Integrated Cranberry Crop Management for Wisconsin

# Cranberry

## Crop Management Newsletter

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### Intrepid labeled for cranberry

Intrepid (methoxyfenozide) has just been registered for use on cranberries. However, until growers have a label in their possession they should **NOT** use this new insecticide. We expect to receive a label from the manufacturer in the very near future.

Intrepid has been used in apples the past 2-3 years with good results, but it takes very intensive monitoring (GDD, insect phenology) to time the spray to be most effective. Intrepid will be useful in controlling blackheaded fireworm and other lepidopteran insect pests.

Look for more information on this product in the near future. As the older organophosphates are phased out, chemistry like this will allow growers to continue to manage major insect pests.

*Saying no to something is actually much more powerful than saying yes.*

*Tom Hanks*

### Don't Buy Pesticides From Telemarketers

MADISON-Aggressive telemarketers are once again targeting farmers, trying to sell them questionable pesticides with claims that these products are "more effective," "more concentrated" or "longer lasting," warns a state agriculture official. "My advice is to not to buy pesticides over the phone," said Dave Fredrickson, director of pesticide compliance with the Wisconsin Department of Agriculture, Trade and Consumer Protection.

Investigators have found many cases where telemarketers misrepresented the product, or the product did not live up to the claims made, were a waste of money, or worse. "An orchard owner recently received a sales call with the offer to buy an herbicide that would last for six years, all for the incredible price of $99 a gallon," Fredrickson said. Fortunately, the orchard owner refused then contacted the department.

"This is similar to a past case in which a farmer nearly bought a product that was

supposed to control weeds in his pasture for up to five years. That particular pesticide turned out to be a soil sterilizer. It would have killed the weeds, but it would have killed the pasture too," Fredrickson said. Other complaints indicate that some telemarketers are also misrepresenting themselves. "One telemarketer told the farmer that they were from their local agricultural co-op. Fortunately, the farmer contacted the co-op and discovered that this was not true," Fredrickson said.

According to the department, many of the telemarketed products are not registered for use in Wisconsin, which is illegal. Unscrupulous pesticide telemarketers may also be violating Wisconsin's No Call List. The No Call List identifies you as someone who does not want to receive telemarketing calls. "If you have joined the No Call List, the pesticide telemarketers cannot contact you to sell products," Fredrickson said. To protect your wallet and your farm operation, buy pesticides from your local farm supply dealer or ag co-op, Fredrickson recommends. "Stick with the businesses that you know and trust. If you have a problem with a pesticide that you've purchased, you have someone to contact."

If you have questions or complaints about pesticide telemarketing phone calls or if you have purchased farm chemicals from telemarketers, call the department at 608-224-4500 or the Consumer Protection Hotline at 1-800-422-7128. Any questionable sales calls should be reported to these numbers. If you are able, also report the name of the pesticide offered for sale, the company, the claims made, the price and the date and time of the call.

*Jane Hewston Larson, WDATCP*

## Phosphorus: How is it used in plants?

While phosphorus is certainly critical for normal plant growth, development and reproduction, it comprises about 0.2% of plant dry weight. Compared to the 94% of plant dry weight consisting of carbon, hydrogen and oxygen, phosphorus is pretty minor. However, without sufficient phosphorus the 94% doesn't happen. Phosphorus is involved in three important structural and metabolic aspects of plants (and animals for that matter).

**Membranes**. Cell membranes are composed primarily of phospholipids. A phospholipid usually consists of two long fatty acid chains (groups of 14-18 carbons connected together) attached to a phosphate ion. Frequently another chemical group is attached near the phosphate. Phospholipids have a hydrophobic portion (the fatty acid chain) and a hydrophilic end (the phosphate). They naturally arrange themselves in bilayers with the fatty acids in the middle and the phosphates to the outside. You can visualize what a phospholipid looks like by thinking about old-fashioned non-spring type wooden clothespins.

Membranes are important as they define "inside" and "outside" of cells and organelles within cells. They keep things "in" that need to be in, and keep

out stuff that might be damaging to the cell.

Membranes are also active in energy transformation and use in cells. When one side of a membrane has a net negative charge and the other a positive charge there is a charge separation across the membrane and this can be used to do "work". This is exactly what happens in photosynthesis and respiration.

In addition to lipids, membranes also contain proteins. Phosphorus is an essential component of some proteins. Some proteins attach to the membrane exterior, while others can be embedded partially or completely through the membrane.

**Energy currency**. Phosphorus is an important component of ATP, the energy currency in cells. In photosynthesis a phosphate ion is attached to an ADP molecule making ATP. In respiration a phosphate is removed from ATP to make ADP. ATP can be moved from one place to another in a cell, thus moving energy.

Phosphate is also involved in moving energy from chloroplasts into other portions of cells. Sugars are made via photosynthesis in the chloroplast and are then moved out of the chloroplast as a three carbon sugar with a phosphate attached. When P is in short supply sugars can't leave the chloroplast and the carbon is stored in the chloroplast as starch.

**Genetic code.** Phosphorus is the "glue" that holds the base pairs together to form DNA and RNA. DNA contains the genetic code that determines what the organism will be like. The DNA in different cranberry cultivars is slightly different. Using various techniques of molecular biology scientists can tell different cultivars apart based on their DNA.

For all of the above reasons phosphorus is extremely important to plants. Without sufficient phosphorus plants can't carry on their vital functions.

New phosphorus doesn't need to be taken up by plants for every cell function each time. Phosphorus that exists in plant cells is recycled over and over. Further, a substantial amount of phosphorus is retained in perennial portions of the vines from year to year, so even within a year not all P must come directly from the soil.

While phosphorus is important for plant metabolism, carbon, hydrogen, and oxygen are still the most abundant minerals in plants. Keeping plant phosphorus needs in balance with other needs will help you make good fertilizer decisions.

*Teryl Roper, UW-Madison Extension Horticulturist*

## SUMMER FIELD DAY

Mark your calendars for Wednesday August 6 and plan to attend the Cranberry Summer Field Day at Elm Lake Cranberry Co. in Cranmoor. Registration materials will be available soon from WSCGA. Cranberry field day is co-sponsored by WSCGA and the University of Wisconsin-Extension.

*In idleness there is perpetual despair.*
*Thomas Carlyle*

## SAFETY IN THE SUN.

*Teryl Roper, UW-Madison Extension Horticulturist*

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