

# FERTILIZER NEWS

## Sub soils – do you know what goes on down there?

Many growers soil sample every year although only a small portion take sub soil samples. Sampling your sub soils can yield valuable information on such things as pH, salt, potassium and sulphur levels.

In some soils, a decline in pH at depth can lead to toxic aluminium levels that restrict root penetration and the plant's ability to access soil moisture and nutrients. Some soils accumulate potassium and sulphur at depth which may not be reflected in the top soil sample. This should be taken into account when making your fertilizer decisions. You can't make a decision about these unless you have all the information. The three figures to the right show that top soil readings do not necessarily coincide with sub soil levels.

Not all sites need to be sub soil sampled so it's a good idea to discuss your soils with your local Summit Area Manager first.

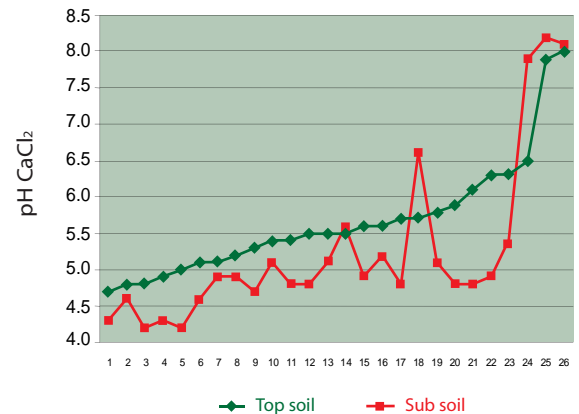
The best way to measure sub soil conditions is to take a normal sample and separate it into 10 cm increments i.e. you should sample 0-10 cm, 10-20 cm and 20 to 30 cm. This can be done either with a spade or pipe with depth markers on the outside. They can be driven into the ground with a small sledge hammer or gypie.

Care needs to be taken to make sure no top soil falls into the sub soil sample.

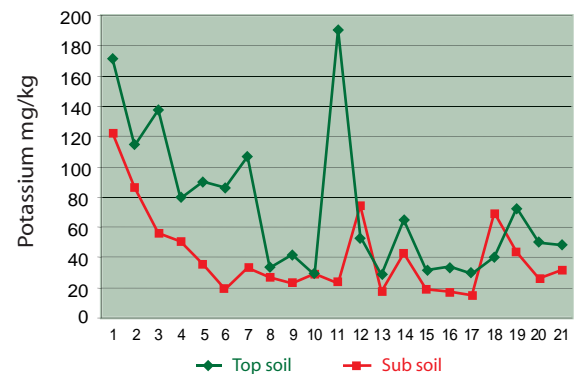
Some interesting findings to come through the Summit analyser are:

- ☑ Most light soils in WA become more acidic at depth. Heavier soils are generally more alkaline.
- ☑ Many light soils have low potassium at depth, meaning that the roots can only access adequate potassium in the surface soil. With drying periods between rains, the plant may be low in potassium.
- ☑ Sub soil sulphur levels show similar trends to potassium in light soils.

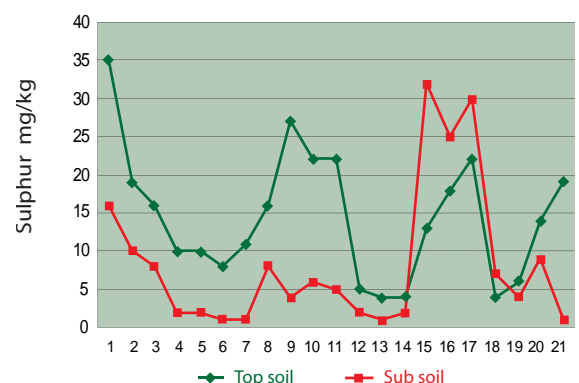
Top soil/sub soil pH comparisons  
(26 sites across the State)



Top soil/sub soil potassium comparisons  
(21 sites across the State)



Top soil/sub soil sulphur comparisons  
(21 sites across the State)



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For more information on soil testing, talk with your Summit Area Manager