

Soya can fill a gap in the human consumption market

By Ursula Human

The Oil and Protein Seeds Development Trust (OPDT) and the Oilseeds Advisory Committee (OAC) hosted a symposium in September this year that focussed on soya bean for human consumption. The event was held virtually and broadcast live to give viewers the inside scoop.

According to chairperson of the OAC, Dr Erhard Briedenhann, who led the symposium, the purpose of the event was to highlight the potential of soya bean and to drive home the fact that the industry needs to produce more soya for human consumption.

Currently, most of the soya beans produced in South Africa are used for animal feed. However, Dr Briedenhann and expert speakers at the event, emphasised soya's potential as an alternative source of proteins for humans. Soya is ideal for

the local market as it is a highly nutritious, affordable food.

Soya bean production in SA

The symposium kicked off with an overview of soya bean production in South Africa, setting the stage for discussions regarding the future of this industry. The day was structured around three themes, namely production, the economic environment and soya bean processing. Production was covered by Dr Jan Dreyer of the Protein Research Foundation's research priority committee, Dr Lisa Rothmann, lecturer at the University of the Free State, and Jane McPherson, farming consultant and contractor.

Dr Dreyer gave insight into ways in which the country can improve its soya bean yield. Although South Africa has made great strides in boosting yield, there is still room for improvement, seeing as the world record

for the most soya beans harvested is 11,5 tons/ha – the South African record is 5,3 tons/ha (dryland). In 1991, 62 900 tons of soya beans were produced from 83 000ha. Compare this to the 1 918 150 tons produced from 827 100ha during the 2020/21 season. Dr Dreyer discussed agricultural practices and cultivars as some of the ways to improve yield.

Dr Rothmann's talk was titled 'Jack and the soya beanstalk: Slaying disease giants', in which she gave an overview of the top viruses, fungi and other pests that soya bean producers must look out for in their fields. She placed a lot of focus on her field of expertise, *Sclerotinia*, that has gone up the list of threats to soya bean health across the globe.

She also shared the results of a Twitter poll she posted on her page (@Landboulisa) that centred on global emerging pathogens threatening soya bean production. A total of 30,6% (out of 72 votes in 36 hours) identified soya bean anthracnose as a threat. *Meloidogyne enterobil* was voted as the second-most threatening (25%), soya bean vein necrosis virus came in third (18,1%), while other diseases made up 26,4%. In the other category, the diseases pointed out were taproot decline, target spot and frog-eye leaf spot.

Economic aspects

The economic environment of soya bean trade was discussed by Dr Ferdi Meyer of the Bureau for Food and Agricultural Policy (BFAP), as well as agricultural economist Dr Dirk Strydom of Grain SA. Both speakers emphasised that local yield needs to improve to fill the gap in the market for soya for human consumption. Currently only 20 000 to 25 000 out of 1,9 million tons of locally produced soya are allocated to human consumption.



From the left is Dr Erhard Briedenhann of the Oilseeds Advisory Committee, Dr Ferdi Meyer of the Bureau for Food and Agricultural Policy, Dr Dirk Strydom of Grain SA, and De Wet Boshoff of the Animal Feed Manufacturers' Association.

According to Dr Meyer, South Africa managed to successfully increase its soya bean yield over the last ten years, which means we are keeping up with international trends. Although local soya bean production (area) has increased rapidly, South Africa is still a very small producer on the global scale. Worldwide production is concentrated in the Americas, and is expanding in hectares faster than maize.

Dr Strydom added that the expansion of locally produced soya bean is a great success story and shows that the industry is actively working towards achieving its goals. He lauded the milestone of bringing in new cultivars, which are better suited to the local production environment, through the South African Cultivar and Technology Agency (SACTA). This will also contribute to improving yield per hectare. With yield increases, the economic sustainability of soya bean is set to improve.

Soya bean processing

Three top professors shared their knowledge regarding the different aspects of soya bean processing for human consumption. Prof LJ Grobler of North-West University discussed twin screw extrusion technology for safe, affordable and nutritious human food,



On the left is Dr Erhard Briedenhann of the Oilseeds Advisory Committee, and Prof Hettie Schönfeldt of the University of Pretoria, and Prof LJ Grobler of North-West University.

while Prof Hettie Schönfeldt of the University of Pretoria focussed on the uses of soya bean for human consumption in South Africa.

Prof Schönfeldt said soya is not readily available to the local consumer, creating a gap in the market that producers could fill. Although soya is commonly used as an ingredient in processed food due to its

high protein and emulsification properties, it is not found in its whole form – canned soya beans, for example, is a product not often seen on retail shelves in South Africa.

She emphasised that consumers want an easy-to-make product that requires no soaking and has a short cooking time. Not only do consumers have limited time to cook – electricity to do so is also costly. A survey conducted for her research showed that consumers do not know how to cook soya products, which offers another opportunity for market development.

School feeding schemes are also a welcome market for this product. According to Prof Schönfeldt, soya, in combination with maize, is a good source of nutrition for children. However, the quality of the product on tender is not always ideal and this means that children often dislike the product. She said more research and development is needed to create a product that will teach children to enjoy plant protein. 🌱

Download all the presentations of the speakers and watch the videos of their talks by scanning this QR code.



For enquiries, visit the Oil and Protein Seeds Development Trust and the Oilseeds Advisory Committee website at www.opot.co.za.



From the left is Dr Jan Dreyer of the Protein Research Foundation's research priority committee, Jozeph du Plessis, chairperson of the Sunflower and Soybean Forum, Oilseeds Advisory Committee and the South African Cultivar and Technology Agency, Dr Lisa Rothmann, lecturer at the University of the Free State, and Jane McPherson, farming consultant and contractor.