

Soya beans levy allows access to new cultivars and technology

By Gert Heyns, CEO, South African Cultivar and Technology Agency (SACTA)

In June 2018, the former minister of Agriculture, Forestry and Fisheries approved a statutory levy for the purpose of funding seed breeding and technology based on which seed companies can be compensated for their performance in the soya bean seed market.

The levy aims to assist with the funding of new variety development and to ensure that South Africa has access to state-of-the-art biotechnology. The funds are paid to seed and technology companies who are actively involved in breeding new varieties and who introduce current and advanced biotechnology. Compensation depends on each company's market share.

The impact of farm-saved seed

Since soya bean is a self-pollinating crop, approximately 80% of soya beans are produced from farm-saved seed. For this reason, seed and technology companies are hesitant to invest in new variety and technology development, as their return on investment is not guaranteed.

Based on the increase in planted hectares, soya bean production has significantly increased over the past five years, but the yield increase per hectare was marginal. Although successful soya bean production is the result of the interaction of various production inputs, the availability of suitable, high-potential varieties, in conjunction with current biotechnology, is a major contributor to increased and successful soya production.

The 2019/20 soya bean marketing season is the first in which the South African Cultivar and Technology Agency (SACTA) has imposed and collected the soya bean levy. The levy has been collected on 95% of all soya beans that were delivered during the season. This

percentage is expected to increase as producers are gradually pricing the soya beans that have already been delivered.

SACTA's analysis of the implementation of the levy system further reiterates the successful progress that has been made, now that there is an opportunity to incentivise seed and technology companies to develop new varieties and improved technology.

Progress in biotechnology

South African producers have not been able to access the progressive biotechnology available to countries such as Brazil, Argentina, Uruguay and the United States (US). Seed companies have been proactive and have already planted advanced deregulation trials within the past three years to ensure that the extensive technology gap between South Africa and other soya-producing countries is bridged as soon as possible.

Three significant seed companies are involved in the various stages of the deregulation trials with the aim of ensuring that local soya producers will be on par with their global peers within the next four years. The initial biotechnology traits that are expected to be deregulated in South Africa, are glyphosate- and insect-resistant traits. Seed could be available for planting as early as the 2021/22 production season.

In addition, various other companies have announced that the deregulation of traits such as glufosinate resistance, combinations of glyphosate and glufosinate resistance, as well as insect resistance will be conducted. These traits have a good chance of including drought and salinity resistance.

Genetic material availability

South Africa is fortunate to have local breeding programmes in which unique, adapted varieties can be developed and marketed. Although these programmes are local, they use genetic material that is licensed from companies abroad. The breeding and

technology levy motivates these companies to make their lines available for breeding purposes, which means that South African breeders now have access to the best material.

Companies that do not utilise local breeding programmes, introduce varieties that have been bred in countries such as Brazil, Argentina and the US. These varieties are thoroughly tested locally and once they are found to be suitable for local production, the rights to produce and market them are licensed in South Africa. However, the owners of the plant breeder's rights are reluctant to grant such rights if there is no reliable system ensuring a reasonable return on investment.

After the introduction of the breeding and technology levy system, many international companies have offered to supply genetic material to local breeders. However, it is important to note that most of the new-generation genetics available for breeding purposes, have already been converted to contain new biotechnology.

The new biotechnology will have to be deregulated in South Africa before the new genetic material can be incorporated into breeding programmes. This would not have been possible without the breeding and technology levy system.

The way forward

The levy's implementation on soya beans has proven to be successful for seed and biotechnology suppliers alike. The second season of the levy on soya beans runs from March 2020 until the end of February 2021. During 2020 an application for the continuation of the levy after 28 February 2021 will be submitted for consideration. The levy will form an integral part of financing the necessary research in the continuous development of new soya bean varieties. 🌱

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