

**ON THE
HORIZON:**

- Resist for root rot control
- Gypsum applications on raspberry and blueberry fields
- Fertilizer formulation and application
- Spanworm scouting and control in blueberry fields
- Cane burning and residual herbicide application

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(Please see your crop advisor for specific recommendations for your situation. No guarantee is written or implied in this newsletter. Always follow manufacturer's label.)

The Berry Good News

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THE ROLE OF CALCIUM REVISITED

As berry growers, calcium is forever on our minds. One cannot under-estimate the role calcium plays in our bodies and those of cultivated plants. What many fail to realize is that effective soil supplementation highly depends on the product applied and at what amount. Applying a ton or two of lime because the timing is right or "that's just a good practice" or because "the pH is not high enough" is now seen as insufficient for good agronomy. Soil pH is really nothing more than a logarithmic method of measuring the amount of hydrogen present in the soil; what is more important to you is what is 'driving your soil pH levels high or low.

The best tool for you and your consultant to know what to do is

a complete and accurate soil sample. An accurate soil sample starts with the person doing the sampling; a few random shovels of dirt is not what we consider



Spring application of gypsum on Whatcom county raspberries.

an accurate test. Talk to us, and we will explain how we properly collect soil samples and explain the results to you.

Potassium, magnesium, sodium and calcium all affect soil pH. The only way to make meaningful

decisions is to have an accurate report by an accredited soil lab. It is of the utmost importance to you and your consultant to measure and understand base saturation percentages of cations in your soil, so you as a farmer can decide what soil amendments to use. High soil levels of magnesium are not uncommon in Whatcom county and may require gypsum rather than lime. Other times, due to excessive potassium fertilization, pH levels are adequate or excessive; here, gypsum would be our first choice to correct inadequate calcium levels, especially in blueberry fields. The Elenbaas Co. carries Diamond K gypsum, the most soluble gypsum available today. Solubility is an important factor when choosing a calcium source.

BLUEBERRIES AND SPANWORMS

Spanworm control is critical to blueberry growers. Adult moths begin mating in November until January and lay eggs in cracks and crevices of blueberry bark. Larvae hatch begins with bud break and balloon on the wind on silken threads.

Oftentimes, shrubs and trees

surrounding blueberry fields serve as hosts. The time to start scouting for these pests is now, as they will feed and tunnel into buds and emerging foliage and continue to feed right through bloom stage into June and July.

Inspect buds by looking for holes, and breaking buds open to

find and identify larvae. Early insecticide applications after pest identification are crucial to avoid yield loss and fruit damage.

More information can be found on the web at <http://whatcom.wsu.edu/ag/comhort/nooksack/ipmweb/blue/wintermoth.html>

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PHOSPHITES AND ROOT ROT

Many of you have used phosphites for root rot control in cane berries for many years. Almost all of you report to us the excellent results from using Resist, but some confusion still exists out there on timing and the best way to apply phosphites (whether as a foliar application or basal drench directed at the crowns of the plants). Both methods can work, but basal applications have a distinct advantage over foliar applications when used at high rates and when combined with Actagro Organic Acids.

Potassium Phosphite is a highly reactive ionic form of phosphorous acid, and moves into plants through the

roots into the leaves. Phosphites will also move through plant foliage into the roots.

Researchers have discovered that phosphites kill phytophthora infestans. Reports from other growers in the PNW, outside of Washington state, report excellent results from basal applications of Resist. The Resist advantage over other phosphate formulations is due to complexed organic acids with the phosphite molecule, allowing protection from soil tie-ups longer than other products on the market and providing an organic compound for plant translocation. Foliar applications of Resist

need to be included in your fungicide program to ensure optimum root rot control. Resist will also stimulate plant growth and provide necessary potassium to the plant and fruit.

An important fact to consider is that by alternating fungicides, we insure we will have the tools to control root rot for years to come. For example, while Mefenoxam has given us excellent control for many years, it is crucial that we prevent resistance by alternating products until new ones can be developed and approved.



FOCUS ON FERTILITY: MANGANESE (Mn)

Manganese is an often overlooked micronutrient. Manganese is critical to fruit ripening (accelerating the process). Manganese also assists the plant in carbon dioxide assimilation.

Deficient plants exhibit white or pale yellow leaves at the tops of plants. The only true way to determine deficient levels is by proper plant

tissue sampling. Manganese is a soil cation, not to be confused with another important cation, magnesium. Manganese can easily be "blocked out" of plants by high levels of calcium, potassium, or sodium. Waterlogged soils can leach out manganese over time.

Many crop consultants report yield and quality responses by manganese

supplementation, even when soil tests do not indicate low levels.

The proper way to avoid problems begin with paying close attention to soil tests and tissue analysis. Drip injections of a high quality manganese source are very effective over single or multiple applications of granular fertilizer.



Dormant blueberries on a beautiful winter day.