Michigan Farm News

MICHIGAN FARM NEWS

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What are the Odds of an Early September Frost in 1992?

People who live in the northern interior of Michigan have better than a 75 percent chance of a killing frost - temperatures of 32 degrees F or colder - occurring earlier than normal this year, according to Jeff Andresen, MSU Extension agricultural meteorologist.

If the jet stream returns to the pattern that caused Michigan's record cool, wet summer, there's a 60 percent of frost on or before mid September at Chatham, and a 75 percent chance of frost at Pellston. In central Michigan, Andresen predicts the odds of a mid-September frost are between 5 and 10 percent.

Statistics show that during a normal year, there's a 50 percent chance of a frost occurring in Ann Arbor on Oct. 6, in the Lansing area on Sept. 30, and in Bad Axe and Traverse City on Sept. 22.

"Unfortunately, there is no accurate way to predict when the first killing frost will occur very far in advance," explained Andresen. "Based upon the current growing degree day (GDD) accumulations, it's becoming increasingly apparent that the corn crop will not mature in many sections of the state, especially northern Michigan even with a normal frost date.".

Standard agronomic tables show that corn at the blister stage requires 40 to 45 calendar days or 875-975 GDDs to mature. Corn in the late milk-dough stage requires 30 to 35 calendar days or 650-750 GDDs for maturity. As of late August, GDD accumulations across the state were 400 to 500 units behind normal.

A severe frost will reduce yields 51 to 58 percent on corn that reached the soft-dough stage, by approximately 40 percent in fully dented corn, and about 10 percent on late dented corn.

According to the most recent Michigan Agricultural Statistics *Crop - Weather* report, Michigan's corn crop was reported as 2 percent in dent compared to the five year average of 30 percent. Corn reported in the milk stage was estimated at 70 percent compared to the five-year average of 90 percent.

Dry beans continue to lag seriously as well with only 60 percent of the crop reported as setting pods compared to the five-year average of 90 percent. Soybeans are also reported as 60 percent setting pods compared to the five year average of 90 percent

"As we continue to experience these below normal temperatures, we're just losing time," Andresen says. "By the time we get to late September, we can count on only about 10 GDD per day of heat accumulation, and in October, if the growing season is still going, maybe on the order of 5 to 10 units per day."

Still, this has been a growing season of records - Michigan has experienced the coldest summer since 1985 - and the latest recorded frost Andresen knows of in Michigan occurred during early November. Could frost hold off until then? "There's an extreme outside chance," Andresen says, "but don't count on it."

Corn silage could be in ample supply this fall, with an early frost. If corn is frozen in the milk stage, it should be allowed to dry down in the field down to 70 or 75 percent before chopping.

MDA Rhizomania Quarantine May be Expanded

The identification of a root disease known as Rhizomania, in portions of Idaho and Nebraska, prompted Michigan Department of Agriculture officials to call a task force meeting Aug. 26 to consider the expansion of an April 30 quarantine to protect the Michigan sugar beet industry.

According to MFB commodity specialist Bob Boehm, Rhizomania has been identified in isolated areas of Idaho and Nebraska. Surveys are currently being conducted in those states to determine the extent of the infestation. Rhizomania, which literally translates to "root madness" and is also known as Beet Necrotic Yellow Vein Virus, attacks the roots of sugar beet plants causing the proliferation of fine fibrous roots preventing the development of a tap root.

"The expansion of the quarantine would prohibit the movement of equipment and soils from infected areas and possibly restrict movement of potatoes and potato seed, as well as dry bean seed," explained Boehm. "A group of industry representatives will be visiting the infected areas in early September, with another task force meeting scheduled on Sept. 21 to discuss further quarantine expansion."

According to an MDA report, once the virus is introduced into the soil of a sugar beet field, it can have a devastating effect, and cannot be freed of the virus once contaminated. The most likely means of infestation comes from soils on used farm equipment coming from an infected area, or possibly on seed contaminated with soil particles.

Under the previous MDA quarantine, equipment which has been used in an infected area will not be allowed entry into Michigan until it has been steam cleaned and treated with a disinfectant and prior written approval is received from MDA.

A copy of the Rhizomania quarantine is available from the Michigan Department of Agriculture, Pesticide and Plant Pest Management Division, P.O. Box 30017, Lansing MI 48909.

Michigan Farm Bureau Tiger Day a Hit - Literally!

It was a sunny Saturday afternoon at the corner of Michigan and Trumbull for the 1,000 Farm Bureau members at Farm Bureau Day at Tiger Stadium Aug. 29.

In pre-game ceremonies, MFB Promotion & Education Committee Chairperson Leona Daniels told the 41,000 fans at the park that "Michigan's farmers are proud of their role in helping to produce the safest, most abundant and nutritious food supply in the world." AFBF Field Representative Rudy Denes also presented President Jack Laurie with his 1992 Quota Jacket in recognition of Michigan's achievement of membership goal.

The pre-game festivities concluded with an excellent rendition of the National Anthem, sung by Debbie Hickmott. Debbie and her husband Mark are in partnership in a family dairy farm near Oxford and are members of the Oakland County Farm Bureau.

Of course, the day would not have been complete without a Tiger victory. And win they did, 12 to 1 over the Kansas City Royals on the strength of four home runs, including a grand slam by Lou Whitaker. Pictured are (l - r) Rudy Denes, Leona Daniels, Debbie Hickmott and MFB President Jack Laurie.

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In This Issue: Fall Harvest Tips From MSU - See Pages 10, 12, and 13
Michigan Farm News Classified Ad Section - See Coupon Page 15

In Brief...

NAFTA Meeting Scheduled for Sugar Beet Growers

Michigan sugar beet growers will want to clear their calendars for Sept. 21 to attend a North American Free Trade Agreement (NAFTA) informational meeting in Frankenmuth at Zehnders Restaurant, with registration beginning at 8:30 a.m., and the program commencing at 9 a.m.

According to MFB President Jack Laurie, the meeting comes at the request of the MFB Dry Bean, Soybean and Sugar Beet Advisory Committee, to inform growers of the most recent information available on NAFTA, including a technical and economic analysis.

American Farm Bureau Assistant Director of National Affairs Paul Drazek and Don Parrish, director of the AFBF's Cotton, Rice and Sugar Department will be on hand for presentations and questions and answers. **For more program information, contact MFB's Commodity Activities and Research Division at (517) 323-7000, ext. 2023.**

USDA Sees Preliminary Florida Hurricane Farm Damage at $1 Billion

Agriculture losses related to Hurricane Andrew could reach more than $1 billion in Florida, according to preliminary figures compiled by USDA, reports *Knight Ridder Financial News*. USDA spokesman Roger Runnigen said that $1 billion figure includes crop losses and damage to physical structures. He added that the figures, compiled by several USDA agencies, are "very, very preliminary" and subject to change.

Crop losses alone could reach $200 million of the total $1 billion, Runnigen said, with damage to more than 50,000 acres of farm land. Included in the losses are 10,000 acres of tropical fruit, 20,000 acres of lime trees and 6,000 acres of avocado trees, Runnigen said. He said he had no further detail on the tropical fruit affected.

In Louisiana, Runnigen said crop losses could total $150 million. Of that, he said sugar cane crops may have suffered $80-$90 million in losses; cotton, $25 million; corn, $10 million; soybeans, $9 million; rice, $7 million; sorghum, $1 million; and commercial vegetables, $1.4 million.

An official of the American Sugar Cane League in Thibodeaux, La., told *Knight Ridder Financial News* that the hurricane will result in a 25 percent drop in Louisiana sugar output the next fiscal year (Oct.-Sept.). Farmers in Louisiana had expected to process about 1 million short tons of cane sugar in fiscal 1993.

USDA Boosts Emergency Food Aid

Agriculture Secretary Edward Madigan has authorized the USDA to spend an additional $5 million for emergency food aid for victims of Hurricane Andrew in Florida and Louisiana. The additional commodities will be provided to army field kitchens, American Red Cross feeding operations and shelters and distributed directly to individuals at several locations in the disaster area.

Commodities purchased with the additional funds will include canned meats, peanut butter, canned fruits and vegetables, infant formula and cereals, cheese, non-fat dry milk, juices, applesauce and other items.

In addition, the USDA has worked out an agreement with Florida and Louisiana officials on an emergency food stamp program to provide resources to victims so they can begin purchasing their own food. Persons demonstrating need will receive benefits based on family size.

Farm Bureau AgriPac Endorses Bush For President

The Michigan Farm Bureau AgriPac has endorsed President George Bush for re-election as President. The committee of nine farmers based their decision on the President's track record of support on issues affecting rural people, according to Al Almy, director of public affairs for Michigan Farm Bureau and secretary for AgriPac.

"The agricultural economy as a whole has gained during the Bush years," said Almy. "Inflation and interest rates are down. Exports of farm products have increased 14 percent since fiscal year 1988 and are forecast this year to reach the highest level in a decade. Net farm income increases from 1989-91 were the highest for any three year period in history," he said.

Almy said AgriPac felt that President Bush represents the best hope for agricultural prosperity in the future. "On issue after issue -- from opposing agricultural embargoes, to supporting ethanol and livestock agriculture, to fighting to protect private property rights -- President Bush has demonstrated support for a sound, market based farm economy," according to Almy.

AgriPac also noted the efforts of President Bush to provide full deductibility of the health insurance premiums of the self-employed, support for expansion of farm exports, development of industrial markets for agricultural commodities and support for the Conservation Reserve, said Almy.

U.S. Vote: Midwest Farmers Strongly Support Bush

A poll of Midwest farmers conducted by the Stewart-Peterson Advisory Group of Milwaukee, Wis., shows heavy support for President George Bush.

The firm surveyed a statistical sampling of its newsletter client base and found about 72 percent of farmers would vote for Bush "if the presidential election were held today," spokesman Scott Stewart said.

About 14 percent expressed support for Democratic contender Bill Clinton, with 11 percent undecided and 3 percent citing no choice, Stewart said. In an earlier poll by the firm, farmers showed strong support for independent candidate Ross Perot, who has since withdrawn from the race.

The Stewart-Peterson poll also showed a 36 percent approval rate for the performance of USDA Secretary Edward Madigan, with 44 percent disapproving. The poll has a margin of error of plus or minus 2.5 percent, Stewart said.

Talks of EEP Expansion Buoys Markets

President George Bush has announced a major expansion of he Export Enhancement Program (EEP), targeting 28 nations for around 30 million tons of U.S. wheat. The export initiative could be a temporary measure until international trade rules can be revitalized under the General Agreement on Tariffs and Trade, officials said.

USDA officials are predicting that the trade-off on the budget impact of increased export subsidies will be higher farm prices, which could cut government crop support payments. Sparks Commodities reports the new trade initiative will involve countries not previously covered by EEP sales, which could include Mexico, India, South Africa, Indonesia and perhaps Brazil and Poland.

American Farm Bureau estimates the new export package is worth over $3 billion and will support nearly 100,000 additional U.S. jobs, most of them off the farm, and generate a total of $10.5 billion in business activity for the U.S. economy. The package replaces all previously announced wheat EEP initiatives and will remain in effect throughout the 1992/93 international marketing year for wheat, which ends June 30, 1993.

USDA Raises 1992 Farm Export Forecast

Higher than expected sales of coarse grains and livestock products have prompted USDA to raise its fiscal 1992 agricultural export forecast to $41.5 billion, $500 million above a May forecast, according to *Knight Ridder News*.

USDA Secretary Edward Madigan said if the estimate is correct, 1992 agricultural exports would be $4 billion higher than last year and nearly as high as a record $43.8 billion in 1981. As a result, the U.S. agricultural trade surplus would rise to $18 billion, $3.1 billion above last year. "This would be the largest (agricultural) trade surplus since 1989," Madigan said.

USDA attributed the higher export forecast to improved coarse grain and livestock products since May. The U.S. has been shipping more corn to drought-stricken sub-Saharan African countries, more sorghum and live cattle to Mexico, and more finished beef to Mexico, Japan and Korea, USDA said.

The U.S. also is exporting more bulk and high-value farm products, including wheat, oilseed, horticultural and livestock products. USDA also predicted that fiscal 1992 U.S. farm imports will hit $23.5 billion, up $500 million from previous estimates, due to increased purchases of wines, malt beverage and grain products.

Fewer Daylight Hours Mean Equipment Lighting

Late summer means more farm equipment on roadways as farmers pursue their harvest activities. Motorists are more likely to encounter this equipment being moved after dark because the hours of daylight are shrinking rapidly with the approach of autumn.

State law requires that lights on farm equipment must be used from a half hour after sunset to a half hour before sunrise, or when visibility is reduced to less than 500 feet, according to Ron Nelson, legislative counsel for Michigan Farm Bureau.

"At a minimum, farm equipment must have at least one white light visible for a distance of 500 feet in front and at least one red light visible for a distance of 300 feet to the rear," he said. "With some equipment, it's very difficult or impossible to maintain a red light to the rear. Following that implement of husbandry with a car or pickup at a distance of not more than 50 feet also meets the requirements of the law."

Nelson noted that these are only minimum requirements. He suggested that farmers think about what a motorist sees, or doesn't see, when approaching farm equipment traveling on roads, and use sufficient lighting.

Washington Apple Growers Need Backing

Washington apple growers, suing CBS over the 60 Minutes broadcast in 1989 that triggered the Alar scare and put some growers out of business, haven't given up on raising funds for their expensive fight against the broadcast giant.

The Washington Apple Committee decided not to help fund the lawsuit, but Bob Brody, a member of the class-action lawsuit committee, said "The fat lady ain't sung yet." Brody said the committee still has several options, including a couple of unnamed "large companies" and a third chance is that the American Farm Bureau Federation, which has already given some support, may help raise more money.

The growers say they have already raised around $400,000 and need about that much more to continue the suit. It is a national issue of product disparagement, says AFBF Secretary Dave Mayfield. "It happens to be apples in this case, but it could be any product or commodity," Mayfield added.

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CAPITOL CORNER

NATIONAL ISSUES

STATE ISSUES

Animal Enterprise Protection Act of 1992

MFB Position:
Strongly supported and was responsible for obtaining many of the 264 cosponsors who were a key to passage of the legislation.

MFB Contact:
Al Almy, Ext. 2040

After several months of consideration by House and Senate committees, Congress passed and the President signed legislation (S. 544 and H.R. 2407) to protect animal facilities from damage by members of the animal rights movement.

The primary provisions of the bill as signed by President Bush include:

- ☐ Makes physical disruption of an animal enterprise causing damage of $10,000 a federal crime punishable by a fine and/or up to a year in prison. If more serious injury or death results, life imprisonment is possible.
- ☐ Allows a judge to order restitution.
- ☐ Defines "animal enterprise" as a commercial or academic enterprise using animals for food or fibre production or research and testing. It also includes fairs, zoos, aquariums or animal competition.
- ☐ Provides for a study by the Attorney General and USDA on the affect of animal rights terrorism.

Among the 264 cosponsors were Michigan Congressmen Fred Upton, John Dingell, Bill Broomfield, Dave Camp, Bob Davis, Paul Henry, Carl Pursell, Guy Vander Jagt, and Howard Wolpe.

Action Needed:
Write the above members of the Michigan Congressional Delegation who were cosponsors and thank them for their strong support.

Legal Standing of Producers in Anti-Dumping Cases

MFB Position:
Supports S. 2883

MFB Contact:
Al Almy, Ext. 2040

S. 2883, sponsored by Sen Don Riegle, was recently introduced to correct a defect in U.S. trade law that prevents growers from entering trade cases involving processed products.

Under the Tariff Act of 1939, growers can file a dumping case with the Department of Commerce and obtain a finding on the amount of dumping. However, when it comes to the injury determination by the International Trade Commission, growers have no standing under the law if a processed product is involved.

For example, red tart cherry growers produce the raw cherry used to make cherry juice concentrate, but have no legal standing in cases involving imported concentrate because they are not considered to be producers of concentrate. S. 2883 would give growers legal standing in such trade disputes.

Worker Protection Standards For Agricultural Pesticides

With the passage of the 1989 amendments to the Michigan Pesticide Control Act, new rules for worker safety were required. Dr. Charles Cubbage of the Michigan Department of Agriculture has created a working group to draft rules covering:

- ☐ The establishment of field re-entry periods after the application of agricultural pesticides.
- ☐ The posting and notification of areas where pesticides have been applied.
- ☐ The use of protective clothing, safety devices, hand washing, or other methods of protection from pesticide exposure.
- ☐ Notification of agricultural workers of poison treatment facilities.

The U.S. Environmental Protection Agency (EPA) has also drafted new rules. Under Michigan's law, if the EPA at any time adopts and publishes agricultural worker protection standards, the federal standards shall supersede rules promulgated by the state.

The EPA's new worker protection standards contain requirements designed to reduce the risks of illness or injury resulting from pesticide handlers' and agricultural workers' occupational and accidental exposures to pesticides used in the production of agricultural plants on farms, nurseries, greenhouses and forests.

Pesticide handlers are those who handle agricultural pesticides (mix, load, apply, clean or repair equipment, act as flaggers, etc.,) and agricultural workers are those who perform tasks related to the cultivation and harvesting of plants on farms or in greenhouses, nurseries, or forests.

There are three types of provisions in the rules which are intended to:
(1) eliminate or reduce exposure to pesticides,
(2) mitigate exposures that occur, and
(3) inform employees about the hazards of pesticides.

In item (2), provisions to mitigate exposure, two rules are worth special attention. The EPA said that exposure to pesticides is mitigated by:
Decontamination supplies... "providing handlers and workers an ample supply of water, soap, and towels for routine washing and emergency decontamination." This means that workers who are allowed early re-entry into treated fields must carry the materials in a vehicle or on their person.

Emergency assistance... "making transportation available to a medical care facility if an agricultural worker or handler may have been poisoned or injured by a pesticide, and providing information about the pesticide(s) to which the worker or handler may have been exposed." This means that another person must always be available to drive the injured worker to the medical care facility.

The new regulations will become enforceable in two phases. **April 21, 1993 and April 21, 1994.** Pesticide labels will not include Worker Protection Standard statements before April 21, 1993. This 8-month period allows EPA to adequately inform registrants about how to correctly revise the 8,000 to 10,000 labels requiring substantial revisions. It also will allow EPA to inform the end-users about the label-specific requirements which they must abide by. On April 21, 1994 all other requirements will begin to be enforceable.

MFB Contact: Howard Kelly, Ext 2044

Local Pesticide Ordinances

MFB Position:
Farm Bureau strongly supports S.B. 643.

MFB Contact:
Vicki Pontz, Ext. 2046

Special Notes:
A big THANK YOU goes out to all Farm Bureau members who participated in the hearings.

Rep. Tom Alley, who has been appointed to chair the S.B. 643 subcommittee of the House Agriculture Committee, has held hearings on the legislation originally introduced by Sen. Nick Smith. The subcommittee will consider the bill when the Legislature reconvenes on September 15.

Approximately 45 farmers from Northwest Michigan counties turned out for the Aug. 14 hearing in Traverse City on S.B. 643.

About half had the opportunity to testify in opposition to local regulation of pesticides and in support of S.B. 643, which would prohibit local units of government from passing an ordinance to regulate pesticides.

Farm Bureau members from the Thumb, Saginaw, & Northeast counties also made their voices heard at hearings held on Aug. 20 in Bay City and in West Branch.

Pesticide Regulations

MFB Position:
Farm Bureau served on the work group and supports the proposed regulations.

MFB Contact:
Vicki Pontz, Ext.2046

A work group of interested parties has been working with the Michigan Department of Agriculture for two years to draft rules for pesticide use (Regulation 637). The Joint Committee on Administrative Rules is expected to consider the rules for passage this fall.

Amendments to the Michigan Pesticide Control Act in 1988 authorized the MDA to promulgate rules relating to the use of pesticides. Regulation 637 is targeted primarly at **commercial** pesticide applicators, although some requirements apply to **all** pesticide applicators. Regulation 637 is a comprehensive regulation that will clarify the responsibility of pesticide applicators while, at the same time, increase the protection of human health and the environment. Some of the provisions that affect farmers are as follows:

(Rule 4) - Standards for Pesticide Use - defines and describes activities and conduct required of applicators to prevent unreasonable adverse effects to human health or the environment. Examples include properly calibrated and functioning application equipment, knowledge of drift factors, the identification of sensitive areas, and the need for adequate response to spills.

(Rule 8) - Excess Pesticide and Pesticide Containing Material - this section details acceptable alternatives for using pesticide materials that have been spilled, such as land application at agronomic rates.

(Rule 10) - Drift - requires consent from adjacent property owners where off target movement of pesticides may occur. Does not exempt the applicator from responsibility or liability relating to drift, but rather allows for an additional measure of caution to be considered during the application. The department will consider the use of a Drift Management Plan as a factor when determining appropriate enforcement action.

(Rule 16) - Organic Farms - Organic farms will be identified as a sensitive area, marked by the organic farmer, and registered by the department. The department will furnish this listing to all commercial agricultural and right-of-way applicators. This provision is primarily in place to provide additional identification and protection of organic farms.

Weather

30-Day Outlook - Warmer and Drier, 90-Day Outlook - Cooler and Wetter Than Normal

Cooler than normal temperatures continued through much of August, with deviations from normal generally averaging from 4-7 degrees below normal in the south and 2-4 degrees below normal in the north. Combined with the abnormally cool June and July, this past summer was the first or second coolest since 1895, which is generally when reliable record-keeping began.

With the exception of some widespread rainfall near the end of the month (some of which was associated with moisture from the remnants of Hurricane Andrew) and earlier moderate to heavy rainfall over east-central sections of the state, rainfall was very light, with some areas reporting problems with dryness.

Overall, the most pressing question, however, is when will we encounter first killing frost, or put another way, will my crops make it to maturity this season? Even though crops generally lag 2-3 weeks behind normal in most sections of the state, there is still great diversity within a given area.

The latest National Weather Service extended outlook offers both good and bad news. The good news is that September is expected to be warmer and drier than normal statewide.

This follows a major change in the jetstream discussed in the last column. Above normal temperatures in September should generally translate into highs in the 70's and maybe a few 80's and lows mostly in the 50's. The bad news is that the 90-day September-November period is expected to be cooler and wetter than normal over most of the state (near normal precipitation is expected in Upper Michigan). This could cause serious problems for all forms of fall fieldwork, especially harvest.

Michigan Weather Summary

8/1/92 to 8/31/92	Temperature Observed Mean	Temperature Dev. From Normal	Growing Degree Days Actual Accum.	Growing Degree Days Normal Accum.	Precipitation Actual (inch.)	Precipitation Normal (inch)
Alpena	62.5	- 2.7	1354	1744	2.65	3.12
Bad Axe	63.2	- 5.5	1551	2092	3.52	2.93
Detroit	66.9	- 3.8	2039	2278	2.53	3.12
Escanaba	62.6	- 2.6	1159	1387	2.63	3.53
Flint	65.5	- 3.2	1894	2278	3.50	3.12
Grand Rapids	65.5	- 3.9	1905	2318	3.55	3.18
Houghton	61.3	- 2.0	1232	1597	0.76	3.69
Houghton Lake	62.5	- 3.6	1501	1744	2.45	3.12
Jackson	64.8	- 6.1	1859	2269	2.30	3.36
Lansing	64.3	- 4.9	1803	2269	2.77	3.36
Marquette	59.9	- 2.4	1167	1597	3.23	3.69
Muskegon	64.9	- 4.1	1700	1998	1.97	3.60
Pellston	62.3	- 1.8	1405	1802	2.23	3.11
Saginaw	64.3	- 4.7	1806	2092	3.40	2.92
Sault Ste. Marie	61.0	- 2.4	1079	1387	2.98	3.53
South Bend	67.8	- 2.6	2151	2318	1.07	3.18
Traverse City	64.7	- 3.3	1625	1802	2.04	3.11
Vestaburg	63.0	- 6.0	1689	2074	3.57	3.64

Observed and normal growing degree day totals are accumulated from March 1. Normals are based on district averages.

Jeff Andresen, Ag Meteorologist, MSU

Michigan and Major Commodity Area Extended Weather Outlook

T - Temp. P - Precip.	9/15 ..... 9/30 T..... P	9/15 .....11/30 T..... P
Michigan	A.....B	B .....A
W. Corn Belt	A.....B	B .....N
E. Corn Belt	A/N..... N/B	B ..... N/A
Wint. Wheat Belt	A.....B	B .....N
Spr. Wheat Belt	A.....N	B .....N
Pac. NW Wheat	B.....A	A .....N
Delta	N..... N/B	B/N ..... N/A
Southeast	N.....B	N .....A
San Joaquin	N.....B	A .....N

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

Is Mount Pinatubo the Cause of the Poor 1992 Growing Season in Michigan?

Michigan's summer has been one of the coolest in decades, and farmers are worried about the damage that frost in September could do to immature crops.

Some people think that the root of our cool weather is the eruptions of Mt. Pinatubo in the Philippines last summer. Jeff Andresen, Extension meteorologist at MSU, isn't so sure that's really the case.

"In theory, volcanic eruptions spew tons of minute dust and ash particles into the atmosphere that may block a portion of the sun's incoming radiant energy, resulting in cooler than normal conditions on the earth's surface," Andresen says.

This volcanic residue can reach the stratosphere – 50,000 feet or more above sea level – and remain suspended there one or two years, or longer.

There is evidence, he says, that some residue from the Mt. Pinatubo eruption did reach the stratosphere and that the global mean temperature, measured by satellite, has dropped about 1 degree F since last summer. But comprehensive research on the possible relationships between surface temperature cooling and very large volcanic eruptions has shown only a weak correlation.

What is not clear is the relationship, if any, between volcanic eruptions and shifts in the jet stream. A shift in the jet stream is responsible for Michigan's cool summer and unusually warm weather in the Pacific Northwest, Andresen says.

Though this summer has been cool, the summer of 1816 was worse. Dubbed "the year without a summer," it followed the eruption of Mt. Tambora in 1815 in the Lesser Sundra Islands in Indonesia. Periodic frosts and freezes devastated crops in eastern North America and western Europe. Yet there were relatively seasonable temperatures in central North America and eastern Europe that summer, Andresen says.

He is inclined to believe that the summer of 1816 demonstrates more the regional nature of seasonal weather patterns than the result of volcanic activity.

Records show that much of Michigan experienced above normal temperatures during many of the past summers, Andresen says. This summer, Michigan may merely be experiencing one of many natural variations in long-term climatic oscillation rather than the effects of Mt. Pinatubo, though the eruption could have contributed somewhat to our cool, wet summer, Andresen says.

If You Have A Choice, Avoid Planting Sprouted Wheat Says MSU's Larry Copeland

Prolonged wet weather during wheat harvest has led to high levels of sprouting in wheat in some areas of the state.

Although those weather conditions apparently have not caused a serious shortage of good seed to date, some growers may feel they must resort to using sprouted wheat for seed this fall.

Larry Copeland, MSU Extension agronomist, says that sprouting may not destroy the capacity for the wheat seed to germinate, but it does reduce its vigor and storability.

After field drying, sprouted wheat can have a germination level of 95 percent or more, but may only germinate to 50 or 60 percent by Oct. 1 -15, when most of the wheat in Michigan is planted.

Copeland recommends that growers who have any sprouted wheat that is being saved as seed make sure it is tested for germination in a recognized seed laboratory just before planting. Growers should not try to test their own wheat that is to be used for seed.

If the germination immediately before planting is less than 80 percent, the seeding rate should be increased by about one-half bushel per acre. All wheat planted for seed should be commercially treated.

Seed germination research at MSU rated the levels of sprouted wheat from 1 to 8.

At level:
1, no evidence of sprouting.

2, split in the germ cover with no apparent growth of the root-shoot axis.

3, ruptured germ cover with root-shoot axis beginning to emerge.

4, germ cover absent with little growth of the root-shoot axis.

5, small amount of sprouting with root-shoot axis less than 2 millimeters (mm) long.

6, medium amount of sprouting with root-shoot axis 2 to 5 mm long.

7, large amount of sprouting with root-shoot axis 6 to 10 mm long.

8, excessive amount of sprouting with root-shoot axis more than 10 mm long.

The tests on Augusta wheat in 1985 showed that at level 3, six weeks after harvest, the rate of germination dropped to less than 85 percent. At level 6, the germination was about 65 percent, and at level 7, the germination was about 50 percent.

If the germ cover (embryo) is broken by the emerging root-shoot axis, the wheat kernel is considered to be damaged.

The upper limit on damaged kernels for U.S. No. 2 wheat is four percent. If higher levels of sprouting occur, the wheat may be discounted.

During sprouting, enzyme activation occurs and breaks down starch into sugars. This change reduces the value of the grain for milling into flour for baking, as well as its use as a thickening agent in various foods.

Wet Weather Trims Agricultural Labor Forces in July

In mid July, there were 75,000 total farm workers in Michigan, according to the Federal/State Michigan Agricultural Statistics Service. This is the first July since 1984 that the all-farm workers estimate has been available at the state level. The total farm workers estimate was reinstated this past April for Michigan on a quarterly basis.

There were only 22,000 hired farm workers in Michigan, compared to 48,000 a year ago. This sharp drop was due to limited days suitable for fieldwork, as wet weather predominated the survey week. Heavy downpours and frequent rains covered most of Michigan, hampering fieldwork. Only limited vegetable thinning and harvesting was possible.

The average hired worker wage rate was $5.68 per hour, up 23 cents from last July. Hired employees worked an average of 35 hours during the survey week.

Nationally, there were 3.56 million people working on farms and ranches. Self-employed farm operators accounted for 1.6 million of the total, along with 536,000 unpaid workers, and 1.03 million workers hired directly by farm operators.

Agricultural service employees working on farms and ranches made up the remaining 385,000 workers. The average hired worker wage rate was $5.82 per hour, 25 cents above a year earlier. Workers paid on an hourly basis earned $5.56 per hour compared to $5.35 in July 1991.

New Stewardship Program to Help Forest Landowners

Private forest landowners who own 12 acres or more of land could benefit from the new Forest Stewardship Program (FSP) being offered in Michigan.

According to Michigan State University Extension Service, the goal of the Stewardship Program is to encourage long-term stewardship by assisting owners to actively manage their land for a broad range of resources such as wildlife, timber, water or recreation.

"The Forest Stewardship Program and the related Stewardship Incentive Program (SIP) offer landowners a new approach to working with their woodlands," says Hannah Stevens, district Extension forester. "The Stewardship Program looks at a forest as an ecological system where all resources are considered for both their amenity as well as commodity values."

According to Mrs. Stevens, the stewardship practices that are included under FSP/SIP are based on a land ethic, which takes a long term view of the entire forest community.

"This program is an opportunity for landowners to create or improve their property for something they really enjoy, such as wildlife, recreation or timber. In addition, it also offers landowners the chance to help the overall environment by correcting soil or water erosion problems or protecting fragile micro-environments, such as wetlands or threatened plants that may exist on their land."

The first step for individual landowners who wish to participate in this program is to identify the goals and objectives for their land that they wish to manage for and incorporate these into a landowner stewardship forest plan for their property. As part of their commitment, landowners must also pledge that any activities that take place on their land are consistent with the stewardship ethic written into their plan.

Once a stewardship plan is written and approved by the State Forester's office (through MDNR), a landowner is then eligible to participate in the Stewardship Incentive Program (SIP) which will help cost-share, up to 75 percent of the cost, approved practices listed in a landowner's stewardship plan.

Some of the practices approved for cost-sharing range from establishing windbreaks, establishing or improving habitat of game and non-game wildlife species, fisheries habitat improvement, woodland improvement, and soil and water protection along waterways.

Landowners who are interested in participating in this cost-share program, or wish to get help from a professional in preparing a stewardship plan for their property, need to sign-up through their local ASCS office.

Record CRP Enrollment in Michigan During 12th Signup

An additional 85,836 acres of Michigan's cropland were accepted into USDA's Conservation Reserve following the recently completed sign-up for the program to reduce soil erosion and protect water quality.

"Office traffic, acreage offered for enrollment and acreage accepted into the program during and after the last sign-up greatly exceeded that of any earlier sign-up," said David Conklin, state executive director for the ASCS in Michigan.

Record enrollment is attributed to an extensive campaign to make land owners aware of the program and the June enrollment opportunity. All land in Michigan was eligible for program enrollment because of its location in the Great Lakes Basin, one of three conservation priority areas.

"We are pleased that Michigan farmers took advantage of the state's priority position to enroll a significant amount of land in the program to benefit the Great Lakes," said Homer R. Hilner, state conservationist for the SCS in Michigan.

"We did what was needed to be sure land owners knew about the program, its benefits and the June sign-up period," Hilner continued. The Soil Conservation Service provides assistance to land owners for the care and protection of land in the program.

Crops cannot be grown for ten years on land accepted into the Conservation Reserve. Permanent vegetation is established and maintained on the idled cropland to prevent erosion damage to the resource and sediment damage in rivers and streams.

At the end of the contract period, the land will be subject to conservation compliance rules and must have needed erosion control practices in place to produce crops again.

The Conservation Reserve, created by the Food Security Act of 1985 and the Food, Agriculture and Trade Act of 1990, is a program to remove highly erodible land from production and protect water quality. It is administered by USDA's Agricultural Stabilization and Conservation Service. The twelth program sign-up was in June.

Canola Market Prices Expected to Soar on News of Early Canadian Snow and Cold

Canadian spring canola growers were surprised to see snow and freezing temperatures the week of Aug 24.

Although the freezing temperatures may be a disaster for some Canadian growers, it could develop into an extremely profitable situation for U.S. canola growers who typically plant winter canola. Now both Canadian and U.S. farmers are waiting to see just how much damage occurred.

The canola market reacted quickly with the price increasing from $4.90/bu. on Aug. 21, 1992 to $5.33/bu. at Central Soya in Hamilton, Ont. and to $5.23/bu. at ADM in Windsor, Ont. on Aug. 26, 1992.

"It's nice to see the price of canola increase," says Dr. Larry Copeland, MSU canola specialist. "We hope that some of the Michigan growers who were undecided about planting winter canola this fall will be encouraged to go ahead and plant."

"This 33 to 43 cent jump may be just the beginning of some serious price increases," states Jim Hansen of Canola, Inc. "We were surprised to see how much the price jumped just out of concern for the crop; if the amount of damage is substantial, the canola market price could rise as much as 25 cents per day for several days!"

"It's really too early to tell what this type of volatile market will do," adds Dr. Copeland. "We won't know how much Canadian crop damage has occurred for a while, but we'll soon know more."

However, for Michigan farmers, that may be too late, because planting time is quickly running out. Planting time for U.S. winter canola typically occurs in August for Michigan farmers, with most Indiana and Ohio canola planted in September.

MSU Wheat Breeding Program: Multi Year Performance Summary

Variety Name	MSU Stock ID	Single Year Multi-site Average Yields (Bushels/acre) 1989	1990	1991	1992	Across Year Averages (bu./acre) 2 YR 91-92	3 YR 90-92	4 YR 89-92	1992 Test Weight (lbs/bu.)	COLOR GRAIN	CHAFF	AWNS	Anthesis Date (June 92)	1992 Obs. Leaf Rust score	Lodge score
Msu Line	C4826	.	76.4	76.1	110.6	93.3	87.7	.	55.9	WHITE	BRONZE	NO	5.5	5	3
Karena	I5026	.	.	66.4	109.0	87.7	.	.	57.2	WHITE	WHITE	NO	7.5	2	1
Mendon	C4227	.	78.0	76.3	106.7	91.5	87.0	.	57.9	RED	WHITE	NO	4.5	4	3
Tw86168	I4663	.	.	67.5	106.5	87.0	.	.	55.5	WHITE	WHITE	NO	9.0	5	2
Lowell	C4827	.	74.9	76.6	105.6	91.1	85.7	.	55.7	WHITE	WHITE	NO	5.5	5	3
Chelsea	C5023	70.5	75.0	66.9	105.6	86.2	82.5	79.5	57.3	WHITE	BRONZE	YES	9.0	3	2
Augusta	M0300	58.6	71.1	61.1	104.5	82.8	78.9	73.8	56.3	WHITE	WHITE	NO	9.0	5	3
Tw86317	I4670	.	.	64.8	103.8	84.3	.	.	55.9	RED	WHITE	NO	8.0	3	2
Harus	M0301	65.9	69.0	71.1	103.3	87.2	81.1	77.3	57.8	WHITE	BRONZE	NO	7.0	2	1
Tw86312	I4674	.	.	67.7	102.4	85.0	.	.	57.8	RED	WHITE	NO	6.0	3	1
Annette H95-9	I5034	.	.	56.9	101.8	79.3	.	.	57.7	WHITE	WHITE	NO	8.5	3	4
Becker	M0297	56.9	61.5	62.1	100.9	81.5	74.8	70.3	57.3	RED	WHITE	NO	4.0	X	1
Cardinal	M0298	62.8	69.5	70.2	100.2	85.2	79.9	75.6	58.6	RED	WHITE	NO	6.5	2	4
Frankenmuth	M0290	59.0	66.8	61.9	99.7	80.8	76.1	71.8	58.2	WHITE	BRONZE	NO	9.5	4	4
Hillsdale	M0295	60.2	64.8	60.3	98.8	79.5	74.6	71.0	58.3	RED	BRONZE	NO	8.0	1	2
Pioneer 2548	I4645	66.7	75.9	75.6	98.8	87.2	83.4	79.2	58.1	RED	WHITE	YES	5.0	2	1
Dynasty	I3966	66.9	70.5	62.5	97.2	79.8	76.7	74.2	59.1	RED	WHITE	YES	4.0	4	1
Discovery	I5084	.	.	55.8	96.5	76.1	.	.	58.8	RED	WHITE	NO	6.0	4	3
Ena	I5033	.	.	54.9	96.2	75.5	.	.	57.4	WHITE	WHITE	YES	8.0	1	3
Geneva	M0302	63.0	71.7	69.0	95.8	82.4	78.8	74.8	57.8	WHITE	BRONZE	NO	4.5	5	2
Gr 876	I4615	67.7	73.2	71.5	94.1	82.8	79.6	76.6	58.4	RED	WHITE	YES	5.0	1	1
Patriot 180	I5165	.	.	71.9	93.1	82.5	.	.	61.1	RED	WHITE	NO	4.0	4	2
Madison	I4631	.	74.4	75.0	93.0	84.0	80.8	.	58.0	RED	WHITE	NO	3.5	2	1
Sawyer	I4622	.	.	67.5	92.9	80.2	.	.	58.0	RED	WHITE	NO	4.5	1	1
Wakefield	I4632	.	79.2	77.0	92.8	84.9	83.0	.	59.6	RED	WHITE	NO	6.5	2	2
Lincoln	I4647	61.5	66.0	63.7	91.4	77.5	73.7	70.6	58.6	RED	WHITE	NO	2.5	1	2
Atlantis	I5083	.	.	60.0	90.5	75.2	.	.	60.8	RED	WHITE	NO	4.0	3	1
Twain	I4646	68.3	77.3	71.8	89.7	80.7	79.6	76.7	59.8	RED	WHITE	NO	4.5	1	1
Columbia	I5085	.	.	55.3	86.9	71.1	.	.	60.1	RED	WHITE	NO	3.5	1	1
Sr203	I5071	.	.	58.1	84.1	71.1	.	.	57.7	RED	WHITE	NO	7.0	6	2
Mean		63.6	71.9	66.5	98.4	82.4	80.2	74.7	58.0						
Counties		7	7	7	5	12	19	26	5						
				l.s.d.	8.3				1.2						
				c.v.	6.9				1.6						

Notes: 1) Leaf rust and lodging scores based on a 0-9 scale where 0=absent or excellent, and 9= very poor.
2) 1991 and 1992 results primarily from Trial 10 ("State Variety Trial"). For 1990 and 1989, white and red wheats were evaluated in separate Trials which were grown side by side at the various county sites.
3) Data sorted on 1992 average yield.

For additional information contact R. Ward, 517/355-2231

Market Outlook

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

Wheat

Recent announcements of 1.1 billion bushels in new EEP wheat offers, and promises by the USDA to be even more aggressive in handing out these subsidies, have helped the wheat market. Also the likelihood (which may have happened by now) of a new large credit package offer for Russia has helped push up wheat prices. This may be a time to price another portion of your remaining wheat in storage, especially if they're having trouble finishing up the spring wheat harvest in both the U.S. and Canada.

The supplies of wheat will be plentiful this year unless there was a real surprise in the September 10 Crop Report. In addition to this, zero set-aside was announced for the 1993 wheat crop. This, in addition to sufficient moisture in winter wheat areas to aid fall seedings, would indicate large supplies of wheat next year as well. Also, it will take more than a promise of available EEP to increase demand. It will take a combination of need for wheat by other countries and large enough EEP subsidies to entice more use or a low enough price that poor countries can afford it. The bottom line is that there is not much reason to be bullish in the wheat market, and the future markets indicate they are not willing the pay commercial storage costs plus interest. It is also important to remember that the election promises will end November 4 and we will still have the budget problems to deal with.

What does all this mean as far as pricing wheat? **One, the odds are against you having positive returns to storage, especially after November. Two, take advantage of near-term rallies to price a large portion of your remaining unpriced stored wheat. Three, if you want to stay in the market just in case of a large rally, consider selling the wheat for cash and buying calls.**

Seasonal Commodity Price Trends

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

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

Corn

What did the September 10 USDA Crop Report say? I suspect it said a very big corn crop is coming just like the August report indicated. If it's caused a rally, consider pricing some corn that would have been put in commercial storage. If it was bearish, consider holding pricing decisions for the time being. If corn prices are at their low at harvest, history tells us the odds are high that it will pay to store, especially on-farm.

Due to the late maturing crop, we still face the danger of a killing freeze. One aspect of this is the market will probably overreact for a very short period. If this happens, consider forward pricing a significant portion of your crop quickly, especially if you have not priced much earlier and/or you are short of on-farm storage capacity.

The other aspect of an early freeze is that some of us in Michigan may be the sufferers. **If this is a potential problem on your farm, consider using put options for downside price protection; there is no delivery requirements. The other risk of on-farm storage this year is the condition of the corn going into the bin. Early frost or not, we will be harvesting a lot of wet corn this fall; be prepared.**

Soybeans

The story and the advise for soybeans is the same as for corn, lots of beans and a late maturing crop. However, there is a bit more room for optimism in the soybean pricing picture. Soybean supplies, while quite adequate, are not as burdensome as corn. Demand has been fairly strong and the strength is expected to continue.

Something you need to be aware of if, the soybean market goes into the tank, is how the soybean marketing loan works. This year you won't forfeit the soybeans under loan to the government if prices do not go over the loan rate.

You'll sell the beans for cash and receive a loan deficiency payment for the difference between your county posted price and the loan rate minus a 2 percent origination fee. Check for details at your local ASCS office if prices do drop under $5.00. If this scenario happens, we will discuss all the angles in more detail in a later issue.

Hogs

In late August and early September, we saw a rally in the October-December hog futures as the EEP for pork and a credit package were offered to Russia enabling them to use it.

If the futures are still in the low $40's for the fall contracts, consider taking some price protection on a portion of your expected production. The fundamentals suggest that hog prices will drop under $40 per cwt. this fall and at times could fall significantly under. In the short-term, keep extremely current. The next Hogs and Pigs Report will be released September 30.

Cattle

The August 7-State "Cattle-On-Feed Report" showed total inventory down 5 percent from 1991, but about the same as 1990. Placements for July were up 8 percent from last year and July marketings were down 2 percent.

This should keep fed cattle prices over $70 per cwt. through the fall. The next Cattle-On-Feed Report will be released September 18. At this point, the cattle futures do not seem to be offering extra good pricing opportunities given the expected fundamentals. However, if we see a rally that takes the December futures into the $74-76 range, consider some forward pricing.

At this point, feedlot breakevens for yearlings appear to be in the red, but the breakevens for five weights are positive at $2.00 corn. See opposite page for discussion of potential returns to corn silage.

Dairy Outlook

Larry Hamm

Farm milk prices are sitting on a bubble and manufactured dairy product prices are the pin that is about to break that bubble.

Farm milk prices, driven by five consecutive monthly increases in the Minnesota-Wisconsin (M-W) price, have been rising for several months in a row. The August M-W was the last month for the M-W to be in its current range. Recent declines in dairy product prices assure that the M-W and farm pay prices will go down.

In the middle of August, barrel cheddar cheese prices at the National Cheese Exchange in Green Bay declined 4 cents a pound from $1.35 to $1.31. Using the general rule of thumb that a 1 cent per pound change in the cheese price translates into about a 10 cent per cwt. change in farm prices, the cheese markets suggest that the M-W will have to drop at least 40 cents in the next couple of months.

Compounding the cheese price drop was the fact that the nonfat dry milk powder prices also dropped about 7.5 cents a pound during August. At this rate of decline, the USDA's CCC will be purchasing surplus powder by the end of September.

A simple butter-powder pricing example illustrates what these price declines mean to future farm prices. Let's assume that the wholesale market price for nonfat dry milk powder is $1.07 per pound and Grade A butter is $.77 per pound. Using the standard CCC conversion rules, this means that 100 pounds of 3.67 percent test milk will make 8.13 pounds of powder and 4.48 pounds of butter.

The CCC assumes that it will cost the manufacturing plant $1.22 to make these products. Given current prices and these assumed product yields, the processor can generate $8.70 from selling 8.13 pounds of powder and $3.45 from selling 4.48 pounds of cheese. The manufacturer therefore has $12.15 per cwt. in the bank. However, it costs $1.22 to produce these products. So, the processor has only $10.93 left to pay producers for 100 pounds of 3.67 percent test milk.

FARM BUSINESS OUTLOOK

Let's assume that the current M-W (August) is $12.71 (3.67 percent test). This is what a butter-powder manufacturer had to pay under Federal Order rules for Grade A Class III milk used to make butter and powder. Under these conditions, the butter-powder plant would be losing $1.78 per cwt. for every load of milk made into butter and powder.

This cannot continue long. Eventually, the Minnesota-Wisconsin plants will start paying $10.93 per cwt for butter powder milk. This will be reported to the USDA and the M-W will decline. How far it declines is determined by the many forces that are not totally understood. But the M-W must decline.

The current loss conditions are particularly hard on all producer milk cooperatives which operate butter-powder plants in federal milk orders. These cooperative balancing plants prevent a major price collapse by taking surplus Grade A milk off the market. If they did not, loads of distressed milk would be roaming the countryside looking for a plant.

This condition would force all farm prices to drop quickly. Without cooperatively-owned butter-powder plants, dairy markets would currently be in chaos. Unfortunately there is no guarantee that these current losses on butter-powder operations will be made up by future product price increases for butter-powder. The benefits of cooperative balancing plant operations accrue to all producers, but the costs are born by only those producers which own the cooperative plants.

The current milk market conditions are unstable. Unless the product markets switch around, the current farm milk price bubble is sure to break.

Table Egg Market Situation

Allan Rahn and Henry Larzelere

Table eggs in early September are trading in the low 70 cent per dozen price range (New York, Grade A, large white, in cartons, to volume retailers), only 4 cents below last year.

The price spread from year ago levels was 20 cents in early August, but egg prices--in contrast to the 2 cent decline experienced a year ago--rallied 14 cents during the past month. Lower feed ingredient prices, primarily corn, have reduced production costs nearly 2 cents per dozen from last year, but an early frost could quickly alter this situation and egg producers may want to consider securing some feed ingredient price level risk protection.

The number of layers in the nation's table egg flock on August 1 was up 1 percent (230 million) and egg production during July was 2 percent above last year, but actions to reduce the flock size are underway.

The cumulative egg-type chick hatch for the first half of the year was 5 percent below a year ago and the July hatch was down 4.6 percent. Although the August chick hatch is likely to be down less than the 14 percent fewer eggs being incubated on August 1, efforts to downsize the flock are very evident.

Egg prices are expected to average in the low 70 cent range during September. Prices are likely to soften below the 70 cent level in October, but then rally into the upper 70 cent range in December.

Food Prices Remain Stable

The latest quarterly food price survey coordinated by the American Farm Bureau showed retail food prices to be just about the same as in the previous quarter. The average cost of the 16 commonly purchased items used in the survey was $29.90, compared to $29.82 in the previous quarter and $30.27 for the same period a year earlier.

The third quarter survey, which involved 77 locations in 25 states showed that in the meat items, ground chuck was a few cents higher, as were whole fryers. The others, sirloin tip roast, pork chops and bacon were a few cents cheaper than last quarter and a year ago.

Other items that rose relative to the last quarter were eggs, russet potatoes, Cherrios, and white bread. Down a few cents were mayonnaise, Mazola oil, flour, apples and cheese. The average price of whole milk and Crisco oil were the same as last quarter.

Farm Business Management Issues

The Agricultural Economics faculty at Michigan State University welcomes the opportunity to communicate with the Michigan Farm Bureau membership. We will attempt to stimulate your thoughts (and ours) on some timely farm managment issues throughout the year. This first article about the current race towards crop maturity and first frost was prepared by Gerry Schwab and Roy Black.

Editor's Note: *Special thanks go to TelFarm Director John Jones for his efforts in coordinating the information presented in the expanded Farm Business Outlook section, as well as the entire MSU Agricultural Economic Department who make it possible to provide you with timely farm managment tips.*

FARM BUSINESS OUTLOOK

Immature Corn? Do You Have Any Alternatives?

by Gerry Schwab and Roy Black, MSU Ag Econ. Dept.

Background:

Are your crops "behind"? Heat units accumulated through Sept. 3 were lower than the norm at most Michigan weather stations. The heat deficiency based on a 50 degree-day ranged from approximately 160 to 700 growing degree-days (GDD).

Corn maturity appears to be two to three weeks behind "normal" expectations. Data presented at the Midwest Outlook Conference suggests that much of Michigan would not accumulate 2,300 growing degree days if we have "normal" weather between mid-August and our first frost.

The question then becomes one of contingency and the need for identifying alternatives for the corn crop if it is not mature at first hard frost. Making silage is the most obvious alternative, but how realistic a choice is it?

Most dairy farms and cattle feeding operations will have the capacity to make silage and a place to use it. But what about the cash crop farms with no ruminant livestock? Because of its bulk and the cost of transportation, the market area within which corn silage can be delivered is limited to a few mile radius around the field location. Now is the time to scout out alternatives for your corn crop in the event of frost before the grain reaches physiological maturity.

Pricing Corn Silage:

Thumb rules for pricing corn silage such as:

$/ton Corn Silage = (# bushels corn/ton corn silage X Price/bu corn grain) + $/ton silage harvest/handling cost

may not be appropriate where the corn grain will not be physiologically mature.

Using $2 per bushel corn price and 6 bushels corn per ton silage the calculated price of corn silage would be $17 per ton. The key to using thumb rules is matching up the rule to the circumstances. Most of the thumb rules, like the one cited, assume corn can be harvested as either grain or silage.

Therefore, the price of corn silage is calculated on what its price would have to be to generate the same net return/acre as the corn crop would earn if sold as grain. In short, what would the corn crop producer have to have for the alternative harvesting schemes to be equally profitable?

A key question facing corn farmers and dairy and beef producers this fall (1992) may be different. They are asking, "What will corn silage be worth if corn that would normally be sold as grain gets frosted before maturity?"

The corn farmer's perspective is, "What alternatives for getting some value for my crop exist?" Alternatives could include: custom hiring silage harvest and feeding beef cattle; contracting with a neighboring cattle feeder to feed your corn silage to your cattle in his/her facilities; selling corn silage in the field to dairy and beef producers with harvest and storage capability; or exchanging fields with a dairy/beef producer whose corn fields and grain is more likely to mature than yours before frost.

Dairy and beef producers in the same region probably face the same problem of a lack of mature corn, but they have more capacity to harvest and store the crop and, in some circumstances, may be willing to purchase corn for silage standing in the field.

What to do?

The first step is to carefully lay out the range of the weather scenarios that are possible. Start thinking through a few contingency plans. What is technically and logistically feasible under each? This ought to be a rough sketch to "get a sense of the territory."

The second step would be to do a rough cut of the economic viability of technically and logistically feasible contingency plans. A current concern is that feeder cattle prices may already have been bid up reflecting the cheap feed situation caused by the projected 8.7 billion bushel crop in the U.S. Much of the potential profit may be exhausted because of high feeder cattle prices. Do some pencil (computer) pushing to get a sense of what's worth following up.

The third step would be to do a more careful analysis of the contingency plans which appear to be feasible on all three measures -- technical, logistical and economic. Hopefully, there are some plans which meet these conditions for most weather scenarios.

An Approach to Budgeting

The following approach is a starting point to assessing economic viability for the corn producer whose crop (or, part of whose crop) doesn't meet maturity.

Step 1: What are feasible contingency plans over a range of weather scenarios? Will depend on livestock and storage facilities, machinery and equipment, experiential skills, marketing skills ....

Step 2: What's the economic value of corn silage at the feedbunk? In short, if corn silage were fed to beef cattle, what is the residual return left to pay for corn silage after paying for your purchased inputs and pricing other farm inputs at their opportunity cost? Or, if it were fed to dairy cattle, what is its economic value vis-a-vis price prospects for hay?

Step 3: What's the cost of getting silage to the feedbunk? Storage, harvest, reduced nutrients returned to the soil ....

Step 4: Are there cost savings resulting from harvesting corn as silage or snapped ears versus leaving it in the field?

Step 5: Net gains? Subtract cost of delivering corn silage or snapped ears (if relevant) to feedbunk from value in feeding.

Corn Silage and Cowboy Economics

Background

Corn ratings in much of Michigan indicate that grain development is seriously lagging the historical average and is far behind 1991. Barring an usually warm September, the risk of immature corn at first killing frost appears highly probable for corn that in late August was still in the "milk" or sweet corn stage.

Growing degree days required for corn at late "milk" state to reach physiological maturity are estimated to be at least 600 GDD. Days with a high temperature of 80 degrees F and a low of 50 degrees F would accumulate 15 GDD per day.

To accumulate 600 GDD would require 40 such days. How likely is it that your crops will have adequate heat accumulation before first frost?

Identify and Evaluate Alternatives

Harvesting corn silage and feeding cattle can be a physically feasible alternative for those who have access to buildings and facilities. But, can profit be made on cattle purchased in the fall of 1992?

What cost items need to be covered in order for you to profit and be better off by pursuing the identified alternative? Consider the example costs for finishing light-weight purchased steers illustrated in Table 1. These costs are intended to be representative of the current Michigan situation.

A residual accounting process can be used to determine the value remaining for the unpaid resources in question; e.g. corn silage.

Using the data in Table 1, all costs identified, excluding corn silage, total $764.25 per head.

For the steer calf purchased this fall with an expected sales date in May 1993, the current futures price for April 1993 cattle contract is in the $73 per cwt. neighborhood which might net $71.50 at the farm.

Table 1. Steer Calf Cost Budget

Purchased Steer Cost:			
550 lbs @ 0.95/lb			$522.50
1.4% death loss adj			7.30
			529.80
Feed Cost:		**Quantity**	
Corn	@ $2.25/bu	47.5 bu	$106.90
Silage	@ $??/Ton	1.61 T	??
Supplement	@ $12/cwt	2.93 cwt	35.15
			142.05
Non-feed Costs:			
Vet & Medicine			10.00
Yardage @ $0.25/day		216 days	54.00
Interest on calf & 1/2 feed @ 10%/yr			36.40
			$92.40
Sum of Costs per 1100 lb Animal Sold			**$764.25**

Gross income per animal sold would be $786.50 with a residual net to unpaid resources of $22.25. If this residual were allocated to silage, the silage would be earning $13.82 cents per ton ($22.25 per 1.61ton/per animal, {see table 1}).

Evaluation

Gross income per acre silage for this particular feeding regime would be close to $220-235 for corn fields averaging 16 to 17 tons per acre. Subtract out silage harvesting/storage costs and compare this net amount with your other alternatives for the corn field.

Cattle feeding is a capital-intensive enterprise subject to risks. The amount of cattle and dollar capital required to sell many acres of corn silage can be quite large.

Finished cattle prices for next spring are not known with certainty. Probabilistic price data estimated by Dr. Jim Hilker, MSU ag economist, suggest a 50 percent chance that cattle prices based on current option prices could be $73 per cwt. or lower.

If the cost data in Table 1 were reflective of your situation, this suggests a 1 in 2 chance to make a profit or conversely to incur a loss. Can you carry this much financial risk?

There is a need to evaluate on paper before deciding what to do. But do not procrastinate on the thought process. There is no question "if" a hard frost will occur, only "when".

The authors acknowledge the assistance of Dr. Steve Rust, MSU beef specialist, in preparing the Steer Calf Cost Budget.

See **"Harvesting Tips for Frosted Corn Used as Silage or Grain,"** and **"Soybeans, Dry Edible Beans Can be Used as Forage, But..."** on page 12 of this issue.

Michigan's Aquaculture Industry Looks to the Future

Above, tour members including MSU CANR Dean Dr. Fred Poston and AES Director Bob Gast, get a first-hand look at the Stoney Creek Trout Farm owned by Farm Bureau member Steve Ouwinga and family. Steve's operation was one of the three commercial fish operations toured by the group recently.

Aquaculture is simply agriculture in water. Michigan's fish growers currently raise millions of fish per year, serving very diverse markets, including food fish, planting stock, as well as fee fishing.Michigan farmers raise coldwater species such as rainbow, brook or brown trout, as well as warm water fish, such as bass, perch or bluegills, according to MFB commodity specialist Bob Boehm.

"With the growing health awareness, people are now making fish a larger part of their diet," said Boehm. "According to the USDA, American consumption of fish has increased from 12.5 pounds per capita in 1980 to 15.5 pounds in 1990. It's projected that annual consumption could reach 20 pounds by the year 2000."

Boehm says that means an additional 1 billion pounds of edible fish will be needed annually. Most industry experts predict that aquaculture will have to be the future source of most fish products.Additional research is needed to assist Michigan's aquaculture industry to meet the growing demand for fish products.

Recently, Farm Bureau member Bob Baldwin, owner of Aqua Springs Trout Farm and president of the Michigan Fish Growers Association, and other industry leaders, hosted a tour showcasing the diversity of their operations.

Hatchery, planting stock, food fish, as well as recreational fee fishing operations, were toured by the group. Dr. Fred Poston, dean of the College of Ag and Natural Resources; Bob Gast, director of MSU Ag Experiment Station; Bill Taylor, chairman of MSU Fisheries and Wildlife; Niles Kevern and Joyce Newman of MSU Fisheries and Wildlife, and Boehm all participated in the tour.

According to Baldwin, the tour provided an excellent opportunity to discuss the challenges facing the aquaculture industry, and the role of MSU and the Ag Experiment Station in addressing those challenges through research activities. The tour is one of many activities that the industry has been pursuing to communicate their concerns and needs.

MFB's Aquaculture Advisory Committee has drafted an aquaculture position statement (see statement printed below), which has been adopted by the Michigan Fish Growers Association and endorsed by the Michigan Agriculture Commission. The committee's goal is to develop awareness and support for expansion of Michigan's aquaculture industry.

Michigan Aquaculture Advisory Committee Position Statement

Endorsed by: Michigan Fish Growers Association and Michigan Agriculture Commission

The commercial aquaculture industry in Michigan has experienced growth fluctuations over the last twenty years, with an overall trend of a slow but steady increase. Aquaculture was the fastest growing sector of the national agricultural community during the decade of the 1980s, growing at a rate of 15 percent per year.

The total U.S. farm-gate value of aquaculture products in 1990 was estimated at $760 million. Consumption of fish and seafood also rose dramatically during this same period, from 12.5 pounds per person in 1980 to 15.5 pounds in 1990. However, the rapid growth of aquaculture elsewhere in the nation did not occur in Michigan, which along with other midwestern states, is a net importer of fishery products. It is estimated that less than five percent of the fish and seafood consumed in the states of the north central region are produced there.

In Michigan today, this non-traditional agriculture industry represents approximately $4.5 million in annual sales from over 100 commercial aquaculture producers. It's anticipated that if the public and private sectors could organize a more cohesive and supportive system for aquaculture production and marketing, Michigan could make a significant contribution to both regional and national aquacultural needs.

A major challenge to this young industry, as opposed to more traditional agricultural commodities, is the necessity to coordinate their efforts with two primary state agencies. The Michigan Department of Agriculture (MDA) has responsibility for food production and food safety, whereas the Michigan Department of Natural Resources (MDNR) is charged with protection of the state's natural resources.

There appears to be a general consensus among industry leaders that Michigan could

See "Position Statement" continued next page

FARM SAFETY

"Position Statement" continued...

benefit from a more uniform set of guidelines governing the aquaculture industry. For the industry to grow, there must be cooperation between educational institutions, state government and private industry representatives. We believe the public and private sectors can work together to address the regulatory needs of the state while at the same time facilitating the continued growth of the industry.

The Michigan Aquaculture Advisory Committee, led by the Michigan Fish Growers Association (MFGA), has been meeting monthly since June 1991. As an industry-led committee, it seeks input from the private sector as well as other state agencies and organizations to assist MDA and MDNR in establishing guidelines for developing aquaculture in Michigan. An important function of this committee is to provide a forum where both private and public agencies, institutions, and organizations can discuss problems, opportunities, needs, regulatory issues and other information pertinent to the continuance and growth of aquaculture in Michigan.

The committee consists of representatives from MFGA, MDA, MDNR, Michigan Farm Bureau, Michigan Department of Commerce, Michigan Sea Grant Extension Program, Michigan State University Cooperative Extension Service, Bay Mills Indian Community, Inter-tribal Fisheries Assessment Program, and the North Central Regional Aquaculture Center. Additionally, other state departments and organizations are and will be contacted for input and comments in developing a comprehensive state aquaculture plan or directive.

In order for Michigan aquaculture to develop competitively with the nation, legislation is needed that will encourage and promote aquaculture in the state. Industry needs that should be addressed by such legislation are:
(1) identification of aquaculture as an agricultural enterprise,
(2) a plan for the development of aquaculture in the state, to be written with the full participation of both MDA and MDNR,
(3) a state Aquaculture Coordinator who would serve as a liaison among the aquaculture industry and those agencies involved with aquaculture, and also serve as the primary resource person for those needing assistance for information pertaining to aquaculture,
(4) product marketing, market research and promotional programs,
(5) personnel and facilities for disease diagnostics,
(6) research and development funds,
(7) availability of sources of financial assistance, and
(8) aquaculture educational programs.

When the appropriate legislation has been enacted and all parties involved in Michigan aquaculture can meet as a collective whole, striving for a common goal, then aquaculture will have an excellent opportunity for growth in a state blessed with abundant aquatic resources. Benefits of increased aquaculture production will include enhanced economic development throughout the state, new job opportunities and streamlining of government functions and regulations. Additionally, there would be a reduction in importation of aquatic products and further safeguards for the protection of the natural resources of the state.

Preventing Theft On The Farm

From Farm Bureau Insurance

Rural theft is like a three-legged stool. One leg is the victim, one leg is the criminal, and one leg is opportunity. If you do your part to remove the opportunity, the stool can't stand--and you can keep from being a victim.

What can you do to stop thieves? You can concentrate on three areas: visibility, accessibility, and identification.

Visibility – Highly Visible Belongings Make For Highly Visible Crimes.
Light it. Most of your valuable equipment and possessions are accessible from your yard. With new, high-efficiency lighting systems, you can make your yard a place where no burglar would want to spend much time.

Keep an eye on it. Try to make sure that all your equipment, valuable supplies, small animals, or doors that lead to them are readily visible from your house. Make sure your fuel supply is well-lighted and visible from your house. Remember: What a burglar fears most is being caught in the act.

Park it where a neighbor can keep an eye on it. If you must leave heavy equipment in the field, be sure to park it where it is readily visible from a neighbor's house. Or work out an arrangement whereby you can park tractors, combines, and other valuable equipment in each other's yards.

Accessibility – A Thief Who Really Wanted to Work Would Get a Job.
Enclose it. Use a small outbuilding or corner of the barn for storing maintenance equipment, tools, and other easily moveable belongings. The door should be visible from your house; it should be of solid core construction with a deadbolt lock or hardened steel alloy hasps and padlock; and it should open inward so the hinges are not exposed.

Secure it. Drawn implements, irrigation pumps, and other equipmentleft outside should be chained and locked securely. Keep the batteries of power equipment securely enclosed and tightly bolted.

Disable it. Power-driven implements should have hidden ignition kill switches.

Consider installing a master switch for your fuel pump inside your house.

Fence it. Keep fencing and gates in good repair and locked.

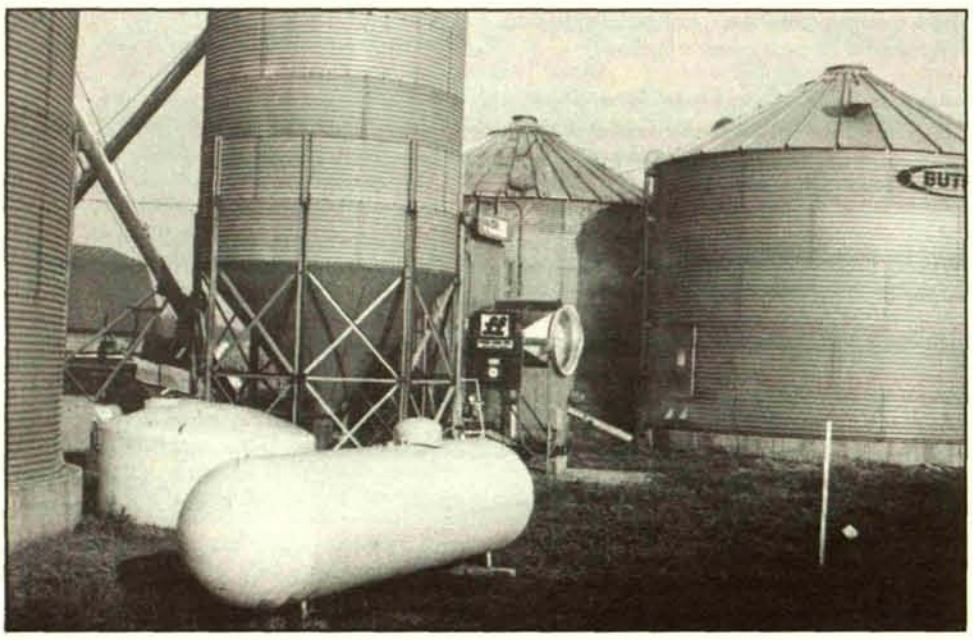
Identification. Identifiable Belongings Make Less Desirable Targets.
Use Operation Identification. On your more valuable belongings, engrave, stamp, or weld your driver's license number and the abbreviation of your state. Advertise with Operation ID stickers.

Mark it. Paint or stencil your name and home town on all your equipment and tools as well as on your expensive chemical containers and fertilizer bags. The markings will make the items less attractive to thieves--and increase the likelihood of recovery if they are stolen.

Brand it. Branding is a good deterrent to livestock rustling--and so is tattooing inside the animal's lip.

10 Tips for Drying Soybeans and Navy Beans if Needed

Research has shown that navy beans harvested at 22 - 24 percent moisture can be dried using current corn drying technology as can soybeans harvested at 18 - 20 percent moisture, if relative humidity and temperature can be controlled.



Soybeans

Most of the research regarding drying soybeans has focused on soybeans harvested at 18 to 20 percent moisture. The main item to watch is the humidity of the drying air.

Research shows that relative humidity of drying air should be greater than 40 percent to help prevent skin cracks. To keep the air above 40 percent relative humidity, the temperature of the drying air should not be boosted more than 20 degrees.

Many older dryers cannot maintain temperatures below 120 or 140 degrees F, however. A relatively simple shield can be used to direct some of the moist drying air back to the intake of the fan to increase the humidity of the drying air. Drying can then likely proceed with a higher temperature.

Bin drying of soybeans can often overcome high moisture levels also. Kansas information shows that air at 60 degrees F and 40 percent relative humidity will take five to six days to dry from 16 to 13 percent moisture. Again, adding more than 20 degrees of heat will cause skin cracking. Remember also that a drying bin should have a full false floor for uniform air distribution.

In a pinch situation, you might consider putting four feet of dried grain over the ducts in the bin to get more uniform air distribution. These bins, however, typically have fans designed for 1/10 to 1/5 CFM per bushel, which is 20 percent of what is ideal for soybean drying.

Navy Beans

Research focusing on navy beans harvested at 22 to 24 percent moisture has shown that current corn drying technology can be successful, as well. There is very definite concern, however, about seed coat cracks.

Canadian research suggests that the drying air relative humidity should be greater than 30 percent. To keep air above 30 percent relative humidity, drying temperatures shouldn't exceed 20 degrees F.

Check the combine manufacturer's recommendations for setting cylinder speed and clearances. Minimum cylinder speed for effective threshing is determined by the moisture content of the pod. Set cylinder speed just fast enough for effective threshing and minimize mechanical damage.

All of the previous discussion on drying soybeans applies here as well. Recommendations for heated air bin drying are to use a grain depth of no more than two feet and air temperatures of 60 to 70 degrees F.

The biggest problem with drying navies is the seed coat damage with the use of conventional corn handling equipment. Canadian research shows that navy beans are eight times more susceptible to mechanical (handling) damage than soybeans. Damage does decrease with higher moisture levels.

Conventional wisdom says that augers can be used if they're large, run full of grain and run relatively slow. Research shows augers running fast and only partially filled cause the greatest amount of damage.

U-Wisconsin Data Base Lists Hay to Buy or Sell

Farmers who have hay to sell or need to buy it can do so by means of a data base established by the University of Wisconsin Extension Service.

The Great Lakes Haylist data base includes listings from Michigan, Wisconsin, Minnesota, Illinois, Indiana, Iowa, Kansas, Missouri, Nebraska, New York, Oklahoma and Pennsylvania. **The data base can be accessed by calling 1-800-462-7408.**

The cost for sellers is $20 for up to six months which includes monthly renewals. The seller's listing remains active for 30 days and then is dropped unless the grower notifies data base officials. Sellers may relist up to five times.

Farmers with hay to sell enter the following information into the haylist data base:

- type (alfalfa, grass, etc.)
- how it was stored
- quantity.
- price
- form (square or large round bales)
- cutting date
- whether transportation can be provided
- dry matter percentage
- crude protein
- neutral detergent fiber
- acid detergent fiber

There is no charge to farmers who need to access the data base to buy hay. Prospective buyers can request all of the haylist's forage listings or ask for sorted lists according to specifications such as locality or quality.

More information about the data base can be obtained from Dan Undersander, U-Wisconsin agronomist, by calling 608-263-5070.

IRS Cracks Down on Options Hedging; Key U.S. Court Case Coming Up

By Kevin Pendley and Robin Taylor,
Knight Ridder Financial News

The use of some options strategies as a hedging tool is coming under attack by the Internal Revenue Service, and a key case that could have a dramatic impact on trading soon will go to court.

An option is a legal contract that gives the holder the right to buy or sell a specified amount of the underlying futures at a fixed price upon exercise of the position.

Options trading has flourished in the past 10 years with cash settlement of futures contracts and a growing understanding of how options work. Options strategies can carry limited or unlimited risk.

The options case in question involves Kansas cattle producter Robert Cather. Cather bought puts to establish a minimum selling price for his cattle and sold calls above the market, which allowed him to collect premium income but also limited his gains if cash prices should move higher.

Other cattle producers have come under attack from the IRS for similar hedging strategies, but disallowing some of these options hedging tools could spill over into financial options trading.

The Chicago Mercantile Exchange and Chicago Board of Trade see the precedent set by the Cather case as important enough to pay Chicago law firm Hopkins and Sutter to represent Cather. A complaint over the IRS audit of Cather's options position could be filed within a month, said Brad Ferguson, a partner with Hopkins and Sutter.

"This broad-scale attack by the IRS has people living in a lot of uncertainty about hedging practices," Ferguson said.

The threat of IRS scrutiny already has had an adverse effect on live cattle options trade. Average daily volume this summer in live cattle options is down almost 70 percent from last year and down 80 percent from January.

Open interest has collapsed to 22,826 contracts from 47,564 last year and 53,244 in mid-January.

According to Commodity Futures Trading Commission member Joseph Dial, the IRS has been interpreting a 1988 Supreme Court decision involving Arkansas Best Corp. to mean that only a narrow category of legitimate business hedges can receive ordinary tax treatment.

This IRS scrutiny means that gains and losses on many kinds of hedges must be treated as capital gains and losses.

The losses are not deductible against ordinary business income, which can significantly reduce or even eliminate a hedger's after-tax profit, Dial said.

In a speech in May, Dial said that "as a consequence of this interpretation, American business is experiencing financial loss and a diminished ability to use the futures and options markets to managing risk effectively.

"The uncertainty that this problem has caused puts the hedger on the horns of a dilemma.

"Does he attempt to hedge his business activity and risk subsequent adverse tax treatment, or does he forego the protection of hedging through futures and options and leave himself open to market risk?"

The IRS interpretation of the Arkansas Best case could compromise futures and options markets by keeping the most informed participants out of the price discovery process, Dial said.

Fate of 1993 Seed Supply Hinges on Date of First Frost in 1992 as Well

The threat of an early freeze across the Corn Belt has at least one seed company calmly pulling rabbits out of hats to protect germination and assure the quality of next year's seed supply.

1992 Weather: Never a Dull Moment

Since day one of this growing season, the weather has been anything but normal. In Nebraska, spider webs formed on idle center pivots as rains continually drenched the seed growing areas of the state. Meanwhile, much of the Corn Belt recorded the driest May and June on record. Also, throughout the summer, temperatures were unseasonably cool. However, just as the corn approached the point of no return, timely rains quenched parched fields and set the stage for harvest of an average corn crop.

But it is the frost on the first day of this summer which hints at an early freeze this fall. During this century, we've had frost three others times in June (1918, 1963 and 1974) and in each of those years, we've had frost in September, according to Bob Neilson, an Extension agronomist at Purdue University.

David Thomas, Northrup King's director of corn production, says, "The seed corn crop is about two weeks behind where we'd like to be. We lost maturity two ways: the early drought stunted corn and the lack of heat units hampered development.

Despite earlier weather-related setbacks, stands look good, pollination and seed-set were excellent and plants now have plenty of moisture for grain fill.

At this point, frost is more of a worry for seed growers than grain farmers. Thomas says as long as corn grown for grain is around 30 percent moisture at the time of frost, growers will have good test weight and feed value. However, frost will destroy seed's ability to germinate, especially if it has not field-dried to less than 25 percent moisture.

"Since plant development is delaying harvest, we plan to pick corn at higher moisture than normal to get it out of the field before it freezes," Thomas says. "We're also increasing our dryer capacity, enabling us to handle more bushels per hour."

Northrup King also installed computerized monitors in its larger dryers to increase efficiency and allow operators to turn batches around as quickly as possible. In addition, the monitors prevent overdrying, which helps avert mechanical damage during shelling.

Finally, the company has made plans for winter production in Chile and is quality testing inventories made possible by excellent yields from 1991 winter production.

Harvesting Tips for Frosted Corn Used as Silage or Grain

Corn Intended for Silage

If a severe frost occurs in Michigan before the end of September, most of the corn crop intended for silage will be caught at an immature stage of development.

Information from agronomists at Michigan State University and the University of Wisconsin and the National Corn Handbook, suggests that the first thing corn growers should do after a frost is inspect the crop.

Inspect frost-stricken corn in the morning after the frost when the crop is beginning to thaw. If the plant has been frosted, the contents of the plant will begin to leak and can be smelled.

The effect of frost damage on the yield will depend on how much of the plant tissue was killed and the corn plant's stage of development.

If frost kills only the plant leaves, the sugars in the corn plant will be redistributed from the stalk to the ears. This often increases kernel dry weight beyond the frost date.

If a severe frost kills the ear shank, however, there will be no further movement of sugars to the grain.

The next step is to consider options for handling the crop. To make good corn silage, the whole-plant moisture should be 62-68 percent (30-45 percent dry matter).

Frosted at the Milk Stage - Silage

Corn at the milk stage is likely to have a whole-plant moisture content of at least 80 percent. If corn at this stage is harvested immediately after a frost, the silage will be wet and sour, nutrients will be lost in silo seepage and livestock consumption will be low.

The options are to greenchop and feed the corn or to let it dry in the field until whole-plant moisture is less than 70 percent for corn to be ensiled in an upright silo, or 75 percent if it's put into a bunker silo or stacked.

Because harvest losses will increase with time, growers will have to balance harvest losses against resulting silage quality problems.

If the crop must be harvested and moisture is high, blend grain or straw with the silage. Each 30 pounds of this material added to a ton of silage will reduce the moisture content by 1 percent.

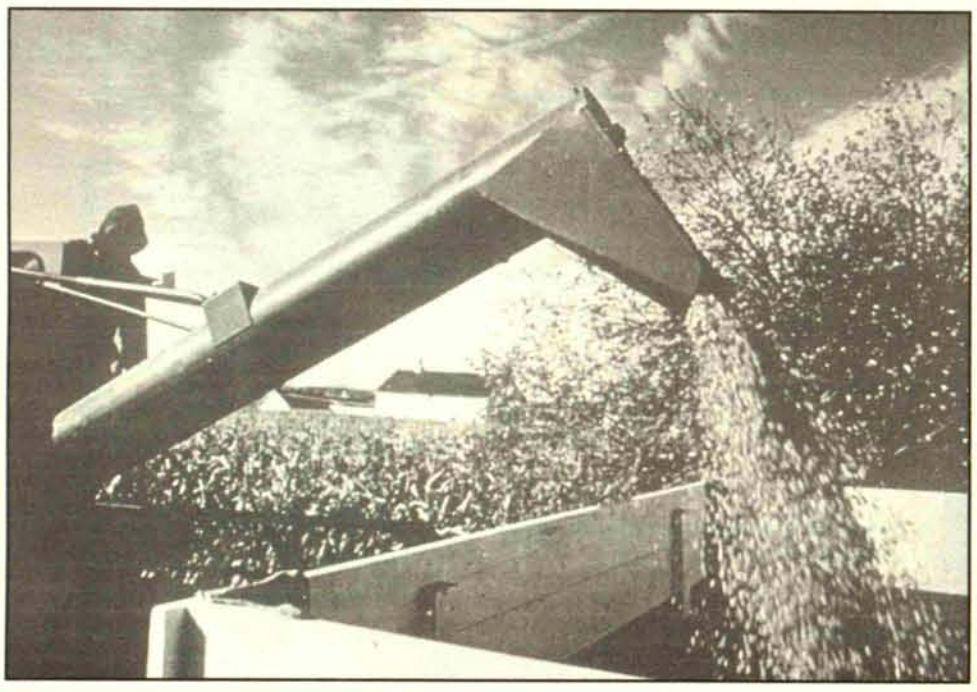
Livestock will eat less of this silage, but the dry matter and crude protein digestibility may be equal to or higher than that of mature corn silage.

Test the silage for moisture and feed value before feeding.

Frosted at the Dough Stage - Silage

Corn frozen at the dough stage should be allowed to field-dry until whole-plant moisture reaches at least 70-75 percent. Handle the crop the same as milk stage corn. Test the silage for moisture and feed value before feeding.

If kernel moisture is over 30 percent, increasing your combine's cylinder speeds and setting conclaves closer may help clean-shell kernels from the cob.



If corn in the milk stage is harvested immediately after a killing frost, the silage will be wet and sour, nutrients will be lost through silo seepage and livestock consumption will be poor.

Frosted at the Dent Stage - Silage

Corn frosted at the dent stage will probably have a whole-plant moisture content greater than 62-68 percent. Allow plants to dry to these levels before ensiling.

If the corn has reached the late dent stage – when the milk line is halfway between the corn and the kernel tip – the whole-plant moisture should be ideal for ensiling.

Because physiologically mature corn dries quickly in warm, dry weather and a heavy frost may increase leaf loss, ensile the corn immediately.

Be on guard for the possibility of the crop becoming too dry as harvest progresses. Corn harvested below 60 percent moisture doesn't pack well. Silage that doesn't pack well will not exclude air from the silage mass and is likely to heat and mold. This greatly reduces quality.

Raise the moisture content, if necessary, by uniformly mixing water with the silage before ensiling. About 7 gallons of water mixed with each ton of silage will raise the moisture content about 1 percent. Raise the moisture content to at least 60 percent.

Corn Intended for Grain

Frosted at the Dough Stage - Grain

Yields will be reduced at least 50 percent unless the stalk, ear and some leaves survived the frost. Test weight will be less than 50 pounds per bushel and kernel moisture will be upwards of 60 percent. Kernels should be down to 35 percent before attempting to harvest, however, expect field losses due to lodging and possible mold development.

If kernel moisture is below 30 percent, reduce combine cylinder speed. If it's over 30 percent, increasing cylinder speeds and setting conclaves closer may help clean-shell kernels from the cob.

High temperature drying (200 degrees F) for more than two hours may cause immature corn to turn brown. If browning occurs, try lowering the drying temperature to about 180 degrees F. It will be difficult to dry corn wetter than 26 percent kernel moisture with natural-air or low-temperature systems for long-term storage.

Frosted at the Dent Stage - Grain

Corn frost-killed at the early to mid-dent stage will have a kernel moisture greater than 50 percent and at late dent stage, about 40 percent kernel moisture. Depending on dent stage, yield will be reduced by 10 to 40 percent, and test weights will suffer also.

If only a portion of the plant tissue was killed and/or the grain was in the late dent stage, yield loss will run from about 4 to 10 percent and test weights will be close to normal.

Severe frost will not affect grain yield or quality after physiological maturity and drying rates will be influenced by hybrid and environmental conditions. Kernel moisture will be less than 40 percent and harvest can begin following the normal drying period - several days of drying weather - after the frost.

Soybeans, Dry Edible Beans Can be Used as Forage, But...

Soybeans and dry edible beans that will not mature for harvest could be used as livestock forage.

Growers, however, need to take into account the herbicide used on the crop and the crop's potential nutritive value before harvesting it as forage.

According to Karen Renner, MSU Extension herbicide specialist, soybeans can be fed to livestock if the following herbicides were used:

- Dual, Lasso EC, Prowl, Treflan, Lorox and Basagran.
- Metribuzin (Sencor or Lexone) if 40 days elapse between application and harvest for forage.
- Butyrac 200 (2, 4-D, B) if 60 days elapse between application and harvest.
- Poast or Poast Plus. Soybeans can be fed as hay but not be grazed or fed as green forage.

All other herbicides may prevent the crop from being used as forage.

The herbicide restrictions for dry edible beans are as follows:

- Lasso or Lasso MT. No restriction on the label.
- Treflan, Prowl or Eptam. No restriction if used alone on the crop.
- Basagran or Poast. Thirty days must elapse between application and harvest.
- Dual. One hundred twenty days must elapse between application and harvest.
- Prowl + Dual, or Prowl + Eptam, or Treflan + Eptam, or Pursuit. Do not graze or harvest.

Dry edible beans and soybeans harvested as 27 percent dry matter (DM) may have a nutrient value similar to that of alfalfa at early bloom, says Herb Bucholtz, MSU Extension dairy nutritionist.

Forage quality can vary, however, and will decrease as bean plant leaves turn yellow and drop, so growers need to decide to harvest for forage rather than grain before considerable leaf loss occurs.

Bucholtz also points out that bean plant stems are not very palatable and that harvest operations, such as raking, will increase leaf loss and reduce forage value. Frost will not reduce bean nutrient value if the leaves remain on the plant.

Beans harvested for silage that have more than 30 percent DM will not ferment properly and will provide poor quality silage.

Harvesting beans as hay may be difficult because the plants and pods dry unevenly, Bucholtz adds.

Dry edible beans or soybeans fed as forage should not exceed 25 percent of the DM intake of lactating cows because potential palatability problems could lower DM intake. Bean silage could be the sole roughage source for young stock.

Rations that are to include bean silage should be specifically formulated and balanced using the results of a laboratory feed analysis, Bucholtz says.

Corn Storage and Dryer Considerations For a Speedier Harvest in 92

Roger Brooks, MSU Ag Engineering

Moisture Management

Grain this year, may be immature and may be molded or sprouted in the field. Immature and sprouted or moldy grain should be dried one percentage point lower in moisture than good condition corn.

Temperature Management

Grain in storage should be between 30 and 50 degrees F to maintain quality over a period of time. Colder temperatures are not desirable because of the likelihood of warm spells during the winter months, which may lead to moisture migration and a moisture build-up in the surface layers of the grain. Warmer temperatures will promote continued germination and mold growth, in addition to promoting insect growth.

Grain which is 30 to 40 degrees F can be held successfully into early summer without warming. With the potential of poor initial conditions this year, it's best not to warm the grain in the spring, making it critical that grain not be cooled below 30 degrees F this fall.

Drying an Immature Corn Crop

Indiana information suggests that during good fall weather, we can expect corn to dry at about .5 percentage points per day until the middle of October and half that rate after mid-October.

Cool wet weather can reduce this to .1 percentage points or less. Rain or snow can actually cause an increase in moisture content. After the corn reaches maturity, the rate of drying is controlled more by humidity than by temperature.

Harvest losses will increase exponentially 30 days after grain reaches maturity. Harvest losses after 30 days can easily surpass additional drying charges.

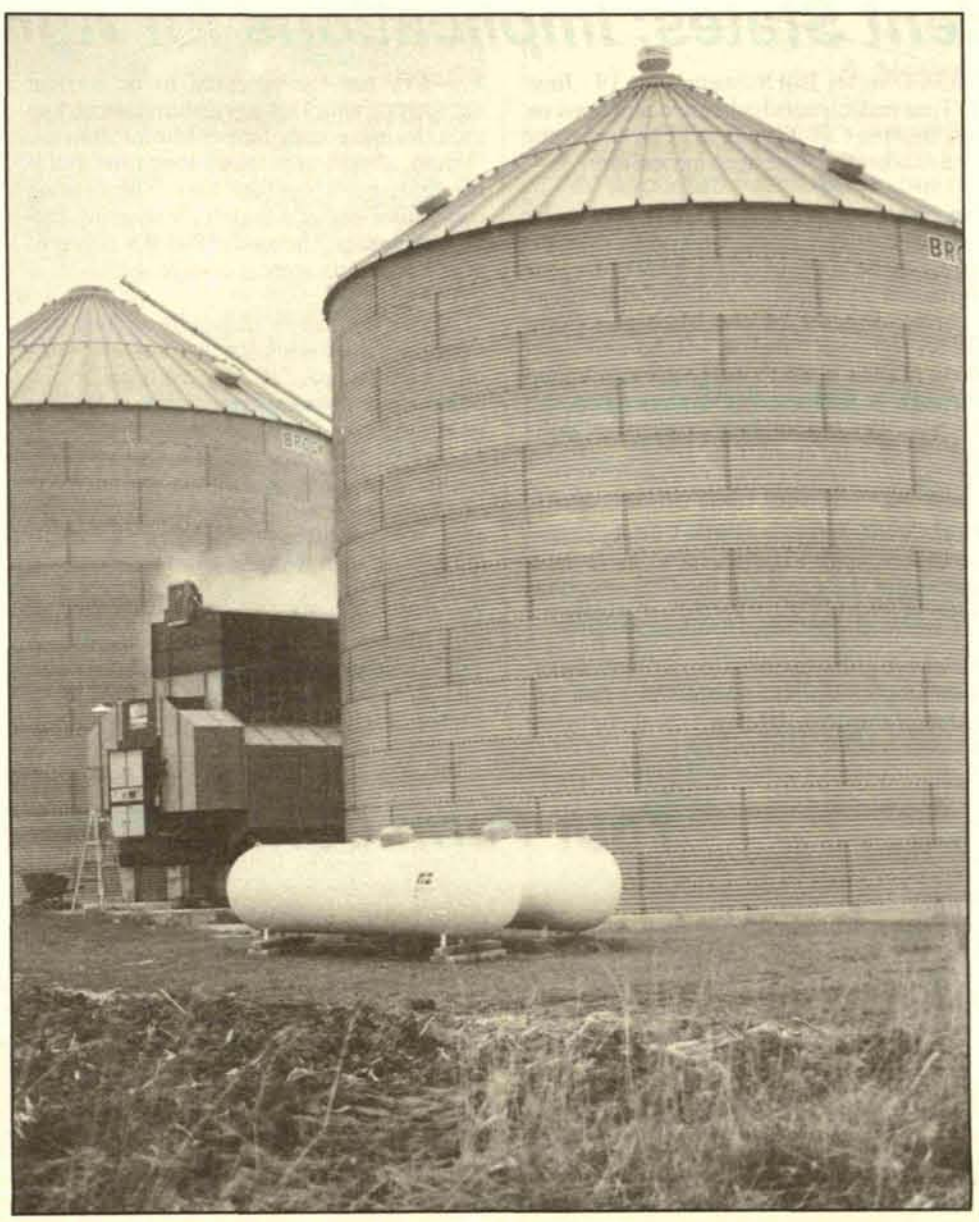
If the kernel has reached maturity (about 35 percent or less moisture), then drying can proceed to normal storage moisture. If the kernel has not reached maturity, be aware that immature corn will have a low test weight and, consequently, low feed value.

Immature corn should be dried to 14 percent moisture for short term storage and 13 percent moisture for long-term storage. Corn coming from the field with mold problems should be dried within 24 hours.

Dryer Tips - Utilize Dryeration

If you're using high temperature continuous flow drying technology, consider using full heat in the dryer by converting the cooling section of your dryer into an additional drying section. If you're using a high temperature batch dryer, eliminate the cooling time from the cycle.

The objective here is to take grain hot (normally about 140 to 160 degrees F) from the dryer at 17 to 18 percent moisture. The drying and cooling are then finished in the storage bin providing several advantages including:



- ☐ Increased grain flow through the dryer
- ☐ Reduced drying costs by making better use of heat already in the warm grain
- ☐ Reduced kernel breakage by slowing the drying and cooling rate

Putting hot grain into the storage bin is known as dryeration and was pioneered by research at Purdue University. Delayed and slow cooling of hot corn can remove two or three percentage points of moisture.

The basic process is to begin by putting the first days harvest, hot and dried to 17 or 18 percent, into a storage bin. At the end of the day (about 12 hours later), turn the fan on to begin the drying and cooling process. The delay is important to let the kernels adjust to the moisture previously removed during the high temperature drying.

At least half of the grain should be cooled by the next morning. If so, you can begin adding the next day's harvest to the bin and leave the fan running. If all the grain is cool, turn the fan off until you finish harvesting at the end of the day.

If the drying and cooling has not progressed (normally in bins with less than desired airflow), begin the process in a second bin and continue to alternate bins. I'd suggest that you take moisture samples of the cooled grain daily to make sure that you're reaching moisture close to 15 percent.

There are variations to be expected due to different weather conditions. However, the temperature of the grain and the delay between high temperature drying and final drying and cooling are the most important for determining the amount of final drying accomplished.

As drying time increases, corn is more susceptible to browning (dryer damage). Browning isn't a problem if the corn is going to be fed to your livestock, but it will be discounted at the elevator. Research indicates that exposure to drying temperatures of 200 degrees for time periods in excess of two hours will likely result in various degrees of browning.

For immature corn at or above 35 percent moisture, drying temperatures may need to be reduced to 180 degrees F if browning occurs.

Bin Dryer Tips

If you're using a bin drying system (possibly in southern Michigan), there are a couple of things that you can do to speed the drying process. A bin drying system for corn is typically designed to supply one to two CFM per bushel of grain in storage, usually figured on a full bin basis.

- ☐ Begin the drying process as soon as you have two or three feet of grain in the bin.
- ☐ Adding 10 degrees F of heat to the drying air will usually dry corn that is below 25 percent moisture content. Adding more heat will decrease the drying time, but it will also increase the potential for mold development in the upper layers.
- ☐ Fill the bin only half full, which will produce an effective airflow at least double that of a full bin. Once the surface layer begins to dry, then you can consider adding additional grains to be dried.
- ☐ Once corn has reached 17 percent moisture, it usually will stay in good condition through the winter if kept cool. Drying can be completed with warmer weather in the spring.

Reprinted from the Aug. 26 MSU CAT Alert

October, 1992 Discussion Topic -- "Commonwealth of Independent States: Implications for Agriculture."

The destruction of communism in Eastern Europe brought about the collapse of one of the largest cash markets for U.S. agricultural exports, according to the USDA Economic Research Service. The Soviet Union was at one time or another the largest purchaser of U.S. wheat, the second-largest buyer of U.S. feed grains and the fourth-largest agricultural market overall.

Today, the composition of U.S. farm exports to the Commonwealth of Independent States (CIS) has changed, both in the mix of commodities sold and in terms of trade -- from sales for cash to sales made possible by Commodity Credit Corporation (CCC) programs. Given the poor economic conditions in the former Soviet Union, U.S. government assistance is needed just to maintain exports of corn, protein meal and soybeans.

The key to long term, unsubsidized sales to the CIS appears to be the willingness of the former Soviet republics to reform their economies.

Alan Holiman, an expert from the University of Kansas Center for Soviet Studies, told a group of Midwest Farm Bureau marketing and commodity personnel meeting in Traverse City this summer, that if reform measures are successful, competition and the profit motive likely will encourage greater productivity and efficiency on Russian farms. Russia, he said, has taken the lead in trying to boost production through reform and farm privatization.

That would have varied affects on U.S. farmers. Wheat sales to Russia would decline sharply and demand for U.S. corn and feed grains would be trimmed.

"But there's going to be a growing market for something else that should interest American agriculture -- value-added food products," Holiman said. "The sale of value-added products can offset the decline in feed grain and wheat sales to Russia." When wages rise, demand for products such as poultry will rise, he explained.

Michigan farm leaders got a first-hand look at agriculture in the CIS on a tour led by MDA Director Bill Schuette May 19 - June 1. Tour participants had mixed reactions on whether the CIS is going to be a competitor or a market for American agriculture.

"In certain respects, they are going to be competitors and, in other respects, they are going to be a tremendous market for our agricultural products," said Pat Driscoll, executive director of the Michigan Farm Radio Network. "Russia will be a tremendous market if they can generate revenue through a free-market system. But the Ukraine has tremendous productive abilities in certain crops like wheat, rye and canola."

Norm Veliquette, an Antrim County cherry processor, said it is difficult to know how successful the people of the CIS are going to be in creating a market-based system.

"If we are going to develop trade with them, they've got to produce something that has value. If they can't, I don't see them being a viable trading partner," he said.

The CIS has the potential to be a great competitor with U.S. agriculture, according to St. Joseph county farmer Marlin Outman. "I think it's going to take a long time, but if they ever get it together, they'll be a strong competitor because they have so many natural resources," he said. "But it's going to take a complete mental change.

"They've been so repressed for so long that they can't even think for themselves," Outman commented. "If they even get to the point where they get their ambition back to be competitive, they'll do really well."

Political realities and humanitarian concerns probably mean that the U.S. government will continue to subsidize exports to the CIS, at least over the short term.

The long range future of agricultural trade with the old Soviet Union depends upon a wide range of uncertain factors. Russia was a major food exporter before the 1917 Revolution. The question remains whether they be able will build the political and economic structures necessary to regain their former agricultural productivity.

Discussion Questions

1. Should the United States continue to provide assistance to former communist states in bringing their agricultural system up to date? If so, in what form should this assistance be?

2. If the CIS currently does not have the money to pay for exported U.S. commodities, how should compensation for these exports be determined?

3. Who should be involved and what should be their roles in efforts to improve the CIS agricultural industry?

4. Who will benefit the most from continued trade with the CIS?

CIS Grain Production Expected to Rise

A German trading firm, Toepfer International, says the Commonwealth of Independent States (CIS) are likely to produce a much larger grain crop this year than the 152 million tons produced there last year. The Hamburg-based trader said the CIS would likely harvest 165 to 170 million tons this year.

A Moscow television report also said the newly independent republics' grain imports will be reduced to an estimated 28 million to 30 million tons in the 1992-93 marketing year just begun, compared to last year's purchase of 39 million tons.

– Michigan Farm News Classifieds –

01 Farm Machinery

1976 DODGE PICKUP, 2 Badger Blowers, 2 Badger Choppers, 1 Bale pickup wagon, 1 Badger manure spreader, Dietz Rake and Tedder, 1 Dietz Baler. 616-832-5977, 616-832-5975

BALE CHOPPER by Goossen P.T.O. used less than 60 hours. $2700 new, $2000 now. Phone 616-889-4066.

BRILLION 25' foldup packer solid. IH 45 field cultivator 27' with Lever. JD 55 Combine square back. 313-753-9932

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04 Livestock

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REGISTERED HOLSTEIN BULL for sale, sire Gambler, out of a 22,000 lb 869F Dam. R. Hyde 616-856-4481.

06 Agricultural Services

CREEKVIEW ELEVATOR COMPANY, INC is open for business in Sheridan, offering very competitive prices for your commodities especially dry, edible beans. Call 517-291-3217.

CREEKVIEW ELEVATOR COMPANY, INC is open for business in Sheridan. Seeds, fertilizer and soon offering chemicals for all your agricultural needs. Call 517-291-3217.

09 Real Estate

3 BEDROOM Mini Farm, partially wooded on 13.57 acres. Just west of Adrian. 2½ car heated garage, 30'x40' pole barn w/Lean-To, paved road. $108,000. F-709. **Faust Realty, Adrian** 517-263-8666.

12 General

1985 S-10 PICKUP with topper. 95,000 miles, excellent condition, $2600. Call 616-826-3662.

12 General

HORIZONTAL Steel fertilizer tanks glass lined: 20,000 gallon size $1900. 29,000 gallon size $2900. Good for liquid fertilizer products. Call Jerry Buginsky, Lennon, Michigan 517-288-6015.

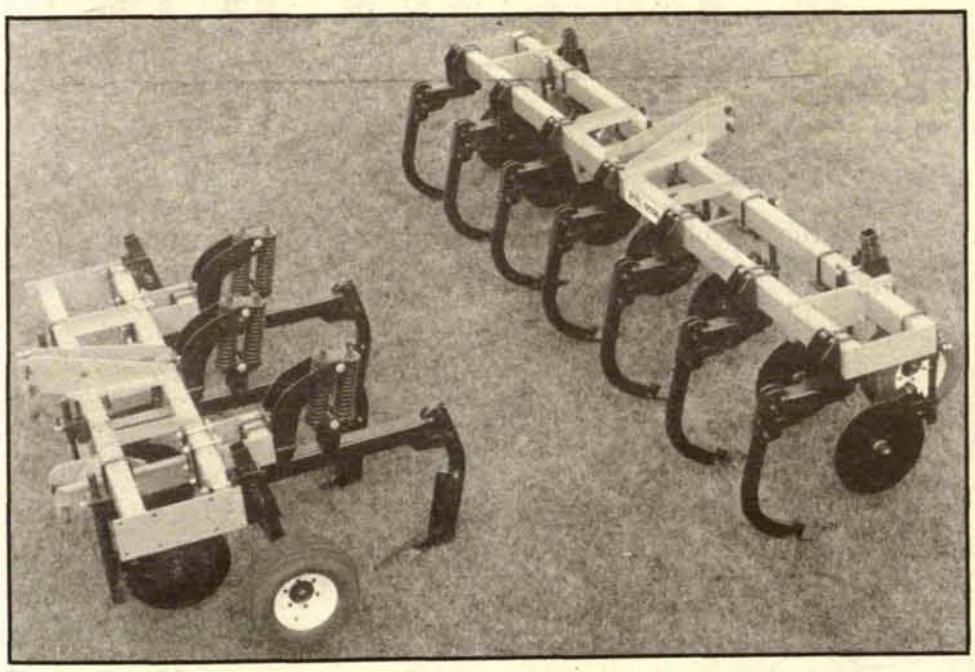
5 SPEED New Process Transmission, $250. 2 speed rear end 12 bolt pumpkin out of 1978 GMC, $300. Or BO. Call anytime 517-624-4658, can deliver.

BLUE HEELER PUPS 10 weeks old, mother good with cattle and hogs. **Pork Chop Hill Farm** 517-283-3001.

NA-CHURS Liquid Fertilizer Products. Foliar and starter analysis along with liquid potash (0-0-30) and trace elements. Soil testing and delivery included. Dealer inquiries welcome. Contact **JERRY'S AGRI-SALES** Distributor for Gratiot, Genessee, Livingston, Saginaw, Shiawassee and Tuscola Counties. Call collect for further information. 517-288-6015.

BALED WHEAT STRAW, Rex forage box, grain drills, cultipackers, vibra shanks, brush hogs. Call after 1pm 517-773-5374. Dan Reid.

DMI Adds New Features to Ecolo-Til Mounted Conservation Yield-Till Tools



DMI, Inc., Goodfield, IL, recently added new features to their line of Ecolo-Til mounted, straight-bar design Yield-Till tools, a part of the DMI Yield-Till System of Conservation Tillage Tools. These new improvements include: new optional shear-bolt shank mounting for non-rocky areas; new optional MRD shanks with shin wedges that relocate compacted layers with Minimum Residue Disturbance for inter-row ripping in No-Till and Ridge-Till; and a new optional 6" covering attachment for additional residue coverage when using parabolic shanks.

The Ecolo-til also features special DMI 1-1/4" x 3" edge-bent parabolic shanks with three point options (a 7" Q/P Tiger-Point, 5" Tiger-Point, and 2" straight point). According to DMI, these shanks will till over 16 inches deep to reach down and relocate compacted areas without slotting. Four-inch covering attachments (in addition to the new 6" units) are available for additional residue coverage. Shanks can be equipped with DMI Quad-Spring reset mountings to maintain tillage depth, plus provide nine inches of vertical trip clearance.

Optional, individually mounted, spring-loaded, 20-inch colters with manual depth adjustments are available to slice through residue and pre-fracture surface soil ahead of shanks. According to DMI, this results in Residue Management that cuts residue in short pieces to combine with the coarse surface soil to minimize erosion and subsequent loss of topsoil and fertilizer.

Larry VanEtten, DMI product manager, states: "These new features are designed to assist DMI Ecolo-Tils in eliminating soil compaction...the number-one yield robber! This is accomplished, in addition to residue management, through air and water management."

The DMI Ecolo-Tils are available in three model sizes: a 3-shank base model that converts to a 5-shank with optional wings; and a 5-shank base model that converts to the 7-shank model with optional wings. All units can be equipped with optional 8" shank extensions for staggering shanks to provide additional residue flow through, or create a V-formation on the 3-shank model. **For further information, contact: DMI, Inc., P.O. Box 65, Goodfield, IL 61742-0065; phone 309/965-2233.**

Announcing
A New Member Benefit

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At *Michigan Farm News*, our commitment to serve Michigan Farm Bureau readers is always a top priority. Beginning with the September 15 issue, readers will be able to read and purchase statewide classified advertising at a cost unmatched anywhere in Michigan.

Michigan Farm News has contracted the services and skills of the *Greenville Daily News*, which also prints the *Michigan Farm News*, to operate the classified section. Experienced Greenville Classified Advertising staff will help place your ad, via the 1-800 phone line dedicated exclusively to *Michigan Farm News* classified users, or through the mail if you prefer. Ads can be paid for either by check or credit card if placed through the mail, or by credit card if placed over the phone.

In the *Michigan Farm News Classifieds*, your ad will reach 45,000 real farm family households across the entire state of Michigan. That's 45,000 actual farm family members of Michigan Farm Bureau from the southern state line to the northern reaches of the Upper Peninsula.

Deadline for next issue is September 22, 1992

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Simplify Your Operation With FPC's Four-Step Lubrication Strategy

If you're like many Michigan farmers, you probably own a mixed fleet of tractors, self-propelled machinery, implements, and farm vehicles. More than likely, each manufacturer recommends "their own brand" of lubrication products, meaning you're likely carrying a mixed inventory of lubricants as well.

Farmers Petroleum Cooperative (FPC) has an alternative to help relieve on-farm inventory headaches of which and how much lubricant to stock on your shelves, with four oil products that can meet all your farm lubrication needs

Superol Gold Motor Oil

Farmers Petroleum's Superol Gold Motor Oil is a premium, heavy duty oil that can provide the ultimate in performance and protection for mixed fleet service. Superol Gold's additives were designed specifically for severe service conditions in today's new generation of high performance heavy duty diesel and gasoline engines.

Superol Gold's additive system with 10+ TBN provides sure protection against corrosion, rust and oxidation concerns and reduces engine wear due to high pressure. Superol Gold 15W40 is API Classified SG/CD-II, CF-4 and meets or exceeds manufacturers' test requirements, providing excellent low temperature, high temperature/high shear performance and better fuel economy.

FPC 75-Hydraulic Fluid

The modern tractor's life blood - hydraulic fluid - provides protection for your tractor's transmission, power take-off, attachments, implements and brakes. FPC's 75 Hydraulic Fluid offers a highly advanced and complex additive package that meets all application requirements.

A package of premium base oil, additives and a shear stable viscosity improver provide improved wet brake performance, high pressure anti-wear protection, and outstanding viscosity retention. FPC's 75 Hydraulic Fluid also provides excellent low temperature performance, anti-corrosion/oxidation characteristics and anti-foaming properties.

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Gear oil is critical for automotive differentials, manual transmissions, and farm implement gearboxes. FPC's GL-5 Gear Oil meets the demand for all of these applications, meeting the API service requirements for GL-4, GL-5, and MACK GO-H applications.

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All of these FPC products are available packaged or in bulk at your nearest FPC Retail Center or through FPC Member Cooperative and/or Dealer Network. Contact FPC at 1-800-782-3276.

Vosburg Nominated for Environmental Stewardship Award

Vosburg Farms of Climax, Michigan has been nominated for the National Cattlemen's Association Environmental Stewardship Award by the Michigan Cattlemen's Association.

The Vosburgs, Jan and Nellie Lou, began their farming operation 36 years ago with 170 acres of crop land leased. Two sons, Timothy and Gregory, are involved in the operation full time. The Vosburgs presently feed to finish 1,100 head of cattle and 3,600 head of hogs annually. A total of 1,300 acres are currently used for crop farming.

The Vosburgs' stewardship achievements include using energy efficient waterers that eliminate the need for an energy source, a no till system that reduces the energy consumption by decreasing the pieces of equipment necessary to prepare the land for planting and the injection of liquid manure into the soil to decrease odor.

The Vosburgs believe the key to a successful and long term operation is the conserving and protecting of our natural resources while bettering the environment. "My goal is to improve the soil and water resources I have and to leave them in better condition than when I assumed responsibility for their welfare," stated Jan Vosburg.

For more information on the Environmental Stewardship Award or other M.C.A. activities, please contact the Michigan Cattlemen's office at P.O. Box 387, DeWitt, Michigan 48820 or by calling the M.C.A. Information Line at (517) 669-8589.