or complicated - we're just trying to remind our elected officials of the commitment they made and to show our support for the ROR."

Where to Send Your Seed Tags and Notes

President Bill Clinton
c/o Mr. Marion Berry
Assistant to the President for Agriculture
U.S.D.A. Room 218 A
14th and Independence Ave., S.W.
Washington, D.C. 20250

Mike Espy
Secretary of Agriculture
U.S. Department of Agriculture
14th and Independence Ave., S.W.
Washington, D.C. 20250

Representative:
U.S. House of Representatives
House Office Building
Washington, D.C. 20515

Senator:
U.S. Senate
Senate Office Building
Washington, D.C. 20510

Pesticide Storage Facilities Open for Tours

Tired of reading about pesticide storage facility design? Would you prefer to see some operating facilities in person, ask some questions and get help in locating and designing your own facility?

Thanks to a Saginaw Bay Watershed Initiative project, you now have an opportunity to do so. Funds obtained from the Environmental Protection Agency through the initiative were used to cost-share the construction of three different pesticides facilities in Bay County, on three different farm operations to serve as educational models for farmers, according to Gratiot County Agricultural Agent Dan Rossman.

"There was a lot of talk about pesticide storage facilities, but very few that farmers could tour and inspect," Rossman explained. "We felt there was a need to have some different models that would be available for farmers to see in operation and to get ideas from."

As a result, grant funds were used to construct three different facilities in the Bay City area, including a 10' x 12' storage facility at the David Duyck farm, a 24' x 32' storage facility at the Johnson Potato Farm, and a 40' x 40' facility that does double duty as a storage and covered loading and mixing facility at the Reif Farm.

"Many farmers have situations that are less than ideal for chemical storage - what we want to do is to help them into a situation where their liability will be greatly reduced, in the event of

a spill or fire," Rossman said. "In many cases, if the chemical isn't stored in a separate facility

Continued on page 9, see **Pesticide Storage Facilities**

This 10' x 12' structure located on the David Duyck farm is one of three structures, cost-shared through an EPA grant, for farmers to tour for construction ideas.



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In Brief...

Meteorologist Says Wet Spring Not Likely

Both historical and climatic trends point away from any likelihood of an extremely wet spring, according to Jon Davis, meteorologist in a report produced by Smith Barney Shearson's Futures Research Department in Chicago.

Consequently, the odds do not support any widespread massive flooding this spring. Minor flooding occurs almost every spring, even with normal precipitation, but problems this year will be compounded as a result of the saturated subsoils combined with runoff from rains and melting snow, and continued levee problems.

Flooding that occurs is most likely to be on a small-scale, regional basis, not widespread and general as it was last spring and summer, Davis said. The manner of spring rains in the next month to six weeks will determine whether planting is to be normal or delayed, according to the meteorologist's report.

Outlook Dim for Russian Grain Imports

A USDA official just back from a fact-finding trip to Russia says he saw no new prospects for the U.S. to sell grain to that nation in the near future. USDA General Sales Manager Christopher Goldthwait told reporters he had been to Moscow, as part of USDA's ongoing effort to remain in contact with a potentially important customer.

USDA Reorganization Moving Ahead

The Senate Agriculture Committee has moved its version of the USDA reorganization plan, which calls for cutting the number of agencies from 43 to 28, puts more emphasis on food safety by creating a new assistant secretary, merges all conservation programs into a Natural Resource and Conservation Service, but leaves local management with the same ASCS committee, keeps the FmHA committee separate from ASCS and drastically reduces the number of USDA reports.

The House Agriculture Committee may mark up its version soon after the Easter recess, according to St. Louis-based *Agri-Pulse*. A House Ag subcommittee version would reduce agencies from 43 to 30, put food safety in the hands of an undersecretary, put SCS with natural resources and leave ASCS with the new Farm Services Agency, and creates a National Appeals Division.

Conservation Reserve May Survive in '95

A USDA spokesman said the Conservation Reserve Program may remain in the 1995 farm bill in some form, but it probably will require tighter bidding and tougher compliance.

Alan King, USDA deputy administrator for commodity operations with the ASCS, told the National Grain and Feed Association, he expects a revamped CRP to remain after 1995, but with more competitive bidding and emphasis on truly erodible land. He said at least 20 to 25 million acres, or more than half the land now in CRP contracts needed to remain out of production, but some of the remainder could come back into crops and probably should not have been in the program in the first place, according to a *Knight-Ridder News* report.

Jett New State Conservationist

Carole Jett, currently an assistant state conservationist in California, will be taking over as the new state conservationist in Michigan, effective April 17. She replaces Homer Hilner who retired from that post last December.

Jett has been assistant state conservationist for operation and management in California for the past two years. She began her career with the Soil Conservation as a soil scientist in Nevada. Between these assignments, she has been soil survey party leader at Austin, Ely, and Fallon Nevada, and a soil survey manuscript editor, state soil correlator, and state soil scientist in California.

She received a bachelor of science degree, with a major in soil science and minors in chemistry and biology from the University of Nevada in 1976. She also completed post-graduate studies in hydrology and range science at the University of Nevada in 1988.

She has received many awards including Outstanding Performance awards in 1979, 1981, 1985, 1988 and 1990, and California's "Risk Taker" award for personal and professional risks taken to benefit conservation efforts in 1991.



Michigan Tart Cherry Producers Approve Referendum

Michigan red tart cherry producers have approved a referendum for the continuation of the Michigan Red Tart Cherry Information and Development Program, according to Dr. Gordon Guyer, director of the Michigan Department of Agriculture (MDA).

Michigan red tart cherry producers approved the referendum to continue the Michigan Red Tart Cherry Information Program for another five years beginning June 28, 1994 and ending June 27, 1999. A total of 389 ballots were cast in the referendum which was conducted by MDA from Feb. 7, 1994 through Feb. 18, 1994. Thirty-two ballots were disqualified. There were 276 producers voting yes (77 percent) representing 102,516,178 pounds (71 percent) and 81 producers voting no (23 percent) representing 42,649,604 pounds (29 percent).

The assessment rate is determined by the Red Tart Cherry Advisory Board annually at a fixed rate per ton of up to but not to exceed \$5 per ton. The current assessment rate for red tart cherries is \$2 per ton of pitting cherries and \$1 per ton for juice cherries sold.

The law requires that more than 50 percent of the voting producers, representing over 50 percent of the volume of cherries produced by those voting, must approve the referendum for passage. **Additional information about the referendum may be obtained by contacting MDA's Marketing and Development Division at (517) 373-1058.**

Pesticide Protection Rules Delayed

The Senate passed a bill to delay until Jan. 1, 1995 new federal regulations for protecting farmworkers who handle pesticides. Senate approval sends the measure to President Clinton for signature.

The new rules that require protective clothing and other safeguards for workers who apply and work with pesticides were to have become effective in April 1994, but farm organizations and state departments of agriculture had requested more time for farmers and their suppliers to become more familiar with the rules. Sen. Thad Cochran, a major sponsor of the bill to delay enforcement, said the delay was needed because the Environmental Protection Agency was late in making guidelines public.

EPA Proposes Pesticide Container Rules

The Environmental Protection Agency has proposed extensive rulemaking that would establish standards for pesticide containers. The proposed rule covers design, labeling, storage, use and disposal of containers, both refillable and nonrefillable. Also covered would be containment requirements for use of bulk pesticide containers, including structure design, spill prevention, notification, refilling, storage and disposal.

The EPA will be accepting comments on the proposed rulemaking through May 12, 1994. The American Farm Bureau and state Farm Bureaus will prepare comments, says Mark Maslyn of the AFBF governmental relations division.

U.S. Forest Service Drops Walkinshaw Litigation Against Oceana County Drain Commissioner

After a 17-month battle, \$92,000 in legal fees for Oceana County, and an unfavorable ruling against them by a U.S. Magistrate Judge, the U.S. Forest Service announced it was ending litigation against the Oceana County Drain Commissioner, Calvin Ackley. According to Assistant Deputy Drain Commissioner, Connie Cargill, the U.S. Forest Service has also agreed to reimburse the county \$70,000 of the \$92,000 spent in legal fees.

In a news release, Huron-Manistee National Forest Supervisor Steve Kelly said that although the Forest Service disagreed with the magistrate's ruling that seriously questioned the uniqueness of their property bordering a county drain, they felt the ruling left little doubt they could win if they continued the litigation.

The court battle focused on a 1992 county drain improvement project the U.S. Forest Service said threatened property known as the Walkinshaw Wetlands. As a result, they said it would adversely affect sandhill cranes using the property as a staging area for migration. Even so, as of presstime, Cargill said the Forest Service still had not taken any steps to impede the flow of water from their property.

Aliens Need New ID Cards After September

The Immigration and Naturalization Service has issued its final rule on replacement of "green cards." After Sept. 20, 1994, it will be necessary for all alien workers to have the new Form I-551, which will replace the old I-151 (the original green card) and other earlier forms, such as AR-3, AR-103 and other INS documents, which will no longer be valid.

Employers will not be required to reverify eligibility of permanent resident aliens, who used older cards to complete their I-9 Form. However, those workers, as well as employees whose status must be established or reestablished after Sept. 20, should be notified of the need to obtain the new forms.

INS estimates that about 1.5 million valid older identification cards are now in use and will have to be replaced. There will be a \$70 fee for the replacement card.

Farmers to Find Adequate Credit Available

The four major farm lending sources are in a good position to meet farm credit needs for 1994, according to USDA's Economic Research Service (ERS). "Farmers who are good credit risks will have no trouble acquiring necessary credit in 1994, mostly from commercial banks and the Farm Credit System (FCS)," according to the monthly *Agricultural Outlook*.

Banks' loan-to-deposit ratios remain relatively low, despite some recent modest increases, the ERS said. In addition to FCS and banks, the other major farm credit sources include Farmers Home Administration and insurance companies.

Total farm debt is expected to increase 1 to 2 percent, representing the fourth consecutive annual increase after six previous years of debt write-down, the report said. Most farmers remain cautious about taking on debt for expansion, according to the report. "Debt, in relation to cash farm income, is at its lowest level since 1973-74. With moderate loan demand expected, lenders are looking to generate high-quality loans to maintain market share," the report said.

Farm production loans are expected to increase slightly this year as farm inputs rise in response to lower energy prices and increased planted acreage, which will result from lowered acreage reduction program requirements.

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

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CAPITOL CORNER



School Operating Millage Elections

Even with the recent passage of Proposal-A, some local school districts will need to hold school millage elections as their current operating millages expire.

Under the Michigan Constitution, the state is limited on the total amount of revenues it can raise through taxation. Therefore, the school operating property tax on non-homesteads had to be levied by both the state and local school districts. Property taxes for school operating purposes will be levied in the following way:

Millage	Homestead	Non-Homestead
State Levied	6 mills	6 mills
Local Levied*	-0-	18 mills
Total Millage	6 mills	24 mills

* Excludes supplemental property taxes for high per pupil spending districts held harmless under Proposal-A and any voter approved enhancement millage.

Local school districts will still need to have school millage elections to approve school operating taxes when the current operating millage expires bringing the district below 18 mills.

No-Fault Auto Insurance Reform

MFB POSITION
Michigan Farm Bureau continues to support this new law and will work to allow it to take effect.

MFB CONTACT
Darcy Cypher, Ext. 2048

Last year, the Legislature made changes to Michigan's no-fault automobile insurance law which would curb lawsuits, control medical costs, and reduce auto insurance premiums an average of 16 percent. The reforms are expected to save motorists more than \$680 million annually.

Since the legislation did not receive the 2/3 vote needed to be made effective at the time of passage, it would become law on April 1, 1994.

Just eight days before the law went into effect, a group, controlled and financed by the Michigan Trial Lawyers Association and calling itself FAIR (Fairness and Accountability in Insurance Reform), filed petitions to block the cost saving reforms, preventing the law from taking effect.

The fate of the auto insurance reform is either in the hands of the voters or the Michigan Court of Appeals. If the petitions are certified, the voters would decide on Nov. 8, 1994, whether to keep the auto premium reductions and curb lawsuits and control medical costs. C.A.I.R. (Committee for Auto Insurance Reform) has asked the Michigan Court of Appeals to void the petitions and let the law take effect.

Rail Reflectors

MFB POSITION
Michigan Farm Bureau has had a long-standing policy regarding the need to reflectorize rails. Our members should be made aware of this new safety sign.

MFB CONTACT
Darcy Cypher, Ext. 2048

The Michigan Department of Transportation has researched what the other states have found to be successful and has adopted a new reflectorized crossbuck sign for use at railroad crossings. Many other states are using signs which have reflectorized material on their reverse sides. This reflectorized material provides a flickering or flashing effect to approaching motorists as their headlights pass between railroad cars of a moving train.

If the crossbuck signs need replacement on state or county highways because of destruction or decay, the road authority is responsible for replacing the sign, and cost sharing the expenses 50/50 with the railroad company. In cities and villages, the railroad company is fully responsible for the crossbuck sign replacement and maintenance. If the road authority chooses to replace the signs, just to meet the new design standards, they alone must cover the cost.

USDA Still Hopes for New Crop Insurance Plan

There may still be some hope for a crop insurance program that will work, despite major funding snags in both the House and Senate, according to Ken Ackerman, manager of USDA's Federal Crop Insurance Corp. The House-approved, five-year budget plan included an increase of only \$3 billion for crop insurance, while the Senate version of the budget for that period did not provide any increased funding for crop insurance.

The USDA's proposal to revamp the insurance program called for about \$5 billion over the next five years to provide free catastrophic coverage for most farmers. The department said its plan would save over \$750 million over five years by eliminating the need for Congress to pass emergency disaster relief measures whenever there is a major crop loss.

If the school district is unable to pass and maintain the 18 mills levied on non-homesteads, then the school district may not receive their entire per pupil foundation grant from the state. The amount of the per pupil foundation grant reduction will be directly proportionate to how much of the local levied 18 mills the school district was not able to have approved by the voters.

Example

XYZ School District, in the 1993-94 fiscal school year levied 36 mills for school operating. Scheduled as follows:

School Operating Millage	Year	For Voters Approved	# Of Years	Year Expires
10 mills	1984	10 Yrs.	10 Yrs.	1994
5 mills	1986	10 Yrs.	10 Yrs.	1996
10 mills	1989	10 Yrs.	10 Yrs.	1999
6 mills	1990	4 Yrs.	4 Yrs.	1994
5 mills	1992	2 Yrs.	2 Yrs.	1994

Because all but 15 mills of operating millage will expire in 1994; in June 1994, XYZ School District will need to go to their voters and ask for a 3 mill school operating renewal to be levied against non-homesteads.

Farmland Property Tax Measure Makes Progress In Lansing

Legislation to allow most farmland to receive the same six-mill property tax rate as homesteads made significant progress before lawmakers left for their Easter recess.

A bill (S.B. 1027), sponsored by Sen. Joel Gougeon (R-Bay City) has been approved by the state Senate and sent to the House for assignment to committee. On the House side, H.B. 5329 (H-4), sponsored by Rep. Dan Gustafson (R-Haslett) and Rep. Kirk Profit (D-Ypsilanti) is on the House floor and is expected to be considered when legislators return after Easter.

"We believe there is broad and strong support to create a situation whereby all ag land is treated alike," said MFB Legislative Counsel Ron Nelson. "That's a very critical

issue in the implementation of Proposal-A. Otherwise it creates some serious administrative problems and probably a constitutional challenge. There was a strong vote in the Senate in support of the farmland definition, so with that strong vote, we'll be watching the House very carefully when they take that issue up on the floor."

MFB is asking members to contact their legislators immediately, and urge them to support both S.B. 1027, and H.B. 5329 (H-4). If your state Senator voted yes on S.B. 1027, please contact him or her to show your appreciation for their support.

For more information, contact Ron Nelson at (517) 323-7000, Ext. 2043.

How Your State Senator Voted on S.B. 1027

MFB encouraged a "YES" vote on S.B. 1027, which would allow most farmland to receive the same six-mill tax rate as homesteads, under Proposal-A.

YEAS - 20

- | | | | |
|-------------|------------|-----------|-----------------|
| Arthurhultz | Dillingham | Geake | Pridnia |
| Berryman | DiNello | Gougeon | Schwarz |
| Bouchard | Dunaskiss | Hoffman | Van Regenmorter |
| Cisky | Emmons | McManus | Wartner |
| DeGrow | Gast | Posthumus | Welborn |

NAYS - 11

- | | | | |
|--------|---------|---------|----------|
| Carl | Dingell | Kelly | Stabenow |
| Cherry | Faust | Miller | Vaughn |
| Conroy | Hart | O'Brien | |

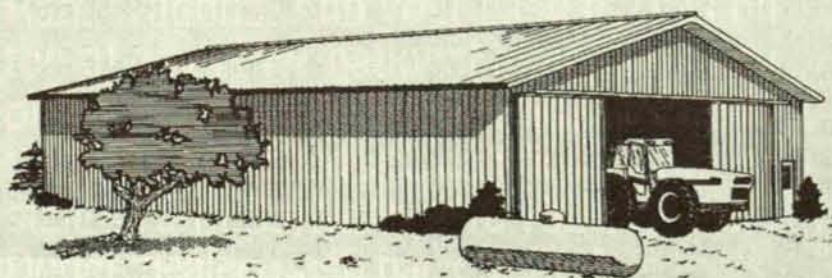
EXCUSED - 5

- | | | | |
|--------|----------|---------|-------|
| Faxon | Honigman | Pollack | Smith |
| Holmes | | | |

NOT VOTING - 1

- Koivisto

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Weather

30 & 90-Day Forecast - Colder and Wetter Than Normal

March weather was truly transitional in nature, beginning the month with warmer than normal conditions and a major thaw and ending colder than normal. The cause of the change was a shift in the upper air steering currents from a southwesterly to northwesterly orientation. Mean temperatures averaged near to slightly above normal for the period, while precipitation was generally lighter than normal across the state.

The new National Weather Service long-range outlooks call for a general continuation of the northwesterly flow aloft. Given that frigid air persists in northern sections of North America, it is only a matter of time before some of the Canadian-origin air makes its way into the Great Lakes region.

While these air masses will likely be moderated due to the lack of snow cover over most of the state, below normal mean temperatures are still a good bet.

The official outlooks for April and April-June both call for below normal temperatures and normal to above normal precipitation. Impacts of these outlooks would be highly dependent on crop type, ranging

3/1/94 to 3/31/94	Temperature		Growing Degree Days		Precipitation	
	Observed Mean	Dev. From Normal	Actual Accum.	Normal Accum.	Actual (Inch.)	Normal (Inch.)
Alpena	29.6	+ 1.8	3	4	1.10	1.87
Bad Axe	30.3	- 1.3	2	11	1.10	2.04
Detroit	37.6	+ 2.6	25	20	1.86	2.32
Escanaba	28.2	+ 1.7	3	0	1.04	1.93
Flint	34.2	+ 1.3	12	20	1.68	2.32
Grand Rapids	34.5	+ 0.9	12	25	1.46	2.48
Houghton	27.7	+ 4.1	0	1	0.74	1.94
Houghton Lake	30.7	+ 2.0	3	4	1.52	1.87
Jackson	35.5	+ 0.7	17	24	0.50	2.26
Lansing	34.1	+ 1.2	14	24	1.95	2.26
Marquette	28.0	+ 4.9	1	1	2.11	1.94
Muskegon	33.1	+ 0.2	8	11	1.32	2.25
Pellston	28.7	+ 3.8	0	4	1.01	1.83
Saginaw	33.5	+ 1.0	4	11	1.18	2.04
Sault Ste. Marie	25.8	+ 1.8	0	0	1.39	1.93
South Bend	37.5	+ 1.4	29	25	0.66	2.48
Traverse City	31.2	+ 1.8	1	4	1.94	1.83
Vestaburg	32.5	0.0	9	10	1.20	2.16

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

from significant spring fieldwork delays for summer crop planting on wet, soggy soils to a reduced risk of spring freeze damage for overwintering crops which would remain dormant longer than usual.

Michigan and Major Commodity Area Extended Weather Outlook

T - Temp.	4/15.....	4/30	4/15.....	6/30
P - Precip.	T.....	P	T.....	P
Michigan	B.....	B	B.....	B
W. Corn Belt	B.....	N	N.....	N
E. Corn Belt	B.....	N	N.....	N
Wint. Wheat Belt	N.....	N	N.....	B
Spr. Wheat Belt	N.....	N	N.....	N
Pac. NW Wheat	A.....	B	A.....	N
Delta	B.....	B	N.....	B
Southeast	B.....	N	N.....	N/B
San Joaquin	A.....	N	A.....	N

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

ASCS Program Sign-Up Continues Through April 29

The sign-up period to enroll in the 1994 deficiency payment program for wheat and feed grains continues through April 29 at County Agricultural Stabilization and Conservation Service (ASCS) offices.

According to Jim Byrum, state executive director of Michigan ASCS, the 1994 program should be attractive to farm producers. "There are no acreage reduction requirements for corn, barley, oats, wheat and grain sorghum," said Byrum. "Producers can plant their entire base acreage of these crops with no set-aside required and flex crop provisions still apply.

"Also, producers may withdraw from the program after the sign-up period with no pen-

alty," states Byrum. "This means producers are free to plant more acreage if conditions are favorable at planting time. This allows producers more flexibility to choose options according to weather and market conditions instead of program requirements."

Advance deficiency payments are available at sign-up and will be paid at the rate of 50 percent of the projected deficiency payment for 1994. Advances will be required to be repaid if producers withdraw from the program.

The 0/92 provisions will apply to the 1994 program, although producers will be paid at 85 percent of the normal payment acreage unless they're prevented from planting, which allows payment at the 92 percent level.

In a related development, repayment of 1993 advance deficiency payments for corn will be required because prices for corn in 1993 were higher than projected. However, repayments will not be required until October 1994, when the 1993 corn "marketing year" ends.



Serving Michigan Farm Families is Our Only Business

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

Station	City	Frequency	Morning Farm	Noon Farm
WABJ	Adrian	1490	5:45 am	11:50 am
WATZ	Alpena	1450	5:30 am	11:30 am
WTKA	Ann Arbor	1050	6:05 am	12:05 pm
WLEW	Bad Axe	1340	6:30 am	12:50 pm
WHFB	Benton Harbor			12:30 pm
WKYO	Caro	1360	6:15 am	12:15 pm
WTVB	Coldwater	1590	5:45 am	***
WDOW	Dowagiac	1440	6:05 am	12:15 pm
WGHN	Grand Haven	1370/92.1	5:45 am	12:15 pm
WPLB	Greenville	1380	6:15 am	11:45am
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	**	11:30 am
WJIM	Lansing	1240	5:05 am	11:50 am
WWGZ	Lapeer	1530	*	12:15 pm
WOAP	Owosso	1080	6:15 am	12:30 pm
WHAK	Rogers City	960		12:15 pm
WSJ	St. Johns	1580	6:15 am	12:15 pm
WMLM	St. Louis	1540	6:05 am	12:20 pm
WSGW	Saginaw	790	5:55 am	12:20 pm
WMIC	Sandusky	660	6:15 am	12:45 pm
WCSY	South Haven	940		12:15 pm
WKJC	Tawas City	104.7		12:45 pm
WLKM	Three Rivers	1510/95.9	6:15 am	12:15 pm
WTCM	Traverse City	580	5:55 am	11:20 am

* Station signs on at different times during the year. Morning farm times change with the sign-on times.
 ** Station airs various farm reports between 5:30 and 6:00 a.m.
 *** Station airs various farm reports between 12:00 and 1:00 p.m.

Some stations carry additional market reports throughout the market day.

Maximize your Sugarbeet productivity with



ACA on Sugarbeets

ACA applied preplant incorporated or in-furrow has shown improved productivity of sugarbeets. ACA applications can be made with fertilizer or water as the carrier.

Identifiable Performance Parameters on Sugarbeets

The following are frequently observed plant responses from soil applications of ACA on sugarbeets.

Visual Response	Observation Timing (Stage of Growth)
Vigorous early growth.	• Spring - From emergence to 4th true leaf stage
Darker green more erect leaves and full canopy	• Row Closure
More extensive hair roots	• Row Closure

The identified performance parameters typically result in:

- Increased uptake of soil nutrients
- Increased utilization of sunlight in photosynthesis
- Increased uptake of soil moisture
- Increased productivity (recoverable sugar per acre)

Yield Information

Soil application to Sugarbeets (1993)

- 34 total evaluations (University and grower studies)
- 3.7% increase in extractable sucrose (224 pound extractable sucrose increase/acre)
- Return on ACA investment of \$25.68 (1/2 pint/acre) or \$22.64 (1 pint/acre)
- 1/2 pint ACA per acre broadcast [Sugar at \$.13/lb (grower net) x 224 lb increase/acre = \$29.12 - ACA investment of \$3.44/acre (1/2 pint/acre) = \$25.68 R.O.I./acre]
- 1 pint ACA per acre broadcast [Sugar at \$.13/lb (grower net) x 224 lb increase/acre = \$29.12 - ACA investment of \$6.88/acre (1 pint/acre) = \$22.24 R.O.I./acre]

Application Techniques/Procedures

Test results have shown that ACA can be applied either broadcast incorporated or in-furrow. ACA can be broadcast incorporated into the soil using water or a fertilizer solution as a carrier. The incorporation or movement of ACA into the soil profile can be by tillage, rainfall, or irrigation. This will position the ACA near the developing root system of the plant.

Methods of Application

ACA mixes easily with and fits into the following fertilizer programs:

Soil Applications

- Soil broadcast applied with liquid fertilizers
- Soil broadcast applied with dry blended fertilizers
- Soil broadcast applied (weed & feed herbicide/fertilizer solution or dry)
- Band application with liquid fertilizer
- In-furrow application with liquid fertilizer

(Contingent on local sugarbeet company recommendations)

Other application methods:

- Soil applied broadcast with water as the carrier, with or without a herbicide
- Direct injection of undiluted ACA in-furrow

Application Rates

The application rate for ACA soil broadcast is 16 fluid ounces (1 pint) per acre. With in-furrow injected applications, apply at 8 fluid ounces (1/2 pint) per acre.



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

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Ram Wagons. And your cash back is on top of any other national offer.* Or if you prefer, select up to \$1,000 in quality DeWalt tools. All you need is a certificate from your state's Farm Bureau before you see your Dodge dealer. Cash back or DeWalt tools — expect a record harvest.

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THE NEW DODGE
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Market Outlook...

CORN

It now appears it's going to take a weather market for higher prices. The USDA Quarterly Stocks Report, released March 31, showed corn stocks were near expectations. And while the USDA Planting Intentions Report, released at the same time, showed corn planting intentions about 1 million acres lower than expectations, this is not low enough to sustain a big rally. However, it is low enough to help out a weather market "if" one occurs.

The Corn Stocks Report indicated that corn used for feed in the second quarter was about 10 percent lower than last year's record usage. However, about 80 percent of this decrease was made up by heavier feeding of wheat, barley and sorghum. This shows strong feed demand, in spite of higher prices this year, which is in line with 1993-94 USDA projections (Table 1). It also matches up fairly close to livestock numbers.

The other big disappearance number is exports which are projected to be down dramatically for 1993-94. And, at this point, looking at exports to date and booked sales, it looks like we may have a problem even reaching this low number.

U.S. corn producers intend to plant 78.6 million acres of corn. With the zero set-aside, the opportunity was there to plant at least 82 million

acres. This tells us that, producers will plant 1-2 million more acres of soybeans on flex land, and producers will let some of their set-aside acres set even though they could plant it.

The Planting Intentions Report lets us start projecting supply/demand for 1994-95. Hilker's supply/demand projections for 1994-95 are shown in the last column on Table 1; the USDA will not come out with their first projection of 1994-95 until May 10. My fundamentals match up fairly close to what the markets were offering for new crop on April 1. To me, this would indicate there is a little more upside potential than downside risk as long as the threat of a weather market is possible. As we go through the year, those odds will even out.

In Michigan, corn producers intend to plant 2.6 million acres, about 4 percent more than a year ago and about 4 percent less than they planted two years ago. Corn stocks being held in Michigan are up about 2 percent, while total U.S. stocks are down 30 percent.

Strategy: The corn basis has continued to tighten. There should be no commercially farmer-stored corn at this point and we probably ought to be moving corn stored on the farm. However, you may want to stay in the market on a portion of this volume through the use of basis contracts, calls and/or minimum price contracts.

WHEAT

The report showed that a little more winter wheat had been planted than previously reported and that a little less spring wheat is intended to be planted than expected. Total wheat planted in the U.S. is expected to be 71.5 million acres compared to last year's 72.1.

Michigan farmers planted 600,000 acres last fall, 3 percent more than the previous year, but nearly 8 percent less than two years ago.

The Wheat Stocks Report showed 30-80 million less bushels than expected. This indi-

cates higher feed use than thought and will likely tighten up ending stocks.

My projections for the 1994-95 crop year are shown in Table 2, column 3. And as you can see, I expect the situation to be much like this past year.

Strategy: If the above reports, along with perhaps some weather scares, have produced a rally in the wheat market, consider pricing a portion of your expected production rather than being forced to sell at harvest prices.

CATTLE

The March USDA Cattle-On-Feed Report showed inventory up 2 percent from last year. Along with this, slaughter weights are up about 4 percent. This will put a lid on very high prices, but we should see prices in the \$75-78 range for April and much of May.

Placements in February were up 7 percent compared to the low placements of a year ago,

but down 10 percent from two years ago. Marketings were up 4 percent, which was near expectations and shows even with the higher weights not too far from current.

Strategy: Over the next several weeks -- keep current, especially if the market is at its highs. For the second half of the year, look for forward pricing opportunities on rallies. I expect

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

SOYBEANS

The reports showed soybean stocks to be very near expectations -- it was the Planting Intentions Report that was a surprise. The report showed producers intend to plant 61.1 million acres of soybeans, over a million more than average expectations. In Michigan, farmers intend to plant 1.5 million acres of soybeans, up 3 percent compared to the last 2 years.

Exports to date would indicate that we should reach USDA 1993-94 projections seen in Table 3. However, booked sales are very low and will have to pick up to keep exports running at a rate to meet the projection.

My supply/demand projections for 1994-95 are shown below in column 3 of Table 3. If I am on target, new crop prices are too high as I write this article. However, as with corn, we are in a situation where there is more upside potential than downside risk. But with the large acreage we better adjust our targets down somewhat.

Strategy: The soybean basis is very tight and the futures markets will not pay storage, either off-farm or on-farm. This means we should be out of the bean storage business and be watching the futures for market gains. This

HOGS

The Quarterly March 1 USDA Hogs and Pigs Report was released March 25. It showed inventory 2 percent below the same date a year ago. Hogs kept for breeding were equal to a year ago. This was a surprise to the trade which expected them to be lower. All hogs and pigs kept for market were down 2 percent. Overall, the report was negative for the market.

Hogs over 180 pounds on March 1 were shown as equal to last year, but March slaughter was up 3 percent. Was this due to holdovers from the first quarter, good gains, or more hogs than the report guesses?

cash prices to be in the \$72-75 range. Consider pricing a portion of your production if you have opportunities in the upper part of that range.

Dairy Market Report
see page 15

FARM BUSINESS OUTLOOK

Seasonal Commodity Price Trends

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

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

can be done with futures, basis contracts, call options and minimum price contracts.

Hogs weighing between 120-179 pounds were down 4 percent and 60-119 pounds down 2 percent. This means we should see a significant drop-off in year-to-year hog slaughter by the end of April, if not before.

Remember these numbers are for the country as a whole; the variance between states was huge. North Carolina became the second largest hog state as they increased their numbers by 22 percent this past year.

The previous number two state, Illinois, dropped their numbers by 6 percent. The largest hog state by far, Iowa, was down 2 percent. Big losers were Indiana, down 10 percent; and Nebraska, down 7 percent.

Winners were Missouri, up 2 percent; Pennsylvania, up 9 percent; and Michigan, up 3 percent. Michigan hogs kept for breeding were equal to a year ago.

Table 1
Supply/Demand
Balance Sheet For
CORN

	USDA Proj.	USDA Proj.	Hilker Proj.
	1992-93	93-94	94-95
Corn Acreage (Million Acres)			
Acres Set-Aside and Diverted	5.3	10.5	?
Acres Planted	79.3	73.3	78.6
Acres Harvested	72.2	63.0	71.5
Bu./A. Harvested	131.4	100.7	123.0
Stocks (Million Bushels)			
Beg. Stocks	1100	2113	802
Production	9482	6344	8795
Imports	7	20	8
Total Supply	10,589	8,477	9,605
Use:			
Feed	5301	4800	5100
Food/Seed	1511	1600	1680
Total Domestic	6813	6400	6780
Exports	1663	1275	1320
Total Use	8476	7675	8100
Ending Stocks	2113	802	1505
Ending Stocks			
Percent of Use	24.9%	10.4%	18.6
Regular Loan Rate	\$1.72	\$1.72	\$1.89

U.S. Season Average
Farm Price, \$/Bu. \$2.07 \$2.60 \$2.30
Source: USDA & Hilker

Table 2
Supply/Demand
Balance Sheet For
WHEAT

	USDA Proj.	USDA Proj.	Hilker Proj.
	1992-93	93-94	94-95
Wheat Acreage (Million Acres)			
Acres Set-Aside and Diverted	3.5	.5	.5
Acres Planted	72.3	72.1	71.5
Acres Harvested	62.4	62.5	61.5
Bu./A. Harvested	39.4	38.4	39.0
Stocks (Million Bushels)			
Beg. Stocks	472	529	588
Production	2459	2402	2399
Imports	70	95	73
Total Supply	3001	3026	3060
Use:			
Food	829	840	850
Seed	98	98	100
Feed	191	275	300
Total Domestic	1118	1213	1250
Exports	1354	1225	1200
Total Use	2472	2438	2450
Ending Stocks	529	588	610
Ending Stocks			
Percent of Use	21.4%	24.1%	24.9
Regular Loan Rate	\$2.21	\$2.45	\$2.58

U.S. Season Average
Farm Price, \$/Bu. \$3.24 \$3.20 \$3.10
Source: USDA & Hilker

Table 3
Supply/Demand
Balance Sheet For
SOYBEANS

	USDA Proj.	USDA Proj.	Hilker Proj.
	1991-92	92-93	93-94
Soybean Acreage (Million Acres)			
Acres Planted	59.1	59.4	61.1
Acres Harvested	58.2	56.4	60.0
Bu./Harvested Acre	37.6	32.0	34.5
Stocks (Million Bushels)			
Beg. Stocks	278	292	155
Production	2188	1809	2070
Imports	2	5	5
Total Supply	2468	2106	2230
Use:			
Crushings	1279	1240	1270
Exports	770	605	620
Seed, Feed and Residuals	127	106	110
Total Use	2176	1951	2000
Ending Stocks	292	155	230
Ending Stocks			
Percent of Use	13.4%	7.9%	11.5%
Regular Loan Rate	\$5.02	\$5.02	5.02

U.S. Season Average
Farm Price, \$/Bu. \$5.50 \$6.50 \$5.90
Source: USDA & Hilker

7 MSU Telfarm Program Picks 1994 Farm Managers of the Year

**John D. Jones, Telfarm Director
Department of Agricultural Economics
Michigan State University**

The excellent farm management skills of four Michigan farm families were recently recognized by the Michigan State University Department of Agricultural Economics Telfarm Center.

Selected as the Telfarm Farm Managers of the Year were Bernard and Shirley Brinks, of Falmouth; David and Beverly Sturgis, of Sturgis; Kenneth and Jane Gasper, of Belding; and Jim and Lloyd Ruesink, of Adrian.

The awards recognize the owners' managerial skills and the economic progress made by their farm operations over the past several years. Other criteria include community service and activities that contribute to improving agriculture in general. The awards were presented at the Ag Tech Luncheon, March 12, at the Kellogg Center in East Lansing during the Ag Tech Program's 100th anniversary celebration.

David and Beverly Sturgis

The Sturgis family, along with their daughter, Pam, and her husband, Edward Schlabach, manage a swine and cash crop operation near Sturgis in St. Joseph County. The swine operation markets about 3,000 hogs each year. The cash crop operation consists of 3,000 acres, half of which is owned by the Sturgis family; the remainder, by a neighbor.

Below (l-r) MSU Telfarm Director John Jones congratulates Lloyd and Jim Ruesink.



By pooling some machinery and providing their own labor, the cooperating joint arrangement produces seed corn, snap beans, field corn and soybeans. This is an innovative and unique farming system employed on the Sturgis farm. Pam is beginning to assume some of the Telfarm accounting work from Dave and long-time assistant recordkeeper, Marilyn Beal. Teamwork

and shared responsibilities is a very important part of the efficient management of the Sturgis family farm.

Dave and Beverly are both strong leaders in their community and are active members of Farm Bureau and United Methodist Church.

Kenneth and Jane Gasper

The Gaspers, and their children, own and operate Low-Max Holsteins, near Belding in Ionia County. In 1988, Ken and Jane took over the management of the farm from Ken's parents, Lewis and Maxine, who started using the Telfarm program in 1970. Jane is now using Micro-Tel, Telfarm's microcomputer option, to keep the business records. Lewis and Maxine still serve as dependable consultants when needed.

The Gaspers are recognized for their advancement in herd genetics and nutrition, and in the environmental management of their farm. They are active with DHIA, MABC and Select Sires. Ken serves on the MSU Animal Science Advisory Committee. With the assistance of MSU, the Gaspers developed, a low cost, environmentally sound milkhouse waste water disposal system.

The farming operation consists of 690 acres and a 140-cow dairy herd that currently produces about 25,000 pounds of milk per cow per year.

Ken was MSU Animal Science Department's 1992 Dairy Farmer of the Year. The Gasper family is also active with their church,

FARM BUSINESS OUTLOOK

school, 4-H club, and county and state Farm Bureaus.

Bernard and Shirley Brinks

The Brinks family manages an 80-cow dairy herd that currently has a rolling herd average of over 25,000 pounds of milk and 1,100 pounds of butterfat per cow per year. Their Missaukee County dairy farm located near Falmouth consists of approximately 300 acres owned and 50 acres rented that produce corn and alfalfa hay.

Bernard Brinks has farmed for 57 years and has used the Telfarm system for 25 years. Shirley is responsible for keeping the Telfarm business records. The Brinks' son, Ronald, and his wife, Barbara, are also involved full time in the farm.

Bernard serves on the Prosper Christian Reformed Church Board of Elders, Clam Union Township Board of Trustees, and Falmouth Coop Board of Directors.

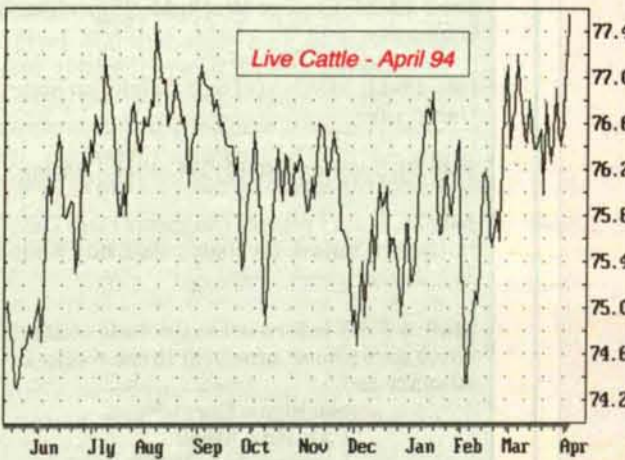
Jim and Lloyd Ruesink

The Ruesink operation, known as the J & L Ruesink Farm, consists of 700 acres of alfalfa, corn and oats for the support of the 230-cow dairy operation, near Adrian in Lenawee county. Jim joined his father, Lloyd, after graduating from MSU in 1978 with a dairy science degree. The Ruesinks' have been active with soil conservation, FFA, Farm Bureau, Michigan Department of Agriculture and Michigan State University.

Lloyd Ruesink's father, William, began using the Telfarm recordkeeping system in 1928. Lloyd continued using the system and in 1992, at the age of 81, he taught himself how to use the MicroTel software option of Telfarm. The books balance to the penny, according to Jim. Lloyd says, "I might as well get started now, I'll never learn any younger."

According to Lloyd, the Telfarm program allows a farmer to know his strong points and weak points. The Telfarm program showed the Ruesinks the dairy end of their operation was more profitable than the cropping end. In 1971, the family invested \$300,000 in a milking parlor.

Below (l-r) MSU Telfarm Director John Jones introduces Beverly and Dave Sturgis



8 Websters Named DHIA Progressive Dairymen of the Year

Clinton County dairy farmers Larry and Wayne Webster took top honor during the recent annual meeting of the Michigan Dairy Herd Improvement Association (DHIA). They were named the 1993 Progressive Dairymen of the Year.

Milking just over 300 cows, the Websters have improved their rolling herd average by 9,900 pounds of milk in just the past five years to 26,950 pounds in 1993. Likewise, dollar value per cow has improved \$1,401 during those same five years to the 1993 average of \$3,445 per cow.

Production increases, according to DHIA General Manager Al Thelen, are attributed to improved rations using the Spartan II program, switching to a total mixed ration feeding program, use of body scoring, and most recently switched to a three times per day milking schedule.

The MSU Animal Science Dairymen of the Year Award was presented to the Lyle Ball and Doug Chapin families of Mecosta County.

In other award programs, the following dairymen were recognized for their achievements:

*** Highest 365 Day Dollar Value - 1993 Average:** Paul Wardin, Remus, Mecosta County, 40 cows, \$3,554 value, on 27,880 lbs. of milk, 1,101 lbs. of butter fat, and 872 lbs protein.

*** Highest 365 Day Herd Average:** Jeff Alexander, Hanover, Jackson County, 93 cows, \$3,532 value on 27,880 lbs. of milk, 996 lbs. of butter fat, and 861 lbs. of protein.

*** Highest Individual Cow, 305-Day Actual Milk and Dollar Value:** Nobis Brothers, St. Johns, Clinton County, Age 62 months, \$5,683 dollar value on 43,482 lbs. of milk, 1,824 lbs. of butter fat and 1,338 lbs. of protein.

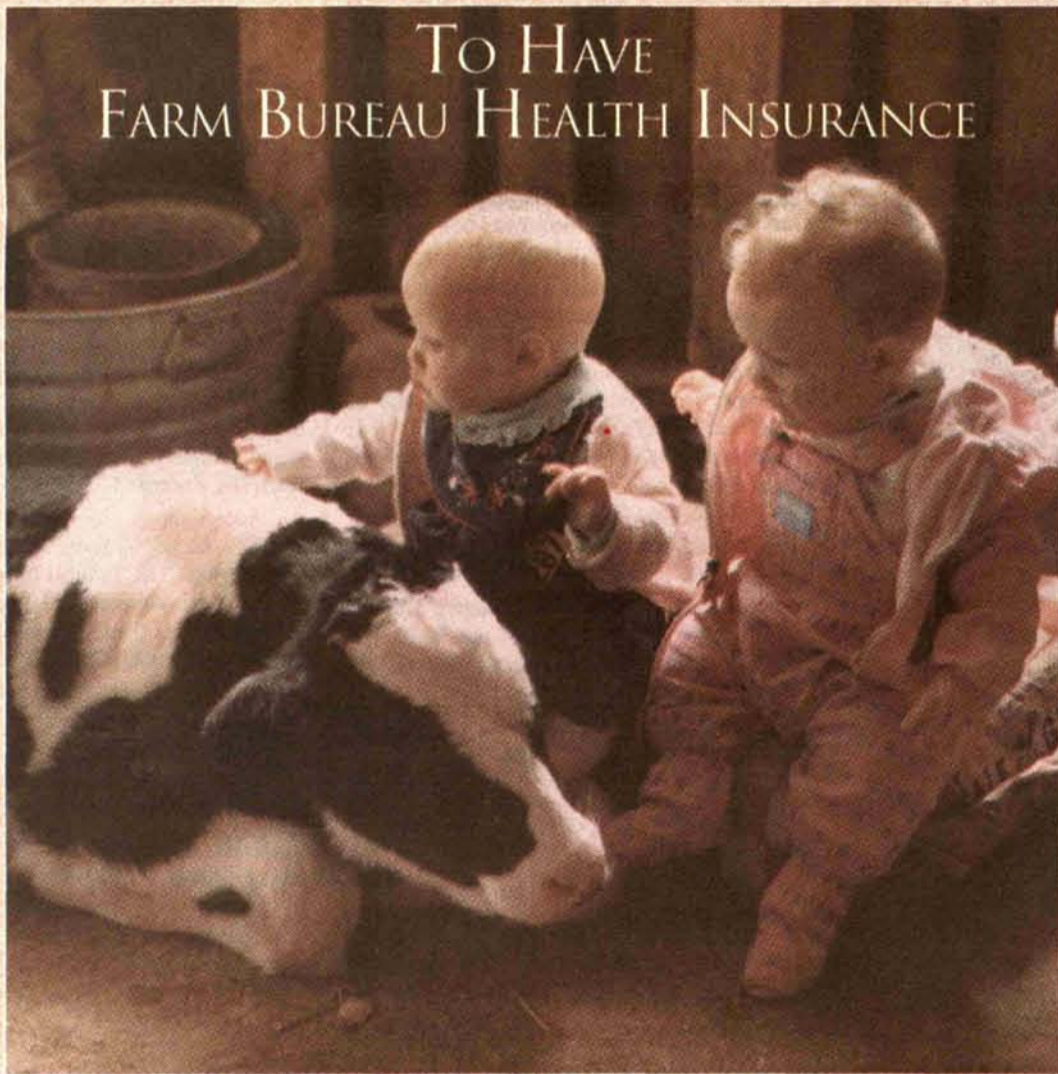
*** 1993 Five Year Gold Award Club Winner:** Nobis Brothers, St. Johns, Clinton County, 5-Year average; 352 Cows, \$3,422 Dollar Value, 26,149 lbs. of milk, 971 lbs. of butterfat, and 831 lbs of protein.

Below (l-r) are Larry and Cathy Webster, DHIA Manager Al Thelen, Wayne and Marjorie Webster, of Clinton County. The operation milks 300 cows with a 26,950 lb. average.



Photo: MSU ANR Outreach Communications

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Michigan Rolling Herd Average All Time High

Michigan dairy farmers on DHIA test keep setting new records, with 1993's overall state average reaching 20,000 lbs, while the total number of herds over 25,000 lbs., keep going up as well, according to DHIA General Manager Al Thelen.

"By keeping monthly records and knowing deviations of each cow from the entire herd, dairy farmers on DHIA know how to manage individual cows and various production groups, putting them in a tremendously advantageous position," Thelen said. "Using the federal milk marketing order data, we know that the overall production averages for herds on test versus non-test herds reached 6,000 pounds last year."

Thelen predicts that trend will accelerate with the advent of new technology, such as the recent introduction of BST. He says that just in the first two months of BST use, production response has been tremendous, according to DHIA technicians and records.

"There are no plans to keep track of herds on BST," Thelen said. "It simply can't be tested for, and DHIA considers the use of BST as a management tool that each individual can choose to use or not use, as they can with other management tools."

Calendar of Events

April 23, West Branch Bull Sale, noon.

April 30, 4th Annual Key to Profit Sale, Escanaba, 1 p.m.

May 23 - 24, National Agricultural Biotechnology Council. MSU Kellogg Center, Call Eddie Hansen (517) 355-0123.

June 20-24, Young People's Citizenship Seminar, Calvin College, Grand Rapids, 1-800-292-2680, ext. 3234.

June 22-24, College Week, Michigan State University.

July 19-21, MSU-AG Expo, Michigan State University.

July 20, Summerfest, MFB Center, Lansing.

July 26, Plant Problem Diagnosis Field Day, Michigan State University, Call Jim Kells 355-2173.

Mail or FAX information (include contact name and phone number) three weeks in advance to:

Michigan Farm News
P.O. Box 30960
Lansing, MI 48909-8460
FAX: (517) 323-6793

Pesticide Storage Facilities Open for Farmer Tours...Continued from page 1

and it catches on fire, the fire department would likely let the whole thing burn."

During a recent tour of the three facilities, approximately 65 farmers from the Bay County area had a chance to listen, look, and ask questions about site location, facility design, and regulatory requirements.

Although each facility was designed differently, they still had some common elements, including building code requirements in terms of electrical wiring, and containment needs via sloped concrete floors and concrete sump pits.

"In each of these facilities, if we do get a spill, we can contain it as well as possibly be able

to reuse the chemical, thanks to the containment system," Rossman said. "Building codes also require that if products with a flashpoint below 100 degrees are going to be stored in the structure, you must have explosion proof wiring. As a result, many chemical manufacturers are trying to reformulate their product so the flashpoint is above 100 degrees."

Explosion proof wiring doesn't come cheap either. According to Dave Duyck, the wiring bill alone on his 10' x 12' structure was \$2,500 for just two light bulbs and a fan. Total construction costs for his facility were \$8,500. The walls are insulated and have steel siding both inside and out.

The structure, located on the main farm site, was required to be at least 200 feet from the house, 100 feet from any other building, 200 feet from his potato storage facilities, and at least 100 feet away from any ditch, lake, pond or well, Duyck said.

The concrete floor slopes to the back of the building to a concrete sump pit, and is designed to hold up to 150 gallons in the event of a spill. A good rule of thumb in determining containment capacity is 25 percent of the total chemicals stored or 125 percent of the largest container.

Duyck, in a partnership with his father Art, farms 450 acres, raising approximately 250

acres of potatoes, in addition to corn, soybeans and wheat annually. He explained that with potatoes there are number of different chemicals that are used each season. Although he prefers not to store chemicals from one season to the next, he does need a facility in-season until they're applied.

"Our goal in using this facility is to store as little chemical as possible," Duyck said. "We prefer to leave that up to the manufacturer. However, there are times when we need a place to store chemicals until they're applied."

According to Rossman, there are cheaper alternatives for chemical storage if resources are limited. "We're not advocating that every farmer go out and spend \$40,000, \$20,000 or \$10,000 for a facility," Rossman advised. "But even a very small producer can reduce his liability by moving his chemical storage from the farm shop or house basement into a separate structure, even if it's just a cargo box off an old refrigerated truck."

Duyck concurs with Rossman in addressing the liability issue, as well as the environmental benefits of a properly constructed and maintained storage structure. "Farmers don't really want to create a liability for themselves and they really don't want to end up contaminating the

groundwater. I think it's a good idea for every farmer to have a chemical storage structure on their farm for their own peace of mind," he concluded.

Who to Call and Where to Go to Tour These Facilities

Contact Dan Rossman, Gratiot County Extension Agricultural Agent, at (517) 875-5233

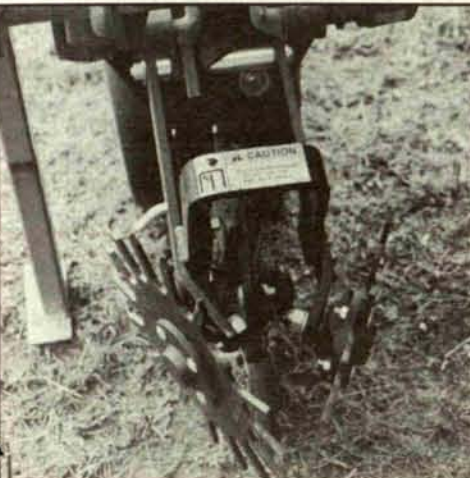
1). David Duyck Farm - 589 Cotter Road, Approximately 8 miles east of Bay City, on M-52, then 1/4 mile south on Cotter Road, facility on the west side. (517) 894-4018

2). Johnson Potato Farm - Approximately 9 miles east of Bay City, on M-52, near the county line, facility located on the south side. (517) 893-2994

3). Reif Farm - Approximately 5 miles east of I-75 on M-81, facility located on north side. (517) 753-2146.

Selecting Planter-Mounted Row Cleaners

These Yetter Row Cleaners, running in combination with coulters, are ideal in heavy residue situations.



by Tim Harrigan, Ag. Engineering, MSU

In many conservation tillage systems, crop residue on the soil surface at planting time is a concern for early planted crops such as corn and sugar beets. Surface residue delays soil warm-up by insulating the soil, and delaying drying.

A narrow zone can be cleared by using coulters to till a narrow band of soil and chop and incorporate most of the residue or by using row cleaners to sweep clean a strip of soil 6-10 inches wide.

There are several types of row cleaners. In tilled fields with light residue, V-configured tine harrows in front of the planter unit may work well but they will drag heavy or long residue.

In tilled or no-till conditions with light residue, brush wheels may work well. Solid, double farrowing disks can work well in a wide range of conditions but they must be adjusted correctly. If set too deep, they can carve a furrow that may wash out or crust over in heavy rain.

The most common row cleaners are 13-15 inch finger wheels, with or without cutting coulters. Chopping stalks is not necessary. In coarse textured or stony soils where seed opener or fertilizer coulters penetration is not a problem, row cleaners alone may be the best choice.

In most conditions, a coulters is not needed to cut the residue. Row cleaners with interlocking fingers will do a good job in heavy corn residue and will also roll most rocks out of the seed furrow.

Finer textured soils may benefit from coulters tillage. If the soil has a tendency to get hard, tilling a narrow band of soil may improve seed-soil contact or fertilizer placement. Adding single coulters with the row cleaners or on a separate toolbar may be a good choice in these conditions. The coulters may improve residue flow if the residue is long, damp and tough but for typical conditions, evaluate the coulters primarily on its tillage benefits.

I don't believe it is necessary or even desirable to remove all of the residue from the cleared zone. A small amount of residue (10-20 percent) will not noticeably delay soil warm-up and may help prevent soil crusting,

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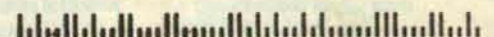
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10 Starter Fertilizers for No-Till Corn

Maury Vitosh, Crop & Soil Sciences

Research has shown that the probability of response to banded starter fertilizer increases markedly as reduced tillage systems are used. Soil temperature is the major factor affecting nutrient availability in these systems.

As soil temperatures increase, more nitrogen (N) and phosphorus (P) is mineralized from soil organic matter. Plant roots also grow more rapidly and have a greater ability to absorb nutrients under warm conditions.

In early spring, no-till soils tend to stay cool and wet causing slow release of plant nutrients. Hence, starter fertilizers used on cool, wet soils will have a higher potential for providing a yield response.

N Likely to be Responsible for Starter Fertilizer Response

Traditionally, farmers and agronomists thought that phosphorus (P) was the nutrient responsible for most starter fertilizer responses. Recent work in Indiana, however, has shown that N was responsible for most of the start fertilizer responses.

In cooler wetter soils, common in no-till conditions, starter fertilizers have shown a yield response in eight of 11 field trials, according to MSU researchers.



In 11 experiments where starter fertilizer treatments were used on both no-till and conventional tilled corn, starter fertilizer responses were obtained only once in conventional tillage, but in eight of the 11 experiments with no-till. In six studies,

where the P and K soil test levels were high, they found that N was responsible for a seven bushel yield increase in the no-till system, three bushels in the ridge till system and two bushels in the chisel system. Similar starter fertilizer responses have

been observed in Wisconsin and Minnesota. Current MSU fertilizer recommendations for corn are to use 30-40 pounds of starter N when planting in a high crop residue system. P use should be based on a soil test.

When the P soil test is less than 120 pounds per acre but greater than 40 pounds/acre, use 20-30 pounds of starter P in high residue systems. When the P soil test is less than 40 pounds/acre, larger amounts of starter P may be used. When the P soil test level exceeds 120 pounds/acre, P is not necessary and should be discontinued for environmental reasons. Growers in this situation should still band N at corn planting time.

The options available for applying starter N without applying P are somewhat limited, however, the best choice is probably 28 percent liquid N. The use of urea as a starter fertilizer is not encouraged due to the potential of free ammonia developing near the seed. One solution to this problem is to move the urea placement further from the seed.

There are limits as to the amount of N and K fertilizers that can be applied in the band two inches to the side and two inches below the seed. Do not use more than 40 pounds of N (any source) and 60 pounds of potash in this placement.

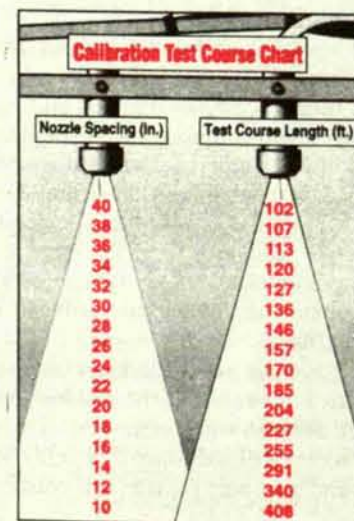
Farmers who want to use more N and K at planting, should move the placement 4-6 inches from the seed to prevent salt injury to emerging seedlings. N can also be broadcast prior to planting to supply N to small seedlings, however, this is not the most efficient placement for N in high residue systems.

Reprinted from MSU Crop Advisory Team Alert

Nine Easy Steps to Calibrate Your Spray Equipment

To avoid needless ag chemical waste and potential water contamination, calibrate your spray equipment at least once a year. Just follow these nine easy steps:

1. Fill your sprayer with water.
2. Measure the distance between the nozzles on your spray boom.
3. Choose the Test Course Length (in feet) from the calibration test chart (below), measure and mark the course distance.
4. Drive the test course at your normal spraying speed and record the number of seconds it takes to drive the measured distance. Be sure to operate all equipment.
5. Stop, set the brakes, but keep the engine r.p.m. at the same setting used to drive the test course.
6. Set the desired pressure on your sprayer.
7. Using a container marked in ounces, collect the water sprayed from one nozzle during the same number of seconds it took to drive the test course.
8. Measure the flow of each nozzle. If the flow rate of any tip is 10 percent greater or less than the others, replace it.
9. The water collected in ounces per nozzle equals gallons per acre applied. Fine tune your sprayer pressure accordingly.



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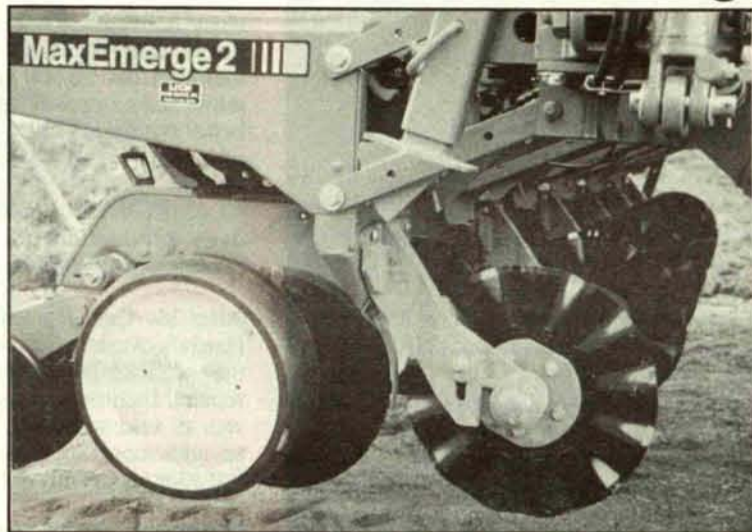
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April 15, 1994



11 No-Till Planter Trouble Shooting

At the business end of the planter, pay special attention to seed openers, seed depth control and leveling your planter once it's in the ground. Make sure residue isn't hair-pinned in the seed trench to avoid poor seed to soil contact.



Proper corn planter preparation this spring could mean big returns this fall. According to studies conducted at Purdue University, proper row spacing, for example can make a big difference, according to Northrup King Agronomist Dan Coffin.

Every one inch increase in the standard deviation of plant to plant spacings can cost you 2.5 bushels per acre. If you were shooting for an average spacing of 7.5 inches and you end up with an average of 8.5 or 6.5 inches, you're losing at least 2.5 bushels per acre.

Purdue researcher Dr. Bob Neilsen found standard deviations ranging from two inches to nine inches in a study he conducted on nearly 100 fields during the past two years. Nearly 48 percent of the fields were in the four to six inch range.

Neilsen estimates the average farmer could gain five to 10 bushels per care just by improving efficiency in planting.

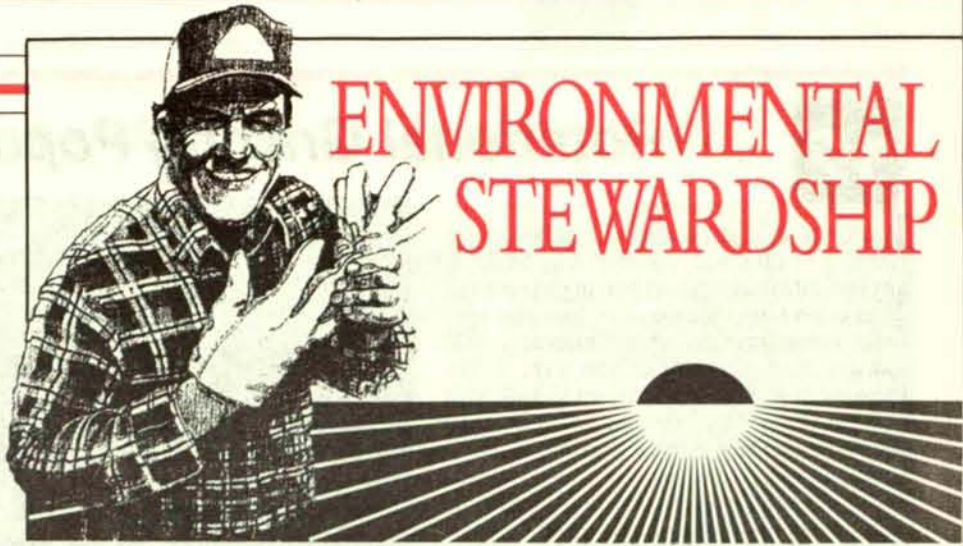
Coffin also offers these other planter conditioning tips:

- Check the hydraulic system and the hitch to make sure the planter is level and aligned between tire tracks properly.
- Planter tires should be properly inflated.
- Adjust row markers and units to maintain proper spacing.
- Replace worn sprockets, gears, and chains, and make sure the correct ones are used for the desired planting rate.
- Clean and inspect the seed hoppers and reservoirs. On air planters, check all seals and gaskets for leaks.
- Check the accuracy of planter monitor systems.

Preliminary checklist for all planters regardless of make and model.

It is recommended that the following items be checked before planting:

- The seed double disc openings should be sharp.



ENVIRONMENTAL STEWARDSHIP

- Plant with the planter frames and planter units level with the soil.
- The planter hitch should be set no lower than the recommended height as stated in the planter's operator manual.
- Make sure the soil is not too wet. If the soil is too wet, any coulters attachments on the planter will not be able to adequately break up the soil and the closing wheels will pack the damp soil over the seed instead of effectively firming it. As a result, the potential drying and cracking of the seed trench may leave the seed bed exposed and possibly affect seed germination.
- Make sure the soil has had sufficient time to warm up. If time and weather permit, it may be necessary to delay planting for an additional period of time compared to conventional tillage.

In-the-field checklist for all planters regardless of make and model. While in the field, the following periodic checks can be made to ensure the effectiveness of your planter and planting methods:

- Make sure the closing wheels are adequately closing the seed trench. The closing wheels require a certain amount of loose soil in order to effectively close the seed trench.

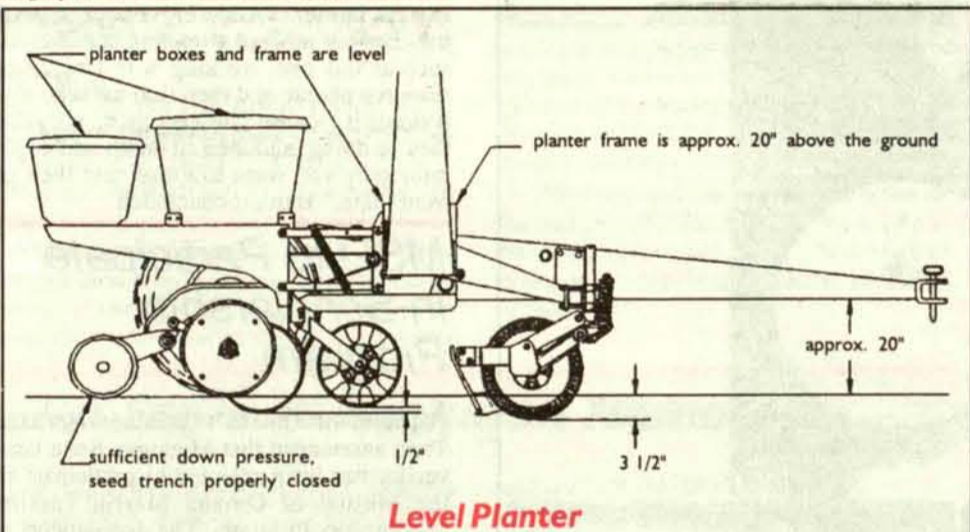
• Make sure the planter frame and planter units are level with the soil. This is done while the planter is lowered in its normal planting position. An unlevel planter can cause one or two things. First, it may prevent the closing wheels from sufficiently firming the seed trench. Second, it may force the unit mounted coulters too deep into the soil causing them to work soil at a level below seed placement. This may result in the formation of air pockets below the seed which may affect germination of the seed.

For the following, some soil may need to be removed from the top of the seed trench for visual verification:

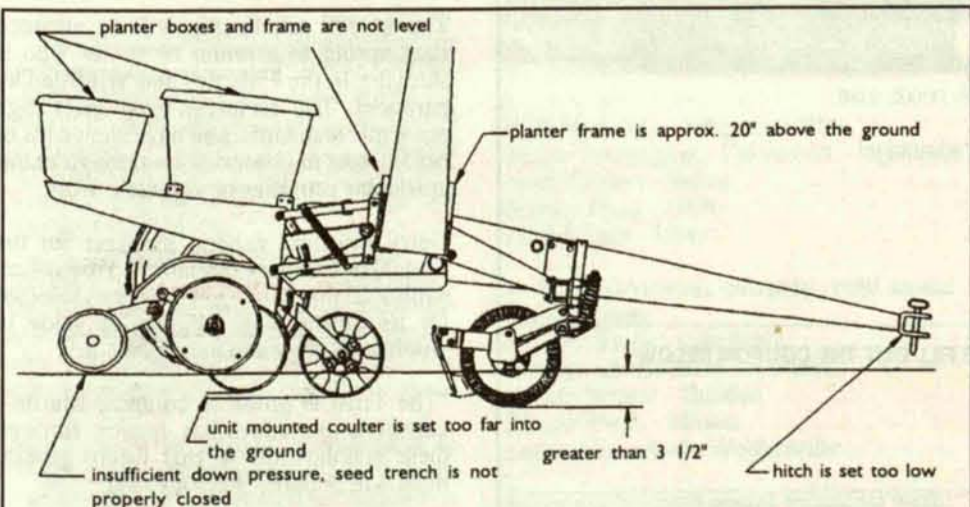
- Make sure there is good soil to seed contact.
- Make sure the seed is planted deep enough and in a moist seed bed.

• Make sure residue is not being hairpinned into the seed trench. Residue which becomes lodged in the seed trench will tend to draw moisture out and away from the seed.

These checks were adapted from a fact sheet entitled "No-till Planting Trouble Shooting Guide," which also includes a problem-cause-remedy section. The fact sheet is available from Yetter Manufacturing Co., Colchester, IL 62326-0358, 1-800-447-5777.



Level Planter - Notice the planter frame and boxes are level with the soil. In most cases, the planter will be outfitted with one or more attachments to enhance planter performance in no-till conditions. These attachments are designed to operate in a specific range of depths (notice in the illustration that the unit mounted coulters are running 1/2 inch above the seed double disc openers while the frame mounted fertilizer coulters are running at a depth of 3-1/2 inches). These are ideal depths and are only obtainable when the planter is level.



Unlevel Planter - For conventional tillage practices, this configuration will work. However, this is not the case in no-till conditions. With the planter hitched in this position, the unit mounted coulters are running below the seed double disc openers, and the frame mounted fertilizer coulters are running at a depth greater than 3-1/2 inches. These depths are not recommended as they'll greatly affect the performance of each attachment. For example, with the unit mounted coulters running below the seed double disc openers, the formation of air pockets below the seed is likely.

Problem	Possible Cause	Possible Remedy
Seed trench not closing	Insufficient down pressure on the closing wheels.	Increase the down pressure on the closing wheels.
	The planter hitch is set too low.	Ensure that in operation, the planter hitch is set to the correct height (consult the planter's operator manual).
	The unit mounted coulters are not providing enough soil disturbance.	Use a wavy coulters blade.
Poor soil to seed contact	The planter unit and/or frame mounted coulters are running too deep.	Properly adjust coulters height and ensure that in operation the planter hitch is set to the correct height (consult the planter's operator manual).
	The double disc openers are excessively worn.	Replace the openers.
	The soil is too wet.	Allow the soil time to dry.
Seed being planted too shallow	Excessive down pressure on the closing wheels.	Decrease the down pressure on the closing wheels.
	The planter needs additional ballast.	Add ballast to the planter.
	The double disc fertilizer openers are causing too much soil disturbance in the path of the seed double disc opener gauge wheels.	Double disc fertilizer openers should be mounted a minimum distance of 2-1/2" - 3" from either side of the row or the planter should be equipped with single disc fertilizer openers.
	Damp soil is collecting on the seed double disc opener depth gauge wheels.	Allow the soil time to dry.
Erratic seed placement	Planter unit depth is improperly set.	Adjust the depth setting of the planter unit.
	Excessive residue in the seed trench.	Use a residue clearing device.
Starter fertilizer is not being placed in the proper zone by the double disc fertilizer openers.	Low tire pressure.	Inflate tires to the recommended psi.
	Excessive speed causing the planter units and the unit mounted coulters to bounce.	Decrease planting speed and increase down pressure spring tension.
	Dry drive chains causing jerky movement.	Lubricate drive chains.
	Planter unit bounce.	Add ballast to the planter.
Row markers are not leaving a visible mark.	Most double disc fertilizer openers are not built for pinpoint fertilizer placement.	Equip planter with single disc fertilizer openers for pinpoint fertilizer placement.
	Row markers are too light or incorrect marker blade setting is being used.	Use a notched marker blade or reset angle of marker blades.

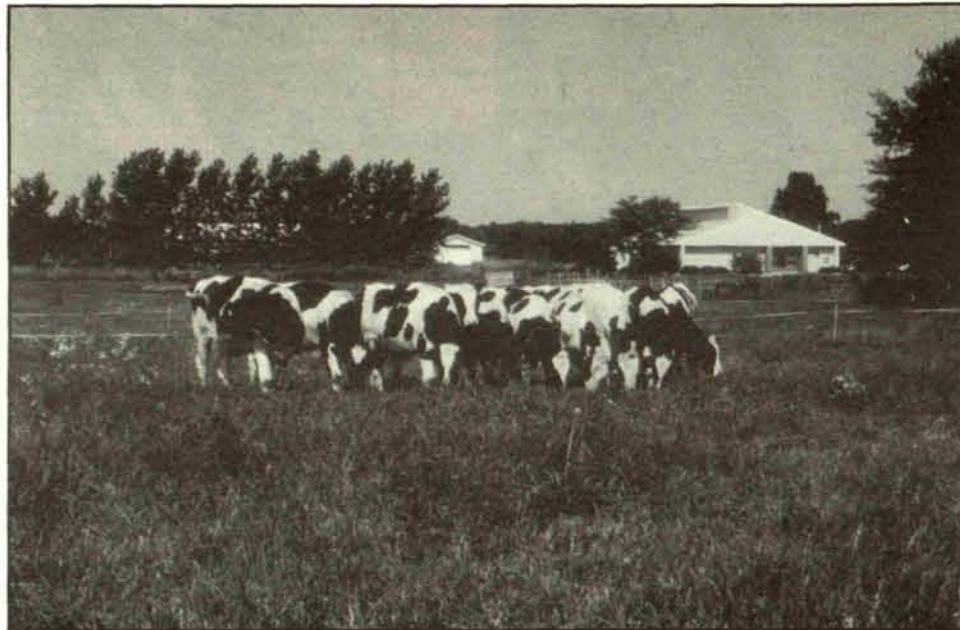
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Rotational Grazing Popularity Growing in Michigan

If attendance at the second annual Michigan Grazing Conference, sponsored by MSU, is any indication, rotational grazing has moved from just a novel idea, to a serious management consideration. Approximately 400 farmers from across Michigan were in Mt. Pleasant in mid-March to listen to, talk with and learn from other farmers and university resources on the merits of grazing.

"We're a high-tech society and grazing is not considered a high tech management tool, so we have a lot of what I call closet grazers in this state," suggested Ben Bartlett, an Upper Peninsula dairy and livestock Extension agent. "We've been working with rotational grazing for 15 years, and we're starting to see a real movement to increased grazing because it can have a tremendous and positive effect."

Bartlett, a grazer himself with over 400 ewes, and 100 head of stocker cattle, estimates that as many as 500 Michigan farmers now utilize grazing in some shape or form right now. He prefers to call rotational grazing an alternative that, based on an individual basis, may be a better way to harvest forages.



"Rotational grazing is a personal decision - it's an alternative," Bartlett said. "It's not necessarily better than conventional methods, it's not worse than conventional. It depends on what kind of farm you have, what goals you have, what kind of skills

you have that should determine if grazing is an appropriate technology for you."

For Lenawee County dairy farmer, Greg Hardy, 1993 was the year he decided rotational grazing was for him and his 150-cow

dairy herd and 200 heifers. Hardy, a producer panel speaker, said he wanted to maintain his 22,000 rolling herd average while reducing feed costs and providing a better environment for his cows. He ran all of his milking cows on 50 acres from May through October. Average feed costs were 63 cent per cwt. lower on pasture, while daily production per cow was down 4 pounds per day.

After his first year of rotational grazing, Hardy's overall costs were down \$107,000, thanks to lower fuel, utility and building repairs. Income was also down, but when it was all said and done, he figures he netted an additional \$60,000 from his operation last year as a result of rotational grazing.

Rotational grazing studies done in New York, Wisconsin and Michigan have shown that grazing can reduce annual production costs for milk from \$1 to \$2 per cwt., according to Bartlett. The largest dairy herd that he's aware of using rotational grazing is a 1,200-cow dairy herd in Wisconsin.

Other speakers included a host of livestock producers such as Matt Wiley of Schoolcraft, who runs 500 ewes, 700 lambs and 300 stockers on rotational grazing. University resource people were also on hand, all of which practice rotational grazing on a regular basis. According to Bartlett, the fact that all of the speakers are experienced grazers themselves adds a great deal of credibility to the conference.

"You can read the books; you can go to classes, but you're not a grazer until you're the one that opens and closes the gates," Bartlett said. "There's a great deal of education and information exchange going on here, both formally and informally."

For the farmer considering rotational grazing, Bartlett advises attending conferences such as this one, working with University resource people and then find out who else is doing it locally. "Go visit them, see what they're doing, and then sit down and determine why you want to graze, and then go from there," Bartlett concluded.

MSU to Participate in Scholarship Program

Mutual of Omaha's Wildlife Heritage Trust announced that Michigan State University has been selected to participate in the Mutual of Omaha Marlin Perkins Scholarship Program. The scholarship is intended to help ensure that a future generation can follow in the footsteps of the pioneer conservationist.

Michigan State is one of five schools included in the expansion of the program. In 1993, 20 schools participated in the program nationwide.

The \$1,000 scholarship will be awarded each spring to a junior or senior who is studying in the Fisheries and Wildlife Department. The recipient must meet high academic standards, and have shown his or her interest in conservation through extra-curricular activities or volunteer work.

Gerry Prysock, general manager for the Mutual of Omaha Companies' Troy office, explained that Michigan State was selected for its outstanding program of study in wildlife ecology and management.

"The Trust is proud to continue Marlin's conservation education legacy through these scholarships so that future generations will benefit," Prysock said.

The scholarships are funded by the Mutual of Omaha Companies through the Wildlife Heritage Trust. In addition, a portion of the proceeds from the sale of the Trust's wildlife videos and Jim Fowler's book, "Jim Fowler's Wildest Places on Earth," will go toward the scholarships. Fowler is executive director of the Trust.

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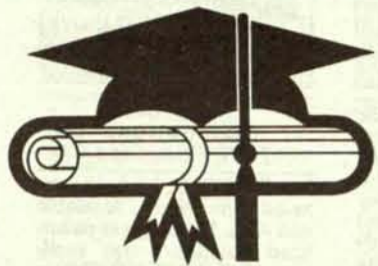
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COLLEGE MAJORS



Careers in Agriculture

Profile: Paul Knoerr Crop and Soil Sciences Graduate Student

By Karen Geiger

Identifying methods for greater and more efficient crop and land management is Paul Knoerr's focus.

Knoerr, who received his bachelor's degree in Crops and Soil Science in 1991, is now a graduate student in that department and has concentrated his attention on weed management.

His interest in weeds was launched after he received the Michigan Crop Improvement Association scholarship as an undergraduate and began working with Dr. James Kells on the weed science research team. His learning experience through this summer internship taught him that research is detail-oriented, labor intensive and necessary.

"Through all of my involvement (at Michigan State) I learned that there are always better individuals than myself, and that you have to cooperate and work hard to be successful," he notes.

With that dedication, Knoerr is continuing his education in the weed science program, focusing on weed control in sugar beets. He is also currently involved on his family's 2,500 acre

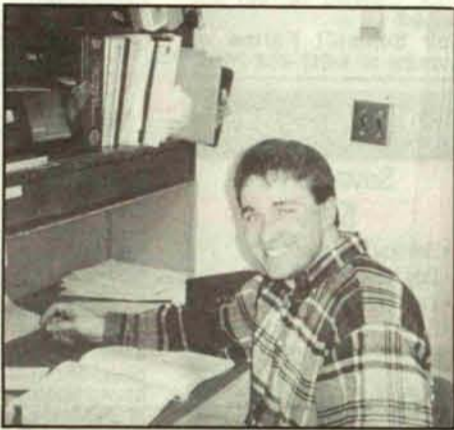
Crop and Soil Sciences - Identifying Opportunities for the Future

By Karen Geiger

When Michigan State University was Michigan Agricultural College in 1855, the pioneer land grant college initiated the progress of technology and innovation of agriculture as a whole. The Crop and Soil Science Department is one of the many departments that has provided education and opportunities for its students through a dedicated teaching staff and excellent resources for research and teaching use.

The Crop and Soil Sciences Department is focused on the future of research and technology, but mainly the future of the students who are part of this department. "The most important output of the department is the students," said Department Chairman Dr. Eldor Paul.

According to Paul, the faculty and staff are dedicated to the future. During the month of March, the Crop and Soil Sciences Department held constituency meetings to organize the needs of the agriculture industry from the department. In those meetings,



cash crop farm, which includes sugar beets and dry beans. Knoerr has 700 acres of his own, is a member of the Michigan Farm Bureau Young Farmers, and Project ProFILE, and the Saginaw County Innovative Farmers.

"The crop and soils program has given me the background to take farming to the next level. More production and better efficiency with lower inputs can keep American agriculture number one."



In constituency meetings Crop and Soil Sciences Department staff meet with representatives from related fields to make sure the department is adequately prepared to meet the needs of the agricultural industry.

representatives from the related fields meet in a cooperative effort to set the path for the department.

During a recent meeting, the representatives from specialty and grain crops discussed the 21st Century and where the department fits in. "Today, we have to look into the future," said Paul. "Without trust and cooperation, the crop and soil science department can't function."

This meeting exemplifies the department's commitment to working closely with the agronomy industry. This allows the teaching and research staff to interact with the people in the industry, providing a better idea of what the industry needs from the university, and what the university needs from industry.

According to Paul, not only is the dedication of the teachers extraordinary, the equipment, field research stations and greenhouse space availability is among the best in the nation, as well. "It is hard to compare other universities' agronomy departments to that of Michigan State's department," he said.

What does all of this mean to individuals looking to further their agricultural education? They will find opportunity within the agronomy courses. The Crop and Soil Sciences Department is noted for the high level of graduate placement it provides for students who have gained experience through internships.

There are also several scholarships available. The Michigan Crop Improvement Association gives out several thousand dollars per year in scholarships alone, providing between \$250 and \$1,000 per scholarship, along with jobs in the department.

These positions are more valuable than just dollars. Students find a niche in the agronomy field and are able to gain practical experience and an area of study to focus on. Others from the industry providing scholarships include Du Pont, and Miles/Mobay, to name a few.

There are four different options available within the crop and soil major. The two-year crop production program focuses on the technological aspect of crops and soils with an 18-week internship requirement. This includes classes in weed management, forage management, and soil management.

The four-year crop and soil sciences general option offers study for crop production-oriented individuals with courses ranging in weed management, soil fertility, crop physiology (anatomy of plants) and plant pathology (plant disease and management of disease). Crop and soil sciences advanced option deals more with the science involved and provides course study for those planning on attending graduate school or returning to the research aspect of agronomy.

The environmental soil science option is relatively new to the department, focusing on areas of soil management and effects of agriculture and related industries to the soil.

Currently, there are 100 graduate students, 38 of which are international students; 47 undergraduate students in the general and advanced crop and soils four-year program and seven in the two-year general program; and 10 in the environmental soil science option. Opportunities in the agronomy field include pesticide, seed, and equipment sales, farm management, research and consulting.

FFA Stars of Michigan Named

The naming of the Star Farmer and Star Agribusiness Person of Michigan highlighted the 66th annual FFA State Convention held at Michigan State University recently.

Luke Haywood, of Hastings, and Douglas Mayher, Jr., of Milan, were recognized as outstanding FFA members for their exceptional Supervised Occupational Experience Programs.

Haywood was named the Star State Farmer for participation in production agriculture with his dairy and beef projects and his tillage test plots. Mayher was selected Star Agribusiness Person for involvement in his place of employment at Schettenhelms Inc., where he assembles and repairs new and used farm equipment.

The State FFA Degree is the highest degree the Michigan Association of FFA can bestow on its members. Just two of the 231 State FFA Degree recipients are selected as Star Farmer and Star Agribusiness Person.

Other State FFA Degree recipients were recognized for excellence in production agriculture and agribusiness. Gold winners in production agriculture were: Matt Smego - Cassopolis Jason Winter - Dundee Julie Gleason - Gladwin Jenny Wheeler - Lakers Andy Zagata - USA

State Farmer Silver recipients in the area of production agriculture were:

Luke Haywood and "Belle"



- Mike Stanke - Charlotte
- Beth McNeilly - Chippewa Hills
- Jolene Pennington - Lakewood
- Brian Corbitt - Saline
- Jeremy Haag - USA
- Clint Hagen - Ubley

In the agribusiness category, gold award winners were:
Edward Smith - Caledonia
Edward Dorrance, Jr. - Corunna
Denise Winter - Dundee
Daniel Webb - Mason
Leann Kittendorf - Webberville

Silver agribusiness award recipients were:
Angela D. Baratta - BACC
Erin Adams - Ionia
Jolyn Hunter - Perry-Morrice
Kyle Kauffman - Sandusky
Lorin Chamberlain - Webberville

Continued on page 16 see
State FFA Winners

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- Four-Year Majors -

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- Agriscience
- Animal Science
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01 Farm Machinery

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Discussion Topic for May -- Tourism and Agriculture

Michigan is one of the major tourist destinations of the Midwest. With thousands of miles of beaches and millions of acres of park and forestland, our state provides a vast array of outdoor entertainment options.

But Michigan is also the most diversified agricultural region in the Midwest. A wide range of crops is produced in or around the same tourist attractions that lure visitors to the state. Over the years, many farmers have taken advantage of this situation by developing a variety of agricultural tourism activities. Maple syrup production and blossom tours take place in the spring. Fruit and vegetable markets and "pick-your-own" operations fill the summer and fall months.

Christmas tree farms draw folks out in the winter. And ag-oriented bed and breakfast facilities provide people with year-round encounters with the rural way of life. These activities offer real opportunities for creative engagement between the people who work the land and the people who visit to enjoy our natural wonders.

Some compromises have had to be made to help ensure the compatibility of tourism and agriculture. One example involves Farm Bureau's successful efforts in the passage of the Michigan Trailways Act. The Act provides some parameters that allow peaceful coexistence between users of "rails to trails" and the adjacent private property owners. For instance, the Act provides for protective fencing and agricultural crossings. It also permits a trail to be temporarily shut down for farm spraying.

The Act is designed to help minimize potential conflicts between users and property owners. Many property owners have even found that an established and regulated trail is a much better alternative to the previous abandoned rail bed. And the traffic on the trails can offer more marketing opportunities for ag products and rural/urban interchange.

Future cooperation between agricultural and tourism interests depends upon developing a sense of mutual understanding and cooperation. There will always be points of potential conflict:

Should forests be harvested or managed primarily for recreational uses? How can wetlands be properly maintained to meet the needs of both agricultural drainage and wildlife? What is the proper allocation of transportation funding for the needs of agricultural shipping and tourist travel? But despite the possible conflicts, there are also many opportunities for agriculture, tourism and natural resources to work together on behalf of common interests, such as containing urban sprawl.

Michigan Farm Bureau is participating in one of these cooperative efforts through its involvement in Resources 2000, a project funded by a grant from the Soil Conservation Service. Resources 2000 is designed to demonstrate potential collaboration between agriculture, tourism, forestry and environmental interests. The program should result in recommendations being made for funding programs to protect these related industries.

Michigan has a bright future as a destination for tourists and as a prosperous agricultural producer. But successfully realizing that future will require a willingness to find intersections of interests between recreational groups and farmers. Much of that willingness has been demonstrated around the state. People with a cooperative spirit will continue to seek out areas of commonality.

Discussion Questions:

1. What opportunities are there for cooperation between tourism and agriculture in your community?
2. What are some ways farmers can use the tourism industry to their advantage?
3. What precautions should be taken when examining a venture that combines agriculture and tourism?
4. What resources are needed to make a profitable and successful combination of agriculture and tourism?
5. How can Farm Bureau help?

DAIRY OUTLOOK

Dr. Larry G. Hamm, Dept. of Agricultural Economics, MSU

The good dairy market news is getting better. Recent price increases on the National Cheese Exchange virtually assure that farm pay prices will continue to increase in the months ahead.

The short milk supply situation in the upper Midwest is driving fierce competition for available milk supplies. This has held the Minnesota-Wisconsin (M-W) up this winter. It appears that the M-W has bottomed out for the time being at \$12.41 per cwt. in February.

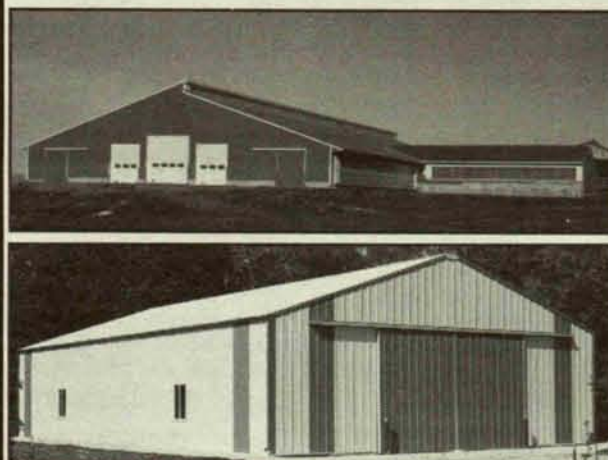
The more limited supplies of milk have limited cheese production also. Lower cheese production has tightened cheese markets. The price of cheese at Green Bay has risen over the last six weeks. Cheese in 40-pound blocks is now trading over \$1.39 a pound. Barrel cheese is at \$1.37

per pound. The prices are 9 cents higher than at the beginning of the year. The rule of thumb where a penny on cheese means 10 cents on the farm suggests more M-W strength.

The recent cheese market strength has not yet worked itself into the M-W. The March M-W will likely rise close to 50 cents per cwt. It is now likely that the M-W will reach \$13.00 or more yet this spring. The industry has not experienced a M-W over \$13.00 since 1990.

Farm pay prices, after a slight drop recently, will rebound. Michigan producers will see the strongest pay prices in several years. Prices will likely peak and start falling in early fall. But that news can wait. After this long and hard winter, enjoying the current increasing price situation is in order.

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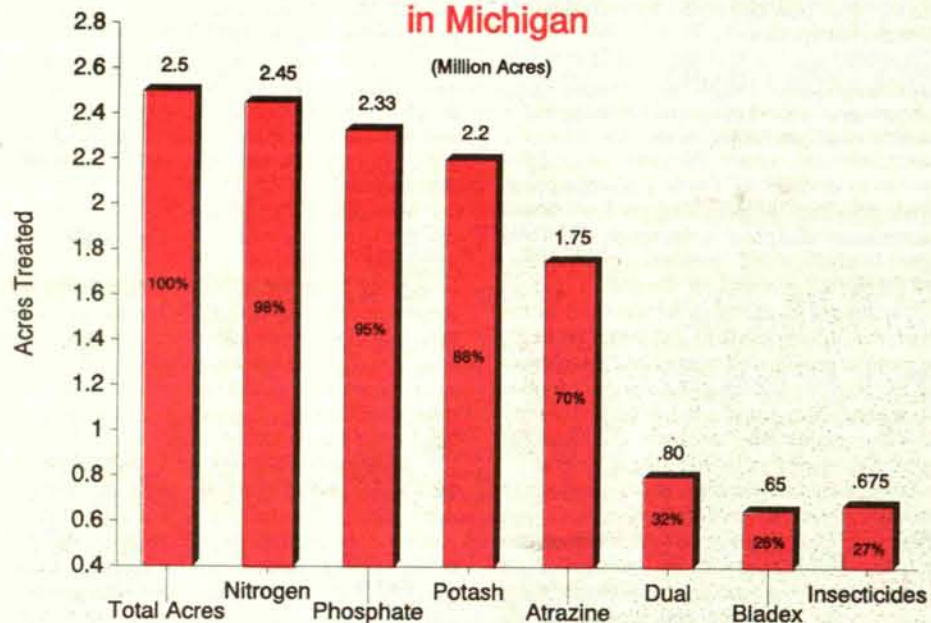
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Michigan 1993 Corn and Potato Chemical Use Survey Results Released by MDA

1993 Chemical Use on Corn in Michigan



Of the estimated 2.5 million Michigan acres planted to corn in 1993, a full 98 percent received an application of nitrogen an average of 1.9 times for a total rate of 118 pounds per acre, according to the recently released Agricultural Chemical Usage Survey compiled by the Michigan Ag Statistics Service.

Nearly 93 percent of those corn acres received an average 53 pounds of phosphate, while 88 percent of the same acreage received nearly 83 pounds per acre of potash.

Herbicides were used on 98 percent of the corn acreage, with atrazine the chemical of choice on 70 percent of Michigan corn acreage in 1993.

Dual and Bladex were the second and third most common chemicals used at 32 and 26 percent respectively. Meanwhile 27 percent of the corn acreage was treated with insecticide.

Nearly all of the 40,000 Michigan potato acres received nitrogen and phosphates, while nearly 97 percent were served an application of potash. Nearly 90 percent of the potato acres were treated with herbicides, while insecticides and fungicides were used on 100 percent of the acreage.

An estimated 61 percent of Michigan's potato acreage was treated with desiccants. The most commonly used herbicide was Dual used on 68 percent, while the most common insecticide, Phosmet, was used on 70 percent. Mancozeb was the preferred fungicide with 84 percent of the acres receiving treatment.

Nationally, nitrogen was applied on 97 percent of the corn acreage at a rate of 125 pounds per acre.

Phosphate and potash was applied to 82 percent and 69 percent of the acres respectively. Atrazine was again the preferred herbicide on a full 69 percent of the corn acreage.

State FFA Winners ...

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Proficiency Award Winners

State awards were also presented to FFA members who have demonstrated exceptional proficiency in 10 areas of production agriculture, agribusiness, and natural resources. Selection was based on the skills, knowledge and leadership ability.

- The state winners by category were:
- Dairy Production - Luke Haywood, Hastings Chapter
 - Diversified Crop - Darcy Haag, USA
 - Horse Management - Charla Smith, Alma
 - Placement in Agriculture - Mike Allen, St. Louis
 - Beef Production - Ryan Kuhl, USA
 - Specialty Crop - Scott Reithel, USA
 - Diversified Livestock - Andy Zagata, USA
 - Ag Sales and Service - Chad Bischoff, Marshall
 - Poultry Production - Mike Hoagg, USA
 - Swine Production - Chad Benjamin, Webberville

Outstanding Juniors

Fifty-nine FFA members from across the state also received the Outstanding Junior Agricultural Award. The award, sponsored by the Michigan Association of FFA and the Alpha Gamma Rho Fraternity, recognizes high school juniors who have demonstrated outstanding leadership qualities.

Of the 59 winners selected from 96 applicants, a state winner and two runner-ups were named. Troy Bowman of the Caledonia FFA Chapter was named the 1994 state winner. Troy will receive a \$200 scholarship upon enrollment at MSU. Runner-ups in the contest were Matthew Keefer of the Laker FFA Chapter, and Wayne Smith of the Laingsburg FFA Chapter. Each will receive a \$100 scholarship to MSU.

- Other Outstanding Juniors, by chapter were:
- Alma.....Jason Lee Cary, Trevor L. Schaeffer
 - Alpena.....Melinda Cripps
 - BACC.....Edward Reif
 - Breckenridge.....Jason Westall
 - Byron.....Keith Adams, Brad Ritter, Kevin Smith, Matt Streeter
 - Caledonia.....B.J. Welton
 - Coopersville.....Nick VandDenBrink
 - Corunna.....Scott Janicek
 - Durand.....Kim Tomasek
 - Fennville.....Erick Andry
 - Fremont.....Jane Bennet, Brad Hinton, Prudence Lubbers, Charlotte Sanborn, Georgia Stroven
 - Grant.....Missy Arends
 - Homer.....Gary Hughes Jr., Derek Williams
 - Hopkins.....Greg VanKlumpenberg
 - Laingsburg.....Carolyn Alwin, Chris Smith
 - Laker.....Danielle Dumaw, Matt Esch, Sheila Iseler, Heath Krohn, Rachael Krohn, Jeffery Talaski
 - Lakewood.....Rebecca Vandermeer
 - Lowell.....Loren Kaeb, Krista Posthumus
 - Marshall.....Andrea Boughton
 - Mason.....Derek Crowl, Sarah Miller
 - Montague.....Brian Wernstrom
 - North Huron.....Thomas Horetski, Daniel Thuemmel, Lori Ventline
 - Ogemaw Heights.....Brian Devine
 - River Valley.....JillAnn Jelinek
 - Saline.....Jeffrey Feldkamp II, Nathan Girbach
 - Sand Creek.....Carrie Griffith
 - Saranac.....Bradley Wittenbach
 - Standish-Sterling.....Karen Wilson
 - St. Louis.....Robb Mikek, Jeremy Most, Leslie Siefka
 - USA.....Terri Bell, Jennifer Bitterling, Darcy Haag, Michael Hoagg

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