Karnal bunt quarantine and concern grows

Shortly after the USDA announced a three-state quarantine, blocking interstate movement of wheat and other related articles to contain the spread of the Karnal bunt fungus, speculation was growing that a contaminated lot of wheat seed may have been shipped to California.

The affected states are Arizona, New Mexico (Dona Ana, Hidalgo, Luna and Sierra counties) and Texas (Hidalgo and Hidalgo counties). The fungus, first detected in Arizona in early March, was later found in three seedlots that were grown in that state but then shipped to New Mexico and Texas.

A shipment of durum wheat seed possibly contaminated with the Karnal bunt fungus was shipped to California, leading to fears that the fungus may have spread to that state as well.

"We'll take the proper regulatory action once we've determined what's happened with the shipment, whether it's in the ground or in storage," said Ed Curtiss, USDA Karnal Bunt Task Force spokesman.

USDA also said that additional funds are being sought to fight fungus infestation under a "declaration of emergency" signed by Agriculture Secretary Dan Glickman, effective March 26.

At this point, the total number of bushels affected by the fungus is not known. However, USDA and industry groups are meeting to determine how to compensate wheat farmers if their crops need to be destroyed, Curtiss said.

USDA has also ordered the destruction of 4,000 acres of fungus-infected wheat in Texas and New Mexico. "These plow-down orders are necessary to prevent the spread of Karnal bunt into non-infected areas of the U.S. and to help protect our export markets," says Don Haws, with USDA Animal and Plant Health Inspection Service.

According to Haws, plans for Arizona, where Karnal bunt was originally discovered, have not yet been announced. "We're still evaluating the situation in Arizona and will make a decision shortly," he said.

Texas and New Mexico farmers who plow down their wheat crops may be eligible to receive compensation at the rate of $27.50 per acre, plus $25 per acre for plowing, according to USDA. However, such compensation may make producers ineligible for compensation from crop insurance.

Meanwhile, Canada has banned the import of U.S. durum wheat and restricted the entry of other wheat varieties from Arizona, New Mexico and Texas - sites quarantined by the USDA to contain the spread of Karnal bunt. The quarantine could be in place until the end of the year, Curtiss said.

MFB Washington Legislative Seminar action packed

MFB's 36th annual Washington Legislative Seminar was a quick-paced event that couldn't have been timed better for producers to discuss farm bill concerns.

The conference committee appointed to develop the comprehensive package that was eventually passed by both the House and Senate started their discussions the same week that 112 Michigan Farm Bureau members from across the state were in town to address a number of issues, according to MFB Public Affairs Director Al Amy.

"Many of the participants had one-on-one opportunities with their respective representatives and Sens. Carl Levin and Spencer Abraham on the farm bill debate as well as estate taxes, health insurance deductions, Delaury clause and minor use pesticide reform, immigration reform, private property rights and regulatory reform," Amy explained.

While Levin and Abraham had differing views on how to address the budget deficit, both agreed that regulatory reform should be a top priority. During a breakfast meeting with MFB members, Abraham said that a Senate bill that establishes regulatory reform is just two votes short of being broken.

"What breaking the filibuster would do is allow us to have good, common sense, honest science and honest risk analysis of new regulations," he said.

Sen. Levin also called for reducing the regulatory burden in a sensible manner. "What we're aiming at is to try and make sure that before federal agencies impose regulations that they take into consideration the costs and the benefits of that regulation and that the benefits justify the costs," Levin said.

"Turning to budget issues, Levin praised the continued on page 14"
New in Brief

Tighter rules planned for cattle feed

As part of its "mad cow" counterfeiting, the Federal Drug and Administration intends to tighten rules on the manufacture of animal feed, including the use of rendered sheep and cattle parts, feeders report.

The new rules will apply to "ruminant-to-ruminant" feed, meaning cattle and sheep parts cannot be fed to other cattle and sheep.

Even before the rule is made official, some feed processors are expected to institute the ban voluntarily in an effort to quell consumer concern about mad-cow disease.

Mycogen guarantees market for Bt corn

Mycogen Seeds, marketer of genetically engineered Bt corn seeds, says it will provide farmers with a written guarantee that it will buy their crop if it can't be sold through normal channels.

Mycogen says it is making the offer in response to reports that some elevators may not accept corn produced with Bt, which gives the plants resistance to corn bores.

In addition, the company notes that Bt proteins have been used for more than 30 years in follicular systems to control pesticide and bores. Other plant engineers do not extend to foreign markets, and merchandisers are worried that genetically altered crops may be banned from some countries.

According to Mycogen, Europe and Japan have not yet accepted Bt corn.

However, the European Union has yet to approve importation of soybeans grown with the Roundup-Ready gene, which gives the plants resistance to Roundup herbicide.

And, according to Mycogen, Europe and Japan have yet not accepted Bt corn.

The company cites scientific basis for concern about possible harmful effects of Bt proteins, this particular corn hybrid was engineered with nonspecific promoters to produce Bt proteins in the corn kernels and not in the plant's tissues and oils, says Carl Bilb, president of Mycogen Corp., the California biotechnology firm that owns Wisconsin-based MFB State Promotion and Education Committee Chair Brigitte Leach presents the Michigan Farmer Scholarship award.

But EPA approval does not extend to foreign markets, and merchandisers are worried that genetically altered crops may be banned from some countries.

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STATE ISSUE
Transportation reform
S
Rep. Phil Huffmann has introduced the following transportation reform package:
• SRV would amend the Michigan Constitution to eliminate the State Transportation Commission. This amendment would be a narrow, highly technical question for voters to decide. In effect, it would eliminate a public forum for discussion on state transportation issues before NDOT.
• S.B. 875 would repeal Public Act 51 of 1951. This act provides for the current distribution of the $3.4 billion Michigan Transportation Fund. There is no proposal to replace this formula. S.B. 874 and S.B. 875 would allow county boards to dispose county road materials.
• S.B. 876 would allow countywide local gas taxes.
MFB Position: Farm Bureau opposes this package of bills.
MFB Contact: Tim Goodrich, ext. 2048.

STATE ISSUE
Workers’ compensation insurance fraud
S
B. 895 defines a workers’ compensation fraudulent act to mean an act by someone who intentionally misrepresents an injury or illness. The Department of Agriculture is the lead agency investigating workers’ compensation fraud. It provides stress, anxiety, personality conflicts, misperceptions of stimuli or events that over time result in a “hyper-sensitive” reaction.
MFB Position: MFB supports S.B. 895.
MFB Contact: Tim Goodrich, ext. 2048.

STATE ISSUE
Tourist-oriented directional signs
H
H. 4770 would create the Tourist-Oriented Directional Sign Act. This bill would allow approved applicants to obtain a permit for a tourist-oriented directional sign on a state highway. The size, location, design and arrangement of each sign will be subject to approval by the Michigan Department of Transportation (MDOT). A review is anticipated soon.
MFB Position: MFB testified before the House Transportation Committee in support of this legislation.
MFB Contact: Tim Goodrich, ext. 2048.

STATE ISSUE
Environmental audits
S
B. 728 has been signed by the Governor with immediate effect, and will allow companies that have physical or environmental problems to voluntarily come forward to develop a privileged environmental evaluation. Once the evaluation is completed and a cleanup plan of action is developed, the individual is exempt from any local, state or federal enforcement.
MFB Position: MFB supported the bill.
MFB Contact: Scott Beetre, ext. 2046.

STATE ISSUE
Private Property Preservation Act
H
H. 4433 has also been signed by the Governor with immediate effect and requires the Attorney General to develop a plan to be considered by state government entities prior to implementing a regulation or decision on a permit that may cause a taking of private property. Currently there are the following:
• All land divisions have to be approved and surveyed before sale.
• Two divisions per the first 10 acres or fraction thereof contained in the parent parcel or parent tract, plus one division for each additional whole 10 acres.
• Locals can cut up to two more divisions total with shared driveways or clustering in accordance with an adopted local ordinance.
• Total maximum divisions nine under Land Division Act or 11 with local approval.
• All parcels created must have approved access and if access is afforded by easement, not more than two parcels may be served by the same easement, unless the local ordinance allows otherwise.
• A maximum parcel size of 2.5 acres, unless a larger lot is permitted by local ordinance.
• A depth-to-width ratio of not more than 4:1. If municipal or county ordinance prescribes a smaller maximum depth-to-width ratio, the municipal or county ordinance controls the depth to width ratio. A municipality or county may grant a waiver from any applicable depth-to-width ratio. Also within the proposed Land Division Act is a requirement to notify land owners of the potential for agricultural operations doing business under the Right-to-Farm guidelines.
MFB Contact: Scott Beetre, ext. 2046.

STATE ISSUE
Michigan Aquaculture Development Act
S
Rep. Mike Green (R-Manteno) has introduced legislation to provide for the establishment, protection and promotion of aquaculture as follows:
• The Department of Agriculture is the lead agency and clarifies that aquaculture is an agricultural enterprise.
• The raising, breeding, transporting and sale of fish and aquatic products are regulated by the Department of Agriculture and specifically states that these activities take place in private waters, not in the public waters.
• Research on species that are not indigenous to Michigan may be permitted. The bill provides a list of approved species for aquaculture production.
MFB Position: MFB supports the bill.
MFB Contact: Ron Nelson, ext. 2043.

STATE ISSUE
Amendments to P.A. 232
H
H. 5562, sponsored by Rep. Kim Kieuht (R-Bay City), is expanded to allow additional conventional enterprises to be organized under P.A. 232, including nursery stock and aquaculture. The bill contains a clarifying amendment for soybeans, which is organized under a national checklist to allow for an increase of the five-year referendum if a periodic review is provided for. There is provision in the national program for a periodic review. The bill also provides that royalties that are collected because of funding of projects will be shared by the program. This amendment was assisted by the corn producers. Provisions were made for the borrowing of funds by commodity programs with the approval of the Director of the Department of Agriculture and with strict limits on the amount of funds borrowed and the payback provisions.
MFB Position: Farm Bureau supports the bill.
MFB Contact: Ron Nelson, ext. 2043.

STATE ISSUE
Primary seat belt bill
H
H. 5000, sponsored by Rep. Fitzgerald is now on the House Floor calendar where it has been since Feb. 1, 1996 awaiting action. When recently Gov. Engler ended this bill and tied it to an increase in the highway speed limit. Both bases by the Governor has increased the probability of enactment, contrary to Farm Bureau’s policy. Action on the bill is being delayed because there aren’t sufficient votes for passage.
MFB Position: MFB policy position is that we oppose further expansion of police powers such as the primary seat belt proposals.
MFB Contact: Howard Kelly, ext. 2044.

STATE ISSUE
Affirmative action
L
legislation has been introduced to amend the Elliott-Larsen Civil Rights Act that would prohibit employers, employment agencies, and educational institutions from adjusting test scores, using different cut-off scores, or otherwise altering the results of a test based upon the religion, race, color, national origin, sex of the person taking the test. The bill would also bar educational institutions from changing exams or scores to meet class race or status, eligibility for admission, or eligibility to participate in any program offered by the institution, or eligibility for a grant of financial assistance.
MFB Position: Farm Bureau opposes any legislation that would directly or indirectly restrict employers implementing hiring quotas as a defense against allegations of discriminatory hiring practices.
MFB Contact: Howard Kelly, ext. 2044.

STATE ISSUE
SARA Title III
M
any counties have now reached the point where they have approved emergency plans from the industry and business and now are aggressively turning their attention to the farm community, seeking compliance with required planning by farms that qualify under the law. Many farmers have already complied with the reporting portion of the law, but now will move to the next phase which is the development of an emergency plan for their “facility,” (farm).
The Local Emergency Planning Committee (LEPC), in each county will be consulting farmers, explaining and helping them to develop an emergency plan for their operation. MFB policy encourages members to become informed and comply with the Right-to-Know laws in an effort to develop a safer workplace for employees and farm family members. MFB also supports the use of a uniform instrument for reporting generic information to the local fire district and endorsed the site specific simplified form approved by the state Emergency Response Commission for reporting by individual farms.
MFB Contact: Howard Kelly, ext. 2044.

STATE ISSUE
Governor signs ag exemption legislation
T
hichigan’s Vehicle Code requires someone who operates a vehicle transporting agricultural commodities "in the normal operation of a farm" to include the contents of such vehicles in the list of vehicles that can escape from the vehicle while in transport, although such persons are exempt from a requirement that their vehicles either be covered or that the contents be securely fastened to the vehicle.
The bill amends the act to include the transport of "other materials necessary in the normal operation of a farm to the exemption described above. The act also permits someone to operate a "truck tractor and semitrailer or "trailer" for transporting saw logs, pulpwood, and tree length poles as long as the entire vehicle, including the load, does not exceed the maximum length. The bill would expand the type of vehicles that could be used for this purpose to include a "truck tractor and semitrailer or "trailer" subject to the same length restrictions.
MFB Contact: Howard Kelly, ext. 2044.

STATE ISSUE
Migrant Camp Licensing responsibilities transferred to MDA
T
he Michigan Department of Public Health has transferred its Migrant Camp Licensing duties to the Michigan Department of Agriculture. Farm Bureau requested the section be housed in the Michigan Department of Agriculture where it was felt the administration would be more aware of and receptive to the input of farmers on camp licensing issues. Governor Engler signed the Executive Order on March 15, 1996 transferring this section to the Michigan Department of Agriculture which will take place within 60 days.
MFB Contact: Howard Kelly, ext. 2044.

NATIONAL ISSUE
Legal Services Corporation
E
This House is expected to adopt a compromise legal services bill. This legislation would provide $278 million to $300 million and removed lottery restrictions against legal aid agencies.
MFB Contact: Al Almy, ext. 2040.
**NATIONAL ISSUE**

**Health care**

The House has passed the Health Care Coverage Availability and Affordability Act of 1996. The legislation contains provisions on portability which would allow employees to take health insurance with them when they change jobs and provisions on pre-existing conditions which would allow insurance companies to exclude people from health insurance coverage.

The bill contains two measures supported by Farm Bureau. The self-employed health insurance deduction would be increased from $30 per $100 per employee per month to $60 per $100 per employee per month that any deductible would be expanded to include the cost of long-term care insurance.

The second measure would allow those who buy high-deductible health plans to make tax-deductible contributions to special medical savings accounts to pay for medical expenses. The bill also allows the transition to high-deductible health insurance.

**NATIONAL ISSUE**

**Private property rights**

S 605, the Omnibus Property Rights Act, has been scheduled for consideration by the Sen- ate Energy and Natural Resources Committee. The bill requires compensation for private property if because of federal government action:

- Private property has been physically taken for public use.
- All or substantially all economic value of the land has been lost.
- The affected property isvalued at $35 per acre.
- Any circumstance occurs that is considered a taking under the 5th Amendment to the U.S. Constitution.

Prior to issuing any regulation that is likely to result in a taking, a federal agency must submit a taking impact statement to the Senate and House Committees on Appropriations within 15 days after the issuance of the regulation. The regulation then would be reviewed by the agency to determine the impact of the taking, and an estimate of the cost of the compensation. The takings impact analysis must be made public and given to owners of property affected by the regulation.

**NATIONAL ISSUE**

**Immigration reform**

The House has passed H.R. 2202, which revises immigration law. The bill focuses primarily on illegal immigrants and contains the following major provisions:

- States are authorized to deny public education to children who are illegal immigrants. Illegal immigrants are barred from receiving state and federal welfare benefits. If within seven years of arrival an illegal immigrant receives more than $12 months of benefits under state or federal welfare programs, he/she could be deported. However, they could receive certain public health and nutri- tion programs, emergency medical care and short-term emergency relief.
- Sponsors of illegal immigrants would be required to assume greater financial responsibility for the immigrants they bring to the United States. Prop-spective sponsors would have to show they could support themselves and the sponsored immigrants at a minimum of twice the federal poverty level.
- 1,000 additional border-patrol agents per year for five years would be authorized. This would double the size of the border force for about 10,000 agents.
- Law enforcement agencies would be given increased powers to investigate and prosecute smuggling of illegal immigrants and the produc- tion of fraudulent documents. Penalties for these activities would be increased.
- Measures to block illegal immigrants from finding jobs would be strengthened, such as hiring 500 new inspectors to enforce laws against hiring illegal immigrants. The number of documents that can be used to establish work eligibility would be reduced from 29 to six.
- A new telephone confirmation system would be created for employers to verify that a new employee is legally eligible to work. The pilot program would be conducted for three years in five states with large populations of illegal immigrants. In those states, employers would have the option of calling into the system for each new employee. The goal of checking specified paper documents is as currently required. The pilot program would end in October 1999 and a subsequent vote by Congress would be required to expand the program nationwide.
- Rules for deporting illegal immigrants would be streamlined. Farmers entering the United States illegally would be permanently barred from re- ceiving legal immigrant status. The H-1B temporary worker program for foreign workers with specialized job skills would be re- vived. Employers with a small number of H-1B workers would be exempted from certain exist- ing regulations. Employers who replace a U.S. worker with a temporary foreign worker would have to pay the new employee at least 110 per cent of the U.S. worker’s wage.

During consideration of the bill, a temporary agricultural worker program amendment was ad- ded. The amendment would create a 3-year pilot program enabling employers to hire tempo- rary and seasonal workers for periods of not longer than 10 months and required employers to give preference to available American workers. Farm bureau supported the amendment but the House rejected it by a 195-245 vote. The Michigan Con- gressional Delegation voted strictly party line on the amendment with all Republicans supporting it and all Democrats opposing it.

The Senate Judiciary Committee has approved a similar immigration reform bill. The bill also re- quires Immigration and Naturalization Service agents to obtain permission of property owners or obtain a search warrant prior to entering open fields being used for agricultural purposes to search for illegal immigrants. The Senate is expected to consider the bill about mid-April.

**NATIONAL ISSUE**

**200°F**

Building to a Higher Standard

$30,395.00

54‘ x 13’ x 90’ Deluxe Machinery Storage

- 24‘ x 8-1/2" D4 EQUIPMENT (Wood)
- 6000 lb. Walk Drive OTIS (Wood)
- 500 lb. Drive OTIS (Wood)
- 24‘ x 6-1/2" D4 EQUIPMENT (Wood)
- 500 lb. Drive OTIS (Wood)
- 48‘ x 6-1/2" D4 EQUIPMENT (Wood)
- 500 lb. Drive OTIS (Wood)
- 60’ x 12‘ x 90‘ Rectangular Machinery Storage
- 24‘ x 8-1/2" D4 EQUIPMENT (Wood)
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- 60’ x 12‘ x 90‘ Rectangular Machinery Storage

$23,375.00

54‘ x 13’ x 90’ Deluxe Machinery Storage

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**MICHIGAN FARM NEWS**

April 15, 1996

**MICHIGAN FARM NETWORK**

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 agricul- tures, 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 11:50 am WATZ Alpena 1450 5:30 am 11:30 am WTKA Ann Arbor 1050 6:05 am 12:05 pm WLPB Bay City 1340 6:30 am 12:50 pm WHFB Benton Harbor 1230 pm WKOY Caro 1360 6:15 am 12:15 pm WKJF Cadillac 1370 5:55 am 11:20 am WTVB Caseville 1590 5:45 am 12:20 pm WDOM Dowagiac 1440 6:05 am 12:15 pm WGHN Grand Haven 1270/92.1 5:45 am 12:15 pm WPLB Grandville 1360 6:15 am 11:45 pm WBCH Hastings 1220 6:15 am 12:30 pm WCSR Hilliard 1320 6:45 am 12:45 pm WJGK Ionia 1450 6:30 am 12:30 pm WKZO Kalamazoo 590 5:15 am WLSP Lapeer 1530 7:20 am 11:50 am WELH Ludington 1080 6:15 am 12:30 pm WHAK Rogers City 950 12:15 pm WSJ St. Johns 1580 6:15 am 12:15 pm WMLM St. Louis 1540 6:05 am 12:20 pm WSGW Sturgeon Bay 700 5:05 am 12:05 pm WMCD Sandusky 660 6:15 am 12:45 pm WCSY South Haven 940 12:15 pm WJWC Tawas City 104.7 12:45 pm WLKM Three Rivers 1510/95.9 6:15 am 12:55 am WTCM Traverse City 580 5:55 am 11:20 am

**Osha tightens grain safety rules**

Walking down grain will no longer be per- mitted at grain elevators after April 8, says the Labor Department’s Occupational Safety and Health Administration (OSHA).

OSHA has published a final rule prohibiting the practice of ‘walking down’ grain to make it flow better.

OSHA’s new rule follows a 1999 death of a 19- year-old Florida man who was walking across a corn storage facility when he was pulled down and suffo- cated, Reuters reports.

‘Walking down grain’ will no longer be per- mitted at grain elevators after April 8, says the Labor Department’s Occupational Safety and Health Administration (OSHA). OSHA has published a final rule prohibiting the practice of “walking down” grain to make it flow better.

While the previous rule protected workers from hazards while walking on or underneath accum- ulated grain, it did not apply to workers entering flood from hazards while walking on or underneath accumu- lated grain, it did not apply to workers entering...
We put a lot of energy into farming

Each day we light the way for you and other farmers across the state — providing the power that keeps you in business. But our commitment to you doesn’t stop there.

We have a 24-hour, toll-free number to answer your energy service questions. Plus, we’ve established a dedicated, toll-free number so we can respond to your questions about stray voltage. And, with 39 Customer Service Centers state-wide, we’re ready to serve you.

We’re also working with key agricultural organizations like Michigan State University Extension and the Michigan FFA on issues that impact your productivity and profitability.

We’re proud to serve 20,000 farms — more farms than any other utility in the state — and we’re committed to helping you succeed every step of the way.

For stray voltage questions call 1-800-252-VOLT
For other service questions call 1-800-477-5050
The March 1 Quarterly Corn Stocks report, released by USDA on March 25, showed that we are using corn at both a faster rate than we thought, and at a rate faster than we can sustain. The Planing Intentions report, while showing corn acres up sharply from a year ago, showed fewer acres than expected and barely enough to replenish stocks to a tolerable level. The bottom line is, we are facing an explosive situation this spring and summer if we have any problems with the corn crop and/or we don’t cut future usage.

This situation is laid out in Table 1. The Corn Supply Demand Balance sheet looks at the ending stocks number for 1995-96, the second column. The 182 million bushels is probably lower than realistically possible, but where do you cut out to get a higher number?

### Seasonal Commodity Price Trends

**Corn**
- Soybeans & Wheat
- Hogs
- Cattle

<table>
<thead>
<tr>
<th>Table 1 - Corn</th>
<th>Table 2 - Wheat</th>
<th>Table 3 - Soybeans</th>
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<td><strong>Crop Year</strong></td>
<td><strong>Prior Year</strong></td>
<td><strong>Crop Year</strong></td>
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<td><strong>(Million bushels)</strong></td>
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**Business Strategies**

Sherrill Nott,
Department of Agricultural Economics, Michigan State University

Ever wonder how your profits and cash flow last year compared to your neighbor’s? This year you can answer that question. In Column 1, the 25 percent of farmers with the highest net farm income averaged $226,198 per farm. This includes all farm-related income. The expenses include cash interest paid, but ignores depreciation.

Look at the summary of your 1995 records, or your income tax returns, to calculate your net cash income. Do this line by line through the columns of Column 1 in Table 1 to see where your farm ranks.

Column 1 is built by taking 136 farms that had a year-end analysis with their Michigan State University Extension agent using Finpack software. These farms were all of types, from herd to individual. If the analysis was complete, their results were tossed into the pool. The net cash income was listed from high to low (better to poorer).

**1995 profits and cash flows on Michigan farms**

The 34 farms (25 percent) that were lowest on the list averaged a ($6,037) loss for 1995.

**Cash Flow**

For most farms, debt is a major consideration in cash flow. Principal repayments are in Column 5. Money borrowed during the current year is shown in Column 6. Think columns 5 and 6 should be in proper financial records system to track this information. And, the bookkeeper has to be conscientious. Of course, if you’re among those who don’t borrow money, you don’t have the problem of tracking principal flows.

Much net worth changes from year to year is a good measure of financial progress. The lowest 25 percent of the farms when ranked by net worth, Column 4, tended to go backwards during the year. Their assets were lower, and, if they were debt, at the end of 1995.

The debt to net worth ratio in Column 7 compares total debts to total assets. This items is often given as a decimal number. 68 would give the same message as the 68 percent at the bottom. Debts add up to 68 percent of the assets on the lowest 25 percent of the farms. Many feel 70 percent is a critical point, ratios over 70 percent means there will be difficulty in generating enough cash to meet principal payments and other needs.

Sharing:

Good managers have goals that deal with profitability. One might be to have net farm income of $30,000 or more. You might select 2 or 3 of the measures in Table 1 and develop goals using them. At the end of the year, calculate the profit measure and see whether you met your goal.

The next step would be to compare your farm’s performance with Table 1. If you discover you are in the lower 25 percent, and you don’t like it, what can you do about it? Your dislike becomes a problem of tracking principal flows.

Most Michigan State University Extension agents have Finpack software on their computers. If you’ll help in designing an analysis that results in calculating the factors in Table 1, plus several others, contact us. It’s a 2 to 6 hour process. The software works for all types of farms. It’s a good way to fine tune your financial management skills.

**DHIA top producers recognized**

Many farm families from Saranac and Sebewa were among those honored recently at the Michigan Dairy Herd Improvement Association’s (DHIA) annual meeting. Jim and John Hardy of Sebewa were awarded the DHIA Progressive Dairyman of the Year, while the MSU Department of Animal Science Dairy Farmer of the Year honors went to Harold andillian Gremel.

The three top DHIA awards — high dollar value, highest milk average, and highest individual dollar producer — were all won by Donald and Haroldserves on the board of directors for Michigan State University Extensionagent using Finpack software. The VanderMeers had a rolling herd average of 26,790 pounds of milk, and received the highest individual production award, which included one of the highest price per cow were all won by Donald and Haroldserves on the board of directors for Michigan State University Extensionagent using Finpack software. The VanderMeers had a rolling herd average of 26,790 pounds of milk, and received the highest individual production award, which included one of the highest price per cow.

The DHIA top producers recognized the operation’s milk production improvement, which included a 10 percent increase in milk production, which included a 10 percent increase in milk production. Additionally, the operation’s rolling herd average of 25,720 pounds of milk, 1,675 pounds of butterfat, and 1,348 pounds of protein. The herd sports a per-cow value of $3,736.

The VanderMeers also have an 85-month old Holstein herd that had a rolling herd average of 27,394 pounds of milk with 998 pounds of butterfat and 853 pounds of protein. The DHIA Progressive Dairy Award was given to the VanderMeers, of Lake Odessa.

The 1996 Young People’s Citizenship Seminar was held at Alma College in June 1996. Students should be proud to have been students at Alma College.

**Michigan Farm Bureau presents 1996 Young People’s Citizenship Seminar**

High school juniors and seniors are invited to attend this five-day seminar designed to teach you about our American political system. The seminar emphasizes the need to be informed and involved in the decisions that affect Americans in their communities, state and nation. The seminar will include:

- Keynote Speakers
- Workshops
- Political rallies, campaigns, caucuses and elections with students as “political party” delegates, “candidates” and “registered” voters
- Rural and urban students from all over Michigan

Students should be proud to represent their school and the Farm Bureau organization, and be the farm kids to discuss their experiences with groups following the seminar.

Pam VanderMeer (left) of Lake Odessa accepts the top three DHIA awards from Leslie Campbell, Area 2 DHIA field rep.
Soil-applied herbicides for grass control

New agribusiness leader formed from merger of Ciba, Sandoz

Weed Spectrum

Porterage: 0.28

Dual II 488 Very strong

Micro-Tech Partner 200 strong

Harness/Surpass 223 moderate

Frontr 1174 moderate

Porterage is very immodest in soil. Harness/Surpass and Frontr are just slightly bound to soil. Dual II and Micro-Tech Partner are intermediate in soil binding.

Persistence in Soil

Dual II is the most persistent herbicide of this group and can carryover problems to sugar beets and, at high rates, no-till or reduced tillage crops. The other four herbicides do not present any carryover concerns. Research in 1995 at the University of Illinois showed that Dual II was more persistent than Frontier or Tronox (meicamprop plus Surpass).

Inconsistent persistence is important. With pre-emergence applications and in soil seed production, low soil persistence may result in better weed control. If late season grasses in corn are a problem, longer persistence is important. However, with at planting applications in commercial field corn or soybeans, herbicide failures due to inadquate herbicide persistence are rare with these herbicides. When selecting one of these herbicides, consider the specific characteristics of each herbicide. Determine which herbicide or herbicides fit your specific situation, then consider cost in making your decision.

Rainfall for Activation

The relative amount of rainfall required to "activate" these herbicides. The actual amount of rainfall required to obtain weed control in any specific field is dependent on several factors, however, the relative rainfall requirement is useful information.

Herbicides requiring the least rainfall is Harness/Surpass. The relative ranking is as follows: (rainfall in inches) Harness/Surpass < Frontier < Dual II = Micro-Tech Partner = Porterage.

Mobility in Soil

Herbicide mobility in soil is affected by several complex processes. Factors that affect mobility are water solubility and binding to soil particles. The following table summarizes the herbicide and soil binding (adsorption) of these herbicides to soil:

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The fact that extra money earned on a new stand in future years is not worth as much as the money earned this year.

Length of Row

How Wide

Base = Equal to 1 ft./ac.

4 10 15 20 24 28 32 36 40 44

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Gear your trucks up for spring work

Truck regulations apply to all Michigan farmers

L ast fall, Eaton County Farm Bureau member John Howell innocently volunteered two of his trucks for a safety inspection (day, looking to learn about all of the rules that applied to his set of trucking circumstances, but found himself two months later being audited by Michigan State Police Motor Carrier Enforcement.

What pushed Howell over the regulatory edge was a fuel truck with a capacity greater than 119 gallons and a driver that did not have the needed Commercial Driver’s License (CDL) endorsement. To make matters worse, Howell’s commercial electrical contracting company’s truck fleet traveled more than 190 air miles from his principal place of business requiring all truck drivers to carry a CDL.

Although Howell may not be your typical central Michigan farmer, operating a stable electrical contracting business throughout the state, he is quick to point out to other farmers that they need to be aware of trucking regulations they may not even know of.

“A farmer’s vehicle in Michigan is going to be impacted (by this trucking regulation),” explains Howell. “You’re going to have to go through an annual inspection on that farm truck—on the complete truck. Our farm trucks are going to be in better shape than they’ve ever been before. They’re going to get pulled over and checked at scales and weigh stops just to make sure they are in shape.

“The farmer with the old grain truck isn’t going to be out there any longer.”

“If we’re over 119 gallons of diesel fuel, that truck will be placarded,” continues Howell. “Four placards, all four directions on the truck, visible from four directions. And you better be showing the right symbols on the farm chemical truck, which is a water truck with chemicals on it. You may even need to have more than one set of placards because you’re carrying more than one type of material regulation. On farm fuel trucks being exempt from hazardous material regulations, because you’re carrying only one type of material regulation.”

According to Assistant Division Commander Bill Mohr, with Michigan State Police’s Motor Carrier Division, Howell is correct about the capacity limitation on farm fuel trucks being exempt from hazardous material regulations. Once the capacity of a fuel tank or any other type of tank exceeds 119 gallons, the regulatory levels change. “Then we introduce them to another whole dictionary of hazardous material regulations.”

“If you have two or more tanks or ‘mini-bulks’ with total combined capacity greater than 119 gallons,” explains Craig Anderson, manager of the Regulatory Compliance Assistance Program (RCAP), “you should check with your chemical dealer regarding potential placarding because the combination of the two or more farm chemicals may require you to do so.”

Commercial Driver Licenses

Another regulatory avenue that opened up because of Howell’s CDL requirement, as it would with anyone required to carry one, is the need to regularly test drivers for drugs and alcohol, thanks to a new law that went into effect Jan. 1, 1996. The drug and alcohol testing provisions apply to all persons who operate commercial motor vehicles and are required to have a Commercial Driver License (CDL) including interstate and intrastate drivers.

- Commercial motor vehicles with a gross vehicle weight rating (GVWR) of 26,001 pounds or more
- Commercial motor vehicles with a gross combination weight rating of 26,001 pounds or more including a towed vehicle with a gross vehicle weight rating of 8,000 pounds or more
- Motor vehicles designed to transport 16 or more passengers including the driver
- Motor vehicles of any size transporting hazardous materials (including pesticides and fertilizers) in amounts requiring placarding.

A narrow exception exists for some farm drivers in Michigan. Drivers who are eligible and are properly operating an otherwise covered vehicle and possess an “F” endorsement on their license are exempt from the drug and alcohol testing provisions.

Howell enlisted the services of Fleet Compliance Group located in Grandville to assist him in bringing his fleet of drivers into compliance with the CDL drug and alcohol guidelines, as well as other regulations that apply to his commercial fleet of trucks, including pre-and post-trip safety inspections and log books.

Farmers are exempt from needing a CDL if they are operating their vehicles within a 150 mile radius of their farm and do not transport hazardous materials for more than 150 air miles from their principal place of business. The only exception is when farmers are transporting farm chemicals where they are operated commercially for more than 150 air miles from their principal place of business.

Endorsements on commercial driver’s licenses are necessary for almost all hazardous materials, regardless of quantity. The basic elements of a legal shipping paper are the proper shipping name, hazard class, identification number, packing group, total quantity transported, shipper certification, emergency response information and emergency telephone number.

Although that may sound like a lot of information, fertilizers/chemical dealers should be supplying their customers with the necessary paperwork to get farmers back home legally, according to Anderson. But he warns that farmers still need to keep track of what they are carrying when they travel from field-to-field and be sure to update the quantities as they are used.

Continued on page 15

If your farm fuel truck carries a tank with capacity greater than 119 gallons, then you need to be sure to placard your load accordingly. The same applies to “mini-bulks” used to transport farm chemicals.
Critical issues for site specific management in Michigan

by Neil R. Miller

Open any agricultural trade magazine today and articles on site specific management will spill out on your lap. The impression one gets from reading these articles is that farmers will soon need to become computer jockeys in order to run the equipment that plans, sprays and harvests their crops. Computers and satellite (GPS) systems will undoubtedly play an important role in farming of the 21st century. But the farms of our children may not look as foreign as much of the media hype indicates. In fact, much of the new technology is based on principles which have been part of agriculture for centuries.

In the coming months, I will examine current trends in site specific management in order to clarify how they fit into the context of Michigan agriculture. Here is a quick preview of several critical issues that I believe farmers in the state need to be aware of in order to keep abreast of this emerging technology.

Effective site specific management (SSM) is possible now with little or no cash investment. Farmers have practiced SSM for years, whenever they varied spreader or planter rates, spot-applied herbicides, etc. Although improving these practices may require adapting current equipment, the critical factor in conventional SSM is investing the time to develop good management practices. We will look at the effectiveness and the limitations of conventional SSM. We will also examine how GPS-based SSM can increase the precision and efficiency of many of these same practices.

Yield monitoring will be the first GPS-based technology to benefit many Michigan farmers. Yield monitoring, can provide both immediate and long-term benefits by helping farmers improve management practices. We will examine these benefits in detail, and discuss how yield monitoring will impact other SSM activities. We will also compare the various equipment and software options available to farmers in the coming year.

Variable rate (VRT) fertilizer application using GPS will begin in Michigan in 1996. The economic payback of variable rate fertilizer application has been difficult to demonstrate in the Midwest. Custom applicators in Michigan have learned from these observations, and have waited to purchase VRT equipment. However, in 1996, several suppliers will offer VRT services beginning with Lime and potash application. We will look at the economic and agronomic implications of these practices and discuss the pros and cons of grid soil sampling versus soil-based sampling approaches.

Most other GPS-based technologies are still in their infancy. We will discuss planters that vary rates and varieties on the go. sprayers that identify weeds and apply appropriate herbicides, and equipment that analyzes soil nutrients and insulates applies proper fertilizers. It will be years before most of these technologies can function reliably on a farm scale. Furthermore, in many cases, we lack the agronomic and economic data to determine where and to what degree the inputs should be varied.

Understanding these trends and issues will be critical to continue farming profitable into the 21st century. Let me know if there are further issues which you feel I should address. Hopefully, through this dialogue, the combine of the future will seem more like the equipment in your toolshed and less like the Starship Enterprise.

Market Outlook

Continued from page 6

CATTLE

This is one sector where we may soon see some cutback in feed use. The March Cattle-on-Feed Report showed total numbers on feed down 1 percent, February placements down 6 percent, and marketings in February up 12 percent. These numbers reflect the hurt in the cattle sector. While there are still plenty of feeders available, feedlots are not in a hurry to put them in the lots, even at very discounted prices.

The marketing number shows we are current. Weights are slightly above year ago levels. Even higher feeders will likely bring cattle to market quicker and others will likely put to grass. This means less beef in the near-term, less feed use, and possibly more beef later this year and into next year. This is a bridge, there is a little to do other than keep current. However, keep an eye on futures—if the markets rally enough to lock in cash prices this summer over $22, you may want to take a look at it.

EGGS

By Henry Larzelere

Egg prices at the end of March were about 26 cents a dozen above year ago levels. These higher prices were partially offset by feed ingredient costs. 10-11 cents a dozen eggs above last year is likely that whole egg prices in New York for Grade A large white eggs in cartons will average in the low to mid $2 range during the April-May-June quarter. This quarter seasonally shows the lowest prices of the year, however, the demand factors of strong age in shell eggs, export and egg products still exist. The data in terms of the number of layers and egg production are slightly above last year.

The egg-type chicks hatched and the后来-type eggs in incubators show modest increases that may indicate further increased production potential in the last half of the year. The incentives for increased egg production will be moderated by the relatively high feed ingredient costs that seem to be expected even with bumper crops and weather in the last part of the year. However, in the past, when egg prices have been relatively strong in the first 3 months of the year as has been the case in 1996, the egg-type chick hatched in the major hatch season has been strong leading to high production levels and lower prices.
Weather Outlook

by Dr. Jeff Andresen, agricultural meteorologist, Department of Geography, Michigan State University

March was significantly cooler and drier than normal across nearly all of Michigan, courtesy of a persistent northeasterly jet stream. With the exception of March 19-21, when a major snowstorm accompanied by strong winds buried southeastern sections of the state, weather patterns were fairly benign. While the cold weather made a seemingly long winter even longer for most humans, it also kept most overwintering crops from breaking dormancy and becoming vulnerable to future cold outbreaks.

While the long term outlooks for Michigan during the upcoming couple of months continue to be vague (i.e., near equal probabilities of below-, near- and above-normal temperatures and precipitation), a few private meteorologists have called for drier than normal conditions across sections of the Great Plains and Cornbelt region this spring and summer. The reasoning: 1) A La Niña event with associated cooler than normal ocean surface temperatures currently in the equatorial Pacific, and 2) a statistical association of droughts shortly following years with little or no sunspot activity (such as past droughts in 1936, 1956 and 1976). National Weather Service outlooks for April through June also call for odds to favor a dryer than normal precipitation scenario for sections of South Dakota, Nebraska, Iowa and Minnesota. Even with such forecasts, remember that the skill of such outlooks is very low and that drought occurs over sections of the Corn Belt region about once every 6 years or so statistically (it occurred over eastern sections of the region last season). One thing you can much more likely watch for is strong commodity price moves during the upcoming weeks as the market reacts to changes in or persistence of current weather trends (especially drierness in the southern Great Plains) and the potential impacts (real or perceived).

Researchers find natural plant defenses

Australian researchers and scientists have found a chemical trigger that helps plants boost their own natural defenses against disease by as much as 85 percent. The chemical "activator" benzothiadiazole stimulates plants to produce increased amounts of proteins that help boost the plant's immune response to disease. The researchers said the discovery of this activator "promises to increase natural plant defenses by as much as 85 percent. But, researchers said further work is needed to simulate plants to defend themselves against insect and viral diseases--although work in that area has "also been promising."

90-day Temperature Outlook

Great Plains and Cornbelt region this spring and summer. The reasoning: 1) A La Niña event with associated cooler than normal ocean surface temperatures currently in the equatorial Pacific, and 2) a statistical association of droughts shortly following years with little or no sunspot activity (such as past droughts in 1936, 1956 and 1976). National Weather Service outlooks for April through June also call for odds to favor a dryer than normal precipitation scenario for sections of South Dakota, Nebraska, Iowa and Minnesota. Even with such forecasts, remember that the skill of such outlooks is very low and that drought occurs over sections of the Corn Belt region about once every 6 years or so statistically (it occurred over eastern sections of the region last season). One thing you can much more likely watch for is strong commodity price moves during the upcoming weeks as the market reacts to changes in or persistence of current weather trends (especially drierness in the southern Great Plains) and the potential impacts (real or perceived).

90-day Precipitation Outlook

Customized trip routing

Farmers and farm managers are used to driving to make their living. Whether you are going to the scenic route or get there fast...and to the nearest seven days you'll receive detailed maps to your destination custom fit to your specifications...and travel plans. It's a convenience you can use again and again as you enjoy the many other benefits and advantages you receive with a Farm Bureau MemberLine Visa or Gold MasterCard.

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Both the MemberLine Visa and the MemberLine Visa offer a 2.3% Introductory APR for the first six months. After the Introductory Period, your APR will be the lowest interest rates available. The interest rate on the MemberLine Visa is 17.15% APR. In addition, you pay no interest on new credit card purchases on your current month's statement when your full balance on your current monthly statement is paid by the due date.

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Convinced?

Simply remove this page from the magazine and fill out the application on the reverse side. No postage necessary!
Losing farmland to development isn’t inevitable

Over the years, the Loves raised beef and hogs or produced milk. Their farm also provided popular for growing Sandsbeach since the late 1970s, when the Loves retired from active farming and their children moved to other careers, most recently the Vanbus, of Climax. For Jan Vanbusch, the family patriarch, it has been a homecoming of sorts. “It was a great time to spend with my children,” she said. “They’re the only people that want to help with the farm.”

Under the Love’s agreement with AFT, the Vanbusch family will have the opportunity to buy the property at the market price, subject to the protection of agricultural easement placed on the land in 1990.

MMPA returns $1.9 million in patronage refunds to members

February, Michigan Milk Producers Marketing Agreement (MMPA) returned $1.9 million to its dairy farmer members. This cash allocation represents 30 percent of the $6.4 million in patronage refunds MMPA allocated to the cooperative in fiscal year 1994-95. The cash patronage return includes 100 percent of the farm supply refunds and 25 percent of the milk marketing earnings. All members who marketed milk through MMPA during the past year will be receiving a portion of the $1.9 million.

“We are proud to be able to send these earnings back to the members,” said MMPA President Bobbi Kirkpatrick. “Our strong financial standing and sound management enables us to return these earnings as well as the retirement of other earnings which will be sent later this year.”

The MMPA has returned more than $17.5 million to its members in the form of cash patronage refunds, cash equity retirements and to the co-op’s retiree program.

Cash patronage refunds and equity allocations are based on the amount of milk each individual member was responsible for providing to the cooperative through the year during which these earnings were allocated. The allocated certificate of equity for the 1994-95 earnings will be returned back to the members in approximately 10 years.

Since 1987, MMPA has operated with an open market principle, whereby we do not restrict the amount of milk our processors can purchase, which allows our members to be a part of the cooperative. MMPA believes that the 1994-95 equity returns are one of the greatest advantages of marketing your milk through a successful cooperative. “Kirkpatrick adds, “We are proud that you have decided to be a part of the MMPA family.”

MMPA is owned and controlled by over 2,500 dairy farmers located in Wisconsin, Illinois, Ohio and Michigan.
Buy a new Dodge Truck and pick up a ton of cash.

$500 CASH BACK TO FARM BUREAU® MEMBERS.

As if our Magnum® engine series, overall the most powerful line of pickup engines on the planet, wasn’t enough incentive for Farm Bureau members, now there’s an extra $500 in the deal.

That’s $500 back on all 1996 5.9L Magnum V-8 Ram and Ram Club Cab pickups, $500 back on all 1996 Cummins diesel-powered Ram and Ram Club Cab pickups ... and $500 back on select mid-size 1996 Dakota pickups.

The offer includes all 1996 Ram Van and Ram Wagon models, too.

That’s on top of any other national Dodge cash back offer.* All you need to do is get a certificate from your state’s Farm Bureau validating that you’ve been a member for at least thirty days. Then stop by your Dodge dealer. Where you’ll discover it pays to be in the Farm Bureau.

*This cash back offer is valid for members of participating Farm Bureaus, expires 9/30/96, and may not be used in combination with any other Chrysler Corporation certificate program or certain other special programs. Ask for restrictions and details. Farm Bureau® is a registered service mark of the American Farm Bureau Federation.
Students will also receive a newsletter called "Soy News" that contains several different articles on soy dided and other soy-based products, as well as a test for checking the student's reading skills.

Fleischmann says that the program will target primarily fourth-grade and fifth-graders, since the students are still in a single classroom setting and the teachers don't necessarily have to be limited to just science teachers.

So, what's the next step in getting these lesson plans into your local school? Fleischmann suggests checking with your local teacher and/or principal to see if they're interested. If they are, then either the teacher or the parents can call our office and we'll take it from there," she explained. To learn more about the MSPC lesson plans, either fill out the coupon below, or call (517) 652-3294.

MFB Washington Legislative Seminar action packed
Continued from front page
Program trade is reducing the federal budget deficit from $300 billion annually to $150 billion annually, and called for current Republican efforts to balance the budget in seven years irresponsible. "We take the position that any serious talk of deficit reduction and elimination, we should reach certain milestones in actual budget deficits before we can even talk about tax reductions," he said. Leno attacked a position that, compared to other industrialized nations, the U.S. budget deficit and national debt weren't that deservingly bad.

Abraham, on the other hand, warned that with an aging baby boomer generation that will soon be leaving Social Security and a growing national debt, the time is quickly running out for the country to get its financial house in order. "Within 15 years, there will not be any dollars available for any programs other than entitlement programs (Social Security, Medicare and Medicaid) and interest on the national debt if we don't get the budget balance," he said.

"That's why this debate goes far beyond the political rhetoric that you usually hear." USDA meeting - U.S. ag exports pace accelerating

U.S. agricultural exports reached a $40 billion surplus last year, thanks to the GATT and NAFTA agreements, which have brought in an average 8 percent increase in income to the Pacific Rim, according to U.SDA Trade Specialist Paul Drazek. In comments to MFB members, Drazek said that the agricultural trade surplus is expected to hit $60 billion in 1996.

Drazek predicts that U.S. ag exports will continue to set new records for several years as the tariff reductions called for in NAFTA and GATT continue to be implemented. Increased meat consumption in the Asian sector, particularly in China, has made that country a corn importer instead of a corn exporter for just two years. That means continued strong demand and good prices for U.S. producers. "Even with a good crop this year, the price of corn and beans will stay high for the next several years," Drazek suggested.

U.S. agricultural exports to China were up 17 percent in 1995, with over $2 billion in sales. Drazek said that producers have a great deal at risk in the future of China's "most favored nation" trading status, saying that if it's revoked, as some are calling for, it would obviously cut into agricultural exports.

In the European arena, Drazek claimed that the continued near hormone ban is cost U.S. cattle producers at least $100 million annually in lost sales. He said that if the ban isn't revoked voluntarily, the U.S. will begin formal appeals procedures under GATT, which could result in the U.S. exporting more than $100 million in beef each year, he said. "We're going to be very aggressive on this issue and we're going to win."

The European Community's recent agreement to accept Roundup-Ready soybean was termed a mixed blessing by Drazek. The agreement will allow import of the new soybeans, but it requires that the beans be labeled. Drazek warned that biotechnology could play a larger role in future trade disputes. "If we're in a position where we're going to have to label the Roundup-Ready soybeans, but we're just getting started with biotech, for example," he explained.

Drazek also assured producers that fears of a trade embargo are unwarranted, and that the Clinton administration is committed to not allowing treatment of any export embargo. "The previous trade embargoes were a horrible mistake; we literally shot ourselves in the foot," he said.

Japan's emergency trade - U.S. counterparts facing many of the same issues
Farmland preservation, the average age of producers and getting young farmers started in farming ranked high on the list of issues and concerns of Connie Yoborski, counselor for agriculture, forestry and fisheries, during comments to MFB members. With a farmland base roughly equal to the state of Michigan, Japan loses nearly 50,000 acres every year to development. Additionally, over 60 percent of Japan's producers are 60 years or older.

Embassy officials anticipate those trends will continue, resulting in additional export growth for U.S. ag products, namely beef, pork, and processed fruits and vegetables. Although rice still plays a predominant role in the Japanese diet, in position is quickly slipping and being replaced by U.S. ag products.

Although officials had high praise for the quality of U.S. produced beef, the quality of wheat was often a concern and considered inferior to Australian-produced wheat.

Fourth and Fifth Grade Teachers
Are you interested in receiving a series of lesson plans about soybeans? The Michigan Soybean Promotion Committee is in the last stages of developing soybean curriculum for fourth and fifth grades. These lessons are aligned with Michigan's core curriculum and will be infused with activities in science, social studies, math and reading. The kit will include hands-on materials and supplies.

Why Soybeans?
How are plants used in our lives?
- Analyze food packaging labels
- Examine common product labels containing soybeans (paints, soy ink, fish food, cosmetics)

From Tofu to Diesel — The Soybean Grows Up
How have soybeans been used by people in different lands?
- Trace the movement of soybeans to the U.S.
- Examine the diets of foreign countries
- Cooking and eating foods of many cultures
- Report on pioneers in soy research: G.W. Carver

Racey Soys
How do soybeans grow?
- Germinate and grow soybeans
- Maintain and care for growing plants
- Measure, record and interpret data on growth

Can the Golden Bean be “Green”?
How are soybeans used to protect the environment?
- Examine alternatives to petroleum-based fuels
- Examine an alternative to using petroleum-based inks

PLEASE COMPLETE AND RETURN IF YOU ARE INTERESTED
Name
School
Address
City/State/Zip

Return to Michigan Soybean Promotion Committee, P.O. Box 287, Frankenmuth, MI 48734-0287

MSPC
Anhydrous ammonia

Anhydrous ammonia (NH₃) is a colorless gas that has a built-in safety factor because of its sharp, penetrating odor—"you can't stand to have it." No one can voluntarily remain in a concentration of anhydrous ammonia gas that is strong enough to damage the nose, throat, lungs, eyes, or skin. When people receive burns or eye damage from the product, it is because of a sudden release of it where the victim is unprepared and cannot escape.

Accident situations

The accidental release of anhydrous ammonia can create a dangerous situation for both the handler and bystanders. The following situations are dangerous:

• Over-filling the tank
• Handling hose by valve handle or hand wheel
• Faulty valves and determinated outlet or-dyline pipes
• Not using positive protective equipment
• Failure to bleed pressurized NH₃ from the hose before connecting or disconnecting
• Not enough water available
• Over-turning an anhydrous tank
• External over-heating of the storage container

An estimated 80 percent of reported accidents result from improper handling, over-filling, storage or transport, and failure to follow proper safety precautions. Accidents can be reduced if all individuals follow safety rules and maintain the equipment properly. It is essential that all equipment be in good operating condition. Only trained individuals should use, handle, or apply anhydrous ammonia.

Operator protection

Even with the best precautions, you may be involved with the accidental release of anhydrous ammonia. Simple protection can prevent serious injury if used consistently.

Proper fitting face shield or goggles, rubber gloves and heavy-duty, long-sleeved clothing are recommended as a minimum protection for operations routinely handling ammonia. Wear rubber gloves and proper protective clothing when you are handing hoses or working on or operating anhydrous equipment.

Regular glasses do not provide adequate protection. Never wear contact lenses when working with ammonia. The chemical might get under the lenses and cause permanent eye damage. When you can remove the lenses and flush your eyes with water. The lenses also can trap the gas, causing them to freeze onto your eye.

Loose-fitting rubber gloves with an extended cuff are recommended for handling anhydrous ammonia. Turn the extended cuff down so anhydrous ammonia doesn't run down your sleeve when you raise your arms. You can remove your gloves that fit loosely in case of an emergency.

You can further protect your arms from splashes by wearing heavy-duty clothing, such as coveralls or work shirts that cover your arms. This dress shirt or short sleeves do not provide satisfactory protection.

First aid = water + water + water

Seconds are critical when someone is sprayed with liquid ammonia or engulfed in concentrated ammonia. Exposure to anhydrous ammonia can be harmful if it contacts the skin or eyes or if it is ingested or swallowed. When ammonia contacts the skin or eyes, tissue damage occurs rapidly. Immediate release of water to flush the exposed body area(s) is crucial.

Water must be available for flushing the eyes and skin in case of exposure. Each vehicle used for anhydrous ammonia must carry a 5-gallon (19L) container of clean water. Anyone handling NH₃ should carry a 6- to 8-ounce (170 to 226g) squeeze bottle of water in their shirt pocket for rapid emergency access.

Washing with fresh, clean water is the only emergency measure to use when skin or eyes are exposed to anhydrous ammonia. Time is important. Get fresh water onto the exposed area of the skin immediately and flush for at least 15 minutes. Contaminated clothing should be removed by running water over it before attempting removal. Flush the affected skin area with abundant amounts of water and do not apply anything except water for the first 24 hours. Stay warm and get to a physician immediately.

Container and system requirements

The specially fabricated and designed pressurized equipment should meet the guidelines provided by the American National Standards Institute in standard "R61.1-1981, Safety Requirements For Storage and Handling of Anhydrous Ammonia." All parts and contact surfaces must be able to withstand a minimum working pressure of 290 psi. This includes pressure welds, safety valves, gauges, fittings, and mating devices.

Ammonia is corrosive to certain metals and their alloys, such as copper and zinc. Galvanized steel and brass fittings must be used with equipment used for storing or applying ammonia. Containers should be made of high-strength steel or other suitable materials, and fittings should be made of high-strength steel.

All containers used for storing ammonia must be painted white or silver. Light-colored reflect heat and this helps keep temperature and pressure down inside the tank during warm weather.

Labels, markings and safety signs

Legal requirements

Nurse tanks must be labeled ANHYDROUS AMMONIA in 4-inch letters, on contrasting background, on the sides and rear of the tank. Federal DOT regulations require that the words INHALATION HAZARD, in association with the anhydrous ammonia label, be placed on both sides of the tank in 1-inch Letting. A Non-Flammable Gas placard with the numbers 1005 (identifying it as an anhydrous ammonia) must be located on both sides and both ends of the tank.

A Slow Moving Vehicle (SMV) emblem must be prominently displayed on the rear of the tank with the bottom of the sign at least 2 and not more than 6 feet from the ground. The valves must be appropriately labeled by color or legend as vapor (Safety Yellow) or liquid (Osmal Orange). The letters of the legend must be at least 2.5 inches high on contrasting background and within 12 inches of the valves.

Cans,甶anbletions of NH₃, requirement

Anhydrous ammonia can be handled and used safely. It is impermissible that equipment is properly maintained and checked daily. A regular, scheduled maintenance program will guarantee that all the valves and the tank are safe for handling the high pressure liquid and its vapor forms.

Daily inspection

Each day give the tank a hoses and a brief inspection.

• Hoses—Look for cuts, sot spots, bulges, kinking, flaring or slipping at the coupler.

• Tires—Inspect for proper inflation, cuts, wear, tightness of lug bolts on wheels.

• Relf the emergency water tank with fresh, clean water.

Each time you fill the nurse tank, check the liquid level gauge and pressure gauge. The gauges should be working properly and be consistent in their readings. Don't use nurse tanks with faulty gauges.

Close all hands valves by hand only. Do not use a wrench, because you could break the stem of the valve or damage the seal. Either damage could allow ammonia to escape.

Immediate inspection

Several situations are cause for immediate repair or replacement. Any leak in a liquid or vapor shutoff valve requires immediate repair or continued on page 17.
Personal protective equipment

Personal protective equipment (PPE) consists of clothing and devices that are worn to protect the human body from contact with pesticides and their residues. Personal protective equipment includes such items as overalls, protective suits or aprons, footwear, gloves, respirators, eyewear, and headgear.

Ordinary shirts, pants, shoes and other regular work clothing usually are not considered personal protective equipment, although the pesticide label may require you to wear specific items of work clothing.

To reduce the loss of personal protective equipment you must wear while handling or applying the pesticide. Sometimes the label gives different requirements for different activities. For example, more personal protective equipment may be required for mixing and loading than for applying the pesticide.

Exposure to pesticides can cause harmful effects. To prevent or reduce exposure, you need to wear correct, clean, properly fitted personal protective equipment. You are legally required to follow all personal protective equipment instructions that appear on the label or labeling.

Gloves — Always wear unlined, elbow length, chemical-resistant (liquid-proof) gloves when handling any pesticide concentrate or chemicals that carry the signal words Danger, Poison, or Warning. When spraying overhead, wear steel safety shoes inside gloves. At all other times, wear steel shoes only on the outside to prevent chemicals from entering gloves skin on your neck and head should be protected.

Goggles — Wear splash goggles or a full face shield when working with pesticides. Use chemical-resistant apron or loose-fitting coveralls when working with highly toxic pesticides. Chemical-resistant boots should be worn when working with liquid manure. Chemical-resistant apron or loose-fitting coveralls should be worn when working with solids.

Chemical-resistant boots should be worn when working with liquid manure. Chemical-resistant apron or loose-fitting coveralls should be worn when working with solids.

Non-absorbent hard or bump hat

Respirators — Correct, properly fitted respirations prevent inhalation of toxic chemicals. Wear a respirator when the label calls for it. Respirators are especially necessary when handling concentrated, highly toxic pesticides. Specific cartridges and canisters protect against specific chemical gases and vapors. Be sure to choose the type made to protect you against the pesticides you will be using. The respirator must properly fit to ensure a good seal. Long sideburns, a beard, or glasses may prevent a good seal.

Chemical cartridge respirators — Usually recommended: a half-face mask, containing one or two cartridges, which cover the nose and mouth only. Full face-piece respirators provide both eye and respiratory protection for the applicator. The inhaled air that enters the cartridge is pulled through a filter pad and a filtering medium such as activated charcoal. Use chemical cartridge respirators either for relatively short periods of exposure or high concentrations of toxic chemicals or for long exposure to low concentrations of toxic chemicals. This respirator should never be used in areas where the oxygen level is too low to support life.

Chemical canister respirators (gas masks) are designed to protect applicators longer than cartridge respirators. A gas mask usually protects the face better than the cartridge respirator since it covers the entire face (that is, it protects your eyes, nose, and mouth). Use a gas mask when you are exposed to toxic fumes in high concentrations or for a long period of time. Also, wear a gas mask when applying pesticides in enclosed or poorly ventilated areas. As with the chemical cartridge respirator, a gas mask should never be used in areas where the oxygen level is too low to support life.

Nebulizing equipment should be worn in areas where the oxygen supply is low or where the applicator is exposed to extremely high concentrations of very toxic pesticides in enclosed areas. Fresh air is pumped by a blower through a hose to the face mask from an unencumbered area or from a backpack carried by the applicator.

Care and maintenance of respirator — If breathing becomes difficult during spraying, get to fresh, clean air and change the respirator cartridges or canisters. Cartridges should be changed after eight hours of use or sooner if you detect pesticide odor while wearing the respirator.

Care of protective equipment — Always clean and inspect all personal protective equipment immediately after use. Clean and wash all protective equipment in a large, cold, clean water bath. Use household detergent and water and scrub all contaminated areas. Air dry protective equipment in a clean area and store in a dry, cool place away from pesticides. Keep full line of protective equipment and reserves in a clean, dry area, out of reach from pesticides.

Only a trained person, equipped with proper breathing apparatus, should enter a liquid manure tank.

Manure gases

Gases are often given off when animal manure is stirred. The most common gases given off from liquid manure are: ammonia, carbon dioxide, methane and hydrogen sulfide.

A person can suffocate in a manure building or pit because of gases given off by manure. The gases do not settle out; there is no oxygen to breathe. Hydrogen sulfide is released rapidly, and is most dangerous when liquid manure is first agitated. It has a bad odor, similar to rotten eggs. It causes headaches, dizziness and nausea, in concentrations as low as 0.5 percent. Exposure to 1 percent concentration can result in unconsciousness. Although you can smell very low levels of hydrogen sulfide, continued exposure dulls your sense of smell and you may not know that you are suffering. Several deaths have been attributed to this gas.

Ammonia is another gas that is a normal part of the air we breathe. However, it is found in the air at a very low concentration (about 0.04 percent). When it's present in higher concentrations, it displaces the air that less oxygen is available. Concentrations of 3 to 6 percent can cause heavy blurred breathing, dizziness and headaches. A 30 percent concentration can cause death by suffocation.

Methane is non-toxic. Concentrations as high as 50 percent only cause headaches. However, methane is highly flammable. It ignites readily, and methane-air mixtures are explosive.

Here are just a few of the safety precautions:

- Know the effects of each of the gases described above. Any time you detect one or more of the symptoms, get to fresh air immediately. A delay could be fatal.
- Never work or smell to detect the presence of hydrogen sulfide gas. It may be present in hazardous concentrations even though you cannot smell it.
- Provide maximum ventilation to keep gases away from people and animals whenever a tank is pumped or agitated. If a person has died or is unconscious and has been last seen near the tank, call 911.
- Do not allow anyone or other fire source to get close to the liquid manure tank or the air is explosive. Keep unauthorized people away.
- Only a trained person, equipped with proper breathing apparatus, should enter a liquid manure tank or air is explosive. Keep unauthorized people away.
- Provide maximum ventilation to keep gases away from people and animals whenever a tank is pumped or agitated. If a person has died or is unconscious and has been last seen near the tank, call 911.

Manure drowning

People can also drown in liquid manure. Thick crusts on top of liquid manure in storage can provide solid, but a person will break through into the liquid. Sometimes a person just slips and falls into the liquid. That's one more reason to keep rescue equipment near liquid manure storage, and to have boats at the site if you must enter the storage.

Working around liquid manure storage can be hazardous. For more information on safety or it's storage and removal, contact the state safety extension specialist at your land grant university, or your county Cooperative Extension office. Contact OSHA (Occupational Safety and Health Administration) for regulations affecting employees entering and working in confined air spaces.

Safety strategies

Spring farm safety management

MICHIGAN FARM NEWS
April 15, 1996

Use personal protective equipment when working with pesticides.

Several available types of head gear, such as water-proof rain hats or washable, wide-brimmed hard hats protect the neck and head at the same time. The headgear, including the sweat band, should be cleaned often to remove any chemical residues. AVOID cOTTON OR feLTH SINCE THEY ABSORB CHEMICALS.

Working around liquid manure storage can be hazardous. For more information on safety or it's storage and removal, contact the state safety extension specialist at your land grant university, or your county Cooperative Extension office. Contact OSHA (Occupational Safety and Health Administration) for regulations affecting employees entering and working in confined air spaces.

SAFETY ROPE

SELF-CONTAINED Breathing APPARATUS

Only a trained person with breathing apparatus should enter liquid manure storage.
Anhydrous ammonia

Continued from page 15
replacement of the valve. If an accident causes a dent, gash, crack or other damage to the tank that makes it impossible to inspect, then other farm machinery is a possible cause of the gas leak. Any repairs should be performed by a qualified repairman. A certified-welder must make all repairs to the tank, or else the tank may be considered hazardous.

Annual Inspection

Must a tank ever be inspected and repainted? No, tank owners must not repaint or repair their tanks. The tank must be inspected every five years or sooner if needed to determine if it still can be used. If a tank cannot be inspected, it must be replaced. Tank owners must not use the tank if they cannot ensure its safety.

Some questions and answers for some legal concerns.

How long has the federal law concerning employment in hazardous jobs in agriculture been in effect?

Since Feb. 20, 1990. This makes it illegal to hire or permit any youth under 16 years of age to operate a tractor or other farm machinery and any other machines or vehicles in any areas that are determined to be hazardous. This is especially true when land is operated by a parent or legal guardian.

For a more detailed explanation, refer to: EXTERNAL VISUAL INSPECTION GUIDELINES FOR ANHYDROUS AMMONIA TANKS, Applicators, and Tank Owners, Published by The Fertilizer Institute, 1st St. N.E., Washington, DC 20002.

Highway safety

Towing anhydrous tanks on public roads presents problems because accidents can cause serious injuries to the operator and others. For proper training, it is strongly recommended that the vehicle be rated for the tank, or else it must carry more. Always use a safety hitch pin and safety chain.

Anhydrous ammonia vehicles must carry clean, fresh water for emergency first aid.

Tractor operator training for 14 and 15-year-old youth

What is the law? The federal law that affects young people is a minimum training law. This requires young people to have a training certificate before they can be hired to operate a tractor.

What about my kids under 16 years old operating a tractor on their grandfather’s or uncle’s farm? It is illegal, unless the youth has a parent or legal guardian who has a training certificate and proof of a good idea that he will be trained in each year’s activity to protect himself and the tractor from injury. A three-day course is offered at the University of Michigan Ag. Ext. This class is offered to protect young people who are under 16 and has not received a training certificate.

For proper safety lights, reflectors, and SMV emblem for transportation at public roads, check your local and state highway authorities.

What if my county does not offer a tractor operator training program this year? You may have to travel to another county where the program is being offered.

Is there a handbook that gives more details on “Youth Employment in Hazardous Jobs in Agriculture”? Yes, your county Extension office for a four-page fact sheet with the above title listed as ARES #598 dated April 91 from the Agricultural Engineering Extension.
MICHTHAN FARM NEWS
April 15, 1996

Michigan Farm News Classified

19 General
BINS FOR SALE: Martin seed corn drying and storage bins, 10,000 bushel and 6,000 bushel, gas dryer. Hatfield Farms, 11,320 12th Avenue, MI 49410, 1-517-967-3547.

15 For Sale by Owner

18 Classified
FREE CATALOG, call 1-800-526-3621.

13 Used
CASH PAID FOR old fishing lures, reels, sketch books. One piece or entire collection! Also, antique hunting golf memorabilia. Paying up to $300. 1-517-427-5681.

13 Classified
CASH: Old steel animal traps in excellent condition. Adverse sizes, make offers and price excluding victors. Norm Burbaw, 1128 Oneida Street, Lakeview, MI 49617-1-517-323-4365.

13 Old Glass
OLD GLASS QUARTS from late 1800's to early 1900's. Willing to pay top prices for certain negatives. Call Joe at 1-616-945-5536 or leave message.

15 WANTED
WANTED: old timer's car and accessories. For a total of 69 years of service!

20 Recreation

20 Financing

20 Buildings
Accommodations for rent. Near downtown sporting events and Condominium. Fish from two piers, 6.50 per week. Cable TV, washer/dryer or electric.

20 Classified
LAW AND GARDEN
NUT TREES: Carpathian and Hazelnut. 3 to 5 ft. each. Add $10 for shipping. Frank Radosa, 4084 Kane, Caledonia, MI 49316. 1-517-323-4365.

20 Classified
WANTED: CHERRY PITTER, 1-517-967-3547.

20 Classified
WANTED: 2"-8" used aluminum irrigation tubing. Buy, Sell or Trade Call. 1-517-967-3547.

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20 Classified
WANTED: CHERRY PITTER, 1-517-967-3547.

20 Classified
WANTED: BUYING OLDER printed materials. Pre-1900's magazines, newspapers, newspapers, catalogues, etc. Richard Hans, 715 Luce, Fremont, 94121,1-616-924-6768. Save this ad.

20 Classified
WANTED: CHERRY PITTER, 1-517-967-3547.

20 Classified
LET THE SNAKE LADY do your parties, birthday, store openings, fund raisers, company picnics, pet shows. Call Linda Meade 1-810-380-2046 or fax 1-810-539-0773.

20 Classified
HARDY OUTSIDE WOOD FURNACE

20 Classified
WOOD FURNACE

20 Classified
WANTED: 2"-8" used aluminum irrigation tubing. Buy, Sell or Trade Call, 1-517-967-3547.

20 Classified
WANTED: CHERRY PITTER, 1-517-967-3547.

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WOOD FURNACE

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WOOD FURNACE
Good beans are the product of good management, not magic. One of the best tools you can use to produce an outstanding crop is EPTAM® herbicide. EPTAM® herbicide provides an unbeatable foundation for a good weed control program by eliminating more than 40 troublesome weeds. Plus EPTAM makes a great tankmix partner for a wider band of protection, not magic. One of the best tools you can use to produce an outstanding crop is EPTAM® herbicide. EPTAM® herbicide provides an unbeatable foundation for a good weed control program by eliminating more than 40 troublesome weeds. Plus EPTAM makes a great tankmix partner for a wider band of protection.