

MICHIGAN FARM NEWS

MICHIGAN'S ONLY STATEWIDE FARM NEWSPAPER

MICHIGAN FARM BUREAU



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USDA to expand crop revenue insurance program



Severe thunderstorms brought flooding that damaged many acres of Michigan crops early last spring. An expansion of the crop revenue insurance program to cover corn and soybeans recently announced by the USDA adds Michigan to the list of 11 states that will be eligible for the coverage. Only Iowa and Nebraska farmers could utilize Crop Revenue Coverage on the two crops last year.

Changing your P.A. 116 agreement?

April 1 filing deadline closing fast

Last summer, Gov. John Engler signed into law sweeping reforms to the Farmland and Open Space Preservation Program, P.A. 116, including provisions for early termination of the contracts and reducing the length of the contracts to a minimum of seven remaining years. But if you want to take advantage of these revisions to the 23-year-old law, you'd better hurry and make your request in writing by April 1 or your window of opportunity will be closed.

According to the Department of Natural Resources (DNR), if a landowner wishes to terminate an entire agreement, simply submit a written request to the Farmland Preservation office, listing the number(s) of the agreements sought for termination.

"If they take land completely out," says Michigan Farm Bureau Legislative Counsel Ron Nelson, "they will be required to pay back any credits received in the last seven years."

One of the following requirements is needed, according to the DNR, to reduce the length of the contract so that only seven years remain:

- Agreements in existence for at least 10 years may be reduced so only seven years remain.
- If 10 years have not been served, but the remaining length of the agreement is more than 17 years, the length of the agreement may be reduced so the total length of the agreement is 17 years from the initial year of enrollment.

"The Legislature created this opportunity to reduce the length of term to seven years," explains Nelson. "If a producer has a long-term agreement, they can reduce that to seven years. So, a 70-year agreement can become a 17-year agreement from the time it was first entered into."

"To avoid paying back credits claimed on the property," says Nelson, "the landowner can claim no credits for the final seven years, thus there's no payback."

Release of parcel for house construction

Another substantial reform to P.A. 116 allows for the release of up to two acres from the agreement for the construction of a house for an individual essential to the farming operation. The person must have a financial interest equal to or greater than 50 percent of the cost of the farm's production or work 1,040 hours or more in activities of the farming operation.

Although this provision does not have an April 1 deadline, there are other requirements to follow before a portion of the contracted area can be released, including a listing of the taxable value from the local assessor, a legal description, a resolution from the local governing body approving

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Pressure results in IRS change of tax rules

Three Michigan congressmen supporting legislation correcting deferred payment ruling by IRS

Increasing pressure from members of Congress and demand for tax law changes by Farm Bureau have prompted the Internal Revenue Service (IRS) to revise its position on the tax treatment of deferred payment contracts.

In late January, the IRS announced it will grant a temporary exclusion for deferred payment contracts. Farm Bureau contends that deferred payment contracts—which allow farmers to even out their income taxes from year to year by deferring income from one crop year to the next for tax reporting purposes—should not fall under alternative minimum tax (AMT) requirements as the IRS contends.

The reprieve on deferred payment contracts announced by the Internal Revenue Service is good news for Michigan farmers in the process of filing their 1996 taxes. The temporary reprieve states that farmers who use deferred sales contracts should make no changes to how they report sales of deferred commodity and livestock contracts on their 1996 income tax returns.

The IRS had ruled late last year that farmers must treat the income received under a deferred payment contract in the year when the contract was signed rather than when the payment was actually received, creating a great deal of confusion and concern about the agency's sudden change in tax policy interpretation.

According to Al Almy, director of MFB's Public Affairs Division, farmers face wide swings in income due to factors that are beyond their control. "This

ruling can result in additional tax liabilities for farmers," he adds. "Farm Bureau believes the IRS has taken a position that is inconsistent with the intent of Congress and the historical treatment of deferred payment contracts. The tax code specifically allows farmers to use the cash basis method of accounting, and farmers have used deferred payment contracts for years without penalty."

While the announcement eliminates the short-term concerns for producers, legislative action and clarification will be needed for long-term relief, according to Almy. He says the organization is aggressively seeking additional support from Michigan congressional delegation for legislation recently introduced.

"The Farm Bureau-supported legislation that Sen. Abraham has co-sponsored, Senate Bill S. 181, would allow a farmer to treat the income as income for tax purposes in the year it was actually received rather than when the contract was signed," Almy explained. "H.R. 426, an identical bill that's been introduced in the House, has over 100 co-sponsors at this time. The only Michigan members who have agreed to co-sponsor H.R. 426 are Rep. Nick Smith (R-Addison) and Rep. Dave Camp (R-Midland). But we know that several other representatives are taking a close look at the bill."

Almy said Michigan Farm Bureau is going to be urging additional congressmen, including Sen. Carl Levin, to co-sponsor the measure, as well as requesting that respective legislative committees hold prompt hearings and report the bill favorably for immediate floor action. ■

COVER STORY Michigan gains Crop Revenue Coverage for corn and soybeans

The USDA is significantly expanding a crop revenue insurance program for corn and soybeans to Michigan and 10 other states that was available only in Iowa and Nebraska last year.

"Crop Revenue Coverage (CRC) is a new form of insurance that covers both yield and price risk," explains MFB Commodity Specialist Bob Boehm. "It started in Nebraska and Iowa and was received very well by producers who saw a benefit to being able to protect themselves from impacts of both price and yield."

The CRC is a private form of insurance that guarantees a stated level of revenue in the event of low yield due to poor growing conditions or low prices. It is an alternative to the federal government's Multiple Peril Crop Insurance program.

USDA Secretary Dan Glickman said the expanded revenue insurance programs would help USDA ensure an adequate "safety net" for farmers.

"By having that assurance," explains Boehm, "it allows producers to be more aggressive in forward pricing their commodity. Because CRC provides a revenue guarantee based on the higher of the planting or harvest price, farmers do not need to be as concerned about the impact of a crop failure in a rising market. CRC will provide the revenue to allow them to meet contract obligations."

CRC policies have proved popular because they guard against not only losses from floods, drought and other acts of nature, but protect against price drops between planting and harvest.

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News in Brief



From the President

S.B. 112 threatens Michigan farmland preservation for the next generation

Efforts to preserve Michigan farmland were dealt a serious blow Jan. 22, when the governor approved Senate Bill 112, which was intended to reform Michigan's Subdivision Control Act. While Michigan Farm Bureau is committed to reforming the Subdivision Control Act, the final version of the package, officially known as Public Act 591, did not accomplish what was needed.

We had a prime opportunity to reform the state's 30-year-old Subdivision Control Act to provide true, long-term farmland preservation in Michigan. Unfortunately, two years of hard work by Farm Bureau and the several recommendations proposed by the Michigan Farmland and Agriculture Development Task Force seem to have fallen on deaf ears in Lansing.

For many years now, Michigan Farm Bureau members have recognized the need to change the law guiding land divisions that are exempt from the plating process. That's why Farm Bureau supported the original provisions of Senate Bill 112.

Our objective was to develop an exempt division policy that provided an incentive for wise land use. Unfortunately, Public Act 591 will still allow the creation of "bowling alley" shaped lots because of an exemption from the 4:1 depth-to-width ratio on parcels larger than 10 acres. The number of divisions exempt from plating is also excessive and is a major reason the bill will not meet farmland preservation needs.

Public Act 591 attempts to provide incentives to place developments on 40 percent of the parcel, preserving the remaining 60 percent for agricultural purposes. However, if these incentives are used, 66 percent of the parcel can be developed within 11 years. Put simply, Michigan agriculture cannot compete with a land division policy that is exempt from plating when creating high-density developments.

Bacteria may provide biofuel, cheap nitrogen fertilizer

A quirk of nature may someday provide an inexpensive biofuel or improve the production of man-made fertilizers. Some soil microorganisms use enzymes that contain iron or iron and vanadium, elements naturally present in soil, to convert nitrogen in the atmosphere into a form plants can use for growth. Hydrogen that is produced in the nitrogen-conversion process — but not used by the plants — could be collected and put to work as a biofuel, scientists say.

Another plus: Bacteria that use iron in this process could provide clues as to how iron might serve as a catalyst in making nitrogen fertilizers. Current ammonium fertilizer production uses extremely high temperatures and pressure, a process that requires lots of fossil fuel. An alternative process could lower costs and preserve fuel. ■

When the governor signed Public Act 591, he encouraged legislators, among other things, to review the plating process to simplify the bureaucratic process. We agree the plating process must be reformed. However, we must first address the problems associated with the number of exempt divisions before proceeding with reform of the plating process. Ironically, under provisions of the new legislation, which will basically allow the proliferation of mini-subdivisions, the plating process will rarely be needed.

The review process by the local unit of government is still intact; however, there is a big difference between a review for low-density developments and requirements by public agencies that are needed for high-density developments. Longer-term — in the next 10 to 15 years — this law is going to be especially hard on local communities who will not have the ability to require the expensive infrastructure needed for this many divisions.

It has literally taken 20 years to change the current law. While the governor also encouraged legislators to "thoroughly review" the provisions allowing redivision of parcels every 10 years, Farm Bureau would have preferred that legislators taken the responsible reform steps necessary at the close of the last legislative session and approved legislation similar to the original version of Senate Bill 112.

P.A. 591 will not preserve farmland for the next generation. It will increase urban pressure on existing farm operations due to unplanned, high-density developments. While Farm Bureau supports economic growth and development, it must be well planned when high-density building is necessary.

The statistics of farmland lost in this state to development are staggering. The governor's own Michigan Farmland and Agriculture Development Task Force determined that we lost 10 acres of farmland every hour of every day from 1982 to 1992. It is imperative that we develop balanced and reasonable reform of the Subdivision Control Act to provide genuine farmland preservation. Without those changes, it's almost certain Michigan farmland will continue to be converted to other uses at an alarming rate.

Michigan Farm Bureau believes the Subdivision Control Act is the basis for proper planning and should be the vehicle to encourage wise land use in Michigan. As a representative of this state's second largest industry, Michigan Farm Bureau will work aggressively on behalf of the agriculture industry to seek the reforms needed to provide a reasonable and balanced exempt division policy for Michigan.

Jack Laurie

Jack Laurie, President
Michigan Farm Bureau

Winter wheat plantings lowest in 19 years

According to the Agriculture Department, winter wheat plantings this year are at their lowest levels in 19 years. With only 48.2 million acres planted, USDA and private analysts are saying the shift in wheat acreage is directly related to the 1996 farm bill that allows producers the freedom to plant crops they want to grow.

Most grain market analysts predicted farmers would sow around 51 million acres and the new numbers shocked some. The drop, said one analyst, was based on a combination of poor planting weather and producers wanting to take advantage of higher corn and soybean prices in the face of lackluster wheat prices.

The shift also has been viewed by some analysts as a sign that the new farm law is working despite the possibility of market volatility over the next few years, caused by acreage shifting from one crop to another. It is expected that most of the lost wheat acreage — a good portion of the acreage came from states in the Corn Belt — will go to corn and some into soybeans. ■

Veliquette elected chair of Ag Commission

Antrim County Farm Bureau member Norman R. Veliquette recently was elected chair of the five-member Michigan Ag Commission, which oversees operation of the Michigan Department of Agriculture.

A native of Elk Rapids, he graduated from Michigan State University with a degree in agricultural economics. In 1972, he co-founded Great Lakes Packing Company and now serves as its president. His company has become the largest family-owned and operated processor of dessert cherries in the United States. In 1993, he and his wife, Marjory, received the U.S. Small Business Administration Entrepreneurial Award.

For 10 years he served as Antrim County Farm Bureau policy development chair and has consequently served on the MFB State Policy Development

Committee for three years. He has also served as Antrim County Farm Bureau president.

Veliquette also served on the Federal Market Order 930 Cherry Administrative Board for 12 years as both chair of the Finance Committee and treasurer of the board. He is a past president of the Rotary Club in Elk Rapids. He has also served on the Elk Rapids Schools Board of Education for more than 20 years.

Veliquette was first appointed to the commission in 1995, and his term expires at the end of this year. ■



Rural Development Council to hold policy forums

Anyone living in rural areas interested in issues facing their community are encouraged to attend one of three policy forums sponsored by the Rural Development Council of Michigan (RDCM) held the end of February.

The meetings will provide a forum for community leaders, business leaders and citizens of rural Michigan to provide input on rural policy development and identify issues facing rural Michigan and the needs of rural communities.

According to David Skjaerlund, RDCM executive director, the meetings will also explore new and innovative ways to address the needs of rural communities and any policy recommendations on addressing those needs.

Purebred Council adds Maine-Anjou

The Maine-Anjou Association of Michigan is the newest affiliate to join the Michigan Cattleman's Association (MCA) Purebred Council.

Deb Videtich, of Kent City, is the Maine-Anjou Association of Michigan's president, and their representative for the Michigan Beef Expo is Lana Kaiser, of Mason.

As the name suggests, the Purebred Council represents the purebred breeders who are members of the Michigan Cattleman's Association. The Purebred Council founded two of MCA's annual activities: the Michigan Beef Expo and the MCA-MSU Bull Test and Sale.

The Purebred Council ruling body is made up of one voting representative of each affiliated breed association. The Maine-Anjou representative for the council is Janet Hillman, of Conklin. The current chairman of the council is Phil Hutchison, of Onondaga, and the current vice chairman is Bill Kube, of Gobles. Quentin Harwood, of Ionia, MCA president; and Gary Voogt, of Marne, MCA president-elect, are both past chairmen of this group. ■

MACMA Annual Meeting to be held

The Michigan Agricultural Cooperative Marketing Association Inc. (MACMA) will hold their annual meeting on Wednesday, March 19 at 1:30 p.m. at the Double JJ Resort in Rothbury, Mich. Prior to that, the Red Tart Cherry Growers and Feeder Pig divisions will conduct their annual meeting at 10 a.m. at the same location.

Call the MACMA office at (517) 323-7000, ext. 2301, for more details. Meeting and meal reservations must be made by Monday, March 10. ■

Michigan CAT is on the World Wide Web

Michigan CAT is proud to announce their new Internet Web site. Various information can be accessed at the site, including company history, available products and services, coming events, used equipment listings, career opportunities at Michigan CAT and more! You can visit the new Web site at <http://www.michigancat.com>. You can also visit the Caterpillar site at <http://www.cat.com>. ■

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Capitol Corner

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NATIONAL ISSUE

Balanced Budget Amendment

Both the U.S. House and the U.S. Senate are scheduled to vote on a balanced budget amendment during the week of Feb. 10 - 14. The Senate is expected to vote first.

On Jan. 9, Reps. Schaefer (R-Colo.) and Stenholm (D-Texas) introduced H.J. Res. 1, the consensus balanced budget amendment. The amendment requires the following:

- A balanced budget each year unless waived by a three-fifths vote.
- A three-fifths vote to raise the national debt ceiling.
- The president to submit a balanced budget.
- A constitutional majority (one more than half the total) to raise taxes.

The requirement to balance the budget can be waived in times of war. The amendment takes effect in 2002 or after ratification by three-fourths of the

states, whichever is later. Sens. Hatch (R-Utah) and Bryan (D-Nev.) introduced the same balanced budget amendment in the Senate as S.J. Res. 1.

A series of alternative amendments will be offered to allow members to say they supported a balanced budget amendment without having to cast a yes vote for the bills. Amendments likely to be offered will waive the Balanced Budget Amendment in times of recession or exempt Social Security from budget cuts. These alternatives do not improve the Schaefer/Stenholm and Hatch/Bryan bills. Congress can decide by a three-fifths vote to waive the balanced budget requirement during recessions or other national crisis. Congress will decide later whether or not Social Security will be affected.

MFB Position: Farm Bureau supports the balanced budget amendment.

MFB Contact: Al Almy, ext. 2040. ■

STATE ISSUE

High-speed railway

The Michigan Department of Transportation (MDOT) is pursuing the establishment of a high-speed railway system from Detroit to Chicago. Improvements in the current system will allow trains to travel up to 110 miles per hour — up from the current safe speed of 79 miles per hour. When the project is finished, the trip between Detroit and Chicago will take 3.5 hours.

To implement this system, MDOT is utilizing the existing rail corridor. MDOT intends to implement the project in various phases with track and signal upgrades over several years. In addition, several crossings may be closed. Affected counties will be Berrien, Calhoun, Cass, Jackson, Kalamazoo, Van Buren, Washtenaw and Wayne.

Status: MDOT has performed a test run between Kalamazoo and Dowagiac. Recently, the affected county Farm Bureau organizations met with MDOT to discuss their plans and express concerns over the possible closing of agricultural rail crossings. MDOT will be working with the affected county Farm Bureaus to provide more information in the future.

MFB Contact: Tim Goodrich, ext. 2048. ■

Changing your P.A. 116 agreement?

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the release and documentation of the individual's involvement on the farming operation, i.e., W-2 forms, Schedule F or payroll records.

"If you want to take a couple of acres out for someone that's involved in the farming operation, that's now possible," states Nelson. "Aside from the other requirements you will pay back any credits received proportionate to the value of that land. But typically, if it's a couple of acres, it's going to be a pretty small payback."

If you need to request the reduction or termination of your P.A. 116 contract or have questions concerning your situation, write to: Farmland and Open Space Preservation, Real Estate Division, Michigan DNR, P.O. Box 30449, Lansing, MI 48909, or call 517-373-3328. ■

QUESTIONS ABOUT NATIONAL AG LEGISLATION?

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STATE ISSUE

Purchase of Development Rights

Senate Bills 573, 574 and 575, sponsored by Sen. Bill Schuette (R-Midland), were signed by the governor Jan. 16 as Public Acts 569, 570 and 571.

The law now provides the ability for townships, counties or municipalities to develop and conduct a purchase of development rights (PDR) program utilizing local funds.

The PDR program may be used only to protect agricultural land and other eligible land. Other eligible land is defined as land that has a common property line with agricultural land from which development rights have been purchased and is not divided from that agricultural land by a state or federal limited access highway.

MFB Position: Farm Bureau policy supports enabling legislation for local purchase of development rights programs.

MFB Contact: Scott Everett, ext. 2046. ■

STATE ISSUE

Land Division Act

The Land Division Act bill, Senate Bill 112, has been signed by the governor and is now Public Act 591. The law will become effective April 1. Sen. Leon Stille sponsored the bill. For details, see the Jan. 30 issue of the Michigan Farm News.

MFB Contact: Scott Everett, ext. 2046. ■

Labor to look at poultry plant conditions

Labor Secretary Robert Reich said his department would look into complaints about mistreatment of workers at poultry processing plants and said, "Sweatshop conditions, whether in garment factories, fields or poultry processing plants, will not be tolerated." Reich was joined by consumer groups, other farm groups — the National Farmers Union and the National Family Farm Coalition — and religious groups who are critical of the broiler industry.

Although not pledging a widespread investigation of the industry, Reich said he shared the groups' concerns about the "harsh and perhaps unlawful conditions faced by workers in the poultry processing industry" and said his department will "initiate a special targeted enforcement project."

U.S. chicken consumption has risen to an average 72 pounds per person, up from 60 pounds in 1990. The increase has pushed broiler production up about 5 percent per year over the last 40 years. Last year, slaughter plants produced more than 24 billion pounds of chicken from more than 7 billion birds.

An estimated 250,000 people work in the broiler industry, and worker complaints include repetitive-motion injuries, long hours, lack of rest and bathroom breaks, and irritation from high carbon dioxide levels in the plants.

Industry representatives said the secretary's statement was "just one more attempt by labor unions and their supporters to drum up support for their organizing campaigns." The packers also added, "We hope that this response by the secretary is not 'pay-back time' for the millions of dollars invested by organized labor in the recent election campaigns." ■

Gov. Engler disappointed with NAFTA decision on Canadian imports of U.S. dairy and other agricultural products

Gov. John Engler recently announced his disappointment with the final report of the North American Free Trade Agreement (NAFTA) dispute settlement panel, which examined and upheld Canada's tariff practices applied to imports of dairy and certain other agricultural products.

In December, the NAFTA panel agreed that provisions in the Canada-U.S. Free Trade Agreement allowed Canada to maintain quantitative import restrictions against certain U.S. imports, including dairy, poultry, egg, barley and margarine products.

"There is a \$6.4 billion market in Canada with these agricultural products for which the United States and other trading partners should be able to fairly compete," Engler said. "Canada converted its quotas on dairy, poultry and egg products to tariff rates as much as 300 percent, which makes the competitive situation very difficult for Michigan and other U.S. agricultural producers and marketers."

The governor sent a letter Jan. 3 to U.S. Secretary of Agriculture Dan Glickman in response to the December final report of the NAFTA dispute settlement panel. The Canadian-United States Free Trade Agreement involving agricultural, manufacturing and other products went into effect in 1989. This bilateral agreement was incorporated into NAFTA in

1993 with the addition of agreements with Mexico. All tariffs between the countries were to be eliminated by 2008.

"This decision seems to be contrary to the intent of NAFTA, where the elimination of tariffs and improved market access were hallmarks of the agreement," said Engler. "Furthermore, protectionist trade policies were to be eliminated. I am very concerned about Canada's dairy support program, which now has been allowed to be maintained, given the NAFTA panel's decision."

Engler said to Secretary Glickman, "I urge you to do everything possible to seek the elimination of these trade tariffs and to improve American dairy access to the Canadian market."

Michigan Department of Agriculture Director Dan Wyant said, "I applaud the governor on his strong stand for free and fair trade. Gov. Engler has been a long-time, staunch advocate of international free trade agreements to link great nations into a partnership for economic cooperation and growth in an increasingly competitive world economy. He understands that dairy is the largest sector of Michigan's agricultural industry. Our close proximity to Canada should be an advantage for Michigan dairy farmers and marketers when this market opens up." ■

Cattle Industry Act draws Farm Bureau support

Introduction of the Cattle Industry Improvement Act of 1997 opens a formal dialogue on improving livestock marketing conditions, according to the American Farm Bureau Federation. The measure, introduced by Sen. Tom Daschle (D-S.D.) and 11 other co-sponsors, drew general support from the nation's largest farm organization.

The bill's chief goal, according to Daschle, is to encourage a fair market for the nation's livestock producers, who have suspected that low cattle prices are a product of decreased competition among livestock processors and packers.

In a letter to Daschle, AFBF President Dean Kleckner said the measure "encompasses many of the ideas expressed" in Farm Bureau policy. He encouraged Daschle to "move the legislation forward so that hearings may be held."

"The cattle industry needs the opportunity to express support and suggest any improvements to enhance the bill," Kleckner said. "Livestock producers should have access to competitive markets for price discovery that accurately determine the value of their products."

Among its provisions, the bill requires public price reporting of all livestock sales conducted by any slaughtering company, and timely reporting of the quantity and price of all imports of meat prod-

ucts and livestock. The measure also calls for a federal study of lending practices to determine whether they are contributing to a concentration in the number of U.S. meat packers.

In addition, the bill requires a federal plan for consolidating the U.S. food inspection system, and a study by the U.S. trade representative to determine whether the European Union can legally challenge the safety of U.S. meat export facilities.

Kleckner expressed concerns about portions of the bill that could limit farmers' and ranchers' uses of marketing methods such as grid pricing, formula pricing and contractual arrangements.

Kleckner said thresholds that govern domestic market reporting "should be sufficient to provide information on a majority of transactions between the buyer and seller." AFBF policy states that livestock packers who process more than 5 percent of national daily slaughter should be required to report all cash and contract prices and terms of sale.

"The administration has moved toward better price reporting on many levels," Kleckner said. "Improving the economic situation of producers within the livestock industry across the country is critical." Assessing integration within the livestock industry is a vital step toward strengthening U.S. cattle producers, Kleckner said. ■

Some farmers sitting tight on their corn

Some producers who last year watched corn prices soar through the roof while they looked longingly at their empty bins have decided this winter to hold their crops, holding out hope for another price surge this spring and summer. The 1996 corn crop was the third largest in U.S. history, following a weather-impacted 1995 harvest.

"At \$2.34 a bushel there's no excitement in selling right now," said Tim Burrack, president of the Iowa Corn Growers Association, who admits he's holding over half of his 1996 corn crop. "I'm just waiting to see what happens. There's really no economic incentive to sell."

The catch, according to some market analysts, is that producers holding their corn right now could risk their crops rotting in the bins or they could be forced into a sell position to free up storage space when next year's harvest nears. A massive sell-off could flood the market and naturally plunge prices at or below today's.

Study shows NAFTA's impact on jobs slight

While the North American Free Trade Agreement (NAFTA) was being hashed out, proponents said the trade accord would produce jobs for U.S. workers. Opponents sounded dire warnings that NAFTA would siphon jobs out of the United States.

According to a study conducted by researchers at UCLA, NAFTA's impact on American jobs has been slight. Using a model of how exports and imports influence jobs in various product categories, the researchers estimated that the net job gain in the United States since NAFTA is estimated at just 2,990 since 1994, the year of NAFTA's inception.

"The impact on trade-related employment during the first three years after NAFTA is estimated to be, at the very least, a near-zero net impact, and more likely, a moderately positive number," the study said.

NAFTA has produced a mixed bag for certain companies around the country. Increased imports to the United States killed an estimated 28,168 jobs the last three years, compared to the creation of 31,158 jobs produced by increased exports. ■

USDA to expand crop revenue insurance program

Continued from front page

The Federal Agricultural Improvement and Reform (FAIR) Act, passed last year, eliminated ties between crop subsidies and price fluctuations in the market. Many farmers see CRC as a way to fill the protection gap. Traditional crop insurance protects farmers only against yield losses; revenue insurance protects producers against unfavorable price movements as well.

Sen. Pat Roberts, prime author of the 1996 FAIR Act, believes CRCs are a good safety net for farmers. "We have to provide the farmer with as many tools as possible to manage their risk," said Roberts, who was chair of the House Agriculture Committee last session. He was elected to the Senate in November. "This is extremely crucial in making the Freedom to Farm policy work."

"There's been a lot of demand for expansion of insurance options with the changes in the Freedom to Farm bill and the decoupling subsidies from price declines," says Boehm. "There's been more of a need for a safety net and producers have been looking for an insurance product that would meet those needs and help in the risk management plan."

"Farmers need this kind of insurance," explains Michigan Congressman John Dingell (D-Deerborn). "With the federal government less able to provide ad hoc disaster assistance to growers, it is imperative that farmers look to the private sector for insurance alternatives."

Farmers in Nebraska and Iowa enrolled about 25 to 30 percent of corn acreage last year, when the program was offered there on a pilot basis. "That's not bad the first year out of the block," a spokesperson for USDA's risk management agency said.

"Crop Revenue Coverage was available in Michigan on wheat and had good interest, and there was a lot of interest in expanding it and making it available to corn and soybean producers," he adds.

According to American Agrisurance, CRC policies tend to cost 30 percent more than traditional policies, but costs vary according to the state and the crop, based on production history and farm location.

Boehm says CRC is available through all the private insurance agents just like any other crop insurance policy. "Prices are going to be subject to your individual area and the records that you provide. It's going to be important to have adequate actual production history records so that you can get the best rate and the best coverage for the premium dollar."

Expansion of coverage to small crops?

"Because it's tied to the Chicago Board of Trade, CRC in its present form is somewhat limited to those crops that are traded off the futures market," states Boehm. "We are looking at new insurance products to cover crops not currently insured. One of the options is a product known as business interruption insurance. Rather than insurance based off yield and price records, business interruption insurance covers a portion of the average revenue stream from the crops. Most businesses, such as a local hardware store, can purchase this type of coverage. If the business has a fire, for example, the policy covers the lost income until the business reopens. Farm Bureau is working to develop insurance products that will address risk management for specialty crop producers, the lack of which continues to be a significant need in Michigan."

States with expanded CRC coverage:

Corn — Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, South Dakota and Texas.
Soybeans — Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, Oklahoma, South Dakota and Texas. ■

Crop Revenue Coverage guarantees price as well as yield, therefore the Final Guarantee is based on the greater of the Minimum Guarantee or the Harvest Guarantee. A loss occurs when the Calculated Revenue is less than the Final Guarantee. This chart shows the formula, with an example of a farmer's payment is in red.

| Final Guarantee Greater of | | Calculated Revenue |
|----------------------------|---------------------------|--|
| Minimum Guarantee | Harvest Guarantee | |
| Base Price | Harvest Price | Harvest Price |
| \$2.50 | \$3.00 | \$3.00 |
| x | x | x |
| Actual Production History | Actual Production History | Actual Yield |
| 120 bu | 120 bu | 80 bu |
| x | x | = \$240 Harvest |
| Coverage Level | Coverage Level | |
| 70% | 70% | |
| = \$210 Planting | = \$252 Harvest | \$252 - \$240 = \$12 per acre loss payment |

Source: American Agrisurance, Inc.

Agriculture and Natural Resources Week is March 1-9 at MSU

From preserving historic barns to growing herbs for profit — that's the range of topics planned for Agriculture and Natural Resources (ANR) Week, March 1-9 at Michigan State University.

Approximately 80 educational programs, meetings and other activities will take place during the eight-day event, says Sandi Bauer, ANR Week program coordinator.

Programs focusing on the environment will include sessions on improving wildlife diversity, converting landfills into parks, toxic chemicals in the Great Lakes and land use in Michigan.

Outdoors-oriented programs will include foraging for wild foods, pheasant habitat management, home garden composting, quiet water sports, growing and selling herbs, and community playground designs that are kid compatible.

Agricultural programs will focus on animal manure management, community organic food production, beekeeping, heritage livestock and narrow-row crop production.

The Michigan Association of FFA annual convention, expected to attract about 1,000 high school members, will run from Monday through Wednesday afternoon.

ANR Week will also feature a day-long discussion of Michigan's tourism outlook, a session on

community-based tourism and a day-long session on managing home-based businesses.

Other programs include a day-long program on human nutrition, a session on managing bed and breakfast operations, and programs on brood mare management and horse training.

Rabbit shows will be held both Saturdays of ANR Week. There will also be programs on organic gardening and farming and dairy goat management.

The MSU President's Luncheon, honoring the Distinguished Service to Agriculture awardees, will be Thursday. Recipients will be Gordon LaFontaine, of Houghton Lake; Herb and Florence Reiley, Belaire; and Deanna Stamp, Marlette. Luncheon tickets can be ordered by calling 517-355-6580, ext. 217.

The College of Agriculture and Natural Resources Dean's Luncheon, on Tuesday, will feature an auction to support scholarships and will honor distinguished CANR alumni. Tickets can be obtained by calling 517-355-0282.

ANR Week details are listed in a free guidebook available through the county MSU Extension offices. Free copies can also be obtained by contacting the MSU Bulletin Office, 10B Agriculture Hall, MSU, East Lansing, MI 48824-1039, or by calling 517-355-0240. ■

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| Station | City | Frequency | Morning Report | Noon Report |
|---------|---------------|-----------|----------------|----------------|
| WABJ | Adrian | 1490 | 5:45 am | 11:05-12:00 pm |
| WATZ | Alpena | 1450 | 5:30 am | 11:30 am |
| WTKA | Ann Arbor | 1050 | 6:05 am | 12:00-1:00 pm |
| WLEW | Bad Axe | 1340 | 6:30 am | 12:50 pm |
| WHFB | Benton Harbor | 1060 | | 12:15 pm |
| WKJF | Cadillac | 1370 | 5:45 am | 11:10 am |
| WKYO | Caro | 1360 | 6:15 am | 12:10-1:00 pm |
| WTVB | Coldwater | 1590 | 5:45 am | 12:00-1:00 pm |
| WDOW | Dowagiac | 1440 | 6:05 am | 12:15 pm |
| WGHN AM | Grand Haven | 1370 | 5:45 am | 12:15 pm |
| WGHN FM | Grand Haven | 92.1 | 5:45 am | 12:15 pm |
| WPLB | Greenville | 1380 | 6:15 am | 11:50 am |
| WBCH | Hastings | 1220 | 6:15 am | 12:30 pm |
| WCSR | Hillsdale | 1340 | 6:45 am | 12:45 pm |
| WHTC | Holland | 1450 | | 12:15 pm |
| WION | Ionia | 1430 | 6:45 am | 12:30-1:00 pm |
| WKZO | Kalamazoo | 590 | 5:00-6:00 am | 12:00-1:00 pm |
| WPLB FM | Lakeview | 106.3 | 6:15 am | 12:15 pm |
| WOAP | Owosso | 1080 | 7:15 am | 12:40 pm |
| WHAK | Rogers City | 960 | | 12:15 pm |
| WSJ | St. Johns | 1580 | 6:15 am | 12:05-1:05 pm |
| WMLM | St. Louis | 1520 | 6:05 am | 12:20 pm |
| WSGW | Saginaw | 790 | 5:55 am | 11:30-12:30 pm |
| WMIC | Sandusky | 660 | 6:15 am | 12:45 pm |
| WKJC FM | Tawas City | 104.7 | | 12:40 pm |
| WLKM | Three Rivers | 1510 | 5:45 am | 12:15 pm |
| WTCM | Traverse City | 580 | 5:45 am | 11:10 am |

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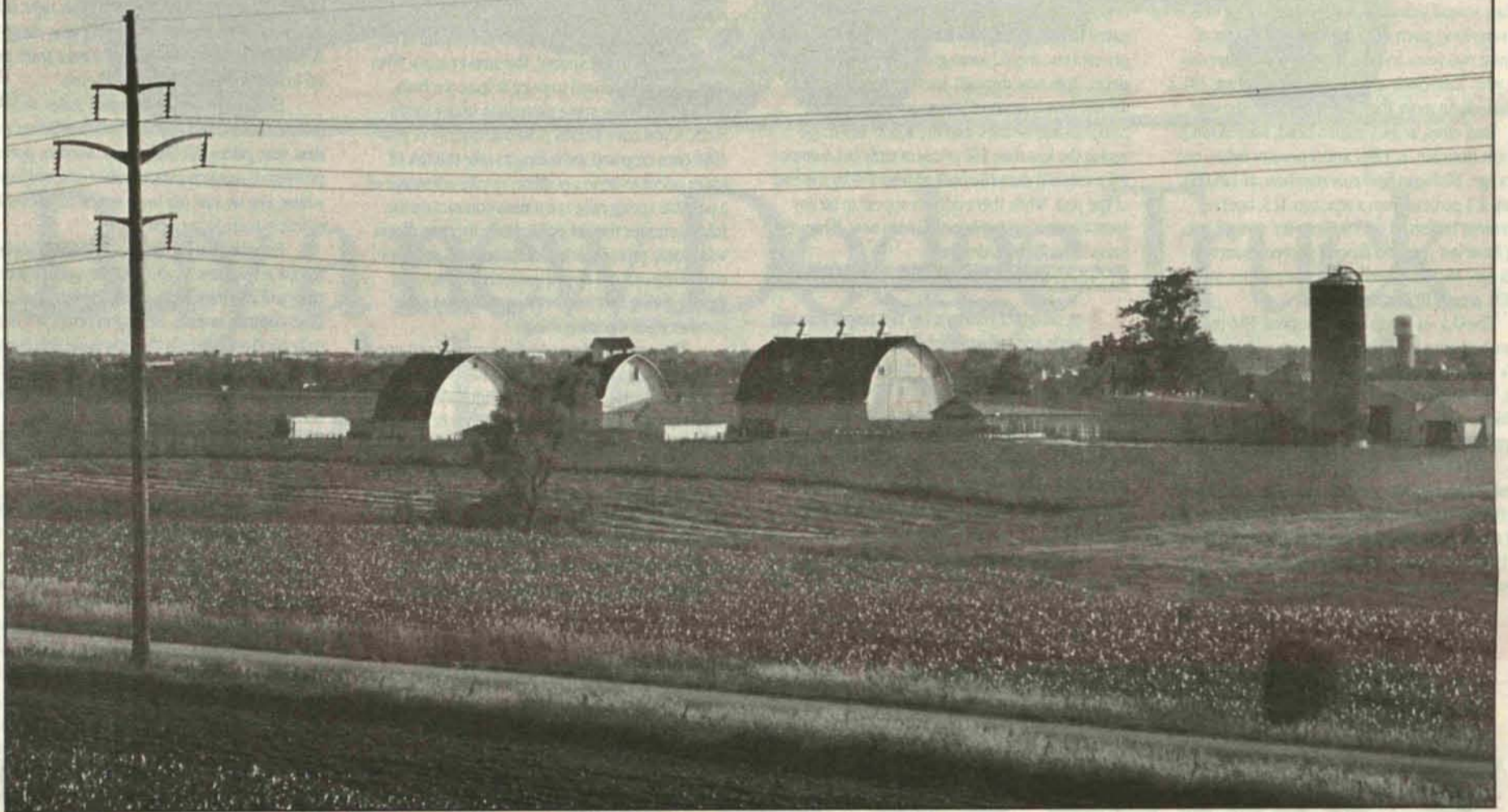
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Market Outlook

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



CATTLE

The Jan. 1 USDA *Cattle Inventory Report*, released Jan. 31, confirmed the belief that the cattle cycle has turned from the growth pattern of the last several years and begun to liquidate. This is not surprising given the poor cow-calf returns of the past two years and the large cow slaughter this past year. Total cattle and calves in the U.S. was 101.2 million, down more than 2 percent from last year.

Beef cows, at 34.3 million head, were down 3 percent from Jan. 1, 1996, and 2 percent below two years ago. Michigan beef cow numbers, at 125,000, are up 2.5 percent from a year ago. U.S. beef replacement heifers, at 6.05 million, are down 2 percent from last year and down 7 percent from two years ago. Michigan beef cow replacements, at 33,000, are up 10 percent.

The U.S. calf crop in 1996 totaled 39.6 million, down 2 percent from the previous two years. Michigan's calf crop totaled 400,000 in 1996, down 5 percent, but these numbers include dairy calves and Michigan milk cows that have calved, which dropped 5 percent over the past year to 310,000.

While I realize the past two years have been brutal for Michigan's cow-calf operations, this bucking the trend and expanding should pay off over the next three to five years in the form of good returns. Fall 1997 calf prices may just be near cost, but 1998 through at least 2000 returns should be profitable.

Seasonal Commodity Price Trends

| | |
|----------|-----|
| Corn | ↔↔ |
| Soybeans | ↔↔ |
| Wheat | ↔↔↓ |
| Hogs | ↑↔↔ |
| Cattle | ↔↔↑ |

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

The Jan. 1 *Cattle-On-Feed Report*, released Jan. 27, showed total U.S. cattle on feed at 13.2 million, up 2 percent from the previous year. Cattle and calves on feed for slaughter in feedlots over 1,000 head totaled 10.6 million, also up 2 percent. Placements in these feedlots in December 1996 were 2 percent below December 1995. Marketings from these lots were up 1 percent in December. The *Cattle Inventory Report* showed there were 200,000 cattle on feed in Michigan Jan. 1, equal to the previous January.

Plenty of cattle on feed, as discussed above, should keep a lid on prices in the near-term. However, lighter weights and gradually fewer cattle compared to last year, as indicated by the low December placements, should mean gradually increasing steer prices from now through April or May. And, while we will have a seasonal downturn this summer, prices should be back into the \$63 to \$65 range versus the less than \$60 prices of early last summer. Prices should then rise back to near \$70 by the end of the year. While there doesn't appear to be any great forward pricing opportunities now, if futures jump \$2 to \$3, consider them.

HOGS

Hog slaughter continues to run below year-ago levels and will probably continue that trend all year. At the same time, sow slaughter continues to run at low levels, although low 1996 sow slaughter was not a very good indicator of breeding herd size as the December *Hogs and Pigs Report* indicated. However, there is reason to believe that the breeding herd will begin to expand and I think we will see it in the March 1 report, to be released March 27.

Returns are good, and with good hog prices and reasonable feed prices, they are expected to stay

good throughout the year. On top of that, add low corn price expectations for 1997-98 and I think that spells expansion. Does this mean prices will go down the tubes soon? Absolutely not. It means that prices will work their way down toward cost over 1998.

Lean hog futures are close to what fundamentals would project over the first half of the year. Futures in the second half seem a little low given the December *Hogs and Pigs Report* is correct. If we have a rebound over previous highs through July, consider some forward protection. If we see fall lean hog futures near \$70, consider some protection before the next report. Remember, to get approximate live hog prices from the lean hog futures, multiple lean hog futures by .74.

CORN

Old crop corn futures continue to tell us that you should not be paying storage, even on-farm, unless you have a particular situation that gives you a tighter basis in the future. And, for most producers, that's not the case. What pays for storage is the spread between futures months; and when they are negative, it's saying you will pay the market to store.

Does this mean you cannot participate in any market rallies in the spring? The answer is no. What it says is that you need to price at least the basis, and you may want some protection under the futures. If you have already priced a majority of your 1996 corn crop and are willing to take the risk of lower prices to be in a position to take advantage of a possible spring rally, use a basis contract on the July futures for the last portion of your crop. If you want some protection under the futures, sell your crop and buy a call option sometime before you think a spring rally may begin; a minimum price contract does the same thing.

The amount of corn under loan that will need to be sold this spring is beginning to scare me. The point here is that there is a downside risk. I realize that producers don't want to be left out of a 1995-96 rally, but I would not put too much weight on a once-ever scenario repeating itself this year. Watch for opportunities to begin pricing some 1997 corn, especially if you did not price any last summer. Yes, last time you started pricing some corn around \$2.45 you felt you got burnt, but anything over trend yields this year and prices will be lower.

WHEAT

Wheat is taking it in the chops. The world wheat crop just seems to keep getting bigger. While there isn't a strong reason that 1997 wheat prices should rally, they are probably nearer their bottom than top. With fewer winter wheat acres and no reason spring wheat acres should grow, it is probably a good time to just sit and wait on further 1997 wheat sales.

It is quite likely something this spring will give us a chance at better prices. When I talk about the possibility of better pricing opportunities, I am talking about July Chicago wheat futures moving back over \$3.70, not \$5. I am assuming all of our 1996 wheat has been moved or at least priced.

SOYBEANS

For the same reasons explained in corn, you should not be paying storage on any old-crop soybeans. And the advice is the same if you definitely want to be in on a possible spring rally — use a basis contract or sell cash and buy a call option. What we are in is a risk management mode for both old and new crop. With the extremely tight stocks forecast for the 1996-97 marketing year, there is definitely upside potential with even a small drop-off from trend yields in the 1997 crop.

However, if both the United States and South America have trend soybean yields or better this next year, prices will likely drop. Another potential problem is a switch back to other oilseeds from wheat, like we saw the huge switch from canola to wheat in Canada last year.

Consider having most of your 1996 soybeans priced at this time. If you feel you understand the risks and still want to be in the market, then use a basis contract or calls. New crop prices are historically good and there is the downside risk explained above. Ask yourself the question: Can I accept some \$6.50 cash prices even if prices might go higher, because they may go lower?

DAIRY OUTLOOK

by Larry G. Hamm

Recent strengths in the wholesale dairy product markets will raise farm prices in the weeks ahead. Michigan's strong milk marketing system also has been helpful in seeing the Michigan dairy producers through the Great Market Crash of 1996.

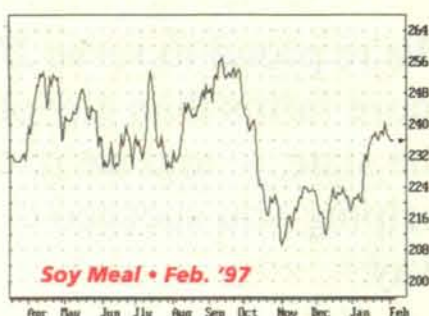
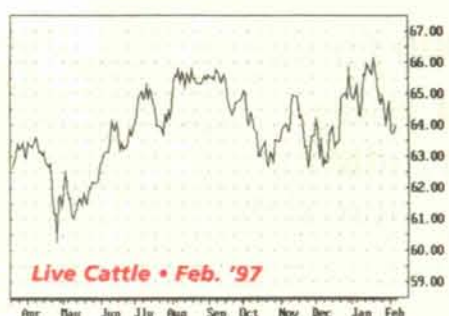
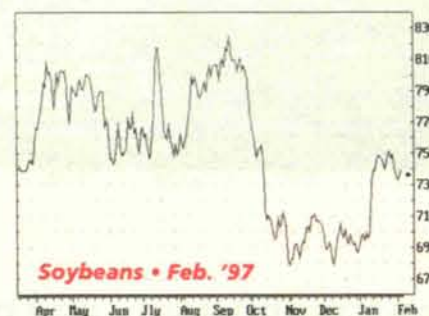
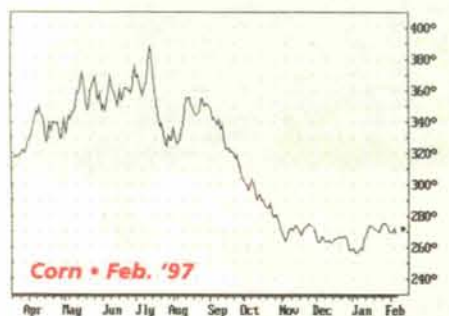
The wholesale butter markets have significantly strengthened since their early December drop to the level of USDA price supports. Active trading in the latter part of January raised the wholesale price of butter on the Chicago Mercantile Exchange to more than 20 cents above the 65-cent-per-pound support price. Similarly active trading on the National Cheese Exchange helped the cheese price (40-pound cheddar block) recover from their disastrous end-of-the-year levels. The current cheese price in the latter part of January was \$1.2750 per pound (\$.0875 higher than Christmas 1996 lows).

The increased strength in the butter market has already been reflected in pay prices to producers, particularly in the value of the butterfat pounds shipped by Michigan producers. The strength in the cheese market during January 1997 will be reflected in the January Basic Formula Price (BFP) released Feb. 5. The January BFP will be \$12 or higher compared to its disastrous December level of \$11.34 per hundredweight (cwt.).

Milk production nationwide and in Michigan continues to suffer from the uneconomic returns and weather-related difficulties. It appears that the BFP will continue to modestly rise over the next several months until the production and dairy product inventory picture becomes clearer.

The Michigan milk market is nationally known for its strong milk marketing system predicated on coordinated cooperative milk marketing activities and milk buyers particularly attuned to the financial condition and viability of their milk supply. Michigan was the first milk market to establish over-order pricing and a superpool of dairy income to be distributed to Michigan producers. The successful cooperation of Michigan's milk marketing organizations, combined with the continued loyalty of the vast majority of Michigan producers to the Michigan milk marketing system, resulted in significant over-order pricing activities for 1996. For all of 1996, Michigan's over-order price was 43 percent higher than the average over-order price in the rest of the U.S. Because the majority of Michigan's milk buyers understood the significance of financial stress possible from the 1996 milk market crash, they accepted the need for Michigan's milk marketing cooperatives to increase the January 1997 over-order premium by nearly 100 percent.

COMMODITY PRICE TRENDS



COMMODITY SUPPLY/DEMAND BALANCE SHEETS

Table 1 — Corn

| (Million acres) | Estimated 1995-1996 | Projected 1996-1997 | Hilker 1997-1998 |
|---------------------------------|---------------------|---------------------|------------------|
| Acres set-aside/diverted | 6.2 | 0.0 | 0.0 |
| Acres planted | 71.2 | 79.6 | 81.5 |
| Acres harvested | 65.0 | 73.3 | 75.0 |
| Bu./harvested acre | 113.5 | 126.5 | 129.0 |
| Stocks (million bushels) | | | |
| Beginning stocks | 1,558 | 426 | 1,107 |
| Production | 7,374 | 9,265 | 9,675 |
| Imports | 16 | 11 | 8 |
| Total supply | 8,948 | 9,702 | 10,865 |
| Use: | | | |
| Feed and residual | 4,711 | 4,975 | 5,200 |
| Food/seed & ind. uses | 1,583 | 1,670 | 1,790 |
| Total domestic | 6,294 | 6,645 | 7,190 |
| Exports | 2,228 | 1,950 | 2,300 |
| Total use | 8,522 | 8,595 | 9,490 |
| Ending stocks | 426 | 1,107 | 1,375 |
| Ending stocks, % of use | 5.0 | 12.9 | 14.5 |
| Regular loan rate | \$1.89 | \$1.89 | \$1.89 |
| U.S. season average | | | |
| Farm price, \$/bu. | \$3.24 | \$2.70 | \$2.40 |

Table 2 — Wheat

| (Million acres) | Estimated 1995-1996 | Projected 1996-1997 | Hilker 1997-1998 |
|---------------------------------|---------------------|---------------------|------------------|
| Acres set-aside & diverted | 5.2 | 0.0 | 0.0 |
| Acres planted | 69.2 | 75.6 | 75.5 |
| Acres harvested | 61.0 | 63.1 | 65.0 |
| Bu./harvested acre | 35.8 | 36.3 | 38.0 |
| Stocks (million bushels) | | | |
| Beginning stocks | 507 | 376 | 435 |
| Production | 2,182 | 2,282 | 2,470 |
| Imports | 68 | 70 | 65 |
| Total supply | 2,757 | 2,728 | 2,970 |
| Use: | | | |
| Food | 884 | 910 | 920 |
| Seed | 104 | 108 | 110 |
| Feed | 152 | 325 | 270 |
| Total domestic | 1,140 | 1,343 | 1,300 |
| Exports | 1,241 | 950 | 1,170 |
| Total use | 2,381 | 2,293 | 2,470 |
| Ending stocks | 376 | 435 | 500 |
| Ending stocks, % of use | 15.8 | 19.0 | 20.3 |
| Regular loan rate | \$2.58 | \$2.58 | \$2.58 |
| U.S. season average | | | |
| Farm price, \$/bu. | \$4.50 | \$4.30 | \$3.50 |

Table 3 — Soybeans

| (Million acres) | Estimated 1995-1996 | Projected 1996-1997 | Hilker 1997-1998 |
|---------------------------------|---------------------|---------------------|------------------|
| Acres planted | 62.6 | 64.3 | 64.5 |
| Acres harvested | 61.6 | 63.4 | 63.5 |
| Bu./harvested acre | 35.3 | 37.9 | 38.0 |
| Stocks (million bushels) | | | |
| Beginning stocks | 335 | 183 | 210 |
| Production | 2,176 | 2,403 | 2,413 |
| Imports | 5 | 4 | 7 |
| Total supply | 2,516 | 2,590 | 2,630 |
| Use: | | | |
| Crushings | 1,370 | 1,390 | 1,400 |
| Exports | 851 | 870 | 870 |
| Seed, feed & residuals | 112 | 120 | 120 |
| Total use | 2,333 | 2,380 | 2,390 |
| Ending stocks | 183 | 210 | 240 |
| Ending stocks, % of use | 7.8 | 8.8 | 10.0 |
| Regular loan rate | \$4.92 | \$4.97 | \$4.97 |
| U.S. season average | | | |
| Farm price, \$/bu. | \$6.77 | \$6.50 | \$6.30 |

Source: Knight Ridder Financial

Source: USDA and Jim Hilker



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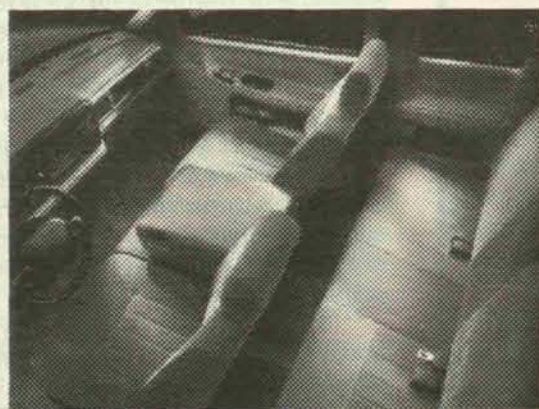


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The New Dodge

Merillats give quarter horse farm to MSU for teaching, research efforts

Lynette Merillat has been bringing her prized quarter horses to Michigan State University for specialized veterinary care for many years; she knows and trusts the equine program staff. That relationship became the foundation for a historic new gift to MSU — the Merillat horse farm in Adrian, Mich.

The 80-acre farm, home to Merillat's nationally recognized quarter horse breeding and show operation, will become the MSU Merillat Equine Center, providing unique opportunities for teaching, research and service to the horse industry in Michigan and throughout the country. The farm and its 40-plus horses represent the largest single gift ever by an individual to the College of Agriculture and Natural Resources and the largest gift-in-kind ever to the university.

"This farm has meant so much to our family. It's been so wonderful here," Lynette Merillat said. "But our daughters are grown up now and have moved on; our family has kind of outgrown it at this point. We couldn't think of a better way to ensure that it would keep going the way we want than having Michigan State take it over."

Neither Lynette nor her husband, Richard, attended MSU, but giving their farm to the university is a little like keeping it in the family. "My brother graduated from the veterinary school; I remember

visiting him there when I was a young girl," Lynette said. "And our veterinarian graduated from MSU. She encouraged me to take our horses there when they needed special treatment."

"I believe the faculty and staff at Michigan State are very well qualified. They're very caring, and they have great programs. We're very excited about giving the farm to them."

The Merillats have owned horses for many years. "We started out with two and grew from there," Lynette said. "We started showing them, and pretty soon we got into breeding them as well." Their daughters shared their mother's love of horses. "It was a lot of work and a lot of responsibility, but the girls loved it, and they won a lot of ribbons and trophies at shows. It really helped them grow up," Richard added.

The couple built their farm in Adrian in 1990. They are eager to see how it continues to grow under MSU's ownership. "I think the hands-on experience it will provide students in fields like equine breeding and farm management will be tremendous," Lynette said. "You can teach students in a classroom, but, like a doctor who serves an internship in a hospital, they need to go out and experience it for themselves."

"It also should benefit the horse industry in the state of Michigan because of the enhanced edu-

cation the students going out into the industry will receive," Richard agreed. "And with the Extension programs they'll be doing, the people in southeast Michigan — and the whole state — will benefit more directly from the work the faculty does."

University officials are equally excited about the possibilities the farm offers MSU's faculty and students. "This is truly a remarkable gift, and the opportunities it presents are tremendous," stated Fred Poston, vice provost and dean of the College of Agriculture and Natural Resources. "Without a doubt, it will boost the equine program in our college and the College of Veterinary Medicine to a new level of excellence."

"This kind of commitment to the educational programs at Michigan State University is immensely gratifying," said MSU President Peter McPherson. "It will create new partnerships between departments and colleges within the university, as well as between the university and the horse industry, which should be served very well by the research and outreach efforts at the MSU Merillat Equine Center."

The new center will provide "real-life" educational experiences "in a controlled, professional, realistic environment," Poston said. Students will have internship opportunities in facilities management, reproduction, health care, housing, nutritional management, evaluation of quarter horses and

more. "The facilities also will provide an excellent rotation for equine reproduction for the College of Veterinary Medicine," he said.

Students also will be involved in the promotion of the breeding stallions at the center. MSU will honor all the Merillats' current breeding contracts and continue to accept new contracts. "We expect that the facilities will be at full capacity during the breeding season, from mid-winter to early summer, with extensive research programs conducted the rest of the year," Poston said.

"This center has the potential to greatly enhance equine research at Michigan State, particularly in the areas of nutrition, exercise physiology and reproduction," added MSU Provost Lou Anna Simon. "With the size of the facilities at the center, including the indoor arena and other covered buildings, a number of projects can be conducted simultaneously."

The center also is an ideal location for livestock Extension and outreach programs because southeast Michigan has the highest per-county horse population in the state. "The kinds of outreach programs we can offer are numerous," Poston said. "On-farm demonstrations and classes, housing design and reproductive clinics, horse breeding and judging classes, youth horse handling and riding clinics, county Extension agent training programs — those are just some of the possibilities."

"I'm looking forward to still being around occasionally and seeing what develops," Lynette Merillat said. "We really want them to be successful; anything we can do to help, we will."

"There's a saying — I don't know by whom — that really sums up how we feel about the farm and why we decided to make the gift: 'Blessed are they who not only count their blessings, but make their blessings count.' This farm has been a blessing to us, and we want it to be that way for others, too."

EPA approves Monsanto registration for YieldGard insect-protected corn

Monsanto Company has received a registration from the U.S. Environmental Protection Agency for the company's YieldGard insect-protected corn, protected against the European corn borer.

The latest EPA approval is the second one for a YieldGard gene and completes federal regulatory reviews to allow more seed companies to offer YieldGard corn for next spring's planting. YieldGard corn is a trademark used on the best hybrids of Monsanto's partner seed companies, offering their best yield potential and the highest level of insect protection.

The Monsanto registration covers technology licensed to such leading companies as Cargill Hybrid Seeds, DEKALB Genetics Corp., Golden Harvest Seeds Inc., and Pioneer Hi-Bred International Inc. Monsanto and DEKALB have a long-term research and development collaboration in agricultural biotechnology and cross licensing agreements in certain corn products. Another seed company, Northrup King Co., completed reviews and received the first registration for corn with a YieldGard gene Aug. 5.

"This additional registration is further progress in our efforts to provide farmers with the performance they want in the seeds they prefer to plant," said Robb Fraley, president of Monsanto's Ceregen unit, which develops new agricultural products.

"We think YieldGard corn will be the grower's best choice for protection against corn borers, one of the worst pests in corn," he said.

"Borers reduce yield by causing damage inside the plant, where external treatments cannot reach. Control is difficult and can quickly become uneconomical, so many growers just don't treat at all," Fraley said.

"YieldGard provides protection throughout the plant, throughout the season — simply by planting the seed. Once the target insect larvae begin to feed on a protected plant, they stop eating and die. Damage from these insects is reduced and elite corn hybrids have a better chance to reach their full yield potential."

YieldGard uses a naturally occurring protein to protect corn plants against the European corn borer, a hard-to-control insect pest that causes significant reductions in corn yields. The protective protein is identical to one found in nature in a common soil microorganism called *Bacillus thuringiensis* (Bt). The protein is harmless to people, livestock, wildlife and even beneficial insects.

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Business Strategies

Ralph E. Hepp, Agricultural Economist, Dept. of Agricultural Economics, Michigan State University

The limited liability company (LLC) is a new form of business entity for Michigan that was authorized by Act No. 23, Public Acts of 1993, and took effect on June 1, 1993. It is defined as an unincorporated organization that limits the liability of its owners to their investment in the enterprises while providing them with pass-through tax treatment.

Prior to the limited liability company alternative, two or more individuals could operate a common entity as a partnership or a corporation. Now the option of the limited liability company allows a third alternative business organizational structure for individuals. The business entity must have two or more members and combines limited liability and taxation by the owners in their personal tax returns rather than the business entity. Currently, both of these characteristics are not available in a partnership, but are possible in a subchapter "S" corporation.

A new vocabulary

An LLC is a limited liability company, not a corporation. Persons who contribute capital to a limited liability company are called "members." The appropriate term for the contributor to a partnership is a "partner" and to a corporation is a "shareholder." The members organizing the entity file articles of organization rather than articles of incorporation, and it is controlled by its operating agreement rather than its corporate bylaws or partnership agreement.

Although the characteristics of the limited liability company parallel those of a limited partnership and a subchapter "S" corporation, there are differences in organization and regulation. This article will explain the characteristics of the business entity.

Business characteristics of an LLC

An LLC is a separate legal entity like a partnership or corporation, distinct from its owners, that has full powers to conduct business in its own name. The business provides management, through its members or delegates, this responsibility in the operating agreement to an annually elected manager.

The LLC's operating rules come from the operating agreement prepared by the members. The operating agreement has the same purpose as the operating agreement prepared by partners in a partnership and corporate bylaws in a corporation. The operating agreement regulates the business activity and the relationship among the members.

Unlike "S" corporations, the LLC is not restricted in the number of members — nor are corporations, partnerships, pension plans and other entities restricted from being members. There is no requirement that members personally sign to allow the organization to be taxed as a partnership. Taxation by the limited liability company as a corporation is not possible if the organizational structure prevents it.

LLCs are generally subject, however, to rigorous disclosure, recordkeeping and reporting requirements that do not apply to general partnerships. LLCs allow contributions to capital by members in the form of cash, property and services rendered, and recognize binding obligations to make such contributions.

Articles of organization

Articles of organization are filed with the Department of Commerce to get a limited liability company recognized in Michigan. The articles of organization shall contain the name of the company, the purposes for which the company is formed, the mailing address for the company and the initial resident agent, a statement if the company will be managed by a manager rather than the members, and the maximum number of years of duration of the company.

Advantages of the LLC

An LLC is a hybrid entity that is taxed as a partnership while providing limited liability protection for all of its members. For federal tax purposes, the income and expenses of an LLC, like a partnership, pass through the business entity and are taxed only at the member level. However, all members of an LLC, like the shareholders of an "S" corporation, have limited liability for the LLC's debts and claims against the LLC. No member has the personal liability of a general partner, which is the characteristic of a limited partnership.

A person may become a member of a limited liability company by making a capital contribution, which is accepted by the company as prescribed by its operating agreement. A limited liability company

Facts about limited liability companies

must have at least two members. A major advantage of an LLC is personal limits on liabilities beyond the investment in the entity. Unless otherwise provided by law or in an operating agreement, a person who is a member or manager, or both, of a limited liability company is not liable for the acts, debts or obligations of the company.

Federal tax treatment of LLC

The state of Wyoming passed legislation authorizing the LLC in 1977, but it was not until 1987 that the Internal Revenue Service (IRS) issued Revenue Ruling 88-76, which ruled favorably on the classification of the Wyoming LLC as a partnership for federal income tax purposes. Other states have passed LLC laws; they also met the revenue ruling, which qualifies the company's earnings as partnership tax treatment.

Qualification for partnership taxation avoids the double taxation, generally, applied to corporations other than "S" corporations. Since the Michigan legislation is new, the IRS has not ruled on the tax issues, but it is expected that Michigan will obtain partnership taxation for the LLC business entity.

To be treated like a partnership for taxation, the business must have more partnership characteristics than corporate characteristics. The IRS has identified six corporate characteristics:

- Associates
- An objective to carry on business and divide gains
- Limited liability
- Centralization of management
- Continuity of life
- Free transferability of interest

Both corporations and partnerships have the first two characteristics. Therefore, IRS laws and regulations look at only the last four to determine if an organization is a corporation or partnership for taxation. An organization must have more than half of these characteristics to be classified as a corporation. As long as an organization has only two of these four characteristics, it will be classified as a partnership for federal tax purposes.

Since a limited liability company offers limited liability to members, at least two of the last three requirements must be avoided. Continuity of life is avoided because the latest date for dissolution of the company is specified when the company is formed. Unlike corporations, limited liability companies do not offer the possibility of perpetual existence, nor is perpetual existence possible in small family owned operations.

In order to ensure that partnership tax treatment is preserved, it is important to either decentralize management or restrict transferability of ownership interest. Under the statute, unless other provisions are made in the articles of organization or the operating agreement, assignment of ownership does not entitle the recipient to exercise any rights of a member unless existing members approve the transfer. The articles of organization or the operating agreement can specify unanimous, majority or other member approval for membership transfer.

Management

Family business owners usually want all owners to be part of the management team. However, a disadvantage of management by owners is that it may lead to greater potential liability because of the managers' authority to make binding commitments on behalf of the company. Decentralization of management may also have undesirable effects on business decisions and management efficiency. If all of the owners of an LLC are managers, they need to address the roles and responsibilities of the management team members and how decisions are going to be made in the enterprise.

Centralized management is an option for the LLC. These managers need not be owners. The number of managers, qualification requirements, and procedures for selection are specified in the articles of organization or operating agreement. If not specified in these documents, the statute prescribes that managers be elected by majority vote of the members and that managers may be removed, with or without cause, at a meeting called by a majority vote of the members or by written consent of a majority of the members. Unless otherwise provided in the operating agreement, voting shall be done in proportion to their shares of distributions of the limited liability company.

Obligations and rights of owners

The contribution of a member to an LLC may consist of any tangible or intangible property including cash, property, services performed, promissory notes, contracts for services to be performed, or binding obligation to contribute cash, property, or services. A contribution to an LLC may be in exchange for a present membership interest

or a future membership interest, including a future profits interest, as provided in an operating agreement. If a member fails to contribute promised property or services, the company has the option to require an equivalent cash payment or outline other remedies in the operating agreement.

Distributions of cash or other assets of the company shall be allocated among members in the manner provided in the operating agreement. If an operating agreement does not provide for an allocation, distributions shall be allocated on the basis of the value of the contributions made by each member. Distributions may not be made if the distribution would cause the company to be unable to pay its debts as they become due in the usual course of business or if total liabilities plus preferential dissolution rights exceed asset values. Members may be personally liable for any wrongful distributions received.

A membership interest is personal property. Except as provided in an operating agreement, a membership interest is assignable in whole or in part. Members own a share of the company but do not have an interest in any specific company property. Members may assign their interests, but the assignee does not become a member of the company, unless the operating agreement allows it or the other members unanimously consent. An assignment entitles the assignee to receive the distributions to which the assignor would be entitled.

A member may withdraw from a company as provided in an operating agreement or by giving written notice to the company and to the other members at least 90 days in advance of the date of withdrawal. Members who withdraw from the company before it is dissolved are entitled to receive the fair value of their interest as of the date of withdrawal. Members do not have a right to demand noncash distributions and do not have to accept distributions in kind that are disproportionate to their ownership interest.

Who should consider forming an LLC

An LLC should be considered when the business owners desire limited liability above their investment in the company and individual taxation of business earnings is preferred over company taxation. These characteristics may also be obtained in an "S" corporation or a limited partnership for some of the partners. The LLC should be considered when:

- The several restrictions on number and type of "S" corporation shareholders prevents the business from qualifying as an "S" corporation. These include structuring with several entities owned by the corporation, consent needed by all shareholders to qualify for "S" status and several classes of stock.
- Professionals who want to limit liability among members for the negligence of others in the firm.
- Family businesses that want the flexibility of a partnership, but not the liability associated with being a general partner.

Who should not choose to form an LLC

Situations where an LLC is not a viable option:

- There is only one business owner.
- The business is organized as a corporation and conversion to an LLC will result in high taxes upon liquidation of the corporation.
- Public trading of an ownership interest is desired which requires free transferability of ownership interest and decentralization of management in order to meet the pass-through tax treatment.
- Corporate taxation is a better alternative than partnership taxation.

Planning pointers

Since general partners in a partnership have unlimited liability, the limited liability advantage for members is a very desirable feature for a business organization. The owners can avoid the unlimited liability responsibility by incorporating the business, but a corporation has income tax, levels of regulation, and other attributes that are not acceptable to small family business operators.

The "S" corporation partly addresses the income tax questions, but imposes limitations on the number and types of shareholders, the allowable classes of stock, and the flow-through of losses. LLCs are subject to rigorous disclosure, record-keeping and reporting requirements that do not apply to general partnerships.

There are many unanswered questions about how lenders, major suppliers and other firms will transact business with a limited liability company, but initial advantages of the business organization appear favorable to family owned and operated businesses. Explore the features of the limited liability company with your accountant and attorney, and evaluate whether the LLC has advantages for your business situation. ■

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Value-added processing begins the push for new-wave cooperatives

Conference introduces concept to more than 120 people interested in adding value to their commodities

If you're a producer in Michigan and you haven't heard of value-added processing (VAP), you'd better pull up a chair and start learning as much as you can if you want to learn new ways to improve your bottom line.

That was the consensus of more than 120 participants who attended a Jan. 20 workshop in Frankenmuth designed to introduce the concept of establishing new-wave cooperatives throughout Michigan in an effort to add further value back to commodities grown in Michigan.

What are new-wave co-ops?

"If producers want to expand their income potential beyond what they sell directly from the farm," explains MFB Commodity Specialist Bob Boehm, "they need to investigate ways to join with other producers to add value and vertically integrate their product to compete further up the marketing ladder — that's what new-wave co-ops and value-added processing can do."

According to recent American Farm Bureau Federation figures, consumers spent \$511 billion for food last year. Of each dollar spent on food, only 21

cents was returned to the farmer. The rest of that dollar was spent on wages and materials for processing, marketing, transporting and distributing the finished product to the consumer.

"Value-added processing is an exciting concept that allows farmers to realize a bigger return on their farm investment and, consequently, an improved profit margin," MFB President Jack Laurie told the group at the conference.

According to North Dakota State University professor and presenter at the conference, Frayne Olson, there were two major things to learn about forming a value-added cooperative. "Number one, in order for these projects to work and be effective, they have to be farmer-driven. Secondly, there are some real advantages with the cooperative structure; hopefully, individuals can motivate people to try and do something different. Agriculture is changing rapidly — we have to reply to that change."

"North Dakota is very sparsely populated, with Fargo being the largest city at 71,000," Olson added. "The general attitude about starting new co-ops is if we don't do it, no one else will. The number of farmers is decreasing, while farm size is increasing. In Michigan, when a farmer doesn't have enough income, he looks to the nearest city. In North Dako-

ta, what happens is you end up leaving the state."

"We're different from North Dakota or Minnesota," Boehm explains. "We have strengths such as our climate, crop diversity and our proximity to large population centers and markets. We also have an extremely supportive feeling right now for the development of value-added processing — from state and federal programs like renaissance zones to university support through value-added portions of Project GREEN and the recent farm bill giving producers flexibility for alternative crops."

Olson explained to the participants that the new cooperatives formed in his home state have ranged from the very traditional — such as a corn sweetener facility — to the unusual one created by the North American Bison Co-op to market meat, hides and other parts of bison throughout the world, especially in Europe where demand is high for their product.

Impact on Michigan Producers

"Those of us in production agriculture hear a great deal from the marketing experts that we as producers need to start producing for the end-consumer," adds Laurie. "As owners of value-added processing, farmers could — and should — have a clear grasp of what their customers want and then pro-

duce it accordingly. That's vertical integration in its purest sense."

"Producers need to evaluate the idea for themselves that if they work together they can do better as a group than themselves as individuals," adds Boehm. "We need to continue to facilitate people working together."

"I contend that new-wave co-ops set the stage for the next generation of family farms to not only survive but succeed. It affords the family farm operation a chance to maintain its competitive edge through the cooperative process," Laurie said. ■



Frayne Olson, North Dakota State University professor

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It pays to be a Farm Credit Services member

Farm Credit Services of Michigan's Heartland has announced that more than 3,000 of its PCA stockholders will receive their share of nearly \$640,000 in patronage refunds from the credit cooperative in early February. These refunds will be distributed as 100 percent cash payments.

Chairman of the PCA board, Robert Weaver, sees the patronage refund program as an important advantage to doing business with Farm Credit Services, both as a board member and as a borrower. "I am pleased to announce that, based on a decision the board made in 1995 to do business as a credit cooperative, we are able to offer our members patronage refunds," Weaver said. "It is a way for us to reward our members for doing business with Farm Credit. As a borrower myself, the prospect of a patronage refund on my loan is an attractive advantage to being a Farm Credit member."

Weaver explained that the distribution of patronage refunds allows Farm Credit to offer competitive interest rates, ensure a constant supply of credit and provide for the retirement of its stockholders' equity.

"Because of the PCA board's decision to do business as a cooperative, Michigan's Heartland members will receive patronage refund checks in February for the first time in our association's history," said James E. Bremer, president and CEO of Farm Credit Services of Michigan's Heartland. "This decision not only bodes well for individual members, but also for the association as a whole; our strong capital position allows us to offer our members even more competitive rates and service," he added. ■

Cold spell blamed for \$10 million damage to vegetables

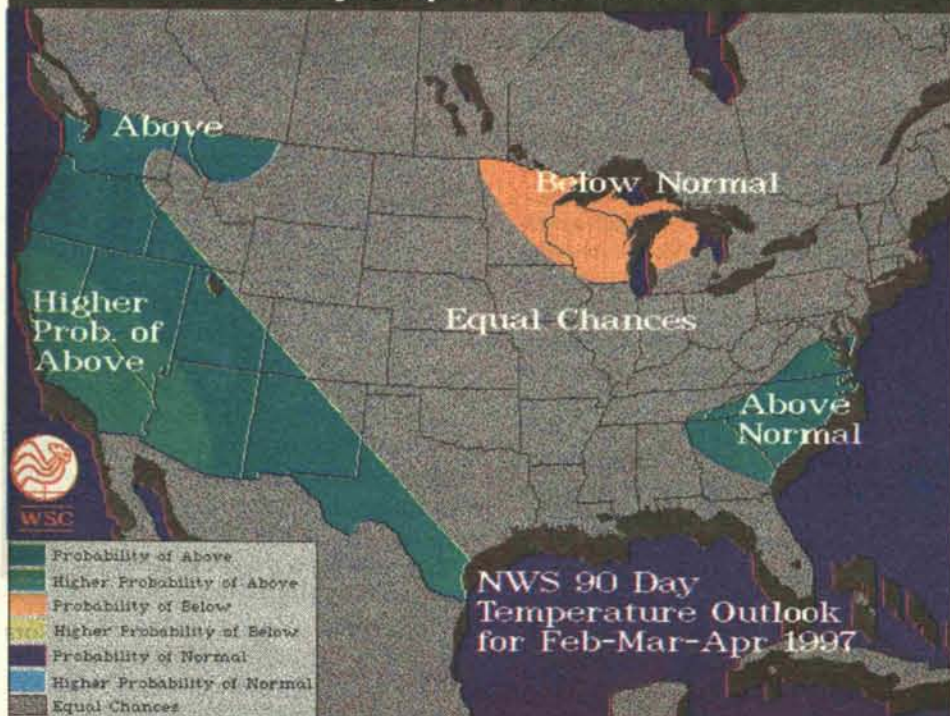
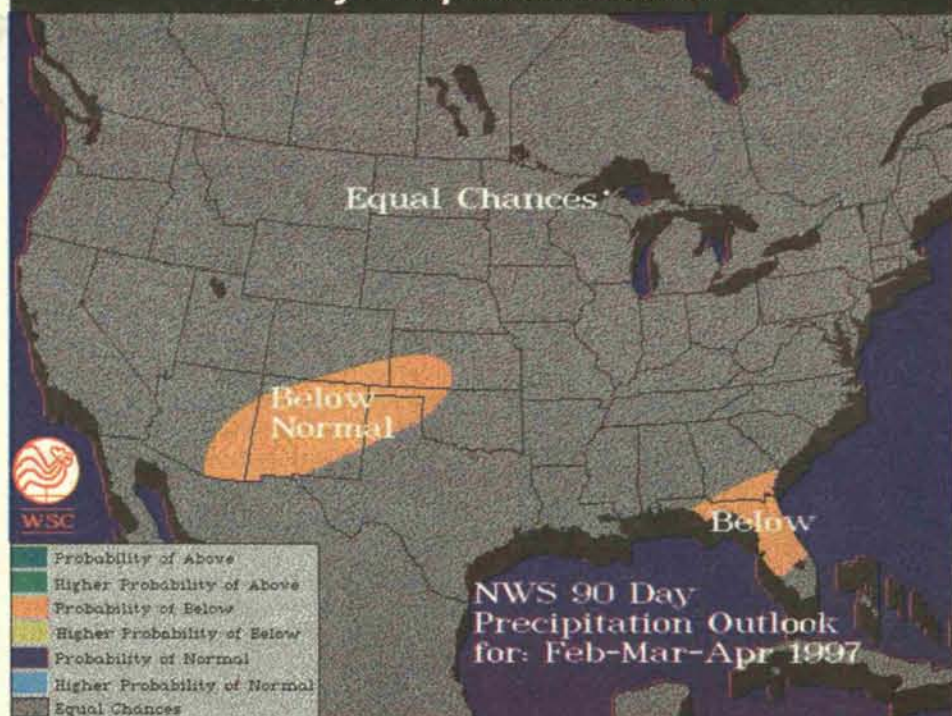
Three nights of cold weather south of Miami will cost vegetable producers at least \$10 million and could mean higher consumer prices.

Prices plunged to 24 degrees in the southernmost part of Florida, destroying up to 90 percent of the zucchini and yellow squash crops, and at least three-quarters of the green bean, pole bean and sweet corn crops.

The price of green beans rose from \$12 per bushel Friday to \$22 Monday after word of the damage spread. Some growers plowed their frozen plants under and may have time to replant.

Some citrus producers had fruit and leaf damage. They reported no tree damage, but citrus producers did experience icing, meaning that the juice crystallizes inside the fruit. Those crops can still be taken to the processing plant, but the amount of juice they yield may be less.

Most crop damage was on the west side of Florida. Growers unprepared for the low temperatures blamed a federal budget cut that eliminated National Weather Service farm forecasts. ■

90-day Temperature Outlook

90-day Precipitation Outlook

Michigan Weather Summary

| 1/1/97-1/31/97 | Temperature | | Precipitation | |
|------------------|-------------|------------------|---------------|---------------|
| | Obs. mean | Dev. from normal | Actual (inch) | Normal (inch) |
| Houghton | 14.3 | -0.2 | 4.25 | 2.02 |
| Marquette | 12.9 | 1.9 | 6.55 | 2.02 |
| Escanaba | 15.8 | -0.8 | 2.48 | 1.82 |
| Sault Ste. Marie | 11.6 | -2.3 | 3.76 | 1.82 |
| Lake City | 19.7 | 1.0 | 6.45 | 1.91 |
| Pellston | 16.7 | 0.4 | 4.46 | 1.91 |
| Traverse City | 22.3 | 0.7 | 3.45 | 1.91 |
| Alpena | 18.2 | -0.7 | 3.97 | 1.69 |
| Houghton Lake | 18.1 | -0.6 | 2.46 | 1.69 |
| Muskegon | 23.8 | 0.3 | 2.03 | 2.38 |
| Vestaburg | 19.6 | -2.6 | 2.83 | 1.68 |
| Bad Axe | 19.6 | -2.4 | 1.96 | 1.56 |
| Saginaw | 21.5 | -0.9 | 2.16 | 1.56 |
| Grand Rapids | 22.0 | 0.3 | 2.62 | 2.44 |
| South Bend | 23.1 | -0.1 | 2.57 | 2.44 |
| Coldwater | 20.9 | -3.4 | 2.40 | 1.70 |
| Lansing | 21.6 | -0.3 | 1.24 | 1.70 |
| Detroit | 23.6 | 0.9 | 1.91 | 1.74 |
| Flint | 21.4 | -0.6 | 1.20 | 1.74 |
| Toledo | 24.1 | -0.5 | 2.54 | 1.74 |

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

Weather Outlook

by Dr. Jeff Andresen, Agricultural Meteorologist, Department of Geography, Michigan State University

In late January, the orientation of the jet stream changed from a northwesterly pattern to a flatter, more west-to-east pattern.

This change allowed a series of mild air masses of Pacific Ocean origin into the state, resulting in generally cloudier and warmer than normal weather conditions and the gradual reduction of snow cover

across central and southern sections.

Mean temperatures for the month of January generally ranged from near- to slightly below normal, although these means were actually the average of a series of Arctic-origin air masses and bitter cold weather with record-setting warmth during the first week of the month.

Precipitation for January ranged from slightly below normal in southeastern sections to much above normal in the north, including very heavy lake-effect snowfall across much of Upper and northwestern Lower Michigan.

The NOAA long-lead outlook for the remainder of February still calls for near equal probabilities of below-, near-, and above-normal temperatures and precipitation.

While temperatures early in the month have moderated to above-normal levels, latest medium-

range computer guidance suggests the formation of a pool of cold, polar-origin air in the northern reaches of North America, which ultimately should move southward toward the Great Lakes region.

I would thus expect at least one or two outbreaks of colder than normal temperatures during the middle to latter part of the month.

The 90-day outlook for February through April calls for an increased likelihood of below-normal temperatures, with odds of the below-normal scenario increased to 38 percent, and odds of the above-normal scenario decreased to 28 percent (the near-normal scenario still has a 33 percent chance of occurrence).

Precipitation odds for this period are considered to be equal for below-, near-, and above-normal scenarios. ■

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Case answers ultra-narrow-row trend with new corn head

Case Corporation has solidified its commitment to ultra-narrow-row corn producers by acquiring the rights to a unique combine corn head that will harvest crops planted in rows as narrow as 15 inches.

With the acquisition of exclusive development, manufacturing and marketing rights for the head, Case becomes the industry's first equipment manufacturer to announce development of a corn head capable of harvesting ultra-narrow-row corn in all row spacing ranging from 15 through 22 inches.

Case acquired the corn-head design from Marion Calmer, a farmer in Alpha, Ill. Calmer, also the owner of Calmer Agronomic Research Center, is a pioneer of ultra-narrow-row corn and designed the corn head to which Case now owns the rights.

"Farmers planting ultra-narrow-row corn have reported significant yield increases and lower input costs compared to those planting traditionally row-spaced corn," said Jon Carlson, Case vice president and general manager, North American agricultural operations. "Farmers throughout the Corn Belt have been experimenting with narrow and ultra-narrow-row corn for years, and there's been a recent resurgence as more and more corn producers realize the benefits."

"A combine corn head capable of harvesting the ultra-narrow rows — to complement our ultra-narrow-row planters — will expand Case's line of equipment to meet this growing trend."

Ultra-narrow-row corn, which includes 15-inch rows, offers many advantages, such as higher yields,

a faster spreading canopy for fewer weeds and enhanced sunlight gathering, more even distribution of residue, better planter-spacing performance, and greater ease of harvest.

Significant yield-increase potential

Case's Gerry Salzman, product development director, crop harvesting, said Calmer's research indicates that the five-year yield potential will be about a one-bushel increase for every one-inch decrease in row spacing.

"The move toward narrower row spacing may be the next significant practice farmers implement to improve yields," said Salzman. "And by obtaining Calmer's innovative corn head, Case is positioning itself as a leader in providing customers the equipment they need to take full advantage of producing ultra-narrow-row corn."

Calmer's design — tested on a Case IH Axial-Flow7 combine during this year's harvest — stems from his own experimentation at his research center with planting narrow- and ultra-narrow-row corn. Conventional corn heads have a gathering chain and fingers on each side of the row that direct ears of corn into the combine. To meet his harvesting needs, Calmer invented a corn head that uses one gathering chain with large, single paddles to direct the corn into the narrower combine openings.

While Case still has to put its prototypes of the ultra-narrow-row head through the company's rigorous product-development testing, Salzman said he is optimistic about what the new offering means

to Case and its customers.

"As a manufacturer, Case will be in a position to offer corn heads that can harvest a wide range of row-width configurations, from conventional to ultra-narrow," said Salzman. "This means our customers will have the flexibility to explore new and promising corn-production practices with equipment that meets the quality and standards synonymous with the Case IH brand."

Case enhances ultra-narrow-row systems

According to Salzman, this acquisition allows Case to offer a complete system of equipment, from planting through harvest, for ultra-narrow-row corn and soybean growers.

He said Case made the decision to pursue equipment systems solutions for spacing as narrow as 15-inch rows because of the added benefits this narrower spacing offers to farmers. Calmer's research has shown definite advantages for additional profitability in both corn and soybeans for ultra-narrow-row versus narrow-row practices, and more recently shows advantages for 15-inch spacing versus 20-inch spacing.

"In addition to lower input costs and increased yields, 15-inch spacing allows farmers to reduce their capital investment because they can plant both corn and beans with a single planter," said Salzman.

He noted that Case IH 955 Series Early Riser7 planters are designed in a "splitter" configuration, meaning farmers can plant in either 15- or 30-inch rows with the same machine. ■

USDA pushes for more ag research money

Saying agriculture research is a victim of its own successes in major advances in improving crops, battling pests and the overall betterment of commodities for farmers and consumers, the Agriculture Department fears agriculture research is being taken for granted.

"Publicly funded research needs to become the center-stage performer to gain the funding needed for that bounty to continue," said Catherine Woteki, USDA's chief of research.

Woteki noted that ag research has been "flat-funded for the past two decades," and said as of now, no new funds are expected to be pumped into needed science. She said one of the reasons for the lack of growth in research funds is due to urban and suburban members of Congress and their constituents who take an abundant food supply for granted and are unwilling to unleash tight purse strings.

"We have a huge infrastructure that has been productive and has paid off, but we cannot financially sustain that ... The dilemma is that scientists have not done a good job of telling their own story and science is losing its priority in society," Woteki said at a recent conference of farmers at Rocky Mountain College in Montana.

The USDA Agricultural Research Service is allotted \$66 million per year for work, but last year's farm bill only extended research dollars for one year, forcing USDA to again go into battle to secure desperate research money this year. ■

New alliance benefits farmers

A recent alliance gives farmers a new option for dealing with the phase-out of the government price support program. Mike Fassler, vice president and co-owner of Salisbury Management Services, Eaton Rapids, Mich., announced his company has formed an alliance with Hurley & Associates Agri-Marketing Centers Inc., with offices in Missouri, Illinois, Kentucky, Tennessee, Arkansas and Mississippi.

"We believe that commodity markets will be more volatile than in the past due to the government removing itself from the role of managing supply. Producers now have flexibility regarding what crops to plant; therefore supply will adjust more rapidly which leads to an increase in price volatility. We feel farmers will want assistance with their marketing and financial planning to increase their profitability," states Fassler.

Fassler adds, "the result of this alliance is the Comprehensive Risk Management Service. This service utilizes the resources of three areas: the production expertise of the producer, Salisbury Management Services' financial planning expertise, and Hurley & Associates' marketing expertise. Both companies are well known and respected in the agricultural arena. Marketing plans under the program are based upon the production and financial realities of the individual farm business. The crops covered by the service are commercial corn, seed corn, soybeans and wheat."

Ida Hurley, principal of Hurley & Associates, states, "We can give farmers an added advantage. We can help them look at their entire risk management, financial planning, crop marketing and farmland management programs. We believe the ability to read and interpret economic signs, calculating the risk they present and acting on them, is one of the greatest challenges for the farmer-businessman in today's volatile marketplace. The future of agriculture rests with those who are willing to make a commitment to risk management. The American farmer has done an excellent job managing risks associated with production. However, very few farmers have time to devote to managing the risks involved with marketing commodities. This requires the expertise to observe and quickly implement sophisticated marketing plans based on a producer's financial plan. The volatility in pricing structures during any crop year can be the determining factor in the success or failure of a farming operation. No matter how efficient the producer, the marketplace will ultimately define the future."

The Comprehensive Risk Management Service is available on a fee-per-acre basis. The service begins with developing a financial plan based on the financial realities of the individual producer. This plan, combined with cropping data and yield projections, is used to develop a specific marketing plan for each commodity. The plan will be continually evaluated and updated as needed. ■



My dad told me once, "A normal year is the average of ten abnormal



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Responsible. Like You.

Precision Agriculture

by Neil R. Miller

Michigan farmers are rapidly adopting GPS as a tool to manage soil fertility and monitor crop yields. Pest management activities, in contrast, have lagged behind. This contrast is not due to a lack of interest or creativity. The farm press is full of schemes reminiscent of Darth Vader: satellites that monitor crop fields and identify diseases from 11,000 miles away, sprayers with sensors that distinguish between weed species and inject appropriate herbicides. Why aren't these ideas being used commercially?

Lack of Pest Thresholds. While we have reliable economic thresholds for many of our insect pests, the vast majority of pest management decisions are still made with a farmer's or an ag professional's informed intuition. Even Microsoft hasn't learned how to program intuition into computers! The weed science staff at MSU has been working for years on mathematical decision-making models for weed management. Nevertheless, Dr. Jim Kells recently informed me that a computer program will not be released until at least 1998. Our agronomic knowledge needs to catch up with our engineering capabilities.

Label Inadequacies. The cost and time involved in registering agri-chemicals is already monumental. Site-specific labels, detailing recom-

Farming is a dangerous occupation

According to the National Institute for Occupational Safety and Health in Morgantown, W. Va., American farmers are three times more likely to be killed on the job than the average U.S. worker.

"The fatality rate has remained fairly constant during the 1980s and into the '90s," said institute spokesman John Myers. "It has run somewhere in the area of 22 to 23 deaths per 100,000 farm workers annually. It's one of the more hazardous industries."

Experts blame many farm accidents on impatience or carelessness. One Ohio farmer who lost portions of his right hand to a corn harvester said he might not be in the situation he is today if he had just taken the time to do his job right.

"No matter how big a hurry you're in, shut the engine off before you get down and do any work on a piece of equipment," said Greg Matre, who continues to farm to help pay off his more than \$100,000 worth of medical bills. "It may take you a little longer, but it's worth staying alive and keeping your fingers and your body parts intact." ■

New magazine to cover "revolution" in agriculture

A new magazine focusing on precision agriculture debuted in January. *PrecisionAg Illustrated* is devoted to the "how-to's" of site specific farming, a new technology and information management system that is being adopted by crop producers across the United States.

PrecisionAg Illustrated will be directed to crop producers and those who serve them, says K. Elliott Nowels of Clear Window MultiMedia, St. Louis, publisher of the new magazine. "New technologies like global positioning systems or GPS, field mapping and remote sensing with satellites are being applied to farms across the country," says Nowels. "It's exciting, and agriculture will never be the same - and that probably qualifies precision agriculture as a revolution. We want to serve as interpreter of these revolutionary developments and make high-technology agriculture easier to put to use."

Nowels and his partner, Robert J. Wanzel, developed their understanding of precision agriculture after covering the issue for five years for another magazine they publish, *Dealer PROGRESS*, a publication for 21,000 farm supply retailers. Wanzel is senior editor of both magazines.

PrecisionAg Illustrated will focus on how-to-do-it articles, with a highly visual, illustrated format of photos, illustrations, charts and graphs, Nowels says. The magazine will also be made interactive with links to the Internet offering updated information to producers; the address is <http://www.precisionag.com>. ■

Star Wars pest management: The myth and the reality

Recommendations for varied conditions, will require additional research expenditures. If these labels lead producers to target pesticide use, rather than taking a shotgun approach, they may result in both increased liability and decreased chemical sales. Companies will face difficult dilemmas in deciding to develop site-specific labels.

Prohibitive Economics. Site-specific pest management should result in lowered chemical costs and/or reduced pest damage. Will these benefits outweigh the cost of GPS receivers, computers and injector equipment? Most producers will also need to buy geo-referenced recommendations. Because of the work involved, elevator personnel are not willing to provide these services free, as they have with conventional technologies. Independent crop consultants, such as our company, will need to raise fees to cover the added costs of equipment, software and labor.

Likely uses of site-specific management in the near future

Despite the above reservations, I am convinced we will see commercial uses of site-specific pest management in the next few years. Likely applications include:

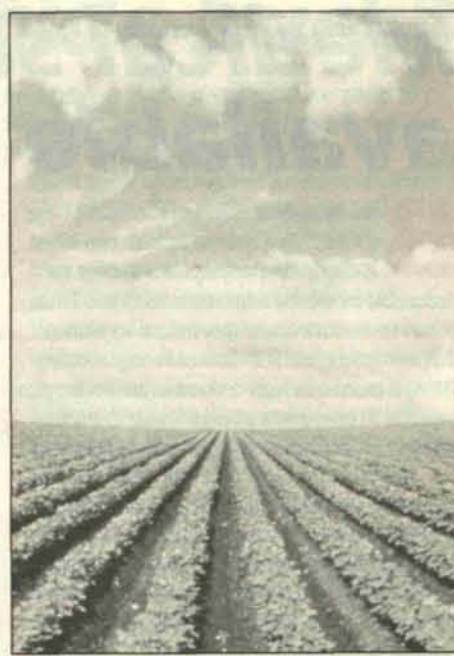
Weed Mapping During Field Operations. Many combine yield monitors already allow operators to map weed problems during harvest (e.g., quackgrass patches). The same unit can be trans-

ferred to a tractor to map weed escapes while side dressing corn. These geo-referenced maps can then be used to spot-spray problem areas. Reductions of 40 to 60 percent in chemical costs have been documented with such approaches.

Sensors for Directing Nonselective Herbicides on Resistant Crops. Roundup Ready soybeans and Liberty Link corn often need a second herbicide application to catch perennial weeds. Since these herbicides are non-selective, sensors will not need to distinguish between weed species, and sprayers can simply be turned on and off rather than using expensive injection systems.

Variable Rate Application of Preemergence Herbicides. Varying rates according to soil texture and organic matter levels has reduced herbicide costs by \$4 to \$8 per acre. Despite the equipment costs and label inadequacies described above, I expect we will see this technology used in Michigan in the near future.

Remote Sensing to Target Scouting Efforts. Satellite imagery or aerial photos can scan large acreages to pinpoint areas where crops are stressed. Although these images can't identify the cause of the stress, they can help direct scouts to problem areas. This technology is most cost-efficient in areas that are difficult to scout from the ground. In Michigan, our smaller field sizes may limit its use to high-value specialty crops. ■



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Medical savings accounts now available to Farm Bureau members

Blue Cross Blue Shield of Michigan (BCBSM) has teamed up with two other Michigan-based companies to offer tax deductible medical savings accounts to small businesses in the state under new federal legislation that took effect Jan. 1. A medical savings account (MSA) is based on a high-deductible health-care plan linked to an investment account similar to an IRA, which helps purchasers pay for medical expenses.

The new product will be a BCBSM qualified Comprehensive Major Medical plan called Blue MedSave and will be administered by Michigan-based FLEXBEN Corporation, a national employee benefits administration and management firm. Michigan National Bank will offer an investment plan for the accounts.

The Michigan Blues will be the first health-care insurance company in the state to offer the new medical savings accounts through organizations such as Michigan Farm Bureau. This will provide small businesses, such as farming operations, in Michigan that purchase MSAs access to every community-based hospital in Michigan, 9 out of 10 Michigan physicians, and providers throughout the nation through BCBSM's affiliation with other Blue plans.

"We're pleased to have the opportunity to offer an MSA to the Michigan Farm Bureau membership," states Doug Fleming, manager of MFB's member services. "Our organization has been a long-time advocate of the principal benefits of MSAs through our members' policy development process."

Richard Whitmer, CEO of Blue Cross Blue Shield of Michigan, said, "Blue MedSave is a unique health-care product with tax benefits for small businesses, sole proprietors and their employees in Michigan."



"Every farm in the state has the opportunity to participate in the MSA program," adds Fleming. "It's another way in which Farm Bureau is working to improve our members' net farm income."

Medical savings accounts use tax-free dollars to cover eligible medical expenses as defined by section 213(d) of IRS code. This includes medical expenses, such as physician and hospitalization costs, if they are for essential medical care.

Throughout the year, when an employee or dependent needs medical care, the employee pays the deductible with funds from the medical savings account. Here's how it works:

- The employer (50 employees or less) or sole proprietor purchases a Blues-qualified Comprehensive Major Medical (CMM) plan.
- The employer or employees contribute to a med-

ical savings account for each employee (federal law prohibits employees and employers from both contributing during one year).

- Contributions and eligible medical expense reimbursements are not subject to federal income taxes.
- Contributions are used to meet plan deductibles of \$1,500 per year for individuals and \$3,000 per year for families.
- The annual maximum contribution is 65 percent of deductibles for individuals (\$975) and 75 percent for families (\$2,250).
- Unlike flexible spending accounts, unused dollars may be rolled over for expenses in subsequent years.

When an employee or dependent receives health care, the health care provider bills Blue Cross

Blue Shield of Michigan. The Blues then generate an explanation of benefits (EOB) and credit the employee's deductible. The EOB details the service and informs the employee that the amount applied to the deductible must be paid. The employee can then submit his or her claim to FLEXBEN for payment, tax-free, for eligible unpaid expenses.

The medical savings account is portable. Employees are free to carry contributions in their medical savings accounts with them if they leave an employer, although they will be responsible for administrative fees to maintain the account.

The medical savings account also works as a safety net for an employee who has been laid off, or has terminated his or her employment. It can even be used to pay premiums for extended coverage under the federal government's COBRA program.

Money remaining in a medical savings account from previous years is rolled over to pay for medical expenses in following years. Rollover funds may also be used to pay for medical services that are not covered by qualified Comprehensive Major Medical (such as copayments for prescription, vision and dental costs).

To withdraw funds to pay for medical services that are not covered, members will need to submit a reimbursement request to FLEXBEN Corp.

Individuals eligible for Medicare cannot participate in the MSA program, according to federal law. Those covered by other non-Blue Cross Blue Shield of Michigan health insurance plans cannot participate in the Blues program.

The new federal MSA program is currently limited to the first 750,000 people nationwide to establish tax-deductible MSAs.

For more information, interested small business owners are asked to contact their local Farm Bureau Insurance agent or county Farm Bureau office. ■

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Want more bite from your insecticide buck?

Each spring growers across the Corn Belt invest millions of dollars in insecticides to protect their crops from damaging soil insects. However, some spend more than they have to, while others may lose control because they're applying their insecticides with planters that are improperly calibrated.

"Insecticide applicators that aren't properly calibrated could deliver application rates that are off by as much as 10 to 20 percent," says Debbie Ventura, of Zeneca Ag Products. "Applying too much product wastes money, while low rates can open the door for rootworms, cutworms and other insects."

Ventura adds that growers can't rely strictly on the manufacturer's recommended settings because product flows through each planter, and even each row unit, at different speeds. Even a brand new properly calibrated planter can have settings that differ by up to three notches from one row unit to another.

"The recommended settings on insecticide bags should be used only as a starting point," she explains. "With any insecticide, it's important to fine-tune the settings for accurate application."

An ongoing process

Every planter should be calibrated every year, according to Ventura. Just checking the settings is not enough, she adds. Growers should run product through the applicators to make sure they're delivering the right rate.

"Normal wear and tear can affect your planter settings from one week to the next — and even one field to the next," she says. "Even if you plan to use the same product as the year before, it's essential to calibrate at the beginning of the season and to re-check calibration halfway through planting."

Ventura says calibrating a planter is not a difficult or time-consuming process. Calibrating an 8- or 12-row planter will typically take about an hour.

These calibration pointers apply to all granular soil insecticides, she adds. For convenience, some newer products are formulated for application at lower rates. For example, Zeneca's Force 3G is applied at 4 ounces per 1,000 feet of row, compared to 8 ounces per 1,000 feet for Lorsban 15G.

Ventura says the newer product was designed to work well with existing application equipment. "Controlled tests and grower experience over millions of

BASF purchase of Sandoz corn herbicide business finalized

BASF announces it has finalized the purchase of a portion of Sandoz Ltd.'s worldwide corn herbicide business and is moving forward in integrating the companies.

The purchase agreement of \$695 million, plus approximately \$83 million in net working capital, includes all rights for agricultural uses of Sandoz corn and wheat herbicides in the United States and Canada, including the Banvel, Clarity and Marksman brands, plus Frontier and Guardsman worldwide.

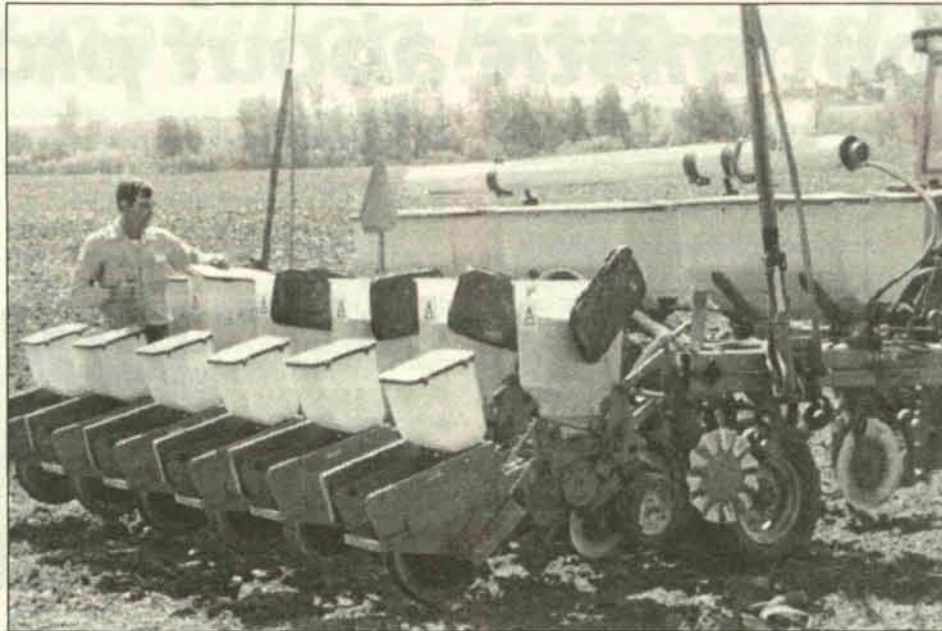
"We are proud to have these well-respected products in our portfolio, complementing our existing and future products for soybeans and corn. By integrating the products of these two leading agricultural companies we're forming a strong, diversified crop protection portfolio," says Hans J. Loose, group vice president, Agricultural Products, North America.

With the addition of these brands, BASF will become one of the top North American suppliers of corn and soybean crop protection products, and will significantly increase its product share in the U.S. and Canadian wheat markets. The agreement also includes Sandoz Agro Inc.'s Beaumont, Texas, manufacturing facility.

BASF headquarters will remain in Research Triangle Park, N.C. Sandoz Argo employees who accepted a position with BASF will begin transferring to Raleigh-Durham and other locations immediately.

According to Loose, more than 450 Sandoz Agro employees have joined BASF, which includes a large portion of the sales force. "Dedicated and committed people are the key to success in our business and we're fortunate to have attracted so many talented Sandoz staff. The sales force is set up and they're ready to provide the same level of quality service our customers have relied on in the past," says Loose.

Although the company will operate with one combined sales force, there will be separate marketing programs and packaging designs for the 1997 season to ease the transition, according to Loose. "Because it will take several months to transfer all contracts, trademarks and other legal items, we will conduct separate programs. This way, we'll ensure there will be no disruption in the availability of product," says Loose. ■



acres show excellent application accuracy with Force 3G," she reports. "Most of the Force we sold last year was the Force 3G formulation. Growers like only having half as many bags to handle and being able to cover twice as many acres between refills. In many cases, they're able to run the planter all day without having to refill their insecticide hoppers."

An independent study conducted by Midwest Research in York, Neb., found that delivery of Force

3G was extremely accurate during a simulated planting procedure over a nine-hour time period. Actual delivery at the end of this period was within 1 to 3 percent of the desired target application from three different planters — Max-Emerge I, Max-Emerge II and Max-Emerge Plus.

How to properly calibrate your planter

Many soil insecticide manufacturers offer pre-season calibration as a service to growers using

their product. However, some growers prefer to take care of the job themselves. Here's how to properly calibrate your planter:

- Check the product bag for the recommended rate per 1,000 feet of row. The instructions will recommend an initial planter setting based on planter type, application rate and running speed. Set each planter box to the recommended setting.
- Disconnect the delivery tube from each planter box and direct the product flow into containers or calibration tubes.
- With product in the planter boxes, run the planter 500 feet at the same speed you will be running when planting. "The speed is very important," emphasizes Ventura. "The application setting determines how fast the insecticide flows out. If you calibrate your planter at six miles per hour and then run five miles an hour in the field, you may be applying too much insecticide."
- Weigh the product in each container and then subtract the weight of the container itself. If you're using calibration tubes, check the level of product in each calibration tube. After a 500-foot run, half of the amount needed for a 1,000-foot row should be deposited in the containers or tubes.
- Adjust the settings on the planter boxes as needed and repeat the test until all the boxes are delivering the correct amount of product. ■

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Agriculture holds key to China's entry into WTO

U.S. trade officials said farm trade issues will be a key factor in determining whether China is admitted into the World Trade Organization. Agriculture Secretary Dan Glickman also denied that the Clinton administration is ignoring agricultural trade rifts between Washington and China.

The American Farm Bureau Federation and other agricultural groups are aggressively campaigning to make sure farm interests aren't ignored in U.S.-China talks.

"Our negotiations on WTO have to be with agricultural officials in China, and we don't see any sign of that," said Barbara Spangler of AFBF. "We have to get the U.S. Trade Representative involved in this."

A spokesperson for the USTR said they are anxious to work with the Agriculture Department to help work out trade barriers between the two nations.

Sen. Richard Lugar (R-Ind.), chairman of the Senate Agriculture Committee, voiced his disappointment that agriculture did not receive sufficient discussion during the WTO's ministerial meeting in Singapore in December. Sen. Tom Harkin (D-Iowa), agreed with Lugar. "Our trade office has got to focus on agriculture," Harkin said. ■

Tighter air standards could mean lower grain prices

The Environmental Protection Agency's proposed tightening of air quality standards could mean lower grain prices paid to farmers. The regulations proposed by the EPA in late November would mean higher prices paid by grain elevators and feedlots for transportation and electric power. This in turn would mean a lower price paid by elevators and feedlots to farmers.

The American Farm Bureau Federation said that new standards may also mean added regulation of sufficient emission regulation in agriculture. ■

Wheat 2000 project remains optimistic about production

In Dickens' novel "The Tale of Two Cities, there were the worst of times and the best of times, but for wheat production in Michigan 1995-96 was the worst of times in more than a decade.

Steve Poindexter, Michigan State University Extension agricultural agent in Saginaw County and Wheat 2000 steering committee chairperson, says the past growing season was the most troublesome he's seen in his 16-year career, but he remains philosophical and optimistic.

"This past year, Mother Nature first came along with winter conditions that severely injured, if not destroyed, whole fields of wheat and then ushered in diseases in the growing season that we had no possibility of controlling," he says.

Winter kill and diseases dropped the state-wide average yield to below 40 bushels per acre. The 1995 yield averaged a record 60 bushels per acre statewide.

"On top of that, wheat prices dropped and unfavorable fall weather, which delayed harvest of other crops, in many cases prevented winter wheat planting."

As a consequence, acreage planted to wheat this fall may have dropped by 30 percent or more, Poindexter surmises. That could mean around 180,000 fewer acres planted to winter wheat this fall than were planted a year ago.

"What wheat was planted looks really good at this time," he says. "While we wish more acreage was planted this fall, the market price, unfavorable harvest and planting weather forced growers to make a management decision, and for many, it was not to plant wheat," Poindexter says.

Though it is not unusual to see year-to-year fluctuations in acreage planted to wheat, statistics show that wheat acreage has been trending downward since the early 1960s, when upwards of 1.1 million acres were being planted to wheat each

year. In 1995 (most recent statistics), 630,000 acres were planted to wheat.

The focus of Wheat 2000 is to reverse the decline in wheat acreage and increase per acre yield. The program was begun by a group of growers, agribusiness representatives, MSU Extension agronomists and Michigan Agricultural Experiment Station researchers in 1994.

In spite of the past growing season, Poindexter sees substantial value in what Wheat 2000 has accomplished for the nearly 1,000 growers participating in the program.

"Had the Wheat 2000 program not been in place, we could not have responded nearly as well to the problems that beset growers throughout the past growing season," Poindexter says. "As it was, we had a communication mechanism in place that kept growers and industry apprised of the problems as they developed. And working through the program, the university and industry were able to provide growers with the best possible advice available when it was needed."

He adds that Wheat 2000's effect on production practices is apparent.

"Growers are now planting seeds per row foot or per acre rather than bushels per acre, they are more aware of the importance of fertility to attain maximum yield according to soil type, and they see the merit of planting two or several varieties of wheat rather than just one," Poindexter says. "They are also more aware of the importance of insect and disease



identification and control using integrated pest management practices. I think we have made quite a difference in growing wheat skills," Poindexter says.

Those skills will continue to be augmented through a series of meetings being planned in the state's main wheat-growing regions this winter.

"In those meetings, we will look at the problems of the past year but focus on practices that will emphasize the value and ultimately the profitability of growing wheat while minimizing risk," Poindexter says. "The potential for growing wheat in Michigan is the same as it always has been. We do have a good wheat-producing climate, and when wheat yields across the United States are examined, it is evident that, on average, Michigan's wheat yield is way above what producers in other states are attaining."

He adds that in spite of this year's problems, wheat remains a viable part of the farm's rotation, economically and environmentally, and that the potential for wheat as a major crop in Michigan is good. ■

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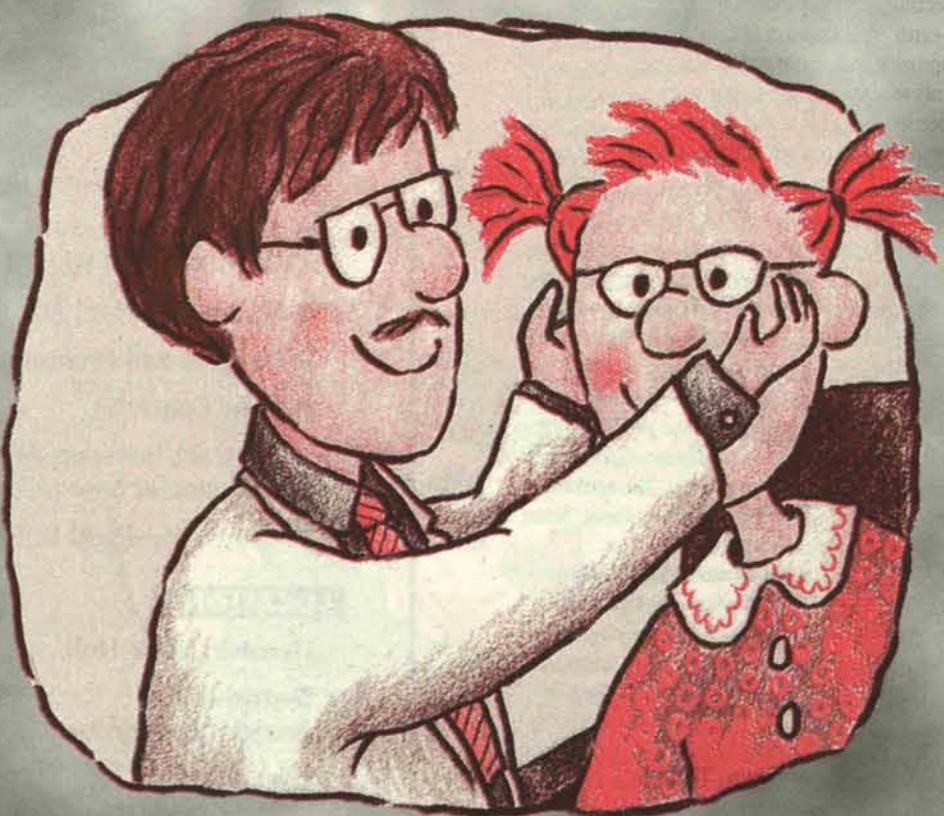
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Where Belonging Makes a Difference. MICHIGAN FARM BUREAU

Animal Initiative dollars in action: MSU's new pavilion is up and running

by Kara Endsley

Michigan State University's Pavilion for Agriculture and Livestock Education opened early this winter by showcasing the Michigan Winter Beef Show, where area producers got the first glimpse of the newly completed pavilion.

"Exhibitors were really quite amazed at the size and scope of it," Livestock Extension Specialist Ken Geuns said. "It just seemed to be a completely different atmosphere. People were really enjoying themselves, and they got a chance to visit with others and to look at livestock and learn."

The pavilion, which was completed Oct. 1, 1996, was part of the \$70 million Revitalization of Animal Agriculture Initiative. "The exhibition center is probably the most visible component of the Animal Initiative to the 'general taxpayer' in the state of Michigan," Geuns said. "They can have direct benefit from it."

The 187,000-square-foot building, located south of the MSU campus, hasn't gone without

notice. Most weekends in 1997 are already scheduled for an event, and requests have even been made into the year 2000.

Although the majority of scheduled events are agriculture-related, the facility is designed for trade shows, flea markets and single-day meetings. "We attempted to think about as many things as we possibly could in designing the facility to accommodate not only livestock shows but large trade shows and things of that nature," Geuns said.

The pavilion includes a 76,000-square-foot exhibition area, an auditorium and auction facility with seating for 350, an arena seating 2,000 people, and four classrooms seating 35 people. The pavilion also has a campground with 73 sites and a 700-car parking lot.

The pavilion was designed by representatives from all walks of livestock. Architects travelled to the North American International Livestock Pavilion in Louisville, Ky., and to Middle State University in Tennessee to acquire design ideas.

"It was a merger of all the different designs and facilities seen around the country," Geuns said.

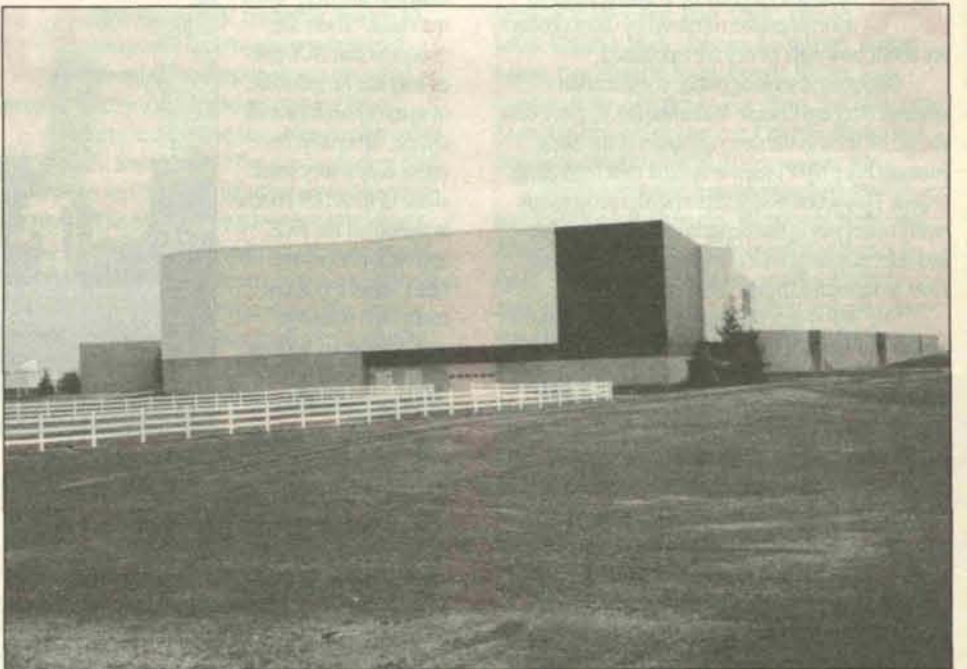
The committee, which represented the beef, sheep, swine, horse and goat industries, compiled a series of lists. The first established the necessary specifications for the facility. The second was a "nice to have" list, and the third was the luxury list.

After negotiations over the design table, a final plan, which included all the necessities and a few luxuries, was completed. In just over a year, the pavilion went from blueprints to a facility ready to open its doors.

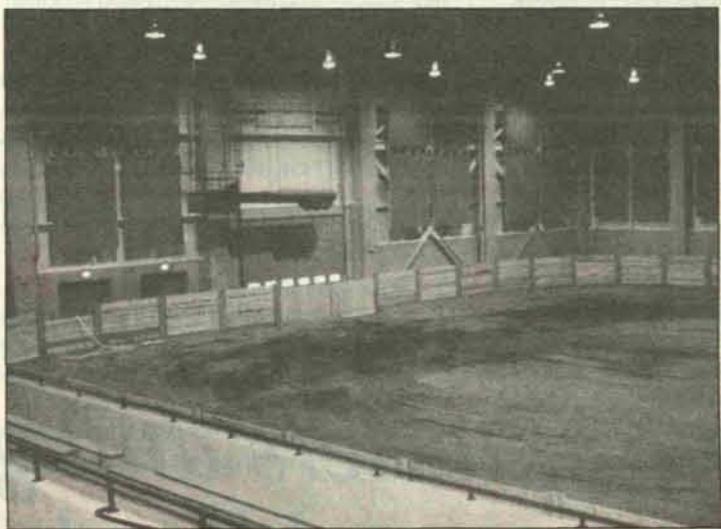
The 14th Annual Michigan Horse Council's International Stallion Exposition and Trade Show, March 14-15, will host the pavilion's official grand opening ceremony.

The pavilion is yet another asset for the agricultural community—a direct result of the Animal Initiative in action. "It will provide a great home for Michigan agriculture events. I think the industry will have a lot of enjoyment in it in the years to come," Geuns said.

To reserve the pavilion or for more information, contact Gerry McCully at (517) 432-5566.



Above: The Pavilion for Agriculture and Livestock Education rests on 50 acres of land just south of the MSU campus.



Left: The 2,000-seat arena is well prepared for livestock shows and barrel racing.

Tentative Schedule of Events

| February | |
|----------|---|
| 15 | Michigan Elk Breeders Association 1st Annual Select Elk Auction |
| 21-23 | MSU Spartan Stampede |
| 28 | Michigan Quarter Horse and Paint Sale |
| March | |
| 1-9 | ANR Week |
| 14-16 | Annual International Stallion Exposition and Trade Show |
| 20-23 | Mid Michigan Home & Garden Show |
| April | |
| 4-6 | Michigan Beef Expo |
| 12 | State 4-H Horse Jamboree |
| 18-20 | Haflinger Horse Sale |
| 25-26 | MSU Small Animals Day |
| May | |
| 2 | FFA Ag Skills Contests |
| 24 | MSU Sheep Sale |
| June | |
| 11-14 | Eastern Regional Jr. Simmental Show |
| 18 | 4-H Exploration Days |
| 20-21 | Michigan All Breed Beef and Sheep Show |
| 23-27 | Beef Industry Seminar Event |
| 28 | National Jr. Holstein Program |
| July | |
| 12-19 | Michigan 4-H Animal Science Week |

MSU Animal Science to sponsor workshops on expected progeny differences in beef cattle

Early in March, MSU's animal science department will hold five workshops around the state on the use of expected progeny differences (EPDs) in beef cattle production.

According to Dr. Dan Buskirk, MSU Extension specialist, the workshop will give participants down-to-earth explanation of EPDs and their use in improving beef cattle production traits. "Participants will be given the opportunity to practice cattle selection using EPDs and will be able to apply the use of EPDs to realistic situations and resources of

Michigan cattle producers," adds Buskirk.

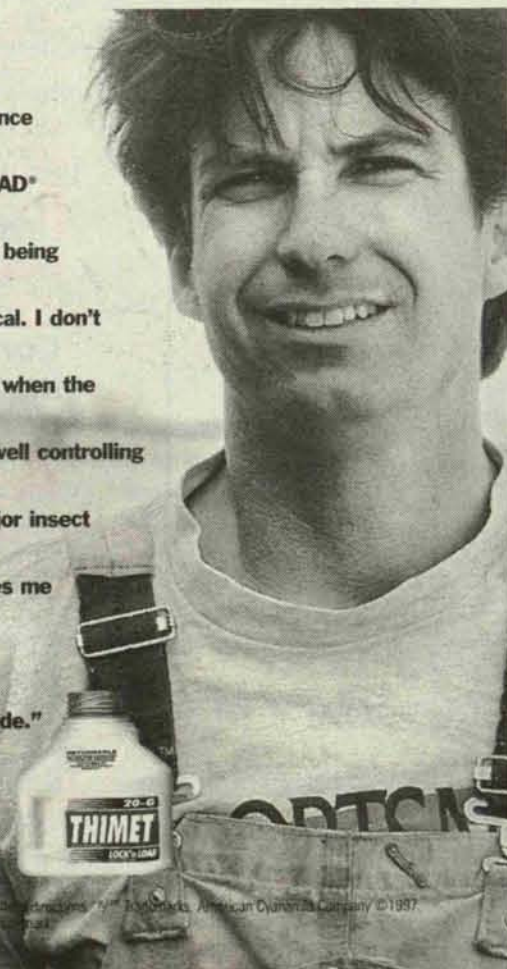
Workshops will be held:

- March 3 Delta Co. Extension office, Escanaba
- March 4 Gaylord Holiday Inn, Gaylord
- March 5 Kim's Kountry Kitchen, Manchester
- March 6 Van Buren Co. Extension office, Paw Paw
- March 7 Brown Bungalow Restaurant, Paris

The fee is \$15 for the first family member, additional are \$5 each. Please send checks payable to MSU to Teri Walters, 113 Anthony Hall, East Lansing, MI 48824-1225 or call (517) 355-8401.

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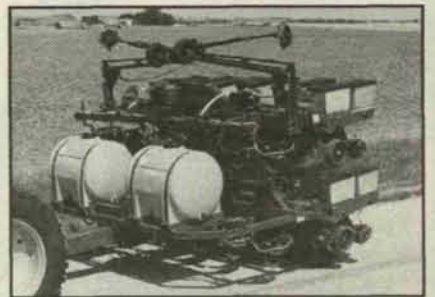
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Midwest Corn Grower



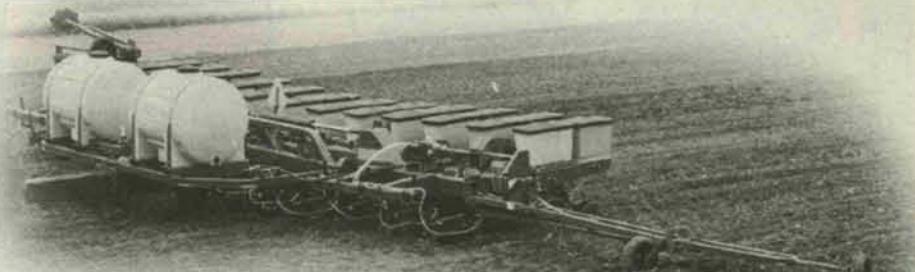
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USDA seeks comment on use of National Cheese Exchange data in determination of milk prices

Agriculture Secretary Dan Glickman announced recently he is taking steps to address concerns raised by dairy producers about how milk prices are calculated.

Glickman is seeking public comment on whether National Cheese Exchange (NCE) price data should be used in the determination of the Basic Formula Price (BFP) used in federal milk marketing orders. This action is in addition to the process currently underway in the department to consolidate and reform federal milk marketing orders by April 1999, as mandated by the 1996 farm bill.

The BFP is determined by USDA each month based on a formula that uses the previous month's producer price paid by unregulated manufacturing plants in Minnesota and Wisconsin, adjusted for changes in dairy product prices between the previous and current month. The price of cheese on the NCE is used in this adjustment.

The BFP serves as the price that handlers must pay dairy farmers for milk used to manufacture Class III products (i.e., butter, nonfat dry milk powder, cheese) under the federal milk marketing order program. It also is used to arrive at the price that processors must pay dairy farmers for milk consumed as fluid milk and soft products usage of milk (i.e., yogurt, ice cream).

"Many dairy producers and producer organizations, as well as Sens. Kohl and Feingold and Congressman Obey, have indicated their concern with

using NCE prices to establish the BFP," Glickman said. "There are concerns that NCE prices may not be reflective of market conditions for cheese nationally, because only a very small share of total U.S. cheese is traded on the NCE, and NCE prices have been subject to abnormally high volatility."

"We must address these concerns now so that dairy producers have confidence that the prices they receive reflect market conditions," Glickman said. "We cannot wait until April 1999 to address this issue. Based on the comments we receive, we will determine whether we should proceed with a national hearing on replacing NCE prices in establishing the BFP."

In response to concerns about the accuracy of reported prices, this month, USDA's National Agricultural Statistics Service (NASS) will begin conducting a national survey of cheddar cheese prices. "We must have broad participation in the survey if it is to be useful to the dairy industry and to be considered as a possible substitute for NCE prices," Glickman said.



The department will continue to review the BFP as part of Congress' mandate in the 1996 farm bill to reform and consolidate federal milk marketing orders. During the next several weeks, in preparation for meeting the April 1999 deadline, USDA will release several studies addressing options for milk order reform, including the role of the BFP and other longer-term pricing issues.

To comment on the use of NCE prices in the determination of the BFP write to: Dairy Division, AMS, USDA; Attn.: BFP Evaluation; Room 2968-S; P.O. Box 96456; Washington, D.C. 20090-6456. Comments should be postmarked by March 31. ■

Farm safety plans focus of winter meeting series

A series of Safety Challenge Seminars, co-sponsored by Michigan Farm Bureau and Michigan State University Extension, will provide Michigan farmers the help they need to develop farm safety plans. Craig Anderson, manager of the Regulatory Compliance Assistance Program for Michigan Agricultural Cooperative Marketing Association, says the meetings, which are free of charge, are funded through a grant received from the Safety Education and Training Division of the Michigan Department of Consumer and Industry Services.

"The program is designed to bring attention to the areas where we see a lot of injuries occurring within the agricultural industry and establish a program within each operation to try and reduce the number of injuries that might otherwise occur," Anderson explained. "These seminars provide participants with the opportunity to determine how to develop a safety plan, and key points that each operation should consider."

Anderson says that farmers and farm managers need to take the first critical step on their own by analyzing their individual operations for safety shortfalls before attempting to develop a plan. "You need to identify within your operation a person who's going to be responsible for safety — that can be a family member or a worker — and you should look at developing a safety plan not only for your workers, but also for your family members as they are a large part of our farm workforce," he advised.

Producers shouldn't hesitate to seek outside assistance in performing a safety audit on their farm, says Anderson, adding that fears of fines and penalties are unwarranted. Liability protection can actually be enhanced once a safety plan is implemented. "Agricultural operations are faced with volumes of regulations designed to protect employees and family from various hazards that exist on the farm," he said. "However, under recent regulatory changes, if you have a safety plan in place, it allows you to mitigate any potential penalties that may be assessed if an injury occurs."

Participants completing the safety meeting can also qualify for two re-certification credits toward their Certified Applicators License. While there's no charge to attend a safety seminar, pre-registration is required. For more details or to register, contact Anderson at (800) 782-6432. ■

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Dale Warner

Tipton,
Michigan

Safety Challenge Seminar Series

| | |
|---|----------|
| Huron/Tuscola/Sanilac | Feb. 18 |
| Huron Expo Center, Soper Rd., Bad Axe, 1-4 p.m.; contact Carrie Andrich, (517) 269-9949; co-sponsored by Huron County Farm Bureau | |
| Lenawee/Monroe/Washtenaw | Feb. 24 |
| Lenawee County Extension Office, S. Winter St., Adrian, 1-4 p.m.; contact Brian Ehlert, (517) 264-5300 | |
| Leelanau/Antrim | March 4 |
| Horticulture Station, Center Rd., Suttons Bay, 6:30-9:30 p.m.; contact James Bardenhagen, (616) 256-9888 | |
| Montcalm | March 20 |
| Sidney Township Hall, Corner of Sidney and Grow Rds., Sidney, 1-4 p.m.; contact Donald Smucker, (517) 831-7500 | |
| Wexford | April 1 |
| Carl T. Johnson Hunting and Fishing Lodge, M-115 N of M-55, Cadillac, 1-4 p.m.; contact Jill O'Donnell, (616) 779-9480 | |
| Central Upper Peninsula | April 2 |
| MSU Extension office, Escanaba, 1-4 p.m.; contact Warren Schauer, (906) 786-3032 | |

Corn will gain importance in high-population future

A Hudson Institute food expert said corn will drive rural economies and will be one of the hottest commodities in the 21st century. As the world's population booms, corn exports from the United States will become more important.

"There's nothing the world will need more than corn," said Dennis Avery of the Hudson Institute. "It's the biggest, most glittering opportunity in the history of agriculture."

Avery pointed out that major export demand will come from Asia, where Indonesia's broiler flock grew 25 percent in the past year. The Philippines recently renounced its policy of food self-sufficiency, and two-thirds of India's milk cows are fed a diet of leaves, branches and crop stalks.

Avery said new technology, such as biotech corn and high-tech farming techniques, will help the United States meet booming export demands. ■

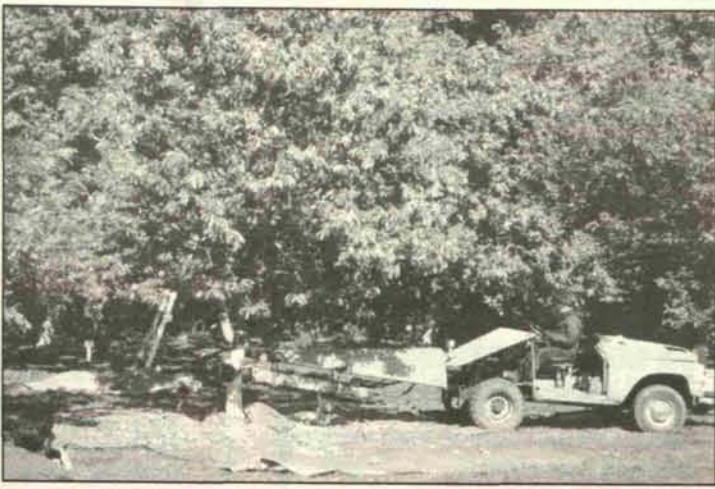


New technique expands chestnut industry

by Steve Tomac

For many growers, chestnut harvest means a painstaking, backbreaking process that involves visiting each tree every day for many weeks.

"Chestnut trees will drop their nuts for approximately two weeks once the maturity of a particular tree is achieved," said Dennis Fulbright, professor of botany and plant pathology at MSU. "If you have



different trees in an orchard that come into bearing at different times, you could be out there basically for a month picking up nuts underneath the tree."

This is one of the reasons the Midwest doesn't have a thriving nut industry. The variable climate makes predicting harvest difficult and the gathering of the nuts labor-intensive.

But now, Fulbright and a team from MSU have worked to develop a process that makes harvesting more predictable, easier, and less labor intensive. They have found that by spraying Ethepon on the chestnut tree, it shortens the span of the harvest.

"We've found that probably within about seven to eight days after spraying, the trees are ready for harvest," said Fulbright. Ethepon is a chemical that speeds up the maturing process. The nuts easily fall out of the tree when shaken by a commercial shaker.

Ethepon is already in use by commercial cherry growers, but no record existed of its use on chestnuts.

This technique has far-reaching implications, according to Fulbright. "We're looking to really start making a mark on the major metropolitan areas in a

few years," he said. "One of the difficulties that could have bothered that was the difficulty in harvest. There's got to be a better way if you are going to be seriously commercial. We saw the first hint that this could be commercialized."

Fulbright stresses that chestnuts aren't like ordinary nuts. They are perishable and need to be handled like a fruit. He compared the chestnut to strawberries, saying they need to be kept cool. If not, he said, "they're going to mold and dry out and turn into little pebbles."

Fulbright said the chestnut industry in Michigan is on the verge of expansion — there are about 70 members of the Michigan Nut Growers Association and only about 10 orchards. He warns, however, that the only ones who make money are those who step in during the middle of the project. He said the pioneers lose money because they are exploring how to be successful, and the late entries deflate the market by flooding it.

For more information on the Michigan Nut Producers Association of the Midwest Nut Producers Council, call (517) 353-4506.

Michigan growers named to tart cherry board

Gregory elected chair of committee

USDA's Agricultural Marketing Service Administrator Lon Hatamiya announced recently 17 appointments to the initial 18-member Cherry Industry Administrative Board.

The tart cherry marketing order became effective Sept. 25. Since then, USDA has conducted mail nomination and balloting to nominate members to the board. The board is the administrative agency for the marketing order regulating the handling of tart cherries grown in Michigan, New York, Pennsylvania, Oregon, Utah, Washington and Wisconsin.

Producers and handlers from the production area are represented on the board. A public member and alternate public member will be nominated at the first board meeting.

Newly appointed to represent producers are: District 1—Donald C. Gregory, Elk Rapids, Mich.; District 2—Larry J. Bradford, Kaleva, Mich., and Frederick J. Tubbs, Hart, Mich.; District 3—Warren R. Willmeng, Watervliet, Mich.; District 4—Daniel W. Sievert, Burt, N.Y.; District 5—Lee W. Schrepel, Yamhill, Ore.; District 6—John K. Lott, Aspers, Penn.; District 7—Phillip R. Muir, Salt Lake City, Utah; District 8—Terry Dorsing, Othello, Wash.; and District 9—Dale E. Seaquist, Sister Bay, Wis.

Northwest County Farm Bureau member Don Gregory was elected chairperson of the committee earlier this year.

Newly appointed alternate producer members are: District 1—Norman R. Veliquette, Elk Rapids,

Mich., and Jeffrey J. Send, Suttons Bay; District 2—Douglas R. Fuehring, Hart, Mich.; District 3—Jerry Jolley, Coloma, Mich.; District 5—Phillip J. Walker, Salem, Ore.; District 6—M. Everett Weiser, York Springs, Penn.; District 7—Kay Riley, Salt Lake City, Utah; District 8—Les Dorsing, Othello, Wash.; and District 9—Marlin H. Feld, Sturgeon Bay, Wis.

Newly appointed handler members are: District 1—William R. Sherman, Elk Rapids, Mich., and Kenneth Terry Morrison, Traverse City; District 2—Earl L. Peterson, Shelby, Mich., and Roy Hackert, Ludington, Mich.; District 3—Robert R. Packer, Lawton, Mich.; District 4—Thomas C. Facer, Rochester, N.Y.; and District 7—Claude A. Rowley, Payson, Utah.

Newly appointed alternate handler members are: District 1—Glenn F. LaCross, Cedar, Mich., and Peter Clyde Morrison III, Williamsburg, Mich.; District 2—Richard DeRuiter, Hart, Mich., and Michael Chase, Walkerville, Mich.; District 3—Janice Lee Price, Lawton, Mich.; District 4—Ben Frega, Rochester, N.Y.; and District 7—Robert W. McMullin, Salem, Utah.

USDA's Agricultural Marketing Service, a marketing and regulatory agency, monitors the operations of the board. The order authorizes market flow regulation, grade, size and maturity regulations, including mandatory inspection for compliance with grade requirements. The order also authorizes production, processing, and marketing research and promotion projects, including paid advertising. Assessments on tart cherries will finance the order.

Senators propose action against E.U.

A bipartisan group of senators have introduced legislation that would force action against Europe if the European Union does not recognize U.S. meat inspection and safety standards and open its markets to U.S. beef and pork.

The bill would require the Clinton administration to review certification of European meat processing facilities. It will also require a formal deter-

mination of whether European countries have violated their trade agreement with the United States.

The White House warned the European Union that unless it recognized U.S. meat inspection and safety standards, European meat not processed in facilities meeting U.S. standards could be kept out of the country. The White House set an April 1 deadline.

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MFB DENTAL

Discussion Topic

March 1997

A monthly resource for the Community Action Groups of Michigan Farm Bureau



You'd be hard pressed to find a Michigan cherry producer who hasn't had to put up with deer enjoying moonlit dinners in the orchard.

Bob Gregory is one farmer who's had enough. Gregory, part owner of Cherry Bay Orchards, Inc., near Traverse City, estimates his operation loses \$10,000 to \$20,000 from deer damage every year. And it's not because he stands idle. He says he and his partners spend \$3,000 to \$5,000 annually in an attempt to ward off the feasting animals. His methods range from hanging strips of mylar from branches to setting up a sound system in the or-

Overpopulation of white-tailed deer causes extensive crop damage

chard with the sound of barking dogs.

Gregory isn't alone. Farmers throughout the state have reported increasing wildlife crop damage, and many are fed up. A Michigan State University study determined that deer destroyed nearly \$32 million worth of crop in 35 southern Michigan counties alone, in 1994.

This is not a new problem, either. In each of the last 10 years, Farm Bureau members passed policy at the annual meeting asking the Department of Natural Resources (whose Natural Resources Commission is now responsible for wildlife management) to take steps to control the deer herd. Unfortunately, the herd has only grown — now more than 2 million head. The DNR has stated that 1.3 million head is their population objective.

After a decade of increasing deer populations, several county Farm Bureau organizations passed resolutions calling for aggressive action. At the state annual meeting, a 452-member delegate body approved policy stating that if the white-tailed deer population is not reduced to the DNR's stated objec-

tive of 1.3 million by Jan. 1, 1999, Michigan Farm Bureau may consider a class-action lawsuit on behalf of Michigan farmers who have suffered crop damage.

Members also recommended numerous steps the DNR could implement, including:

- Extension of the firearm deer season, for antlerless only, prior to Nov. 15 and following Nov. 30.
- Liberal issuance of out-of-season block permits at no charge to landowners in overpopulated areas, or to farmers with damage during that year.
- Limit baiting of deer from Sept. 15 through the end of the firearm deer season. The Natural Resources Commission should scientifically study the effects of baiting on overpopulation and disease, then enact a quantity restriction that will help avoid these problems.
- The use of tree stands for deer hunting during firearm season.
- Any other technique to increase the antlerless harvest.

The emphasis for these deer management strategies is on harvesting antlerless deer. Experts say doing so is the most efficient method for

reducing the population.

When members passed this resolution, it captured headlines. Since that time, MFB representatives have met with the DNR, sportsmen organizations and others to find a solution to the deer overpopulation problem. Few disagree there are too many deer in Michigan. The question lies in the quickest, most efficient way to reduce the numbers. ■

Discussion Questions

1. Why do you think the deer herd has grown so rapidly over the past decade?
2. Farm Bureau has always supported sound, scientific wildlife management. What are your ideas for bringing the deer population to a more reasonable level?
3. What can farmers do to help manage the number of deer in your county?
4. How do members of your group allow a reasonable number of hunters to hunt on their farms?

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Scientists' corn seed gets microbial coat against harmful fungi

Harmful fungi that try to invade newly sprouted corn seeds may be kept at bay by a new tactic of U.S. Department of Agriculture scientists: seeds coated with helpful microbes that weaken or kill the would-be fungal freeloaders.

"We've devised a procedure that uses naturally occurring, beneficial fungi and bacteria to protect corn seed from disease caused by the fungal plant pathogens Pythium and Fusarium," said plant pathologist Robert Lumsden of USDA's Agricultural Research Service in Beltsville, Md.

Unchecked, Pythium and Fusarium cause rot diseases that can reduce corn yields 10 to 30 percent, said Lumsden at the ARS Beltsville Agricultural Research Center. The fungi are scourges of corn crops throughout the United States, particularly in the Midwest, he said.

Enlisting multiple species of beneficial microorganisms "is a new form of biological control," Lumsden said. "In the past, the approach has been to use one biocontrol agent against one plant pathogen." But this won't guard against other disease-causing organisms that may also be in the soil, he explained.

So, the scientists coated seed with a combination of helpful bacteria and fungi they isolated from plant roots and surrounding soil. "These microorganisms attack pathogens in a number of ways," Lumsden said. "They compete with fungal pathogens for nutrients, they make antibiotics that kill or repel the pathogens, or they serve as parasites that invade and consume the pathogens from within."

And, compared to chemical fungicides, he said, "the beneficial microorganisms pose no environmental hazard and protect plants at least as well as fungicides."

Lumsden, research leader of the Biocontrol of Plant Diseases Laboratory, led a scientific team that includes soil scientist Jack Lewis, plant pathologist Weili Mao and microbiologists Daniel P. Roberts, Prakash Hebbar and Shin-I Chow. They conducted lab and field tests at the Beltsville center.

Pythium flourishes when soils are cool and wet, such as during the spring. It causes damping-off, a rot disease of seeds and seedlings. Fusarium prefers warm, dry conditions typical of summer. It attacks the roots of corn plants. In one field study, only about half the seeds sprouted and grew to mature plants in plots harboring both fungi.

But in plots where seeds were coated with a combination of beneficial fungi and bacteria, more than 80 percent became full-grown plants. This was better than or equal to the performance of seed protected with coatings of any of several fungicides, said Beltsville researcher Jack Lewis.

Protection by the good microbes continues after the seedling stage. Mature plants in the biocontrol plots had about 25 to 40 percent less damage from root and stalk rot diseases, compared to plants grown from untreated seed, Lewis said. ■

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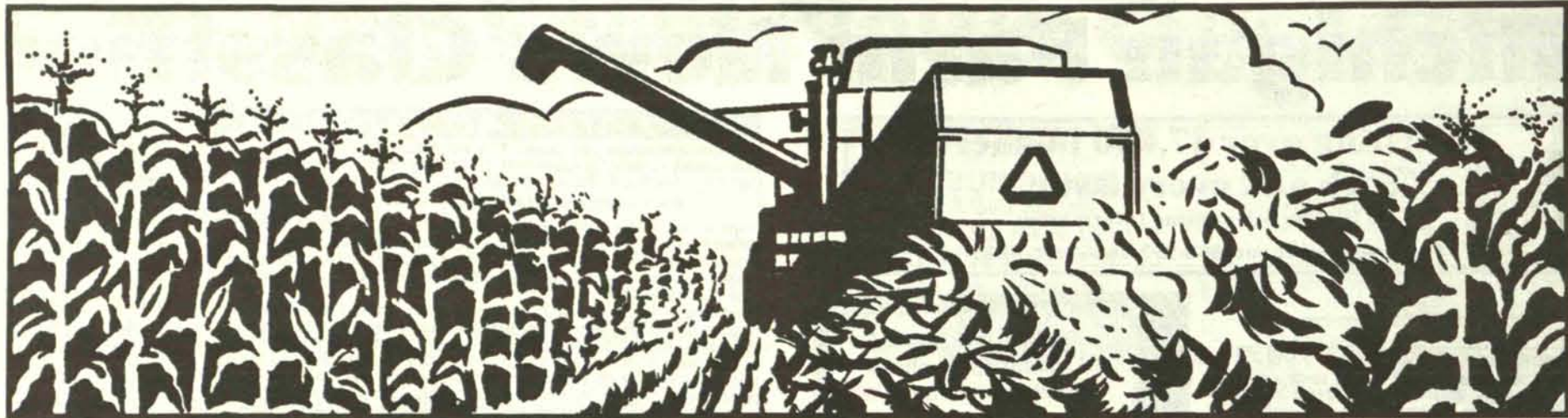
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Results: 1996 Michigan Sustainable Agriculture Project

MASA THE LAND STEWARD

Newsletter of the Michigan Agricultural Stewardship Association

Vol. 6, No. 1

February 1997

Reporting the Sixth Year Of On-Farm Research

This publication is the sixth in a series reporting results of farmer-driven on-farm research and demonstrations sponsored by the Michigan Agricultural Stewardship Association.

In 1991, MASA and its on-farm research committee began offering financial help, moral support and technical advice to farmers who wanted to try a new ideas to see if they would work on their farms.

The project is on-going. Kalamazoo dairyman Roger French chairs the committee that 1) solicits and selects new projects, 2) helps farmers set up scientifically meaningful on-farm experiments, and 3) collects and publishes the results.

Most projects attempt to optimize use of inputs, enhance environmental protection and in general help to identify sustainable practices.

MASA pays farmers up to \$500 to help defray their costs in carrying out experiments and demonstrations. Each project is assigned a coordinator who helps the farmer set up the experiment and collect and compile the results. Again, the on-farm research committee is looking for farmers wanting to do a project (see box):

A Call for Projects

Have an idea you'd like to try on your farm and need just a little help? The farmers who, in this publication, are reporting results of their on-farm tests were in that situation when they made their application to MASA's On-Farm Research Committee.

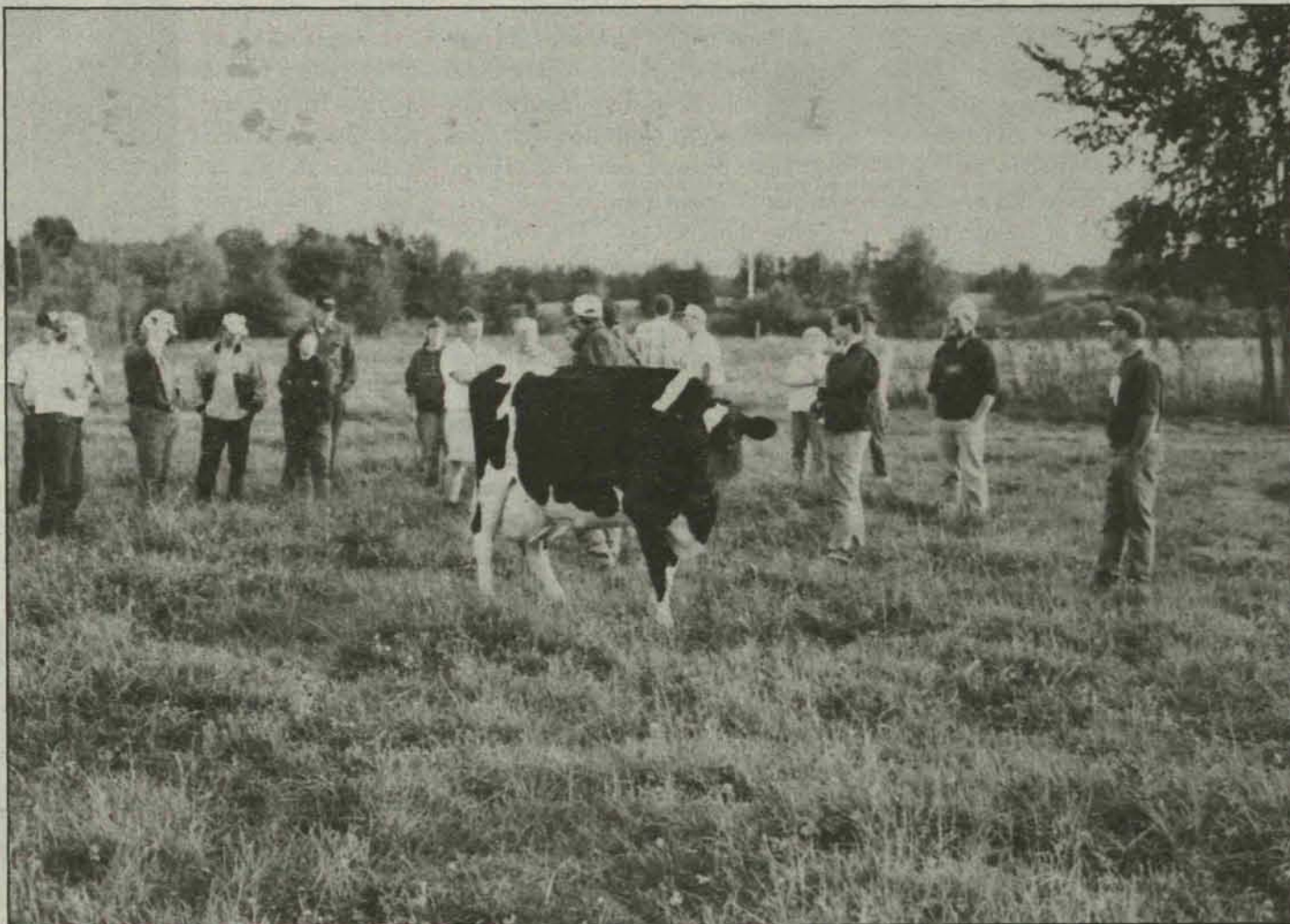
They received up to \$500 and some advice on how to structure their experiment to get meaningful results. MASA sponsors demonstrations as well as scientifically rigorous experiments.

The committee is accepting ideas for projects. Deadline is March 1. Those whose projects win support will know in time to get field projects underway this spring.

Farmers try ideas to reduce fertilizer and pesticide impact, improve soil quality and control erosion, use new methods to combat pests or tame manure. How about odor control in hog barns or strip cropping as a way of gaining biodiversity while rotating crops?

Try out some new ideas. Contact Roger French at Dawnera Farms, 10004 Stadium Drive, Kalamazoo 49009, or call 616/375-0658. Or contact MASA headquarters (Russ LaRowe) at 605 N. Birch St., Kalkaska 49646 (616/258-3305).

You can receive and fill out an application or just describe your project in a letter.



Pasture walks have become popular, relaxed learning tools for livestock producers who graze their animals. This one was in Ionia County last summer (see report on page 6).

MASA Picks President, Board Members

MASA members re-elected their president and a board member and elected two new board members at the annual meeting during the Michigan Agriculture Mega-Conference January 9.

Cindy Dutcher, from Goetzville in Chippewa County, was re-elected president. She and husband John own a farm devoted to forage production for beef, sheep and Angora goats. They also have blueberry planting they are developing into a U-pick operation.

The new board members are Tom Foltz, a dairyman from Petoskey in Emmet County, and Chuck Cornillie, a cow-calf producer from Byron in Shiawassee County. Board member Greg Mund, a fruit and vegetable grower from Rothbury who works for the Natural Resources Conservation Service in Muskegon County, was re-elected.

The Michigan Agricultural Stewardship Association is a non-profit organization, the goal of which is to foster sustainable agriculture practices among Michigan farmers. Executive Director is Russ LaRowe, located in the MASA office at 605 N. Birch St., Kalkaska, MI 49646, who may be contacted for membership information or other matters. Phone: 616/258-3305 Fax: 616/258-3318.

MASA officers are: President, Cindy Dutcher, Goetzville 906/297-2120; Vice-

President Paul Lutterbacher, Clio 810/686-1370; Secretary Marlin Goebel, Hillman, 517/742-4505; and Treasurer, Tom Guthrie, Delton 616/623-2261 or -2255.

Other directors are Jerry Wirbel, Hope, 517/689-3857; Greg Mund, Rothbury, 616/773-0008; Richard Lauwers, Imlay City, 313/724-2263; Tom Foltz, Petoskey 616/347-1619; and Chuck Cornillie, Byron 810/266-4708.

Leadership Development Coordinator is John Durling, Michigan State University, 517/353-3209 Fax 353-7186. Roger French, Kalamazoo, 616/375-0658, chairs the On-Farm Research Committee.

If you have sustainable agriculture news to share, send it to Newsletter Editor Dick Lehnert, 2700 E. Cavanaugh Rd., Lansing MI 48910. 517/882-2794 Fax 887-4964.



New board members Tom Foltz (left) and Chuck Cornillie pose with re-elected MASA president Cindy Dutcher.

Gene Vogel, Huron County**Will Corn in Twin Rows Give More Yield?**

After 30 years with 30 inches being a national norm in corn row width, intense interest has developed for growing it in narrower rows, 15 or 22 inches.

Steve Poindexter, Extension agent in Saginaw County, says narrow rows are the hottest topic in the northern Corn Belt and that farmers are poised "to make a major change in production practice."

"I know of no other practice a corn grower could adopt that would give him 10 percent more yield right now," he said. He became an advocate of narrow rows after working with Michigan State University crop scientist Don Christenson on a five-county, three-year (1989-91) comparison of crops grown in 22-inch rows compared to 30.

The results: Corn yields averaged 160 bushels per acre in 22-inch rows, compared to 147 for 30-inch. For navy beans, yields went from 24.1 to 26.8 hundredweight, and sugar beets went from 23.5 to 24.7 tons—all statistically significant yield increases.

Planting more rows per acre costs more money. Farmers who plant narrower usually plant more seeds per acre, need planter units to plant the same acre-

age in the same time, need narrow combine heads to harvest and narrower tractor tires for field operations.

This year, Gene Vogel of Minden City decided to grow corn in twin rows to see if he could get the best of both worlds—higher yields without much cost increase. He grew 150 acres of corn and 250 acres of dry edible beans and soybeans in dual rows - 7.5 inches apart on 30-inch centers.

Vogel hooked two conventional eight-row planters together, one behind the other and offset 7.5 inches.

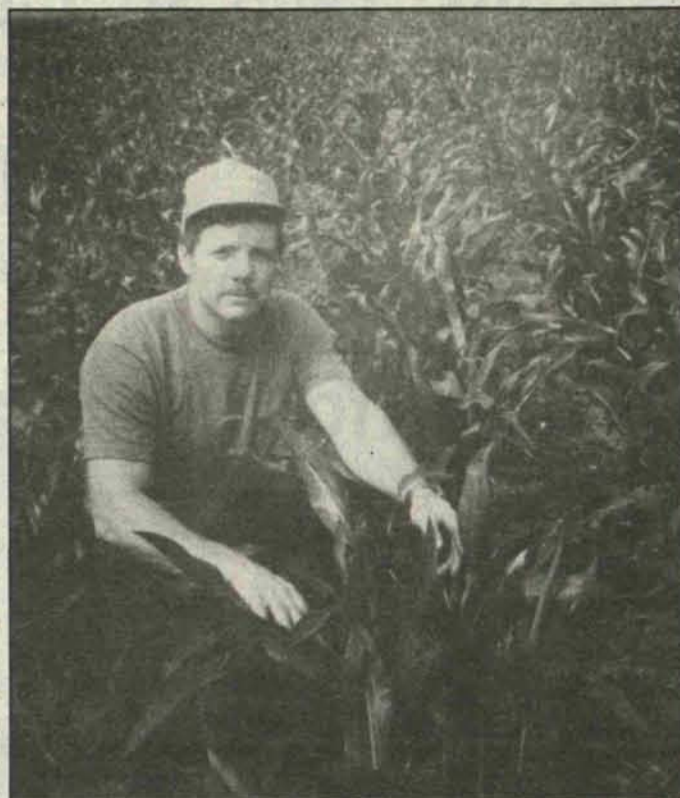
He band-applied herbicides and cultivated between the rows. And he used a conventional 30-inch corn head to harvest the corn. "It cultivated well," he said. "I used the same sweeps as the guys who plant 22-inch rows."

How'd harvest go? "The corn fed into the header better than I expected. Harvest losses weren't even a factor," he said.

One disappointment was the lack of increased yield. "This year was not a fair test," he said. "I intend to try again next year. Other farmers in the Thumb who used 22-inch rows this year didn't get a yield increase either."

The wet spring prevented Vogel from planting until June 6. Serious hail damage occurred September 12. At harvest November 22, yields were 90 to 100 bushels per acre of high-moisture, low-test weight corn, regardless of plant population (four trials from 30,000 to 40,000) or row width.

Vogel uses a zone-tillage system. He uses a Trans-Till in a separate tillage operation ahead of the planter. Two wide-ripple coulters do surface tillage, much as a no-till planter does, while a depth-adjustable shank between the coulters reaches deeper and breaks up compaction where the row will be. Because it's used before the planter comes, the ground can dry and be planted with a conventional planter. "That was a real



Gene Vogel is experimenting with twin-row corn, soybeans and dry edible beans.

advantage this year," he said. "It was really too wet to no-till."

Vogel planted dry edible beans and soybeans in twin rows in 1995 and got favorable yield increases.

Ross Voelker and Steve Koroleski, Huron County**Thumb Weather Hurt On-Farm Research**

Terrible weather in Michigan's Thumb last year turned several farmers' on-farm research projects to no good end.

Ross Voelker tried fall planting mammoth clover in wheat. But it - and the wheat - were killed by the cold, open winter. Voelker's farm near Pigeon has been visited by many farmers (he rents 40 acres the Innovative Farmers of Huron County use for their research).

"I planted mammoth clover with my fall fertilizer just before planting the wheat," he said. Farmers often frost-seed medium red clover into wheat in the spring. "I wanted to give the clover 19 months to root, break up compaction and build up organic matter before the following crop. I thought it would provide additional nitrogen credits as well."

Fall planting would give it a head start against weeds, avoiding the need for 2,4-D herbicide in the wheat. And the cover crop would help stop wind erosion.

Mammoth was chosen because it is shorter than medium red clover, which might make it easier to combine the wheat.

Fall seeding mammoth remains a theory to be tried. The wheat winterkilled and the clover apparently went with it. "Other farmers have made it work. I think it will work for me," Voelker said.

Steve Koroleski of Kinde is another of the Innovative Farmers of Huron County, trying to reduce tillage, save residue, prevent erosion and still get good yields off their heavy soils.

Koroleski planned to install Case-IH rubber gauge wheels on his John Deere 7000 eight-row no-till corn planter to reduce sidewall compaction of the seed furrow and give better seed

to soil contact and better furrow closure, increasing plant population. In addition, he planned to install Martin spiked closing wheels to reduce crusting, improve closing and give quicker emergence of the corn.

He wanted to plant 20 acres of corn in alternating eight-row strips so he could compare emergence date and count plant population. At the end of the season, he'd compare yields.

Bernard Wall, Isabella County**Leaves Too Much of a Good Thing**

After three years of effort, Bernard Wall is back to square one. He takes tree leaves bagged from the lawns of friends and uses them to bed his beef cows in the barn.

He thinks that's a good idea. That way, he needs to grow only pasture and needs to buy or raise no straw for bedding.

But last year he took on a mountain of leaves, the entire output of the city of Coleman. His idea was to mix them with cattle manure and compost the two together. But he had too few cows and not enough manure.

"He worked his head off on those leaves," said Barney's wife Dolores.

"People want to recycle if they can," he said. "People call here and want to bring leaves out. They seem happy when I tell them they'll be used

Corn planting was delayed by wet, cold weather. Corn was planted between May 16 and June 5. "The corn was mudded in," he said. "I saw the spike closing wheels seemed to be closing much better, fluffing the soil and dropping in on the seed. After three rounds, I stopped planting and installed the Martin wheels on all the rows."

Repeated pounding rainfalls after planting packed the soil, and corn was

leafing out under the surface. "I rented a rotary hoe," Koroleski said. "Rotary hoes were working everywhere around here. That's not normal for corn. I went one way, then turned around and went back the other direction. I think it improved the corn stand. I think I'll buy a rotary hoe."

There was no way to evaluate time of emergence or difference in plant population. The experiment was abandoned.



Too many leaves and not enough manure resulted in a composting failure for Bernard Wall.

for something." He has "regular customers" who've been bringing leaves for 10 years. He stores them inside, where they're dry, and beds the barn with them.

The shortage of manure relative to the leaf supply last year resulted in a poorly composted material. And taking everything the city had to offer resulted in "dirty" leaves - leaves mixed with sticks and plastic. He had hoped to sell compost to gardeners. "They shy away from this," he said.

The closing of landfills to leaves and grass clippings has created a need for a place for these organic materials. They do fit well into composting systems with livestock manure, and MASA members in western Michigan have incorporated urban leaves into their manure composting.

Oriette Easlick, Shiawassee County

Interest in Hazel Nut Orchards Is Increasing

Oriette Easlick hops spryly up onto her Massey-Ferguson tractor and cautions her rider to watch his step. We ride to the site of her new hazelnut orchard at the back of her 55-acre sheep farm near Owosso.

She used her MASA demonstration grant to plant 52 trees for "future income and the hope of increasing the value of the property." The new trees are staked and encased in tree guards to protect them from deer and temperature extremes.

Now age 81, in fine health and used to taking care of herself, she's looking forward to harvesting hazel nuts four years from now. "It should pay better than corn or soybeans," she said. Nuts are worth nearly \$1 a pound and should yield 2,500 pounds per acre when trees are mature, she said. Most tree nuts used by U.S. consumers are imported, and there appears to be a market for exported hazel nuts as well.

Hazel nuts have captured the interest of some orchardists. They bloom

early, in March, but frosts don't seem to affect fruit set. And they are harvested in September, after most fruits except apples. Cherry shakers are used to harvest the nuts.

Oriette gathered production information from Cecil Farris, of Lansing, a breeder of hazel nuts, and from Sid Grinnell, who sells grafted trees from Grinnell Nursery in Perry.

The trees are not self-fertile, so Oriette planted trees from five varieties. Cross pollination is by wind. Breeders have been working to develop pest-resistant varieties, so spraying is seldom needed.

Grinnell has perfected grafting methods that make the trees easier to propagate and not develop suckers. Some hazel nut varieties sprout from roots and become bush-like rather than trees.

Recommended practices include clean tillage to reduce competition and irrigation. Oriette Easlick does not have irrigation available and is using mulch

created from mowing grass ground cover between the tree rows. She will decide later, after evaluating growth, whether to use herbicides or tillage to help trees grow faster with less competition.

Oriette keeps careful records. She itemized her costs from planting about a third of an acre of trees. Trees cost nearly \$8 each, about two-thirds of the establishment cost.

Oriette's main farm enterprise is a flock of ewes. She has selected them to breed in February and lamb in July. This gives many more twins than early breeding, she says, and positions the lambs to come to the highest-price May market without feeding them or their mothers much



Oriette Easlick planted a small hazel nut orchard to see how they'll do in central Michigan.

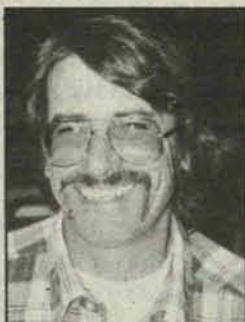
grain. Summer lambing makes the best use of pasture, she says. Her careful records show that clearly, too.

Paul Guenther, Washtenaw County

Crimson Clover Interplanted Did Well in Corn

Paul Guenther is determined to make it work. He's equipped his cultivator with seeders (converted from insecticide boxes) to interplant cover crops in the row middles of his corn fields.

Last year, across each six rows he seeded five middles - two with crimson clover, two with burseem clover and the center one with buckwheat.



Paul Guenther

Last year, crimson clover was the star and burseem did poorly. But in past years, the opposite has happened. He's dropped Australian medics from his on-farm trials because it doesn't seem shade tolerant enough to establish between rows of growing corn.

He seeded into the corn last July 20, at the same time he sidedressed nitrogen, dribbling the seed behind the applicator shank and covering it slightly with a scratcher.

Guenther is looking for several ben-

efits from an interplanted legume. He wants something growing late in the season, as corn matures, to pick up surplus fertilizer and, hopefully, fix some nitrogen for the next crop. The ground cover prevents erosion, provides footing for harvest during wet falls and contributes organic matter.

The buckwheat is to serve a different purpose. He hopes its attractive blossoms will provide a nectar source that attracts parasitic wasps that prey on corn borers.

But first, the planted seed has to germinate and get established. Ideally, Guenther says, that means getting moisture and two weeks of sunshine before the corn canopy closes in. There would be little sun during July and August until the corn begins to ripen.

Guenther band-applies herbicide, both to reduce costs and to keep the row middles amenable to growth of the interseeded cover crop. He uses half rates of atrazine (1 quart) and Dual II (1 pint) in a band 12 inches wide, an 80 percent herbicide reduction. By cultivating, he provides loose soil for the interplanting.

He grows about 600 acres of corn and soybeans in rotation, using ridge till and no-till on some land, more tillage on others. He would prefer that his interseeded legumes would winterkill rather than need to be killed by herbicide or tillage the next spring. Crimson clover overwinters more successfully

than burseem. But, right now, the top goal is to find a good plant to grow in growing corn.

The key first step is finding a plant that will grow just enough to get started but not enough to compete with growing corn. Perhaps, he says, a mix of seed would provide better consistency.



What Guenther wants to achieve is a healthy legume stand coming on strong as the corn matures.

Loren Roslund, Gratiot County

Frost-Seeded Mammoth Clover a Superb Performer

Michigan mammoth clover, frost seeded into wheat, outgrew other interseeded legumes in a MASA-sponsored comparison on the Loren Roslund farm in 1996. The Roslunds raise 1,700 acres of corn, soybeans, wheat and cucumbers in Gratiot County.

The frost-seeded Michigan mammoth clover produced more green manure than any interseeded legume Loren observed on his farm. Observations by Loren Roslund and Extension Ag Agent Dan Rossman are recorded in the table below.

Michigan mammoth clover performed so well that Roslund plans to frost-seed it into all his wheat when he broadcasts nitrogen in February 1997. The local fertilizer dealer will blend the seed with the fertilizer. Seed costs \$1.10



Loren Roslund

a pound and is broadcast at about 8 pounds per acre.

Roslund believes the luxuriant Michigan mammoth clover that he plowed down last fall will very favorably affect the 1997 corn crop. He also

believes he can decrease his need for purchased nitrogen with the clover plowdown. For next year Roslund is considering on-farm research to measure the clover's nitrogen contribution to corn.

| Table 1 | |
|---|----------------------------------|
| Treatment | Observations |
| Fall-Seeded Michigan Mammoth Clover | Poor, winter killed |
| Fall-Seeded Crimson Clover | Poor, winter killed |
| Frost-Seeded Michigan Mammoth Clover | Excellent growth |
| Frost-Seeded Crimson Clover | Poor, didn't grow |
| Frost-Seeded 20% Alsike, 80% Red Clover | Very good stand, moderate growth |
| Frost-Seeded Annual Alfalfa | Thin stand, fair growth |

(Note: Last winter was cold and snow cover did not provide protection for any fall-seeded crops)

Gary Manley, St. Joseph County

Ground Cover Affects Soil Arthropod Numbers and Diversity

Soil arthropods are part of a complex ecosystem. These small creatures - insects, mites, spiders - scurry about at ground level finding food for themselves and being food for others.

For the last two years, Gary Manley, who has a 120-acre farm near Three Rivers in St. Joseph County, ran experiments to determine how ground cover affects the number and species diversity of soil arthropods.

Last year, Manley seeded cover crops into soybeans planted no-till on land in corn the year before. The soys were planted from May 5-14 after an application of Roundup May 5. The cover crops were planted on Sept. 4 (see treatments).

The study indicated that total biomass of cover and kind of cover influenced arthropod populations positively: More biomass, more arthropods, more diverse arthropod populations.

Annual ryegrass plus crimson clover plots produced the largest biomass (see table) by mid-November. Annual ryegrass alone was close behind, followed by hairy vetch. Crimson clover plants remained small.

Arthropod populations were highest

in those plots with the highest biomass. Collembola (springtails) populations were more than three times higher in the annual ryegrass plots than in the no-cover plots. Various arthropod groups showed



Gary Manley

a positive response to one or more covers: Spiders and Oribatid mites were more numerous in hairy vetch plots, springtails more common in plots with the largest biomass, while Diptera larvae populations were equal in all plots.

Since ground cover and cover crops do influence arthropod numbers and diversity, they have potential for inclusion into pest and crop management programs. "Detritis feeding segments of the

food chain should be considered equal in importance to predators and parasites," Manley said, in creating stability and increasing potential for natural controls with the agricultural ecosystem.

As well as being a MASA-supported project, his on-farm work was part of a larger study of cover crops being done by Dale Mutch, an IPM and cover crops Extension specialist at Kellogg Biological Station.

Treatments

Annual ryegrass - seeded Sept. 4 at 20 pounds per acre
Annual ryegrass and crimson clover - seeded Sept. 4 at 15 and 11.25 pounds per acre, respectively
Crimson clover - seeded Sept. 4 at 15 pounds per acre
Hairy vetch - seeded Sept. 4 at 20 pounds per acre
Control - not seeded - bare ground
Percent cover and biomass data - taken November 10
Arthropod samples - taken Oct. 5 and Nov. 10

Soil Arthropod Evaluation in a Soybean/Cover Crop System

| Treatment | g/m ² Biomass | % Cover | bu/a Yield | Total Fauna | Litho ¹ (Centipedes) | Araneida (Spiders) | Orib ² (Mites) | Entomobryiidae (Springtails) | Sminturidae (Globular Springtails) |
|-------------------------------------|-----------------------------|------------|---------------|----------------|------------------------------------|-----------------------|------------------------------|---------------------------------|---------------------------------------|
| Annual Ryegrass | 46.72 | 100 | 40 | 319 | 5 | 2 | 69 | 131 | 142 |
| Annual Ryegrass + Crimson Clover | 52 | 100 | 41 | 301 | 2 | 4 | 66 | 116 | 147 |
| Crimson Clover | 5.76 | 37 | 39 | 215 | 4 | 3 | 61 | 86 | 86 |
| Hairy Vetch | 37.6 | 73 | 40 | 334 | 2 | 6 | 197 | 135 | 142 |
| No Cover | 0 | 5 | 37 | 177 | 2 | 0 | 44 | 36 | 48 |

¹Lithobiomorpha ²Oribatei

Gaining Experience with Whole Farm Planning

Farmers are gradually getting used to the idea of whole farm planning; a few MASA members gave it a try last year. Lew Coulter, a cherry grower on the Old Mission Peninsula north of Traverse, became involved in it for personal reasons as well as though his job with the Grand Traverse Conservation District.

Whole farm planning can come to a farmer from several sources. The Natural Resources Conservation Service is developing whole farm planning as a way of helping farmers evaluate the sustainability of the resource base of their farm. At one level is it a basic farm conservation plan, but it also concerns itself with the satisfaction level of the farm family. And at another level, it tries to help farmers assure themselves they will meet all federal, state or local environmental regulations.

Holistic Resource Management also is a form of farm management that emphasizes the long-term interaction of farm resources and farm family goals. Within these larger systems are specific tools, like Farm•A•Syst, which helps farmers evaluate their farmsteads and identify problems they will want to correct in the long run.

A workshop last March drew 18 farmers last year, some of them trying to cope with problems in new ways. "Many of the dilemmas farmers face are not resource management problem but a problem of choices," Coulter said. His farm has been identified as one eligible for purchase of development rights and he is in the process of trying to understand what that can mean to the choices he makes for the future.

George Shetler and Tom Foltz, two dairy farmers in northern Michigan, participated in whole farm planning as well. George and Sally Shetler are now considering forming an advisory council for their farm - to gather insights and ideas

the family itself may overlook as it sets goals and defines a mission for the family and farm.

Tom and Sue Foltz traveled with the Great Lakes Basin Whole Farm Planning

Wagbo Peace Center, Charlevoix County

Chicken Soup for the Soul

If MASA had a "chicken soup for the soul" project this year, the Wagbo Peace Center was it. Under the direction of Rich and Tracy Meisterheim, the center uses a working farm to help troubled youths develop the character and discipline necessary to lead fruitful lives.

The youth program is only one of the educational outreach tools the center has, but one that is most intriguing. In 1996, more than 300 students from northern Michigan and as far away as Minnesota toured or stayed at the farm. Experiential learning is the key. Sustainable agriculture is the model.

When the MASA board of directors visited the center in early December, students were participating in the one-on-one education that makes the center's approach so interesting. Every young person is important, so important that a teacher-to-student ratio of one-to-one is not too much to expect.

That day, we met a young man named Steve. He came from a poor, single-parent home. He'd been labeled irresponsible and unteachable, and hadn't been taught simple things like responsibility, hard work, or maybe even love. He's learning these things at the center.

He does chores on the farm, and said he likes feeding calves best. When asked if he wouldn't rather sleep in on a cold December morning, he informed us seriously that he didn't sleep in because the calves needed him.

A van load of emotionally disturbed

Team to visit Amish farmers in Ohio. In an article in the Grand Rapids Press, they were quoted as saying the experience was "life changing." Farm management means thinking about the people you af-

fect as well as calculating the bottom line, he said. What seems to be missing in farming today is working together and helping each other - the sense of community.

youngsters from upper Minnesota were there to stay a week at the center. Rick and Tracy are Mennonites, and Rick wears a pair of suspenders with a single strap down the back. After a couple days working around the farm with Rick, the aspiring young farmers were fashioning suspenders from bailer twine. The whole crew wanted suspenders like Rick. Imitation is the sincerest form of flattery, they say, but also a sure sign of a positive connection made.

The center is located just south of

East Jordan. One part of the farming operation is producing pure maple syrup each spring. Kids like Steve do the work, gathering the sap and firing the boilers. People like MASA members buy the syrup to help out kids like Steve - because Rick and Tracy show us Steve's worth it.

For more information write or call:

Wagbo Peace Center
5745 N. M-66
East Jordan MI 49727
616/536-0333



Students and intern at Wagbo Peace Center

Jim and Tara Good, Barry County

Getting Started with Limited Resources

How can a young farmer get started with limited resources? That's the question Jim and Tara Good have been attempting to answer with their MASA on-farm demonstrations since 1994.

Both in their late twenties, Jim has been an Extension Agricultural Agent and Tara is a laboratory technician in the Animal Science Department at Michigan State University. Resources available on their farm near Nashville include 34 acres of pasture and hay and whatever time they have left after working their off-farm jobs.

For the last few years, the Goods

have started newborn calves in the fall, fed them in the barn through the winter, and put them on pasture in the spring. However, with winter corn prices around \$5 a bushel, they decided to wait until March 1996 to purchase calves. They were encouraged by reports from New Zealand and from Ann Clark at the University of Guelph, Ontario, that show success in putting 200-pound calves on grass at 8 to 10 weeks of age.

Newborn calves purchased by Goods in March got off to a poor start. Scours and pneumonia pushed death rates toward 25 percent. Calves were put on pas-

ture in early May, supplemented with a couple of pounds of grain per calf per day. Once the calves were established on pasture, it quit raining. Only traces of precipitation were recorded from mid-June through mid-September. By mid-July the pasture had stopped growing and the steers had to be put back on grain and baled hay. Neighbors growing corn in the area averaged yields of only 50 bushels per acre.

Steers gained only 1.25 pounds a day from March through early October. "Not too rosy a year," according to Good. In the future they plan to graze heavier animals - an enterprise that was profitable in the two previous years of MASA-sponsored demonstrations on their farm.

Although Jim and Tara Good's experience with grazing 8- to 10-week old

calves was disappointing, they are optimistic about their future in production agriculture, but stemming from a different opportunity. Jim has decided to return to the family farm near Caledonia. There he will assist in managing one of the world's largest herds of registered red and white Holsteins on Med-O-Bloom Farm, where Jim grew up farming with his father Jerry Good and Elton Smith.



Jim and Tara Good found 1996 a tough year for pasturing young calves.

Richard Hand, Charlevoix County

Annual Forages Have Place on a Dairy Farm

Double cropping annual forages could provide some real advantages for a dairy farm. For one thing, the land would be open spring, summer and fall for manure application.

Rich Hand, a dairyman from Charlevoix, tried double cropping this year. The weather didn't help him much, but he was encouraged enough to try it again.

Using seed from Wolf River Seeds, White River, Wisconsin, he planted a prepared seed mix of 60 percent field peas and 40 percent triticale. "The idea is to plant early, mid-April, on fall-manured ground," Hand said. When the triticale comes into the boot stage about 55 days after planting (peas will be in bloom), chop the mixture and ensile. Hand puts up the silage in the long plastic bags.

Then, about June 10, spread manure and plant either corn or a mixture of soybeans and sorghum-sudangrass. Wolf River offers the seed mix and varieties of short-maturity corn (68 to 80 days).

Hand said the triticale/pea mixture has been improved by the addition of a new pea, Arvica, which has 3 percentage points higher protein than the Canadian Trapper pea and yields about 3/4-ton more dry matter per acre.

This annual forage program captures the attention of dairy farmers in northern areas where alfalfa is less adapted or frequently winter kills. Dairyman anywhere would benefit having this program in their back pockets because alfalfa can be killed anytime conditions are too cold or too wet.

But the annual forage doublecrop isn't perfect, either. Hand said it was cold and wet early this year, delaying planting. Then it was dry, which hurt the yield of the second crop.

Hand owns only 30 acres and milks 100 cows. He rents 220 acres of land, but is still short of land, both for forage and for spreading liquid manure. He's trying to make the double crop work to help out in two ways.

John Densmore, Gratiot County

Ten Years of Plowing Hurt Soybean Yields

Does tillage history affect the yield of no-till soybeans? That was the question MASA farmer-cooperator John Densmore and Gratiot County Extension Ag Agent Dan Rossman attempted to answer with this on-farm research.

No-till soybeans were planted into fields that had been continuously maintained for 10 years in one of the following tillage systems: no-till/zone till; fall

moldboard plow; chisel plow; or ridge till/cultivated no-till crop production.

Results of this study show we can say with some certainty that tillage history affected the yield of no-till soybeans on the Densmore farm in 1996. Soybean yield and crop value were significantly higher for no-till following the three reduced tillage systems following moldboard plowing.

While we can say with some cer-

tainty that tillage history affected no-till soybean yield in 1996, the effect of till-

age history may be different in another year or at another location.

| Calf Budget | | | |
|-----------------|--|--|--|
| Income | | | |
| \$5,866 | Gross Proceeds from Sale of 36 Steers, October | | |
| Expenses | | | |
| (\$1,050) | Purchase of 45 Calves, March | | |
| (\$2,326) | Purchased Feed | | |
| (\$1,166) | Medicine, Veterinary | | |
| (\$120) | Bedding | | |
| (\$200) | Electricity | | |
| (\$100) | Lumber | | |
| (\$60) | Trailer Rental | | |
| (\$85) | Misc. | | |
| \$759 | Net Return to Pasture, Labor, Management, and Investment | | |



John Densmore drilled no-till soybeans in fields with different tillage histories.

| 10-Year Tillage History | Soil 0-4" | O.M.% 0-8" | Harvest Moisture% | Crop Bu/A | Value \$/A |
|-------------------------|-----------|------------|-------------------|-----------|------------|
| Ridge till/Cultivated | | | | | |
| No-Till | 4.5 | 4.3 | 17.1 | 55 | 378 |
| No-till/Zone Till | 4.1 | 3.8 | 17.0 | 55 | 373 |
| Chisel Plow | 4.3 | 4.1 | 17.1 | 54 | 368 |
| Fall Moldboard Plow | 3.9 | 3.9 | 17.1 | 51 | 349 |
| LSD=0.05 | n.s. | n.s. | n.s. | 3 | 16 |

Least Significant Difference (LSD=0.05) of 3 bu/a means there is a 95% probability that yield differences of 3 bu/a or more are real (attributable to more than mere chance). Likewise, there is a 95% probability that differences in

crop value of \$16/a or more are also real. Significant differences were not observed in soil organic matter or in harvest moisture. LSD calculations were possible because replications were part of the experimental design.

Henry Miller, St. Joseph County

Four Years' Results on N Rates in Corn

Henry Miller has done research with MASA for five years. In four of those years, he looked at the effect of different rates of nitrogen in growing irrigated seed corn on his thousand-acre St. Joseph County farm.

Looking at the four years of data, sometimes the low rate did almost as well the middle rates, but the middle rates seemed to deliver the best yield for the money. Last year seed corn followed green beans and a fall cover crop of oats in 1995. A single spring field cultivator pass prepared the ground and seed was planted on May 22 in five randomized and replicated plots. The ni-



Henry Miller

trogen was sidedressed on June 28 at the three different rates. Plots were harvested on Oct. 18 at 26 percent moisture.

In his work with cover crop plots in 1996, Miller spread seed after potato harvest in August of 1995 and either disked or chiseled the fields on Aug. 20. There was good emergence of the covers, with oats and oats plus crimson clover producing the most growth in the fall. In 1996, the disked plots were sprayed with Roundup and Dual II and no-till planted to seed corn. The chiseled plots were sprayed with Roundup, field cultivated and then planted. Yields were measured at harvest.

The data indicate that that rye, oats and ryegrass performed better as cover crops and wheat and no cover crop at all performed the worst.

| 1996 Yields (Bushels Per Acre) | | | | |
|--------------------------------|----------------|-----------------|------------------|-----------|
| N Rate | 65 lbs N | 95 lbs N | 117 lbs N | |
| Yield Average | 90.7 | 85.7 | 91.4 | |
| Yield Range | 86.1 - 99.2 | 80.4 - 91.1 | 84.2 - 103.9 | |
| 1995 Yields | | | | |
| N Rate | 75 lbs N | 82 lbs N | 115 lbs N | |
| Yield | 99.0 | 104.4 | 103.1 | |
| 1994 Yields | | | | |
| N Rate | 60 lbs N | 76 lbs N | 88 lbs N | 99 lbs N |
| Yield | 89.1 | 91.9 | 93.2 | 99.8 |
| 1993 Yields | | | | |
| N Rate | 68 lbs N | 89 lbs N | 95 lbs N | 120 lbs N |
| Yield | 66.5 | 80.3 | 82.3 | 80.0 |
| Tillage Trials | | | | |
| Cover | Tilled Average | No-till Average | Combined Average | |
| Rye | 134.9 | 112.7 | 123.8 | |
| Wheat | 110.0 | 82.0 | 96.0 | |
| Oats | 119.5 | 122.8 | 121.2 | |
| Crimson Clover/Oats | 117.7 | 119.5 | 118.6 | |
| Ryegrass | 130.4 | 122.7 | 126.6 | |
| Control (no cover) | 114.1 | 115.5 | 114.8 | |

Cherry Bay Orchards, Leelanau County

Alternative Ground Covers for Orchards

Cherry Bay Orchards, Leelanau County, completed a project looking at alternative ground covers for the orchard floor.

IPM specialist Francis Otto and farm owner Bob Gregory say the conventional system of orchard floor management - herbicide or mechanical control of vegetation in the tree rows - results in reduced organic matter, reduced holding capacity, greater nutrient loss, and reduced biodiversity.



Francis Otto

In the fall of 1995, 12 rows containing 56 tart cherry trees were treated with Roundup to kill all the vegetation. The plot was seeded in early September using a broadcast seeder and then pressed. Seven seed combinations and a control were established. Species were selected that would winter kill.

Plots were seeded too late, Otto says. Dry weather and cool temperatures lim-

ited growth. Most could have used more time to get established. The medic performed well but a higher seeding rate will be used next year. A mulching seeder may be a better way to establish the seedings.

Seed costs of \$8 to \$16 per acre can't be justified by savings in fertilizer or pesticide costs, but long-term improvement in soil health and organic matter may eventually support the costs.

The project warrants further work and will be continued in 1997, Otto said.

| Species | Seeding Rate per Acre |
|----------------------|------------------------|
| Berseem clover | 16 pounds |
| Buckwheat | 1 bushel |
| Oilseed radish | 20 pounds |
| Mogul medic | 16 pounds |
| Oats | 1 bushel |
| Oats and berseem | 3/4 bushel + 13 pounds |
| Oats and Mogul medic | 3/4 bushel + 13 pounds |

How Extension Plans To Support Graziers

In Ionia County, pasture walks have evolved into the primary vehicle for information-sharing among graziers, say Extension agents Kevin Gould and George Atkeson. Farmers who graze their animals come together on a summer evening, look over the pasture, ask questions and offer suggestions.

As graziers learn, they need more detailed information and technology to increase productivity and profit, they say. "Graziers are showing increasing support for on-farm trials and demonstrations that can be easily understood and targeted toward specific needs of the grazing group. This is where Extension can help. We can offer the organizational support for information gathering and compiling results that will be accurate and supported by specific data and visual evaluations."

Most graziers are guessing at intake and forage values, Gould and Atkeson say. They see "a great deal of need" for better ways to evaluate the quantity of forage

available and its feed value. "We feel there is a definite need to better understand the calculations associated with stock density, carrying capacity and forage quality."

Last year, the two Extension agents requested MASA support for a planting of 30 grass/legume mixture plots that could be pastured and visited by pasture walkers. Samples from the plots could be analyzed for feed value and yield, and graziers would be able to associate these with the visual appearance of the plots.

This work is going on across Michigan. Local Extension agents are working with Rich Leep and Ben Barlett, Michigan State University Extension grazing specialists with statewide responsibilities. They want to be able to incorporate sample information into the SPARTAN DAIRY or BEEF computer evaluation programs producers use to balance rations.

The pasture demonstration plots planted in Ionia County last June 5 were lost to heavy rains.

George and Sally Shetler, Kalkaska County

They May Add Milk Bottling To Dairy Grazing

MASA's longest-running demonstration project involves the Shetler family's intensive rotational grazing project.

When the project began six years ago, George and Sally realized that their farm depended

very heavily on labor supplied by their five children. One goal of the grazing program was to address the coming labor shortage. Now, six years later, only two are left to help with the farming.

However, the Shetlers oldest son, having completed military service, is interested in returning to the farm. The emerging challenge now is to make room in the operation for another family.

After looking at their milk and feed prices, their land base, milking facilities and the grazing lifestyle compared to the machine approach, they are considering another venture as a way to gain additional income.

They are considering purchase of a bottling plant as a way of adding value to the milk and increasing management opportunities on the farm. With their grazing lifestyle and non-use of purchased fertilizers or agrichemicals, it may be fea-

sible to gain a premium for milk from their farm.

The Shetler farm consists of 275 acres devoted to forage production. The farm dropped corn production three years ago. George's goals of reducing labor needs and cost of production have been largely successful.

Although production per cow dropped in the initial years, it has stabilized (see figure). Last year it increased.

Last year offered challenges to all dairymen, including graziers. Prices of hay, feed and milk were all erratic. George made a month-by-month call on the cost effectiveness of grain feeding.

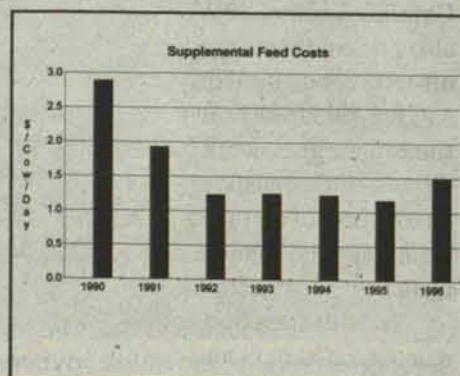
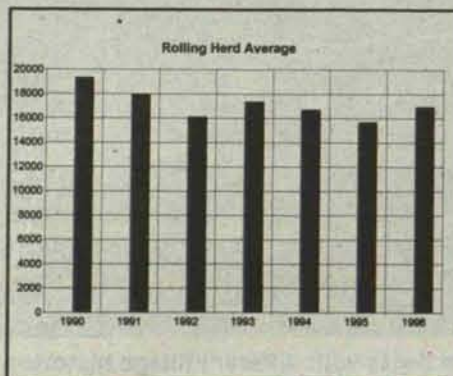
After some experimentation with exotic grasses, George has settled on conventional grass and legume mixtures. Seed prices of the exotics were high and performance didn't meet expectations. In 1996, he interseeded clover and orchard grass into pastures needing a boost. Earlier dependence on annual ryegrass for last season feed has been tempered by its poor performance in cool or dry conditions.

This last year, George returned to using sawdust for bedding. He has been using locally shredded newspaper for bedding, and found that worked very well in manure composting, which has also become a permanent practice on the farm. Local suppliers have discontinued paper shredding.

Overall, George and Sally were pleased with the 1996 season. The winter is being spent researching markets and studying regulations for an on-farm milk bottling plant.



George Shetler



Tony Igl and Sid Hawkins, Ingham County

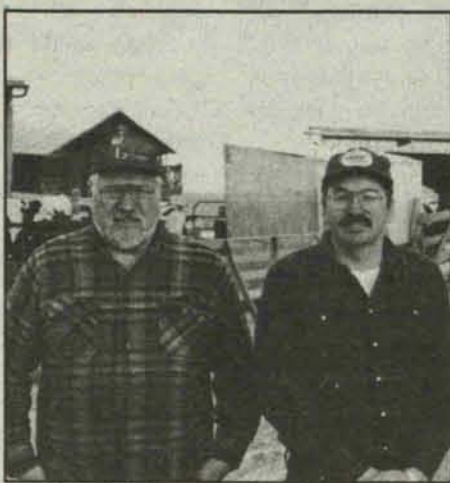
Starter Fertilizer on Corn Paid Marginally

For several years now, Sid Hawkins and his son-in-law Tony Igl have conducted on-farm research to determine whether starter fertilizer pays off when soil tests don't particularly call for added nutrients.

They farm Hawkins Homestead, their 2,300-acre farm near Mason in Ingham County, on which they use a corn-corn-soybeans-wheat rotation. This year's test was conducted on corn planted on land in soybeans the previous year.

The four treatments compared:

- 95 pounds of 18-46-0 dry fertilizer applied below and to the side, costing \$12.30 an acre
- 15 gallons per acre of 10-34-0 liquid placed below and to the side of the row, costing \$15 per acre
- Five gallons per acre of Alpine 6-24-6 applied in the seed row, costing



Sid Hawkins and Tony Igl

\$13.50, plus additional 28 percent nitrogen solution to balance (total cost \$17.25)

Plots were planted with the aid of Bill Moyer from Alpine Plant Foods in

Coldwater. Harvest weights were taken by John Oakley and Dave Voss from Gutwein Seeds.

Last year's cold, wet spring prevented planting until May 29, and the crop grew afterward with virtually no rainfall, depressing yield. Forty gallons of 28 percent nitrogen solution were sidedressed over all treatments.

As the results show, there was a

spread of nearly 10 bushels per acre from low to high yield. The dollar income spread, after paying starter fertilizer expenses, was \$7.50. While the trend was to reward the starter fertilizers with somewhat higher yield, income generated by the added fertilizer was quite small.

Tests with soybeans last year brought no added yield to offset added fertilizer cost.

Starter vs. No Starter Fertilizer on Corn

| Treatment | Moisture | Bushels/ac | Fertilizer cost | Dollars/ac |
|----------------------|----------|------------|-----------------|------------|
| 18-46-0 dry | 22.2 | 89.4 | \$12.30 | \$229 |
| Alpine 6-24-6 liquid | 22.3 | 94.5 | \$17.25 | \$238 |
| 10-34-0 liquid | 22.2 | 91.2 | \$15.00 | \$231 |
| Control | 22.4 | 85.2 | -- | \$230 |

Alpine treatments were seed-placed at 5 gallons per acre. All 10-34-0 liquid treatments were side-placed 2 inches by 2 inches at 15 gallons per acre. All 18-46-0 dry treatments were side-placed 2" x 2" at 95 pounds per acre.



This planter provided by Alpine Fertilizer is equipped to make three different fertilizer treatments by a simple selector switch.

Tom Guthrie, Barry County

Soil Nitrate Test Vital To Water Quality Protection

The Pre-sidedress Soil Nitrate Test (PSNT) was used to demonstrate cost savings through reduced nitrogen fertilizer rates on Tom Guthrie's farm this summer. Guthrie's MASA-sponsored demonstration was conducted by members of the Barry County Innovative Farmers in conjunction with the Michigan Integrated Food and Farming Systems Stewardship Plan for Water Quality (SPWQ).

The SPWQ Team is working to develop and implement a model farm stewardship plan to protect water quality and other natural resources for a commercial cash crop and livestock farm. On-farm demonstration of agronomically sound, environmentally safe, and economically profitable production practices is an important component of the plan.

Outreach activities for the SPWQ in 1996 included the annual field day for fourth graders from the Delton and Gull Lake Schools, a SPWQ Field Day and Whole Farm Planning Seminar, and field days for groups including vocational agriculture teachers and Extension agents. Guthrie and other SPWQ Team members also present their experiences at various off-farm educational meetings.

Pre-sidedress Soil Nitrate Tests take some of the guesswork out of making fertilizer recommendations by providing better estimates of the nitrogen available from spring-applied manure and soil organic matter.

Pre-sidedress Soil Nitrate Tests were demonstrated in Guthrie's corn in 1996. Corn was grown following corn or follow-



Tom Guthrie

ing alfalfa and with or without manure from various sources (dairy slurry, dairy heifer, beef pack, and beef compost). Sampling was done on June 20, prior to the period of rapid corn growth and nutrient uptake and early enough so that sidedress nitrogen rates could be adjusted based on PSNT results.

Guthrie expects PSNT to be increasingly important on his thousand-acre farm as he pursues profitability and environmental stewardship. Based on Michigan State University's laboratory fee of \$6 per sample and an estimated \$6 for farmer or technician time to take the sample, PSNT costs \$12 per 20 acres or \$.60 an acre. Reducing nitrogen fertilizer by just 5 pounds per acre more than covers the cost of PSNT. Moreover, PSNT plays a vital role in protecting groundwater from over-application of nitrogen.

Richard Ekins, Jackson County

Lower Herbicide Rate Performed Well in Soybeans

"My goal is to find a soybean herbicide I can apply at planting and get complete weed control, then work to cut the rate as low as possible," says Richard Ekins, a farmer from Rives Junction in Jackson County.

This year, he tried Canopy as that herbicide. "I sprayed everything one week before planting with Canopy at 3.5 ounces, blending it with one quart of vegetable oil (Landoil). That's half the label rate. I also used 2,4-D at two-thirds full rate as a burndown." Cost of that treatment: \$11.25 per acre (\$8.09 for Canopy, \$1.75 for oil, \$1.41 for 2,4-D).

He planted his soybeans no-till in 30-inch rows on May 18. By mid-June, weeds were appearing and he planned a program of post-emergence applications to attack foxtail, a heavy infestation of black nightshade and volunteer corn. Each treatment was applied to 12 rows (his sprayer width) the length of the field (one-fourth mile).

One treatment was a full rate (1.44

ounces) of Pursuit (cost: \$21.05), with a pint of oil and one gallon of 28 percent nitrogen solution. Total cost \$22.79.

A second treatment was the same plus the addition of Assure II herbicide for added grass control used at 7 ounces per acre, that cost an added \$6.35.

A third treatment used Pursuit applied at two-thirds label rate (.9 ounce), with a pint of oil and a gallon of 28 percent N. That cut cost to \$14.90.

Yields are shown in the table. The check plot was severely infested with black nightshade, reducing yields and delaying maturity. The reduced rate of Pursuit didn't reduce yields - in fact, those plots showed the highest yield.

One visual difference was a higher incidence of marestail in the low-Pursuit strips.

One of Ekins' goals is to reduce herbicide rates to the lowest level he can, both for economic and environmental reasons.



A sharp line divides the nightshade-infested soybeans (right) from soybeans treated with Pursuit. But Richard Ekins found, Pursuit at two-thirds label rate worked equally as well as the full rate.

| Post Treatment | Yield (bu/a) | Moisture level (percent) |
|---|--------------|--------------------------|
| Full rate Pursuit | 44 | 15.9 |
| Full rate Pursuit + full rate Assure II | 45 | 15.8 |
| Reduced rate Pursuit | 47 | 14.2 |
| Control - No post | 34 | 28.5 |

All treatments were applied with Landoil and 28 percent nitrogen solution at 10 gallons per acre

Richard Bilinsky, Marquette County

Making Pasture on Acidic Sands for Exotic Animals

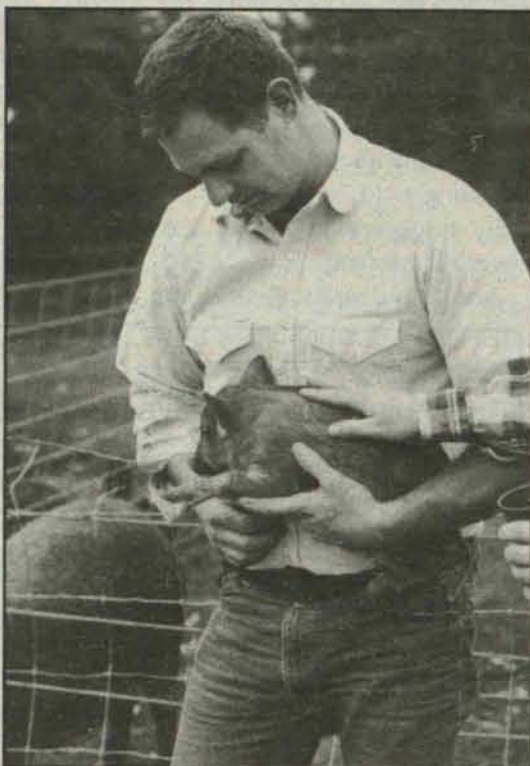
The "charming" side of Richard Bilinsky's farm is that he raises exotic animals in an exotic place. But the other side of the story is that it's hard to raise anything on his sandy, acidic soils and cutover jack pine land in central Marquette County.

This last year, he worked with Extension Ag Agent Jim Isleib to test plantings of 33 species and mixed species of forages that would provide pasture for his livestock. He raises "Russian boars" and Barbados sheep that provide game stock for hunting preserves and trophies for the walls of hunters.

The plots were set up with four replications, two receiving 10 tons of lime per acre to bump up the pH from 4.2, two receiving no lime. All were fertilized with 100 pounds nitrogen, 85 phosphorus and 250 potassium.

In general, most unlimed plots did poorly. "The legumes germinated and died," Isleib said. "The perennial grasses were failures. The large-seeded annuals did fairly well: rye, buckwheat, Japanese millet and sorghum sudangrass."

Warm-season grasses - big bluestem, switchgrass, sideoats grama, little



Richard Bilinsky wants pasture for his trophy "razorback" hogs, but his land is acid sand. He and County Agent Jim Isleib tested 33 forages.

bluestem, indiangrass - established poorly, whether limed or unlimed, but since they normally take off slowly, plots with these grasses may look better next year.

The only two "real keepers" on the unlimed plots were Tioga deertongue and showy tick trefoil. The deertongue, a low-growing broad-leafed grass, was fairly aggressive at establishing itself, but the plant has poor relative feed value. Showy tick trefoil, reputed to grow well on infertile sites, established poorly but the plants that grew looked good, Isleib said. Seed is expensive.

The hogs Bilinsky raises are more hairy than the usual domestic breeds, and he says they do well even with the cold and snow. He uses hut shelters, and the sows burrow down into the straw pack, farrow and raise their pigs no matter

what the weather.

The hogs get too fat easily, he said. They grow slowly and fare best on a high-protein, low-calorie diet like alfalfa, rape, forage turnips or grasses like rye. He feeds about two pounds of ground corn a day. The hogs, weighing 250 pounds or more and two years old, are worth \$1 a pound, but they must look like wild razorbacks, not prime pork.

He's looking to find soil amendments that would build soil organic matter and pH, without having to invest in 10 tons of lime per acre, at \$25 a ton. Paper mill wood ash and sludge may be available much cheaper.

Chuck Cornillie, Shiawassee County

Grazing Made More Beef in This Test

Grazing beef cows is more profitable and less input-intensive than either feedlot beef or cash-crop corn on Chuck Cornillie's farm. Cornillie's Angus, Limousin and Simmental cow-calf operation is in southeast Shiawassee County.

This year Cornillie compared intensively grazed sudangrass with cash-crop corn. Side-by-side comparison plots of sudangrass and corn were established in the spring. Actual production costs (\$/acre) for both crops are shown in the budgets below.

Eighty-five cow-calf pairs grazed the 5-acre sudangrass plot for 2.5 days in July, 1 day in August, and 1.5 days in October. Farm records show calves gain an average of 2.7 pounds per day on pasture. The value of the beef produced on the sudangrass plot was calculated as:

$$5 \text{ total grazing days} \times 85 \text{ calves} \times 2.7 \text{ lbs/day} \times \$0.65/\text{lb feeder calf price} \div 5 \text{ acres} = \$149.18/\text{acre}$$

The above budgets show a \$14 per acre advantage for the beef/sudan system compared to corn. Other benefits that Cornillie sees to the beef/sudan system in-

clude its utilization of land not suited for permanent pasture because of flooding or other factors. Grazing sudangrass in late summer and early fall also allows stock-



Chuck Cornillie (right) meets with his MASA coordinator John Durling.

pling of cool season grasses in other pasture fields for late fall and early spring grazing.

Cornillie plans to grow and graze more sudangrass in 1997 in his continuing pursuit of a more economically profitable, agronomically sound, and environmentally safe beef production system.

| | Beef/Sudan | Cash Corn |
|--------------------|--------------------|-----------------------|
| Gross Income | \$149 ¹ | \$185.50 ² |
| minus costs of: | | |
| seed | (\$25) | (\$22) |
| tillage/planting | (\$12) | (\$15) |
| fertilizer | \$0 | (\$15) |
| chemical + appl | (\$10) | (\$25) |
| harvest | \$0 | (\$20) |
| labor | (\$3) | included above |
| drying | \$0 | (\$3.50) |
| Net over operating | \$99 | \$85 |

¹ Beef/sudan gross income calculated above.
² Cash corn gross income = 70 bu/acre x \$2.65/bu harvest price.

John Oswald, Kalamazoo County

Gaining Fall Pasture with Companion Crops

John Oswald and his wife farm 600 acres in the southeast corner of Kalamazoo County. They keep a flock of 600 to 700 ewes that they rotationally graze.

This year they interseeded, on June 23, companion crops when the corn was at the 4- to 5-leaf stage. Companions crop were essex rape seed, annual ryegrass, a combination of the two, hairy vetch, and open strips where no corn was planted for control. The goal was to graze these in the

fall after corn was harvested and see which gave the most tonnage.

Lack of rain led to poor results. The companion crops grew where there was no corn but in the corn they did not grow because of no rain.

Next year Oswald plans to try this in soybeans. He is especially interested in seeing how rape will perform because it grows better later in the season and seed costs only 7 cents a pound.

Merrill Clark, Cass County

Who Will Process Organic Meats?

Producers wanting to market meat animals grown organically should have no greater difficulty finding slaughtering and processing plants to handle their products.

As part of a MASA-sponsored project, Merrill Clark conducted a telephone survey of establishments that slaughter and process meat animals. Merrill and her husband John produce organic beef at their farm near Cassopolis. In her final report, she intends to have a list of plants and locations available for those seeking those services.

"A problem facing any small livestock producer, organic or not, is the lack of available processing plants that are USDA-inspected," she said. "Several in Michigan have been under the gun to spend thousands of dollars to upgrade their facilities or lose USDA inspection, with the result being several plant closings or others open for custom work only."

Custom plants that slaughter and process meat turn out packages labeled "not for sale." Farmers must transfer ownership of the live animal if they in fact arrange for slaughter and processing for individual customers. A farmer who wanted to sell organic meat in a farm retail set-

ting must go through a USDA-inspected plant.

The Organic Food Production Act of 1990 mandated USDA to establish national standards for organic agriculture. The law is still in the process of implementation, and it is not yet clear what the standards will be.

"At this point, without having the final organic livestock processing rules in place, it would appear a 'certified organic' slaughter/processing plant would need to verify methods of avoiding commingling of conventional beef sides with organic sides while aging," Clark said. "If animals require any feeding at the slaughter point, only organic feed could be offered. Organic producers usually want their animals to be processed first in line of the day's work to avoid any possibility of cross-contamination. Some toxic cleansing materials may be prohibited for use on equipment or in buildings when organic meat is being handled."

With the survey work done thus far, it would appear that new organic livestock producers will find access to appropriate processing for their organic meat products. This is probably the case more for large animals than it is for poultry, Clark said.

MASA Membership Application

Name: _____ \$25 - Individual
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 City: _____ \$10 - Student
 Telephone: _____ \$250 - Lifetime
 New Member: ___ Renewal: ___ Are you a full time farmer: ___
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Mail completed membership form and check to:
MASA, 605 N. Birch St., Kalkaska, MI 49646