



Soya beans: Choosing the right fertiliser to support the crucial reproductive stage

By Johan Bredenkamp

Even with today's advanced agricultural practices, many soya bean fertiliser recommendations are still based on research conducted in the mid-1900s, meaning it may not be sufficient in supporting the nutritional requirements of today's high-yielding hybrids. Providing your soya bean crop with sufficient nutrients is essential for achieving its true potential.

These days, producers are spoilt for choice when it comes to fertiliser options, with each claiming to be 'ideal' or the 'best' for a specific use. While choosing the right fertiliser is not always easy, it can make a significant difference in the profitability of your soya bean crop.

Tips for choosing fertiliser

Know your supplier: With so many companies supplying fertilisers to the South African market and with new ones appearing every other day, it has never been more important to partner with a reliable, established company

or distributor to supply your fertiliser requirements. Rolfes Agri is a proudly South African manufacturer of a diverse range of agricultural inputs and specialises in producing high-quality fertilisers for the entire agricultural sector.

Know your growth stages: Soya beans can be classified as entering the reproductive stage as soon as they start to flower. The reproductive stage is one of the most important growth stages in the soya bean plant's life cycle, as it will determine the crop's final yield potential. During this period, the crop is most susceptible to shortages due to the high nutrient demand for flowering, pod development, seed development and plant maturation.

Know the crop's nutrient requirements: When a nutrient deficiency occurs, processes such as photosynthesis, water transport, stress management and carbohydrate production will be lower than required, which can lead to a reduction in potential yield. It is therefore crucial to provide your crop with adequate nutrients. This will ensure

that you maintain plant health and increase the efficiency of photosynthesis. The plant needs to make use of as much sunlight as possible, which is converted into sugars (energy) to support optimal seed development and maturation.

Essential nutrients that play an important role are:

- **Macronutrients:** Nitrogen (N), phosphorus (P) and potassium (K) are considered the most important and are referred to as essential nutrients. Calcium (Ca), magnesium (Mg) and sulphur (S) also play a key role but are needed in much lower concentrations.
- **Micronutrients:** Elements considered essential micronutrients during the reproductive stage include boron (B), copper (Cu), iron (Fe), manganese (Mn), molybdenum (Mo) and zinc (Zn). Micronutrients are essential plant nutrients required by crops in small quantities but play a crucial role in helping crops reach their maximum yield potential.

Table 1: Rolfes Agri's Acticell® solutions that apply to soya bean production.

Solution	Description
Acticell® Bio-CalBor	A calcium and boron fertiliser for use as a foliar feed to maintain or increase calcium and boron levels.
Acticell® Bio-CalMag	A calcium, magnesium and boron fertiliser for use as a foliar feed to maintain or increase calcium and magnesium levels.
Acticell® Bio-Man	A manganese fertiliser for use as a foliar feed to maintain or increase manganese levels.
Acticell® Bio-Zinc	A zinc fertiliser for use as a foliar feed to maintain or increase zinc levels.
Acticell® Maintenance	A multi-dimensional, high-quality foliar feed for maintaining the nutritional status of crops.
Acticell® MoB	A boron and molybdenum fertiliser for use as a foliar feed to promote pollen germination and growth.
Acticell® Supreme	A potassium, phosphorous and boron fertiliser for use as a foliar feed to maintain or increase potassium, phosphorous and boron levels.

The Rolfes Agri solution

Rolfes Agri introduced the Acticell® range of products in 2019. This range consists of 16 unique products, seven of which can play a vital role in soya bean production. These products are made up of single nutrients as well as multi-nutrient mixtures, all containing plant biostimulants, protein hydrolysates and/or kelp extracts. Refer to *Table 1*.

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