

## **Revolutionary New Maize Trials Planter**

A unique and revolutionary eight-row precision planter, the first of its kind in South Africa, has been imported by Monsanto to accelerate the planting of maize yield trials and to improve data quality with more accurate precision planting technology.

The project was initiated in February 2011 and finally came to fruition with the delivery of the planter in August 2014.

The Almaco precision planter has sophisticated engineered features and boasts the world's most advanced technology. A John Deere 8245R tractor with auto steer functionality was also purchased to operate the planter.

The planter can be programmed to implement planting density, fertiliser application rates, plot length and row width.

"Plant population can be programmed while planting, from 20 000 plants/ha to 130 000 plants/ha. Fertiliser buckets are electronically operated to ensure that each plant gets precisely the same application. Up to four different fertiliser applications can be accommodated in one experimental field if required," says Mauritz Lombaard, testing operations manager of the maize breeding team at Monsanto.

Experimental plots of varying lengths are planted at 75cm, 91cm, 1.5m or 2.3m row widths, depending on the precipitation levels of the area. The planter is operated by two persons seated on top of the planter who feed the planting tubes with pre-packed seed envelopes containing different experimental hybrids.

Every plot is mapped according to GPS coordinates and is harvested with specially converted New Holland combines to collect yield data.

Research Yield Trials are planted across five provinces – Gauteng, Free State, Mpumalanga, North West and Northern Cape – by a skilled testing team.

All trials are planted on land rented from commercial farmers. The farmers play a critical role in the quality of the trials. Trials are adapted according to the farmer's practices and fertiliser recommendations, as well as insect and weed control measures.