September 2016

Vegetable Advisor

A TerraLink Technical Advisor

Crop Protection

What's New in Pest Control

Cantus WDG

Cantus fungicide is now registered for control of mold in beans. Apply Cantus at 560-770 g/ha, at 20-50% flowering, to control white mold *(Sclerotinia sclerotiorum),* or at 420 g/ha to control gray mold *(Botrytis cinerea)*. Apply a second time 7-14 days later if disease persists, or weather conditions are favourable for disease development. The active ingredient (a.i.) Boscalid is effective in controlling *Alternaria, Botrytis and Sclerotinia*. Cantus fungicide is systemic in the xylem, making it rapidly rainfast and allowing it to protect growing plant tissue as it expands.

Lontrel 360 EC

Lontrel herbicide has been registered for post-emergence use on turnips. For control of labeled weeds, apply Lontrel 360 Herbicide at the rate of 0.42 -0.56 L/ha in approximately 200 to 300 L/ha of water. Apply as a postemergent spray when weeds are young and actively growing. Make only one application per season. Preharvest interval is 30 days.

Agri-Mek SC

A minor use registration has been given to Agri-Mek SC Group 6 insecticide with a.i. Abamectin for control of thrips on Green Onion. Application rates are 54 – 110 mL / ac with a 7 day application interval and not more than 4 applications a year.

Forum

Forum, Group 40 Fungicide, a.i. Dimethomorph, is registered for use on brassicas, bulb vegetables, cucurbits, fruiting vegetables, leafy vegetables and potatoes. It has protectant, systemic and anti-sporulant activity against late blight in potatoes and downy mildew in many vegetables.

Kopa

Kopa Insecticidal soap is registered for control of aphids, and many other insects on a variety of vegetable crops. Dilute 8L with 400 litre of water and apply in field at 280-760L/acre.

Luna Tranquility

Luna Tranquility Fungicide is a broad spectrum fungicide with preventative, systemic, and curative properties recommended for bulb vegetables, tomatoes and potatoes. In potatoes the active ingredients Fluopyram & Pyrimethanil in Luna Tranquility provide excellent leaf spot complex protection (early blight and brown leaf spot), including strains with reduced sensitivity to Group 11 and current Group 7 fungicides.

Sivanto Prime

Sivanto Prime, Group 4D Insecticide, a.i. Flupyradifurone is used to control listed insects on root and tuber vegetables, leafy vegetables, leaf petiole vegetables, brassica head and stem vegetables, legume vegetables, fruiting vegetables, cucurbits, and sweet corn.

Soil Building and Conservation

Start Thinking About Cover Crops Now!

If your crop of potatoes or vegetables can be harvested early enough, make sure to plan for and plant a cover crop.

What is the benefit of planting a cover crop in late summer? There are, in fact, many benefits. Cover crops have been proven to provide several things, all of them good and none of them bad. A cover crop is an investment in your soil which will:

- Increase organic matter and fertility,
- Improve soil structure and drainage,
- Prevent erosion,
- Tie up leachable nutrients such as nitrogen and sulfur,
- Stimulate soil microbial activity, and
- Compete against weeds.

Here are two specialty cover crops to try:

Nitrogen-fixing Legumes:

Legumes have a symbiotic relationship with specific bacteria. These bacteria are able to take nitrogen from the atmosphere and convert it to a plant-usable form, a process known as 'nitrogen fixing'. The bacteria grow in nodules that develop on the roots. Up to 200 pounds of nitrogen per acre can be obtained – without spending money on fertilizer!

Tillage Radishes:

Also known as daikon or forage radishes, seedlings develop a thick white taproot which can grow 45cm deep and punch through a compacted plough pan. Left to decompose, the cavities they create serve as channels for air and water, vastly improving soil health. Even better, some tillage radishes are known for their bio-fumigant properties. Their residues can suppress troublesome nematodes and other soil-borne organisms.

Plant Science Lab

Soil Testing

Fall is the best time to soil test. Why?

There are several reasons: First, except for nitrogen and sulphur, nutrients don't generally leach over winter, so

it is safe to assume that what shows up on your soil test in fall will be present in the spring. Your recommended rates for nitrogen are mostly 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. Second, both the labs and the folks who conduct soil testing are less busy than they are in the spring. Last, should the soil test indicate your field has become too acidic, fall testing allows you more time to apply limestone, as it is almost always drier in the fall.

Plant Science Lab

Why Fall Limestone?

Fall Limestone Application: Makes Sense, Saves Dollars!

The best time to apply limestone to your fields is in the fall. There are two main reasons for this. First, from an agronomic point of view it makes the most sense. What happens when limestone is applied to soil? In our Fraser Valley soils there is an abundance of aluminum, which naturally reacts with water to produce hydrogen ions (H+). The presence of a concentration of H+ creates acidity. When limestone (calcium carbonate) is added to the soil, some of the calcium replaces aluminum at the cation exchange sites. Meanwhile, some of the carbonate combines with hydrogen to produce water and carbon dioxide. This reaction is not instant, especially if the limestone is not incorporated. Typically, several months pass before the biggest change in pH takes place. If limestone is applied in the fall the pH should be increased just in time for fertilizing time in the spring. The second reason for applying limestone in the fall is time. The fall is typically drier than spring so fields are better able to handle the weight of spreading equipment without damaging the soil. Application can be timed right after the last cut of grass or directly following corn harvest. Also, bad weather in the spring with wet soils often means we can't get to all the orders in time prior to planting. Inevitably, some are cancelled and yield and quality are compromised. It makes far more sense to do some of the spreading in the fall when we can quickly drive across dry fields.

FALL SALE!

on Custom Spread Bulk Limestone (pre-planting only).

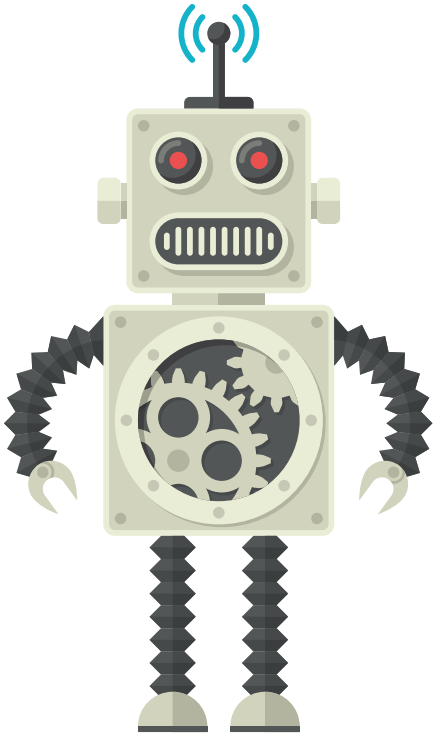
From September 1st through to November 30th 2016, TerraLink offers a $10/tonne discount on custom applied limestone.
(Fraser Valley locations only.)

Technology in Farming

Robotic Broccoli Harvesting?

A recent article posted on FreshPlaza.us, an online news site for the produce industry, demonstrated one example of the advance of hi-tech in agriculture. Researchers at the University of Lincoln in the United Kingdom are working on a robot they hope will revolutionize broccoli harvesting. The fledgling robot is being built around a three dimensional camera taken from a Microsoft Kinect games console, of all things. The project is focusing for now on imaging, arguable a tricky accomplishment if they can manage it. The camera must identify the exact location of broccoli heads in three dimensions in order to tell the robot where to pick. Imaging in two dimensions is one thing (left-right, up-down), but the researchers say the difficult part is finding the third dimension, or depth (front-back).

The university researchers hope to develop their harvest robot to be 95% accurate, while picking broccoli heads at up to six times faster than human harvesting. After the imaging part gets accomplished, they will move on to the cutting mechanism. In two years they hope to have completely developed a commercial system for field testing. After that? They hope to extend the robotic technology to a variety of fresh produce crops, such as apples, pears, tomatoes, peppers and cucumbers.



At TerraLink, we too are developing and promoting technology in agriculture. In our case, it is about plant nutrition. International population growth will put increasingly higher pressure on worldwide food supply. Consequently, plant nutrients are going to become in shorter supply and likely more expensive. Our scientific understanding of how plants take up nutrients is changing. A lot of international research is ongoing to help us to understand better how soil, nutrients and microbial organisms interact with plant roots. At TerraLink we are invested in applying those new scientific concepts and we are excited about sharing them with you. So, you will begin to see more organic-based ingredients and biostimulants offered in our granular and liquid fertilizers as a result.

As you might be aware, TerraLink recently acquired BioFert Manufacturing Ltd. Under the direction of Mr. Yasir Syed, BioFert will supply the organic market and international sales. Yasir brings to TerraLink expertise in organic-based crop nutrition as well as biostimulants. We look forward to working with him in our endeavors to develop leading-edge technology in plant nutrition. Hey, it might not be a broccoli-harvesting robot, but it will be hi-tech and it will be exciting!

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