

# WINTER CEREAL TRUST PROGRESS REPORTS 2010-2011

## CROP IMPROVEMENT

GK 01/01, GK 01/02, GK 01/03, GK 01/04: SEED MAINTENANCE OF SGI DEVELOPED  
SMALL GRAIN CULTIVARS  
2011 PROGRESS REPORT: APRIL 2010 – MARCH

### Summary

- Number:** GK 01/01  
**Title:** Maintenance and supply of pre-basic (breeder) and basic seed of small grain cultivars in the summer rainfall region at Vaalharts (Irrigation, Northern Cape) and Bethlehem (Dryland, Free State).  
**Duration:** Ongoing  
**Status:** Continuation of existing project  
**Project leader:** Ms N van der Merwe
- Number:** GK 01/02  
**Title:** Maintenance and multiplication of nucleus seed of small grain cultivars and lines through single seed descent procedure in the summer rainfall region at Vaalharts (Irrigation, Northern Cape) and Bethlehem (Dryland, Free State).  
**Duration:** Ongoing  
**Status:** Continuation of existing project  
**Project leader:** Ms N van der Merwe
- Number:** GK 01/03  
**Title:** Maintenance and supply of pre-basic (breeder) and basic seed of small grain cultivars for the winter rainfall region.  
**Duration:** Ongoing  
**Status:** Continuation of existing project  
**Project leader:** Ms N van der Merwe
- Number:** GK 01/04  
**Title:** Maintenance and supply of pre-basic (breeder) and basic seed of small grain cultivars at Riet River, Northern Cape.  
**Duration:** Ongoing  
**Status:** Continuation of existing project  
**Project leader:** Ms N van der Merwe

The production of basic and pre-basic seed is one of the most labour intensive and time consuming activities in the development of new cultivars and the release of certified seed to the marketing companies involved. This action is also the most important step to ensure continuous high quality seed as well as to ensure that there is no genetic drift during the lifespan of a cultivar in the market. If this action is not on standard and under the supervision of a dedicated scientist, the production of basic and pre-basic seed is doomed with devastating results for the marketing companies, as well as the wheat producing community of South Africa.

Without a proper seed multiplication programme in place, an institution developing new wheat cultivars, as well as maintaining existing cultivars in South Africa, is not in the position to meet all the regulations set by SANSOR for certified wheat seed to protect the marketing companies, as well as the wheat producers in South Africa.

The success of ARC-Small Grain Institute's newly developed cultivars, is totally dependent on the supply of adequate cultivar-pure seed to the seed industry for multiplication and then for distribution to the local wheat producers. Pure seed of all small grain cultivars, including wheat and oats are produced and supplied on order.

A limited amount of cultivar pure seed of the new ARC-SGI cultivars to be commercialised were produced to be able to meet the marketer's requirements to enter the market in a specific production area. Adequate seed of all existing cultivars were produced and processed.

There is an increasing risk posed by the practice of farm-saved seed. This practice can lead to a significant decrease in pre-production contracts for these seed multiplication projects.