

# Improving Sad Soils

The soils of our suburbs may be in a sad state from being disturbed by machinery, being built on, having 'fill' dumped on them, or having been compacted. These things do damage to soil in a number of ways:

- They compact the soil making it difficult for oxygen and water which are needed by plant's roots to enter the soil. It is also difficult for fine roots to grow in compacted soils.
- The soil may be low in organic matter which supplies nutrients to plants
- The soil may have poor drainage - which mean that plants have "wet feet" making it difficult for them to grow.

Soils in this sad state are difficult places for plants to grow and be healthy and strong. If you are planting into soil that has been damaged, there are many things you can do to improve it.

### **Rip or Cultivate the soil**

Ripping or Cultivating involves breaking up the soil so that oxygen and water can enter the soil and so that the soil's drainage is improved. This is done using a ripping machine, a rotocultivator or by using a mattock. The deeper that you rip the better the effect will be.

### **Add gypsum**

Gypsum helps break up heavy clay soils, making it easier for plants to grow and for water to get to plants roots. Plan to add gypsum several weeks before you plant so that the soil is in good condition for your seedlings, an average gypsum application rate for Townsville soils is 20t/Ha or 2kg/m<sup>2</sup>.

### **Add mulch**

Mulch has many benefits

- It cools the soil and stops water evaporating from the soil
- It keeps weeds down around a plant
- It "traps" water and stops it running off of your area
- It adds organic matter to the soil

There are many different types of much, you can buy it or make your own from compost or newspaper.

### **Add plants**

Plants like healthy soil and plants help make soil healthy! Plants can make sad soils better by:

- Adding organic matter to it by dropping leaves (which then makes new soil which is rich in nutrients)
- Root growth breaks up the soil which improves the soil structure and allows better air and water flow through the soil