

## Citrus

Citrus trees are demanding feeders and are prone to many disorders related to mineral nutrition. In Australia and Pacific Regions, citrus suffer from deficiencies of at least eight of the thirteen essential elements which plants obtain from the soil. Common deficiencies are: nitrogen (N), phosphorus (P), potassium (K) and magnesium (Mg)—major elements; zinc (Zn), manganese (Mn), iron (Fe) and copper (Cu)—minor or trace elements.

Citrus species are also sensitive to an excess of certain elements in the soil or the irrigation water, especially to an excess of chloride, sodium, boron and manganese, which can injure the trees.

### GROWING/ MAINTENANCE

**Climate** ; Citrus trees growing outside are at a distinct disadvantage with regard to climate, i.e., winter almost always will be accompanied by one or more freezes. Citrus trees are subtropical to tropical in nature; thus, they may suffer severe damage or even death because of freezing temperatures. However, several types of citrus have sufficient cold-hardiness to sustain some freezing conditions, particularly as mature trees.

### Soil Requirements

All citrus trees require deep soil having both good surface and internal drainage. Surface drainage refers to runoff to prevent water standing around the tree. Internal drainage is the ability for water to percolate downward through the soil to preclude saturation of the root zone.

The presence of vigorous, healthy landscape trees is a good indication that the soil is sufficiently deep and well-drained for citrus trees. Should uncertainty about internal drainage exist, dig a posthole 3 to 4 feet deep and fill it with water. All water should drain from the hole within 24 to 36 hours. Soils requiring more than 48 hours to drain completely should be avoided unless raised planting beds are used.

Most citrus grows well in a soil pH range from 6 to 8. Avoid soils that have high caliches content or are excessively salty, as citrus trees will not grow well in such soils.



Safe Fertilisers

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# Safe Fertilisers – Crop Info



## Nutrition

The soil must provide 13 nutrient elements essential to all plant growth. Australian soils generally are quite fertile and contain in some cases more than adequate quantities of all essential elements except nitrogen. The other elements need to be applied to mature, established citrus. However, the exceptions are important.

Clay soils usually contain plenty of iron, but citrus trees may exhibit iron deficiency in the early spring. Usually, the deficiency clears up as the soil warms up. If it does not, soil application of iron chelates is necessary. Where iron deficiency does occur, do not use fertilizers which contain phosphorous because high phosphorous aggravates iron and zinc deficiency in high pH (alkaline) soils. Red, sandy soils may need supplemental potassium and sandy soils in general may need additional zinc.

Mature, bearing citrus trees should receive enough nitrogen to provide for good but not excessive growth. If the percentage of nitrogen in the fertilizer is less than 15 percent, apply as per following program with a soil test.

The fertilizer may be applied at one time for the year, usually in February, or it may be split into two or three applications. Two applications are recommended, with two-thirds of the fertilizer applied in February and the balance in May. However, equal applications in February, May and September are effective, also.

The most expedient application is to spread the fertilizer uniformly on the soil surface under the tree canopy and slightly beyond and water it in thoroughly. It is not necessary to drill holes in the soil for fertilizer as a thorough watering will carry surface-applied fertilizer throughout the soil profile. Water application is the most effective and works to a budget

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## Program Guide:

**Biology Kick start;** Apply 10 lt /ha Vital Activator

### **Ground preparation:**

Apply 1 tonne/ha Lime **or** Liquid Lime @ 40lt/ha in 300lt/water  
Apply 400kg/ha Alroc DAP Supablend  
Apply 100Kg Alroc CBM  
Liquid spray 15lt Vital Phos in 300 lt water under trees

### **Side Dressing**

Liquid Lime @ 20lt/ha in 300lt/water or through your water system  
Apply 100 Kg/Ha Alroc NPK 9.5.7 Supablend

**Foliar Apply;** Vital Mix monthly during growth stages @ 6lt/ha in 300lt water  
6Lt/Ha Vital K Blast monthly from fruit set

### **Sidedressing / Maintenance after picking**

Apply 400 Kg/Ha Alroc NPK 9.5.7 Supablend This can be applied split in two applications,  
Use 70kg/ha Safe Coated Urea Spread on with spinner spreader, again two applications is ok  
Use one application of Safe Organic Liquid Lime @ 12lt/ha to assist the balancing of conductivity and low calcium

### **Liquid Feed, Growth Stage**

Vital Mix @ 4lt/ha monthly  
Vital Activator @ 10lt/ha one application  
Vital Kelp @ 6 lt/ha one application

### **Liquid feed, Fruiting Stage**

Vital K Blast @ 10lt/ha Monthly  
Vital Calcium, @ 8 lt/ha one application  
**Monitor potash,** may need Sulphate of potash topup

### **Top up Fertiliser requirements:**

**Nitrogen:** Use 120kg/ha Alroc CBM side dress applied with 6lt / ha Vital Activator sprayed under Citrus Trees

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### **Disclaimer**

The above program will be affected by soil variation, testing errors, seasonal factors and management skills. Any recommendation should be acted upon as part of an ongoing fertiliser program. No responsibility can be accepted for any of the above matters or other matters that are beyond our control.

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