

# Smallholder farmers planted first WEMA maize hybrids

Smallholder farmers who planted the first WEMA conventional drought tolerant maize hybrids in South Africa the past 2014/15 season, plagued by one of the worst droughts in many years, doubled their yields. The variety, DroughtTEGOTM WE3127, is a white hybrid. ARC (Agricultural Research Council) distributed 10 000 seed packs, 500 grams each, free to smallholders in Limpopo, Mpumalanga, North West, Free State and KwaZulu-Natal for them to try out the variety.

The DroughtTEGOTM hybrid was developed by the ARC under the WEMA (Water Efficient Maize for Africa) project co-ordinated by the Kenya-based AATF (African Agricultural Technology Foundation). The public-private partnership also involves CIMMYT (International Maize and Wheat Improvement Center), Monsanto, and agricultural research organisations in Kenya, Mozambique, Uganda and Tanzania. Monsanto donated the insect protection (Bt) and drought tolerance (DT) technologies to the WEMA project. These GM technologies will be deployed to smallholder farmers royalty free.

At Mooifontein, near Lichtenburg, North West, according to Prince Molema, one of four smallholders who planted the drought tolerant maize, their average yield was 2t/ha compared to 1.5t/ha for other commercial hybrids. Average rainfall during the season was 250 mm compared to an average 500 mm in a normal year.

In Limpopo, nine smallholders – six men and three women – from the Ga-Mokaba village in the district of Mokopane, planted seven hectares. According to Isaiah Setseta, chairman of the Mokaba Farmers' Association, their yield was 1.14t/ha compared to 0.6t/ha conventional maize the previous season, with good rains – 100% increase in a season that has been termed the worst in two decades. They only had rain immediately after planting and again during flowering.

Mr Setseta was speaking at a farmer's day attended by some 65 smallholders



**Smallholder farmers from the Ga-Mokaba village, Mokopane, Limpopo, showing off their first bumper drought tolerant WEMA maize crop. From left are: Dr Kingstone Mashingaidze, research team manager for plant breeding and biotechnology, ARC Grain Crops Institute, Potchefstroom; Dr Sylvester Oikeh, WEMA project manager, African Agricultural Technology Foundation, (AATF) Kenya, and three smallholder farmers, Jane Mohlake, Melita Somela and Ramasela Moabelo.**

from surrounding villages who came to see what benefits this new DroughtTEGOTM technology could offer them.

He said they planted their maize on December 22 and harvested on May 25 this year, 2015. The seed was planted with a planter but harvesting was done by hand. To control weeds, Roundup was sprayed on the land before planting and followed up by hand-hoeing to eradicate a few individual weeds that sprouted after the emergence of the maize. "We are very happy with this WEMA maize and we are going to double our hectares this coming season," said Setseta.

Dr Thula Dlamini, agricultural economist from ARC, described their yield as "a remarkable achievement. The farmers are likely to double their farm gate income this year. The implications on food security are numerous. The technology guarantees

output in difficult production seasons. The expectation is that more smallholder farmers will be enticed back into agriculture."

Dr Kingstone Mashingaidze, research team manager for plant breeding and biotechnology from the ARC Grain Crops Institute, Potchefstroom, spearheading the WEMA project in South Africa, called on farmers to work together. "The yields we are seeing today show us what can be achieved if we work together to put smallholder farmers on the road to becoming commercial farmers. Seed for the coming season will be available from licensed seed companies, Jermart and Capstone. We are looking forward to launching Bt (insect-resistant) varieties in the near future," said Dr Mashingaidze.

For more information contact Dr Mashingaidze on 018 299 6356 or 074 694 6946.