



Seed Genetics

## Excel Ladino Clover

### Origin and Breeding

The variety 'Excel' was developed by Seed Genetics Australia over three cycles of recurrent mass selection from open pollinated populations tracing to a nursery in which clones selected from 'Ladino' and 'Waverley' varieties were cross pollinated. Clones had been selected on the basis of vigour, yield and varietal characteristics.

In each generation undesirable plants were eliminated and plants were selected on fodder production, increased winter activity, flowering characteristics, morphology, disease resistance, and seed production. Emphasis was placed on the 'Ladino' type coupled with early flowering. Progenies were reselected in nurseries in which survivors were allowed to cross pollinate to produce seed. Various phases of the program were conducted at Canberra, ACT, Moruya, NSW and Frances, South Australia.

### Agronomic characters

'Excel' is most readily distinguished from the Ladino-type varieties 'Will and Regal' by its increased frequency of early flowering plants, shorter and thinner petioles, shorter and thinner peduncles, more pronounced leaf markings, a higher number of inflorescences and increased seed production. 'Excel' also has longer leaflets, larger leaves, greater petiole length and width, greater flowering intensity in summer and greater numbers of inflorescences produced in spring. Excel Ladino has large leaves similar to Will Regal and Haifa.

'Excel Ladino' is more winter active (rating 6) than 'Will' ladino (rating 4/5). Therefore 'Excel' is able to provide more winter forage in regions which experience moderate frosts in winter. It is adapted to temperate climates to sub-tropical environments. It is early flowering, beginning flowering at the same time as 'Haifa', and considerably earlier than "Will and Regal' ladino.

In trials in the Frances (South Australia) and Apsley (Victoria) districts in 2003-04, 'Excel' averaged 4.2 tonnes/hectare and 'Will' yielded 3.7 t/ha, **an advantage of 14% to 'Excel'**. 'Excel' has a high density of stems providing an ability to quickly recover from cutting and grazing. It has been included in trials in Victoria in which performances of clovers are being compared in mixtures with Italian ryegrasses.

'Excel' has also been entered in a trial conducted by the Queensland Department of Primary Industries at Gatton, in South East Queensland. Plots were cut at 4 week intervals during the first winter. Under these conditions 'Excel Ladino' averaged 1.48 t/ha and 'Will' averaged 1.46 t/ha over three cuts in July and August 2004.

Following its outstanding initial performance, particularly in summer production, 'Excel' is undergoing extensive testing in trials in the US, Europe, Argentina and Uruguay. Seed production is in progress and it is expected that seed will be available in 2005.

Results in the official entry trials for Europe show a similar yield to Fantastico and Regal.

Excel Ladino is protected under Plant Breeders Rights.

For more information please visit our website

<http://www.seedgeneticsaustralia.com>