

ESTABLISHMENT OF WARM-SEASON PERENNIAL GRASSES IN NORTH-WESTERN N.S.W.

Alison Bowman
NSW Agriculture & Fisheries
Walgett

Aim: To develop minimum risk sowing guidelines for warm-season perennial grasses.

Reliable establishment of small seeded perennial grasses in a low rainfall environment on cracking clay soils is difficult to attain. Experiments have been initiated in the Walgett district to begin preliminary comparisons of the available sowing technology.

Four perennial grass species - Bambatsi Panic, Purple Pigeon grass, Biloela Buffel grass and Curly Mitchell grass were sown in a replicated experiment using three sowing methods; broadcasting seed onto a cultivated seedbed, using a band seeder with a roller and using a furrow seeder with moisture-seeking tines.

A full soil moisture profile at sowing, and a heavy reliance on post sowing rains was required with broadcast seed.

The band seeder with a roller allowed improved seed/soil contact. Again a full moisture profile and post-sowing rains were important.

The use of a furrow seeder with moisture-seeking tines allowed the seed to be placed on the moist soil layer, and the use of the furrow removes the complications of sowing small seeds too deeply.

These sowing methods are being evaluated at two sowing times. Sowing in the autumn when rainfall is more reliable would be beneficial, but these warm season grasses are susceptible to low temperatures and frost, particularly at the seedling stage. Selecting a seedling with tolerance to low temperatures may be required to make this option feasible.

Establishment from sowing in spring is unreliable due to erratic rainfall events combined with high temperatures at this time of year. "False starts" and soil crusting are two problems to overcome. The use of mulches to reduce surface soil drying may have a role.

This experiment is now in progress and the results will be essential to the development of minimum-risk sowing guidelines for the use of these pasture species in north-western New South Wales.