

Sustain soil health for the future

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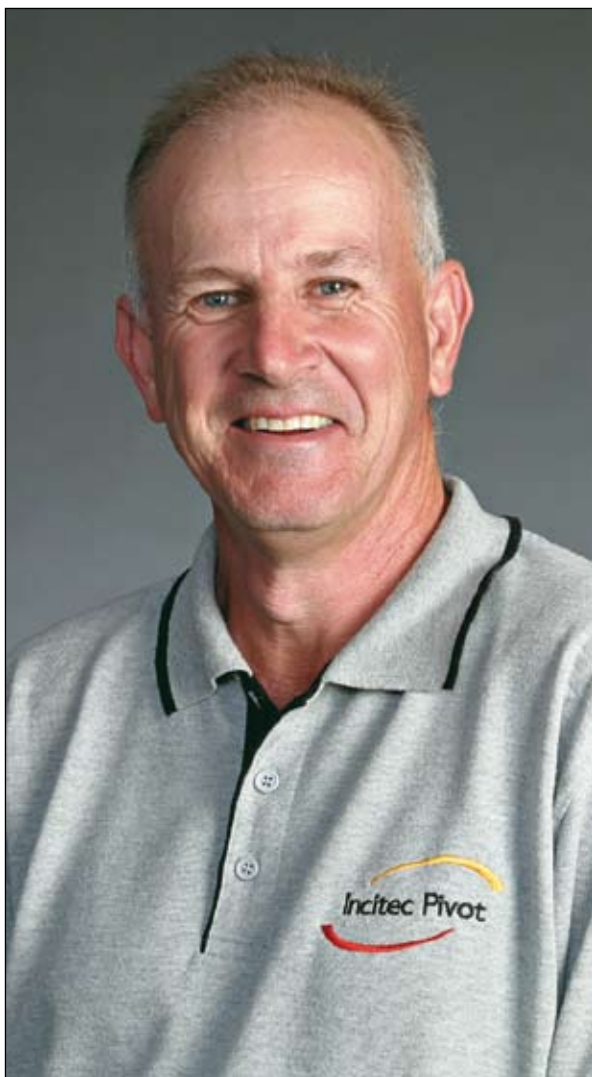
Nutrition in cotton is currently undergoing a change in focus.

Growers no longer apply fertilisers solely to achieve a yield or economic response. A significant priority for growers is matching fertiliser inputs to nutrient removal to retain or improve soil health and avoid future nutrient deficiencies.

This is because crop variety is more often the key to yield increases. Nutrition must simply keep up.

Problems like potassium deficiency can be slow and expensive to remedy — and prevention is better than cure!

So Incitec Pivot Limited is turning attention to developing and introducing fertilisers that make it easier for



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growers to achieve ongoing soil fertility, such as Granulock Cotton Sustain fertiliser.

Granulock Cotton Sustain contains a nutrient balance that reflects the nutrient removal ratios of high yielding cotton crops, particularly for phosphorus and potassium.

It contains five per cent nitrogen, 10 per cent phosphorus, 21 per cent potassium and one per cent zinc and can be broadcast or banded prior to planting. As a co-granulated fertiliser, Granulock Cotton Sustain can be broadcast evenly, unlike blended fertilisers where nutrients may segregate, giving a less even spread of nutrients across the paddock.

Ian Rochester and Greg Constable from CSIRO Plant Industry reported nutrient removal for cotton at various yield levels in the June–July 2006 edition of *The Australian Cottongrower*. They showed that a 10–12 bale per hectare cotton crop removes 24–28 kg per hectare of phosphorus and 37–44 kg per hectare of potassium.

Granulock Cotton Sustain applied at 300 kg per hectare supplies 30 kg per hectare of phosphorus and 63 kg per hectare of potassium. It also supplies zinc along with 'starter' nitrogen.

Best fit

There are several advantages to adding potassium to the soil pre-plant.

It helps avert the risk of the crop running short of potassium in the critical boll filling stage, although additional foliar potassium may still be required. Peak potassium requirements can be as much as four kg per hectare of potassium per day for a high yielding crop.

At higher application rates, Granulock Cotton Sustain can be particularly valuable on cotton country that has tested low in potassium, marginal in phosphorus and low in zinc.

Where subsoil limitations affect root depth, pre-plant broadcast application of potassium will help to ensure potassium is available in the top layer of soil and available to the crop.

While there are some concerns about the addition of chloride to the soil because a Muriate of Potash source is used in the fertiliser, mass balance modeling suggests that the contribution of fertiliser to salt levels is small in comparison with other sources such as irrigation water or existing salinity levels in the soil.

Granulock Cotton Sustain may be critical in sustaining cotton soils over the long term, but to see whether it suits your farm, first check your soil test results and discuss the options with your local Incitec Pivot agent or dealer agronomist.