

SIMPLY LIME

By Carol Ponchet-Cassidy

Fruit trees that receive lime on an annual basis will benefit significantly. Lime will neutralize soil PH and release water in clayish soils while improving structure and quality in soils that are high in organic matter. It will also help suppress diseases and bring nutrients to your trees.

The soils of coastal B.C. are slightly acidic for several reasons. High rainfall, organic matter and clay, and many acidifying plants such as conifers create this condition. On the PH scale, acidic soils range from 6.0 and lower and alkaline soils range from 7.0 and higher. Fruit trees prefer a more neutral soil PH of 6.0 to 7.5. Acidic soils can be neutralized over time with the application of lime.

Various soil structures behave differently. For example, clayish soils have lots of “surface tension” in their tiny particles. This “tension” holds tightly to water and minerals and as a result acidity increases. Higher organic content, such as that found in soils in forested areas and newly cultivated sites, is also more acidic. This kind of soil tends to leach out in heavy rains and lacks the rich decomposed earth that leads to healthier soil structure conducive to fruit tree cultivation.

The acidity of our local soils is a prime environment for fungal diseases such as scab and canker. They love it nice and sour. We can create a less hospitable environment by sweetening the soil surface with lime.

Many fungal spores will happily over winter on leaf litter. Ideally, a thorough fall raking is best, but, if the task is too onerous, a light dusting of lime after the leaves have fallen will help. For insurance, lime even if you do rake as there will likely still be fungal spores on the soil surface.

As well as suppressing disease, lime brings nutrients to our trees, namely calcium and magnesium. These nutrients are used by the roots, wood and leaves.

Calcium builds and maintains cell walls and helps reduce injury from freezing and heat stress. Adequate calcium in the soil helps maintain good soil bacteria, earthworm activity and root development.

Magnesium helps trees to take up calcium as well as to use nitrogen and phosphorous. It also plays an important role in chlorophyll synthesis and reduces premature fruit drop.

On the subject of nutrients, we should not forget compost. To really do the best for your trees, nothing beats a thin layer of compost raked around the drip-line of fruit trees. Apply compost when you do your liming to give a more complete feed. Compost contains many of the trace minerals and nutrients trees need. In addition it adds to soil structure.

Different types of lime are available. The most common for home use is Dolomite Lime, which contains adequate amounts of calcium and magnesium for our area. It usually comes in a fine powdery form. For smaller areas, apply a light “icing sugar” dusting from the trunk outwards to beyond the drip-

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line. If you are spreading lime using a tractor and spreader you may choose Agricultural Lime which is coarser and flows more smoothly through your spreader.

Lime may be applied in the fall after the bulk of the leaves have fallen. It may also be applied in spring before bud-break. If you can, apply lime just before a rain so that it can be washed in quickly.

Applying lime to our acidic coastal soils is one of the most kindly things you can do for your fruit trees. While you're simply and happily spreading it around above ground, you're also improving soil quality and structure below the surface. You're also raising the soil PH, stamping out fungal spores and nourishing your beloved trees!

SOURCES:

- *Organic Tree Fruit Management* by Linda Edwards
- *The Apple Grower* by Michael Phillips
- *A Gardener's Guide to Pest Prevention and Control* by The Ministry of Agriculture, Fisheries and Food
- *Dan Thompson* Secretary BCFTA
- <http://soils.tfrec.wsu.edu/>