IGNORANCE IS NOT BLISS!
EDUCATION STILL IMPORTANT IN TOUGH TIMES

Attendance was down this year at cranberry mini-clinics, especially in the central part of the state. Since mini-clinics are free, we can't blame a high fee that kept folks from coming. So why didn't they come? A few possible reasons: 1) the day the clinic was held was a rare dry day in June in central Wisconsin, so people stayed on the marsh to catch up on chores; 2) Dan, Teryl, Tod, and Patty say the same stuff over and over—who needs to hear it again? 3) what's the point in learning more about managing a crop that won't bring a profit? Of these possibilities, #1 is a reasonable excuse—as the saying goes, make hay while the sun shines. If #2 is the reason, we've got a problem, but a relatively easy problem to fix. We in Extension are eager for your opinion on what's needed in the way of education. Contact us directly, or funnel your requests/complaints anonymously through the WSCGA office or your county Extension office. The more input we get from growers, the more likely we are to talk and write about topics of interest to you.

And then there's #3—this is the reason I fear most because it is not easily fixed, at least not by me or my colleagues in Extension. And ultimately, apathy toward learning more about your crop is deadly—not only does it impact the here and now, it undermines past achievements and sabotages the future. FQPA, the development of new pest management technologies, and the current economic crisis have put the cranberry industry at a pest management crossroads. The next few years will see an end to the long history of pest control with conventional broad-spectrum pesticides and a transition to more selective pesticides used within an IPM framework. However, as growers and IPM consultants experience financial hardship, they might cut back on educational programs for themselves and their employees, especially programs for which there is a fee. Unfortunately, this would come at a time when the cranberry industry is facing (i) intense scrutiny of its pesticide and water use in environmentally-sensitive areas; (ii) FQPA limitations in the use of important pesticides and replacement of these with unfamiliar products; and (iii) difficult economic conditions. In brief, there has never been a worse time for cranberry growers and their pest management consultants to not be educated on pests and their management.

Over the decades, cranberry growers have invested heavily in crop management research and extension and have benefited from the investment. With just a few years of neglect, the IPM research and extension infrastructure that consists of industry, entrepreneurial, and

university personnel would collapse. The cranberry industry might see brighter economic times in the next decade, but it would take much longer to rebuild the IPM infrastructure that has served the industry so effectively.

Recently Teryl Roper, Dan Mahr, and I applied for and received a grant for $13,700 from the U.S. Department of Agriculture to help offset the cost of cranberry school and other extension activities in 2001. Programs won't be free, but the grant will allow us to help WSCGA keep the quality of the educational programs high and the fees modest. Someone once said something like, "The only thing more costly than education is ignorance." Nothing could be truer for the cranberry industry. I haven't checked the long-range forecast, but I think it will be cold, yucky, and get dark early next January, so you might as well plan on attending cranberry school. And it's not too late to tell WSCGA or Extension what you want to hear about at the 2001 school.

Patty McManus, UW-Madison Extension Plant Pathologist

Men often oppose a thing merely because they have had no agency in planning it, or because it may have been planned by those they dislike.

Alexander Hamilton

Let men decide firmly what they will not do, and they will be free to do vigorously what they ought to do.

Mencius

When a fellow begins to understand that he doesn't understand, he's beginning to understand

Author unknown

PRE-HARVEST INTERVALS

As the crop matures and pest management continues it is good to take a moment to refresh our memories about pre-harvest intervals. Obviously, this information is included in product labels. It can also be found on page 11 of Cranberry pest management in Wisconsin (A3276). The PHI in days for cranberry pesticides is listed below.

Pesticide	PHI (days)
Orthene	75
Lorsban	60
Poast	60
Funginex	60
Bravo	50
Orbit	45
Roundup	30
Dithane, Maneb, etc	30
Mankocide	30
Confirm	30
Guthion	21
Marlate	14
Sevin	7
Diazinon	7

This table does not include materials intended for non-bearing beds only, such as Select and Touchdown. The pre-emergent herbicides (Casoron, Evital, Devrinol) don't have PHI's because they are applied in early spring.

Teryl Roper, UW-Madison Extension Horticulturist

ROUNDUP REMINDERS

With flowering over and fruit setting growers will once again be thinking about wiping weeds with Roundup. Be sure to read the product

label before you begin an application. A few points warrant reminders:

- Coverage is the most important variable. You must have good coverage of the weed's leaf surface in order to get enough material throughout the plant to kill it completely. Dyes added to the wiping solution help you tell where you have wiped.
- Increasing concentration does not make Roundup more effective. Concentrations that are too high may be detrimental as they can kill the contacted tissue before enough is translocated to kill the roots. A 10 to 20% Roundup solution works for most people.
- Cut stump applications are allowed for woody brush. Cut the plant off then treat the stump with a Roundup solution.
- Adding ammonium sulfate per the label specifications can help entry of the active ingredient and will improve performance.
- Roundup requires a 6 hour rainfree period following application to get into the plant. Don't apply if rain is imminent.
- Remember the 30 day PHI.
- Wear appropriate PPE. This includes a long sleeved shirt and long pants and shoes plus socks. Waterproof gloves are not required, but are prudent.
- Keep the wiper surface clean. If dirt, weeds or other debris covers the wiper too little solution will accumulate on weed leaves.

Teryl Roper, UW-Madison Extension Horticulturist

QUESTIONS AND ANSWERS ON LIGHTING AND MARKING OF FARM EQUIPMENT ON PUBLIC ROADS

QUESTION #1: What lights are required on farm equipment?

Lighting requirements apply during hours of darkness, as given below.

Farm tractors and self-propelled farm implements operated or parked on a public road must have the same lighted headlamps and tail lamps as are required of other motor vehicles. This means that two headlamps and at least one red tail lamp are required. If a vehicle was originally sold with two tail lamps, both must be working. Tail lamps are to be mounted 20 to 72 inches off the ground.

Implements of husbandry, such as farm wagons or other non-self-propelled farm implements, must have either two red tail lamps or two red reflectors on the rear. Implements manufactured before 1984 are allowed to have only one lamp or two red reflectors. This is in addition to the SMV emblem.

A machine should never be operated or parked on the road with a white work light showing to the rear. Besides being prohibited by law, it blinds other drivers and confuses them about what is ahead, and thus is dangerous.

Reference: Wisconsin Statutes 347.10, 347.13, 347.21, 347.24

QUESTION #2: What about amber flashers and turn signals?

Although amber flashers are not required by law, they are highly recommended and are authorized by law for any situation that requires caution by approaching motorists. Farmers should strongly consider adding flashers to all tractors and self-propelled implements.

Just like amber flashers, turn signals are not required on farm tractors or self-propelled

farm implements by law. However, they are highly recommended, and should always be used if available.
Reference: Wisconsin Statute 347.26

QUESTION #3: Are there special requirements when pulling multiple wagons or implements?

Vehicle trains are defined by law and have special requirements. A typical train of agricultural vehicles would be a tractor and two towed units behind, such as two wagons or an implement and a wagon. No more than two units can be legally pulled behind a tractor without a permit, and the total length must not exceed 60 feet.
During darkness, a red light or red reflector must be located on each side of every vehicle in the train. The statute permits an SMV emblem to be used on the side, instead of a red light or reflector, but this is not recommended because it could easily confuse drivers and is not in conformance with engineering standards for SMV use.
During the day, two red flags, at least 12 inches square, must be displayed on the rear-most vehicle, on at each rear corner.
Reference: Wisconsin Statutes 347.32, 348.08

QUESTION #4: Should I use my lights during the day?

Although lights must be used on roads during hours of darkness, the best practice is to turn on headlamps, tail lamps, and flashers during the day or night. You want to be seen from as far away as possible by other drivers, and always using your lights is a smart idea that costs nothing.

QUESTION #5: What are the requirements for slow-moving vehicle (SMV) emblems?

SMV emblem requirements apply day and night. Any vehicles or equipment, including animal-drawn equipment, which *usually* travel at less than 25 mph, must have a slow-moving vehicle emblem. This is true day or night. If a tractor has a clearly visible SMV emblem that is not blocked from view by the implement being pulled behind, the implement is not required to have one; however, it is best to have an SMV emblem on every tractor and implement, even if both are visible.
All SMV emblems must be bright and clean, and should be replaced if faded. The emblem must be mounted in accordance with the American Society of Agricultural Engineers standards, which means that it must be mounted or pointing upward, with the lower edge two to six feet off the ground, and either centered or as near to the left of center of the equipment as practical. The display of an SMV emblem for other purposes, such as to mark a driveway or mailbox, is prohibited.
There is one exception to the SMV requirement, and that is for a vehicle or combination of vehicles that have an amber flashing light of at least four inches in diameter attached to the left rear. However, an SMV emblem is always recommended and is simply a good practice.
Reference: Wisconsin Statute 347.245

QUESTION #6: Are there any other markings required?

During hours of darkness, any implement of husbandry that extends four feet or more to the left of the centerline of the towing vehicle must have an amber reflector mounted on the left side, facing forward, so as to mark the extreme width of the implement to drivers of oncoming vehicles.
Reference: Wisconsin Statute 347.24

Mark Purschwitz, UW-Madison Farm Safety Specialist

Snobbery is the pride of those who are not sure of their position.

Author unknown

GENERAL NUTRITION QUESTIONS

A. *Each season I see many small aborted berries at harvest time. What do I need to do to set more fruit & size these berries for harvest? Is there a problem with pollination, fertility (amount/timing), heat stress or blossom injury?* While all of the above factors can affect fruit set and size, in my opinion it is not any of these that limits fruit set and production. My research clearly showed that most of the carbohydrates that support fruit set and growth come from leaves on the current season growth above the fruit. When we measure photosynthesis on these leaves through a season and then do some math it appears that on average, a cranberry upright produces enough carbon to set and grow to maturity, 2 fruit. Good overall management will give you the best chance of setting and keeping as much fruit as possible. Having enough, but not too much N is important. Good pollination is critical, as is frost protection. But none of these individually will increase production. In my opinion this phenomenon is not a fertility issue.

B. *Each season (especially hot, dry years) I see "yellow areas" appear in producing beds (mostly Stevens, sometimes Ben Lears), is this a sign of poor fertility, drainage, or leaching concern, heat stress or disease? What is suggested for treatment?* In my opinion this is not strictly a fertility issue, but is a sign of stress. I have also seen it in hot periods. We typically don't see the symptoms in spring or in cool years. Being careful with irrigation and using the sprinklers to cool the vines during the heat of the day can reduce the stress. Applying a light dose of ammonium sulfate has also been effective. However, time and cool weather are also effective at reducing symptoms.

C. *Have you ever heard of manganese deficiency on cranberry?* I have not. I don't recall seeing manganese deficient in tissue tests. *Is it possible and under what conditions?* It is possible. Conditions that would favor manganese deficiency are high pH and organic soils. The condition could be exacerbated by heavy doses of Calcium as the calcium would fill up the cation exchange sites in the soil and Mn could be lost. *How do I know if I have it?* By taking a tissue test.

D. *Growers in BC plant into sawdust. Is this a reasonable alternative? Will the sawdust hold water and nutrients better? Will herbicides work better?* BC growers use sawdust because it is cheap and readily available. This is aged softwood sawdust. In my experience it does not hold water or nutrients any better or worse than other organic soils. It might be useful for growers planting into alkaline soils, but in those sites the water is typically alkaline so I don't think this is a long-term solution. The biggest drawback to sawdust is keeping it from floating when beds are flooded. BC growers are in the process of sanding heavily to keep their bogs from floating. I don't know if herbicides would work better or worse.

E. *Why soil & tissue tests in Aug/Sept. rather than spring?* There are two reasons to take tissue tests in the late summer as opposed to spring. The first is that tissue concentrations of elements (particularly N) change rapidly in the spring. Thus, the date or stage of development at which the sample is taken has a large effect on the tissue concentrations found in uprights. In the summer these elements don't change much so the exact date or stage of development is much less critical. The second reason is that you should think of fertility as a July-to-July process rather than a May to August process. A fall tissue test tells you if your fertility program was effective for the year and points out areas where adjustments may have to be made for the following year. If you make this "paradigm shift" then the fall collection makes more sense than a spring sample.

F. *Should I irrigate after a fertilizer application?* I think it is prudent to irrigate after applying fertilizer, especially fertilizer with K (the possible exception being a foliar application of micronutrients that may be best absorbed through the leaves). About 1/10 of an inch of water should be sufficient to wash granules off the vines, solubilize the fertilizer and get it into the top soil layer, yet not enough to leach nutrients through the soil.

G. *Should I consider using blended rather than manufactured fertilizer?* Blended fertilizers are less expensive than manufactured

fertilizers. The primary drawback is that blended fertilizers have different particle sizes/densities and some elements may settle out in shipping and they may behave differently in the delivery tubes on booms. I think the cost savings exceed this minor drawback. Be careful that when a dealer blends a fertilizer for you that they use ammonium nitrogen and sulfate forms of potash.

They who engage in iniquitous designs miserably deceive themselves when they think they will go so far and no farther; one fault begets another; one crime renders another necessary; and thus they are impelled continually downward into a depth of guilt, which at the commencement of their career they would have died rather than incur.

Robert Southey

SUMMER FIELD DAY

The Wisconsin cranberry summer field day will be held on Wednesday August 9 at the R.S. Brazeau marsh in Cranmoor. Registration begins at 8:30. Lunch is available by pre-registration through WSCGA. The cost is $7.50.

The Brazeau marsh in located on CTY D. Parking will be at the Bennett Landing Strip located north of HWY 54 on CTY D. Volunteers will direct you to parking. A shuttle bus will run between parking and the field day site. Please do not park along CTY D.

Tours, exhibits and opportunities to visit with other growers await you at summer field day.

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