

The Grapevine

A TerraLink Technical Advisor

Pest Control

New Registrations in Grapes

Regalia Maxx biological fungicide

Regalia Maxx, an extract of the plant *Reynoutria sachalinensis*, "switches on" natural biochemical defense systems within host plants to protect against attacking pathogens. Sprayed plants are induced to produce and accumulate elevated levels of specific proteins and other compounds known to inhibit fungal and bacterial diseases. Regalia Maxx is registered for powdery mildew in grapes. Like many biologicals, Regalia Maxx is for suppression of diseases and should be used in rotation with other registered fungicides.

Presidio

This product came out in summer 2012. It is registered for downy mildew in grapes. Presidio is known to be both curative and protective with anti-sporulant activity. It moves within the xylem, and is locally systemic and translaminar. Presidio is practically non-toxic to bees. Maximum 4 applications per season.

Aim herbicide

This Group 14 herbicide, active ingredient carfentrazone-ethyl, can be used in grapes for sucker control. Avoid contacting other plant parts such as fruit, green bark and foliage. It has an REI of 12 hours and a PHI of 30 days.

Switch WG fungicide

In spring 2012 Switch WG was given a minor use registration in grapes for control of botrytis. Switch WG is a mix of active ingredients cyprodinil and fludioxonil, Group 9 and 12 fungicides respectively. Please note there are restrictions on the amount of active ingredients that can be applied in one season. Apply first application at

early bloom. Switch WG is very effective, and though only slightly harmful to *persimilis* (a biological control) it is toxic to bees.

Phostrol fungicide

One of the new phosphite-based fungicides, Phostrol has a full registration on many crops, for suppression or control of several diseases. On grapes it is registered as a foliar preventative spray for control of downy mildew. Four applications per season are allowed. The REI is 12 hours.

Rampart fungicide

As often happens, two very similar chemicals become registered and available at almost the same time. Rampart, like Phostrol, is also a phosphite-based fungicide. A Group 33, Rampart is now registered for suppression of downy mildew in grapes as well. Up to 5 applications per season are allowed, with a 1 day PHI and 4 hours REI.

Actinovate SP fungicide

Another biological pesticide, amongst a growing number of others, Actinovate SP is active ingredient *Streptomyces lydicus*. It has a full registration in grapes for suppression of powdery mildew. There is no PHI and a one hour REI. This product has no adverse effects on beneficials. If you have an organic operation, this product is worth a try.

Zampro fungicide

A new product from BASF, Zampro is a mix of ametoctradin and dimethomorph, Groups 40 and 45. It is a preventative chemical that acts against fungal spores. It is registered currently on grapes for downy mildew. Make sure to rotate with fungicides from other Groups. The REI is 20 days.

Altacor insecticide

The label for this Group 28 product has expanded.

Altacor is now registered in grapes for suppression of Japanese beetle. A maximum of 3 applications per season is allowed. The REI is 12 hours.

Luna Tranquility fungicide

A brand new fungicide from Bayer, Luna Tranquility is a combination of Groups 7 and 9 active ingredients. It is registered for powdery mildew and botrytis bunch rot in grapes. Despite the fact that it has curative activity, Luna Tranquility should be used in a preventative program.

Soil Fertility

Nutrition in the Vineyard

A very good article in the November/December edition of Fruit & Vegetable magazine outlined some fundamentals to follow in viticulture. The article was based on information from Dr. Kevin Ker, a consultant and research associate at the Cool Climate Oenology and Viticulture Institute at Brock University in St. Catharines, Ontario. Dr. Ker's advice is paraphrased below:

- The most important elements in the vineyard are the three macro-nutrients nitrogen, phosphorus, potassium, secondary nutrients calcium and sulphur, and the micro-nutrients boron, copper, zinc and chlorine.
- Grapes are lean feeders. Over-application can be harmful. For example, too much nitrogen (N) can cause excess flowering, and N applied during blossoming could result in poor fruit set. Dr. Ker also advised to not apply N prior to bud break and not within 4 weeks of bloom. Too much potassium (K) can result in unstable sugar levels in the grapes. Finally, an excess of calcium (Ca) or K can displace manganese (Mn), which in normal amounts aids fruit quality.

- Phosphorus (P) is related to root production and disease control.
- Potassium (K) helps the transportation of nutrients into the cells of grapevines.
- Calcium (Ca) helps make grape skins become harder; Dr. Ker says it should be applied foliarly to help against the botrytis spore.
- Sulphur helps build proteins, as well as helping in the regulation of growth and plant hormone production.
- Boron is involved in germination, fruit set and shoot development.
- Dr. Ker also commented on soil structure, recommending that vineyard managers try to keep organic matter between 2% and 4%, and also to consider sub-soiling to avoid compaction.
- Finally, Dr. Ker recommended to use tissue tests to monitor the nutrient levels inside the grapevines.



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PyGanic Crop Protection EC 1.4 II is an organic-compliant product containing Pyrethrins, a botanical insecticide derived from chrysanthemums. It delivers quick knockdown and kill of crop-damaging pests, such as beetles, aphids, leaf hoppers and caterpillars. In 2012, PyGanic had an Emergency Use Registration for Spotted Wing Drosophila in stone fruit and berry crops.



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These comments are similar to the recommendations given by TerraLink agronomists, including building and improving healthy soil structure and nutrient levels. TerraLink can assist also through processing and recommendations of both tissue and soil tests. Our on-site Plant Science Lab, at the Abbotsford location, processes tests quickly to get information back to the grower fast in order to make decisions in real time. Call 1-800-661-4559 for more information on lab services and agronomic recommendations.

Reference: *Fruit and Vegetable Magazine*, November/December 2012

Crop inputs for viticulturists can be found at these locations:

On Vancouver Island:

Top Shelf Feeds
1895 Roberts Road, Duncan, V9L 3Y2
Tel: 250-746-5101, Fax: 250-746-6233
lori@topshelffeeds.ca

In the Fraser Valley:

Terralink Horticulture Inc.
464 Riverside Road, Abbotsford, V2S 7M1
Toll Free: 1-800-661-4559
Tel: 604-864-9044, Fax: 604-864-8418
info@tlhort.com

Crop Protection

Feature Pest: Brown Marmorated Stink Bug

The strange name for this bug is probably related to the marbled pattern of markings on its body and wings. It is quite a large species of stink bug, about 17 mm in length in the adult stage. A native insect of southeast Asia, the Brown Marmorated Stink Bug (BMSB) was first found in 1996 in Pennsylvania. It has become a serious pest in 36 states in the US and it is expected to be here in the near future. The BCMA is concerned about it, and any sightings or samples should be reported to the ministry soon as it is discovered. Both mature and immature stages can cause significant damage. It can also be a contamination issue in

fruit coming into the winery. Scan this QR code into your smart phone so you have a convenient photo of BMSB to aid in identification. There is also a very good brochure from the BCMA that you can print and read (http://www.al.gov.bc.ca/cropprot/bmsb_alert.pdf).

According to an article written in the Good Fruit Grower (November 2012) adult BMSB overwinter in convenient hiding places and move into vineyards and other crops. The adults pierce grapes with their mouthparts, inject chemicals in their saliva that begin to dissolve plant tissue, then suck it up. Also, BMSB ride along with harvested grapes into the winery, where they can foul the juice after crushing. Although it is not yet clear if BMSB-contaminated grapes affect the resulting wine quality, clearly this pest must be identified, monitored and controlled to ensure it does not.



References:

Good Fruit Grower, Nov 2012.
BCMA brochure: Brown Marmorated Stink Bug: Have You Seen This Bug?



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