



General Orchard Maintenance

SOIL TESTING

Taking a "Soil test" after harvest indicates the level of soil nutrients that may be available for the next cropping cycle. These levels can be enhanced through the addition of soil conditioners, fertilisers, trace elements and mulching.

Attention to nutrition prior to flowering is essential for all crops. Poor growth caused by lack of Phosphorus, Calcium and Boron during this period will lead to poor pollen quality, poor fruit set and small fruit.

Pollen quality is not often addressed. Earthlife contends that pH levels above 6.3 should be maintained to provide the optimum availability of nutrients required for good pollination. Soil pH between 5.0 – 5.5 induces the uptake of potentially toxic levels of Iron, Manganese and Aluminium for both tree and bees. Bees are affected by these toxins to the point where it may kill the hive. At these pH levels Calcium and Phosphorus uptake is also reduced further impairing pollination.

It is the ratios between nutrients in the soil that determines the status of availability of a particular nutrient to the plant. Certain elements have a positive influence on each other, this is called **SYNERGISM**. Other elements have a negative influence, this is called **ANTAGONISM**.

Not only does the effect of synergism and antagonism play an important role when interpreting soil analytical data, but even more important is this understanding when analysing tissue data (leaf testing). Earthlife' range of horticultural products have a proven record of reducing the effects of imbalances and toxicities in the soil.

Fruit quality is very dependant on the growers ability to manage nitrogen levels and other nutrient balances during fruit growth.

Foliar Sprays

It is important to determine whether any trace elements, particularly boron is required to enhance flower set. Previous fruit set, taking in to account weather conditions, leaf tests and soil levels are determining factors for this decision. Boron, calcium and phosphorus play major roles in determining the quality of flowering. This in turn provides the basis for fruit quality as the cell structure of fruit is determined at flowering.

Pruning

The pruning of trees is necessary from time to time to maintain the height of the tree to a manageable level and to allow traffic between the rows. The productivity of orchard can also be increased through selective pruning to allow light into the centre of the tree. Spraying Buddy over the internal branches at this time will encourage more sideways growth, resulting in more flowering points inside the tree and therefore more fruit set.

Disease Controls

Diseases such as Phytophthora is a constant threat to orchards. It is far more important to determine the correct timing for a particular remedy than which remedy should be employed. Stem injection and foliar treatments require the sap flow going towards the roots, while soil drenching requires the sap flow towards the leaf. One application of any treatment will rarely control Phytophthora.

Mulching

Most orchard trees will respond to the utilisation of mulch as this maintains a moist environment in which the roots will thrive. Their feeder roots are better insulated from the variances of temperature near the surface of the soil. It is important to maintain a reasonable depth of mulch over the root area

The use of Earthlife's minerals and Stubble Mate ensures additional nutrients from the mulch becomes plant available and is beneficial to the soil structure. Often, high organic matter levels in the soil can contribute to the acidification of the soil, as it is unable to break down to plant availability.

It should be noted that large amounts of carbon dioxide and nitrogen are utilised to convert organic matter to plant available humus. Therefore, it is most important to schedule mulch applications and it's breakdown to match specific stages of plant growth.

Organic matter is unable to convert to humus, where there is a lack of moisture, minerals, microbes and/or earthworms. The use of Stubble Mate at the correct stage of development of the crop ensures that the nitrogen production coincides with the plants requirements.

Irrigation

After harvest a thorough check and maintenance of all irrigation equipment including drippers, sprays, lines, filters and pumps should be carried out. Pressure testing of the pumps and comparing flow rates for each block will provide further information and allow better uniformity of irrigation to be undertaken through out the coming season.

Please contact Alex or Ian through our contact us page or phone 1800 819 003 to enable us assist you in your future endeavours.