

APPLE PIPS

~ little things to grow from ~

2015 SEASON RE-CAP Mother nature flexed her muscles in 2015. With a 2nd harsh winter in a row, it was not hard to find winter damage in many blocks across Ontario. Growers persevered and orchards managed to come into a beautiful bloom. Unfortunately mother nature had other plans on the night of May 22 and 23. After the killer frost, many regions across the province reported both big yield loss, or severely lowered quality from frost ring and low seed count. OAG estimates a 50% crop loss compared to normal years. For many this has been a tough year, and one that will not be forgotten. Weather mitigation is top of mind for many. Some optimism did come from 2015 as the season progressed. For those that did have crop, the market has been strong so far thanks in part to disparities in international currencies. Pest pressures seemed to be low and most growers did a great job in cutting down disease pressure and fireblight was held in check. We had great growing conditions to push new and existing plantings and trees should be set up well for a great crop for next year.

From our family to yours, we wish you a healthy and prosperous 2016!

Building Blocks to a promising 2016 starts Now!

ZINC

Zinc applications are valuable for correcting deficiencies as well as acting as an "anti-freeze" to aid in winter-hardiness. **Yara's Zintrac (40% Zn)** is the product of choice for this timing and is generally used @1L/ha.

BORON

Best effects of Boron application comes from foliar sprays made post-harvest and prebloom to improve bud development, flower set, and fruit set. Yara's Bortrac (10.9% B) is the product of choice for these timings. The rate for post-harvest sprays is 2L/ha.

COPPER

Copper is antibacterial and acts as a sterilant. Late fall applications at 20 and 80% leaf drop is a great finish to your disease management plan and has shown to help control the spread of Necteria Canker (indicated by orange spores on dead wood) by protecting newly exposed leaf scars where the canker can inhabit. Copper sprayed at this timing has also shown to speed up and condense natural leaf drop.

NITROGEN

Late season Nitrogen applications can help in two ways. 1) increasing N levels in buds now will help push healthy growth early next spring before 'mass flow' of N into roots commences. 2) Nitrogen applied at higher rates onto leaves before winter can directly kill apple scab and also aid in the decomposition of leaves which decreases survival rate of over-wintering fruiting bodies of apple scab. Better coverage on both sides of leaves is generally obtained when applications are made while leaves are still on trees, however Urea can volatilize quickly (7-10 days), so application should be applied right before the majority of leaves drop (15-30% of leaves dropped).

APPLICATION NOTES

Various tank-mixes of these elements have been used effectively. We promote high quality micro-nutrients from Axter BioScience (Oligosol) and Yara for their proven track record for efficacy and crop safety. Several coppers are available for use at this timing with varying rates. The Nitrogen source you use should be scrutinized. Only Low Biuret Urea (LBU) should be used as a foliar spray. It is uncommon to see the Biuret reading on the bag, so make sure you are using foliar or industrial grade. Although 7-12kg/ha may be enough for nutrition, most studies state that a higher rate of N is necessary for satisfactory sanitation. A **4-5% solution of LBU** has shown good results (40-50Kg/1000L water). If using this high a rate of Urea (46-0-0), make sure to alter your fertilizer applications accordingly.

ORCHARD SANITATION

Mulching of leaf litter will further help you in your battle against apple scab. A study performed at the Horticultural Research and Development Center, AAFC, Saint-Jean-sur-Richelieu, Quebec concluded that the highest reduction of apple scab inoculum was found in the treatment that had an application of Urea, followed by leaf shredding. **90% + reduction of ascospore** viability the following spring resulted from this treatment.



What we learned in 2015

2015 saw our first experiences with new Nealta miticide. The product has excellent attributes and to fully realize these and give optimum results, certain conditions should be met. We recommend the following;

1. Apply early. Spray before visual damage - get off the tractor and look! 1-3 mites per leaf is optimal timing.
2. Coverage is key. 1000L/ha minimum with aid of surfactant, summer oil preferred (watch around Maestro or sulfur)
3. Do not expect rapid knockdown. Nealta can take several days but will give good control of labelled mites.

Bitter Rot

Our field experience over the last 3-4 years has taught us that bitter rot prevention takes an integrated approach of tree health, sanitation, and chemical control. To achieve this, focus on proper nutrition by soil sampling then maintaining a ground and foliar nutrition program, use solar shade products during high heat events, diligently remove dead wood, fireblight and mummified fruit and integrate a sound fungicide program. Some high risk blocks required sprays as often as 7 -10 days during summer months due to rain and heat events. Make sure however you do not quit too early. This year we had a prolonged high heat event lasting 10 days in September! We have now seen the effects of such an event without proper fungicide coverage.

ORCHARD VOLE AND MOUSE CONTROL

When you think of protecting your apple crop, you use all available tools to ensure minimal loss. Trapping, scouting, proper pest ID, product selection, timing and product rotation. This shouldn't be any different for rodent control!!

- ID your pest - if you have pine voles you may need to provide a sheltered area then treat the underground runways instead of applying above ground for orchard voles. Many orchards have both, so both techniques are required.
- Pay attention to historic high population areas - this will give you an idea of population and re-application timing.
- Keep grass rows tightly mowed and well maintained; exposed mice are less likely to stick around.
- Fall herbicide applications under trees also help to make for a less-than ideal habitat for rodents.
- Pay particular attention to High Density plantings! Once rodents find that beautiful row of recently planted, tightly spaced trees - they may never want to leave! It's like an all-you-can-eat smorgous board for mice!

Growers have reported success from a multi-pronged approach to rodent control. The program suggests an initial application of a quick knock-down product such as "Bartlett Waxed Mousebait" to lower the population, followed a few weeks later by an application of the anti-coagulant "Ground Force" to provide sustained control into the winter. This will also help reduce bait shyness and potential development of resistance.

Another consideration to make is a mid-winter bait top up if high populations are confirmed. Dr. Robert Crassweller, PSU suggests that an application made in early spring before breeding season can be effective as well.



FALL HERBICIDE PROGRAM



Fall is a good time to apply herbicides for control of perennial, biennial and winter annual weeds, but especially persistent weeds and late-germinating weeds that usually escape or tolerate pre-emergence herbicides. Fall herbicides should be applied after frost has killed most annual weeds and new growth has ended for the year and before soil freezes. November is normally a good time to apply. Fall rains help to move the herbicides into the soil and "activate" them. Cool soil temperatures reduce herbicide dissipation and degradation of the active ingredients.

Pre-emergent program success often depends on the state of the row at application. If there is too much leaf litter or too many weeds present the product will be unable to create the barrier necessary to inhibit weed emergence. The use of a brush rake or burn-down herbicide prior to application will help provide more uniform coverage.

Always read and follow Label guidelines and recommendations from local experts.

N.M. Bartlett Inc. is the most trusted name in the business because **we care**. We strive to help you grow a higher quality crop that will return you more money! Give your local rep a call to develop a solid strategy for the 2016 season.

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