

260 producers, a 100 more than last year, attended this year's soybean demonstration day that took place in Pretoria.



Tent bursting at its seams

RUTH SCHULTZ, SA GRAAN/GRAIN CONTRIBUTOR

Despite the negativity in the political sphere and persistent security threats in agriculture, one still experiences positive energy in the agricultural sector in South Africa. This energy could be felt at the Protein Research Foundation's (PRF) soybean demonstration day that took place on 21 February 2012 at the Hatfield Experimental Station at the University of Pretoria (UP).

100 more producers than last year attended this day – the tent in which the speakers from South Africa, Canada and Argentina made their presentations, was filled to the rafters.

A number of questions need to be answered to deal with the ultimate job and development issues in South Africa. How to improve the gross margin of soybean production through no-till activities; how to introduce activities of processors that will lead to more than 6 tons per hectare; and what are the improved cultivation practices in soybeans, are just some of the questions that were answered on this day.

According to Prof Johann Kirsten (head: Agricultural Economics, Extensional Rural Development, UP) there is a greater interest in agricultural science among students at the UP since marketing and engagement by professional associations of agriculture and the private sector have improved.

"The UP has partnered with the private sector to host an agricultural science career fair. At the end of August this year we will probably have one of the largest agricultural science career fairs in South Africa," he said.

Challenges and concerns

Prof Kirsten said that despite the concern regarding leadership and direction, agriculture has improved its image and status with-

in the national policy. "The national planning commission has recently indicated that agriculture is seen as one of the drivers of creating jobs."

He sees the production of soybeans as one of the key drivers of achieving the latter. "South Africa should replace their imports and assure a greater on-farm activity, but also a greater off-farm activity. There are predictions that in the next year or two we will produce one million tons of soybeans and there are also indications of companies that would want to invest in crushing capacity."

No-till in Argentina

Why do the producers in Argentina use no-till in soya production? Dr Pedro Barbagelata (research scientist: National Agricultural Technology Institute, Argentina) answered this question by naming some benefits of no-till.

"It lowers production costs, less machinery is used, the crop area is utilised earlier, the yield stability is higher because of higher water use efficiency in the system and the producer can reserve the soil for future generations."

Residue cover helps avoid rain impact and soil detachment, but no-till in the Entre Ríos province in Argentina is not good enough to avoid sediment delivery, rill and gully formation, especially in the clay soils characterised by its low infiltration rates when wet. They consequently not only use no-till, but also plant the soybeans in terraces, plants cover crops and do crop rotations.

What is the secret?

Prof Dave Hume (professor emeritus: University of Guelph, Canada) talked about a producer from Canada who has won the US high yield contest for soybeans several times. "Kip Cullers' winning yield in 2010 was

10,75 ton/ha on an area of 2 ha. Producers flocked to his farm to try and understand his recipe," Hume said.

Some of his secrets include:

- High fertility because of the use of chicken manure on deep topsoil.
- Stress minimisation with irrigation.
- Crop protection with fungicides.
- Branching at lower nodes stimulated by spraying with herbicide that partially or completely destroys the growing points.
- Mist at mid-day to keep leaf temperatures down.
- The use of Bio-Forge – this product decreases ethylene (a gas the plant produces in response to stress), shortens internodes and allows nodules to fix normally, even in the presence of high available soil nitrogen.

How are producers in Canada adapting his techniques?

They are using:

- High fertility fields
- Early planting of full-season varieties
- Irrigation
- Narrow rows
- Added fertility by applying manure
- Bio-Forge (it allows normal nodulation in the presence of high available soil N)

Mr Wessel van Wyk (contractor: PRF) spoke about the important cultivation practices of soybeans. In his presentation he gave an overview of inoculation and Rhizobium, fertilisation, planting dates, no-till and reduced tilling as well as Sclerotinia. Van Wyk's presentation on these aspects and more will be shown at the PRF's stand at Grain SA's NAMPO Harvest Day this year. Be sure to visit this stand. ■