

## **Ag1000™ Orchard Applications**

Below are our program suggestions for orchards used in conjunction with regular nutrient program:

Aggressive Program (1-year program):

- 100 gallons of Ag1000™ to the soil per acre in irrigation water.
- 5 gallons per acre per foliar feed (3% solution) added to other nutrients in Western Blend program.

Moderate Program (2-year program Each Year):

- 60 gallons of Ag1000™ to the soil per acre in irrigation water.
- 5 gallons per acre per foliar feed (3% solution) added to other nutrients in Western Blend program.

Annual Program:

- 40 gallons Ag1000™ per acre per year added in irrigation water.
- 5 gallons per acre per foliar feed (3% solution) added to other nutrients in Western Blend program.

Additionally, we recommend incorporation of all chipped pruning material in the soils to add additional carbon to the soil.

- Prune, chip or shred pruning in rows.
- Mix 20-30 gallons Ag1000™, 20-30 gallons molasses, 1-2 gallons Humate and 50 gallons water per acre.
- Spray solution on shred or chips and lightly incorporate in to 2-3 inches.
- Repeat this program according to your pruning rotation.

**Farmers Blend Martin Boerema: 805-421-6436**

**An orchard's soil** should mimic that which is found in nature. This means it should have lots of organic matter, be well aerated, and have a rich musty smell. The soil should be teeming with life. This is often not the case.

Soil types, management and watering methods affect aeration, drainage, disease pressure, and overall performance of the plant.

Compacted soils tend to drain poorly, allowing for standing water in various areas both above and below the surface. When water does not drain quickly the area becomes oxygen-deprived. In these areas anaerobic bacteria and fungi grow.

Most anaerobic bacteria are known as pathogens. They produce substances that are toxic to plants and are most often areas where diseases will start. As disease-producing microbes grow, trees will sicken and attract pests that feed on them. From here diseases and pests can spread throughout the orchard.

Soil structure will additionally affect water availability and root growth and root penetration. Clay soils and sandy soils drain differently. It is common knowledge that clay soils drain poorly and sandy soils drain quickly.

Both are low in organic matter. Organic matter should be used to amend both clay and sandy soils. Leaves and prunings are great sources of organic matter and should be incorporated into the soils as often as possible.

In areas where organic matter is less than 1% (most of the Southwest), the addition of humate or compost is preferable to accelerate the buildup of organic material in the soil. Humate is 100% bioavailable, whereas about 20% of compost is available organic matter.

Organic matter helps keep the soils aerobic, increases moisture retention and drainage, and provides food and a hospitable environment for beneficial microorganisms.

Increased populations of beneficial microorganisms help with nutrient efficiency, soil structure formation, reduction in salts, and digestion of wood materials from pruning, break up caliche, and suppression of the growth of pathogenic species of bacteria.

Before signs occur, experts recommend the addition of organic matter, practicing good water management, and the addition of live beneficial microorganisms.

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## **Ag1000™ Orchard Applications**

### **Ag1000™ advantages to soil:**

- Increases Cation Exchange Capacity CEC
- Improves drainage
- Adds active enzymes, amino acids, and vitamins
- Increases polysaccharide production
- Increases growth of beneficial fungi
- Increases efficiency of nutrient availability for plants

### **Ag1000™ advantages in foliar applications:**

- Improves nutrient availability
- Adds active enzymes, amino acids, and vitamins

### **Ag1000™ advantages in incorporation of pruning materials:**

- Accelerates breakdown of wood material
- Accelerates breakdown of leaves
- Improved tilth
- Improved drainage