

# The critical role of the soya bean supply chain

By Dr Erhard Briedenhann, chairperson: Oilseeds Advisory Committee

**T**he growth of South Africa's soya bean industry in the last 20 years is one of agriculture's great success stories. Soya bean production has increased by 450% – from 282 000 tons in 2007/8 to 1 550 800 tons in 2018. The long-term debate always revolved around which would come first – growth in production, or capacity to process?

**Growth in crushing capacity** has paved the way for value chain expansion, from an estimated 600 000 tons in 2010 to the current estimated capacity of 2,1 million tons. This capacity, and that of full-fat soya processing, is expected to meet the country's demands for at least the next five years.

**Agronomic practice improvements** have largely boosted increased yields. Practices such as rotational cropping, conservation agriculture and accurate application of Rhizobia are some of these improvements. Research worldwide has confirmed the fact that narrower rows increase yield potential in soya beans. Planting date has also become an integral part of the process and decision.

**Chemicals** have been made available for effective weed control, and the introduction of new chemicals and biological products to manage debilitating diseases such as Sclerotinia have become critical for the industry.

**Fertiliser** usage is better optimised through improved understanding of soil status and the nutrient requirements of soya beans, allowing for the application of appropriate nutrient ratios.

**Cultivars** selected for regional use have been successfully tested and trialled over many years. Daylight length, temperature during growing, the date of the first likely frost, and disease challenges can be more accurately estimated. These parameters

are added to potential yield and influence cultivar selection. The continuous introduction of new technology and cultivars has had a positive effect on average yields.

**The introduction of a new technology levy**, effective from March, has created the expectation that we will not only maintain yields, but also boost them in future.

**Nutrient content**, namely oil protein and amino acids, is the reason why soya beans are grown and purchased, and it is imperative for the future of the industry that growers strive for increased nutrients harvested rather than vegetative mass. The focus on improved nutrient yield could benefit everyone in the supply chain. Should South Africa be fortunate enough to be able to export soya beans, we will need to meet minimum oil and protein content requirements to offer a marketable product to foreign countries.

**Transformation** has received significant attention in the soya bean industry. Emerging farmers have entered the market and soya bean processing at household level contributes to food security. Soya bean production in South Africa has the potential to increase our contribution to food security and reduce malnutrition. Expanding the transformation initiative requires ongoing focus.

**The oilseeds supply chain** faces numerous challenges, including political uncertainty and slow economic growth. The absence of reliable, continuous power supply and quality water has an extremely adverse effect on soya bean processors.

**The feed industry** is the biggest global consumer of soya bean meal (239 million tons). South Africa is no different, with the livestock feed industry consuming an estimated 1,2 million tons of soya bean meal per annum, or 98% of domestic



Dr Erhard Briedenhann.

soya bean production (including full-fat soya). There has been a slow, but steady, conversion of the local feed industry from imported to domestically produced soya bean meal. A reliable, consistent and quality supply is the guarantee the industry requires, and some end users have taken longer than others to be convinced.

When looking at the future of the country, sustainable protein production is critical, and the contribution of the soya bean value chain should be emphasised. According to BFAP, we are predicted to consume 1,56 million tons of soya bean meal by 2027. If South Africa produces 2,1 million tons of soya beans by 2027, we could reach self-sufficiency.

It has been a long, rewarding and exciting journey, but now is not the time for us to sit back and claim 'mission accomplished'. There is still a long, hard road full of challenges ahead. 🌱

For more information, contact Dr Briedenhann at [erhardb@netactive.co.za](mailto:erhardb@netactive.co.za)