

MICHIGAN FARM NEWS



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NAFTA - The Debate Continues

Debate surrounding the proposed North American Free Trade Agreement (NAFTA) is reaching a frantic pace as the legislation to implement the agreement appears ready for consideration before Congress this fall. NAFTA moved to the front burner following the Clinton Administration's completion of the side agreements on August 13.

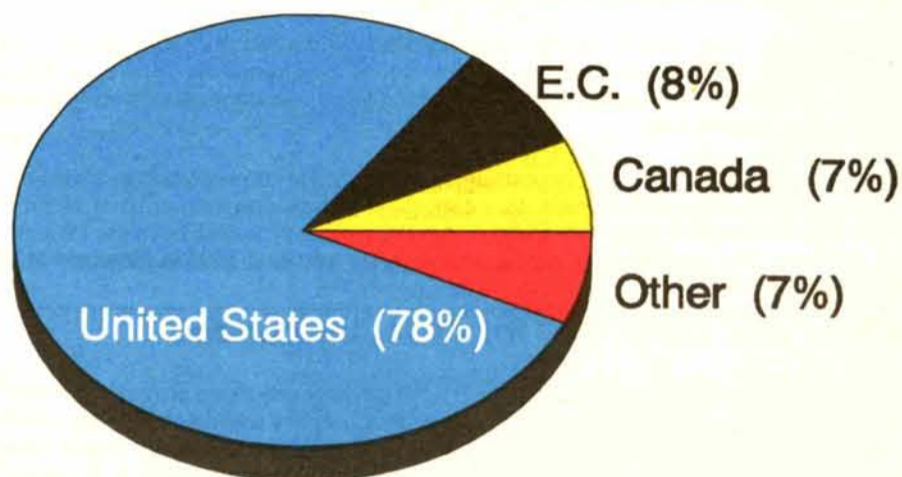
The side agreements, which were deemed necessary by many in Congress, are designed to address concerns regarding labor and environmental issues by calling for consultation among the three NAFTA countries to remedy problems that arise.

The accord now provides for actual punitive penalties for persistent failure to enforce a country's labor or environmental laws. An unsuccessful attempt was made to address import surges in the supplemental agreements.

With congressional debate on NAFTA now set to begin on September 16, U.S. Secretary of Agriculture Mike Espy has indicated that an "all out effort" will be made by the Clinton Administration to pass the pact.

The Senate is expected to approve NAFTA by a small margin. The outcome in the House is much less certain as many

Suppliers of Agricultural Products to Mexico



Source: UC Agricultural Issues Center

Democrats are withholding support or outright opposing the agreement.

The outcome of this debate is of critical importance to U.S. agriculture due to the expanding size of the Mexican market for U.S. farm exports. Mexican sales now rep-

resent 10 percent of our \$40 billion in annual agricultural exports.

For more information see the NAFTA Analysis on pages 12 & 13 and the Discussion Topic on page 15.

Manure Gas Proves Costly at MSU Dairy Facility

A no-wind situation, hot humid temperatures, and initial agitation of a manure pit located under slatted floors, all combined to take the lives of 22 dairy heifers at the MSU dairy research facility in East Lansing, August 25.

According to MSU Dairy Farm Manager, Bob Krefit, 18 heifers died immediately from hydrogen sulfide inhalation, while four more were later euthanized, and another one was sold due to exposure to the high levels of the manure gas.

Farm workers had begun agitation of the manure pit, located under the freestall heifer barn at 8 a.m., when one of the workers noticed animals going down approximately 15 minutes after agitation had begun. He immediately shut down the pump, and alerted other workers who set up fans to aerate the barn so that the remaining heifers could be removed.

Krefit said that in the nine years the facility has been used, they had never had an experience like this before. "Autopsies did confirm that the heifers died from hydrogen sulfide," he said. "We're not sure what exactly caused the problem. There were a few things that were different this time, but at this point, we're not sure just what role each factor played."

Krefit suspects that the major factor was the weather, which was very calm, with little or no wind, and high, humid temperatures.

Another possible contributing factor that's being investigated, according to Krefit, is the fact that the manure contained up to 4

percent milk. Researchers will be trying to determine if the milk may have increased the total amount of toxic gases generated through decomposition.

In the immediate future, Krefit said they will remove livestock prior to agitation and pumping manure, unless they can pinpoint what exactly caused this incident. MSU engineers will also be conducting air tests with meters while wearing a self-contained breathing apparatus.

Krefit credits the quick thinking of one of the farm workers with the prevention of any loss of human life or suffering. "When we first saw the heifers going down, six of us entered the barn - my first thought being, how can we get these animals out of here, when one of the employees asked, 'If it's not safe for the livestock, is it safe for us?'" Krefit said. "That's when we immediately left the barn."

Continued...page 9 see "MSU Dairy Facility"

Fortunately, no human lives were lost in this freestall barn, where 18 heifers died shortly after workers began manure agitation in the pit located below the slatted floors.



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In Brief...

GATT Envoys Set December Deadline

Envoys from 116 nations have endorsed a final deadline of mid-December for completing world trade talks, which then would be signed at a ministerial meeting in April. GATT Chief Peter Sutherland firmly set Dec. 15 as the make-or-break date to clinch a pact to liberalize world trade. Sutherland emphasized twice that there would be no extension.

Andrew Stoler, acting head of the U.S. Trade Representative's Office, welcomed the firm deadline. "We have always felt that mid-December would be time enough," he told *Reuters News Service*. "If we can't do it by then, then it's too bad. We can hardly take issue with the date, as we are basically the ones who set it under our fast-track process."

President Clinton must inform Congress by Dec. 15 whether he intends to sign the agreement. Under fast-track, the administration would then have 120 days, or until mid-April, to sign it.

Ag Trade Surplus to Hit \$17.5 Billion

The latest USDA estimate of agricultural exports for fiscal 1993, which ends Sept. 30, stands at \$42.5 billion, unchanged from a May estimate and slightly above the \$42.3 billion seen in fiscal 1992, according to a recent USDA report.

Prospects for exports of corn, cotton and tobacco have worsened since May, but the outlook for sales of horticultural and other high-value goods has improved. Total export volume forecasts are down by 3 million metric tons since May, reflecting mostly the diminished sales of corn, USDA said.

Despite the latest revisions, corn exports are still expected to surpass last year's total of 40.6 million tons. Wheat exports this year are estimated at 35.5 million tons, up from 34.3 million last fiscal year. Soybean exports will be 20.5 million tons, up a little from the 19.2 million sold last year. The nation's agricultural trade surplus for fiscal 1993 is projected at \$17.5 billion, the USDA said.

Wheat and Corn ARP for 1994 Announced

The USDA has decided to maintain the zero ARP (acreage reduction program) for the 1994 wheat crop, the same as it had in 1993. The Sparks Company translates this into a 1994-95 production level of just over 2.5 billion bushels and looks for a modest gain in carryout stocks at the end of that period, according to the Sparks Company's daily policy report.

Meanwhile, USDA is also expected to reduce the acreage reduction program for the 1994 corn crop to 5 percent, from 10 percent in 1993. Sparks Companies pegs the harvest near the midpoint of the range experienced in 1992 and 1993 at 8.55 billion bushels.

With usage expected to increase modestly in 1994-95 from the 1993-94 level of 8.1 billion bushels, to around 8.4 billion, the ending stocks would be expected to go from 1.6 billion bushels at the end of 1993-94 to 1.6 billion by the fall of 1995.

Milk Production Steady in July

Fewer dairy cows and higher production per cow kept milk production at 11.0 billion pounds in July, the same as it was in June. July milk production was just 0.85 percent higher than output of milk in July 1992, according to the AFBF's Commodity Digest.

Among the 21 leading dairy producing states, Texas had the highest increase in production, up 9 percent over July 1992. California production was up 3 percent and Wisconsin was down 2 percent. Production per cow for the 21 states was up 29 pounds in July, compared to the same month a year earlier; but the number of cows on farms dropped 109,000 head from last July to 8.14 million head. The July figure was 6,000 head below the previous month.

Red Meat Production Declines

U.S. commercial red meat production during July totaled 3.34 billion pounds, 3 percent below a year ago. Beef production totaled 1.98 billion pounds, down 2 percent, while veal production declined by 11 percent, pork production by 5 percent and lamb and mutton production by 5 percent, according to the National Agricultural Statistics Service.

As a member of the board of directors of the Michigan FFA Foundation, MFB President Jack Laurie assisted in the presentation of the "Corporate Diamond Award" to representatives of the Detroit Edison Company. FFA State President John Schut, Hopkins, and Sue Ann Stuever, FFA state reporter, Capac, made the presentation to (left) John Howell, director, North Area Energy Center, and (right) Bob Howard, manager, Thumb Division, during the FFA State Officer Leadership Workshop held at Detroit Edison's corporate office earlier this summer.



Michigan Farm Bureau Reaches 1993 Statewide Membership Goal and Target

County Farm Bureau membership workers and insurance agents combined efforts to reach statewide membership goal of 124,568 total members and statewide target of 45,100 total regular (farmer) members. Out of the 69 organized county Farm Bureaus, 59 reached their target objective for the year, while 40 out of 69 counties reached their overall membership goal for the membership year which concluded Aug. 31.

According to MFB Administrative Director Chuck Burkett, reaching both goal and target is a tremendous accomplishment that reflects well on the efforts put forth by county volunteers, Farm Bureau Insurance agents and county secretaries. He said that surpassing the target objective vividly demonstrates that farmers in Michigan regard Michigan Farm Bureau as the pre-eminent organization for making things happen in their county and state.

"While our membership accomplishment is a great victory, the job's not over yet," Burkett said. "Our challenge now is to energize and involve these new members by inviting them to events like the county annual, Lansing Legislative Seminar, the MFB annual meeting and other events to show them that their investment in Farm Bureau will be time well-spent on behalf of their farms, their industry, and their personal growth."

Disaster Program Sign-up Periods Announced

The United States Department of Agriculture (USDA) is conducting a sign-up through its Agricultural Stabilization and Conservation Service (ASCS) for 1990 through 1992 crop losses including quality adjustments. The sign-up period extends through Sept. 17 and applies only to 1990-92 losses of corn, wheat, barley, oats, grain sorghum, soybeans, sugar beets and sunflowers.

Any producer who feels he or she has suffered a loss of production for these specific crops, for 1990-92, including adjustments for poor quality, should apply for benefits at the county ASCS office before close of business Sept. 17. There are no provisions to accept applications after Sept. 17.

In addition, ASCS is conducting a sign-up period for 1993 crop losses through March 4, 1994. Any producer who suffers a 1993 loss for virtually any crop should contact the county ASCS office as soon as the loss becomes apparent and no later than March 4, 1994. For more information, contact your local ASCS office.

Frost Threat Pushes Corn and Soybean Prices

The damage that could be done to late maturing crops by an early frost is keeping feed grain and soybean markets edgy. USDA forecasts of low carryout inventories by the end of the current marketing year also adds strength to the futures markets.

The Agriculture Department estimates soybean stocks at a historically low 190 million bushels a year from now, and sets the corn carryover going into the 1994 harvest at 1.41 billion bushels, according to the *Wall Street Journal*.

Adding to the fear of frost damage is the fact that the latest crops are in the western and northern sections of the Corn Belt, where frost normally occurs earlier than in the eastern portions of the Midwest. One analyst, Daniel W. Basse, market research director for Chicago-based AgResource Co., says the chances of a killing frost are about 5.3 percent, according to the *Journal*. Basse said there have been only five killing frosts (ones that cause considerable crop damage) since 1900.

Market analysts will be watching Canadian weather patterns this fall, since killing frost there is thought to sharply increase the chance of similar weather here, the *Journal* said.

USDA Reorganization Still Under Review - County Office Reductions Likely

The Department of Agriculture, comprised of 42 agencies, with 124,000 employees and thousands of offices located throughout the country, will be a target for reorganization, when Vice President Al Gore's task force on government reform reports its findings in about a month.

Many analysts familiar with the quest to streamline the massive department say the reorganization may not be dealt with this year. The department and key congressional committees will have to devote much time to consideration of the North American Free Trade Agreement, which may limit their ability to deal with department reorganization.

Agriculture Secretary Mike Espy is already at work on his plan to reorganize the USDA's Washington headquarters. Espy's reorganization plan calls for establishment of a super Farm Service Agency combining functions of the Agricultural Stabilization and Conservation Service, the Soil Conservation Service and the Farmers Home Administration.

Espy has a rough plan for reorganizing and reducing the number of field offices and cutting the department from 42 agencies to 30. Plans to reorganize and streamline the department originated with Secretary Ed Madigan in the Bush administration, but have been slowed by the change of administration and the pressure of other priorities.

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Coastal Zone Management Act Reauthorization Amendments

MFB Position:

DNR staff has formed an advisory committee for overall policy discussions and several work groups to address various sources of nonpoint source pollution. MFB has been asked to serve on the overall advisory committee and on the agricultural work group. Discussions are taking place regarding the possibility of MDA taking the lead agency role in regards to agriculture.

MFB Contact:

Vicki Pontz, Ext. 2046

In 1990, Congress passed amendments to the Coastal Zone Management Act (CZMA). Section 6217 requires states to establish coastal nonpoint programs which must be approved by both the National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA).

Beginning in fiscal year 1996, states that fail to submit an approvable coastal nonpoint program to NOAA and EPA face statutory reductions in federal funds awarded under both section 306 of the CZMA and section 319 of the Clean Water Act (CWA) which address nonpoint source pollution voluntarily with cost share assistance.

The central purpose of section 6217 is to strengthen the links between federal and state coastal zone management and water quality programs in order to enhance state and local efforts to manage land use activities that degrade coastal waters and coastal habitats. This is to be accomplished primarily through the implementation of:

- (1) Enforceable management measures in conformity with guidance published by EPA.
- (2) Additional state-developed management measures as necessary to achieve and maintain applicable water quality standards.

At this time, it appears that the entire state of Michigan, with the exception of a small portion of the southwest Upper Peninsula, will be covered by the amendments. The agricultural program will need to control nutrients, sediment, animal wastes, salts, herbicides and protect habitats.

- EPA's Published "CZMA Guidance" Documents -

Erosion and Sediment Control Measures - All farmers within the coastal boundary will need to have a resource management system in place that satisfies criteria contained in the SCS Field Office Technical Guide. These measures apply to all activities that cause erosion on agricultural land.

Management Measures for Facility Wastewater and Runoff from Confined Animal Facilities - Control measures will be required for all new facilities regardless of size and to all existing facilities with specified numbers of animals.

Nutrient Management - Controls will be required to minimize leaching of nutrient from the root zone. Farmers will be required to develop, implement and periodically update a nutrient management plan for their farm.

Pesticide Measures - Controls will be required to reduce contamination of surface and groundwater from pesticides including Integrated Pest Management strategies, organic farming techniques, record-keeping, calibration of spray equipment and anti-backflow devices.

Grazing Management - Controls will be required for all activities on range, pasture and other grazing lands to reduce the physical disturbance and direct loading of animal waste and sediment caused by livestock.

Irrigation Water Management - Controls will be applied to all activities on irrigated lands including agricultural crop and pasture land, orchard land, specialty cropland and nursery cropland.

Medical Care Savings Accounts

MFB Position:

MFB supports the study of alternative methods of finance of health care costs, such as:

- Allowing individuals and their employers tax incentives to make deposits to medical IRA accounts designed to supplement and eventually replace coverage under Medicare.
- Allowing annual deposits by individuals to Medisave accounts to use for medical expenses without tax penalty.

MFB Contact:

Howard Kelly, Ext. 2044

H.B.-4878, sponsored by Terry London, and co-sponsored by 25 other representatives, authorizes the establishment and maintenance of medical care savings accounts and exempts contributions to the account from taxation.

H.B.-4879 would amend Michigan's Income Tax Act of 1967 to facilitate the purpose of these accounts. Money placed in the account would receive the same tax treatment as money used to pay premiums for health insurance.

The medical care savings account program includes the purchase by an employer of a qualified higher deductible health plan for the benefit of an employee and his or her dependents. It also allows the payment on behalf of an employee into the account by the employer. The maximum deductible would be \$3,000. The employee could then withdraw unused money from his or her account on the last business day of the fiscal year.

A subcommittee of the House Insurance Committee has held hearings on these bills and the full committee started debate on Aug. 31, 1993. Rep. Mary Brown, Democratic co-chair of the House Insurance Committee has indicated she will schedule these bills for the second meeting of the committee in September.

A federal version of this package is also being developed.

Wetlands Policy

MFB Position:

Farm Bureau is pleased the new policy addresses these areas of concern to agriculture regarding wetland regulation. The policy is being analyzed in more detail and more information will be forthcoming.

MFB Contact:

Al Almy, Ext. 2040

President Clinton has announced a new policy for the regulation of wetlands. Many of the changes will be accomplished by Executive Order or regulation while some will require Congress to enact legislation before they become effective.

Among the nearly 40 changes are the following which are of significance to agriculture:

1. Wetlands that were converted to farm use before 1985 will not be subject to federal regulation as if they were still wetlands.

It is estimated that 53 million acres of farmland will be protected from wetlands regulation by this policy. Farm Bureau has long supported the exemption of prior converted wetlands.

2. The Soil Conservation Service (SCS) will be responsible for designating wetlands on farmland.

Although the policy may give some oversight role to the U.S. Fish and Wildlife Service, the Environmental Protection Agency, and the U.S. Army Corps of Engineers, these agencies are not expected to be as involved as previously in wetland designations on farmland.

Farm Bureau has been the leading supporter of the SCS being the primary agency farmers should deal with in wetland determinations.

3. The 1987 criteria will be used in determining if an area is a wetland.

The 1987 criteria requires the presence of hydric soils, the presence of water just below the soil surface, and the presence of vegetation commonly found in a wetland.

Farm Bureau has consistently called for all three of these criteria to be present before an area is designated as a wetland.

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Weather

30-Day and 90-Day Forecast – Cooler Than Normal, Above Normal Precipitation

Warm muggy conditions persisted for most of August, bringing seasonal growing degree day totals much closer to normal in most parts of the state. The real "weather story" for August, however, was the disparity in precipitation between western and southeastern sections of lower Michigan. Frequent rounds of thunderstorms in the west brought seasonal rainfall totals to as much as eight inches above normal (normal rainfall total for the April through August period ranges from 14 to 16 inches).

Spotty light rains in the southeast corner of the state led to abnormally dry topsoils and drought stress of many crops. In addition, an abundance of damp, foggy days, led to continued disease pressure for field crops, fruits, and vegetables.

The long-term outlook for the upcoming harvest season is not a favorable one. The newest National Weather Service 30-day and 90-day outlooks both call for cooler than normal temperatures, and normal to above normal precipitation.

While this generally is considered the worst case scenario for agriculture this time of

8/15/93 to 9/15/93	Temperature		Growing Degree Days		Precipitation	
	Observed Mean	Dev. From Normal	Actual Accum.	Normal Accum.	Actual (inch.)	Normal (inch.)
Alpena	68.2	+ 3.0	1729	1744	5.67	3.12
Bad Axe	69.9	+ 1.2	2024	2092	5.25	2.93
Detroit	74.7	+ 4.0	2600	2278	1.60	3.12
Escanaba	68.4	+ 3.2	1526	1387	1.83	3.53
Flint	70.8	+ 2.0	2273	2278	3.43	3.12
Grand Rapids	71.6	+ 2.3	2264	2318	7.12	3.18
Houghton	67.4	+ 4.1	1441	1597	3.36	3.69
Houghton Lake	69.1	+ 3.1	1913	1744	5.45	3.12
Jackson	70.7	- 0.2	2258	2269	3.38	3.36
Lansing	71.0	+ 1.9	2247	2269	3.78	3.36
Marquette	66.0	+ 3.6	1463	1597	3.47	3.69
Muskegon	72.2	+ 3.2	2217	1998	6.07	3.60
Pellston	68.0	+ 4.0	1697	1802	2.54	3.11
Saginaw	71.4	+ 1.9	2203	2092	4.74	2.93
Sault Ste. Marie	66.0	+ 2.6	1329	1387	2.84	3.53
South Bend	73.7	+ 3.3	2548	2318	5.25	3.18
Traverse City	70.5	+ 2.5	1964	1802	3.25	3.11
Vestaburg	69.8	+ 0.8	1987	2074	7.88	3.64

Observed and growing degree day totals are accumulated from March 1 – August 31. Normals are based on district averages. Jeff Andresen, Ag Meteorologist, MSU

year, most farmers in Michigan will likely finish the 1993 growing season with a much better disposition than last year, considering the immature crops, and the widespread flooding experienced by our western neighbors this year.

Mendon Wheat Variety Will be Released Under Private License to Lakeside States

A new soft red wheat, primarily intended for growth in southern Michigan, will be available to growers for the 1994 fall planting. The new variety – Mendon – has been released by Michigan State University to Lakeside States, Inc., in Britton, through an exclusive licensing agreement reached in June.

Lakeside States was one of several private companies that submitted bids to MSU for the license. Under the agreement, Lakeside States will be the sole distributor of certified seed of the new variety for the next five

years. In return, Lakeside States will pay an annual royalty fee to MSU.

Bob Gast, director of the MSU Agricultural Experiment Station, says that a portion of the funds will be used to augment MSU's wheat variety research program. "However, the primary purpose of reaching agreements such as this is to get the new varieties used as extensively and quickly as possible," he said.

Larry Copeland, MSU Extension seed specialist, says that the exclusive license contains the provision that Mendon seeds sales be accompanied by a vigorous promotion and education package.

"With this arrangement, we hope to maximize the potential yield of this new variety to provide the best return on investment possible to the grower," Copeland says.

MSU's agronomic data show that Mendon average 86.4 bushels per acre in 1992-93

field trials replicated at six sites in southern Michigan (Augusta averaged 80.7 and Frankenmuth averaged 78).

Mendon's highest per acre yield – 105 bushels – occurred in 1992. This year, the variety averaged 67.8 bushels per acre, compared with Frankenmuth at 58 bushels and Augusta at 58.6 bushels per acre.

Copeland says that Mendon has good winter hardiness and flowers three to five days earlier than Frankenmuth and Augusta. It produces a red kernel and has white chaff and no awns.

Mendon exhibits good field resistance to powdery mildew and wheat spindle streak virus. However, it is susceptible to lodging and virulent leaf rust races. "We believe that good cultural management will control the weaknesses – this is the reason for the educational package when growers buy seed," Copeland said.

Michigan and Major Commodity Area Extended Weather Outlook

T - Temp.	9/15.....9/30	9/15.....11/31
P - Precip.	T.....P	T.....P
Michigan	B.....A	B.....A
W. Corn Belt	N.....N	B.....A
E. Corn Belt	N.....N/B	B.....A
Wint. Wheat Belt	A.....N	B/N.....N
Spr. Wheat Belt	B.....A	B.....N
Pac. NW Wheat	N.....N	N.....N
Delta	A.....N	N.....N/A
Southeast	A.....N	N/A.....N
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

Wisconsin Scientist to Release a New Winterhardy Alfalfa Variety

The last two winters left Wisconsin alfalfa fields shot full of holes. Some farmers lost more than 80 percent of their alfalfa plants each year. Statewide, 40 counties lost more than half their alfalfa in 1993, even before the rains came. The whole state lost a third of the crop.

For Plant Geneticist Edwin Bingham, those losses showed it was time to introduce a new alfalfa variety that could withstand the worst of winters. Bingham's variety, Columbia, will be ready to plant in 1996. If history is a guide, that should be soon enough to help farmers through the next disastrous winter.

"We've experienced severe alfalfa winterkill about once every 10 years since the 1920s," says Bingham of the University of Wisconsin-Madison's (UW) Department of Agronomy. Winters in 1922, 1937, and 1949 were very hard for alfalfa, he says.

UW researchers released their first and only alfalfa variety in 1953. Called Vernal, it was selected after the 1949 winter because it did better under the ice sheeting that year than any other alfalfa. R.A. Brink, Bingham's predecessor and one of Vernal's developers, described it as "winter proof."

"In 1992, we had a cold snap in November that some say did in the alfalfa," Bingham says. But he believes the warm weather of January, February and March was harder on alfalfa. Many of the plants were not really dormant at that time. They used up their energy reserves and died before spring. Vernal, however, remained dormant and survived the winter in good shape.

"During 1993, most of the alfalfa in southern Wisconsin was clobbered again, this time by ice sheeting. Ice sheeting occurs when cold rains coat plants with ice or standing water freezes over plants, smothering them. The ability to withstand

ice sheeting involves more than dormancy," Bingham says. "Other varieties we know to be extremely dormant did poorly in 1993. Survival under ice sheeting requires special characteristics." Again, Vernal did quite well in Bingham's nurseries.

"The early commercial varieties developed for the Upper Midwest were selections mostly or entirely from Vernal," Bingham says. Therefore, Vernal's winter-hardiness traits were carried virtually intact into the 1970s. But as commercial breeders continued producing new cultivars in the 1970s and 80s, they shifted their emphasis to varieties better able to resist disease and insects.

One of Bingham's graduate students has now shown that many of the varieties with enhanced pest resistance are less able to withstand winters. Even though they have multiple disease resistance, many of these varieties fade by the third year, Bingham says. By comparison, Vernal does not fade, producing more feed in the third, fourth and fifth years than many newer varieties.

"The genetic material in our new variety includes about one-half Vernal-derived parents and one-half parents from commercial sources that have survived at least six Wisconsin winters, including the last two," he says. Because even the commercial sources got about half their genes from Vernal sources, Bingham estimates that his new variety may be as much as 75 percent Vernal.

Since the commercial parents have the same high level of bacterial wilt resistance as Vernal and have higher levels of resistance to several other disease and insects, the result is an alfalfa variety that yields about as well as commercial seed and resists many diseases and insects. Growers will produce certified Columbia seed in 1995, and it will be for planting in 1996.

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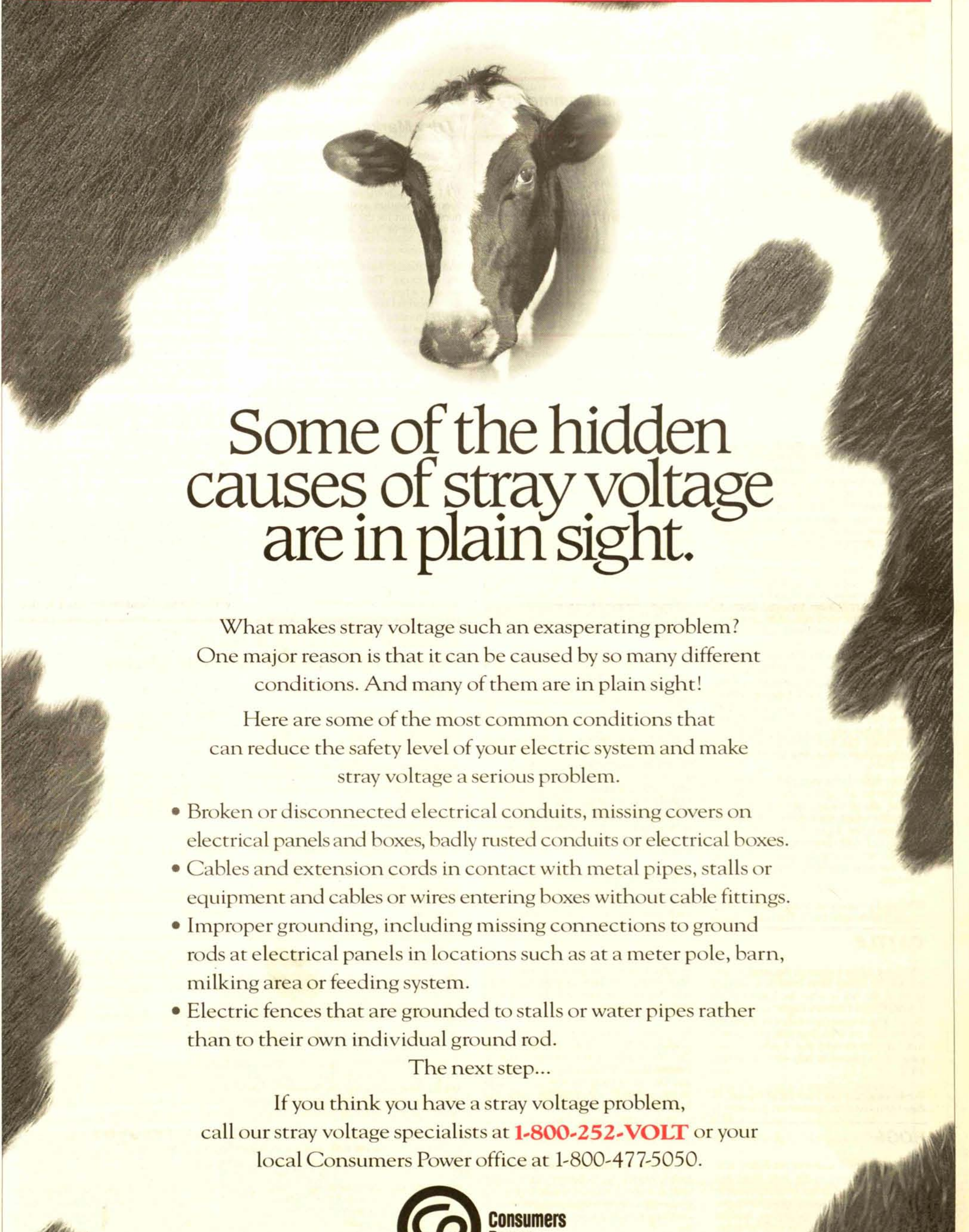
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6

Market Outlook...

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

CROPS

There are a lot of similarities among marketing strategies for corn, wheat and soybeans at this time. Therefore, I am going to depart from the normal format of going through crop by crop and discuss all three at once.

The other problem with discussing each individually is, I am writing this article seven days before the release of the September Crop Report and you are receiving it after the report is released. Make sure you have looked at the Crop Report closely. While we will discuss it in the next issue, most of the market reaction will have already taken place.

In summary, I feel the last good potential for a market rally for all three crops will be from between the release of the Crop Report and very early October.

STRATEGY:

Consider being ready to pull the trigger on pricing much of the unpriced portions of your crops if we have a rally. There are several things that could bring around this rally. One is the Crop Report having shown that there is less out there than expected. If that is the case, you are in the rally now and need to be taking advantage of it.

Another is frost; there are large portions of the upper mid and western Corn Belt that would sustain considerable damage with an early frost due to the late maturity of the corn and soybean crops. A normal freeze could well get a bunch.

We will know whether this is going to happen soon. Remember, both the scare of a frost and the initial reaction to a frost tend to help prices more than the actual damage when known. Therefore, you have to be ready to price by being on top of what is happening in the market. You can't wait for the next issue of the Michigan Farm News Market Outlook.

Another factor is the spring wheat crop may not come in as high as expected due to disease, and this may not show up in the September report, but rather as they harvest it in September. Again, the gains from this may not last. And for it to have much effect, it would need to happen in the same time period as the scares mentioned for corn and soybeans.

Why am I so intent on being ready to price so much in the near term? The reason is the

CATTLE

There are a lot of cattle in the feedlots and we will be seeing them from now through most of the fall is what the latest USDA 7-State Cattle-On-Feed Report seems to indicate. The August report showed 9 percent more cattle on feed than last year at this time. It also showed that 4 percent more cattle were placed in July 1993 than July 1992.

While slaughter has been up in August, to date from last year, production probably is

HOGS

Hog slaughter continues to run below year ago levels contrary to the June Hogs and Pigs Report, and this has been reflected in the prices. If this continues for much longer, it means the hogs were never there. And the report showed that slaughter this fall is not expected to be up much if at all.

Strategy: Keep very current as prices are likely to drop at least some due to normal seasonal increases in slaughter as we move from summer to fall and we have the large spring farrowings coming to market.

Seasonal Commodity Price Trends

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

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

demand side. While the futures markets show some carryover, it is not large. The demand part that scares me the most is exports, or rather I should say lack of exports.

Corn exports are forecast to be down over 12 percent, to the lowest level in eight years. Soybean and wheat exports are expected to be down 15 percent, the lowest level in three years. And while livestock numbers will continue to grow and, therefore, keep feed demand fairly strong, it will not come close to making up for the loss in exports.

In theory, the markets should adjust on the demand side at the same time that they are adjusting on the supply side. But my observation historically is that there is a lag. We have weather problems, like this year, which cut supply and when the market adjusts the price up to account for this, it does not adjust its perception of demand down enough.

A price adjustment then takes place later as the higher price causes less to be used through the year than expected. And this is why I am very concerned about carrying a lot of corn, soybeans or wheat into the storage season. Once the size of the crops are known, the market will start reacting to the demand side which I feel may even be weaker than the present forecasts.

And with adequate ending stocks, in a pipeline sense, and there still being the excess capacity of the U.S. to produce, there does not seem to be a reason for the markets to panic unless we have another disaster next year.

In Michigan, it appears we will have good corn and soybean crops in large parts of the state. Consider taking advantage of the relatively good prices we have been seeing.

not due to lower weights. However, I expect weights to keep creeping up along with higher slaughter and this will keep pressure on prices.

Keep very current on cattle ready for market. On those that will be ready later in the fall, watch for pricing opportunities. Futures above \$76 per cwt. for the October and December contracts seem a little high to me, although we could see cattle that high by the end of the year.

Given the fundamental information we have to work with, the futures markets seem to be at or above what we would expect. But given what we are seeing in numbers, it is hard to get excited to do any forward pricing.

However, if we see a couple dollar rallies from the first of September levels, consider locking in some of your expected production.

Dairy Market Outlook

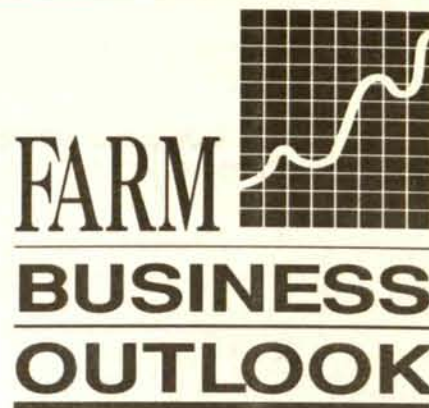
Dr. Larry G. Hamm Dept. of Agricultural Economics, MSU

It's fall and schools are back in session. The food distribution system is beginning to book product for the holiday seasons. This is the time of year milk prices go up - normally.

Unfortunately, farm milk prices this year are declining. They rose this spring and summer when normally they decline. Have dairy markets been turned upside down or is 1993 turning into an unusual year? Since the end of the buyout in 1987, there has not been a normal dairy year. So, 1993 is a typical year in that it is breaking down old notions of dairy markets.

The August Minnesota-Wisconsin (M-W) price decline was the third month in a row. Since federal order milk prices lag behind the M-W, farm pay prices will continue to decline for the next couple of months. When markets decline, attention focuses on speculation when they will stop. The worst case situation is that the M-W would not stop declining until it reaches the support price around \$10 per cwt. The industry remembers the 1990-91 price crash.

Fortunately, the M-W will not go much lower this fall. Many analysts (including this one) think the M-W will actually increase later this fall. Milk production in Wisconsin and Minnesota is declining and cheese demand is still growing.



Reported cheese inventories are not excessive by historic standards. The cash market price for cheese, as reported by the National Cheese Exchange, has stabilized and even increased recently. All of these factors combine to suggest that milk prices can increase later this fall.

However, the price outlook is very tenuous because of two factors. First, milk production is increasing rapidly in other dairy states (California, Texas, Washington). The recent price declines, combined with possible feed price increases, have not yet hit these production regions.

Second, the impacts of poor and/or unavailable feedstocks on Wisconsin's industry are not yet predictable. With a late frost, Wisconsin may be able to get enough feed put up to avoid accelerated culling. An early frost could dramatically turn the milk output projections and the M-W around.

In summary, milk prices are projected to decline for the next few months, but then turn around late this year. Many producers wish that economists' predictions are right, at least once in a "blue moon." Well, we just had a "blue moon." Hopefully, the prediction of rising prices late this fall will be right!

Cherry Industry's Hard Times Prompts Federal Market Order Application

After incorporating numerous suggestions from various members of the Tart Cherry Industry Federal Marketing Order Committee, and an even greater number of suggestions from USDA, a formal request for a federal marketing order was filed with USDA, under the Agricultural Marketing Act of 1937.

While the formal request is quite lengthy and will likely undergo several revisions as it proceeds through the USDA's review and hearing process, growers will have the final say on the federal marketing order via a grower/processor referendum, according to MACMA General Manager Randy Harmson.

"This marketing order is, after all, intended to help the producers," Harmson said. "I know there are a lot of people that would like to see this marketing order in place in time for next year's crop. Whether that

happens or not, it's important that everybody gets an opportunity to review it and then vote on it."

Harmson said a market order would help restore profitability and order to a chaotic cherry market that's seen its share of ups and downs in the past seven years since the previous market order was discontinued.

"A lot of work has gone into this particular market order with input from a number of different facets of the cherry industry, making it quite different from the last order," he said. "This federal market order is much more comprehensive and there are more tools that can help the industry."

Efforts have been and are being made in Washington, D.C., to expedite the review and hearing process so that the industry can vote on the federal market order possibly as early as this coming winter.

Monitor for Foliar Diseases that May Appear on Corn Plants - Adjust Harvesting Plans Accordingly

Foggy mornings, heavy dew, abundant rainfall and high temperatures and humidity create an ideal environment for foliar disease problems in corn. Mark Mattingly, Northrup King Co. agronomist, says foliar diseases are present to some degree every year. Their effect on yield depends on the interaction between the pathogens, corn plants and the environment. Sound management can minimize disease impact on yields and profits.

Some of the major foliar diseases include Northern Corn Leaf Blight (NCLB), Southern Corn Leaf Blight (SCLB), Anthracnose and Gray Leaf Spot (GLS). Corn growers should scout for these and other diseases throughout the year.

Mattingly says the continuing increase in no-till and minimum-till practices leaves more crop residue on the soil surface, creating a primary over-wintering site for disease pathogens. Splash during rain the following spring can then move pathogens from the soil to growing plants. Crop rotation breaks the life cycle of disease pathogens. As a result, rotation lowers the potential for foliar disease in corn. A sound fertility and weed control program helps plants avoid stress, making them less susceptible to disease pressure. Mattingly says it's also important to choose hybrids with a strong package of leaf disease-resistance.

Mattingly also recommends monitoring affected fields. Since the presence of foliar disease is directly associated with stalk rot, growers may want to harvest affected fields first to prevent harvest losses.

7 Revenue Reconciliation Act of 1993

In early August, Congress passed President Clinton's revenue bill for 1993. Following are the key elements for farmers and small business persons categorized by: (1) immediate recognition or action; (2) changes effective for 1993; and finally, (3) changes effective in 1994.

Immediate Recognition or Action

Myron P. Kelsey, Dept. of Agricultural Economics, MSU

Direct expensing (179 deduction) increased from \$10,000 to \$17,500.

Depreciable capital purchases eligible for expensing such as machinery and equipment, fruit trees, breeding livestock and "specialized use" farm structures are eligible for up to \$17,500 of direct expense deductions for purchases any time in the 1993 calendar year for calendar year taxpayers or for fiscal year taxpayers, years beginning in 1993.

Self-employed health insurance deduction extended retroactively from July 1, 1992 through Dec. 31, 1993.

Self-employed individuals who utilized the 25 percent self-employed

health insurance deduction in 1992 for only one-half of the year (i.e., January 1 to June 30) should file an amended return, if they paid any tax in 1992, to obtain a refund.

Since the addition of the health insurance adjustment to income will decrease adjusted gross income, there should also be a Michigan income tax refund.

Repeal of 10 percent luxury tax (all but cars).

The luxury tax which applied to big ticket pleasure items costing over \$30,000, such as jewelry, furs, private boats and aircraft, was repealed retroactive to January 1, 1993. The tax on automobiles costing over \$30,000 was not repealed, but the \$30,000 was indexed for inflation

and, therefore, for 1993 car purchases made after the date of enactment in late August is \$32,000.

If you made luxury purchases subject to the tax, obtain a refund from the seller.

Capital gains remains at a maximum 28 percent.

Capital gains will continue to be taxed at your regular tax rate, or 28 percent, whichever is less. Therefore, installment sales of capital assets will not provide any tax savings if you

FARM BUSINESS OUTLOOK

will be in the 28 percent tax bracket or higher with other income in future years.

No investment tax credit.

Early debate indicated that there might be a restoration of investment tax credit for capital purchases for small businesses. The final bill does not include any investment credit.

Changes Effective for 1993

Higher tax rates for high income individuals.

Few people will be affected by the higher rates. The 1992 rates apply to incomes up through the 31 percent bracket. A new 36 percent rate begins for joint returns with taxable incomes over \$140,000 and a 39.6 percent rate for taxable incomes over \$250,000.

Since these rates apply retroactively, the tax in excess of 1992 rates can be paid in three installments, by April 15, 1994, 1995 and 1996.

Motor and transportation fuel tax increase.

Effective Oct. 1, 1993, an additional 4.3 cents-per-gallon tax is imposed on most motor and other transportation fuels. Current exemptions for farmers and government still apply.

Maximum estate and gift tax rates restored.

Rates on taxable estates over 2 million were reduced on Jan. 1, 1993 to a maximum of 50 percent. The old rates effective prior to Jan. 1 were restored retroactively to 53 percent on estates from 2.5 to 3.0 million and 55 percent on estates over 3 million. No change was made in the \$600,000 exemption.

Alternative minimum tax rate increase.

The AMT rate was increased from 24 percent to 26 percent to the extent that

AMT income does not exceed \$175,000 for joint filers. Amounts in excess of \$175,000 will be taxed at 28 percent.

The exemption amount was increased from \$40,000 to \$45,000 for married filing joint and from \$30,000 to \$33,750 for unmarried individuals.

The tax preference for the charitable contribution of appreciated property was repealed.

Without a capital gains exclusion and investment tax credit, few small business people will have an AMT greater than their regular tax unless they have a lot of tax-free interest investments.

Other changes.

Except for an increase in the depreciable life of non-residential real estate from 31.5 to 39 years, no further changes affect farmers for 1993.

Other changes include: a capital gains exclusion of 50 percent for certain small business stock held over five years (agricultural operations are specifically excluded); the low income housing credit was extended; the top corporate tax rate was increased to 35 percent; and the research and targeted jobs tax credit were extended retroactive from June 30, 1992, as well as the exclusion of educational assistance from employee's income.

Changes Effective January 1, 1994

More Social Security benefits taxed.

The current rules for the taxation of Social Security benefits still apply, where up to 50 percent of Social Security income is taxed with a phase-in beginning at \$32,000 of provisional income for a married couple up to \$44,000 (\$25,000 and \$34,000 for unmarried taxpayers). The addition is that for income in excess of \$44,000, or \$34,000 for unmarried taxpayers, 85 percent of Social Security benefits will be subject to tax.

Repeal of Medicare wage base cap.

Beginning in 1994, all wages and self-employment income will be subject to the 2.9 percent Medicare payroll tax. The current \$135,000 cap on taxable earnings was repealed.

Expansion of earned income credit.

The earned income tax credit for tax years beginning after 1993 has been extended to individuals without

children and the credit percentages and earned income amounts have been increased for 1994, 1995 and later years.

Lobbying expense no longer deductible.

Expenditures after 1993 intended to influence legislation by an individual or organization will no longer be deductible as trade or business expenses. A flow-through rule will require organizations, such as Farm Bureau, to notify members on what portion of their dues are non-deductible.

Other changes.

Other changes effective for 1994 include: reduction of business meal deductions from 80 to 50 percent; loss of business deduction for club dues; tougher limits on deducting a spouse's travel expenses on "business" trips; provision for amortizing intangible assets, such as good will; and a modification of the moving expense deduction.

Tim Ruggles, MCA Young Cattleman of the Year

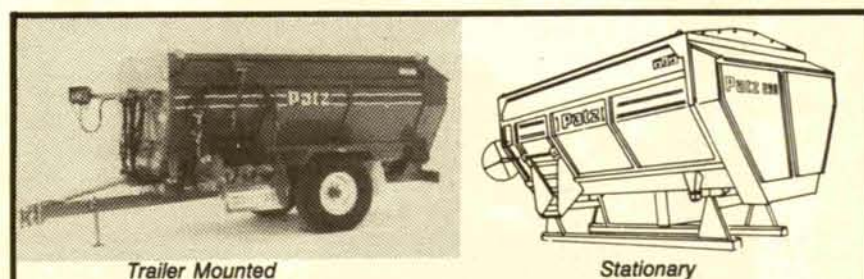
Tim Ruggles, Kingston, was honored at the Michigan Cattlemen's Association (MCA) 1993 Summer Round-Up in Bad Axe. Ruggles was presented the award for MCA Young Cattleman of the Year.

Ruggles began showing steers at the county fair at the age of eight and has been active in the beef industry since that time. After graduating from Michigan State University, he formed a partnership with his father, Fred. They cash crop 1,400 acres, feed 700 head of steers and have a 125 head brood cow herd.

Ruggles serves as treasurer of the Thumb Cattlemen's Association Membership Committee. He is an MCA regional membership director for Tuscola and Huron Counties and vice-chairman for the Tus-



cola/Sanilac District of Michigan Live Stock Exchange. Ruggles encouraged 4-H beef projects by organizing the Thumb Jackpot Steer Show in 1992.



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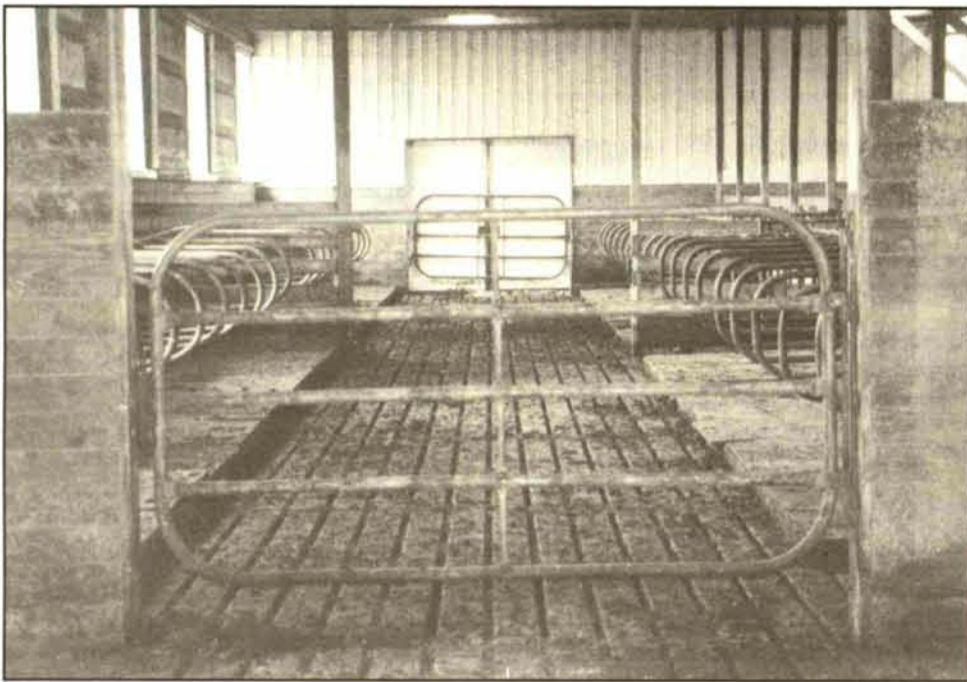


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8

Manure Storage Areas Demand Precaution

Provide strong ventilation during agitation and pumping. The interior of the building should be off limits to people, and, if possible, animals should be evacuated.



Liquid manure storage systems in livestock buildings provide a fast and economical method for handling animal wastes. But they also have the potential to release hazardous gases that threaten the lives of both humans and animals.

Hydrogen sulfide, ammonia, carbon dioxide, methane, and many other gases are generated when manure decomposes under certain conditions. Such decomposition occurs in all non-aerated manure storages, and the gases can be hazardous when they reach sufficient concentrations. The greatest danger is present during and after – up to several days after – agitation of the manure.

The extent of the hazard can be deceiving, because dangerous circumstances don't always exist in such spaces. Individuals may occasionally enter such an area without experiencing problems.

Here are precautions regarding the safe management of a liquid manure system in a livestock building:

- Under no circumstances should anyone enter a liquid manure pit without wearing a self-contained



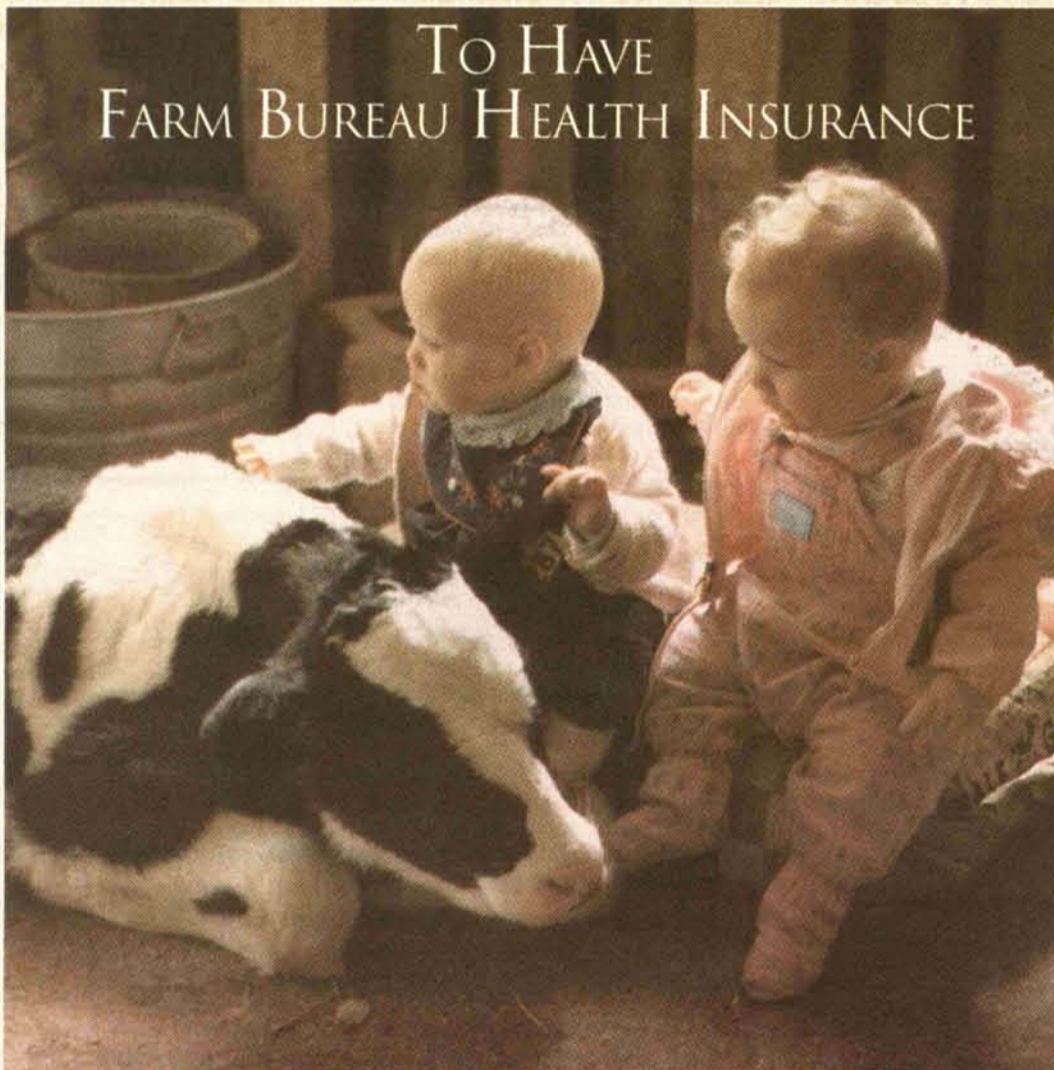
From Farm Bureau Insurance

breathing apparatus – even if the pit is empty. Use a lifeline connected to someone outside the danger area.

- Do not allow the manure pit to fill completely. Allow one to two feet of air space to accommodate concentrations of gas. If possible, lower the level of liquid manure in the storage facility before beginning agitation. Doing so will further reduce the possibility that gas will be forced above floor level.
- Because of the danger presented by agitation and pumping, such procedures should always involve at least two people, connected by a lifeline, with one person always outside the danger area.
- Consult your physician if you have been exposed to hydrogen sulfide in concentrations severe enough to cause irritation of your respiratory tract.
- Post warning signs at common potential entry points of confined spaces where hazardous gas concentration could occur.
- Purchase and use decals from the Michigan Department of Labor-S.E.T. Division, P.O. Box 30015, 7150 Harris Dr., Lansing MI 48909. Ask for SET #2054 - "Confined Space Decal Sign."
- Keep sources of ignition and fire away from the manure pit. Designate smoking areas away from the immediate vicinity.
- Consider installing railings on all walkways and permanent ladders on the inside walls of the pit. Construct lids or tops on all ground level pits, or fence around them where possible.
- Remove pumps that become clogged or need repair from the pit to make the repair. Remind children, visitors, and any non-essential employees to stay away from the pit.

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Self-Contained Breathing Apparatus Considerations

If a confined space must be entered where hazardous manure gases may exist, a self contained breathing apparatus (SCBA) should be worn along with a safety harness and preferably two persons standing by. Dust masks or masks with cartridges will not protect you!

An SCBA supplies clean air to the mask by means of a small air tank strapped to the user. This allows great mobility, but protection is limited by the 15 to 30 minutes of air supply. This is by far the safest method for entering a manure pit.

Check the yellow pages of your phone book under "Safety Equipment" for supplies. This type of equipment will list for \$1,200 to \$1,600. Your local fire department is the best local source for information and training on its use.

Protect Yourself and Family from Deadly Silage Gas

Farmers who will be handling corn for silage need to be mindful of the danger of nitrogen dioxide – silo gas – which can accumulate in the silo. Exposure to silo gas can cause permanent injury or death.

"The highest concentrations of nitrogen oxides usually occur 48 hours after the silo is filled, but no one should go into a silo for four to six weeks after filling," says Howard J. Doss, MSU agricultural safety specialist.

Nitrogen dioxide is heavier than air, so it may form yellowish layers of mist above the silage or drop down the silo chute. The strong silage odor can mask nitrogen dioxide's bleach-like odor. It may be present even if you can't see or smell it.

When silo gas is highly concentrated, it can kill a person in a matter of seconds, along with anyone who attempts a rescue. In low concentrations, silo gas damages the respiratory system when nitrogen dioxide combines with moisture in the lungs to form nitric acid. This acid can severely and permanently damage respiratory tract tissue.

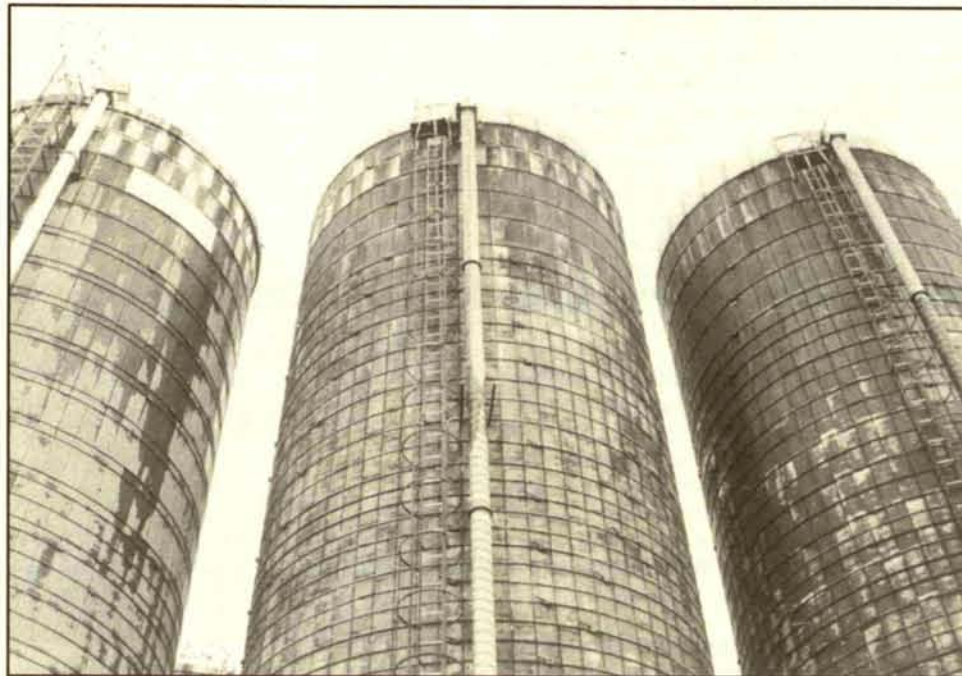
The effects include severe irritation that may lead to inflammation of the lungs, though the victim may feel little pain or discomfort. Exposure symptoms – shortness of breath, a faint feeling and flu-like illness – can frequently be delayed for several days.

"A person may inhale silo gas for a short time and notice no effects," Doss says. "But he or she may go to bed several hours later and die while sleeping because of the fluid that has collected in the lungs."

Frequently, a relapse with symptoms similar to those of flu or pneumonia occurs one to two weeks after initial recovery from the exposure.

"The majority of people who develop initial silo gas exposure symptoms could also develop secondary ailments," Doss says. "For this reason, it is extremely important that anyone exposed to silo gas seek medical atten-

Always ventilate silos by turning on the blower prior to entry, and if at all possible, make repairs or unplug fillers tubes immediately, to limit exposure to silo gas.



tion, regardless of the degree of these symptoms."

Silo gas begins to form almost as soon as silo filling begins. "It is most likely to develop

one to three days after the silage has been made," Doss says. "If a mechanical breakdown occurs or the filler pipe clogs, the problem should be corrected immediately. Waiting overnight to do the task adds the risk of silo gas build up in the silo. If there's a dire need to enter the silo, wear a self-contained breathing apparatus," Doss warns.

Farmers who must enter a silo during or just after filling should follow these general procedures:

- Open a silo door above the silage level to allow any silo gas present to drain out of the silo.

- Run the blower at the base of the silo 15 to 30 minutes before entering to let fresh air in above the silage.

- Always wear a self-contained breathing apparatus when entering the silo within four to six weeks after filling.

- When entering the silo after that recommended waiting period, be sure to ventilate the silo chute for 10 to 15 minutes before hand and open several hatches to move out any pockets of gas.

- No one should ever work alone in a silo. Always work in pairs so someone can go for help in an emergency. Remember that employees must follow Michigan Department of Public Health regulations for entering a confined space.

"MSU Dairy Facility" continued from page 1

Ten of the farmworkers were taken to the hospital for observation and released, with none of them suffering any ill-effects from the manure gas.

MSU Ag Engineer Howard Person and MSU Safety Specialist Howard Doss both agree that the wind, or lack of it, was the primary reason that the facility experienced problems this time around. Person suggests that producers with pits located directly under the barn, play it safe and move the animals out of the building prior to beginning agitation.

"If the building is wide open, it's usually not a serious problem," Person explained. "My recommendation would be to normally remove the animals if at all possible. I know that normally animals are left in the building, and that in large confinement operations it's not always practical to get them out of the building, but the results can also be costly."

Doss suggests that producers consider the wind velocity, the weather, the facility design, and a host of other factors before making the decision to proceed with manure agitation and pump-out.

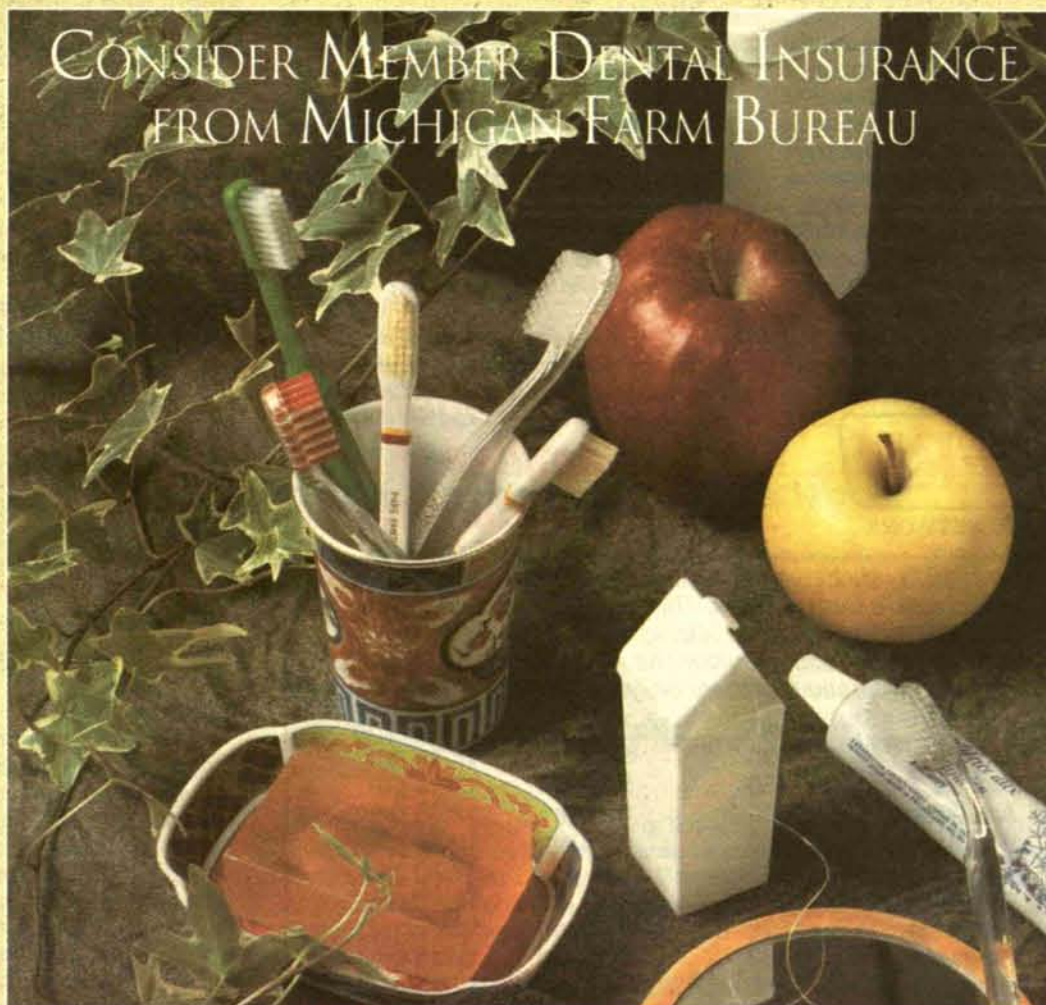
"I'd be most concerned about wind velocity, when you start agitating and pumping," Doss said. "If it's real calm, hedge your bets and wait until you get a day with some natural wind velocity, especially in facilities that depend on natural ventilation."

Doss said it's critical that as farmers prepare to empty manure storage facilities this Fall, to consider all of the factors involved, and ask a few questions, such as: What has been done to prepare for an emergency? What rescue equipment do you have? How many people are involved? And, is it necessary to have that many people involved?

Doss also recommends that producers treat empty facilities with the same precautions as a full one, because they're never really completely empty.

"Don't think that because you've got just a half foot or so of manure remaining in the pit that it's safe to enter without precautions," Doss warned. "You haven't lowered your risk level at all, and gas, such as hydrogen sulfide, will still be present, and could lead to the multiple fatalities that we've seen in the past if you should pass out and someone tries to rescue you."

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10 Make the Best Silage Possible to Maximize Your Milk Production

When it's time to harvest corn silage, make sure the plants have reached physiological maturity before chopping. That's how to get the most feeding value out of the crop, according to Michigan State University Extension animal nutrition specialists.

The ideal moisture concentration is whole plant moisture between 65 and 70 percent. Harvesting excessively wet silage (moisture greater than 70 percent) usually results in undesirable fermentation, loss of nutrients through seepage and poor animal performance due to low consumption.

One way to tell when corn is physiologically mature is to look for the black layer at the top of the corn kernels. The moisture content of the kernels is about 65 percent by then, and the ears will be dented. Most of the plant leaves will still be green, but the lower leaves will be in various stages of drying. No further grain development occurs once the plant reaches physiological maturity. Researchers suggest that the milk line may be a useful indicator of kernel maturity.

To observe the milk line, break the ear of corn and look at the face of the kernel on the tip portion of the ear. As the plant develops and the kernels mature to the full dent stage, a distinct line – the milk line – can be seen progressing from the crown of the kernel to the base.

The milk line separates the solid from the liquid portion of the kernel. When the milk line is halfway between the crown and the tip (half milk stage), kernel moisture is about 40 percent and more than 90 percent of the normal yield of grain can be expected.

When the milk line has reached the kernel base and becomes indistinct, the kernel base can be probed with a knife point to see if any milk remains. Kernels containing no

milk are physiologically mature and should contain a developed black layer. Though the black layer and milk line development help in estimating whole plant moisture, a fully developed black layer with little or no milk means that the optimum time for making silage has passed.

Using a commercial moisture tester to determine whole plant moisture is the best way to avoid variation in visual estimates of moisture content due to the hybrid grown and local growing conditions.

Ideally, the corn plant should be chopped into pieces 1/4 to 3/8 inch long to minimize storage loss. Extremely fine chopped corn silage (1/8 inch or less), such as that produced by a recutter screen, is undesirable. Material chopped that fine is known to reduce milk fat test in dairy cows because of a decrease in effective fiber in the ration.

A practical rule of thumb is that most of the silage particles (80 to 85 percent) should be about 1/2 inch long, with 15 to 20 percent of the particles one inch long. If the silage is too dry (below 60 percent moisture), reduce the chop length to near 1/4 inch so the silage can be adequately packed.

Adding non-protein nitrogen (NPN) at ensiling is an economical way to provide supplemental protein for silage. Dairy nutritionists say that corn without NPN will contain about 8 percent crude protein on a dry matter basis.

Adding NPN products can raise the crude protein level to 12 percent. Adding anhydrous ammonia at the rate of seven pounds per ton of wet silage or adding urea at 10 pounds per ton of wet silage can increase the crude protein level up to 12 percent.



Stored Grain Pest Management Tips You Can Use

Doug Landis & Mike Haas, Entomology, Michigan State University

Now is the time to prepare bins for on-farm storage of harvested grain. It is critical that growers take steps to prevent stored grain insect problems, since measures to correct an existing infestation are frequently very costly and may not be completely effective.

The key to preventing stored grain insect infestations is through a program of sanitation, cleaning, drying and proper management of the stored grain mass. These practices are outlined in Extension bulletin E-934, "Protecting Stored Grains from Insects."

Two Important Notes

1. Not all formulations of the insecticides noted here are intended for use in stored grains. Read the label to be sure that the product to be used is specifically registered for use in stored grains.
2. Insecticides and fumigants are effective only in properly dried and cleaned grain. Check the grain and clean and dry it if needed before applying the chemical.

Preventing Insect Infestations in Stored Grain

Sanitary Sprays

Thorough cleaning in and around the bin and all grain handling equipment (combines, trailers, cleaners, dryers and augers) is strongly recommended. A spray of an insecticide in cracks, corners and other hidden places that cannot be adequately cleaned is also recommended. The accumulated debris in the space under the false flooring of the bin is an especially good place for insects to breed. A special effort should be made to clean and spray this area.

These sanitary sprays can be used in any empty bin regardless of the grain that will be stored later in the bin. Special products registered for use on stored grains are listed in Extension bulletin E-1582, "Chemical Control of Insects and Nematodes in Field and Forage Crops."

Surface Sprays

Sprays of insecticides applied and raked in the surface of the grain are used in new grain to aid in preventing insects from getting into the grain and also to control surface feeding caterpillars such as meal moth or Indian meal moth.

The caterpillars are often abundant in poorly ventilated grain where moisture has condensed at the surface. Remove the damaged grain before spraying, then keep the grain well-ventilated.

Grain Protectants

Sprays or dusts of some insecticides can be mixed directly with new grain as it goes into the bin to protect the grain from insects. The use of a grain protectant is especially recommended if the grain is to be stored longer than one year.

Grain protectants can also be used to control low infestations of insects (roughly defined as "insects present but hard to find"). This involves moving the grain and requires an empty bin or other space to put the grain in as it is treated. Grain protectants are not reliable against established infestations (where insects can be found with little searching) and, therefore, a fumigant, noted later, must be used.

Controlling Established Insect Infestations in Stored Grains

Fumigants

Fumigants are gases that penetrate through the grain mass and the grain itself to kill insects. They are most commonly used to control established infestations of insects in the grain mass. They are sometimes applied to newly-binned grain in place of sanitary sprays and grain protectants. Fumigants are fairly costly and difficult to apply safely. Analysis of the cost of the fumigant and its application versus the value in protecting grain quality, should be made before they are used.

An important point is that while fumigation kills all stages of the insects, they do not repair damaged grain nor remove the dead insect bodies. There are times when feeding the infested grain or selling it at a discount, outweigh the return from the cost of fumigation.

Growers must be certified by MDA in the fumigation standard to buy and use fumigants. New restrictive standards on the use of fumigants have been established. These include the use of self-contained breathing apparatus (scuba gear) in place of a gas mask and the use of gas detection devices in some situations.

Grain Protectants to Treat Low Level Infestations

As mentioned, the grain protectant chemicals can, in certain instances, be used to control very light infestations of stored grain insects. Where insects have recently invaded the surface of the grain mass, a surface spray applied to the top four inches of grain and then mixed into the upper six inches may suppress or completely control an infestation.

If the infestation is more severe, the grain may need to be moved and treated as described in the "Grain Protectants" section above.

Caution

These tactics are most effective against surface feeding insects. Insects which feed within the kernels of grain will not be controlled using a grain protectant spray. In these cases, fumigation is recommended.

Reprinted from MSU Field Crop Advisory Team Alert



Serving Michigan Farm Families is Our Only Business

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

Station	City	Frequency	Morning Farm	Noon Farm
WABJ	Adrian	1490	5:45 am	12:15 pm
WATZ	Alpena	1450	5:30 am	12:15 pm
WPZA	Ann Arbor	1050	6:15 am	12:05 pm
WLEW	Bad Axe	1340	6:30 am	12:50 pm
WHFB	Benton Harbor	1060	*	12:30 pm
WKYO	Caro	1360	6:15 am	12:45 pm
WTVB	Coldwater	1590	5:45 am	***
WDOW	Dowagiac	1440	6:15 am	12:15 pm
WACY	Fenton	1160	6:15 am	12:15 pm
WGHN	Grand Haven	1370/92.1	5:45 am	12:15 pm
WPLB	Greenville	1380	6:15 am	12:45 pm
WBCH	Hastings	1220	6:15 am	12:30 pm
WCSR	Hillsdale	1340	6:45 am	12:45 pm
WHTC	Holland	1450		12:15 pm
WKZO	Kalamazoo	590	**	12:15 pm
WJIM	Lansing	1250	5:05 am	12:15 pm
WWGZ	Lapeer	1530	*	12:15 pm
WNBY	Newberry	92.5		12:15 pm
WOAP	Owosso	1080	6:15 am	12:30 pm
WHAK	Rogers City	960	7:10 am	12:15 pm
WSJ	St. Johns	1580	6:15 am	12:15 pm
WMLM	St. Louis	1540	6:06 am	12:20 pm
WSGW	Saginaw	790	5:55 am	12:15 pm
WMIC	Sandusky	660	6:15 am	12:45 pm
WKZC	Scottville	95.9	5:45 am	12:30 pm
WCSY	South Haven	940		12:15 pm
WKJC	Tawas City	104.7		12:45 pm
WLKM	Three Rivers	1510/95.9	6:15 am	12:15 pm
WTCM	Traverse City	580	5:55 am	12:40 pm

* Station signs on at different times during the year. Morning farm times change with sign-on times.

** Station airs various farm reports between 5:50 and 6:20 pm.

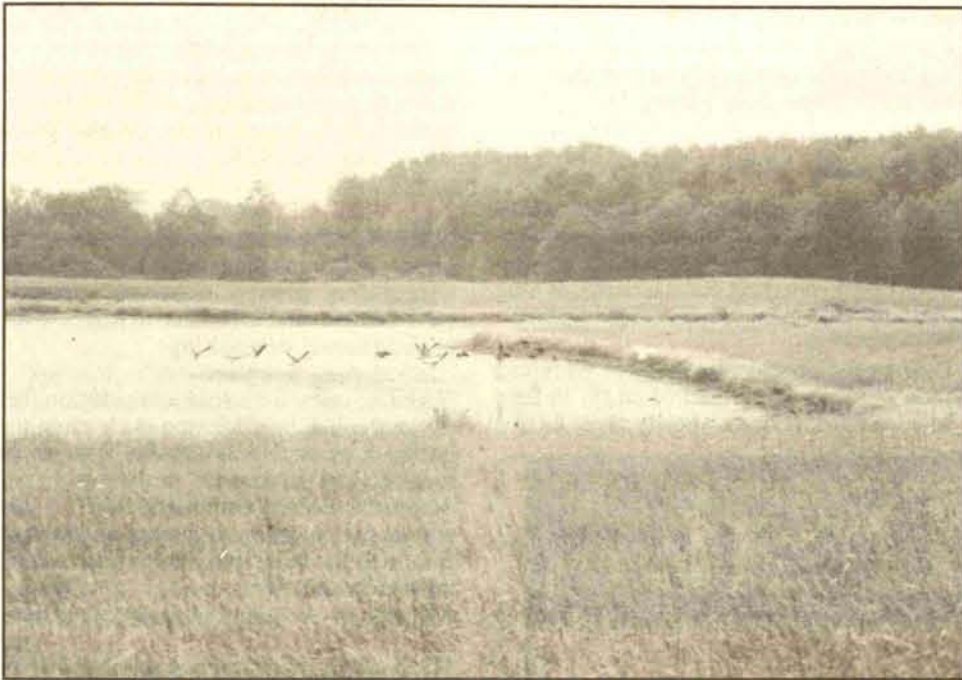
*** Station airs various farm reports between 12:00 and 1:00 pm.

Some stations carry additional market reports throughout the market day.



11 New Wetlands Package a Step in the Right Direction

Under Clinton's wetlands proposal, farmers should receive clarification of what is and isn't a wetland, an exemption on prior-converted wetlands, and will deal primarily with SCS on wetland questions. Farmers will also receive an incentive to restore wetlands on their property through an expanded wetlands reserve program. Below, Clinton County farmer Jim Flynn's restored wetlands project, started just two years ago on part of his 350 acre farm, has turned into home for several ducks, geese and other waterfowl while also helping to improve water quality and reduce soil erosion.

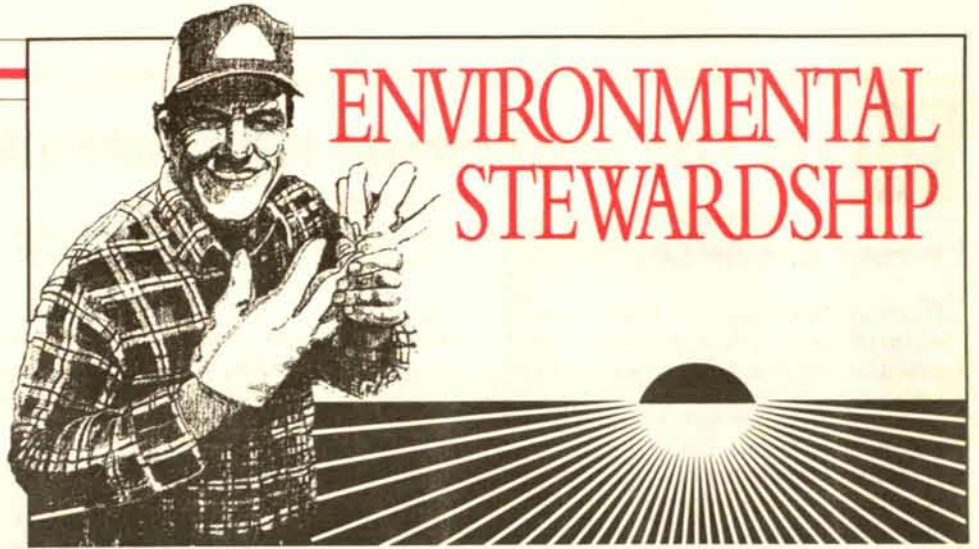


The new Clinton administration wetlands proposal should help clear up some of the confusion and frustration associated with the controversial issue, according to AFBF President Dean Kleckner:

"We welcome the fact that the Clinton administration has taken on some of the most contentious issues regarding wetlands," said Kleckner. "Farm Bureau will continue to push for legislation such as H.R. 1330 as a final solution to wetlands problems such as classification and compensation.

According to Kleckner, Farm Bureau endorses the following principles announced in the plan:

- * The administration's exemption of prior-converted wetlands.
- * The clarification that certain man-made structures such as irrigation ponds will not be considered jurisdictional wetlands.
- * The use of mitigation banks.



* Incentives for farmers to restore wetlands on their property through the expansion of the wetland reserve program.

* Increasing the quantity and quality of wetland areas through voluntary, non-regulatory programs.

* The administration's acknowledgement that all wetlands are not of equal value.

Kleckner said Farm Bureau will take a "wait-and-see" attitude concerning the administration's proposal to give the USDA's Soil Conservation Service more authority to identify and regulate agricultural wetlands.

"We have long supported SCS being named the lead agency in agricultural wetlands determination and management," he said. "SCS is qualified to do the job and it's time we let that agency do it. "It doesn't appear that this announcement will give SCS the sole oversight that its trained soil scientists are most qualified to carry out.

"While stating that farmers can rely on SCS determinations as 'final,' the statement also gives monitoring power to the Corps of Engineers and EPA, in consultation with the U.S. Fish and Wildlife Service. We want to ensure that farmers will not be burdened by the same old bureaucratic red tape."

Clinton acknowledged "the past frustrations of contradictory policies of feuding among federal agencies which blocked progress by creating uncertainty and confusion."

"Farmers welcome relief from this confusion. The past policies have left many landowners unable to make decisions," Kleckner said. "I'm encouraged by what appears to be a long-overdue recognition of property rights in the administration's wetlands statement, including increased support for the wetlands reserve program."

"The administration has made a first step in acknowledging that wetlands exist on privately-owned property," Kleckner said. "Compensation to landowners, like that included in the wetlands reserve program, recognizes that private property rights are essential to the conservation of wetlands.

"It's estimated that 75 percent of the nation's wetlands in the lower 48 states exist on private property. We agree that it is imperative to recognize and consider fully the impacts of wetlands protection policies on individuals who own wetlands."

Kleckner praised the administration's exemption of prior-converted farmland. "These areas were converted when the rules were quite different. These lands no longer function or hold the characteristics of wetlands," he said. "It was only fair for the Clinton administration to make this determination.

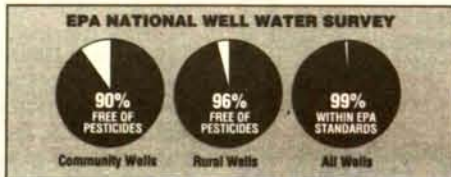
"We still need recognition of the role of farmed wetlands - those occasional small wet areas in fields that will raise crops nine out of 10 years. It would be better to offer an exemption to all areas tilled prior to 1985."

Looking Out For The Environment

Well Water Monitoring Studies: Good News for Farmers

As public concerns grow over a society's impact on the environment, it's logical that ground water would also come under scrutiny. In fact, great advances in detection technology have raised questions about the presence of agricultural chemicals in rural wells. But, is it true? How safe is our country's well water in general?

To find out, two nationwide well water studies were conducted. Scientists tested the water from thousands of rural and community wells to predict the water quality of all wells in the country. These



well studies represent the most extensive evaluation ever undertaken.

The EPA National Survey of Pesticides in Drinking Water Wells was a 5-year, \$12 million study of more than 1,300 wells, some in every state, including

information about each wells' condition and characteristics and nearby use of ag chemicals and fertilizers. Well water from community water systems and rural domestic wells was tested. These tests could detect the presence of pesticides thousands of times lower than their EPA lifetime safe consumption levels.

Nitrates were the most commonly detected contaminant. The EPA estimates that more than 50% of the nation's wells contain nitrates from many natural and manmade sources, and about 1.2% of community wells and 2.4% of rural wells have levels that might pose a risk to public health.

Pesticide traces were detected also, but only infrequently. Of the 126 pesticides and their breakdown products the study looked for, 12 were detected. The popular corn herbicide, atrazine, and breakdown products of dacthal accounted for most of the pesticide detections in the study. Dacthal is a com-

monly used herbicide in suburban and rural areas for weed control in lawns and gardens, but not for grain crops.

From this study, EPA estimates that about 90% of America's 95,000 community water systems and 96% of our 10.5 million rural domestic wells are free of measurable traces of any pesticide. Most importantly, they estimate that more than 99% of all wells in the country contain no pesticide traces exceeding the EPA standards for safe drinking water.

The National Alachlor Well Water Survey tested 1,430 wells in 89 counties of 26 states. From these samples, Monsanto scientists projected the occurrences of contamination for the estimated 6 million rural domestic wells, serving about 20 million people in 45 agricultural regions. Five major herbicides and nitrate nitrogen were studied closely.

The results supported the conclusions of the EPA nationwide well water study. Monsanto scientists predict that 87% of the estimated 6 million wells in the surveyed area should be completely free of any detectable levels of these herbicides. Better yet, 99.9% of those wells should have no herbicide levels exceeding the EPA standards for safe drinking water.

This information is provided by the Alliance for a Clean Rural Environment, a non-profit, non-political organization encouraging environmental stewardship and protection of water quality, supported by the makers of crop protection chemicals.

USDA: Conservation Tillage Works

After three decades of testing, the USDA has concluded that tilling fields as little as possible considerably reduces erosion and protects groundwater, according to an *Associated Press* story.

On low-till fields, which comprised 57 percent of the nation's cropland in 1992, the rainwater that filters deep into the soil carries "almost no trace of herbicides," said William Edwards, a soil scientist with the Agricultural Research Service. During a recent meeting of the American Chemical Society, Edwards said soil erosion from those fields also dropped dramatically.

"Eliminating conventional plowing has changed the flow of soil from tons to pounds per acre," he said, adding that as a result, more and more farmers are adopting the approach. Research that served as a basis for Edwards' statement came from the North Appalachian Experimental Watershed Laboratory in Coshocton, Ohio, and the Southern Piedmont Conservation Research Center in Watkinsville, Ga.

Farm Chemicals Detected in Flood Waters

The U.S. Geological Survey says that despite the higher volume of water from this year's floods, concentrations of agricultural chemicals in the Mississippi River and its tributaries are on line with concentrations detected in 1991 and 1992.

"We thought that concentrations would be diluted by the record high flows, but this did not turn out to be the case," said Philip Cohen, chief hydrologist for USGS in Reston, Va. "Instead, herbicide concentrations were at or near the maximum levels that were found in our previous studies."

Cohen told *United Press International* that the herbicide atrazine is of particular concern. He said as much as 300 million pounds a year are applied to crops in the Midwest. At all sampling sites, atrazine levels ranged from about 1.5 to 3 parts per billion. USGS said, however, that the high levels did not mean that the maximum contaminant level for drinking water had been reached.

More Farmers Going Cellular

More and more farmers are using cellular phones these days to keep in touch with the world from their tractors and pickup trucks, according to an *Associated Press* story. A growing number of farmers are finding that cellular phones are allowing them to keep up with markets and to phone for assistance when equipment malfunctions.

According to Barbara Sullivan, an official with CommNet 2000 of Englewood, Colo., the largest provider of rural cellular service in the nation, about 25 percent of her company's customers are farmers, but she says that's certainly not a new trend.

Is Your Water Safe?

National studies say YES - our country's well water is safe to drink. In most areas of this country, detections of pesticides are infrequent and low in concentration. Even so, contamination of wells can be prevented. You can help protect water quality and the public's confidence in agriculture by following sound practices for storing, handling and using pesticides, rinsing containers before disposal and protecting your wellhead.

Lots of people are testing wells for various potential contaminants: fuel leaks from underground storage, excess bacteria and nutrients from leaking septic systems or manure lagoons, broken pipes or pesticides. If you believe there's a reason to suspect contamination of your well, you can get well testing help from your state Board of Health, private testing labs, and your state Department of Environmental Management.

12 Do You Understand What NAFTA Does and Doesn't Do?

WHAT IS NAFTA?

The North American Free Trade Agreement (NAFTA) provides rules and guidelines for dismantling trade barriers and creating a three-country free-trade area encompassing the United States, Canada and Mexico. The free-trade area eliminates barriers to trade, but does not create economic integration or a common external policy like the European Community's "common market." The agreement does provide for the free flow of capital among the three parties, and contains rules allowing for the temporary entry of business people.

NAFTA is actually three bilateral agreements: the already existing U.S./Canada agreement; and two new agreements, one with Mexico and Canada, and one with Mexico and the U.S.

While NAFTA is a three party agreement, this analysis will deal exclusively with the potential impact of the U.S./Mexico portion.

GENERAL

The agreement contains schedules for reducing and eventually eliminating tariffs and non-tariff barriers to trade, rules for converting non-tariff barriers to tariffs, rules to determine country of origin and provisions to facilitate investment.

Tariffs would be eliminated immediately on about half of U.S./Mexico trade upon implementation, while tariffs on more sensitive products would be phased out over 5, 10 and 15 year periods. All barriers would, therefore, be removed by the end of the 15 year transition period.

Approximately 40 percent of current Mexican agricultural imports enter the U.S. duty free. Under NAFTA, an additional 20 percent would be granted immediate duty-free status. The remainder, about 40 percent, would be phased out over the next 15 years of the transition period.

In Mexico, NAFTA will open an estimated 52 percent of their market to duty-free access for U.S. farm goods immediately. The remaining tariffs would be removed over the next 15 years. Mexico's restrictive import-licensing system, which covers an es-

timated one-quarter of U.S. agricultural sales to Mexico, would be eliminated. Likewise, the U.S. would exempt Mexico from Section 22 import restrictions.

TERMINATION

The agreement provides that any party "may withdraw from this agreement six months after it provides written notice to the other parties."

FOOD SAFETY AND GRADE STANDARDS

NAFTA makes no changes in stringent U.S. food safety law and inspection requirements. We are allowed to prohibit any imports that do not meet our standards, as long as these standards are scientifically based.

U.S. agencies closely monitor Mexican food products at the port of entry. In fact, Mexican products are already checked at a

1992 U.S./Mexico Commodity Trade

	U.S. to Mexico — in millions of U.S. dollars —	Mexico to U.S.
Grains and Oilseeds	1,548	327
Animals and Products	1,378	1,014
Fruits and Vegetables	220	301
Coffee	---	301
Beverages	---	138
Other	530	506
Total	3,676	2,286

higher frequency than domestic goods. Current U.S. grade standards, establishing minimum quality requirements, are also maintained under NAFTA.

ENVIRONMENT

NAFTA endorses economic development in an environmentally sound manner. By stimulating greater economic growth, NAFTA will enable Mexico to increase its' environmental stewardship.

NAFTA calls for close cooperation between the U.S. and Mexico to clean up the border area, and provides for a series of long-term environmental initiatives. In addition, the recently completed NAFTA side agreement on the environment will lead to penalties for failure to live up to environmental commitments.

TRANSPORTATION

The NAFTA transportation section will, for the first time, allow U.S. trucks and railroads access to the Mexican market on equal terms to those already provided to Mexican vehicles in the U.S. After three years, U.S. trucks will be allowed to travel within the border states of Mexico. After six years, trucks from both countries would be allowed into the other country's interior.

Transportation standards, including licensing, would be harmonized at the highest common denominator over this period. In the meantime, all foreign trucks and drivers must meet U.S. standards.

COUNTRY-OF-ORIGIN

NAFTA bolsters incentives for buying within the NAFTA region and ensures that Mexico will not become an export platform to the U.S. Only North American products can obtain the benefits of NAFTA tariff preferences.

Non-Mexican origin commodities must be transformed or processed significantly in Mexico before they would be afforded NAFTA's favorable treatment.

Agricultural trade between Mexico and the U.S. constitutes a significant and growing business. Mexico accounts for about 8 percent of all U.S. farm exports, while imports from Mexico comprise 11 percent of our farm imports. Trade with the U.S. accounts for a majority of Mexico's agricultural imports and most of its farm exports.

IMPACT ON LABOR AND WAGES

Most studies indicate that each of the three NAFTA countries will gain in the number of workers and in average wages received by workers as a result of the agreement.

With our rapidly increasing exports to Mexico, over 700,000 U.S. workers are now at jobs supplying goods and services to Mexico. Under NAFTA, another 200,000 U.S. jobs will be created with wages above the national average.

Some U.S. workers will also be displaced by increased Mexican competition under NAFTA. However, any negative employment loss is projected to be small compared to the jobs created by further opening the Mexican market to U.S. products.

In Michigan, NAFTA will help lock-in the 22,350 jobs already generated by Mexican trade, and create new jobs that will offset any loss by an estimated nine-to-one margin.

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NAFTA Export Sales and the Commodities You Grow

13

Think a failed NAFTA won't hit your pocketbook? Guess again. Despite the political rhetoric, Michigan agriculture has a lot at stake.

COARSE GRAINS

Traditionally the U.S. has supplied nearly all of Mexico's corn and grain sorghum imports. Under NAFTA, Mexican restrictions on corn imports will be phased out over 15 years, resulting in a 6 million ton market for U.S. corn. A market increase of that size would boost corn prices by six cents per bushel and increase farm revenues by \$400 to \$500 million per year.

SOYBEANS

Mexico is already a good market for U.S. soybeans and soybean meal, and the elimination of tariffs over time will make this market even more attractive. By removing the current soybean tariff, U.S. exports to Mexico could quadruple to 4.5 million tons per year.

By the end of the transition period, U.S. soybean prices are expected to be 2 percent higher than without NAFTA and revenues are expected to be \$400-500 million higher.

WHEAT

The U.S. is a major supplier of wheat to Mexico. Improvements under NAFTA are expected to increase Mexican wheat demand and boost U.S. exports by 20 percent.

DRY BEANS

Mexico is an important market for the U.S. dry bean industry. Mexican imports of U.S. dry beans have varied widely (153,327 tons in 1990 but only 38,000 tons in 1991) due to a very restrictive licensing arrangement.

NAFTA will eliminate the licensing scheme and guarantee a minimum access to the U.S. of 50,000 tons with no tariff. Quantities above the quota will be assessed a tariff, but the quota and tariff will be phased out over 15 years.

SUGAR

Both the U.S. and Mexico are net importers of sugar. NAFTA is expected to have little effect on the U.S. sugar industry for at least the first six years of the transition period. Mexico will be allowed to increase its quota from 7,258 to 25,000 metric tons during this period, but only if it becomes a net sugar exporter.

In the seventh year, Mexico will be allowed to ship up to 150,000 tons (increased by 10 percent per year), but again, only if it is a net exporter of sugar. Furthermore, if Mexico is a net exporter for two consecutive years, the limits on Mexican imports are removed altogether.

To become a net exporter, Mexico would have to convert its soft drink industry to high fructose corn syrup (HFCS). This could free up a substantial amount of sugar for export to the U.S., requiring that imports

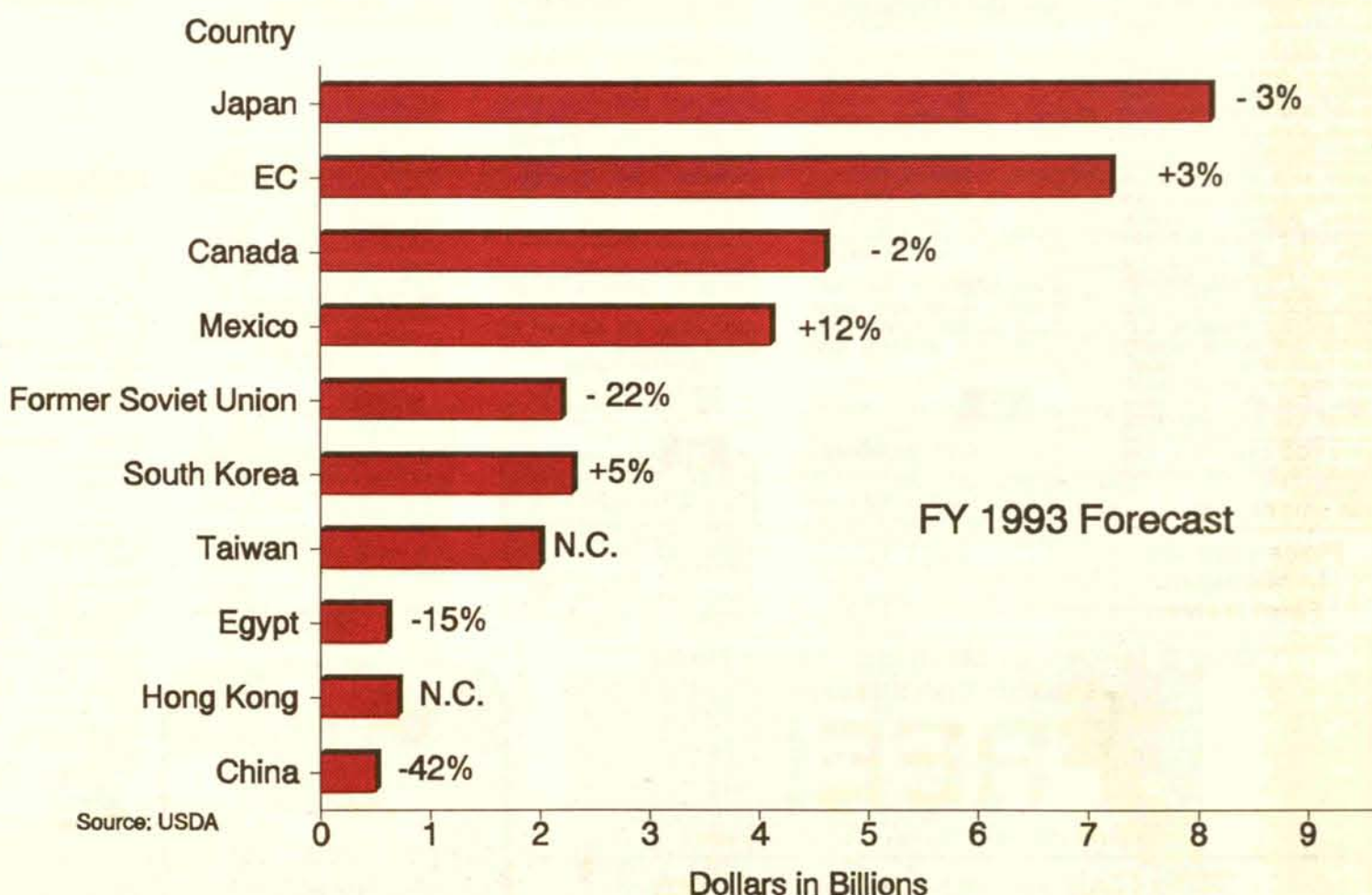
OVERALL IMPACT TO U.S. AGRICULTURE

NAFTA will lead to increased efficiency and market opportunities in both Mexico and the U.S., but most of the advantage will be tipped in favor of the U.S.

By the end of the transition period, U.S. agricultural exports to Mexico will likely be a modest \$2-2.5 billion greater, and farm cash prices 3 percent higher, than without NAFTA. Grains, oilseeds, animals and meat products will lead in the expansion.

Mexico will also see agricultural exports to the U.S. expand under NAFTA - rising \$500-600 million by the end of the transition period. Noncompetitive products such as coffee, cocoa and bananas, and competing products including vegetables, fruit and feeder cattle will see an increase in trade with NAFTA.

Top U.S. Agricultural Export Markets



from other countries be reduced accordingly. Efforts are currently underway to address sugar industry concerns that Mexico could import HFCS to achieve net surplus producer status.

HORTICULTURAL CROPS

The current trade balance in the sector is heavily in Mexico's favor and comprises a significant portion of their farm exports to the U.S. Mexico is expected to gain from NAFTA tariff reductions in winter vegetables, citrus, melons and cut flowers. However, the U.S. will also gain from improved access to Mexico for potatoes and several noncitrus tree fruits.

DAIRY

Mexico is the world's largest importer of milk powder. The U.S. annually exports about 40,000 tons of non-fat dry milk to Mexico. These exports are projected to grow to 55-65,000 tons by the end of the 15 year transition period, for a gain of \$36 million in additional sales. Annual exports of other dairy products to Mexico are expected to total \$200-250 million, about 15 percent more than without NAFTA.

CATTLE and BEEF

Mexico/U.S. trade in cattle and beef is a two way street with Mexico shipping feeder cattle north, while the U.S. ships live cattle and beef back to Mexico. NAFTA is expected to increase such trade in both directions. By the end of the transition period trade is expected to boost U.S. cattle prices by 50 cents to \$1 per hundred pounds, which will create an added \$200-400 million in annual industry revenues.

SWINE and PORK

Despite high tariffs, Mexico has been a growing market for U.S. hogs and pork products. NAFTA is expected to double the market for U.S. pork, resulting in a \$50-100 million gain for U.S. producers.

POULTRY

The U.S. supplies almost all of Mexico's poultry imports. This rapidly growing market represents 100,000 tons of exports per year, or about 16 percent of U.S. poultry exports. Further U.S. export sales under NAFTA will benefit by removal of Mexican licensing barriers and from income growth in Mexico.

Why Pursue a NAFTA?

Mexico represents our third largest and most rapidly growing export market for farm products (see graph on this page). Since the mid-1980's, when Mexico embarked on a market-oriented policy agenda, U.S. agricultural exports to Mexico have increased two and one-half times to \$3.8 billion in 1992.

At the same time, total sales of U.S. goods and services to Mexico have grown from \$12 billion to \$41 billion. Mexicans have a strong preference for U.S. products, which is shown in the \$380 per person annual purchases of U.S. goods and services.

These purchases represent almost as much as the average Japanese (\$400) who has earnings 10 times the average Mexican. NAFTA will help lock-in our recent export gains, and should assure future export growth by stimulating demand for food well beyond what Mexican agriculture can produce.

With NAFTA, the U.S./Mexico playing field will be balanced by the removal of tariff and non-tariff barriers in Mexico. By eliminating these barriers (Mexican tariffs average two and one-half times the average U.S. tariff) our farm products will become even more competitive and available in the Mexican market.

Less tangible benefits will be in the development of a more stable political and economic system in Mexico, and in their ability to use economic growth to address environmental problems. By approving NAFTA, we will also send a message to the world that the U.S. intends to remain globally competitive.

If NAFTA is rejected, our trade relationship with Mexico will be imperiled. Mexico will be free to use and even strengthen barriers to keep our exports out and turn to others, such as Japan or the European Community, to secure long term trade relationships. This action could cause us to be "shut out" of this growing market with a resulting negative impact on U.S. exports sales and jobs.

(This analysis is prepared from material compiled by USDA, U.S. Congressional Budget Office, U.S. International Trade Commission and the American Farm Bureau Federation.)

A Look at Mexico's Agriculture

Mexico is a developing country with an economy about 20 times smaller than the U.S. Mexico tends to be more densely populated than the U.S. with approximately one-quarter of the population living in the Mexico City area.

A significant portion of their labor force is unemployed or underemployed. Since the late 1980's, an outward-looking and market-oriented government agenda has enabled Mexico to realize significant economic growth while reducing both inflation and foreign debt.

Agriculture in Mexico represents 9 percent of the country's Gross Domestic Product and employs 26 percent of the work force. Mexico has 57 million acres of arable land producing a wide variety of commodities in both "traditional" (subsistence) and "modern" (commercial) systems. Two-thirds of Mexico is arid or semi-arid.

Corn occupies half of all cropland followed by dry beans, sorghum and wheat. Principal animal products are beef, pork, poultry, eggs and dairy. Some adaptation to confined

feeding has occurred in swine, poultry and egg operations. Cattle production is largely range-fed. Major horticultural crops for internal consumption and export to the U.S. are tomatoes, peppers, melons, cauliflower, broccoli, onions, cucumbers, mangoes, table grapes and squash.

Government farm policies have become more market-oriented since the mid-1980's, and many support programs have been eliminated or scaled back.

Irrigation is used on approximately 12 million acres of Mexican farmland, primarily on larger farms in the arid north. Much of the irrigation construction and maintenance has been provided by government subsidies, which in recent years have been curtailed.

Irrigation is used extensively on winter vegetable and wheat production. Due to increasing water demand for this short resource, groundwater supplies are being depleted, and in several areas salinity of the water and soil has become a deterrent to production of some crops.

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October Discussion Topic: What it Will Mean if NAFTA Fails

Opponents of the North American Free Trade Agreement may not have good arguments against the agreement, but they have a never-ending supply of bad ones. If the NAFTA had to live or die solely on the basis of the two most frequently mentioned concerns, jobs and the environment, it would pass Congress fairly easily.

NAFTA has been shown by nearly all studies to be a net job creator for the United States, and many (probably most) environmental groups now agree that NAFTA will actually have a beneficial effect on the environment.

When the bipartisan U.S. International Trade Commission and Congressional Budget Office agree that NAFTA will create jobs in this country, and when many mainstream environmental groups say that a more prosperous Mexico will actually help the environment, most members of Congress can be expected to take notice.

The public's perception of the NAFTA that it's full of horrors, and more are being found every day. In reality, most opponents of NAFTA would not support any NAFTA as long as the "FT" in the name stand for "free trade".

The irony is that NAFTA would actually level a playing field that has been tipped in Mexico's favor for many years. Mexico has much freer access to our market than we have to Mexico's.

Our tariffs average less than 4 percent; Mexico's average well over 10 percent. Despite this preferential treatment for Mexico, we have a \$5.6 billion favorable trade balance with Mexico which will only increase under NAFTA. Mexicans prefer products from the United States and spend a higher proportion of their income on them than does any other country in the world.

If we reject NAFTA, we can expect Mexico to turn to other countries for a stable, long term trade relationship, and we can expect to lose our full share of that market to Canada, Japan, the European Community or other countries more willing to negotiate trade agreements. Many Americans dependent on these exports will lose their jobs. Will Congress approve an adjustment assistance program for these workers?

Anyone interested in the U.S. jobs at risk if NAFTA is rejected need only look at the composition of our \$41 billion in exports to Mexico. They range from agricultural products to heavy machinery, services, consumer appliances, computers, electric and electronic equipment, transportation equipment, chemical products, wood products, and on and on.

If you think your state is immune to job losses if trade with Mexico is curtailed, think again. Since 1986, when Mexico began opening its doors to more U.S. goods and services, our exports there have jumped from \$12 billion to \$41 billion and that growth has come from 48 states.

How many jobs are at risk? Over 700,000 Americans are now at work supplying goods and services to Mexico.

Under NAFTA, another 200,000 will be put to work. If Mexico decides it can obtain from other countries even half of the goods it would be importing from the U.S., 450,000 Americans will lose their jobs.

Even so, many people wonder what would be so bad about leaving things the way they are? Why take a chance with the unknown?

The truth is, NAFTA has been studied so extensively that we know that it will expand exports and increase jobs.

The real risk is that by rejecting NAFTA, we could be sacrificing thousands of American jobs.

Here's a very simple picture of what would likely happen if Congress is pressured into rejecting NAFTA:

U.S. import tariffs on Mexican goods, which average less than 4 percent, remain in place.

Mexico's tariffs, which average over 10 percent and which can be legally increased to 50 percent, remain in place or are increased on U.S. products.

Mexico's tariffs on products from Canada are reduced to zero, since the agreement has already been approved by Canada's parliament, and Mexico reduces tariffs on products from other countries under new trade agreements.

U.S. exports, facing high tariffs, can no longer compete against freely

traded foreign products in Mexico and U.S. jobs are lost.

U.S. manufacturers, no longer able to export to Mexico, move factories into Mexico in order to avoid Mexican tariffs, and more U.S. jobs are lost.

The Mexican economy fails to generate new jobs and more Mexicans emigrate to the United States looking for work, and more U.S. jobs are lost.

Anyone interested in the number of U.S. jobs at risk if NAFTA is rejected need only look at the composition of our \$41 billion in exports to Mexico.

No one should suggest that NAFTA is a perfect agreement. No trade agreement ever is, or ever could be. A perfect trade agreement for the U.S. would be one in which the other countries make all concessions and we make none. Of course such an agreement could not happen.

NAFTA will create jobs in both the U.S. and Mexico. It will help protect the en-

vironment. It will help to improve food safety in both countries. And it will show the rest of the world that the U.S. intends to compete in world markets and knows it can.

The impact on U.S. credibility in world affairs, if Congress rejects NAFTA, could be devastating. Other nations would have to be enormously perplexed by a decision to turn our backs on our third best market and on an agreement that is so much to our favor, especially when good export markets are now so important to our economy.

Discussion Questions:

1. What potential does NAFTA have for benefitting Michigan agriculture?
2. What potential does NAFTA have for improving Michigan's economy?
3. What will Michigan and our nation lose if NAFTA is not ultimately approved?
4. What can Farm Bureau members do to assure Congress approves NAFTA?

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16 Protect Your Forage Harvester with a Preventive Maintenance Program

The silage season will soon be on us, and there's no better time than right now to get your forage harvester ready for a season's use.

With proper maintenance and care, you may be able to get longer and more satisfactory use from your current forage harvester, according to Terry LeFever, Gehl harvester product manager, who says the first and most important step is to review the operator's manual that came with the machine.

"It's quite common for owners to go over the operator's manual when the machine is new and then to occasionally review it afterwards," LeFever says. "Now is the time to reacquaint yourself with both the harvester and the manual."

Lubrication Schedules

LeFever recommends paying special attention to the lubrication schedules in the manual. With the book in hand, go over the harvester thoroughly, making sure you find all the lubrication points.

"This is important if someone else on the farm is going to be operating the machine during the season," he says. "Make sure the operator knows how much, how often and where to lubricate, and with what."

The next step, according to LeFever, is to check all hydraulic lines. "Look for leaks, and if you find a bad coupling or hose, replace it

now before you really need the machine in the field," he says. "Check all the chains and make sure there are no frozen links."

Since the attachment head is probably off your harvester, LeFever also suggests checking all the heads thoroughly.

"With the attachments off the harvester, you can get into the cylinder area and make the necessary checks and adjustments there," he says. "Two items to look for in particular are the stem guides or vertical cutterbars. These guides prevent material from sliding past the sides of the knives. The guides should be properly adjusted. If any guides need to be replaced, do it before you go through all the labor of mounting the attachment head on the harvester."

"While you're working in the cylinder area, check the adjustment of the scraper. The scraper keeps the roller clean, and if you set it properly, this will save tractor power and fuel."

"Then check the cylinder itself and the knives. If any need replacing, take care of that now."

Blower Compartment

Moving to the back of the harvester, LeFever suggests checking the blower. "Open the covers to the blower compartment and move the paddles, one by one, to the 6 o'clock position," he says. "Then adjust them from



one-sixteenth to one-thirty-second of an inch from the rim sheet. We recommend that for our harvesters. Also check your operator's manual since adjustments may vary from machine to machine. If you find dents in the rim sheet or any bent paddles, make the replacements and repairs now."

LeFever advises checking all pulleys, belts and electric control wires. Keep the areas around the electric and hydraulic controls clean.

"No matter what kind of forage harvester you have, please read through the operator's manual for explicit detail and procedures on maintaining and adjusting your forage harvester," he says. "If you give it a little tender loving care before you take it into the field, you may be able to continue getting a good return on your investment."

For safety reasons, LeFever recommends disconnecting the PTO before making any checks or adjustments on the harvester.



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Three Simple Adjustments to Reduce Corn Head Downtime

It's critical that your corn head attachment is in tip-top shape for harvest time. By making a few key adjustments to the corn head now, you can reduce costly downtime during the harvest season.

Terry LeFever, Gehl Company's forage harvester product manager, says there are three important corn head settings to check before heading to the fields.

1. First, the knives should be set so they rub lightly against the rotor sickles.
2. Second, the corn head's crop guides should have a vertical gap of one-sixteenth to three-sixteenths of an inch from the knives.
3. Third, maintaining a three-sixteenths to five-sixteenths of an inch distance from the end of the crop guide to the knife holder plate is also important.

These adjustments will reduce plugging and hairpinning and insure proper cutting of the corn crop, even when harvesting in weedy fields or in down or tangled corn.

LeFever says if the knives are set too tight, the rotors will run too hot within a few seconds of operation. If this occurs, an adjustment should be made so that the knife rubs just lightly on the rotor.

When adjusting the knives, the rotor sickle shims should never be removed to set the rotor closer to the knives. These shims are installed to prevent the rotor from grinding down the heads of the knife mounting bolts. This clearance also keeps trash from packing under the knife. If left unchecked, packing can bend the rotor teeth.

LeFever says it's also important to maintain a minimum of one-sixteenth and a maximum of three-sixteenths of an inch vertical gap between the bottom edge of the crop guide and the top of each knife.

The proper crop guide setting allows plant material to pass through the corn head without getting caught. LeFever says this setting is especially important to maintain when harvesting in weedy fields or in down or tangled stalks.

LeFever says it is equally important to maintain a three-sixteenths to five-sixteenths of an inch distance between the end of the crop guide and the knife holder plate. The risk of plant material getting caught and plugging up the corn head increases if this setting is not properly maintained.

When you notice that the corn head is tearing or splitting stalks instead of cutting them cleanly, they should check the settings of the knives and crop guides. A properly adjusted corn head not only reduces downtime, but it also reduces horsepower requirements and improves its field performance.