

Fall 2018

Cranberry Chronicle

A TerraLink Technical Advisor

Good Management Fall is the Best Season

The best time of year is Fall. Is it because the air is cooler, the leaves are changing colours and falling, and Hallowe'en is on its way?

Not even close. Fall is the best time of year because it is the right time to take care of so many field operations. Some of them cannot be done any other time.

Fall is the best time to get your soil tested.

Except for nitrogen and sulphur, the other nutrients don't move in the soil or leach over winter, so what is tested in the winter you can assume to be present in the spring. Your recommended rates for nitrogen and sulphur are based more on crop removal than soil test levels, so unless you are engaging in a Nutrient Management Plan, part of an Environmental Farm Plan, don't worry about them for now. Secondly, the soil testing labs are less busy than they are in the spring. Last, should the soil test indicate that your field has become too acidic, fall – being typically drier than spring – is a good time to apply limestone. Use the Plant Soil Lab, located right at TerraLink in Abbotsford. We're both fast and less expensive.

Fall is the best time to build up your soil.

The fall is a very good time to bring up soil levels of nutrients that can be "stored" in the ground; those nutrients that don't easily leach into the groundwater during winter. If your levels of potash or Magnesium are low, for example, now is a good time to apply those nutrients. TerraLink has inventory of 0-0-62, 0-0-50+17(S), 0-0-22+22(S)+11Mg. If you have an organic farm, try BioFert Sulphate of Potash or BioFert 1-3-15.

Fall is the best time to apply post-harvest nutrients. Apply Stella Maris and TigerClaw foliar fertilizer to help recover the plants, and to help develop and strengthen buds for next season's crop.

Fall is the best time to control weeds. Rogue out the biggest ones manually, use the weed wiper to control any patches of Quack Grass or other problem perennial weeds, and plan to apply Devrinol 2-XT Liquid or Casoron.

Root Zone Health Novacal II for Maximum Production

A manufactured granular gypsum-like product, Novacal II contains a natural plant extract derived from rice and cotton, called Nutrisorb. Carboxylic acid within Nutrisorb enhances activity in the root zone, improving auxin metabolism. This in turn induces production of root hairs and overall root growth. It stimulates the ability of the root hairs to absorb nutrients, and facilitates the colonization of beneficial microbes in the rhizosphere. The result? Increased root mass, volume and dry weight. It also increases respiration, nutrient uptake and translocation, and water use efficiency.

Novacal II can be applied by blending with fertilizer, or independently. Fall is a good time to apply it, as growers often desire to apply gypsum at this time of year anyway. A typical application rate is in the range of 50 to 150 lbs per acre. Novacal II is superior to gypsum also in the nutrient make-up. Compared to regular gypsum that is normally about 20% calcium,

Novacal II contains 28% calcium and 19% sulphur.

Plant Nutrition Late Season Foliar Applications

Many perennial fruiting crops benefit from late season foliar nutrient applications. Cranberries are a good example of a crop that shows significant benefits such as reduced winter stress and improved early plant development in the spring from late season foliar nutrient applications.

Late in the season there is an opportunity to replace key nutrients that are removed with the harvest and to support the plant as it prepares for winter. Phosphorus, Potassium and Magnesium will support the late season production and storage of carbohydrates; the plants' natural anti-freeze and winter food supply. Fall foliar applications of Boron and Zinc will ensure that these nutrients are present in the spring when they are needed for bud break and early season leaf development when soils tend to be wetter and cooler, inhibiting nutrient uptake through the root system.

The most common approach to late season foliar nutrition is to make applications postharvest, while the leaves are still viable. However, in the case of commercial cranberry bogs, postharvest foliar nutrient applications may be hindered by damaged leaves and water-logged bogs. Since successful foliar nutrient applications rely on functional leaves for uptake it may be more practical in certain circumstance to make late season nutrient

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applications just prior to the beginning of the harvest season.

The right form of nutrient ensures rapid, complete foliar uptake and better results. TigerClaw's dextrose and lactose-encased plant nutrients are rapidly absorbed and transported across cell membranes making them ideal foliar nutrient products. The following would be a consistent, high performance cranberry late season foliar nutrient program:

Product	Rate
TigerClaw TopSet (9% B and 0.5% Mo)	0.5 L/acre
TigerClaw Zinc 10% DL	1.5-2.0 L/ac
TigerClaw Magnesium 3% DL	1 L/acre
3-18-18 or equivalent	2 L/acre

Guest article from Rick deJong, Agro-K Corporation.

Post-harvest Recovery Time to Apply Stella Maris

This feels like a yearly ritual. Every year in late summer and early fall we write about the use of Acadian's liquid seaweed extract, Stella Maris, as a post-harvest application to help the cranberry plants recover from a tough, hot, dry year. Well, it is, but this isn't just about sales. Why not? Read on...

It helps to remind ourselves just exactly why applications of Acadian Stella Maris are a good idea. Remember that Acadian sustainably hand-harvests *Ascophyllum nodosum* seaweed from the intertidal shores of Nova Scotia's Bay of Fundy. Evolved in the freezing but nutrient-rich water, *A. nodosum* contains very unique, bioactive components that when applied to plants allow for higher quality crops. Popular around the world for use on many crops, research has demonstrated a full range of benefits, such as improvements to colour and fruit size uniformity, as well as plant health. Many growers have turned to applications of Stella Maris to improve root growth and plant establishment at planting or throughout the year. Fundamentally, applications allow the plant to better tolerate stress.

In cranberries in particular, post-harvest is a crucial time to ensure a healthy and sizable

crop in the next season. Like other types of plants, cranberries may be thought to be at a weak point at this time, trying to recover from the stresses of harvest itself, extended hot and dry spells and nutrient stress. It is at this time that perennial plants develop the buds that produce next year's crop. Timely applications of Stella Maris seaweed extract have been shown to improve not only fruit bud development, but also overall plant health, root growth, and definitely maximize the natural resistance plants develop to drought, salinity and temperature stresses. Late season root activity is important for establishing nutrient reserves that are necessary for early spring growth. An overall healthier plant has the potential to store more carbohydrates and nutrients for next year. By doing so, this sets the stage for achieving maximum fruit set and size.

Insect Pests

Japanese Beetle

What? Not another new pest?



In fact, this is very probably not the last time we have to worry about new pests. Despite the best efforts of the regulatory agencies here and in other countries, eventually we can expect non-native species of pests of all kinds to find their way to Canadian shores. Pests that are no significant threat in their native places often become major economic issues once introduced, without their naturally-controlling predators they evolved with. And so; the case with Spotted Wing Drosophila (SWD), Brown Marmorated Stink Bug (BMSB), Western Corn Rootworm – and now possibly the Japanese Beetle. Although there is no evidence of which we are aware of Japanese Beetle becoming a pest in cranberries, we wanted you to be aware – just in case.

In the summer of 2017 Japanese Beetle (*Popillia japonica*) was found south of False Creek in Vancouver, in enough numbers to come to the attention of the BC Ministry of Agriculture (BCMA), the Canadian Food Inspection Agency, and the nursery industry. If not controlled quickly, Japanese Beetle could spread quickly in the Fraser Valley and farther afield. Ultimately, based on experiences elsewhere, it could become a serious pest problem in a wide variety of ornamentals, berry and tree fruit crops. Again, until some study is undertaken, we don't yet know how this new pest will behave here, and False Creek is not all that far from one of our major areas of cranberry production in Richmond.

Adult beetles have copper-coloured wing cases, and the thorax and head are green. Five patches of white hairs are on each side of the abdomen. This last feature distinguishes *P. japonica* from all other similar-looking beetles. The larvae are pale white "C"-shaped grubs, with a yellowish head.

In eastern North America, Japanese Beetle is a significant pest of turf and grass crops, in which it is the larvae that cause damage. This means lawns, institutional turf, golf courses, hay fields and forage grass stands are potential crops that may experience damage. In nursery crops and ornamentals the adult beetles cause skeletonization of foliage, although they can also damage flowers and fruit.

A partial list of known primary hosts includes maples, roses, pome and stone fruit, cane berries, grapes and corn. Note that although turf grass is known to be a secondary host, in 2002 one reference listed Japanese Beetle as the "...most widespread pest of turfgrass..." costing the American turf and ornamental industry approximately \$450 million a year to manage the pest in those crops.

If your field is already being monitored by a qualified scouting firm or agronomist, ask them to start to include monitoring for Japanese Beetle. Report any possible sightings to the BCMA, an Agronomist at TerraLink, or to your grower association. For more detailed information, you can download a PDF of our new Pest Bulletin on Japanese Beetle from our website. Or you can ask for a copy from our Customer Service people at either Delta (4119 – 40th Street, 604-946-8338) or Abbotsford (464 Riverside Road, 800-661-4559).