

Sulla and other forage species for southern Australia

Dr Mike Ewing

Centre for Legumes in Mediterranean Agriculture, University of Western Australia

Objectives

The objectives of this project are to:

- Identify new legumes species and cultivars suited for use in a range of existing and innovative fodder production systems.
- Work with the fodder industry to develop and demonstrate the productivity and quality potential and benefits of new fodder legumes and to identify constraints to their adoption.

Background

Changes in farmer systems and new technology in the form of new legume cultivars has stimulated interest in their potential in fodder production and also the further development of new legume species and cultivars with potential for use in such systems.

Research

The project involved a program of activities linking evaluation of plant and rhizobial genetic resources, evaluation of promising legume species and cultivars in field experiments, and demonstrating legume productivity in a range of fodder production systems. The field evaluation and demonstrations were conducted on the farms of fodder producers and covered a wide range of soils and management systems.

Outcomes

Key outcomes included:

- Demonstration that newly available legume species and cultivars were highly productive in fodder systems, such as Cadiz French serradella.

- The release of Caprera crimson clover and Cefalu arrowleaf clover for use as dual-purpose grazing/fodder plants on well-drained soils.
- Identification of elite accessions of a group of legumes (and their root nodule bacteria) that, with further testing, will add to available fodder legume options, such as sulla (*Hedysarum coronarium*) and purple clover.

Implications

The project has identified legumes that combine high productivity in fodder production systems with adaptation to soil and climatic condition prevailing in high-rainfall regions where fodder production is concentrated. Producers now have a greatly expanded array of legume options to include in their systems to cover the wide range of environmental conditions that they face and the managerial systems that they impose.

Acknowledgment

This project is sponsored by the Rural Industries Research and Development Corporation (project UWA-30).

Publications

- Ewing, M. A. 1999. New pasture species. *Proc. 11th Australian Plant Breeding Conf.* Vol. 1: 86–90.
- Ewing M.A. 1999. Sulla and other forage species for southern Australia. AFISC Conference, August 1999, Adelaide, SA.