

# APPLE PIPS

~ Little Things to Grow From ~

## New Products for 2015



New TwinGuard™ (Grp. 4C + 5) Insecticide from Dow AgroSciences is now registered for fast and effective control of a broad range of sap-feeding and chewing pests through two powerful active ingredients with two different modes of action. TwinGuard is easy to use and is compatible with many fungicides and micro-nutrients.



Vivando (Grp. U8) Fungicide from BASF has a Unique mode of action for exceptional powdery mildew control. With a 12 hr REI and Rainfast in 1 hr it is an excellent early season



Nealta is a new miticide from BASF that is registered for control of European red mite, Two-spotted spider mite, and McDaniel spider mite. It is effective on all life stages of mites including eggs. Nealta's active ingredient cyflumetofen belongs to a new class of chemistry, group 25. Being the first and only A.I. in this category, it is effective against mites that may have developed tolerance to other acaricides. Nealta is also unique because it's very specific activity on the labelled pests so is relatively harmless on non-target insects and beneficials. For optimum results, time applications early in the season.



New highly concentrated formulation, applied at lower use rates than the old EC, which requires less product handling. Make sure to follow the new labeled rates.

## Label Expansion/ Revision



A new formulation for an old product. Fruitone is now only available as a liquid formulation for ease of measuring and use. 1L of fruitone L is equivalent to 1kg of the old fruitone N.



The REI for Nova has changed from "When Dry" to 12 days for Thinning and 5 Days for hand harvest.



The PHI for Granuflo T has been changed From 1 day to now being 28 days. Please keep this in mind when you are planning your late season fungicide program.



Pristine label expansion for the control of Bitter Rot and Black Rot.



Product	Active De-registered	Last Date of Sale	Last Date of Use
Diazinon	Diazinon	TBD	Dec. 31 2016



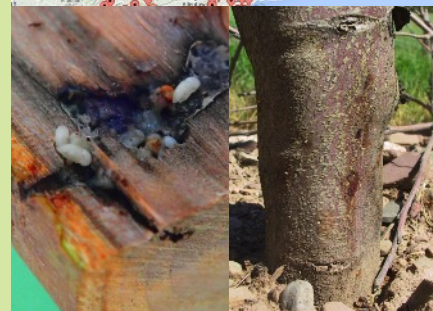
### Pest Watch - Black Stem Borer

Introduced from Eastern Asia, Black Stem Borer was first reported in NY in 1932. It is in the ambrosia beetle family which are wood boring insects. They tend to attack ornamental/forest species including American Beech, Dogwood, Maple, Black Walnut, Oak, and Magnolia. BSB was first discovered in orchards in 1982 and since has spread across NY and has the potential to live in Ontario orchards. It wasn't until 2013-14 season that they seemed to have widespread damage.

Adults over winter in galleries at the base of infested trees. Females emerge to infect new sites after 3 consecutive days of 20°C. Adult females drill a hole 1mm in diameter into young trees (2-50cm dia.) The female then starts to culture a fungal food source to feed on. The adult lays her eggs in chambers and within 30 days mature into adults, producing 2 generations per year. Late season they will migrate to a hole in the lower trunk until the following spring. This pest is attracted to weakened trees by sensing stress-related volatiles.

Symptoms includes toothpick frass after calm rain-free days, blistering of bark, Oozing sap (fireblight or not), dying trees.

Thus far the only insecticides to show efficacy are OP's, Pyrethroids and Neonicotinoids.



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# Fireblight Management Tips in 2015

Fireblight wreaked havoc across the North East last year. Many growers who have never had fireblight before are now faced with managing the most destructive disease to pome fruit. **Fireblight is manageable** when incorporating a full program.

Some factors that increase susceptibility of a tree to infection include high nitrogen fertility, young actively growing trees, and most critically, susceptible cultivar. Bloom time generally poses the greatest risk as flowers provide a pathway directly into the tree. Conditions favourable to development include; open flowers, temperatures greater than 18.3°C, wetting event that moves the bacteria from the pistils to nectaries (rain, dew, spray), and the presence of the fireblight bacterium.

To limit the severity of damage in 2015 we recommend the following program.

1. Cut out any current fireblight cankers and either flail chop or burn.
2. Check tree lines for other hosts including; Mountain ash, Quince, Firethorn, Hawthorn, raspberry and the unattended apple or pear orchard.
3. Spray a labeled copper product at Green Tip to help reduce surface bacterium in the orchard from missed cankers.
4. Download a copy of Maryblight or Cougarblight.  
[http://county.wsu.edu/chelan-douglas/agriculture/treefruit/Pages/Cougar\\_Blight\\_2010.aspx](http://county.wsu.edu/chelan-douglas/agriculture/treefruit/Pages/Cougar_Blight_2010.aspx)  
<http://www.caf.wvu.edu/kearneysville/Maryblyt/index.html>
5. Plan to make applications of Streptomycin and/or Kasumin through bloom if program alerts you to. Make sure you save a Strep. spray for the unlikely trauma event.
6. Consider the use of Apogee to decrease the susceptibility of shoot blight. Start these applications early (king bloom petal fall, and continue with low-moderate doses for at least 3 applications 2 weeks apart.
7. Prune out any fireblight strikes and remove from orchard if feasible, if not, leave till dry and flail chop. If possible, do not work in blocks with active fireblight bacterium present until trees have dried from morning dew.
8. In the event of a hail storm or high wind event, plan to have your strep spray on within 24hrs. The sooner the better!



Apple Maggot control in 2015 was extremely challenging due to the wet summer we endured. AM pupated for an extended period of time with trap counts 10 times higher than usual in many regions. Control of apple maggot has been traditionally achieved with organophosphate (OP) insecticides like Guthion and Imidan, but with the loss of many OP's and label restrictions it makes using them tough. Synthetic pyrethroid compounds like Perm-up and Ripcord are also toxic to adult fruit flies, but are generally viewed to

be moderately effective because they have a shorter residual period. There are several new reduced-risk and OP-replacement insecticide products that include apple maggot on their labels. The neonicotinoids Calypso and Assail are labeled for apple maggot control. They have limited lethal action on adult apple maggots, but provide strong curative activity on eggs and larvae. The Spinosyn compounds Delegate and TwinGuard are highly active on apple maggots when ingested, but have shown to be only fair control materials in field trials with high pest pressure, thus are labeled for apple maggot suppression only. Altacor (Anthranilic Diamide) is similarly active on apple maggots, and is labeled for population suppression. Exirel (Anthranilic Diamide) has shown to have good activity on maggots and is labeled for control. It's not always the case that compounds from the same family have similar pest spectrums.

In Organic Production we have GF120 Fruit Fly Bait (spinosad) registered for control of apple maggot. Because the primary route of entry is through ingestion, applying this product during the fruit fly pre-oviposition period is important for optimal performance. GF120 must be applied with specialized equipment, and is designed for low-volume application. Surround (kaolin Clay) can also be effective when applied before first adult emergence and re-applied till trap catches are at zero.

A strong spray program in conjunction with sanitation will provide you with best results. Set traps in July to help your timing of an insecticide. You will usually notice an up-swing in trap captures after a warm, wet period. Make sure to remove any unmanaged, wild or unsprayed trees within 500 m of an orchard to eliminate outside sources of apple maggots. Inspect orchard regularly for signs of apple maggot infestation and fallen apples, especially along margins nearest backyard or wild host trees. Infested fruit should be destroyed or buried >30 cm before the larvae leave the fruit to hibernate in the soil.

Research in Quebec has demonstrated that baited sticky red spheres or yellow panels with centre red sphere hung at 10 m intervals along the margins of non to low infested orchards will protect the orchard by intercepting females immigrating from nearby infested sources. This tactic is called perimeter trapping. It is inconsistent, but may serve a purpose in your orchard.

**SPEAK WITH YOUR BARTLETT REP FOR ADVICE ON PRODUCT CHOICE, RATE, AND TIMING.**

Always follow label guidelines - visit [www.bartlett.ca](http://www.bartlett.ca) for current labels.

# PLAN To Grow QUALITY Fruit

## Apogee - For improved pack outs!

Creating a balanced tree with good leaf area to fruit ratio is critical, yet challenging. First line of defense is choosing the right root-stock for your site, planning the proper spacing, then training and pruning effectively. If not in balance strong vegetative growth will result, leading to harsh pruning which in-turn promotes the need for increased pruning in following years. **Apogee is a tool that can be used to keep trees in balance** in many varying orchard designs.

Apogee or prohexadione-calcium, is a plant growth regulator that reduces terminal shoot growth. Apogee inhibits the synthesis of gibberellins, the plant hormones responsible for cell elongation. Trees treated with Apogee often have the same number of shoots as untreated trees, but shoots from treated trees are thicker or greater in diameter and have compressed internodes. Apogee does not reduce the number of leaves or fruit size. Controlling vigor can reduce the amount or intensity of pruning, decrease internal shading – a major proponent to properly color apples – and reduce canopy density for thorough pesticide coverage. **Apogee also reduces the incidence and severity of fire blight on shoots.**

Apogee helps in the pursuit for top yields through three key points. Light penetration, holding trees back to maintain their structure and stop over shading of the next row. (helping maintain the 90% rule.)

Partitioning - how the tree decides to build roots, shoots, or fruit. Utilizing Apogee will put less focus on growing wood and more on growing your crop. Fruit quality - with less shading due to shoot growth their is the potential for greater colour and more consistent pack out. Furthermore, there is recent information to show that the use of Apogee also has a side benefit of reducing the incidence of bitter pit in varieties that are prone to developing the disorder.

When applying Apogee to apples, growers should consider the following: timing, rate per acre, thinning relationships, and compatibility with other chemistries in the tank. Apogee will only affect shoots sprayed. If you concentrate on the upper canopy those branches will only be affected. Response generally takes 10-14 days and lasts for 4-6 weeks.

## Precision Crop Load Management

In the past, crop load management was primarily achieved through chemical thinning with NAA/Carbaryl around the 10-12mm fruit stage, then some 'wait-and-see' and potentially some large hand-thinning bills. With this you were at the mercy of mother nature, and what seemed to be just dumb-luck!

To the benefit of the apple industry, there has been a large group of researchers dedicated to learning more about this very important practice. The concept of 'Precision Crop Load Management' has been developed as a result of this research with a goal of helping growers achieve a more consistent crop load of valuable fruit based on science, leaving less to chance. With PCLM we start with a defined target yield per acre, then correlate that number to fruit per tree. Prune to a precise bud load, then start chemical thinning early using the carbohydrate model. Then use models to predict fruit set and repeat thinning with Cilis Plus (6-ba) as needed. With a multi pronged approach you are spreading out your risk and enabling you to take more control of your thinning window and amount of thinners used.

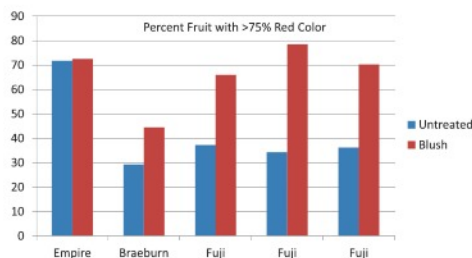
In the pursuit of maximizing yields and profit the program gives growers the confidence to thin when appropriate and when not to thin. Your local Bartlett rep would be glad to aid you in these important decisions!

### INTRODUCING...

blush<sup>®</sup>

#### 2011 Blush EUP - NY

Trial Coordinator: Agr.assistance; 2011



Blush Rate: 52 oz/A

Spray Vol: 50-75 GPA

Blush™ is a new plant growth regulator developed to promote colour change in bi-colour apples, thereby improving the commercial value of the crop. While performance depends on cultivar, orchard conditions and application timing, Blush™ has shown positive results in orchards trials from New York to Washington across a wide range of apple varieties and conditions.

Prohydrojasmon is a synthetically produced jasmonate, one of a new group of plant hormones with several beneficial physiological properties. In addition to fruit de-greening, PDJ aids in fruit color development by enhancing accumulation of anthocyanin within apples. Anthocyanins are red pigments that belong to a class of molecules called flavonoids. Along with stimulating fruit coloration, anthocyanins act as powerful antioxidants.

Blush was specifically developed to bring out the red in Fuji, Gala, Honeycrisp, McIntosh, Paulared, Pink Lady and other bi-color apple varieties.

**Registration expected summer 2015, stay tuned for more updates and info!!**

# PROVIDE AGRO

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# Equipment News

**UNIFORM FRUITING SURFACE  
INCREASED LIGHT PENETRATION  
DECREASED HAND LABOUR**



Provide Agro is the distributor for FAMA Pruning Systems in North America.

FAMA has developed a hedger designed for high density plantings for shearing and shaping rather than "knocking down" big trees. The goal is to decrease labour, increase light penetration (colour, fruitfulness of lower canopy), and create a uniform fruiting surface (ease of harvest, mechanization, consistent fruit)

Research in Europe and in the U.S. has shown that timing of the hedging can be altered to achieve different responses. A grower may decide to apply differing treatments based on their knowledge of the orchards history and end goals. For instance, a dormant to early spring timing with high severity could stimulate growth on weaker trees. A late June application can shape the tree while encouraging a slight and manageable shoot re growth with some additional fruit bud formation.

FAMA has created a hedger that is cost effective, robust and adaptable to meet your needs, and we can help you integrate this technology into your operation.



**PRECISION DISTRIBUTION  
LOW ENVIRONMENTAL IMPACT  
CUSTOM FLEXIBILITY**

**H.S.S.**  
Hol Spraying Systems

Provide Agro is pleased to announce a partnership with Hol Spray Systems of Holland to market and sell the line in North America. H.S.S. has developed a high efficiency sprayer that provides growers with less drift, lower fuel consumption, more consistent coverage and increased operator safety. Hol Spray Systems has developed sprayers specifically for high density orchards, combining their experiences with orchard equipment and new technologies to make a high efficiency machine that places product exactly where it needs to be.

It uses a low-noise radial two-speed fan to draw in clean air for the unique distribution system that sends air equally to all outlets. The overcapacity of the fan makes it possible to operate with a slower PTO speed, enabling you to "gear up and throttle down", reducing fuel consumption and noise. Excellent coverage can be obtained with varying water rates giving you custom control and flexibility based on the target pest, canopy density and product being used.



**PROVIDE AGRO 'The Chariot'** is a new breed of orchard platform developed



by Provide Agro. This machine keeps efficiency, safety and cost in mind. The Chariot takes it's power from 2 large 12v batteries and will be able to work up to 16 hours on a single charge. The batteries can be charged by using a generator in the field, or plugged into 110v. 2 people work on the platform which can be raised independently of the other worker by way of an electric cylinder. The Chariot is a great machine for orchardists making the transition to HD plantings but can't yet justify a large platform, or those who do not wish to put a lot of capital towards adopting a platform-assisted workforce. Give us a call if your interested in seeing it at your farm!



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**FIND US IN OUR BOOTH AT MOST HORT SHOWS OR MEETINGS HELD IN CANADA AND UNITED STATES!!**

**This 'Apple Pips' is available on both our websites; [www.bartlett.ca](http://www.bartlett.ca) [www.provideagro.ca](http://www.provideagro.ca)**