

Which fertiliser should I apply on my ratoons?



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The 2013 harvest is well into the current season. Now until Christmas is the time the ratoons receive fertiliser to take them through the next 12 months. Which fertiliser do ratoons need and how much nutrient should be applied?

What nutrients does a sugarcane crop need?

All the nutrients in the diagram are necessary for cane growth.

Carbon, Hydrogen and Oxygen are supplied from water and the atmosphere. We don't have to worry about applying more of them.

Macronutrients and **silicon** are required in larger quantities than micronutrients. In most cane-growing regions, nitrogen (N), phosphorus (P) and potassium (K) must be applied in most years. Calcium (Ca), magnesium

(Mg), sulfur (S) and silicon (Si) might not have to be added. If they are required, they are applied at much less frequent intervals than N, P and K – for example, once per crop cycle or every second crop cycle.

Micronutrients or trace elements usually do not need to be applied.

However, zinc and copper deficiencies occur usually on lighter textured soils.

Iron deficiency is sometimes seen in very small patches but the crop almost always grows out of it.

Manganese (Mn), molybdenum (Mo) and boron (B) deficiencies have rarely, if ever, been diagnosed in Australian cane fields. If Mn, Mo or B applications are recommended, obtain a second opinion from a trusted advisor.

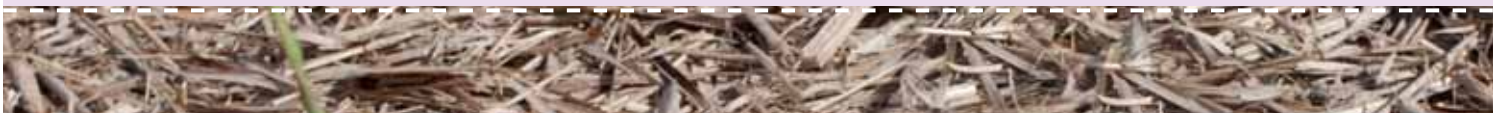
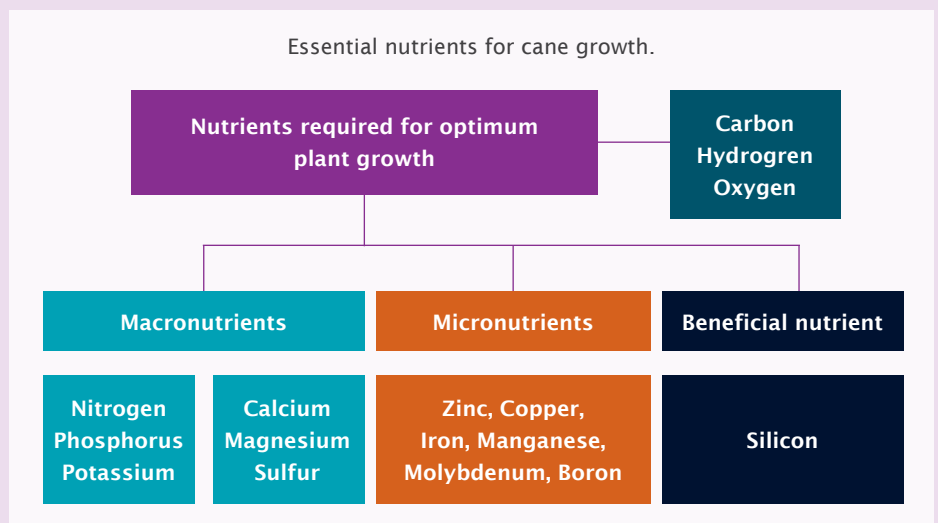
Soil test

Under Reef Regulation requirements, soil testing of blocks to be planted is mandatory. That soil test provides sufficient information on the nutrient requirements of the block for the whole crop cycle (e.g. plant cane and four ratoon crops).

The easiest, most reassuring way to work out which fertiliser a crop needs is to take a soil test.

While it costs a few dollars, a soil test can potentially save a grower far more money.

It provides the only sure method of knowing exactly what the crop requires.



Ratoon fertiliser rates

A soil test will identify which nutrients need to be applied to a particular block. With a SIX EASY STEPS Guidelines chart, the quantity of each nutrient that needs to be applied can be easily determined.

Types of fertiliser

Growers in some areas may have several options when choosing the type of fertiliser to apply.

Bagged fertiliser: The product all growers are familiar with, granulated or prilled fertiliser, is still the most commonly used source of nutrient.

Liquid fertiliser: Various liquid products are available to growers in some regions. They may contain some or all of N, P, K and trace elements. Customised blends are often available to meet the nutrient requirements of particular blocks as determined by soil test results.

Dunder-based fertiliser: These products are a valuable source of potassium, and, if urea or other solid fertilisers are added, of nitrogen, phosphorus and some trace elements.

Mill mud, mill ash and mud-ash mixtures: All three mill byproducts provide valuable quantities of nutrients. They can be a very

economic source of all the major nutrients, trace elements and silicon. To gain the most economic benefit from mill byproducts, their nutritional inputs must be discounted from any additional fertiliser applied to the ratoon crop.

Legumes: Legumes are grown in the fallow period prior to planting. While potentially providing high quantities of nitrogen to the plant crop, the nutritional benefits of legumes do not carry over to the ratoons.

No matter which product or combination of products is used, the recommended SIX EASY STEPS nutrient rates remain the same.



Left: Mill mud-ash contains the range of nutrients required to grow a crop. Adjust additional fertiliser inputs to your ratoon crop to account for these inputs by using the SIX EASY STEPS Guidelines for your region.

Right: After the crop is harvested, ensure you have a sound fertiliser strategy for the upcoming ratoon crop.

Leaf testing

A leaf test will check the adequacy of fertiliser inputs by identifying the level of uptake of all the nutrients and of any nutrients below the critical values. Leaf testing is recommended between December and April. Used in conjunction with soil testing, leaf analysis is a very handy tool to check on the nutritional health of the crop.

Summary

To manage the nutritional requirements of a ratoon crop, the results of a soil test are vital to guide decisions about fertiliser inputs. The SIX EASY STEPS Guidelines chart will allow an accurate assessment of the quantities of each nutrient to be applied. A leaf test will provide information on the nutritional uptake of the crop.