

# MICHIGAN FARM NEWS



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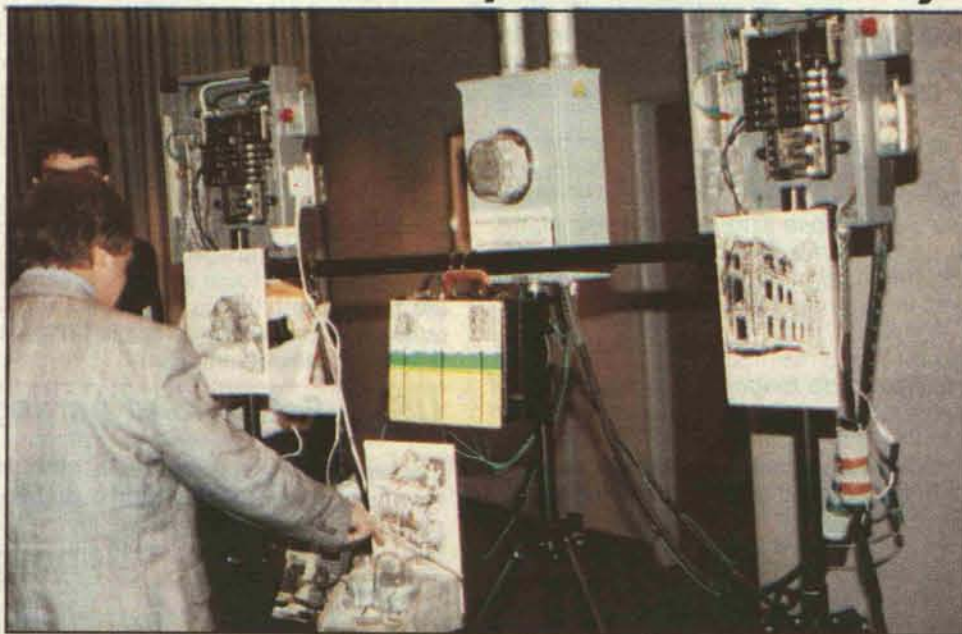
## Consumers Power Announces Comprehensive Stray Voltage Campaign

At a recent Michigan State University meeting, Consumers Power Company unveiled their game plan to address the stray voltage issue head-on with their 2,000 Michigan dairy farm customers. Their strategy includes providing a six-member staff to provide on-farm inspection services, and a direct mailing of an information packet on stray voltage, complete with a video and technical bulletin.

"Stray voltage or neutral to earth voltage is a natural phenomenon that's going to be there," said Dave Joos of Consumers Power. "It's often not a problem. But if the current associated with the stray voltage gets to levels that affect animal behavior, it clearly can affect the way your farm operates and the productivity you get from those animals."

After several contacts with various organizations, including MFB, the company has adapted a "radically new approach" to the whole stray voltage issue, according to Jim Schrandt, power quality director of Consumers Power. "This company has taken the position of solving the customer's stray voltage problem, however it's getting there," said Schrandt. "In the past, farmers were often on their own."

Through the use of a 1-800 hotline number, (1-800-252-VOLT) Consumers Power is planning to respond to customer concerns and questions on stray voltage through one of six farm inspectors. In addition, Consumers Power plans on visiting all 2,000 of their dairy farm customers during the next three year period.



Those attending the Consumers Power meeting were able to experience the tingle livestock can experience with stray voltage, thanks to an educational demonstration built by MSU's Dr. Truman Surbrook.

"We have expanded our on-farm investigation services to identify conditions whether they be from a utility system or from the on-farm distribution system," explained Schrandt. "Once we identify the sources, we'll work to correct it."

"If it's coming from the utility system, we will take action to reduce the contribution. If it's coming from the customer system or from other sources, we'll recom-

mend action that can be taken to reduce the contribution."

According to Schrandt, the on-farm investigation services may include, when necessary, the use of data logging equipment to record several different data points over a period of time to identify just what and where the stray voltage is coming from.

"The investigations at the farm are really the most important part of the program -

that's where we can solve the problem," said Schrandt. "We have selected six professionals who will be dedicating 100 percent of their time to responding and investigating on-farm stray voltage."

The on-farm inspectors, according to Schrandt, will not only conduct stray voltage investigations, they'll also be filling an educational role by providing farmers with technical information and helping them understand what can cause stray voltage.

"We selected these people with two primary criteria in mind," said Schrandt. "One is that they have a farm-related background so that they'll understand the farmer's concerns and be able to relate with that farmer. Secondly, we wanted people, obviously, who had training or a background in electrical troubleshooting, so they could do testing and analyze data."

Consumers Power is also planning to schedule a number of educational meetings across the state in the near future in cooperation with Dr. Truman Surbrook of MSU's Ag Engineering Department. Surbrook has been working with Consumers Power to develop the educational material in their stray voltage campaign.

"We'd like to reach a point where the farm community will include checking for stray voltage as a part of their normal farm management practices," said Joos. "We're going to be there as long as there's a problem, and we'll keep working with the farm customers until they are satisfied that we have resolved their problem."

## Proposal A Defeat Sends Property Tax Reform Back to the Drawing Board

The defeat of Proposal A narrows the options, but Farm Bureau will continue to pursue school finance reform.

"As we look at cutting property taxes, there are several options to consider," said Ron Nelson, legislative counsel for Michigan Farm Bureau. "One possibility is to simply cut and not replace the revenue. If the cut is significant - ten percent or greater - we're assuming that the cut will be absorbed by

government and schools. That is not a very popular or practical option.

"Another alternative is to replace a part of the revenue. In other words, if the property tax was cut 20 percent, revenue would be found to replace that at the rate of ten percent. It would be a net gain of ten percent to the taxpayer. That's assuming that counties, townships and schools can absorb a ten percent cut."

A third option, according to Nelson, is to replace all or most of the lost revenue, as Proposal A would have done. "But the defeat of Proposal A really narrows the sources of revenue to the state income tax. And politically, at least from the discussions I have heard, there is no visible support for increasing the state income tax," he said.

One ominous option from agriculture's standpoint is the suggestion that revenue could be increased by removing exemptions from, for example, the sales tax.

"That is a possibility," said Nelson. "It will replace lost revenue. But if that is the avenue taken by the Legislature, it will be very controversial. Those exemptions and credits have been fought for and won over the years based usually on the argument that the tax is disproportionate to that particular taxpayer or group of taxpayers."

Farm Bureau policy calls for a shift from the property tax to some other sources of revenue in order to fund K-12 education.

The policy also calls for more equitable school funding.

"Farm Bureau members are to be commended for their efforts in trying to pass

Proposal A," Nelson said. "We will continue to work with the Legislature and the governor to achieve the school finance reform and property tax relief specified in our member-developed policy."

### Ag Expo Field Demonstration Preparations Well Underway!

Several no-till planters and drills as well as this machine, the Trans-Till manufactured by Row Tech, Inc., were on the Michigan State University campus in late May, preparing the field demonstration sites for Ag Expo 93, scheduled July 13-15. For more information on this year's event, be sure to see and save the Michigan Farm News 1993 Ag Expo Extra for your trip to Michigan's premier farm show.





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## School Finance Reform Still A Priority For Michigan

It is very unfortunate that Michigan voters turned down Proposal A. It is unfortunate for rural school districts that now will not benefit from the school finance reform contained in Proposal A. And it is unfortunate for property owners who once again have seen their hopes for property tax relief dashed.

We have tried in this state for at least the last 20 years to address the property tax issue, and this proposal, even though obviously it wasn't perfect - and there won't be a perfect proposal - was, in my opinion, the best opportunity that we had seen.

Your Farm Bureau will continue to pursue school finance reform. The members of our organization still support their policy that says we should shift the burden of financing education from the traditional property tax to some other form of revenue. I think it's time to regroup and look at how we propose and promote this issue. Certainly the issue of trust was one that came to the forefront. This proposal, involving as it did a change in the state constitution, should have assured that trust but apparently it didn't answer the questions. So we need to review that and go on from here.

The ownership of property, especially farmland, is no longer a good measure of the ability to pay taxes. As farmers' profit margins narrow, the increasing burden of property taxes really is a factor behind trying to shift some of the responsibility for school finance to other areas. So, while school finances and property tax relief are the centerpiece of our concern, in a broader sense, we're talking about potential for economic growth. High property taxes are a drag on the rural, suburban and urban economy in this state. The sooner we can remove that anchor, the sooner we'll unleash the economic potential that will benefit all Michigan citizens.

In the 1920s, the infant Farm Bureau fought another tax battle - a fight to remove from property owners the crushing burden of financing local roads. Overcoming bitter opposition from Gov. Groesbeck, Farm Bureau persevered and prevailed in gaining approval of a gas tax that equitably shared the burden of road construction.

In the 1990s, farmers are again fighting for property tax equity. Once again, it will take persistence to win the battle. The defeat of Proposal A was but a temporary setback. I'm convinced that our organization, armed with our solid and logical grassroot policy, will eventually prevail in the struggle for school finance and property tax reform.

*Jack Laurie*  
Jack Laurie, President  
Michigan Farm Bureau

## USDA Proposes New Milk Pricing System

The USDA is proposing a new pricing system for raw milk intended to be used to make nonfat dry milk, according to the Associated Press. Under the proposed regulations, the price of such milk would no longer be based on the price of manufacturing-grade milk in Minnesota and Wisconsin which is used to make cheese.

According to the department, during periods of high demand for cheese, the cost for milk used for nonfat dry milk also rose, causing processors of dry milk to lose money. Under the new rules, a minimum price would be established based on prices in Western states, where 60 percent of the nation's powdered milk is produced. The pricing change already has been in effect since Nov. 3, 1992, in New England, the Middle Atlantic and Northwest.

## Board of Trade Soon to Open an Hour Earlier

Traders on the Chicago Board of Trade (CBOT) may have to start getting up an hour earlier as the members of the exchange have voted to open trading of agricultural futures and options contracts at 8:30 a.m. instead of the present 9:30 a.m. starting time. The 1:15 p.m. closing time will remain the same. No date has yet been set for the new hours to begin as the decision must still be approved by the Commodity Futures Trading Commission, which regulates the exchanges.

The CBOT action was followed by similar decisions by the Mid America Commodity Exchange and the Kansas City Board of Trade. Officials of the exchanges say the extended hours will allow for more international participation in the markets.

## Veggie Dogs Don't Play Well in St. Louis

The St. Louis *Post-Dispatch* reports that when former Beetle Paul McCartney held a concert in Busch Stadium a few weeks ago, concession stands were ordered to sell vegetarian hot dogs at the entertainer's request. There were 42,000 people at the concert and they bought only 100 of the veggie delicacies.

McCartney apparently did not get the message, reports the *Post-Dispatch*. He is now scheduled to play in Milwaukee's County Stadium and is insisting on a ban of meat products and the sale of veggie dogs. Said the concession manager of the first major league ball park to offer bratwurst, "Let's just say it's a good thing we're not getting rid of all of our meat products, because I don't think this will be too popular."

## New Meat Inspectors Ready To Train

Even though Congress hasn't yet supplied the money, about 160 new meat and poultry inspectors soon will begin training. Agriculture Secretary Mike Espy announced the additional hirings in February, responding to the contaminated meat incident in the Pacific Northwest.

## In Brief...

### ASCS Reminds Farmers of Important July 1 Deadline

July 1, 1993, is the final date for farmers to certify their 1993 planted acres with their local ASCS office. Any program acreage that "failed" or was prevented from being planted should also be reported to the county ASCS office when it becomes apparent that the crop will fail to be planted.

Producers are reminded that it is extremely important to certify their acreages, especially if they are participating in the 1993 Wheat and Feed Grains or Conservation Reserve Program. Even farmers who planted "zero" acres should report to the ASCS in order to protect their crop bases for future years. Producers with any questions should contact their local ASCS office for more information.

### Congressman Nick Smith on House Ag Committee

Michigan Congressman Nick Smith has been asked to serve on the House Agriculture Committee and MFB enthusiastically endorsed that appointment. "Farm Bureau is exceptionally pleased with the announcement that Michigan will again have a representative on the House Agriculture Committee," said MFB Public Affairs Director Al Almy. "Michigan is one of the top ag states in the nation. We rank third or higher in the production of 11 different commodities."

Congressman Smith has deep experience in agriculture. He owns, and operated for many years, a farm in Hillsdale County and served in the Michigan Legislature as a member and chairman of the House and Senate agriculture committees. With the upcoming debate on the 1995 farm bill, this experience will prove to be very valuable. Congressman Smith replaces Michigan Congressman Dave Camp, who accepted an appointment to the House Ways & Means Committee.

### USDA Sets Wheat Acreage Reduction At Zero

The zero acreage reduction for the 1994 wheat crop announced recently was in accord with recommendations of most farm organizations, including the AFBF. In allowing farmers to plant their entire wheat acreage base without losing eligibility for farm program benefits, the USDA came down on the side of keeping American wheat competitive on world markets, according to a Spark's Company Policy Report.

The department also said it will leave the target price for wheat at \$4 a bushel, the same as for the 1993 crop and said there will not be a paid land diversion program. Still under consideration is the loan rate for the 1994 crop. The department says the loan and purchase price level is a matter of continuing attention in the administration as Agriculture Secretary Mike Espy looks for ways to show the administration wants to increase farm income.

### Bills Would Restrict Use of BST

Legislators wishing to keep bovine somatotropin from going on the market have introduced a variety of legislation either to create a moratorium on its use, separately label its product, or to tax users of the controversial growth hormone.

Companion bills in the U.S. House and Senate, H.R. 1904 and S. 734, entitled the Bovine Growth Hormone Moratorium Act of 1993, would cause the USDA to study the effects of BST on the dairy industry and its price support system, meanwhile prohibiting the sale of milk from BST treated cows. Other measures would require labeling of dairy products from BST-treated cows (S. 735 and H.R. 1906) or assess users of BST (S. 736 and H.R. 1905). None of these pieces of legislation are currently moving in either house of Congress, says MFB dairy specialist Kevin Kirk.

MFB opposes the labeling of milk and other dairy products from cows receiving BST, since it is naturally occurring, said Kirk. MFB does support BST use as a management tool for the dairy industry, provided it receives FDA approval, and farmers are educated about its effective use by Michigan State University and the Michigan Department of Agriculture.

### Canada's Health Care System Headed For Trouble

Soaring costs in the past decade have been dragging down Canada's national health care system, often cited as a model for health care reform in the United States, according to a recent article in the *Chicago Sun-Times*.

It seems Canada's federal government, desperate to control its budget deficit, is cutting back on reimbursement to doctors who practice privately, then bill the government insurance plans for their free services.

Provincial governments are trying to compensate for the shortfall with spending restrictions on health care. Ontario, Canada's most populous province, has experienced a 10.5 percent annual growth in health care costs for the past decade. In its 1993 budget, Ontario announced \$1.25 billion in reductions for health care expenditures.

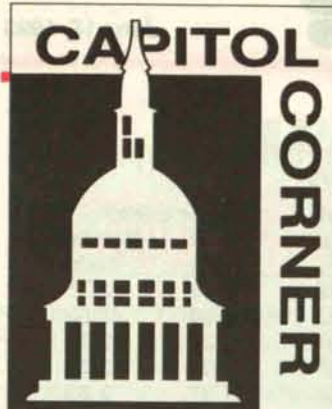
"If we had continued to allow spending to grow out of control, we would lose Medicare," said Ruth Grier, Ontario health minister. Some candidates to replace retiring Prime Minister Brian Mulroney are proposing user fees for health care as one way to meet the crisis.

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**Federal Budget Bill to Cost \$2,500 Per Farmer**

**MFB Position:** Farm Bureau strongly opposed H.R. 2264. The bill now goes to the U.S. Senate where floor action is expected the week of June 21 or June 28.

**Action Needed:** If your U.S. Representative voted against H.R. 2264, write and thank him for opposing the tax increases. Contact U.S. Sens. Don Riegle and Carl Levin and request them to oppose tax increases when the budget reconciliation package reaches the Senate.

**MFB Contact:** Al Almy, Ext. 2040

On May 27, the U.S. House of Representatives voted to approve President Clinton's budget reconciliation package, H.R. 2264, by a party line vote of 219 to 213. All of Michigan's congressmen who are Democrats voted for the bill, while all Republicans voted against the bill.

The bill contains nearly \$3 billion in spending cuts for agriculture and imposes a BTU tax, a barge tax and a dyed fuels provision, all of which will affect agriculture.

Economists with the AFBF estimate a typical farmer will experience an income reduction of about \$2,500 per year as a result of the BTU tax and adjustments in farm program provisions. Overall energy costs for agriculture will increase \$992 million per year and farm cash receipts will decline more than \$700 million annually.

Efforts to lower the BTU tax for diesel fuel and gasoline used on the farm were successful but will result in farmers paying \$119 million annually in higher direct energy costs. The 50 cent per gallon barge fuel tax will cost farmers about \$150 million per year as a result of lower grain prices to reflect the higher barge transportation costs.

The tax package also continues the 2.5 cent per gallon special tax on fuel which was set to expire Sept. 30, 1995. The 2.5 cent tax was imposed by Congress in 1990 as a revenue source for the general fund. This will cost agriculture an additional \$105 million. There is no off-road use exemption from either the BTU tax or the 2.5 cent special tax.

The remainder of the energy tax cost to agriculture comes from other farm fuels including natural gas and propane plus higher indirect costs such as electricity, chemicals and fertilizers.

The dyed fuel provision requires diesel fuel used for off-road purposes to be dyed and kept separate from diesel fuel used for on-road purposes. It is estimated farmers will pay \$70 million in higher costs to install new diesel fuel storage tanks and equipment to separate the off-road fuel.

**Resolution to Voice Opposition to H.R.1173 (Agricultural Worker Protection Reform Act of 1993)**

**MFB Position:** MFB strongly supports H.C.R. 139 and the efforts of the co-sponsors. MFB strongly opposes H.R. 1173 as introduced in the U.S. Congress by Michigan Congressman William Ford (D-Ypsilanti).

**Action Needed:** Thank the co-sponsors of H.C.R. 139 for their efforts and contact your U.S. Congressman and Senators and voice your opposition to H.R. 1173.

**MFB Contact:** Howard Kelly, Ext. 2044

Rep. Carl Gnodtke (R-Sawyer), Rep. Gary Randall (well), and Rep. Robert Bender (R-Middleville), introduced House Concurrent Resolution 139 asking Congress to reject H.R. 1173, the proposed Agricultural Worker Protection Reform Act of 1993.

Rep. Gnodtke, chair of the House Agriculture & Forestry Committee and sponsor of H.C.R. 139, said, "The intent of H.R.1173 is misguided... No one wants to see migrant and seasonal workers placed at risk or taken advantage of, but the provisions of this act are so restrictive and punitive that our farmers would be hog-tied and unable to conduct business."

Gnodtke also said, "The needlessly expanded legal rights and changes in employment status and requirements raise questions as to whether small farms and businesses could survive financially. To enforce new laws that have no bearing on our unique state or the types of workers and farms found here is to cripple a vital industry. These amendments are unwarranted and we urge Congress to reject this proposed bill."

H.C.R. 139 passed both the Michigan House and Senate and a copy has been sent to the Michigan congressional delegation, president of the United States Senate (Vice President Al Gore) and speaker of the U.S. House of Representatives.

**Headlight Use During Precipitation**

**MFB Position:** MFB supports the use of headlights during precipitation.

**MFB Contact:** Darcy Cypher, Ext. 2048

S. B. 81, sponsored by Sen. George McManus (R-Traverse City), would expand Michigan's current law to require that headlights be used during any type of precipitation that impairs visibility, such as rain, fog, and snow.

Presently, vehicle headlights are required from one-half hour after sunset to 1/2 hour before sunrise and when there is not enough light to clearly see persons and vehicles on the highway at a distance of 500 feet.

Other states that require headlight use during bad weather have found that vehicle collisions have been reduced by 15 percent. The Senate passed the bill and, if the House agrees, the law would take effect on Jan. 1, 1994.

**Michigan Truck Deregulation**

**MFB Position:** MFB supports economic de-regulation of Michigan trucking. De-regulation eliminates unnecessary and costly rules, promotes competition, reduces hauling costs for businesses which today are forced to haul thousands of empty miles at artificially inflated rates. Deregulation will ultimately reduce costs to consumers.

**MFB Contact:** Darcy Cypher, Ext. 2048

Senate Bill 582, sponsored by SenS. Honigman (R-West Bloomfield), Gast (R-St. Joseph) and Geake (R-Northville), would eliminate Michigan's economic regulation of trucking routes and rates.

The Public Service Commission (PSC) would continue to supervise and regulate the safety of hauling operations. The state's current system requires the PSC to review and authorize shipping routes, rates, and cargo which can be hauled.

The present law provides for a limited hauling exemption for agriculture. The exemption allows farmers to haul their own:

- 1) raw products from farm to market;
- 2) feed; and
- 3) farm supplies.

Agriculture, like other businesses, cannot backhaul unless the backhaul meets one of the few stated exemptions and cannot haul for hire without PSC authorization.

S.B. 582 has been reported out of the Senate Labor Committee by a three to two vote and is expected to be taken up on the Senate floor sometime in June.

**Farm Bureau Members, Kick Back and Relax!**

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

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

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

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



**'93 Summerfest Ticket Order Form**

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City/State/Zip \_\_\_\_\_  
 County \_\_\_\_\_

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

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





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# Weather

## 90-Day Forecast - Cooler and Wetter Than Normal

Many people, including myself, would describe May weather this year as cool and dry. The statistics, however, tell a somewhat different story. While the majority of the state did average below normal in terms of precipitation (the exception being scattered areas of the Upper Peninsula), the actual mean temperature for the month was near to slightly above normal in almost all locations.

This was the result of abnormal warmth throughout the state during the second week of the month, when maximum temperatures approached the 90 degree mark, acting to statistically cancel out a number of cloudy, cool days during the remainder of the month. More interestingly, and of greater relevance to agriculture, degree day totals for the month turned out to be below normal for many locations in the state (this is the first time I personally have seen such disagreement between the mean temperature and the accompanying GDD totals).

This also was because of a greater than normal number of cloudy, cool days and low maximum temperatures which generally resulted in less overall time spent above the base temperature and subsequently less GDD accumulation.

With the summer of 1992 still fresh in many memories and recent cool temperatures causing growing degree day accumulations to fall behind normal, the new National Weather Service long range outlooks will likely cause some concern, with temperatures during June and the June-August period expected to continue below normal.

5/1/93 to 5/31/93	Temperature		Growing Degree Days		Precipitation	
	Observed Mean	Dev. From Normal	Actual Accum.	Normal Accum.	Actual (inch.)	Normal (inch.)
Alpena	51.7	-0.4	192	280	2.49	2.76
Bad Axe	54.6	-0.9	257	385	2.54	2.63
Detroit	60.3	+1.8	474	434	1.24	2.85
Escanaba	50.6	+0.2	104	164	4.52	3.01
Flint	58.3	+1.7	398	434	1.67	2.85
Grand Rapids	58.8	+1.1	383	466	2.17	3.01
Houghton	50.2	+0.8	129	253	3.26	3.37
Houghton Lake	55.1	+0.7	276	280	2.50	2.76
Jackson	58.3	-0.3	393	455	1.32	2.92
Lansing	58.3	+0.9	392	455	1.39	2.92
Marquette	50.5	+0.2	164	253	4.53	3.37
Muskegon	57.7	+1.5	352	367	2.36	2.67
Pellston	52.0	+0.4	201	301	1.75	2.61
Saginaw	57.5	+0.5	328	385	2.30	2.63
Sault Ste. Marie	49.1	-0.5	114	164	4.16	3.01
South Bend	61.7	+2.6	504	466	2.35	3.01
Traverse City	54.4	+1.3	261	301	2.23	2.61
Vestaburg	55.9	-1.0	306	391	3.23	2.79

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

### Michigan and Major Commodity Area Extended Weather Outlook

T - Temp.	6/15.....6/30	6/15.....8/31
P - Precip.	T.....P	T.....P
Michigan	B.....N	B.....A
W. Corn Belt	B.....A	B.....A
E. Corn Belt	B.....B	N.....N
Wint. Wheat Belt	N.....A	B.....N/A
Spr. Wheat Belt	B.....N	N.....N
Pac. NW Wheat	A.....A	A.....N
Delta	N/A.....A	N.....N
Southeast	N.....N	A.....N
San Joaquin	N.....N	A.....N

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

## Rootworms May Strike Corn Crop Twice This Season

Each spring, rootworm larvae hatch and feed on corn roots in many fields. Later in the season, as the larvae and corn crop mature, rootworm beetles may clip silks, preventing pollination.

Dean Grundman, Northrup King Co. agronomist in Iowa, says corn growers especially need to monitor rootworm activity as management practices change.

Grundman recommends scouting for rootworm larvae when growers suspect a problem in first-year corn, if they didn't apply an insecticide on continuous corn, or when changing management practices may favor rootworm activity.

Digging and comparing corn roots from suspect fields with healthy roots from undamaged fields is the best way to identify rootworm feeding.

Growers can also more easily identify the small white larvae by shaking soil from the roots onto a dark garbage bag. Grundman says the presence of one rootworm per plant warrants an at-cultivation insecticide treatment.

As corn plants begin pollinating, growers should scout for silk clipping by the adult rootworm beetle. At this time, the beetles are active and are also laying eggs, which will hatch the following season.

Treating beetles to prevent silk clipping is usually only necessary when beetles keep silks clipped to less than one-half inch beyond the husk. This usually occurs during heavy infestations or drought conditions, since silks can grow up to three inches each day.

Grundman recommends growers contact their local agronomist, university Extension specialist or ag supplier for rootworm treatment recommendations.

## Midwest Planting and Crop Development Reports - Looking for Heat Units!

### - Michigan -

Drier weather helped move planting and tillage to five-year average levels for most parts of the state, as of June 8, according to the Michigan Agricultural Statistics Service. Temperatures, however, remained far below average, with frosts reported across the state for the second week in a row.

Corn planted had increased to 97 percent complete, with emergence reported as 65 percent, well behind the five-year average of 85 percent.

Soys were 85 percent planted, with 40 percent reported emerged. Sugarbeet development hadn't been significantly affected by the cooler than normal temperatures. Potato planting was nearly complete, with emergence lagging.

Hay harvest was 10 percent complete, with several reports of severe winter kill coming in from across the state. Winter wheat was 55 percent good to excellent, with an estimated 10 percent of the acreage being plowed down due to winter kill.

**Fruit** - The lack of growing degree days continued to slow fruit development. Chemical thinning was very heavy with powdery mildew sighted in several blocks. Grapes were at pre-bloom, and blueberries were in late petal fall.

Apples development ranged from petal fall in the northwest to 15 mm in diameter in the Southwest. Tart cherries were at early shuck split in the Northwest and were beginning pit hardening in the Southwest.

**Vegetables** - Vegetable development also remained behind normal. Asparagus harvest had advanced to 85 percent complete

statewide. Reported frost damage was minimal.

Late carrot planting was almost complete. Sweet corn planting in the Southwest continued, with growth reported as slow.

Pepper transplanting picked up with some farmers expressing concern over cool temperatures. Tomato transplanting was nearing completion in most areas.

### - Ohio -

Corn seeding was complete as of June 7, despite wet weather, according to the Ohio Agricultural Statistics Service. Corn was rated 14 percent excellent, 51 percent good, 30 percent fair, and 5 percent poor.

Soys were 93 percent planted, with 12 percent of the crop reported excellent, 48 percent good, 33 percent fair and 7 percent poor or very poor.

Winter wheat was 15 percent excellent, 46 percent good, 30 percent fair, and 9 percent poor or very poor. Powdery mildew and leaf beetle continued to be reported in several areas of the state. Nearly 80 percent of the crop was headed, on par with the five-year average of 79 percent.

Soil moisture supplies were rated 7 percent surplus, 69 percent adequate, and 24 percent short.

### - Indiana -

Corn planting was nearly complete, at 98 percent compared to 94 percent on average as of June 7, according to the Indiana Agricultural Statistics Service. The crop was rated 1 percent excellent, 52 percent good, 44 percent fair, and 3 percent poor.

Soybean planting was 84 percent complete, compared with 75 percent on average. Crop condition was reported 2 percent excellent, 40 percent good, 53 percent fair, and 5 percent poor.

Seventy-four percent of the wheat crop was headed and 21 percent had reached the milk stage of development. Wheat crop conditions were 6 percent excellent, 71 percent good, 21 percent fair, and 2 percent poor.

Precipitation during June is forecast to range near to above normal in northwestern sections of the state, near to below normal in southeastern lower Michigan and near normal elsewhere.

If this forecast does verify, and we do experience conditions somewhat cooler and wetter than normal weather (i.e. not nearly as extreme as last summer), most crops will still perform adequately, albeit more slowly than in a normal year. As was the case last year, the cool, wet weather scenario is highly correlated with much above normal crop yields in the Cornbelt region as a whole.

Soil moisture levels were reported 33 percent surplus, 62 percent adequate and 5 percent short.

### - Illinois -

Corn planting was also nearly complete at 95 percent, compared to 97 percent on average as of June 7, according to the Illinois Agricultural Statistics Service. Crop condition was rated 4 percent excellent, 72 percent good, 23 percent fair, and 1 percent poor.

Soybean planting was 71 percent complete, compared to 93 percent on average. Crop condition ratings were not yet available.

Wheat was 93 percent headed, compared with 100 percent on average. The crop was rated 6 percent excellent, 67 percent good, and 27 percent fair.

Soil moisture levels were reported 28 percent surplus, 67 percent adequate, and 5 percent short.

### - Iowa -

Prolonged wet, cool conditions have slowed germination and delayed completion of corn planting which is estimated to be two weeks behind average at 88 percent complete as of June 7, according to the Iowa Agricultural Statistics Service. Two percent of the corn acreage had been replanted due to poor germination.

Sixty percent of the crop had emerged, compared to 93 percent on average. Corn was rated 1 percent excellent, 27 percent good, 59 percent fair, and 13 percent poor or very poor.

Soybean planting was 45 percent complete, compared with 100 percent on average, making this the slowest year for soybean planting since 1982. Only 10 percent of the soybeans had emerged, well behind the 88 percent average.

Soil moisture levels were reported 9 percent adequate, and 91 percent surplus. Subsoil moisture levels were 12 percent adequate and 88 percent surplus.



## Michigan Summer Farm Tours Abound!

### Michigan Professional Dairy Farm Tour - June 23, 9:30 a.m. to 5:15 p.m.

Meeting starts near Coopersville, at River Ridge Dairy Farm, featuring a double 12 Gossen parallel parlor on a 500 cow dairy operation producing 20,000 pounds of milk. Other tour stops include Valley View Farms to look at a double-8 rapid exit Germania herringbone and manure management facilities. The Elzinga farm stop will also look at a manure picket system used on a 60 cow operation with a 26,700 pound rolling herd average. The last stop will be at the Wayne and Kirk Haverdink farm to look at a new 130 cow curtain sidewall freestall barn nearing completion, and a Westfalia rapid exit double-8 parallel parlor.

Sponsored by the Ottawa County and Michigan State University Extension Service, Michigan Professional Dairy Farmers Association, Michigan Hay and Forage Council, Agricultural Economics and Animal Science departments, Michigan State University. For more information contact MSU's Dr. Sherrill Nott at (517) 353-4522, or Ira Krupp at (616) 846-8250.

### 1993 Michigan State University Weed Tour - June 30, 8:15 a.m. to 4:30 p.m. MSU Crop Science Field Lab East Lansing

Morning tours will look at weed control in corn, dry beans, soybeans, and sugar beets at the MSU Crops Farm. Tour participants can choose from one of two tours for afternoon portion of the program. One tour will take place at the MSU Muck Research Farms to look at weed control in muck soils for mint, onions, carrots and celery. The other tour will focus on weed control options on mineral soils at the MSU Horticulture Farms for crops such as green beans, tomatoes, peppers and cover crops.

For more information, contact MSU Crop and Soil Science Department's Karen Renner at (517) 353-9429, or Linda Salemka (517) 353-3397.

### Michigan Cattlemen's Association 1993 Summer Roundup - July 16 and 17, Bad Axe

This annual event of the Michigan Cattlemen's Association will feature Bruce Bass, vice president of cattle procurement for IBP, Inc., Bass will address the intentions of IBP as cattle feeding becomes more intensified in the Kansas-Nebraska-Texas cattle feeding belt. Bass will also present producers with insight into the necessary grading changes being produced and IBP's stance on value-based marketing. Along with educational programs, the event will feature a prime rib banquet and tours of six area cattle operations.

For more information on the Summer Roundup, call the Michigan Cattlemen's Association at (517) 669-8589.

### Chicken Litter Sidedress Prototype in Works

Scientists at the University of Delaware plan to develop a machine that will sidedress crops with poultry litter.

Calibrated equipment is available to lay down commercial fertilizers in bands between rows but not poultry litter - a fertilizer in great abundance in Delaware.

Armed with \$25,000 in grants and a new manure spreader, the scientists expect to have a prototype ready to demonstrate next summer. Prototype plants include on-board poultry litter processing and metering to apply a uniform amount of nitrogen from pre-test manure.



"Fields of Tomorrow" Preview - July 22, 9 a.m. to 3 p.m. in St. Johns, Nobis Dairy Farm

Experienced no-till farmers and those considering making the transition to conservation tillage can preview innovative residue management techniques at this farmer

hosted field workshop and tour. Sponsored by Monsanto Company and free of charge, the tour will include presentations by experienced no-till farmers, Soil Conservation

Service, and major equipment dealers as well as Monsanto research and sales staff.

Topics will include: the economic benefits of no-till, new ideas for fertility challenges, successful weed and pest control, innovations in no-till equipment, and understanding no-till soil structure.

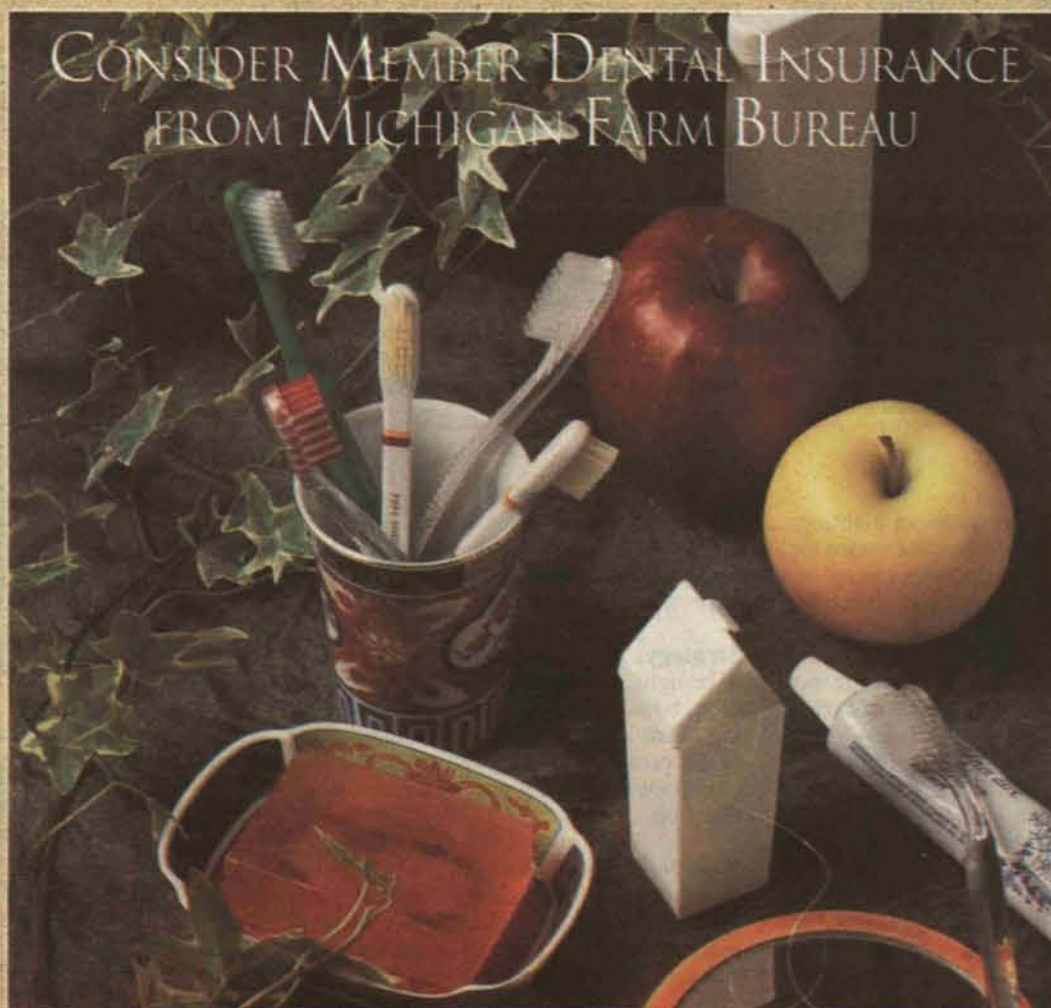
For more information, contact Monsanto by calling 1-800-ROUNDUP.

### Manure Management Field Day - Aug. 3 (rain date of Aug. 5) Kalamazoo County, Jan Vosburg Farm

Kalamazoo County Extension Service will be hosting a half day tour and field demonstrations at the Jan Vosburg Farm. Participants will see the latest equipment and technology available in dealing with the many challenges of manure management, and will focus on how nutrients can be successfully utilized.

For more information, contact Maury Kaercher at the Kalamazoo County Extension office at (616) 383-8830.

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County \_\_\_\_\_



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

## Corn

The corn is planted. Now the question is: is it growing? The odds are it will. People are comparing this year with last year. However, last year we had fairly timely planting. The problem last year was we had a wet, cool summer. The one constant in all of this is that prices this summer will follow the Corn Belt weather conditions.

Exports are still running strong, but there are signs shipments may be falling off if we don't get some new sales. As of early June, the Russian credit deal was still having trouble, partially due to the high costs of using U.S. flag ships. If that package is not wrapped up soon, it will cause a loss of corn exports this year and will increase ending stocks.

Writing this report the day after a big market crash makes it hard to be optimistic. Even with the five cent drop in prices on June 1, the prices are still at, or maybe even above, what fundamentals would suggest given a yield close to normal this fall.

Given the huge carryover we will have, it will take a significant yield drop to jack up prices to a profitable level. And that is only as long as the yield drop happens to somebody else.

## Wheat

Hopefully, wheat prices have hit their low. The winter wheat crop for the country as a whole looks very good. The spring wheat went in well, and harvest is hitting full swing in parts of the country. New crop export sales have been less than strong.

**Strategy:** At this point, there does not appear to be any good forward pricing oppor-

## Soybeans

As of the first of June, soybean plantings for the U.S. were only 45 percent versus the normal of over 60 percent. This means we will need a decent growing year to reach the trend yield.

The soybean sector, unlike corn, is not overburdened with large amounts of excess stocks. Just a bushel or two below trend would quickly tighten next year's supply versus likely demand. This does not mean I am projecting a large price increase, but rather the odds are better for a strong rally in soybeans versus corn.

Exports and new export sales continue to run stronger than needed to meet USDA projections for the 1992-93 marketing year which lasts until August 31. Part of this is

## Table Egg Market

Allan Rahn and Henry Larzelere, Dept. of Agricultural Economics, MSU  
Egg prices in late May were sharply recovering from their normal seasonal low. Prices (New York, Grade A, large white, in cartons, to retailers) had advanced to 73 cents per dozen, 8 cents above their mid May level and 15 cents over a year ago. Corn prices remain below year ago levels and continue to cut feed costs a little over a cent a dozen.

The Agricultural Statistics Service estimated that the size of the table egg flock on May 1 was 234 million birds, 1 percent more than a year ago. The reductions in spent hen slaughter this year--12 percent less than a year ago through May 12--have more than offset the cutback in replacement pullets hatched during the second half of 1992. Table egg production during April was unchanged, however, as the flock has more older birds and their reduced produc-

## Market Outlook...

### Seasonal Commodity Price Trends

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

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

The basis for both old and new crop are in the range of expectations. The near-term odds for upside price potential for old crop are decreasing due to the large projected ending stocks and the crop being planted with adequate moisture in most parts.

**Strategy:** New crop prices of \$2.05-2.10 are not particularly conducive to forward pricing even if prices may be lower this fall, especially for those who have already priced some. However, those who have not priced any new crop should consider pricing some with a 10-15 cent rally. And even those who have priced some may want to follow suit if prices rally beyond that.

opportunities for new crop wheat. The futures are on the lower side of what projected supply and demand would suggest and the new crop basis is also on the wide side of normal. Consider holding on more new crop sales for a rally. While there is still downside risk, the odds are a little higher for some upside movement in prices.

due to less exports than usual coming out of South America by this time of the year and part of it seems to be stronger than expected world demand.

**Strategy:** The basis for old crop continues to be tight. If you are still holding on to old crop, be using a basis contract versus holding beans in the bin. Given the June 1 drop of 20 cents in the soybean markets, new crop forward pricing opportunities sort of dried up.

If the November futures rally back over \$6, be ready to consider some forward pricing. For reasons given earlier, I feel there is more upside price potential than downside risks, but don't get to greedy if we get a rally.

tivity offset the higher flock size. The number of table egg-type chicks hatched during April was 4 percent over year ago levels and continues the relative hatch increase trend that started in January. May 1 egg-type eggs in incubators was up 5 percent. The hatch increases are likely to translate into production increases later this year and will temper the typically strong year-end seasonal price advances.

Egg demand conditions are currently healthy and prices in June should move into the mid 70-cent range. Prices during the third quarter should continue to strengthen seasonally throughout the quarter and average in the upper 70s. Average price levels during the last quarter of the year are not likely to differ much from the upper 70 cents per dozen range projected for the third quarter.

## Dairy Market Outlook

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

Farm milk prices are on the rise. The 1993 counter-seasonal price increase is providing welcome financial relief to Michigan's dairy producers and rural communities. The outlook for the rest of the year is, however, as cloudy as this spring's weather.

Pay prices for April milk were virtually identical to April 1992. This was in spite of the fact that the Minnesota-Wisconsin (M-W) price in 1993 bottomed out 24 cents per cwt. lower than in 1992. Farm milk prices went to the mid \$12.00 range in April.

The outlook for farm pay prices in the next few months is very bullish. May's Class I price in the federal orders reflects the 28 cent increase in the M-W for March. May's Class II price (milk for soft manufactured products) is \$12.93, almost \$2.00 higher than April's.

The June Class I price will be \$13.90 because of the historic jump of \$1.13 in the April M-W. May pay prices will, therefore, likely approach \$13.00 per cwt. and June pay price will likely push \$13.50.

Normally, with the spring milk flush, prices at the farm are lowest this time of year. History would suggest that prices would continue to get stronger through the year with pay prices topping out in November or December. But milk marketing history is being rewritten right now.

## Cattle

As you all know, we have finally had our sharp drop in fed steer prices. It had to happen sometime given the number of cattle in feedlots. The positive part is the strong prices lasted much longer than expected; the negative is, they are gone. However, with the low feed costs, most of the industry should stay in the black.

On May 21, the USDA released the Monthly 7-State Cattle-On-Feed Report. The total on feed as of May 1 was up 7 percent from a year ago. This is why we'll see prices tapering off, probably through August when we should stabilize in the lower half of the \$70 range. Numbers actually

## Hogs

The hog market is having a seasonal increase as expected. April and May marketings are in the range suggested in the last Hogs and Pigs Report after March marketings were way below projections.

The report suggested that we will continue to have year-to-year increases in slaughter as we move into the summer, but they will be closer to 2-3 percent versus the 4-5 percent we have been seeing. The next Hogs and Pigs Report will be released June 30.

Hog prices should continue to be in the range they are now into the first part of July.

## Record Exports Help Cattle-Hog Prices

Record foreign sales of U.S. beef and pork last year added \$6.06 per cwt. to average cattle prices and \$2.46 per cwt. to hog returns, according to CF Resources Inc., a subsidiary of Cattle-Fax. The U.S. was a net exporter of beef in 1992 for the first time ever, selling \$2.043 billion worth to foreign buyers, while imports totaled \$1.87 billion.

These figures illustrate how far we have come in developing foreign markets and also how important these markets have become to our industry's future and the nation's balance of trade, according to U.S. Meat Export Federation Chairman Stan Miller.

Japan remained the top customer for U.S. beef exports, with total shipments rising 18 percent from the previous year and accounting for over 46 percent of total beef exports.

Pork exports rose 34.9 percent in 1992, relative to the year before reaching a total of \$451.2 million. Despite this record performance, the United States remained a net importer of pork, the federation said.

# FARM BUSINESS OUTLOOK

The M-W could peak in May or June. Reports are that there are massive amounts of "unallocated" milk floating around the country looking for a place to be processed. The recent Memorial Day weekend was reported to be one of the most stressed weekends for processing plants.

It's not clear whether the surplus milk is from expanding production, declining demand, a massive supermarket strike on the East Coast, or abbreviations in the market caused by the M-W being higher than the blend price in several milk orders. In any event, surplus milk supplies like this will put severe pressure on the M-W if they continue.

If the M-W peaks in the next few months, so will milk prices. In this case, the milk price peak will be in mid summer. Conversely, reports of severe alfalfa damage across the entire Great Lakes dairy region suggests that an increasing milk supply momentum cannot continue. If so, milk prices at the farm can continue throughout the summer and into the fall. Right now the outlook is that cloudy. In any event, having \$13.50 milk in June will provide some rays of sunshine.

marketed in April were 4 percent above last year and is an indication we are current.

Numbers placed in April were a surprise with placements down 8 percent compared to April 1992. While you can't make too much of one month's placement, it should help this fall. The previous month's placements were up 4 percent, and if they're up in May, this lower number won't mean much.

**Strategy:** At this point, there is little reason to forward price. Continue to keep current as prices are sliding. If the industry does keep current, it should slow the slide.

Expect them to start dropping off into the mid 40s as we go into August. This fall they will likely drop into the \$41-43 range.

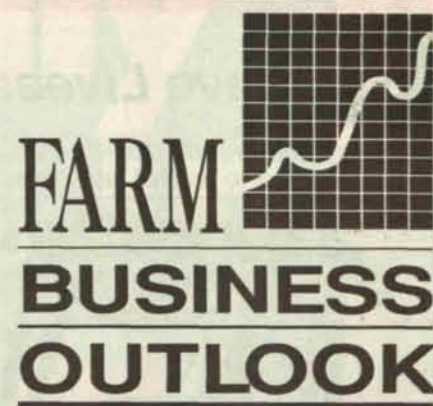
**Strategy:** At this point, there are no forward pricing opportunities to lock in prices higher than these expectations. Continue to keep current.

Slaughter weights are running about 2 pounds above year ago levels. While this is probably due mostly to low feed costs, it is important the industry stays current.





# 7 Communications Key to Your Farm's Future



**Allen E. Shapley, Ag Labor Specialist, MSU Ag Econ. Dept.**

Communications is a key factor in any relationship between humans. It can make a relationship grow, deteriorate, or blow up. Communications can start wars and end wars. Communications can make a farm a profitable, enjoyable business and it can drive a farm into bankruptcy. Communications is one very powerful tool.

If you are involved in a business in which one or more other people are also involved, regardless of whether those others are partners, unpaid family members, or employees, the quantity and quality of communications will have a tremendous impact on the success of that business, no matter how you measure that success.

Let's start by digging into the communication process a bit. First, **what** is it? The dictionary has many meanings, but it basically boils down to three things; giving information, requesting information, or sharing feelings. In many instances, all three of these are incorporated into one message.

Now, it is relatively easy to improve one's skills in how and when to effectively give and request information. It is much more difficult to find effective ways to communicate feelings. Part of the reason for this is because feelings often arise out of a conflict between what you experience and a set of values/attitudes you hold dear.

Values and attitudes are seldom changed as a result of one person suggesting that a different value/attitude would be more appropriate in a given situation. For example,

when a farmer told me that most farm workers are lazy good-for-nothings that only work on farms because they're too stupid to work anywhere else, I knew that attitude would come through whenever he communicated with a worker. The result is low morale which leads to poor performance. I also knew that there's not much I or anyone could say in a few sentences that would change that person's attitude. More on this later.

Next, let's think about **how** we communicate, that is, what are the communication channels? Of course, oral and written messages come to mind immediately. Then we add the visual messages such as pictures and maps.

One visual way we communicate that we sometimes forget, but is nonetheless very important, is body language. A smile, a frown, hands on the hips, etc. all carry strong messages, often without the communicator's intention.

Now, **when** to communicate? All the time, from the time you write down what a worker's duties will be to the time you celebrate with that worker his or her retirement. Even when a person chooses **not** to communicate, they are sending a message.

Keeping in mind the what and how to communicate, let's run through some key "whens" when managing personnel.

First, write a job description for every worker on the farm including yourself. If possible, include some performance standards in those job descriptions. Don't worry about doing a perfect job; there will be need for changes as conditions change and as you grow.

Next, if and when you decide to advertise for an employee, write an ad that really communicates what the job offers and what is required. Use the job description as a starting point. The next "when" is interview time. Write down the questions ahead of time and stick to them. Encourage the applicant to ask you questions and to talk about themselves.

Orientation time is when you give new employees a tour of the place, introduce them to other employees, talk to them about your benefit package, holidays, etc. It is also a time to honestly share your feelings about things you feel are very important such as timeliness, dependability, language, safety, etc.; those things that drive you up a wall when they are different than you feel they should be.

Training is one of the most important times to be very thorough in the quality of communications used. What you communicate during training and how you communicate it will have a big impact on performance for a long time. Therefore, it is important to lay out your training plan, use multiple communication channels, and check to see if the training is succeeding.

Another "when" that I have found very important, is when you are laying out the goals of the business, particularly the short term goals. Employees will perform much better if they are involved in setting the goals. Talk to them about goals, share your ideas, ask them about their ideas, build goals together.

Still another time when you must be careful how you communicate is when an employee is doing something wrong. Often, in the heat of such a moment, the communication used (such as a bawling out) is ineffective at the least and may have long term negative effects.

When such a moment arises (and it will sooner or later) zero in on the behavior, not the person. Remember, the messing up may be due to poor training or communicating on your part. Find out why the person messed up and then take action to prevent it from happening again. Sometimes, it is appropriate to ask the offender what can be done to see that the incident won't happen again. There is seldom a place for punishment in a work situation, but there is often a place for taking corrective action.

Finally, communicate your recognition of the family member or employee as a person of worth, and for the work they are doing. One

of our basic needs is the need for recognition. The time and effort needed to recognize a worker's worth and effort will be returned many times over in quantity and quality of performance.

Most farm employers I have worked with have real respect for people in general and for their workers in particular. When the employer has this positive attitude, he/she can have some serious weaknesses in their communication skills and still communicate effectively. Somehow, the positive attitude comes through. At the same time, if an employer really dislikes people in general and his/her workers in particular, studying communication skills will be of little help. Again, the true feelings have a way of getting through.

If you are one of those many employers with a positive attitude, brush up on your communication skills, enjoy your role as a human resource manager and developer and watch the goals set by you and your workers come to fruition.

However, if you're one of those few employers that is prejudiced against certain groups such as migrants, women, kids, or people of color, and dislike your workers, you had better get some counseling or get out of the business of being an employer; anyone who attempts to manage people with such an attitude will always be very unhappy, will make the employees miserable, and may very well find themselves in trouble with the law.

## Discussion Topic for July, 1993 -- P.A. 232 Commodity Checkoffs

P.A. 232, the Michigan Agricultural Commodities Marketing Act, is a unique self-help program for the state's commodity producers. The act provides uniform procedures for farmers to setup a program of commodity promotion, market development, information, research, produce standards and inspection, determination of surpluses and producer assessments.

The apple, asparagus, cherry, corn, dairy product, mint, onion, plums and soybean industries use one or more of the provisions of P.A. 232. Over \$10 million in assessment funds are collected for these commodities each year, according to the Michigan Department of Agriculture.

Corn, cherries and onions are administered by the Michigan Agricultural Cooperative Marketing Association (MACMA).

"The biggest benefit of P.A. 232 is that it allows growers themselves to direct a promotion and research program that will benefit and help stimulate demand for their particular commodity," said Randy Harmson, general manager of MACMA and manager of the Michigan Red Tart Cherry Growers. "It's successful because it is managed by the growers for the growers."

Harmson thinks commodity producers have benefitted from their participation in P.A. 232. "One of the many positive aspects of the program is that, in these days of compet-

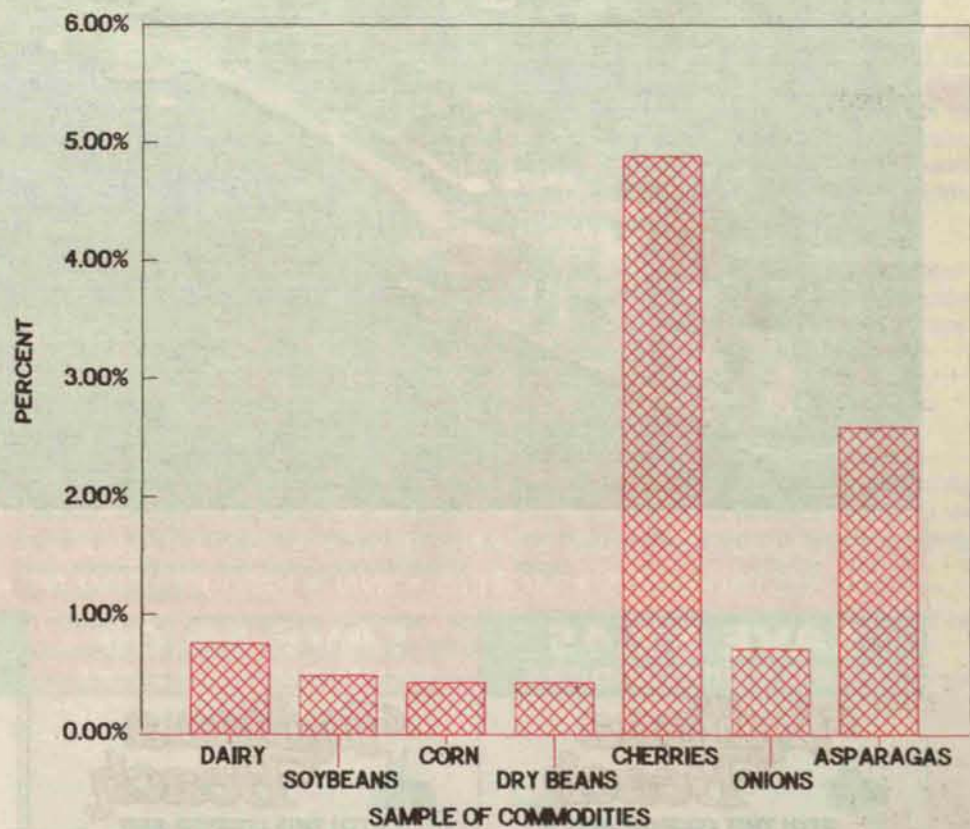
ing food products, it keeps awareness of the commodity in the eye of the consumer. It also allows for some explanation of how that commodity is produced and delivered to the consumer."

Farmers are often concerned about control of the check-off funds collected under P.A. 232, said Bob Boehm, commodity specialist for Michigan Farm Bureau. He points out that the legislation clearly states that "any money collected under the Act shall not be state funds and funds shall be disbursed only for the necessary expenses incurred with respect to each such separate marketing program."

"P.A. 232 funds are not a tax and the money is not commingled with state funds," Boehm said. "The Michigan Department of Agriculture is charged with overseeing and auditing, but they have no control and no access to the funds. They simply oversee the grower commissions to ensure they stay within the guidelines of P.A. 232. The grower commissions make the decisions on how the money is to be invested," he said. (See accompanying charts that illustrate P.A. 232 check-off dollars and estimated crop value for specific commodities.)

Farm Bureau is trying to help the floriculture industry organize under P.A. 232, according to Harmson. "Vegetable production

**ASSESSMENT DOLLARS**  
AS A % OF VALUE OF PRODUCTION



CHECK-OFF COMPARISON FOR SEVERAL MICHIGAN COMMODITIES					
Commodity	Check-Off Rate	5 Year Average Volume	Average Value (Million)	Est. Tot. Chk-Off (Million)	Chk-Off As a Percent of Value
Dairy	\$.10/cwt	52.53 mill cwt	\$679.3	\$5.253	0.77%
Soybeans	1/2% x net \$	37 mill bu.	\$215.5	\$1.075	0.50%
Corn	\$.01/bu.	101.8 mill bu. (A)	\$230.3	\$1.018	0.44%
Dry Beans	\$.10/cwt	3.5 mill cwt	\$ 80.0	\$0.350	0.44%
Cherries	\$15/ton	90000 tons	\$ 27.5	\$1.350	4.90%
Onions	\$.06/cwt	2.041 mill cwt	\$ 16.8	\$0.122	0.73%
Asparagus	\$.015/lb	.25 mill cwt	\$ 14.6	\$0.375	2.60%

(A) Assumes 1/2 of total grain production is sold.

is also a real growth area," he said. "Another one I've always been intrigued with is timber and forestry."

A survey by the American Farm Bureau Federation found hundreds of farmer-financed commodity promotion, research and education programs across the country.

In addition to major commodities like corn, soybeans, dairy and pork, they included kiwifruit, raisins and pistachios in California, citrus in Florida, crawfish in Louisiana, wild rice in Minnesota, trellis tomatoes and yams in New York, filberts in Oregon and flax in South Dakota.

### DISCUSSION QUESTIONS:

1. What other Michigan commodities should be under P.A. 232 and have check-offs?
2. What is the biggest benefit for farmers resulting from a commodity check-off?
3. What, if any, problems have arisen from commodity check-offs?
4. What additional programs or projects should commodity check-offs fund?



# 8 Save Lives: Prevent Tractor Overturns

Although damaged, this operator's enclosure remained intact to protect the driver



The National Safety Council (NSC) confirms what the farm community already knows all too well: More farm workers die from tractor overturns than from any other kind of tractor-related mishaps.

Recent reports from 18 states, covering 40 percent of the farm tractors in the U.S., indicated that more than half of on-the-farm tractor fatalities were the result of overturns. The figures translate to an annual rate of 5.1 deaths per 100,000 tractors.

NSC urges all farmers and tractor users to follow the safe tractor operating procedures offered in operator's manuals, and to conduct maintenance checks routinely.

Here are common tractor safety tips that all farmers and workers should know, be reminded of, and take to heart:

- Provide proper rollover protection. Rollover protective structures (ROPS) have been standard on tractors manufactured since 1976 -- but if you have an older or unequipped model, you can check with your local equipment dealer about the possibility of retrofitting it. Remember also that proper rollover protection includes use of a safety belt.
- Set the wheel tread as wide as practical.
- Be sure all workers are trained in the safe and proper use of the tractor.
- When possible, avoid operating the tractor near ditches, embankments, and holes. Stay off steep slopes, and watch where you're going -- especially at row ends, on roads, and around trees.
- Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.



### From Farm Bureau Insurance

- Operate the tractor smoothly. Avoid jerky turns, starts, or stops.
- Hitch only to the drawbar and hitch points as recommended by the manufacturer.
- Do not let children ride as extras on the tractor.
- Lock brake pedals together before traveling in transport gear. Be sure brakes are equalized so that the tractor will not pull to one side.
- When getting off the tractor, disengage the power take-off, lower equipment to the ground, turn off the engine, put the transmission in neutral or park, set the brakes, and remove the key.

## Farm Credit Banks of Louisville, and St. Paul Announce Intent to Merge

AgriBank Farm Credit Bank of St. Paul, MN, and Farm Credit Bank of Louisville, KY, have jointly announced their intention of merging the two institutions, according to *Knight Ridder Financial News*.

The merger is dependent upon a vote by stockholders of each bank, as well as approval by the Farm Credit Administration.

Currently, the two banks and their affiliated associations serve about 200,000 farmers and rural residents in the Midwest and Southwest.

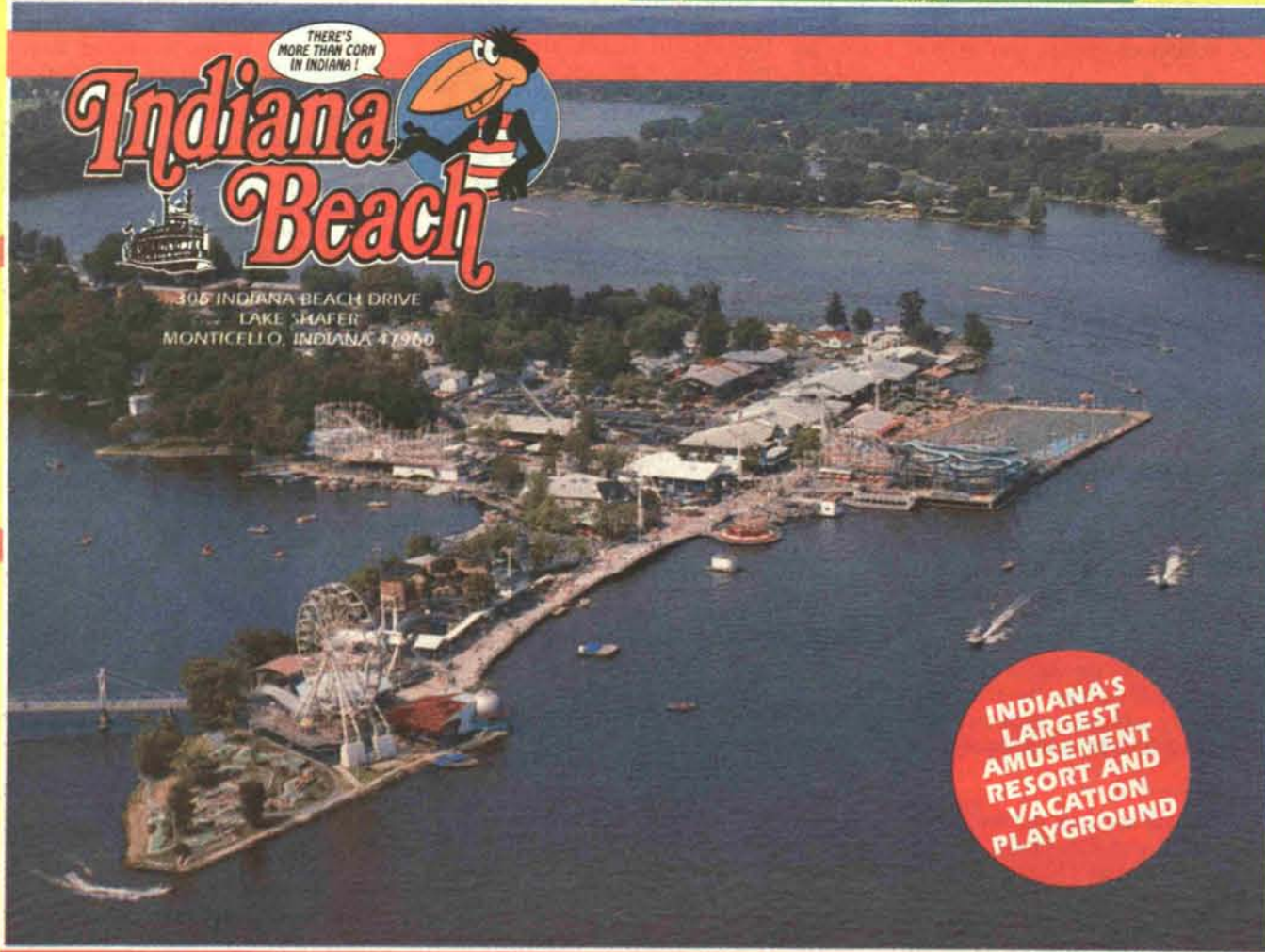
If approved, the merged bank would be headquartered in St. Paul and would retain the name AgriBank FCB. It would have assets of about \$14.4 billion, with more than \$2.1 billion in capital and about \$12.4 billion in gross loan volume.

The geographic territory of the new bank will cover 11 states including Arkansas, Illinois, Michigan, Minnesota, Missouri, North Dakota, Wisconsin, Indiana, Ohio, Kentucky and Tennessee.

There is a good indication that the merger could be effective as early as Jan. 1, 1994, according to AgriBank Chairman Daniel Kelley.

On March 31, the Farm Credit Bank of Louisville and its affiliates reported earnings of \$64.3 million, with capital of \$1.4 billion and gross loan volume of \$8.7 billion.

The Farm Credit Banks, part of the nationwide Farm Credit System, are privately owned lending institutions chartered by Congress to serve farmers and rural residents. The banks and their affiliated associations make long-term agricultural real estate loans, short- and intermediate-term production loans and rural home loans.



- 1400 ACRE LAKE ▪ SAND BEACH ▪ WATER PARK ▪ COTTAGES ▪ CAMPING ▪ RESTAURANTS ▪ MOTELS ▪ INN ▪ ENTERTAINMENT ▪ AMUSEMENT RIDES ▪

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# AG Expo

# July 13-15

## Michigan's Farm Show

### Michigan State University

June 15, 1993

## Field Demonstrations at Ag Expo to Focus on No-Till Planters, Drills

More than 300 manufacturers from more than 20 states and Canada are expected to participate in Ag Expo, July 13-15, at Michigan State University.

Ag Expo's 35-acre main exhibition site will be open at 9 a.m. each day. All of Ag Expo's activities, parking (at Farm Lane and Mt. Hope Road) and transportation are free.

"There appears to be widespread interest among agricultural manufacturers in coming to this year's show," says William Bickert, Ag Expo director. "Ag Expo will be showcasing the latest in agricultural technology, which promises a lot of good ideas for people attending the event."

Since it was introduced at MSU in 1981, Ag Expo has become Michigan's largest farm show and one of the top 22 shows of its kind in the United States.

"It's the only place in Michigan where farm families can, in a single setting, see agricultural equipment, buildings and supplies from many parts of the United States and Canada and talk with industry and university experts," Bickert said.

Ag Expo's field demonstrations will focus on planting into moderate and heavy amounts of crop residue. The residue-laden field conditions that growers encountered this spring will be replicated during the field demonstrations.

The demonstrations will run from 10 a.m. to 5 p.m. on July 13 and 14 (Tuesday and

*Expo participants will be able to do side-by-side comparisons of stands achieved by various planters and drills at this year's field demonstrations.*



Wednesday) and 10 a.m. to 4 p.m. July 15. Shuttle buses will run between Ag Expo's parking lot and the demonstration site about every 20 minutes.

Tim Harrigan, Ag Expo field demonstrations manager, plans on showing the performance of several types of conservation tillage drills and planters.

"As nearly as possible, we are going to replicate the field conditions that many

farmers will encounter this spring," Harrigan says. "Planting into residue is going to be the pattern in the future for a variety of reasons, the most important of which will be capital costs, timeliness and labor required to get a crop established."

During the demonstrations, growers will be able to see the mechanical aspects of residue displacement, soil conditioning and seed placement by the equipment to be demonstrated.

Growers will be able to view crop response to each type of drill or planter used. The same equipment to be demonstrated at Ag Expo will have been used to establish conservation-planted plots at the demonstration site in mid-May.

About 40 acres will be used to conduct no-till and planter demonstrations in corn and wheat residue. Among the manufacturers who are planning to be a part of the field demonstrations are:

- Unverferth Mfg Co.
- John Deere Co.
- Case IH
- Great Plains Mfg.
- Ag-Equipment Group L.P.
- Yetter Mfg.
- United Farm Tools
- Hiniker
- Crust Buster
- Newmatics
- Row-Tech
- White/New Idea

"I think growers will be surprised by the range of planting options that we will be showing," Harrigan says. "The purpose of showing a variety of planting options is to help growers move closer to site-specific management—the management of soils and crops according to localized conditions within the field."

MSU agronomists will also provide information about soil fertility and herbicide requirements of crops planted into moderate and heavy residue cover.

## Ag Expo – July 13-15 – At MSU Will be Open at 9 a.m. Each Day

**Bill Bickert, Ag Expo Chairperson**

Just about everybody in Michigan agriculture would like to get 1992 far behind them as quickly as possible.

We are still grappling with the effects of one of the worst growing seasons in this century, but those in agriculture are a resilient lot who tend to be consistently optimistic about the future.

That was reflected during last year's Ag Expo, which for us was the worst year for weather since we began this event in 1980. We had water at the main exhibition site that in places was literally up to our knees, and our field demonstrations were flooded out.

Yet (and this is still amazing to me at this writing), farmers and their families showed up in droves. In fact, Ag Expo 1992 was one of our best years for attendance. Rain, mud and flooding did not deter their zest to participate in what has become the largest traditional event in Michigan agriculture. And people were happy to be there!

That turnout last year made me feel that we really are doing worthwhile things here at MSU for agriculture and that Ag Expo is the

single largest public demonstration of our commitment to Michigan farm families.

We like to think that Ag Expo is important to farm families and that it moves in tune with their needs. I think that will be particularly reflected in this year's field demonstrations.

We're going to have a lineup of equipment that is going to show growers how to successfully handle large amounts of field residue.

The 35 areas that constitutes our main exhibition site will be brimming with millions of dollars worth of new technology in farm equipment, supplies, and services.

We will provide an enjoyable setting in which visitors can make evaluations, develop ideas, and talk with university and industry experts about opportunities to improve the farm business.

In addition, there will be a variety of demonstrations, displays, and information available in "education row."


This is a series of exhibits representing MSU's departments of agricultural engineering, animal science, crop and soil sciences, fisheries and wildlife, the In-

stitute of Water Research, public safety, Telfarm, veterinary medicine, etc. Representatives will be available to answer questions about almost any aspect on managing the farm business.

*In addition to commercial exhibits, Ag Expo participants can find quite a list of educational exhibits as well on the 35-acre exhibition site.*







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

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

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Consumers Power can help you solve stray voltage problems.

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





## Planning for Conservation Compliance – Planters and Drills

Tim Harrigan, MSU Ag Engineering Dept.

Planting conditions in a conservation tillage system are not as uniform as in a conventionally tilled field with a prepared seedbed, but the planting objectives are the same. You want to open a seed furrow, place the seed at the correct depth, cover the seed with soil and firm the soil over the seed.

No-till planters and drills can be equipped to operate in specific soil and residue conditions. Most no-till planters and drills use coulters to cut the residue and till a narrow band of soil. Removing or incorporating the residue from the soil surface allows faster soil warm-up and easier placement of fertilizer in liquid, granular or anhydrous form.

When two or three coulters per row are run side-by-side on a planter, a zone of soil 6-10 inches wide is tilled, loosened and cleared of most surface residue. Row cleaners sweep the residue to the side exposing a bare strip of soil 8-10 inches wide in front of the planter units.

Rules-of-thumb to estimate residue cover after various tillage and planting operations are convenient guidelines for planning field operations. But if farm program compliance is a residue management objective, farmers should not estimate residue cover based only upon which tillage or planting implements were used.

Actual residue left depends upon the tillage tool used, depth and speed of tillage, soil type and moisture, crop yield and the condition of existing crop residue. Use rules of thumb such as those in Table 1 to plan field operations, but check their accuracy with direct residue measurements on your farm, under your field conditions.

### Coulters for Planters and Drills

The most important function of coulters on no-till planters and drills is to cut through surface residue. Coulters also till the soil in front of the furrow opening. The choice of coulters will depend upon the soil and residue conditions and the seedbed requirements of the crop.

Fluted (wavy) coulters are the most popular choice for no-till planters in Michigan. Fluted coulters are available in widths from

Table 1. Percent of initial residue cover after various planting operations.

Implement	Percent Residue Remaining	
	Non-Fragile*	Fragile**
<b>PLANTERS</b>		
Conventional		
Off-set double disk openers	90-95	85-95
Double disk openers	85-95	75-95
No-Till		
Ripple or Bubble coulters	75-90	70-85
Fluted coulters	65-85	50-80
Zone-Till		
2 or 3 Fluted coulters	60-80	50-75
Row cleaners	60-80	50-60
Row-Buster (pre-plant zone tillage)	60-80	50-75
Ridge-Till	40-60	20-40
<b>DRILLS</b>		
Conventional		
Single disk opener	85-100	75-85
Double disk opener	80-100	60-80
No-Till		
Smooth coulters	85-95	70-85
Ripple or Bubble coulters	80-85	65-85
Fluted coulters	75-80	60-80
Boot opener	75-80	60-80

\*Such as corn, small grains and pasture.

\*\*Such as dry beans, soybeans, sugar beets and potatoes.

Source: Cooperative effort of the USDA, SCS and the Equipment Mfr's Institute, 1992.

Timothy M. Harrigan, Agricultural Engineering Department, Michigan State University, East Lansing, MI 48824.  
Jerry Grigar, State Agronomist and Roy Hall, Soil Conservationist, USDA-SCS.

about one inch to three inches. Most have eight flutes but a narrow, 12 flute coulters is also available.

Fluted coulters have an advantage when some tillage is needed for quicker soil warm-up, improved seed-to-soil contact or for fertilizer placement or incorporation. Two or three fluted coulters run side-by-side chop and incorporate the surface residue leaving a zone of tilled, residue-free soil, six to 10 inches wide. Liquid and granular fertilizer as well as anhydrous ammonia can be applied with these systems.

Fluted coulters require more weight for down-pressure for soil penetration than other coulters that till less soil. Fluted coulters

also have a tendency to throw soil from the seed furrow if the soil is moist and sticky, particularly at faster planting speeds.

Advantages of the narrow, 12 wave flute are:

- 1) less down-pressure required than the wider, more aggressive fluted coulters;
- 2) more tillage at slower speeds with less soil thrown from the seed furrow.

Because of the high down-pressure requirements, only the narrowest fluted coulters are used on no-till drills.

Ripple and bubble coulters are frequently used on both planters and drills. They till less soil than fluted coulters but more than

smooth coulters. Bubble coulters can be used for zone tillage when planter weight limits penetration of fluted coulters. But many growers report sidewall compaction of the seed furrow if bubble coulters are run directly in front of the furrow opening on damp, clay soils. Do not run a bubble coulters directly in front of and deeper than the furrow opening under these conditions.

Spiked wheels, brushes and furrowing discs are being used as row cleaners to sweep clean a band of soil in front of the planter unit. Row cleaners may be particularly suitable on coarse textured soils where coulters tillage is not required for soil penetration and fertilizer placement.

### Residue Characteristics Affect Residue Flow

1. Is the residue evenly distributed? Uniform spreading behind the combine helps prevent large clumps of residue from plugging planter and drills and facilitates rapid and uniform soil drying and warm-up.
2. Is the residue loose or anchored to the ground? Loose residue plugs planter and drills more readily than anchored residue.
3. Is the residue long or short? Long residue may need to be chopped into shorter lengths for improved trash flow.
4. Is the residue moist and tough or dry and brittle? Moist, tough residue will plug tillage tools more readily than dry, brittle residue. Dry, brittle residue will break up on impact with the tillage tool and residue flow will improve.

### Tye Series V NoTill Grain Drills Part of Expo Field Demo

With a double 4-inch x 4-inch coulters bar built to handle big no-till jobs, the Tye No Till Grain Drill offers trash cutting coulters blades to match the individual's no-till demands, with 17 and 18 inch duraflute, 18 inch wavy and 17 inch bubble coulters. Spring loaded to 400 pounds, the coulters swivel to track on hills and contours.

Rugged double disc openers provide forward seed delivery to gently place the seed in the track, followed by depth control press wheels which provide positive soil to seed contact. The drill's 7-inch x 7-inch tubular frame supports a 2.4 bu./ft. rainproof grain box for high acreage operation.

Standard equipment on the Tye drill includes 1-1/2 x 3 inch tubular row unit mounting, Cat II/III 3 point hitch, gauge wheels and tires with quick adjusters, gentle internal flute seeders with infinite adjustment, double-sealed disc bearings, double pressure springs on each row unit, and choice of independently mounted "E-Z" or spring mounted presswheels.

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# 4 Nutrient Management in Reduced Tillage Cropping Systems

**Darryl D. Warncke**  
**Crop and Soil Sciences**  
**Michigan State University**

Growing corn or soybeans in reduced tillage systems provides benefits through conservation of natural resources. Maintaining crop residues on the soil surface greatly reduces water and wind erosion of the soil. Reduced tillage and leaving crop residues on the soil surface is cause for thinking about nutrient management.

With conventional tillage systems, nutrients applied as fertilizers or manures are thoroughly mixed into the top eight to 10 inches of soil, the primary rooting zone. With reduced tillage systems, there is limited, if any, mixing of surface applied nutrients into the soil.

Nutrients from deeper in the soil profile are also cycled to the surface in crop residues. Therefore, nutrient concentrations become stratified, especially for immobile nutrients such as phosphorus.

Table 1 indicates the degree of nutrient stratification that can occur in no-till fields. The question to be answered is what adjustments, if any, in nutrient management need to be made in reduced tillage crop production systems.

There are a number of reasons one may think there is a need to change nutrient management practices with reduced tillage in relation to conventional tillage. Slower warming of the soil with residue on the surface results in slower root development.

Soil moisture is conserved resulting in shallower rooting. With limited soil mixing, nutrient levels and soil pH become stratified. There is an active microbial zone at the soil - residue interface which may affect nitrogen availability, especially if nitrogen is surface applied.

The key soil fertility areas to be addressed are soil pH, nitrogen, phosphorus, potassium and the micronutrients. Acidification of the soil surface is of primary concern for the effectiveness of surface applied herbicides. As the pH of the surface soil drops below 6.0, some of the herbicides, especially the triazines, become less active and effective in controlling weeds.

The primary factor causing acidification of the top two inches of soil is surface applied nitrogen fertilizer. Where the sidedress nitrogen is knifed into the soil, the rate of acidification of the soil surface is greatly reduced.

Monitoring of the soil pH in a limited tillage situation is more important than with conventional tillage because applied lime is not incorporated and takes longer to move downward into the soil and neutralize the soil acidity. Hence, more frequent application of low lime rates may be necessary with reduced tillage.

For crops planted in cool soils, banded placement of phosphorus fertilizer is beneficial in stimulating early growth. Since soils warm more slowly in no-till fields, one may expect the placement of phosphorus near the seed (two inches to the side and two inches below the seed) to be especially important. However, in research studies, this has not been the case.

In long term no-till fields, the concentration of available phosphorus is usually quite high in the upper two to three inches of soil where the seed is germinating. Therefore, the young developing plants have good access to phosphorus. For this reason, early growth responses to banded phosphorus are more likely to occur in conventional tillage systems than in no-till.

Although held on the exchange sites of soil particles, potassium tends to be more mobile in soils than phosphorus. Surface applied potassium tends to move downward into the rooting zone in reduced tillage sys-

tems. And with the shallower rootings of crops, potassium is utilized quite well. However, the deep placement of potassium has proven beneficial in some ridge-tilled fields. Including some potassium in the planter placed fertilizer may be beneficial with reduced tillage systems.

In reduced tillage systems, nutrients tend to accumulate in the upper two to three inches of soil. This is of significance for the micronutrients as well as the major nutrients. With shallower rooting, micronutrient problems should be no more of a concern with reduced tillage than with conventional tillage. Surface application of lime may temporarily reduce the availability of zinc and manganese.

In summary, nutrient management for crop production in reduced tillage systems does not need to differ greatly from that of conventional tillage systems. But farmers need to recognize there are differences in how the nutrients and soil pH are distributed throughout the soil profile.

Regardless of the tillage system, good nutrient management begins with a knowledge of the soil pH and nutrient levels

**Table 1**  
**Profile distribution of soil pH, phosphorus and potassium in a no-till corn field.**

Soil Depth inches	Soil pH	Phosphorus lb P/A	Potassium lb K/A
0 - 2	5.7	154	288
2 - 4	6.1	98	202
4 - 8	6.2	87	158

in the soil. Regular collection and testing of soil samples provides the needed information for agronomically and economically effective nutrient management. Always collect soil samples in a manner so that the sample will be representation of the field or area sampled.

The general guideline is for one sample to represent 15 to 20 acres. However, the more intense the sampling, the more that is known about the variation in fertility

properties of a field and the more effectively it can be managed.

In reduced tillage fields, two samples need to be collected: one from the zero to two inch depth for determination of the surface pH and one from the usual sampling depth of zero to nine inches.

More information on soil sampling and nutrient management is available in Michigan State University bulletins E-498, E-550A, and E-1616.

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

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# The Costs of Owning and Operating Row Crop Planters and Drills

Table 1  
The Costs of Owning and Operating Row Crop Planters and Drills.

	Width	Tractor Hp	Acre/Yr	Acre/Hr	Implement Price \$	Implement Ownership \$/Yr	Tractor ownership \$/Yr	Operating \$/Acre	Total* \$/Acre
<u>Row Crop Planter</u> (conservation)	4-row	50	250	4.5	10,000	1,241	303	3.40	9.60
	6-row	75	375	6.8	14,000	1,742	454	2.35	8.25
	8-row	90	500	9.0	17,500	2,183	614	1.85	7.45
	12-row	130	750	13.6	25,000	3,124	887	1.30	5.35
<u>Row Crop Planter</u> (conservation w/ row cleaners)	4-row	50	250	4.5	10,900	1,349	303	4.00	10.60
	6-row	75	375	6.8	15,350	1,903	454	2.95	9.25
	8-row	90	500	9.0	19,300	2,398	614	2.45	8.45
	12-row	130	750	13.6	27,700	3,447	887	1.90	7.70
<u>Row Crop Planter</u> (conservation w/ row cleaners & 1 coulters/row)	4-row	60	250	4.5	11,700	1,444	363	4.20	11.40
	6-row	85	375	6.8	16,550	2,047	580	3.15	10.15
	8-row	100	500	9.0	20,900	2,590	682	2.60	9.15
	12-row	160	750	13.6	30,100	3,735	1,091	2.10	8.50
<u>Row Crop Planter</u> (conservation w/ fert. inject & 3 coulters/row)	4-row	80	250	4.5	14,000	1,721	546	4.10	13.20
	6-row	110	375	6.8	20,000	2,461	750	3.05	11.65
	8-row	145	500	9.0	25,500	3,142	989	2.55	10.80
	12-row	220	750	13.6	37,000	4,563	1,500	2.00	10.10
<u>Grain Drill</u> (conventional, hitch mount)	10'	60	250	4.8	6,500	814	343	3.10	7.70
	15'	90	375	7.3	9,500	1,192	580	2.10	6.85
	20'	130	500	9.7	11,500	1,449	838	1.60	4.55
<u>Grain Drill</u> (no-till, end wheel)	10'	80	250	4.8	12,000	1,474	516	3.80	11.75
	15'	100	375	7.3	20,000	2,451	645	2.90	11.15
<u>Grain Drill</u> (hitch mount w/ coulters cart)	10'	100	250	4.8	13,800	1,691	645	3.85	13.20
	15'	135	375	7.3	19,000	2,332	870	2.85	11.40
	20'	160	500	9.7	23,500	2,888	1,032	2.35	10.20

Cash flow basis, before tax costs. Real interest rate @ 6%. Tractor ownership and repair and maintenance based on 500 hrs use per year. Operating costs include diesel fuel @ \$1/gal + 15% for lubrication and filters. Labor @ \$7.50/hr, repair and maintenance on accumulated use.

Table 2

Estimated annual ownership and operating costs\* for selected, single pass tillage operations.

IMPLEMENT	Implement width, ft	Rate acre/hr	Implement Ownership \$/acre	Tractor Ownership \$/acre	Operating \$/acre	Total \$/acre
Moldboard Plow	7.5	3.3	3.00	4.20	5.70	12.90
Chisel Plow	9.0	4.2	1.90	3.30	3.75	8.95
Tandem Disk	16.0	7.4	2.50	1.90	2.30	6.70
Field Cultivator	18.0	10.2	1.70	1.35	1.65	4.70

\*120 hp tractor, labor @ \$7.50/hr, fuel @ \$1/gal.

Timothy M. Harrigan, Power and Machinery Specialist,  
Agricultural Engineering Dept.

Tim Harrigan, MSU Ag Engineering Dept.

There has been a great increase in interest in planters and drills capable of working effectively in difficult planting conditions; untilled soil covered with heavy crop residue. Farmers are adopting residue management and reduced tillage planting methods for many reasons.

One of the most common is improved timeliness of spring planting. Time required for more conventional tillage and seedbed preparation such as moldboard or chisel plowing, disking once and field cultivating can be more than 30 minutes per acre (see Table 2). This is work that must be completed before planting can begin in clean tilled fields, but is not needed in no-till fields.

Many farmers have changed tillage and planting methods to decrease costs. Equipment ownership and operating costs for clean tillage is about \$20-25/acre.

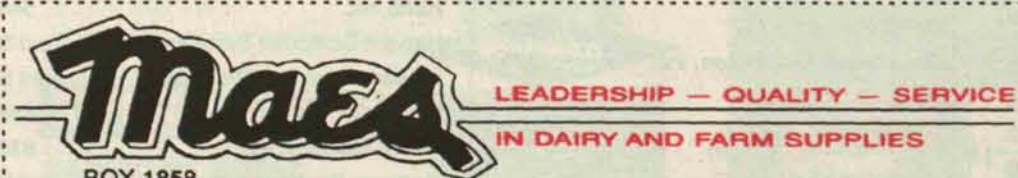
As tillage requirements decrease, fuel, labor and repair and maintenance costs decrease. Machinery replacement costs decrease as tillage equipment is either not replaced or is replaced less frequently. Tillage tractors are typically replaced with lower horsepower, less expensive models.

If residue management is part of a conservation compliance plan, no-till or zone tillage at planting may be the most effective and least expensive way to manage surface crop residue and remain in compliance.

No-till planters and drills can be equipped to operate in specific soil and residue conditions by using coulters to cut the residue and till, or row cleaners to sweep clean, a band of soil up to 10 inches wide in front of the planter units.

The Expo officially opens at 9 a.m. on Tuesday, July 13. Hours are from 9 a.m. to 5 p.m., Tuesday and Wednesday, and from 9 a.m. to 4 p.m. Thursday.

**Ag Expo Food Services**  
There will be a variety of food and plenty of it at the main exhibit site, including grilled chicken sandwiches, submarine sandwiches, roasted sausage, hot dogs, pizza, cold/hot beverages and ice cream from vendors that will be on the grounds daily. All of the food services will be in a food court near Tent C at the north edge of the grounds.  
Make plans to stop at the MFB Center on Wednesday afternoon, July 14, for the best meal deal in town at the annual Summerfest event for just \$4. Be sure to get your Summerfest tickets now, since sales are limited to the first 2,500 purchased.

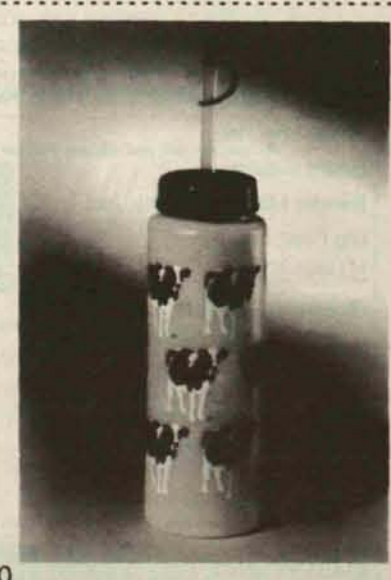


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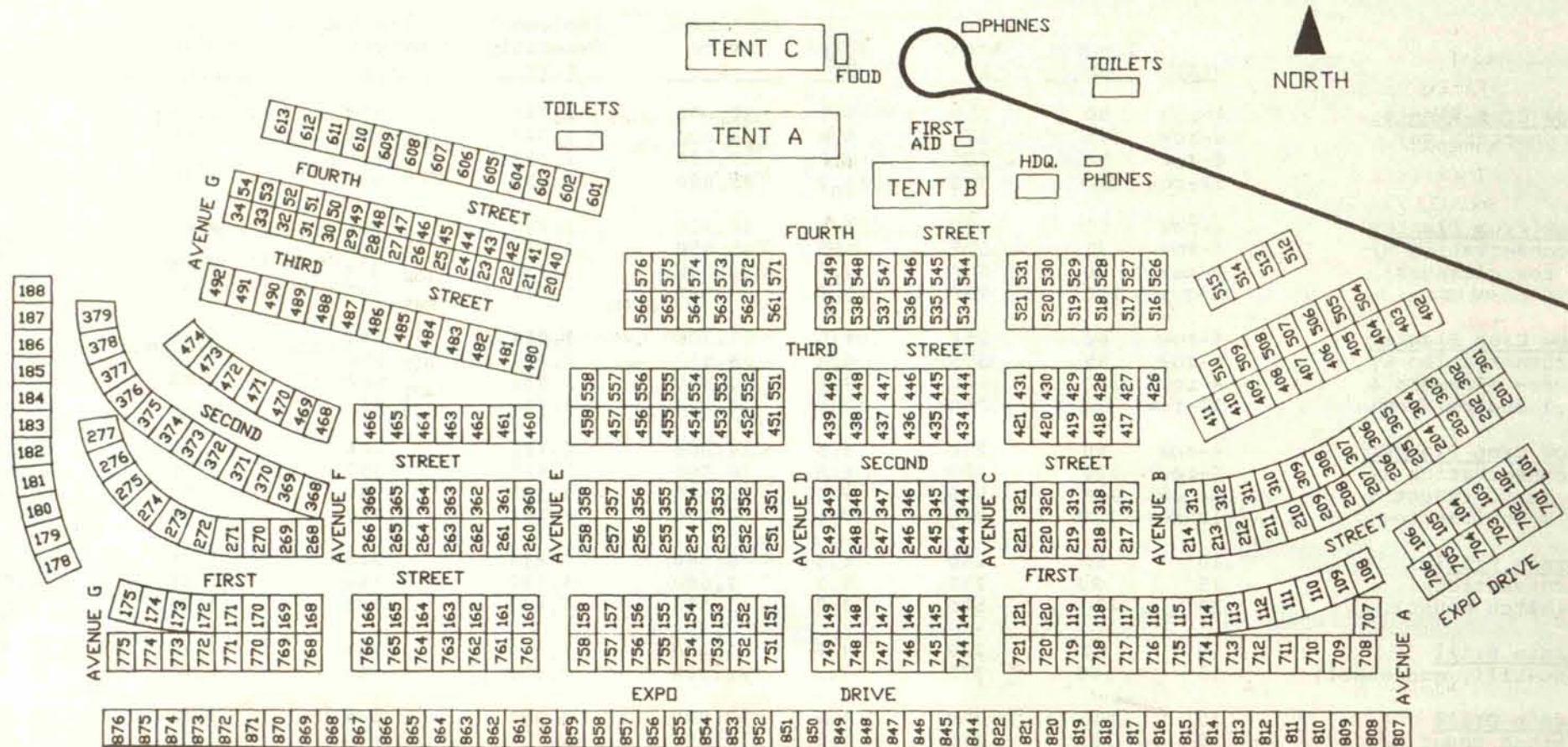




6

# Companies Applying For Exhibit Space at AG EXPO 1993

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## 8 Agri-Bank Reports First Quarter Net Income of \$64 Million

AgriBank, FCB and affiliated associations throughout the Seventh Farm Credit District reported combined net income of \$64.3 million for the first three months of 1993, compared to \$48.6 million for the same period a year ago.

The increase in earnings is due primarily to strong net interest income at \$101.3 million, which was up 16 percent from last year's first quarter period.

Combined capital position for AgriBank continued to improve as well, with total capital on March 31 reported as \$1.425 billion, an

increase of \$56 million from Dec. 31, 1992. The increase is attributed to continued strong earnings performance.

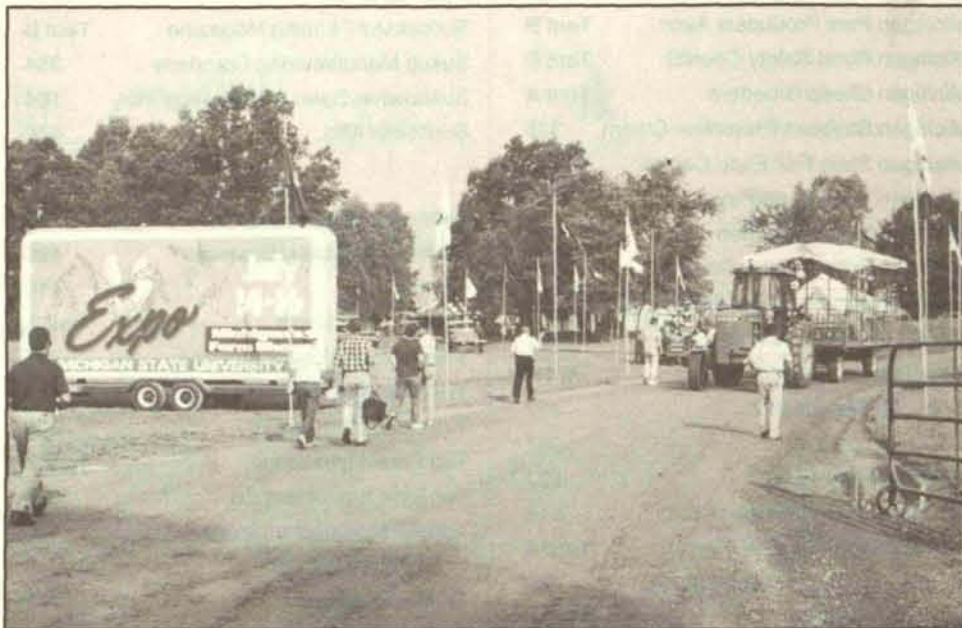
The amount of loans in nonaccrual status continues to decrease, dropping \$35 million in the first quarter. Maintaining that downward trend remains a key priority for the district.

AgriBank provides funding and support services to 33 Farm Credit Services associations in the Seventh Farm Credit District, which provides financing to 124,000 farmers.

**Michigan Farm Credit Services First Quarter Performance**  
(all numbers are dollars in thousands)

Farm Credit Services of	Interest Income		Net Capital Position		Net Income		Non-Accruals	
	1992	1993	1992	1993	1992	1993	1992	1993
East Central Michigan ACA	1,039	1,519	332	711	22,097	23,407	2,268	2,329
Michigan's Heartland (FLCA & PCA combined)	2,562	3,268	56,766	58,188	1,684	2,058	5,238	3,443
Southeastern Michigan (FLCA & PCA combined)	1,062	1,612	23,289	26,469	594	814	1,571	1,682
West Michigan, ACA	1,287	1,867	25,706	28,595	406	1,065	2,431	1,473
<b>TOTAL</b>	<b>\$7,942</b>	<b>\$10,259</b>	<b>\$108,085</b>	<b>\$115,956</b>	<b>\$26,773</b>	<b>\$29,337</b>	<b>\$13,500</b>	<b>\$10,920</b>

## Road Dust to be Controlled with Soybean Oil Product at MSU Ag Expo



Thanks to American soybean farmers, the Michigan Soybean Promotion Committee (MSPC) is proud to present Michigan's first "unveiling" of Acidulated Soybean Oil

Soapstocks on behalf of grower's soybean checkoff investment.

"New uses for soybeans keep coming up," said Bill Kirk, MSPC chairman. "Now a byproduct of soybean oil is used to suppress road dust and we will be having the main road that people take the horses and wagon rides at Ag Expo controlled with soybean soapstocks."

Acidulated Soybean Soapstock was first tested by Minnesota in 1991, and, by 1993, was approved by the Department of Transportation and pollution agency. Kirk continues, "Soy soapstocks is geared toward gravel county roads that seem to continually stir up a cloud of dust. It is applied at a one quart/square yard rate and increased traffic actually enhances the product's effectiveness."

Kirk adds, "By presenting Acidulated Soybean Soapstock to farmers at MSU's Ag Expo, we hope they understand how some of their checkoff dollars are being invested in new uses. At this point, the potential market for soy soapstocks cannot be meaningfully predicted."

What is known is that the oil works it is more environmentally friendly than calcium chloride, and is made with a renewable resource produced by U.S. farmers...a solid place to start. More information will be available on soybean soapstock at MSU's Ag Expo, July 13-15, at the Michigan Soybean Promotion Committee's exhibit, lot number 305.

Keep watching for more information on "Acidulated Soybean Soapstocks." (Also being highlighted at Ag Expo are: NewStone - a building material made from soy flour and recycled newspaper; soy ink; soy diesel; and edible uses of soybeans.)

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## Asgrow Files Lawsuit in Plant Variety Protection Case

The Asgrow Seed Company has filed a lawsuit in the United States District Court for the Eastern District of North Dakota against Reuben Rud of Galesburg, ND, because Rud violated rights granted to Asgrow under the Plant Variety Protection Act (PVPA).

Rud advertised to sell, and sold, Asgrow's PVPA variety, Stinger. A representative of Asgrow Seed Company purchased Stinger in April 1993 from an agent of Rud at the Satrom-Hiam Seed Farm.

Asgrow has filed and successfully completed 20 lawsuits in 12 states to enforce rights granted under the PVPA. The company aggressively pursues the infringers of its PVPA certificates because, according to James R. McIntosh, Asgrow product manager, the PVPA enables Asgrow to recover some of its substantial research investment and continue its efforts to develop improved varieties.

"Disease resistance, enhanced quality, and greater yield potential are all the direct result of research and development," McIntosh points out. "Our research effort would be jeopardized if we did not strongly enforce the PVPA, which gives us exclusive rights of our protected varieties. Agriculture as a whole would suffer in the long run."

The PVPA was passed by Congress in 1970 to encourage the discovery, breeding and development of improved plant varieties and provides patent-like protection to companies developing new varieties.



## John Deere to Sponsor First Ever Ride and Drive at Expo 93

9

MSU Ag Expo participants in the hunt for a new tractor this year may have the unique opportunity to participate in John Deere's "Ride and Drive," a first for the Michigan State University Ag Expo, according to chairman Bill Bickert.

"John Deere has done this before at the Ohio Farm Science Review with good success," said Bickert. "Since they started doing it there, two other companies have also started similar test drive programs."

Bickert expects the concept will grow at Ag Expo in future years, depending on how well it works out for John Deere this year. That, he says, depends on how well farmers come prepared for the show.

"The companies get pretty serious about MSU's Ag Expo and spend a considerable amount of time planning ahead for this event," Bickert said. "It's nice for farmers to come here and just look around, but I

think it's good also to have some specific things in mind that you're looking for."

According to John Deere's territory manager for Southern Michigan, Jim Fairman, the company will be showcasing their 6000 and 7000 series tractors at the ride and drive program as well as a new four-wheel drive the company recently introduced.

The program isn't just for anyone, however, cautions Fairman. "We'll screen prospective customers at our static display on the Expo grounds," he said. "They'll have to fill out a registration card and then we'll direct them to a specific site to catch a shuttle bus to the ride and drive site."

"Our intent is to let a prospective customer get in the tractor and drive it around and try out the transmission and the cab and see how it feels. It's good for John Deere; hopefully, it's good for Ag Expo and for the attendees of the show."

Ride and Drive participants will be able to test drive the 6000 and 7000 series (shown below) as well as a recently introduced four-wheel drive model.



## John Deere's 750 No-Till Drill Part of Expo Field Demo

Perhaps one of the hottest no-till drills on the market today that has converted many a nay sayer into true no-till believers, is the 750 John Deere no-till drill. It's an all-till drill used mainly for no-till soybeans into corn or wheat stubble, but it also does an excellent job of no-tilling wheat as well, according to John Lich, owner of Lich Farm Service, Inc., near Portland.

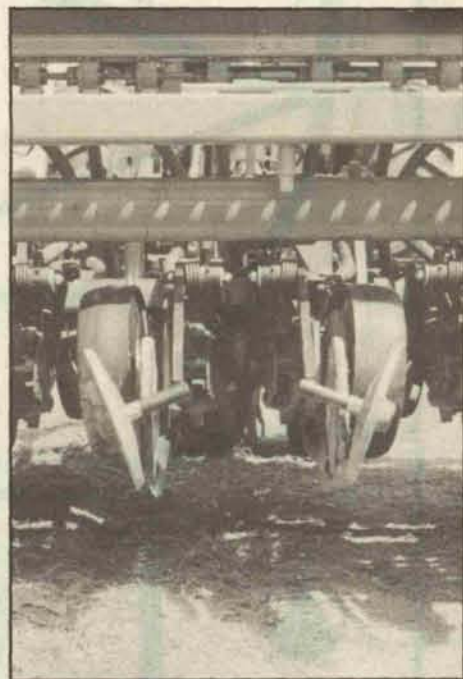
"What's different about this drill compared to other no-till drills is that there is no tillage done, whatsoever," explained Lich. "It just has a blade that runs on an angle and cuts a slit in the ground. The seed comes right out a little shoe at the very bottom of the disk, which is adjusted by a gauge wheel to precisely control depth, and make sure that all of the seeds are placed at an even depth."

According to Lich, the drill then utilizes a cast iron wheel that runs on an angle in the opposite direction of the blade, to pinch the slit shut. With the John Deere system, there is actually no soil compaction directly over the seed.

Down pressure on the coulters can be controlled with the simple adjustment of one stop on the master cylinder and, if needed, can actually lift the entire drill off the ground, transferring the entire weight of the drill to the coulters, at 375 pounds per opener.

The drill also provides adjustment for the tucker wheels and press wheels as well.

Although the drills are available in 10 and 15 foot models, Lich says the 15 footers are the most popular with a hopper capacity of 42 bushels. He's sold 26 of the 15 foot models in the last two years. The drills can be equipped with Yetter markers, and a fill system for bulk seed handling.



The 750 grain drill comes optionally equipped with a dual casting wheel hitch to remove weight from the tractor drawbar. The drill operates with two ranks of flat, 18-inch diameter single disk openers that run on a seven degree angle, with a seed shoe to place the seed at the bottom of the blade. The closing wheels (lower left) run on an angle in the opposite direction of the disk blade to seal the seed slot.



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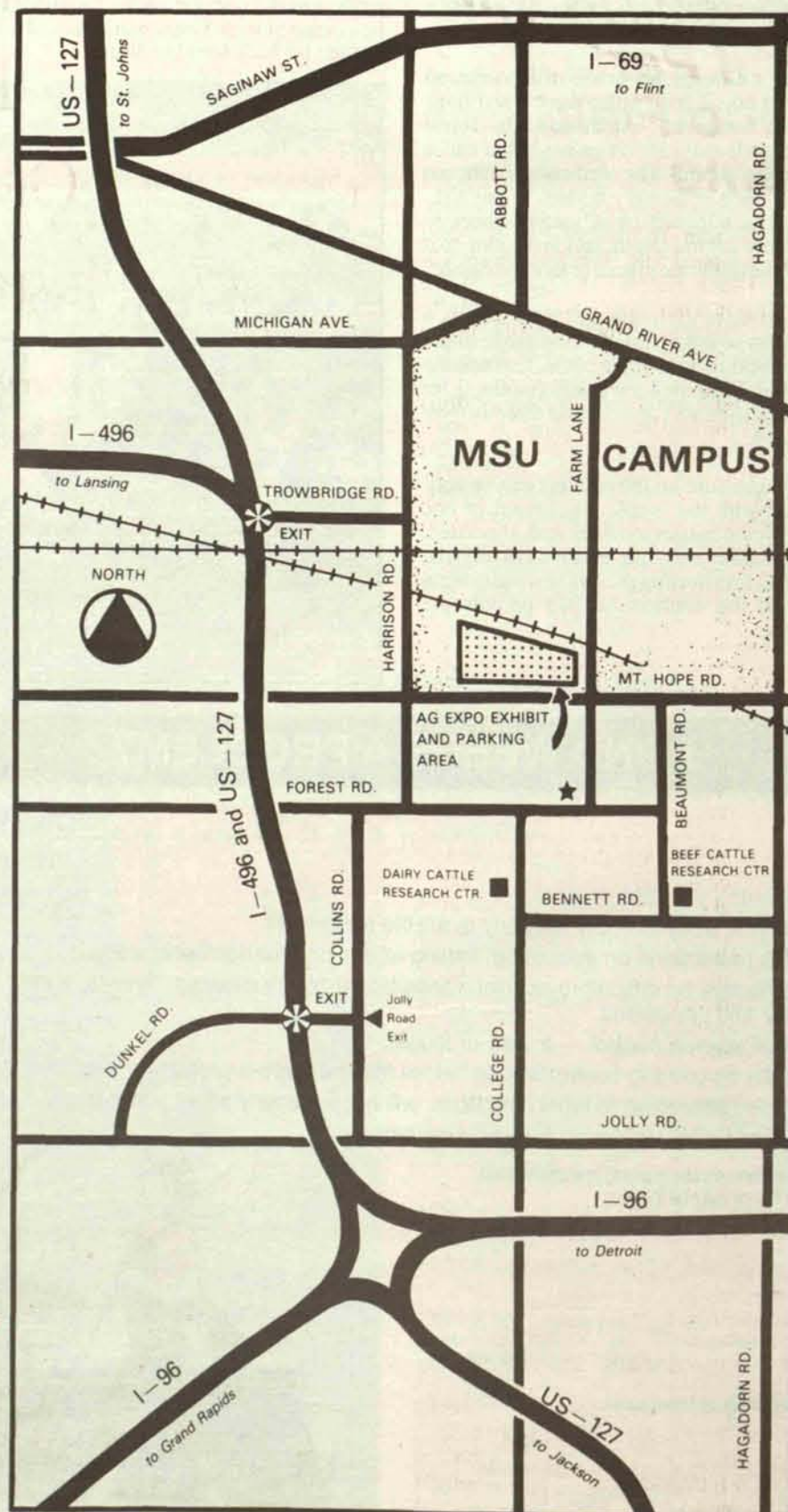
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## Routes to Ag Expo

The most direct routes to Ag Expo 93 are by way of Trowbridge Road or the Jolly Road exits from I-496/U.S. 127. The exits are marked with the star shaped figures. If you are approaching Lansing from the north, take the Trowbridge Road exit. If you're coming from the south take the Jolly Road exit.

**DIRECTIONS VIA TROWBRIDGE ROAD EXIT:** Travel to Harrison Road, remaining in the far right lane of eastbound traffic. Turn right onto Harrison Road. Go to the second stop light (Mt. Hope Road) and turn left. At the next traffic signal (Farm Lane), turn left proceeding into the Ag Expo parking lot.

**DIRECTIONS VIA JOLLY ROAD EXIT:** After exiting, turn east to Collins Road and proceed north on Collins Road, east on Forest (past the Swine Research Center) to Farm Lane to the Ag Expo parking lot (just past the traffic signal).



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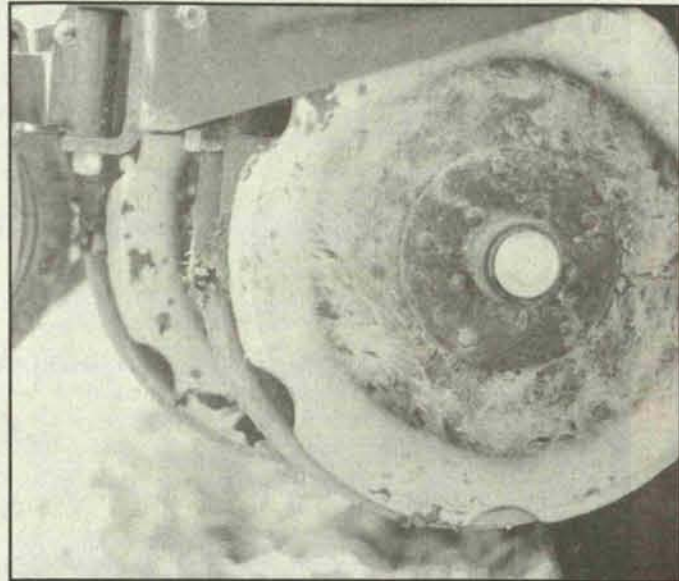
## Crust Buster 3400 All-Plant Drill Part of Expo Field Demo

11

Crust Buster, Inc., located in Dodge City, Kan., has a unique squeeze and plant drill system that makes its 3400 All-Plant Drill a true no-till drill, according to territory representative Dan Michael.

"We're using one smooth and one notched blade to cut through the residue and help trash flow," explained Michael. "The notched blade is the leading blade and is set about three quarters of an inch ahead of the

A leading notched blade helps cut through trash and improve residue flow on the Crust Buster drill.



smooth blade. The offset 16 inch coulters penetrate firm no-till soils and creates the ultimate seed furrow."

Other features of the Crust Buster include quick and easy pressure adjustments from 80 pounds to 545 pounds of pressure per row unit. A 38 bushel capacity is standard on the 15 foot model.

Hand adjustable depth control, in 1/4 inch increments, combined with a single arm pivoting press wheel that tracks behind opener disks, provides the ideal seed-to-soil contact



without additional side loads experienced with other drill's packer wheels, says Michael.

Michael claims that demand for the no-till drill continues to exceed supply, saying the company has been sold out by February for

the last three years. He attributes that demand to the simple fact that yields with a no-till drill in soybeans have consistently out-yielded other systems by six to 14 bushels per acre.

## United Farm Tools 5000 Series No-Till Drill Part of Expo Field Demo

United Farm Tool's 5010 no-till drill comes equipped with 18 inch diameter, 12-wave, 1-inch fluted coulters, which are mounted on a new single arm assembly so they can be staggered for less trash build-up and better residue flow.

The United Farm Tool 5000 Series drills feature a unitized frame, meaning the coulters are a part of the drill frame, instead of being mounted on a coulters caddy. The close proximity of the coulters to the openers assures accurate tracking even when planting in contoured fields.

The drill provides for separate control of hydraulic down pressure adjustment for the coulters and the seed openers. The hydraulic transfer of weight to the coulters allows the entire weight of the drill to be shifted to the coulters for easy penetration in tough soil conditions. Up to an additional 1,500 pounds of weight can be transferred from the tractor to the drill by means of the hitch hydraulic weight transfer system.

Heavy duty 15-inch double disc openers with a three-quarter inch offset for better cutting and penetration are mounted on a 1-1/8 inch spindle with a cast iron hub and triple seal bearing. The openers also feature self-adjusting internal rotary scrapers. Opener pressure can be adjusted by the tractor's hydraulic system and can exert up to 435 pounds per opener.

Customers can choose ripple or fluted no-till coulters, and the choice of four different styles of press wheels. Other optional equipment includes hydraulic markers, grass and legume seeders, and fertilizer attachments.

The seed metering system features an internal fluted seed cup capable of accurate metering of alfalfa seed to soybeans requiring adjustments for seeding rates only, with use of a single knob for the entire unit.

Seed hopper capacity on the 8-foot model is 20 bu.; 24 bushels on the 10-foot model; 35 bushels on the 15-foot model; 48 bushels on the 20-foot model; and 70 bushels on the 30-foot model.

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# 12 Soil Nitrate Testing for Corn Prior to Sidedressing a Smart Investment

**Maury Vitosh, Crop & Soil Sciences  
Michigan State University**

Nitrate testing of soil is an excellent and inexpensive way of evaluating the available nitrogen (N) status of your soil. Michigan State University (MSU) research and demonstration studies have shown that many farmers could reduce their N fertilizer application rate on corn without risk of reducing yields if they used the nitrate soil test. Nitrate testing also helps to prevent over-use of N fertilizers, reducing the potential for nitrate contamination of groundwater.

### What The Test Measures

The soil nitrate test measures only nitrate N. It does not measure ammonium N or organic N. If samples are taken in June, much of the ammonium and some of the organic N will have been converted to nitrate and will show up in the test.

MSU has been looking at ammonium in preplant soil samples to determine if it might be used to improve the prediction of N availability. Ammonium measured in the early spring of 1992 did not prove to be highly correlated with N availability in June samples.

### When To Take Soil Samples

Soil samples may be taken any time, however, samples taken in June after the soil has warmed-up usually contain the greatest amount of nitrate N. The June test measures both residual nitrate N from the previous year and recently mineralized N from ammonium and organic matter. Soil samples taken in early spring (April or May) measure only residual nitrate.

Because of the wet fall and spring, it is unlikely that much residual nitrate N will be

found in soil this season. However, testing may still be well worth the effort if the fields have been recently manured.

Samples taken just prior to sidedress time can be used to the greatest advantage to determine the appropriate amount of sidedress N for corn. Research and demonstration plots have shown that adjustments made in the N application rate based on these samples can provide optimum yields with reduced rates of N fertilizer.

Samples taken in June from fields where N has been broadcast prior to planting can be used as a guide to adding additional N through the irrigation system or for planning next year's application rate. If the soil test in June indicates more than 25 p.p.m., no additional N is needed. Soil test levels in excess of 40 ppm at this time may indicate an excess of N has been applied.

Samples taken in the fall may be used to evaluate how much N is left at the end of the season. Soil test levels in excess of 15 p.p.m. at harvest indicate excess soil N. Growers who have excess soil N in June or at harvest time should consider reducing next year's fertilizer rate or use the sidedress test to determine the appropriate N rate.

### What Fields to Sample

Sample all fields where corn is planted. Manured fields and legume fields sampled in June will likely contain the most nitrate. Sampling these fields early, however, will not result in the maximum N credit because ammonium N and easily decomposed organic N will not be measured by the test.

Farmers and county Extension agents should use MSU Extension Bulletin WQ-12 or WQ-25 for determining the ap-

propriate N credit from manure and legumes if samples are not taken at sidedress time. Other fields that show the most nitrate N are fields with fine textured soils (i.e. loam, clay loam and clay) that were heavily fertilized with N the previous year. Sandy soils, even though heavily fertilized the previous year, may not show much N carry-over.

### Where To Get Soil Sample Boxes

Soil sample boxes and information on taking soil samples for the nitrate test are available from your county Cooperative Extension Service office or the MSU Soil Testing Laboratory, East Lansing, MI 48824.

### How To Take Soil Samples

Each sample should be a composite of 15-20 soil cores taken from a uniform field no larger than 20 acres. Use a soil sampling tube or spade. Take each core to a depth of 10-12 inches. Place the 15-20 cores in a clean pail and mix thoroughly. Save one quart of the sample for drying.

### Handling Soil Samples

Air dry the sample immediately in a warm room. Placing the sample near a hot air vent or space heater will speed up the drying process. Do not hold wet samples in a plastic bag for any length of time. Microbial

action in wet samples can significantly change the nitrate test results.

### Where To Get Samples Analyzed

See your county Cooperative Extension office. Dry soil samples may be mailed to the MSU Soil Testing Laboratory, East Lansing, MI 48824. If the samples are still moist, do not put them in the mail. Moist samples should be transported directly to the Extension office for drying.

**Reprint, MSU CAT Alert, Field Crops**



## Michigan County and State Fairs Schedule

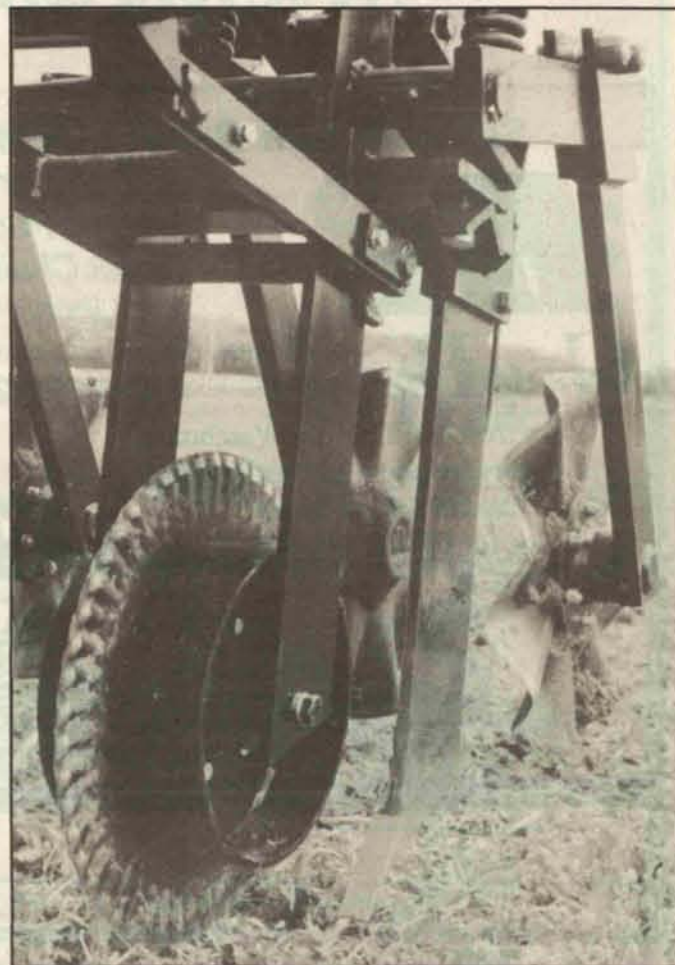
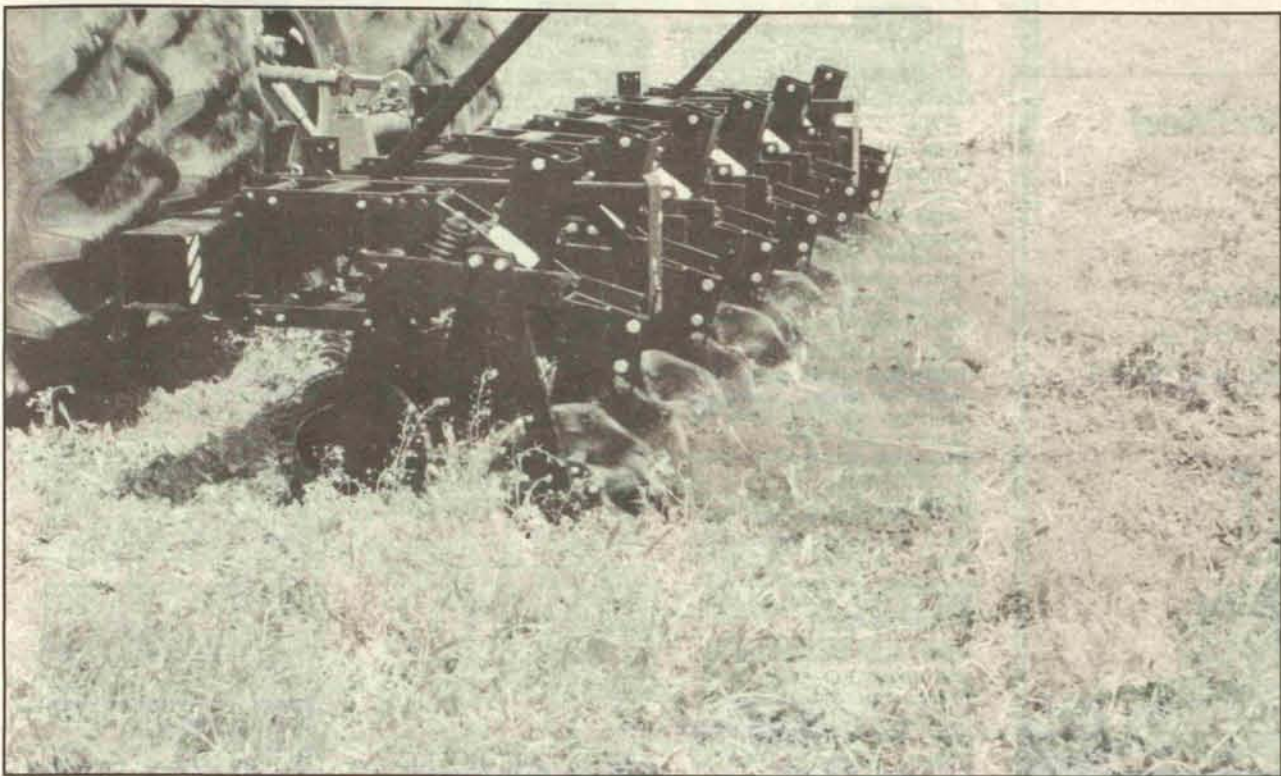
Alcona County Fair.....	Aug. 11-14	Houghton County Fair.....	Aug. 26-29	Northwestern Michigan Fair.....	Aug. 19-25
Alger County Fair.....	July 23-25	Hudsonville Community Fair.....	Aug. 23-28	Oakland County 4-H Fair Assoc.....	Aug. 2-9
Allegan County.....	Sept. 10-18	Huron Community Fair.....	Aug. 8-14	Oceana County.....	Aug. 25-29
Alpena County.....	Aug. 22-28	Ingham County Fair.....	July 30 - Aug. 7	Ogemaw County.....	Aug. 16-21
Antrim County.....	Aug. 26-28	Ionia Free Fair.....	July 30 - Aug. 8	Ontonagon County.....	July 29-Aug. 1
Arenac County.....	July 18-24	Iosco County.....	July 26-31	Osceola County 4-H & FFA Fair.....	July 26-31
Armada.....	Aug. 17-22	Iron County Fair.....	Aug. 19-22	Oscoda County Fair.....	July 15-17
Baraga County Fair.....	Aug. 13-15	Isabella County Youth & Farm Fair.....	Aug. 6-14	Otsego County Fair.....	Aug. 9-14
Barry County.....	July 17-24	Jackson County Fair.....	Aug. 8-14	Ottawa County Fair.....	July 26-31
Bay County Fair.....	Aug. 11-14	Kalamazoo County.....	Aug. 23-28	Presque Isle County.....	Sept. 9-12
Berrien County.....	Aug. 11-21	Kalkaska County.....	Aug. 8-14	Roscommon County Fair.....	Aug. 19-21
Branch County.....	Aug. 8-14	Kent County.....	Aug. 9-14	Saginaw County.....	Sept. 11-18
Calhoun County.....	Aug. 15-21	Lake County Fair.....	Aug. 23-28	Saline Community Fair.....	Sept. 7-11
Cass County.....	July 18-24	Lake Odessa.....	June 29-July 4	Sanilac County.....	Aug. 1-8
Cheboygan County Fair.....	July 31-Aug. 7	Lapeer County.....	Aug. 6-15	Schoolcraft County Fair.....	Aug. 6-8
Chelsea Community Fair.....	Aug. 24-28	Lenawee County.....	Aug. 15-21	Shiawassee County.....	Aug. 8-14
Chippewa County Fair.....	Aug. 30-Sept. 6	Manchester Community Fair.....	July 6-10	Sparta Area Fair.....	July 22-25
Chippewa County.....	Sept. 9-11	Manistee County.....	Sept. 1-6	St. Clair County.....	Aug. 2-7
Clare County.....	July 31-Aug. 7	Marion Farm Exhibit.....	June 21-26	St. Joseph County.....	Sept. 19-25
Clinton County.....	Aug. 2-5	Marquette County Fair.....	Sept. 9-12	Tuscola County Fair.....	July 18-25
Crawford County Fair.....	July 21-25	Mecosta County.....	July 11-17	Van Buren County.....	July 12-17
Dickinson County Fair.....	Sept. 2-6	Menominee County Fair.....	July 22-25	Vassar Fair Assoc.....	July 5-11
Eaton County.....	July 10-17	Midland County.....	Aug. 15-21	Washtenaw County.....	July 26-31
Emmet County Fair.....	Aug. 21-29	Missaukee Falmouth Agr'l.....	Aug. 2-6	Wayne County Fair.....	Aug. 10-14
Fowlerville.....	July 19-25	Monroe County Fair.....	Aug. 2-7	Western Michigan.....	Aug. 22-28
Genesee County.....	Aug. 16-22	Montcalm County 4-H Fair Assoc.....	July 4-11		
Gladwin County Fair.....	July 25-31	Montmorency County 4-H Fair.....	Aug. 18-21		
Gogebic County Fair.....	Aug. 12-15	Muskegon County Fair.....	July 10-17		
Gratiot County Fair.....	July 26-30	Newaygo County.....	Aug. 9-14		
Hillsdale County.....	Sept. 26-Oct. 2	Northern District Fair Assoc.....	Aug. 16-21		

### STATE FAIRS

Michigan State Fair..... Aug. 27 - Sept. 6  
Upper Peninsula State Fair..... Aug. 17-22



# 13 Row-Tech's Trans-Till Part of Expo Field Demos – Unit Makes No-Till Transition Easy



Designed by farmers for farmers, the Trans-Till has given its creators, the Roggenbuck, a happy compromise between conventional tillage and no-till. This six-row unit (above) was preparing strips at the Expo field demonstration site. At right is a close-up look at the unit's coulters and shank configuration. Overall depth can easily be adjusted by varying the third link of the three point hitch. The result is a cleanly tilled strip 6-1/2 inches deep that makes an ideal seedbed for planting (see below left) with a conventional planter. The Roggenbuck let the ground air out for four to 12 hours before following up with a planter.

For the Roggenbuck, Snover area cash croppers, no-till just didn't seem to work in their crop rotation and heavier, sticky soil conditions. Several years of experimentation with no-till left them convinced there had to be a system that provided the best of both worlds, according to David Roggenbuck, who farms over 2,000 acres with his brother, father and a brother-in-law.

"I know a lot of people who are turned off to no-till because of past bad experiences," said Roggenbuck. "We tried no-till and it was just about a total failure in our soil conditions. We could see that conventional tillage was going to beat the pants off of no-till in our area."

Their solution was a machine they developed in their farm shop three years ago and are now selling on a commercial basis. The Trans-Till tills a planter strip with a 17-inch coulters which is sandwiched between gauge wheels to provide depth control and runs directly ahead of a shank. Two 17-inch diameter, 2-inch 8-way coulters offset 4 -1/2 inches on either side of the shank follow to complete the tillage strip.

The depth of the machine can be varied by adjustment of the third link on the three point hitch. The shank depth can be controlled separately to run either at 4, 6-1/2 or 9 inches. Roggenbuck recommends the 6-1/2 inch depth setting in normal conditions, the 4 inch setting for early tillage in sugar beets, and the 9 inch setting for late season tillage.

According to Roggenbuck, the concept isn't all that new - create a clean strip of soil that warms up, and makes an ideal seedbed. What is unique, however, is the time that the soil is allowed to air out before actually planting with a conventional planter.

"If you've got sticky or heavier soil types, you can let it air out with this system before planting," explained Roggenbuck. "You can get the benefits of conventional tillage, plus the residue benefits of no-till. And, if someone wants to try no till, he can make the transition from conventional tillage into no-till and never touch his planter."

Although Roggenbuck recommends allowing time between the tillage pass and the actual planting, he expects that it's only a

matter of time before someone will couple their machine to a planter for a one-trip tillage and planting process.

"With the tilled strip, the sun shines on that cleaned off dirt and warms it up, plus it has time to air out between the tillage trip and the planting trip," said Roggenbuck. "When it's all coupled together on the planter, you've got one shot with the planter. If it's too sticky, you shouldn't be out there."

Roggenbuck estimates that the Trans-Till requires approximately 20 horsepower per row, and that the ideal operating speed is in the 5-1/2 to 6 mile per hour range, to provide the best tillage and mixing of trash. The units sell at \$1,200 per row, without the tool bar.

The most popular unit is the six-row version, says Roggenbuck, adding that they've probably sold a 100 rows worth of the units. The six

row unit, complete with the tool bar lists for \$7,950.

The Trans-Till can also be outfitted with markers for use in fields that were previously drilled or in sod. Once the 30-inch rows are established, however, Roggen-

buck says the unit can run without the markers.

For more information about the Row-Tech Conservation Tillage Tool, contact Roggenbuck at (313) 672-9383.

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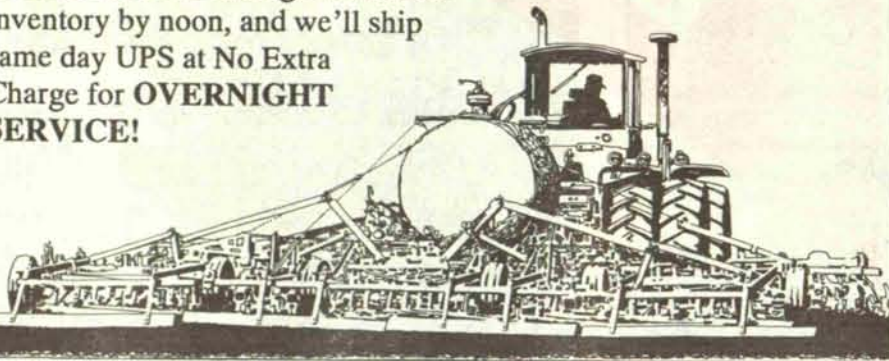


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## Operation Clean Sweep a Pesticide Disposal Program

Greg Patchan, Horticulture Agent

Pesticides are invaluable tools for the production of agronomic and horticultural crops, sod, and the management of plant materials in the urban landscape. But, when pesticides become old, obsolete, illegal or unwanted, you can face a formidable challenge in arranging for their disposal.

The confusing pesticide regulations, paperwork and costs can be a mind numbing problem, and as a result, many pesticides continue to collect dust while they sit in barns, sheds, basements and other storage facilities.

While in storage, the pesticides and containers continue to deteriorate, which increases their liability issues. Tightening environmental regulations also compound the concerns regarding these stored products.

### Program is for Eastern Michigan

If you're starting to lose sleep over your collection of old pesticides, or simply trying to forget about them, Operation Clean Sweep can greatly reduce your stress level and liability while reducing the potential demands on your wallet.

This collection and disposal program is sponsored by MSU Extension, Michigan Department of Agriculture, Farm Bureau, Soil Conservation Districts, health departments, professional associations, and other sponsors. Funding is partially provided by the Environmental Protection Agency. This "one time" only program is targeted for counties in eastern Michigan. (*Editor's note: Similar programs may be scheduled later for other areas of Michigan.*)

The collection and disposal is planned for late 1993 or early 1994. The exact timing and details are currently under development.

Operation Clean Sweep will allow you to dispose of most old, unwanted and unusable pesticides with far less trauma than if you tried to arrange for disposal for just your business' supply. You will also enjoy substantial cost savings because of the "pooling" process and the grant funding. A "donate and use" program may also allow you to dispose of pesticides that are still usable. This program disposes of these usable pesticides by donating them to applicators who can apply them according to the label.

As an overview, Clean Sweep has divided the eastern Michigan target zone into five sites or zones. These are as follows:

Site 1: Bay, Saginaw, and Midland counties

Site 2: Oscoda, Alcona, Iosco, Arenac, and Ogemaw counties

Site 3: Genesee, Lapeer, St. Clair, Oakland, and Macomb counties

Site 4: Tuscola, Huron, and Sanilac counties

Site 5: Washtenaw, Wayne, Lenawee, Livingston, and Monroe counties

The exact procedures, such as eligible participants, locations, collection dates, costs, etc. will vary with each site by county. In all cases, you should contact your MSU Extension Service office for specific details. While the collection dates are scheduled for late 1993 or early 1994, you need to do the following to be eligible to participate:

1. Obtain an inventory form for detailing the products you wish to be considered for disposal.
2. Return the form to your MSU Extension county office by July 1, 1993.

The inventory forms will be strictly confidential and are not a contract or legally binding document. The inventories supplied by the participants will be pooled and supplied to several licensed disposal firms to determine the disposal procedures and the associated costs.

This information will then be used by the Clean Sweep management team to determine your costs, if any. You will then be contacted regarding your materials and procedures, collection sites and dates, and other pertinent information. Note: you will only be listed eligible to dispose of the products listed on your inventory form.

For a copy of the inventory form, call your local MSU Extension office.

- Genesee County .....(313) 732-1470
- Lapeer County .....(313) 667-0341
- Lenawee County .....(517) 264-5300
- Livingston County .....(517) 546-3950
- Macomb County .....(313) 469-6440
- Monroe County .....(313) 243-7113
- Oakland County .....(313) 858-0887
- St. Clair County .....(313) 985-7169
- Washtenaw County .....(313) 971-0079
- Wayne County .....(313) 494-3012

Don't delay in obtaining and submitting your confidential and non-binding inventory form. Your savings will be substantial in reduced liability and costs. You'll also sleep better.

Reprinted from MSU CAT Alert, Field Crop Edition, May 26 issue

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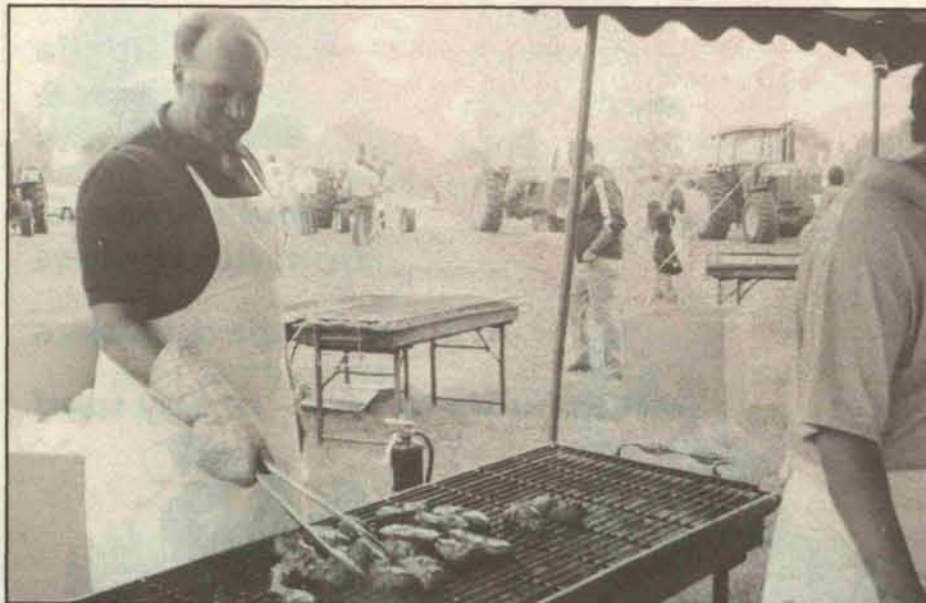
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## 16 MFB's Summerfest and Ag Expo – A Great Combination!

It's going to be a celebration at Farm Bureau Center in Lansing on July 14, starting at 3 p.m. The festive Summerfest event includes a grilled steak dinner with all the trimmings, cold drinks, apple pie and other sweet treats, games, and country music. To get an added extra during your trip to Ag Expo, send in your ticket order form today along with a check or money order before the June 30 deadline. There's just 2,500 tickets available, sold on a first come-first serve basis. See the order form on page 3 of the regular *Michigan Farm News* in the Summerfest ad!



Ag Expo '93 will provide the MFB Family of Companies an opportunity to showcase their many products and services to an expected 50,000 farmers who will attend the three-day trade show. The theme for this year's MFB big tent display will be, "Farmers – Professionals From the Ground Up!" The 60' x 90' red and white striped tent will be located on our traditional lots in the heart of the Expo grounds at the corner of Second Street and Avenue D on lots 248, 249, 348, and 349 (see map on page 6).

Under the big top, members will find Farm Bureau staff ready to answer questions on everything from health care to custom diesel fuel. In addition to the many products and services, booths featuring member involvement programs will be included in this year's display.

Don't miss the most exciting spot on the Expo grounds – the Farm Bureau Family of Companies display!

## Manage No-Till Soybeans to Guard Against Diseases

A quiet revolution is rapidly changing the way U.S. farmers produce soybeans.

Soybean acres are being converted to no-till in record numbers. Total U.S. no-till soybean acres jumped from 2.25 million in 1989 to 4.7 million in 1991, according to USDA statistics. In 1992, that acreage nearly doubled again, to 8.2 million. The trend likely will continue as farmers bring their tillage practices into compliance with conservation guidelines.

No-till offers numerous benefits, including reduced erosion and compaction, plus substantial savings on labor, equipment and fuel. However, experts caution no-till farmers to pay close attention to controlling soilborne diseases. Crop residue, an excellent host for disease-causing organisms, makes no-till fields more vulnerable than conventional-tilled or plowed fields. Common soybean diseases are a major threat to yields, with losses of more than 50 percent possible.

"There is plenty of evidence that no-till results in cooler and damper soil conditions in the spring, which favor soilborne diseases," says Dr. Walker Kirby, Extension plant pathologist at the University of Illinois.

"Seedling diseases can have a major affect on stand establishment and yield potential," adds Dr. Gary Cloud, University of Arkansas plant pathologist. The first step in crop protection from disease, he says, is identifying which pathogens are present. No-till fields are especially susceptible to several pathogens:

- *Phythium* spp. can survive in residue as well as the soil. Infected seedlings are slow to develop in cold, wet soil and sometimes die prematurely.
- The *Diaporthe* complex overwinters in residues and can cause pod and stem blight, as well as stem canker.
- *Phytophthora*, another major problem in no-till fields, has a pruning effect on the young seedlings' roots and can severely damage or eliminate stands.
- *Rhizoctonia*, a threat because of its ability to thrive on dead plant matter, can reduce yields by up to 35 percent.

Farmers can take several steps to manage seedborne and soilborne diseases. First, delay planting until the soil warms up. Cold, damp soils are conducive to slow germination and plant establishment, which makes seeds more vulnerable to phythium and rhizoctonia.

"Some farmers plant early when temperatures are cool, and the seed sits and imbibes moisture but doesn't germinate," says David Sysong, Extension plant pathologist at the University of Nebraska. "Since many soybean growers also are corn growers, I recommend that they plant corn first so the beans don't go in too early."

Second, plant high-quality seed, because poor seed is more vulnerable to disease. Many experts recommend having cool and warm germination tests conducted on seed beans.

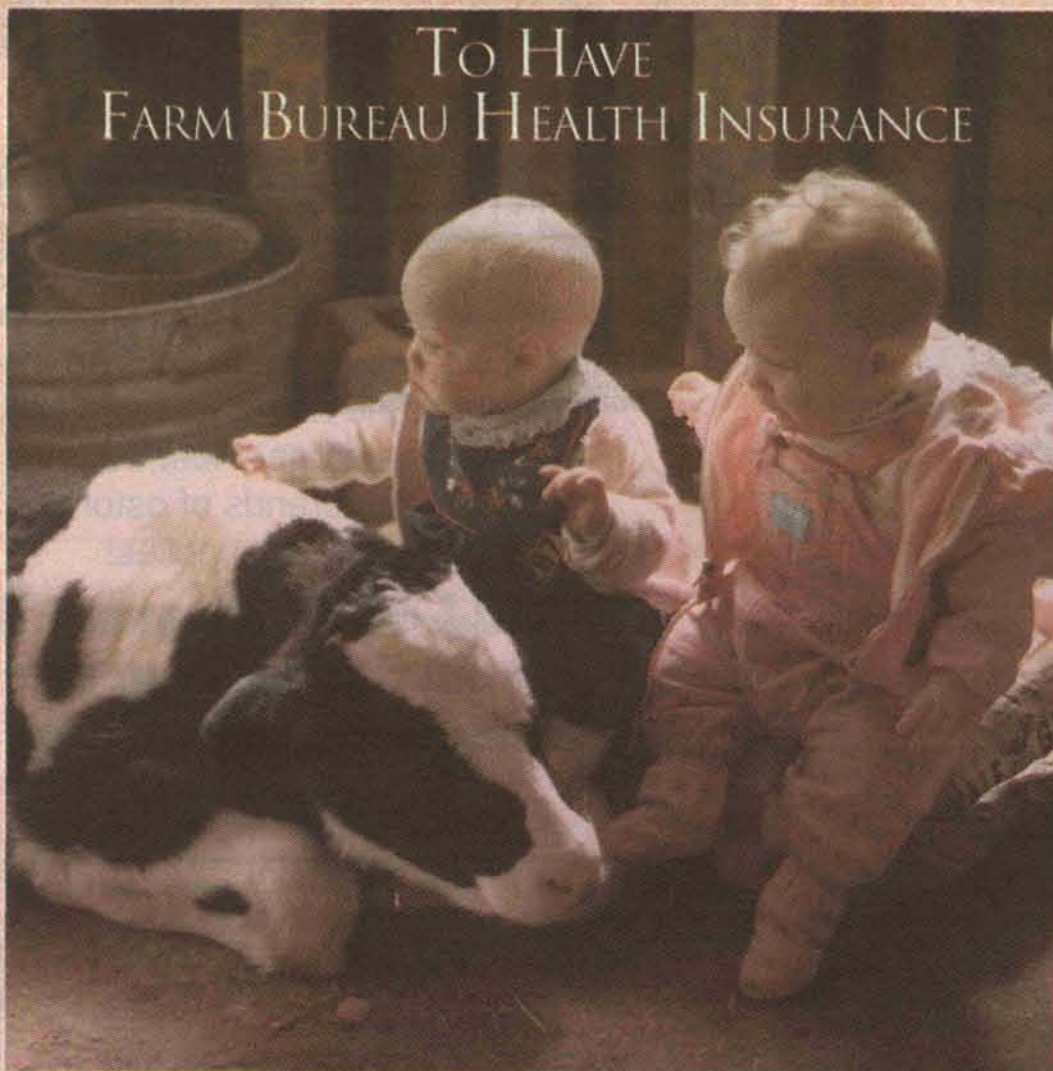
Third, plant seed treated with a systemic fungicide. Seed treatments are valuable with any tillage system, but especially so in no-till, Kirby says: "We feel seed treatments are good in zero-till, conventional till or anywhere in between."

The best option to manage these diseases is treatment with a combination of fungicides. As Cloud reminds growers, no single fungicide protects against all pathogens. The challenge is determining the best combination.

For soybean farmers switching to no-till, planting treated seed is a good management practice to ensure the money saved on tillage won't be robbed by soilborne diseases.

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