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## April 2001 Regional Fruit Newsletter

### CALENDAR OF EVENTS

- 4/3-4/28 Tractor Safety Training  
TBA Career Tech Center  
Traverse City
- 4/10 [Cherry Tree Training Demo](#)  
Jim Bardenhagen's Farm  
East Leland
- 4/12 [Michigan Apple IPM  
Implementation Project](#)  
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- 4/16 [Orchard Maps due to CIAB](#)
- 4/18 [Spring Pest Management –  
Hort Update](#)  
NWMHRS
- 4/19 [Farm Safety Program](#)  
NWMHRS
- 4/19 [Michigan Farm Labor Meeting](#)  
NWMHRS
- 4/21 [Pat McManus Fundraiser](#)  
St. Francis School  
Traverse City
- 6/21 USDA Tart Cherry Crop Estimate

### CHERRY TREE TRAINING DEMONSTRATION SWEETS AND BALATON

By Jim Nugent, District Horticulturist

Training dwarf sweet cherries will be the focus of a program on April 10<sup>th</sup>, from 1:30 to 4:00 p.m., at Jim Bardenhagen's farm on Pertner Road in East Leland. We'll begin with a short discussion in Jim's pole barn with some slides, and then we'll move into the orchard. We will also make a stop at a young Balaton planting. Resource people will be Dr. Bill Shane, SW Michigan Research & Extension Center, and Jim Nugent. A dwarf sweet cherry systems trial which was established in 1997-1998 at Jim's farm will provide an excellent site to see the response from various pruning techniques.

### MICHIGAN APPLE IPM IMPLEMENTATION PROJECT

By Gary Thornton, District Fruit IPM Agent

All apple growers and consultants are welcome to attend an informational meeting about the Michigan Apple IPM Implementation Project at the Northwest Michigan Horticultural Research Station on *April 12 from 8:00-9:30 a.m.*

The goal of the Michigan Apple IPM Implementation Project is the implementation of an economically viable and environmentally sound pest management and production system that will maximize the implementation of IPM practices.

The program features:

- \$15/acre for a scouting program
- 25% cost share for use of mating disruption products
- Direct access to the latest IPM information
- Growers make all final pest management decisions for their farm

For more information about this project please see our website at: <http://www.cips.msu.edu/maipmip/index.html>

or contact:

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### SPRING PEST MANAGEMENT – HORT UPDATE

By Gary Thornton

Topic: Thinning, pest management/pesticide update and a discussion of the new growth regulator "Arbogest."

Topics: thinning, pest management/pesticide update and a discussion of the new growth regulator Apogee.

**When: Wednesday, April 18<sup>th</sup>, 6:30 p.m.**

**Where:** NW Michigan Horticultural Research Station

**Presenters:**

Phil Schwallier, District Horticulture Agent

Brian Mueller, BASF Field Rep.

Gary Thornton, District Fruit IPM Agent

MDA credits have been applied for. I would expect 1 credit to be available toward recertification. Pest management will be covered first for those cherry growers that don't want to stay for the apple portion.

#### **NW MICHIGAN FARM LABOR MEETING**

April 19<sup>th</sup>, 2001

NW MI Hort Research Station

**Agenda:**

8:00 - 8:30 Registration, Coffee, Sweet Rolls

8:30 - 8:50 U S Department of Labor Plans for Michigan in 2001

Kevin Novorolski, Agent, U S Dept of Labor, Traverse City, MI

8:50 - 9:50 2001 Farm Labor Issues

Craig Anderson, RCAP, Michigan Farm Bureau, Lansing, MI

9:50-10:00 Break

10:00-10:15 Seasonal Labor Housing – Licensing Issues & Grants

Mark Stanfield, MI Dept of AG, Traverse City, MI

10:15-11:00 Unemployment Changes & Tax Withholding

Craig Anderson, RCAP

Glenn Kole, MSU Extension District Farm Management Agent

11:00-11:45 Update on the 2001 Labor Force & Recruiting Via the Web

Jerry Deer, MI Dept. of Career Development, Cadillac, MI

Janie Schlagel, Michigan Works, Traverse City, MI

11:45-12:30 Lunch - Catered by Cedar Valley Ranch

12:30- 1:15 Using Computers for Labor Record Keeping

A Piece Rate System using Palm Pilots

Gary Bardenhagen, Grower, Lake Leelanau, MI

A System for Handling Seasonal Labor Payroll Needs

Nancy Harms, MSU Microtel/Telfarm System

1:15 - 1:45 Motivating the Farm Worker

Vera Bitsch, MSU Human Resources Specialist, Ag Econ Dept.

**Cost: \$15.** The program is partially funded from Fruit Area of Expertise Team & MSU GREEN Funds. Some handouts will be provided.

Please use registration form below to register. Please register by *Monday, April 16*, so we can plan for lunches.

#### **REGISTRATION FORM**

##### **NW Michigan Farm Labor Meeting**

Thursday, April 19, 2001, 8:00 am

NW MI Horticultural Research Station

Name/Farm Name: \_\_\_\_\_

Phone# \_\_\_\_\_

Mailing Address: \_\_\_\_\_

No. Attending: \_\_\_\_\_ x \$15.00/person = \_\_\_\_\_ Total Cost

Please make checks payable to **MSU Extension** and return to: MSU Extension - Leelanau

116 E. Philip Street

Lake Leelanau, MI 49653

(231) 256-9888

**Registration deadline: Monday, April 16, 2001**

#### **FARM SAFETY PROGRAM**

Jim Bardenhagen, MSU Extension

**Date:** April 19, 2001

**Time:** 2:00-5:00 pm

**Location:** NW MI Horticultural Research Station

**Cost:** Free. This program is being funded through a Michigan Farm Bureau Safety Education and Training Grant

The program agenda is as follows:

2:00 Introductions

Jim Bardenhagen, Leelanau MSU Extension Director

- 2:05 Developing Farm Facility Checklists  
Craig Anderson, RCAP, Farm Bureau
- 2:30 New Pesticide Label Information
- 3:10 Tractor Safety Using DVD Technology  
Howard Doss, Ag Safety Specialist, MSU AG Engineering
- 3:50 Break
- 4:00 Injury & Accident Reporting Benefits  
Debra Chester, Industrial Hygienist, MSU Dept. of  
Occupational & Environmental Medicine
- 4:15 Ag Sprayer Safety Utilizing DVD Technology  
Craig Anderson, RCAP
- 4:50 Evaluation & Wrap Up

This program will focus on hazard identification and reduction using facility surveys, accident/injury surveys, reporting and interactive training for farm safety.

The program will provide **2 private** or **2 commercial** recertification credits.

#### MSU PESTNET FORECAST

By Gary Thornton

Project GREEN has once again funded a joint weather-monitoring grant between the NWMHRS and SimpleSoft. This year's grant will allow us to run an innovative program throughout the state to deliver real-time disease and insect prediction information to all fruit growers. This year's program allows us to utilize the newly developed Michigan Agricultural Weather Network (MAWN) of electronic weather stations throughout the fruit growing regions of Michigan. This season's PestNet forecast will include information from a total of seven weather stations throughout NW Michigan.

Last year we relied heavily on the weather stations of Hort Systems, Inc. Most of those stations were scrapped due to age and necessary repairs. This year, MSU has pooled sources including cost share, grower and processor funds to establish a "new" network of weather machines that can adequately cover the NW fruit growing region. As a result, MSU has a total of seven weather machines located in Benzie, Leelanau, Grand Traverse and Antrim counties. Although this number is down from the 12 that we had last year, I do think we are making progress as MSU only had two in place last year and now has seven. I hope to add a few more stations to the MAWN in 2002.

This network will provide growers with predictions based on real time information for wetting events (apple scab, cherry leaf spot and fireblight). Additional information is also available via the faxback system on the PestNet Code-A-Phone. Information can be received via three methods. The reports will be sent for every wetting event in your region, up to twice a day, depending on the length of the wetting event. Fax and e-mail reports will go out between 7:00-8:00 am and 6:30-7:30 pm when it rains. Disease prediction reports via the PestNet Code-A-Phone will be updated at that time as well.

*Via email* – This method of delivery is *free* to those who subscribe and strongly encouraged. In order to read the reports via email, you will need to have Adobe Acrobat. If you do not have this software, you can download the Adobe Acrobat Reader for free at the following WEB address: <http://www.adobe.com/products/acrobat/readstep2.html> Fill out steps one and two and click on download. You may consider "unchecking" the boxes in step two that will prevent them from contacting you with new product info.

*Via Fax* – Reports will be sent via fax to those subscribing. The cost for the season is **\$25**. Subscribe by contacting the NWMHRS (946-1510). If you subscribed last year, you will be sent two free reports before payment will be required. Please let us know if you would like to subscribe again.

*Via Phone* – Discussed in the Code-A-Phone article and available for free to anyone who has access to a touch-tone phone. The phone numbers for those wishing to access the PestNet are 947-3063 (Local) 1-877-763-3300 (Toll free)

#### 60 HOUR WEATHER FORECAST

By Jim Nugent and Gary Thornton

A few years ago a program was initiated to deliver **weather forecasts daily** for the Grand Traverse area **during the growing season**. The forecast is given in 3 hr. increments for a 60 hr. period. It is now available either in fax or email format. There is a \$30 subscription fee for the fax version and a \$20 subscription fee for the e-mail version per season. The Traverse City 60 hr. forecast is also available on the web at:

<http://www.agweather.geo.msu.edu/Ldm-Data/fcasts/fous14ktvc>. The predictions are based on the Traverse City airport, so you will need to adjust temperature forecasts as appropriate to your site.

The computer program that generates these reports is run twice per day - based on 8:00 a.m. data that is available to us at about 2:45 p.m., and again based on 8:00 p.m. data and available to us about 2:45 a.m. Fax subscribers will receive the afternoon report only. E-mail subscribers will receive both reports; i.e. updated reports every 12 hours. We will begin the fax cycle by about 3:00 p.m. Reports will be sent daily from **mid April** through **mid October**.

This predictive information should complement the real-time (current) weather and pest scouting information that you are collecting to further improve your IPM implementation decisions!

#### FRUITNET

The weekly newsletter written by area Extension agents sent out of the NWMHRS via fax or email will continue as in the past. FruitNet will be published on Tuesdays throughout the growing season. Funding for this is provided by the area horticultural organizations. Subscription is **free** in NW Michigan. Past subscribers will automatically remain on the list, unless you ask to be removed. New subscribers should contact the NWMHRS (946-1510).

#### To Summarize:

To subscribe to the PestNet Forecast (email or fax), 60 Hour Weather Forecast (email or fax) or the FruitNet Newsletter (free) contact Jackie

Baase or Alison Heins at the NWMHRS via phone at 946-1510 or 888/749-3019, via fax at 946-1404, or via e-mail at [nwmihort@msue.msu.edu](mailto:nwmihort@msue.msu.edu).

For 60 Hour Weather Forecast and PestNet Forecast reports, make checks payable to **Michigan State University** and mail to: NWMHRS, 6686 S. Center Highway, Traverse City, MI 49684.

#### **PHONE SYSTEM FOR STATEWIDE PESTNET ACCESS AND LOCAL**

##### **CODE-A-PHONE MESSAGE**

By Gary Thornton

This year the system is being updated to provide fruit growers from throughout the state with quicker access, improved information and a broader range of options. This system is known as a telephony system and works similarly to how you access bank information. You will need a touch-tone phone to access this system.

To access, call:

**947-3063 (Local to Traverse City)**

**1-877-763-3300 (Toll free statewide)**

Options this year include the following by pressing the corresponding number:

- 1** - Stone Fruit Information
- 2** - Pome Fruit Information
- 3** - Grape Information
- 4** - Weather conditions and Disease Forecasts (including wetting events from 19 weather stations throughout Michigan with 7 of those in NW Michigan)
- 5** - Fax Back Menu
- 6** - Listing of Weather Station Numbers (required for access to your local weather station info)

The above categories are the main menu choices; however, throughout the season there will be additional opportunities to garner information by using additional menu options.

*For example:* A grower could call up and hear, "Welcome to the Northwest Michigan Horticultural Research Station Information Network. Please press 1 for stone fruit information, 2 for pome fruit, 3 for grapes, 4 for weather conditions and disease forecasts, including wetting events, 5 for the fax-back system, etc. You may return to this main menu at any time by pressing the star key." Then you might press 1 to listen to the stone fruit information. At that time it would say, "Press 1 for the stone fruit message, press 2 for a refresher on the 'postponed insecticide treatment strategy for plum curculio' or press 3 for recommendations on the use of pheromone disruption for controlling lesser and greater peach tree borers." For starters, it will only say "Press 1 for the stone fruit message." By pressing the star key you can back out of the menus to get to additional menu options.

The highlight of the system is the access to the latest information on current wetting events. This is being made available through a GREEN grant with MSU and SimpleSoft, Inc. cooperating. This information will be updated twice daily during a wetting event and thus can be accessed from wherever you have access to a touch-tone phone. The system will ask for the weather station that you want the information from, so you will need to know the code of that station and punch it in when asked. Listed below are the stations that will be available as of the week of **April 15<sup>th</sup>** and their respective codes. Write these down!! If you happen to lose them, they will be available via menu selection 6.

Northport West – 120

East Leland – 140

NWMHRS – 160

Blaine – 180

Old Mission – 190

Elk Rapids South – 200

Kewadin – 210

This year the phone system will have statewide codes listed as well, so you may hear of places that you are not familiar with.

#### **DISASTER ASSISTANCE PROGRAMS ARE AVAILABLE**

Jim Bardenhagen, MSU Extension

Several Disaster Assistance Grants and Loan Programs are now available to fruit growers and ag producers through your local Farm Service Agency (FSA).

##### Grant Programs:

- 1.) **\$100 Million Market Loss Assistance Program for US Apple Growers** - Deadline for sign up is April 13<sup>th</sup>. All you need to provide is your production for 1998 and 1999. As soon as all the applications are in, FSA will allocate the \$100 million to payments for each grower.
- 2.) **Crop Disaster Program** - This is a general assistance for growers who suffered production losses in 2000 due to natural disasters. This general crop disaster assistance is geared to provide benefits when crop losses exceed 35% of past years averages or the state averages. No deadline for sign up has been announced.
- 3.) **Honey Producers Disaster Program** - Honey producers need to contact FSA by April 12<sup>th</sup> to participate in the Disaster & Loan Deficiency Program.

##### Loan Programs:

- 1.) **Special Apple Loan Program** - Low interest loans are available for apple growers who suffered hardships due to low prices for their apples. Growers must have produced apples on a minimum of 10 acres in 1999 and 2000. Eligible participants may obtain 3 year loans up to \$300 per acre. No deadline for sign up has been announced.
- 2.) **Emergency Loans** - This is a 7 year - 3¼% interest loan that is available to fruit growers and ag producers. To be eligible, an operation must have sustained a 30% production loss in one enterprise (crop) in 2000.

#### **MAPPING ORCHARDS FOR CIAB**

By Jim Nugent

The deadline for providing updated orchard maps to the CIAB is **April 16, 2001** (*one day later than normal due to the 15<sup>th</sup> falling on Sunday*). At this time it appears that the primary reserve pool will likely be nearly full or full (amount in pool is dependent on export sales this year) as we head into the 2001 crop. *If we experience a large crop combined with a substantial inventory in the primary reserve pool, then many processors are likely to require some level of at farm diversion.* Tank diversion at farm is possible without mapping, but in orchard diversion is only available to growers with orchard maps on file with the CIAB. Even if no map changes are necessary from last year, you still must sign and return a grower diversion application found on the back of the orchard map sheet sent to you by CIAB by the April 16th deadline. This grower diversion application makes all diversion options available to you; without it, your diversion options are limited!

At a recent meeting of the CIAB, a quality control proposal was unanimously adopted. It would allow the board to require a small portion of the crop to be diverted by each processor to assure that the poorest quality fruit is not processed. This requires USDA approval, so will likely not be available for this season, but if approved could further encourage some in orchard diversion.

If you have any questions regarding orchard mapping, contact Heather at the CIAB office at 888/639-2422.

#### **PAT MCMANUS FUNDRAISER**

Fruit grower Pat McManus recently underwent a stem cell transplant in his battle with leukemia. To help offset some of the large medical costs, a pig roast and raffle has been scheduled for **April 21, 2001**, beginning at **4:30 p.m.** at the St. Francis School in Traverse City. A silent auction will take place from 4:30-10:00 p.m. with a live auction at 8:00. Everything has been donated, so all proceeds from the pig roast and auction go to help Pat. The cost for the meal is \$15 per person or \$35 per family. Tickets are available from Gillison's Variety Fabrication, the NWMHRS and other sites.

#### **VOLE DAMAGE**

By Jim Nugent

A combination of high meadow vole (mouse) populations last fall and a lengthy, deep snow pack has resulted in significant tree damage in some locations. Suggest checking for damage as soon as possible. Following are some suggestions if damage is found:

Stone fruits -- Bridge grafting generally is not worth trying. If trees are young and if girdling is above the graft union, then trees can be cut off at the girdled area in early spring (preferably prior to bud swell) to encourage sprouting below the damage and above the graft union. If this is done and a sprout develops, it will usually grow so fast the first season that staking is encouraged to avoid tree breakage during the growing season. Remove older trees and trees girdled to graft union.

Apples and Pears -- Bridge grafting generally works well. Collect scion wood as soon as possible while still dormant. Scion wood needs to be cut from last season's growth. Suckers and water sprouts work well for this purpose. Scion wood should be bundled and placed in plastic bags. Cutting into manageable lengths (12-16") can make storage easier. Store under refrigeration to maintain dormancy. Keep moist during storage. **Do not** refrigerate with fruit (particularly apples) as ethylene gas from the fruit can injure or kill the scion wood.

Grafting can begin when the bark begins slipping (generally about bloom). Give us a call if you would like some written information on bridge grafting. We can send you a copy of an old (long since out of print) bulletin, but the information is as good today as it was when written.

#### **CROWN GALL CONTROL - NEW FOR 2001**

By Gary Thornton

Crown gall is caused by the soil borne, tumor producing bacteria *Agrobacterium tumefaciens* and can infect more than 200 species of plants. The galls develop on the roots and rarely on the aerial portions of the trees. The adverse effect of the galls varies depending on number of galls, age of tree and overall vigor. The effects include reduced vigor, root development and stunting of the tree.

When planting stone fruit trees, growers have the one and only opportunity to minimize problems with crown gall for the life of the orchard. Crown gall can reduce root and shoot growth and limit productivity. Once the tree is planted there is no cure! Stone fruits are particularly susceptible, especially those on Mazzard rootstocks.

To protect against crown gall, two steps can be taken. First, plant only crown gall free trees. If trees arrive with galls present, realize that just removing the galls will not remove all infections. Some latent infections are likely to be present that have not yet caused the gall formation. Second, plan to inoculate roots with a biological control agent immediately prior to planting, if planting into soil with the crown gall pathogen present. Sites that would likely have high inoculum include stone fruit replant sites and sites where woods were removed that had black cherry, choke cherry or other alternate hosts in them.

Although chemical controls are ineffective, there has been an excellent biocontrol using the competitive bacteria, *Agrobacterium radiobacter*. When this bacteria colonizes the roots it gives off the antibiotic agrocin 84. This prevents the crown gall bacteria from ever establishing itself. *Agrobacterium radiobacter* has been available commercially in several formulations including Norbac K84 (gel suspension) or Galltrol (agar plates).

As of October 2000 the commercial product Norbac K84 has been removed from the market, although the Galltrol version should still be available. The Norbac K84 strain is being replaced with NOGALL 1026 strain. In some areas of the world a break down in control has occurred, due to a form of transferred resistance. This new strain of *Agrobacterium radiobacter* has been genetically modified to prevent this resistance from occurring.

The new product will come as a live bacterial culture on a finely ground peat medium. It has a much better shelf life than the gel formulation, but should still be refrigerated. A 100g. packet should be mixed with 1 gallon of water and the trees can be dipped or sprayed onto the roots of the plants.

At least some of the local suppliers will not be carrying the new product, so growers may have to order it directly. Their local suppliers should have more information on ordering instructions.

Crown gall can also be a problem in grapes, but it is typically a different biovar than that which infects stone fruits. As a result, the biocontrols mentioned above will not provide control of crown gall on grape.

#### **CAT ALERTS**

By Gary Thornton

Once again the CAT Alert Newsletter will be available to growers this season. It is a weekly newsletter that is aimed at providing growers the latest information on insect and disease pressure and control options. It also has pertinent and timely articles on selected horticultural topics. In addition to the statewide topics, the NWM Extension group submits a weekly update on the most pressing locally

horticultural topics. In addition to the statewide topics, the RVV Extension crew submits a weekly update on the pest pressures locally.

To subscribe to the print versions, go to the following web site and follow directions. The cost is \$35/season:

[http://www.msue.msu.edu/ipm/subsc\\_fruit.htm](http://www.msue.msu.edu/ipm/subsc_fruit.htm)

Or you can call us at the station for a subscription form. The Cat Alert is also available online for no charge. You can also set it up so that you receive an email every time a new issue is posted on the web. To view the online version or subscribe to the "reminder email," go to the following web site:

<http://www.msue.msu.edu/ipm/fruitCAT.htm>

#### **FRIDAY TRI-CLAMP SHAKER PADS**

Jim Bardenhagen, MSU Extension

Growers with Friday Shakers that have tri-clamp shaker heads have had a serious problem the last few years of not being able to find a source for replacement rubber shaker pads. Low fruit returns have made it difficult to invest in other shaker heads. There is a grower effort currently underway to convince a local company to look at producing these pads.

A mold has been located for producing the pads, however, for this company to make it a worthwhile venture, they need to know if there is enough sales potential for these Friday tri-clamp pads. In order to provide the pads at an economical cost to the grower, several pads will need to be produced at once.

If you want/need Friday Tri-Clamp shaker pads now or in the future, now is the time to stand up at the plate. Please call Dave Enger at Grand Traverse Rubber (943-4477) and let him know your interest.

#### **REFLECTIVE TAPE REGULATION FOR AG TRAILERS AND SEMI TRAILERS**

By Jim Bardenhagen, MSU Extension

June 1, 2001 is the deadline for the Reflective Tape Retrofit Requirements for ag trailers and semi trailers manufactured before December 1, 1993. Trailers manufactured since December 1, 1993 already have the reflective tape installed.

The following information has been obtained from Craig Anderson of the Farm Bureau RCAP Program and an article written by Devon Anderson for the MI Farm News.

Retroreflective sheeting & reflex reflectors requirements

All Semi trailers and trailers manufactured before Dec. 1, 1993, need to be retrofitted by the June 1 deadline.

Farmers are encouraged to retrofit all trailers with a system that meets all requirements applicable.

The driver of rental equipment is responsible at the time of a traffic stop and will receive a ticket if an emblem or reflective material is not displayed.

The use of retroreflective sheeting or reflex reflectors should be in a red and white pattern.

Alternative color patterns must comply with the following requirements:

Alternative color combinations may be used on sides or lower rear area of semi trailer/trailer until June 1, 2009.

Alternative color must be uniform.

Red shall not be used unless in the red and white pattern.

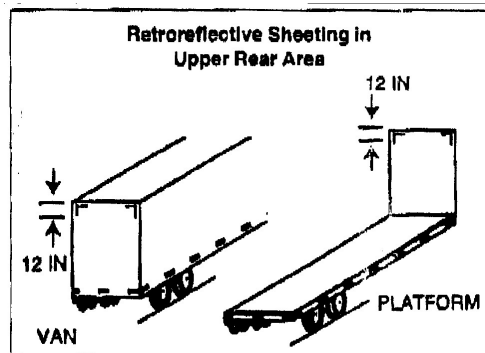
Locations for retroreflective sheeting & reflex reflectors

Sides

Each strip positioned horizontally, beginning and ending as close to the front and rear of the trailer as practical.

Although not continuous, the sum of the length of all reflective material segments should be half the length of the trailer

Segments should be evenly distributed.



Lower rear area

Each strip positioned horizontally.

Extending across the full width of the trailer: beginning and ending as close to the extreme edges as practical.

Upper rear area

Two pairs of white strips, each consisting of strips 12 inches long.

Positioned horizontally and vertically on the right and left upper corners of the rear body of each trailer/semi trailer

As close as practicable to the top of the trailer and as far apart as practical.

Enforcement

Failure to meet requirements can result in citations from the State Motor Carrier Officers with up to a \$250 fine and/or 90 days in jail.

More detailed information is available from Craig Anderson (RCAP) or the Leelanau MSU Extension office.

#### IS YOUR FARM EQUIPMENT PROPERLY MARKED?

By Jim Bardenhagen, MSU Extension

The following information has been obtained from Craig Anderson of the Farm Bureau RCAP Program.

Farm equipment operated on the road needs to be properly marked to protect both the equipment operator and the people who share the road. Please realize that if someone hits your equipment from the rear and the vehicle is not properly marked, the farm equipment operator will normally be determined as the responsible party.

Slow Moving Vehicle Sign (SMV)

There are two regulations covering the use of Slow Moving Vehicle signs: The Michigan Vehicle Code (enforced by police agencies) and the Michigan Occupational Health and Safety Act (enforced by the Department of Consumer and Industry Services).

The Michigan Vehicle Code requires an SMV emblem be displayed when the following equipment is operated on the highway:

Every vehicle which has a maximum potential speed of 25 miles an hour

An implement of husbandry. An implement of husbandry is defined as a farm tractor, a vehicle designed to be drawn by a farm tractor or an animal, a vehicle which directly harvests farm products, or a vehicle which directly applies fertilizer, spray or seeds to a farm field.

Farm tractor or

Special mobile equipment.

The Michigan Occupational Health and Safety Act provides that the SMV must be mounted on the rear of the vehicle, broad base down, not less than 3 feet, nor more than 5 feet, above the ground and as near the center of the vehicle as possible.

Reflective Marking

Red reflectors or reflectorized tape is required on rear at each side of implements of husbandry. While regulations provide only for the red reflector, operators may consider using yellow material on the sides and front surfaces and orange reflective material on rear as shown in the diagram.

Grades of Reflective Material

There are many grades of reflective material available. In recent years, reflective material technology has substantially improved. Material meeting the American Society of Agricultural Engineers Proposed Standard S279 has a reflective capability several fold greater than the

earlier versions. This increase does not come without cost. A complete marking package may cost upwards of \$50 for a tractor-drawn implement.

#### COST-SHARE FUNDING AND TECHNICAL ASSISTANCE AVAILABLE THROUGH THE GROUNDWATER STEWARDSHIP PROGRAM FOR NW MICHIGAN GROWERS!

By Dan Busby, Grand Traverse Conservation District

The NW Michigan Groundwater Stewardship Program has funds available to help you reduce many potential risks to the water resources on your farm. In order to be eligible you must have completed a farmstead assessment or Farm\*A\*Syst.

Practices available for 2001:

Abandoned Well Closure - 90% cost-share up to \$500.

Offset Hydrant - (moving fill pipe away from well head) 90% cost-share up to \$750.

Pesticide Application Controller - 50% up to \$1,500.

Pesticide Application Monitor - 50% up to \$300.

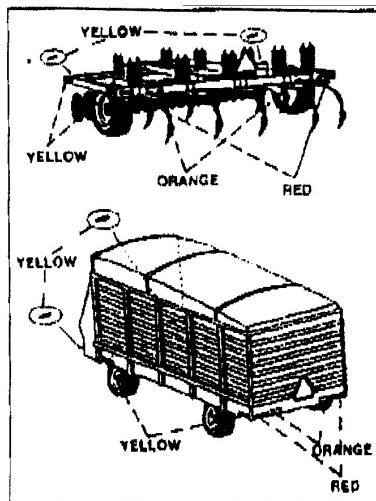
IPM Scouting - 50% up to \$15/acre.

Spill Kits - 75% up to \$30.

Pesticide Storage Impervious Surface (retro fit) - 50% up to \$500.

Permanent or seasonal Pesticide Storage - 50% up to \$500.

Intensive Rotational Grazing - 50% up to \$15/acre.



Nurse Tank - 50% cost-share up to \$500.

Pesticide Container Rinse Nozzle - Only \$6.25

Emergency Planning Tube \$\$ FREE \$\$

Every farm owner should be prepared for an emergency. The Michigan Emergency Tube will help you be prepared and will protect your local emergency crews. *Don't keep emergency crews guessing!*

ALL PRACTICES MUST BE COMPLETED BY SEPTEMBER 1, 2001

Events scheduled for 2001...

Clean Sweep (unwanted pesticides) and Household Hazardous Waste Collection dates for this year are Saturdays, May 5, August 4, October 27. Call 922-2052 to make a reservation for one of these collection dates.

Free Water Well Screening for Nitrate and Triazines (atrazine, simazine, etc.)

-Pick up sample container from your MSU Extension office prior to July and sample collection date will be Monday, July 9<sup>th</sup>, at your local Extension office.

Pesticide Container Recycling Program.

Hamilton Farm Bureau (tentative) and Wilbur-Ellis will be collection sites for this year's program. Pick up your collection bags at either of these locations or at your local Conservation District or MSU Extension office.

For more information on cost-sharing or any of the above events, please call Dan Busby at the Grand Traverse Conservation District Office.

For more information on cost sharing or any of the above events, please call Dan Busby at the Grand Traverse Conservation District Office at (231) 941-4191; mobile number (231) 883-9962; or you can e-mail at [dbusby@gtcd.org](mailto:dbusby@gtcd.org)

**Please send any comments or suggestions regarding this site to:**

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