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 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 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 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, 30 to 40 percent on corn that reached the soft-dough stage, and about 10 percent on late maturity. As of late August, GOD accumulations in the late milk-dough stage require 30 to 40 calendar days or 450-550 GDDs for maturity, 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."

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 Beert 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 infection 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. " ABFI Field Representative Rudy Dennes 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 Dennes, Leona Daniels, Debbie Hickmott and MFB President Jack Laurie.
NAFTA Meeting Scheduled for Sugar Beet Growers

State 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 the $4.3 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 1981," Madigan said.

The U.S. is also 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 beverages 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 be distracted by the presence of farm equipment on roads and highways, and the presence of farm equipment makes the roads more dangerous for motorists, especially for those 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 will meet 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, using CRS 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 lady fat 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.

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 Stewart said.

About 14 percent expressed support for Democratic contender Bill Clinton, with 11 percent undecided and 2 percent not choosing, 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 Buoy Markets

President George Bush has announced a major expansion of his 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 $3.5 billion in business activity for the economy. The forecast 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 Rider 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 the $4.3 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 1981," Madigan said.

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.

Farming 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 to reach this year 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 farm programs, increasing the nation's education budget, to expanding the nation's economic base -- 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 international markets for agricultural commodities and support for the Conservation Reserve, said Almy.

Financial News

USDA Sees Preliminary Florida Hurricane 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 Rider Financial News. USDA spokesman Roger Runnigen said that $1 billion figure includes crop losses and damage to property and livestock facilities. To fight fires to protect private property rights, according to several USDA agencies, are "very, very preliminary" and subject to change.

Crop losses alone could reach $100 million of the total $1 billion, Runnigen said, with damage to more than 500,000 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 million.

An official of the American Sugar Cane League in Thibodaux, La., told Knight Rider 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 $50 million in emergency food aid funds 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.

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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.
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 Alley, 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, aquaria 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, Gay 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 Alley, Ext. 2040

S. 2883, sponsored by Sen Don Riegel, 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 1933, 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 Curbage 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 supplant 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.

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.

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 primarily at commercial pesticide applicators, although some requirements apply to all pesticide handlers and 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:

(1) **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.

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

(3) **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 Draft Management Plan as a factor when determining appropriate enforcement action.

(4) **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 agricultural and right-of-way applicators. This provision is primarily in place to provide additional identification and protection of organic farming activity.

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, 1994. Pesticide labels will include Worker Protection Standard statements after April 21, 1993. This 8-month period allows the EPA to adequately inform registrants about how to adequately inform 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

Michigan Farm Bureau (517) 323-7000
Is Mount Pinatubo the Cause of the Poor 1992 Growing Season in Michigan?

Michigan's summer has been one of the coolest in recent years. Many 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 insolation, resulting in cooler than normal conditions on the earth's surface," Andresen says.

This volcanic residue can reach the stratosphere and that the global average temperature 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 1986 was worse. Dubbed "the year without a summer," it followed the eruption of Mt. Tambora in 1815 in the Lesser Sundas 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 much of the past summers, Andresen says. This summer, Michigan may merely be experiencing one of many natural variations to our cool, wet summer, Andresen says.
New Stewardship Programs 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 forest landowners and to properly utilize 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 wooded lands," says Hanh 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 is 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 improve the overall environment by correcting soil erosion and 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 into a stewardship forest plan for their property. As part of their commitment, landowners must also pledge to do 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 new wildlife habitat, controlling game and non-game wildlife species, fisheries habitat improvement, woodland improvement, and soil and water protection along waterways.

Landowners in participating in this cost-share program, or wish to get help from a professional in preparing a stewardship plan for their property, can 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 Program following the recently completed sign-up for the program to reduce soil erosion and protect water quality.

"Office traffic, offered acreage for enrollment and acreage accepted into the program during and after the last sign-up greatly exceeded that of any earlier sign-ups," said Doug 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 period. 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. Hiltner, 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 twelfth 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 lowering 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. farmers who purchase canola from Canadian suppliers to plant winter canola this fall.

"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 weather will do to the markets," says 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, this 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.

*Michigan Farm News* September 15, 1992

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"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 weather will do to the markets," says 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, this 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.
Wheat
Recent announcements of 1.1 billion bushels in new marketing orders, and how the USDA by the end of this week has not been any more aggressive in handling out these subsidized, has helped the wheat prices to rally to a new high level. The September 10 USDA 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 in storage thus helping the price to make 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 of the low end of wheat prices that some 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 until November 4 and we will still have the budget problems to deal with.

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 is, we have a rally, potentially pricing some corn that would have been put in commercial storage. If it was bearish, corn prices could be an indication that time is running out. Due to the late maturing corn, we still face the danger of a killing freeze. One aspect of this is the market will probably over react 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.

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. If this happens, demand has been fairly strong and the strength is expected to continue.

Hogs
In late August and early September, we saw a rally in the October-December hog futures as the EEP for pork and a cbrate price was 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 $4 to $4 per cwt. this fall and at times could fall significantly below the $3.67 test milk. This situation is very short term and not current. The next Hogs and Eggs Report will be released September 30.

Cattle
The August 7-State "Cattle-On-Feed Report" showed total inventory down 5 percent in the first quarter, but about the same as 1990. Placements for July were up 8 percent from last year and July marketings were down 5 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 break-even for yearlings appear to be in the red, but the break-even for empty weights are positive at $10 per cwt. 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 nearly three months. This trend is expected to continue. The 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 marketers suggest that the M-W and farm pay prices to drop to 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 7.5 cents a pound during August. At this rate of decline, the USDA CCC will be purchasing surplus powdered milk 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 whole market price for nonfat dry milk powder is $1.07 per pound and Grade A butter is $1.77 per pound. Using the CCC conversion rules, this means that 100 pounds of 3.67 percent test milk will make 51.1 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 $3.35 from selling 4.48 pounds of cheese. The manufacturer therefore has $12.15 per cwt. in hand. However, the processor has only $10.93 left to pay producers for 100 pounds of 3.67 percent test milk.

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Let's assume that the current M-W (August) is $12.71 (3.67 percent test). This is $2 per cent above last year and the July hatch was $12.64 per cwt. for butter powder and $12.74 per cwt. for butter. 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. This will be reported to the USDA and the M-W will decline. How far it declines is anyone's guess. At this time, it is not totally understood. But the M-W will decline.

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

This condition would force all farm prices to drop quickly. Without cooperatively owned butter-powder plants, butter prices 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 borne by only those producers which own the cooperative plants.

The current milk market conditions are unstable. Unless the market uses something like the current farm milk price bubble is sure to break.

Table Egg Market Situation
Allan Rahn and Henry Larzelle
Table eggs in early September were trading in the low 70 cent per dozen price range. New York, Grade A, large white, in cartons, to volume retailers, early 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 coming late after 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 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 early 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 survey items used in the survey was $29.90, compared to $29.77 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, Muzela oil, flour, apples and cheese. The average price of whole milk and Crisco oil were the same as last quarter.
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 norms for most Michigan weather stations. The heat deficiency based on a 50 degree-day range 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. Most farms usually seem to have the 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? Best case is cash crop farms with no ruminant livestock. But what about the cash crop farms with no ruminant livestock? Being a physically feasible alternative for crop farms with no ruminant livestock, the market area within which corn silage can be delivered is limited to a few miles radius of the field location. Now is the time to scout out alternatives for your corn crop. You may be hard pressed to get the grain before the frost. What if the corn in your field could meet the feeding needs of your livestock and the grain reaches physiological maturity.

Pricing Corn Silage:

Thum rules can be used to determine the value of corn silage, but their limitations need to be considered. A good example of this is the thumb rule, like the one cited, assume corn silage to be $12 per ton. The key to using thumb rules is matching up the rule to the circumstances. Most of the variables, like the one cited, assume corn can be harvested as either grain or silage.

The obvious alternative, but how realistic a choice is it? What cost items need to be covered in order to determine the value remaining for the unpaid sources in question; e.g. corn silage is worth $12 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.

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 technologically and logistically feasible under each scenario? What is technologically and logistically feasible under each scenario? This might be a rough sketch to "get a sense of the territory." What is technologically and logistically feasible under each scenario? What is technologically and logistically feasible under each scenario?

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

What is technically and logistically feasible under each scenario? What is technically and logistically feasible under each scenario?

The second step would be a more careful analysis 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 corn crop in the U.S. Much of the potential profit may be exhausted because of high feeder cattle prices. Does 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 economic viability of technically and logistically feasible contingency plans. What is technically and logistically feasible under each scenario? What is technically and logistically feasible under each scenario?

Evaluating Alternatives:

Corn Silage and Cowboy Economics

Table 1. Steer Calf Cost Budget

<table>
<thead>
<tr>
<th>Purchased Steer Cost:</th>
<th>550 lbs @ 0.95/lb</th>
<th>$522.50</th>
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<tbody>
<tr>
<td>1.4% death loss adj.</td>
<td>$7.30</td>
<td>529.80</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Feed Cost:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corn</td>
<td>@ $2.25/bu</td>
<td>47.5 bu</td>
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<tr>
<td>Silage</td>
<td>$77/Ton</td>
<td>1.61 T</td>
</tr>
<tr>
<td>Supplement $12/cwt</td>
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<tr>
<td>Non-Feed Costs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vet &amp; Medicine</td>
<td></td>
<td>10.00</td>
</tr>
<tr>
<td>Yardage @ $0.25/day</td>
<td>216 days</td>
<td>54.00</td>
</tr>
<tr>
<td>Interest on calf &amp;</td>
<td></td>
<td>36.40</td>
</tr>
<tr>
<td>1/2 feed @ 10% yr</td>
<td></td>
<td>92.40</td>
</tr>
<tr>
<td>Sum of Costs per 1100 lb Animal Sold</td>
<td>$764.25</td>
<td></td>
</tr>
</tbody>
</table>

What cost items need to be covered in order for you to profit and be better off pursuing the identified alternative? Consider the example: corn silage sold for $12 per ton. The cost of the purchased steers illustrated in Table 1. The costs in Table 1 are 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.

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 Harv'ing Tips for Frocked Corn Used as Silage or Grains. Silage prices by soybeans, Dry Edible Beans Can Be Used as Forage, But... on page 12 of this issue.

Generally, there are three plans which meet these conditions for most weather scenarios.

An Approach to Budgeting

The following approach is a starting point to assessing economic alternatives:

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 is the economic value of corn silage at the feedout? In short, if corn silage were fed to beef cattle, what is the economic value of corn silage at the feedout? In short, if corn silage were fed to beef cattle, what is the economic value of corn silage at the feedout? In short, if corn silage were fed to beef cattle, what is the economic value of corn silage at the feedout?

Step 3: What is the cost of getting silage to the feedout? Storage, harvest, reduced nutrient returns 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: How much net? Subtract cost of delivering corn silage or snapped ears (if relevant) to feedback from value in feeding.

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Corn Silage and Cowboy Economics

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Michigan’s Aquaculture Industry Looks to the Future

A quaculture 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 for fishing. Michigan farmers raise cold-water 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 Fishery and Wildlife; Niles Keven 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 agricultural commodity 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 orchestrate 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 on next page
Preventing Theft On The Farm

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
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.

The Farm Bureau MemberLine™ VISA & Gold MasterCard. Two good reasons why it pays to compare before you apply for a credit card...

From Farm Bureau Insurance
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.

Compare the interest rates. The interest rate on the MemberLine VISA and Gold MasterCard is just 15.9% A.P.R. — one of the lowest interest rates available. In addition, you pay no interest on new credit card purchases when your full balance is paid by the due date.

Compare the fees. The MemberLine VISA has no annual fees, no membership fees and no application fee. The annual fee for the Gold MasterCard is $20 — far lower than the fee charged for most gold cards. For added savings, the $20 fee is rebated every year that you make $3,000 or more in net purchases.

Compare the premiums. Both the MemberLine VISA and the Gold MasterCard offer a wide array of complimentary features and options for your protection and peace of mind. And when you carry a Gold MasterCard, you'll enjoy the added advantages of a higher credit line, executive travel privileges, emergency road assistance, purchase protection insurance and a warranty extension program — valuable "extras" you and your family can depend on.

Easy to apply for. Simply remove this page from the magazine and fill out the application on the reverse side. Letterfold and staple the form with the mailing address on the outside. No postage necessary!

Michigan Farm News
September 15, 1992

8-Position Statement continued...
benefit from a more uniform set of guide-
lines governing the aquaculture industry. For the industry to grow, there must be co-
operation between educational institutions, state government and private industry repre-
sentatives. We believe the public and private sectors can work together to address the
problems, opportunities, needs, regulatory issues and other information pertinent to the continuance and growth of aquaculture in a state blessed with abundant aquatic resources. Benefits of increased aquaculture production will include en-
acted and all parties involved in Michigan aquaculture can meet as a collective whole,
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 aquacul-
ture will have an excellent opportunity for growth in a state blessed with abundant aquatic resources. Benefits of increased aquaculture production will include en-
hanced economic development throughout the state, new job opportunities and stream-
lining of government functions and regula-
tions. Additionally, there would be a reduc-
tion in importation of aquatic products and further safeguards for the protection of the natural resources of the state.
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 125 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 air drying will 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 1/50 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 cracking.

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. Cana- dian 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 beans can be used if they're large, run full of grains and run relatively slow. Research shows growers running fast and only partially filled cause the greatest amount of damage.

U-Wisconsin Data Base

List of Hay to Buy or Sell

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

The Great Lakes Haystrat data base includes listings from Michigan, Wisconsin, Michigan, 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
- acetal 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 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
- acetal detergent fiber

More information about the data base can be obtained from Dan Undersander, U-Wisconsin agronomist, by calling 608-256-5070.
The threat of an early freeze across the Corn Belt has put a spotlight on how options strategies can carry limited or unlimited risk.

The options case in question involves Kansas corn producer 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.

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 above or below the position.

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

Frost

Frost pivots as rains continually drenched the seed growing areas of the state. While June on record. Also, throughout the 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). Despite earlier weather-related setbacks, normal to get it out of the field before it freezes. Thomas says. "We're also increasing our dry drought stunted corn and the lack of heat units hampered development.

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 and sell as seed. Corn harvest is going to be delayed around as quickly as possible. In each of those years, we've had frost in September, according to Bob Neilson, an Extension agronomist at Purdue University.

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 calibrating 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 coves pitting 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 it 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 and sell as seed. Corn harvest is going to be delayed around as quickly as possible. "I wish it had a good 20 percent moisture. However, frost will destroy seed's ability to germinate, especially if it has not field-dried to less than 25 percent moisture. The losses are not deductible against ordinary business income, which can significantly reduce or even eliminate a hedger's after-tax profit, Dial said.

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


**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 56-66 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 conclusions 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 frost-killed at the dent stage will probably have a whole-plant moisture content greater than 62-66 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**

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 40 percent, increasing cylinder speeds and set-Bucholtz 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 frowning 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.

**Soybeans and Dry Edible Beans Can Be Used as Forage, But...**

Soybeans and dry edible beans that will not mature for harvest could be used as live-stock 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.
- Butylac 200 (2, 4-D, B) if 60 days elapse between application and harvest.
- Dual, Prowl or Dual, or Prowl + Eptam, or Treflan + Eptam, or Pursuit. Do not graze for har-

Soybeans, Dry Edible Beans Can Be Used as Forage, But...
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 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
Indianapolis information suggests that during good fall weather, we can expect corn to dry at about 1 percentage point 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 yield
- 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 reaching moisture close to 15 percent.

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That would have varied affects on U.S. agriculture, Holiman said. "The sale of wheat to Russia will rise, he explained. However, the sale of corn will decline sharply and demand for U.S. corn and soybeans will be reduced to an estimated 28 million tons this year, compared to last year's purchase of 39 million tons.

Holiman also said that "there's going to be a growing market for the CIS farmers. Russia, he said, has taken the lead in trying to boost production through reform and farm privatization. That will 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 offer new advantages in terms of feed grain and wheat sales to Russia." When wages rise, demand for products such as processed foods 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 will be able to 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?

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DMI Adds New Features to Ecolo-Til

Mountied 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 short pieces 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 "OP" point, a "T" point, and a "OP" point). According to DMI, these shanks will 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 VanVliten, DMI product manager, states: "These new features are designed to assist DMI Ecolo-Tills in eliminating soil compaction...the number-one yield rober! This is accomplished, in addition to residue management, through in-depth residue management."

The DMI Eco-Till 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 option wings. All units can be equipped with optional 8" shank extensions for statorge shelves 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.

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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 to improve and protect 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.