

## 17 NUTRITION AND DISEASES

It is well recognised that nutritionally balanced plants are less susceptible to pests and insect damage. Another well accepted theory is that potassium strengthens the resistance to diseases. This subject did not receive much attention on citrus but the following was established on other crops.

- When plants are subjected to water logged conditions for more than two hours, they become more susceptible to pathogens.
- Avocados planted in red loamy Hutton soils containing > 2000 mg Ca/kg soil are less susceptible to *Phytophthora* than plants in Hutton soils with < 2000 mg Ca/kg.
- The incidence of *Fusarium oxysporum* can be reduced if the pH and Ca status of the soil is increased.
- Nitrates reduce the incidence of *F. oxysporum* in comparison to ammonium nitrogen.
- Ammonium nitrogen reduces the growth of *Verticillium sp.*
- Cu and to some extent Zn reduce the presence of fungi in general. The problem applying this is that roots are also sensitive to excess Cu.
- The activity of *Pythium coloratum* is suppressed at a soil pH(water) of 6,9 compared to 5,1.
- Neutral to alkaline pH values suppress the activity of pathogens and stimulate that of saprophytes.