Integrated Cranberry Crop Management for Wisconsin

Cranberry

Crop Management Newsletter

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Contents:

Clarification of Orthene/Acephate labeling

There has been confusion over the labeling of Orthene (acephate) products for cranberries. And that confusion has been confounded by conflicting advice and guidance from the "experts". After discussions with the WI Department of Agriculture, Trade, and Consumer Protection (DATCP), who has issued 24-c Special Local Needs state labels, and Valent, the registrant, we can clarify the situation.

As a result of the EPA Risk Assessment of all acephate products and uses, the use pattern for cranberries was reduced to one application per crop season. State labels (24-c's) can modify the timing of applications, but can not increase the number of applications for this compound.

Here is the clarification of WI 24-c labels for Orthene/acephate products:

Valent products only:

- 75S/75WSP 75 day preharvest interval (shortened from Sec. 3 label 90 day phi), limit of only 1 applications/season, 1 1/3 lbs/acre/application.

- 97 75 day preharvest interval (shortened from Sec. 3 label 90 day phi), limit of 1 lb /acre/ season. There is no statement regarding the number of applications, but 1 lb is the single application rate.

Other acephate products: No 24-c labels, so the Sec. 3 label must be followed.

- 90 day preharvest interval, 1 application/season only.

Jere Downing, Cranberry Institute

Informal on-farm meetings

Just a reminder of informal on-farm meetings for cranberry growers. UW-Extension specialists will be on hand. Bring samples & questions.

June 9 Beltz Cranberry Co., Warrens. 3:00-5:00 pm

June 11 Bartling's Manitowish Cranberry Co.; Manitowish Waters. 10:00 am to noon.

Ag Clean Sweeps

MADISON-Now is the time for farmers, rural property owners and businesses to remove unwanted pesticides and farm chemicals from storage areas, sheds, basements and out buildings and take those products to their county clean sweep collection site.

"Spring is not only the time to tune-up field and garden equipment but a great time to see what unwanted farm chemicals are left from previous growing seasons. Old or unlabeled pesticides or ones that have lost their potency can be taken to clean sweeps," said Roger Springman, program manager with the Department of Agriculture, Trade and Consumer Protection.

Ag Clean Sweep is a county-based program that collects unwanted pesticides and farm chemicals at no or low cost to farmers, rural property owners and businesses. The collections are supported through grant funds made available from the state agriculture department.

In 2003, 37 counties are offering this service: Dane, Dunn, Florence, Forest, Grant, Iowa, Jefferson, Kenosha, Kewaunee, Lafayette, Langlade, Lincoln, Manitowoc, Marathon, Oneida, Pepin, Pierce, Polk, Racine, St. Croix, Sauk, Trempealeau, Vilas, Washington, Waukesha and Wood. Residents in ten northwestern Wisconsin counties can also participate through the Northwest Regional Planning Commission: Ashland, Bayfield, Burnett , Douglas, Iron, Price, Rusk, Sawyer, Taylor, and Washburn counties.

"Numerous collection locations make it easy for customers to use clean sweep. This year, nearly half of our counties are offering two or more collection days through our permanent facilities grant which improves customer convenience and flexibility," Springman said.

The 2003 collection season got off to a fast start with the collection of the program's two millionth pound of waste in Jefferson County on March 20. Wisconsin is only one of three states to reach this mark. In 2002, Ag Clean Sweep set a program record when it collected 279,000 pounds of waste chemicals.

Future prospects for Ag Clean Sweep remain bright. In his budget, Governor Jim Doyle proposed the transfer of recycling funds to support county clean sweep grants beginning in 2004.

For more information, contact your county coordinator or Roger Springman at (608) 224-4545.

2003 Agricultural Clean Sweep Collection Schedule

Dunn May 16 - 17 George Hayducsko 715-232-4017
Florence April - November Mary Klopatek 715-282-4942
Forest April - November Mary Klopatek 715-282-4942
Langlade June 20 - 21 Dave Tice 715-627-6236
Lincoln April - November Mary Klopatek 715-282-4942
Marathon January - December John Schlicher 715-261-1900
Northwest Clean Sweep (Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor, and Washburn Counties) May - October Bill Welter 715-635-2197
Oneida April - November Mary Klopatek 715-282-4942

Polk June 9 & Sept. 27 Debbie Peterson 715-485-9278
St. Croix May 17 & Sept. 20 Jennifer Havens 715-386-4675
Trempealeau June 7 Patricia Malone 715-538-2311
Vilas April - November Mary Klopatek 715-282-4942
Wood May - September Nancy Eggleston 715-421-8911

Jane Hewston Larson, WDATCP

Soil and P uptake

Since P fertilizer applied to cranberries is held in the soil, it is important to understand how soil affects plant uptake of P. Soil affects plant uptake of P in at least three ways: 1) the amount of soil P (quantity), 2) the concentration of soil solution P (concentration), and 3) the movement of P to roots (diffusion).

While soils may have substantial quantities of total P, this is different than plant available P. Total P would include P held in the mineral fraction of the soil that would only become available as the soil minerals weathered or broke down. This fraction would also include P held in relatively insoluble compounds with iron, aluminum, and manganese.

The concentration of P in the soil solution is a very important parameter. Plants can't absorb P from the mineral or structural portion of the soil directly. P must be in water, and must not be attached to any other ions. P in the soil solution is in equilibrium with P adsorbed to the soil particles. When a plant takes up a phosphate ion, for example, another phosphate ion will slowly de-sorb from the soil and go into solution. This is what is meant by equilibrium.

Soil water is a repository for dissolved solids and gases and for this reason it is commonly referred to as the soil solution. Soil solution is defined as the aqueous liquid phase of soil and its solutes consisting of ions dissociated from the surfaces of the soil particles and of other soluble materials.

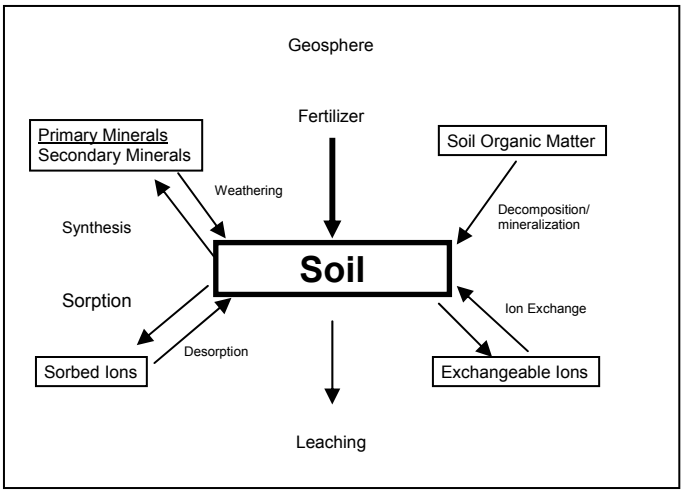
The soil solution moves through the soil through macropores (infiltration, percolation, and drainage), micropores (retained water), and water films around soil particles (capillary movement).

In order for nutrient uptake to occur, nutrients must come in contact with the surface of plant roots. Movement of ions within the soil solution is thought to primarily occur via diffusion. Diffusion is the process of ions moving from an area of higher concentration to an area of lower concentration until the concentration of that ion is uniform (equilibrium is reached). In soils diffusion usually occurs for only short distances (<1 cm). Diffusion increases with soil temperature.

Soil texture is an important determinant of the ability of a soil to retain P. The maximum amount of P adsorbed for a group of acid soils was 18, 104, and 342 ppm of P for sand, fine sandy loam, and silty clay loam textures, respectively. Coarse soils as are typically used for cranberries are least able to retain P. However, applications of P fertilizer to coarse soils results in a greater increase in soil solution P than finer textured soils.

In review, soil may hold substantial amounts of P in or adsorbed to the

mineral fraction, but this P is not available for plant growth. Only P that is in the soil solution and in close proximity to plant roots can be taken up by plants. Slowly over time P may move from the mineral fraction to the soil solution. All of these processes are important to plants getting sufficient P. The following diagram may help you understand the system.



Teryl Roper, UW-Madison Extension Horticulturist.

Orbit Label

In this issue is the Section 18 label for Orbit. You must have this label when using Orbit under the Section 18 permit. Last year's Section 18 label or the regular label that comes with the product will not do.

Orbit Label

Patty McManus, UW-Madison Extension Plant Pathologist