

May 2018

Cranberry Chronicle

A TerraLink Technical Advisor

Pest Control

Cranberry Girdler Control Using Nematodes

As you might be aware, TerraLink is a distributor of beneficial entomopathogenic nematodes, which many cranberry growers now apply for control of Cranberry Girdler. Like Blackheaded Fireworm and Tipworm, Girdler can cause significant damage in cranberry bogs. Adult moths appear in June, flying at night near the surface of the bog. They have long mouthparts which give them the appearance of having an extended "snout". Girdler also causes damage in turf, forage grass stands and fir tree species. In cranberries, the damage from chewing on the vines can result in large, irregular patches of dead plants. Adults are active for almost two months, laying up to several hundred eggs into the leaf litter. The larvae cause damage, then pupate and overwinter in a cocoon that develops in September or October.



Control Methods

Cranberry Girdler can be managed in an integrated program. It is best to hire the services of a consultant to monitor Girdler population dynamics. Sand can be top-dressed before eggs are laid by the adults in June, which is believed to cover fungi and moss that the young larvae feed on. Larvae can also be drowned by flooding for up to two days in late August, however keep in mind that if water is left on the bog too long it can cause an increase in fruit rot.

The most common entomopathogenic nematode for use against Girdler is *Steinernema carpocapsae*, but *Heterorhabditis bacteriophora* can also be used. A rate of 3 billion nematodes per acre is recommended to achieve firm control. Nematodes can be applied by spraying or chemigation. It is best to apply during cool conditions and to follow application with irrigation, to avoid the nematodes drying out and to rinse the nematodes off the foliage and into the leaf litter.

If you plan on using entomopathogenic nematodes this season, please help us secure your supply by planning ahead. If you do not have the contact information of one of our Sales Representatives, ask for it from either the Abbotsford or Delta offices (numbers below). To have your nematodes in hand by application time in the summer, now is the best time to get on this.

For more information, visit our website at www.tlhort.com. Type "nematode" into the search bar to download a tech sheet on nematodes for Girdler, as well as other beneficial nematodes for pests in other crops. Alternatively, call and inquire with our Abbotsford sales desk at toll free 800-661-4559, or the Delta office at 604-946-8338.

ANNOUNCEMENT!

Exclusive for German Nematode Supplier

TerraLink has reached an agreement to be the exclusive distributor and representative of predatory nematodes for the German firm E-Nema. Cranberry producers who have been using TerraLink's Marauder brand nematodes for control of Cranberry Girdler are already familiar with the consistent and high quality from E-Nema.

Predatory nematodes are one of the more unusual tools available to producers to help control pests of food and ornamental crops. With the steady advance of scientific research, these beneficial nematodes are becoming both more common and less expensive. Of the more than 80,000 species of nematodes known to exist, only a few are insect-parasitic (entomopathogenic nematodes, or EPN). We can and do use them to our benefit, and there are several commercially developed and produced species available for several situations.

One of the primary tools in the fight against Girdler are EPN such as Marauder, which is the species *Steinernema carpocapsae*. Another species, *Heterorhabditis bacteriophora*, has also been used effectively. These two types of predatory nematode have different hunting and killing strategies, making a blend of the two an effective weapon.

S. carpocapsae and *H. bacteriophora* can also be used to control other insect pests in other crops. E-Nema rears, offers, and does research on, many other species of EPN as well.

Rooted in your community.

TerraLink

Weed Control

New Format for Devrinol Herbicide

New last season, Devrinol is now a liquid formulation; Devrinol 2-XT Liquid. The granular product, Devrinol 10G, is no longer manufactured. But, despite the change in formulation, it is the same trustworthy active ingredient (napropamide) that will give you good control of grassy weeds.

Happily, the new Devrinol 2-XT Liquid can be applied via chemigation through a solid-set overhead sprinkler irrigation system. Alternately it can be applied as a broadcast foliar spray. This new formulation has more advantages besides chemigation. It is much more efficient to handle and apply. As for the old formulations, Devrinol 2-XT Liquid still has the same restrictions. Only one yearly application is allowed, either early spring or late winter. It is recommended for use on mineral soil only (less than 10% organic matter). It will only control newly germinating weeds, not established weeds. Foliage and litter on the soil surface may interfere with the quality of control.



Two Locations:
TerraLink Abbotsford
464 Riverside Road

TerraLink Delta
4119 - 40th St.

One Number:
1-800-661-4559

Managing Stress

Stella Maris to Combat Heat and Drought

With climate change no longer in doubt, we are getting used to a yearly stretch of very hot, very dry weather. How to get the cranberry bog through it with the minimum negative effects?

One way to reduce the potential of damage from heat and drought is to regularly apply Stella Maris Liquid Seaplant Extract. This is a Canadian product, completely Canadian-owned, manufactured from *Ascophyllum Nodosum* kelp grown in the Bay of Fundy. Acadian is heavily science-based, and works with Federal scientists to not only conduct a vast amount of ongoing research into the positive effects of Stella Maris on agricultural crops, but in leading the way in sustainable management and low environmental footprint harvesting of this extraordinary sea plant.

Application of Stella Maris helps plants get through hot, dry stress periods. This has been repeatedly scientifically demonstrated. To see this graphically, go to the TerraLink corporate web site (www.tlhort.com), search "Acadian", click on any of the four Stella Maris products, and scroll until you find the videos. Besides entertaining, you will see how this product helps plants manage heat and water stress after being treated with Stella Maris.

In cranberries, Stella Maris can be sprayed foliarly, or safely applied through the irrigation system.

For more information, contact your TerraLink Sales Representative, or call one of our Sales Desks, either 800-661-4559 or 604-946-8338.

Plant Nutrition

TigerClaw Foliar Fertilizer

Foliar fertilization in cranberries allows for directed applications of specific nutrients just before and at peak nutrient demand periods. Individual elements such as zinc, boron, magnesium, calcium and potassium all support the plant in different ways. By meeting key nutrient demands at specific times during plant and fruit development, optimum yield, fruit firmness, fruit size and fruit colour can be achieved. The right nutrients, in the right forms, at the right times will enhance production.

As the cranberry vines move through the different stages of growth, targeted foliar nutrient applications will enhance fruit set and quality. During hook stage, bloom through fruit set boron, and molybdenum

influence pollination and fruit set. Calcium plays a direct role in cell wall density and thickness, which translates in to fruit firmness. However, calcium is one of the least mobile nutrients in the plant and can only be absorbed in to the fruit's cell walls during cell division, which happens at fruit set and early fruit development. During this time of rapid cell division applications of potassium should be limited as they can antagonise the plants ability to move calcium in to the cell walls of the fruit. Foliar potassium should be applied later in the season, as the fruit begins to colour, in support of fruit bulking and fruit colour.

Timing	Product	Suggested Rate
Hook stage through full bloom	TigerClaw Cal-Bor-Moly	1 L / acre
	Power SeaCal	2 L / acre
Fast leaf growth through peak leaf growth	TigerClaw Power Calcium	2 L / acre
	TigerClaw Magnesium DL	1 L / acre
	TigerClaw Zinc DL	1.5 - 2 L / acre

Timing and rates for foliar TigerClaw applications.