

## **BRIGHT FUTURE FOR SOUTH AFRICAN SOYBEAN FARMERS**

Since 1994 the Protein Research Foundation (PRF) has been committed to promoting soya. Now, for the first time in the past 10 to 12 years, soybean can compete economically with maize, and even exceed it. The best ever yield of soybeans in South Africa (SA) was 424,000 tons on 240,570 ha in the 2005-2006 production season. However, the 2008-2009 soybean season looks even more promising, with estimates of 450,000 tons from an area of 224,750 ha, giving an average of approximately 2 tons/ha.

Due to the SA demand for protein, more than 1 million tons of protein for animal consumption, and approximately 500 000 tons of edible oil, are imported annually, at a cost of almost R6 billion. Expansion of sunflower is limited because of its fibre content and canola is still a very new crop as production only began in 1995.

In view of these facts, the PRF decided that soybean is a crop with tremendous potential, although at this stage production is still low. Up until 1994 maize board guided the maize industry which resulted in a price fixing situation enabling farmers to make a living out of planting only maize. Consequently, there was no incentive for farmers to practice crop rotation with, for example, soyas. However, since 1994, with the end of price control of agricultural products, other crops, for example soybeans, have been able to show their value and potential in the agricultural market.

With the present declining and limited research capacity in SA, the soy industry remains small and has, in fact, already fallen very far behind the rest of the world. Brazil was in a similar situation in 1985 when they were planting only 200 ha to soybean. Ten years later soybean was the most important crop in Brazil and in 2009 they harvested 58 million tons making them the second biggest soybean producers in the world. In 2000 they were harvesting 2 tons/ha but with advanced agronomic practices, they are now averaging 3.1 tons/ha. Scientists in Brazil believe that the breeding of specialized cultivars, soil management, correct planting dates, insect, nematode and disease management have been key factors in their successful increase of production.

As there are presently no government soybean breeders in SA, the PRF embarked on an exciting promotional campaign in 2007 to look abroad for research institutions, universities and researchers to help increase soybean production, with a target of doubling SA production in the next 5 years according to the Chairperson of the PRF, Mr Gerhard Scholtemeijer. In addition to the efforts of companies breeding soybean seed in SA, the PRF decided to complement the research previously done by the Agricultural Research Council (ARC), by seeking assistance from scientists in North and South America to compliment the SA research programme.

After three visits to Embrapa Soy in Brazil over the past two years, a Memorandum of Understanding (MOU) has recently been signed between Embrapa and the PRF, opening the way for this programme to begin.

Embrapa is an agricultural research organization, similar to the ARC in SA, and consists of 40 different institutes that are involved in various kinds of agricultural research. The Head Office is in Brasilia, the capital of Brazil. Embrapa Soy is situated near Londrina in the state of Parana, Brazil. It employs 303 specialized employees of which 75 are researchers of which 80% are PhD graduates, which places them among the biggest soybean research organizations in the world. Embrapa Soy is also involved in a challenging research programme together with seed producing companies. Germplasm is given by Embrapa to various seed producing companies to be incorporated into their breeding lines. Cultivars that are produced remain the property of Embrapa but the seed company has the right to sell it.

Certain Embrapa Soy public cultivars are already available to be tested in SA with some Embrapa lines to follow shortly. The plan is to test 10-12 cultivars with a variety of special traits, e.g., root knot nematode resistance, early planting cultivars, high yielding, disease and drought resistant cultivars etc. These cultivars will be in the 4-8 maturity groups and will be incorporated in National Cultivar Trials in the 2009-2010 growing season. Successful cultivars will be made available to commercial companies by Embrapa for sale in SA.

A similar programme is underway with the University of Viçosa in the province of Minas

Gerais, Brazil. The university began as the College of Agriculture and Veterinary Sciences in 1922, but its name was changed to the "Rural University of Minas Gerais" in 1948. In 1969 it became the Federale University of Viçosa. It boasts a staff of 900 academics with 10 000 undergraduates and 2 000 post-graduate students. It is not surprising that this university has national and international recognition.

These international research programmes not only show that the PRF is serious about expanding co-operation with Brazil, but also opens new doors which will greatly contribute to their new and concerted national generic marketing programme to dramatically increase soybean production in SA over the next five years.

**Dr PM Caldwell, University of KwaZulu-Natal**

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