**GK 02/12: OPTIMISING SEEDING RATE AND PLANTING DATE FOR WHEAT CULTIVARS IN SOUTH AFRICA**
**PROGRESS REPORT APRIL 2010 – MARCH 2011**

***Summary***


**Number:** GK 02/12
**Title:** Optimising seeding rate and planting date for wheat cultivars in South Africa.
**Duration:** April 2010 – March 2013 (extension)
**Status:** Report of the first year of the extended project with newly released cultivars
**Project Leader:** Mr Willem Kilian

The field trial was conducted at Bultfontein and Bethlehem, which is representative of the North Western Free State and Eastern Free State respectively. The first year was successfully completed at the Bethlehem locality, notwithstanding unfavourable environmental conditions. With the onset of this project, the main objective was to determine the optimum seeding rate and planting date for wheat cultivars in the dryland summer rainfall region. The trials were planted using a split-split-plot design to include three planting times, six seeding rates and twelve cultivars, at four replications on both the localities.

Recommendations of seeding rates and planting dates require research inputs to statistically prove the optimal seeding rate and planting date for each cultivar. The project has the following long-term objective in mind:

- To statistically determine the optimal seeding rate and planting date for cultivars in a specific dryland region in the summer rainfall region in South Africa, with regard to yield and quality.

In order to achieve the above-mentioned, the following short term objectives were set:

- Measuring the effect of seeding rate and planting date on yield, quality and plant-components applicable
- Determination of the optimum seeding rates required for high yields and good quality of these cultivars.
- Determination of the optimum planting date for high yields and good quality of these cultivars, with regards to seeding rate.

The 2010/2011 season represented the first season of the extended project to be executed in the Eastern Free State and the North Western Free State, with the twelve new cultivars. Differences in plants/$m^2$ were achieved with different seeding rates applied. This led to differences in grain yield and grain quality aspects. Significant differences were obtained in the interaction between planting date and cultivars. Recommendations will be made after completion of the three years extension on the project.