Media Release

17 September 2009

Summer dormancy- one way for pastures to survive hotter and drier times

Plant breeders from around the world have highlighted the need to develop plants with the ability to become dormant over the summer months and survive the expected hotter and drier climates of the future.

This key finding from the *First International Workshop on Summer Dormancy: Coping with Increased Aridity And Heat Under Climate Change* held in Oklahoma, United States, has highlighted the role summer dormant plants could play in Australian agriculture's adaptation to climate change.

Dr Mark Norton, Future Farm Industries CRC (FFI CRC) researcher and agronomist for the NSW Department of Industry and Investment, said the key limitations to pasture persistence in many southern Australian grazing systems are low rainfall and long, hot, dry summers.

"Better utilisation of the summer dormancy trait found in the phalaris, cocksfoot and tall fescue species could enhance resilience to an increase in the intensity and frequency of drought," Dr Norton said.

"It also very likely the development of a perennial wheat for southern Australia will require the use of a strong drought resistance trait, such as summer dormancy, to survive several months of dry conditions each year."

Most species use a combination of traits to resist drought with each trait expressed in varying degrees.

"For example, deep rooting is found across all phalaris varieties whereas dormancy is a relatively more important feature in cocksfoot. A key priority now is to develop compatible pasture mixtures that combine both summer active and summer dormant species. In this way, we can produce fodder in response to rain during any season while minimising competition between the pasture components," Dr Norton explained.

Perennial cool-season grasses are the main fodder source for livestock in the world's temperate pastoral systems but the persistence of these types of grasses in Mediterranean-type climates has been poor. Recent devastating droughts have wreaked havoc on livestock production in these climates which has resulted in plant breeders increasing their interest in the summer dormancy trait.

"It was this interest that resulted in the International Workshop on Summer Dormancy that I attended earlier this year," Dr Norton said.

"The workshop concluded with the establishment of a permanent international committee with myself and Carol Harris (another FFI CRC researcher) as the Australian representatives. The committee will develop standardised evaluation techniques, measurements and protocols for different grass species across the temperate regions of the world."

The knowledge and contacts gained through their involvement with this committee will help Australian researchers gain information to develop grasses with the summer dormancy trait to improve the survival and profitability of southern Australian grazing enterprises.

The full story about using summer dormancy change can be found in the latest edition of the FFI CRC's *Focus on Perennials* which can be downloaded from their websites' publications section: www.futurefarmcrc.com.au\publications.

Media Enquiries: Greg Lawrence, **T:** 0429101 675 **E:** greg.lawrence@futurefarmcrc.com.au
Further information: www.futurefarmcrc.com.au