Info Sheet17
Resource care guide – July 2001

Fodderbank systems:

Reducing drought impacts and improving sustainability on dryland farms.

What are Fodderbanks?

Fodderbanks are simply stockfeed reserves. Fodderbanks incorporate the concepts of feedbanks, fodder shrubs and alternative pasture species.

What are Fodderbank Systems?

Fodderbank Systems incorporate management techniques designed to create stockfeed reserves and improve the sustainability of dryland farming. The techniques include landuse fencing, shelter, direct drilling, dryland pasture management, mulching and establishment of special use areas.

Landuse Fencing

Fencing is integral in the development of fodderbank systems. To be most effective fences should follow ridges and gullies separating all landforms and soil types. This may require more fencing and corners but means the sunny aspects, shady faces and terraces are each able to be managed separately. Laneways should also be incorporated for ease of access.

Shelter and Shade

Strategic areas should be fenced and planted for shelter and shade. This will reduce the impact of wind on pastures and crops and help to protect soils. Under northwesterly conditions, good shelter can result in 60% higher dry matter yields. Trees will also improve the environment for people, stock and wildlife.

Pasture species include a mixture of grasses, legumes and herbs

Strategic areas are fenced and planted for shelter and shade.

Dryland Pastures

Appropriate mixtures of perennial dryland grasses, legumes and herbs will provide a balanced diet for stock and be tolerant of drought and pests like grass grub.

Dryland Pasture Species

Tall Fescue: a deep-rooted grass providing quality summer feed.

Cocksfoot: a very persistent grass providing good summer feed.

Phalaris: use in a mixture on very dry sites for cool season growth.

Wheatgrass: rhizomatous plant providing good summer growth.

Brome: fast growth in early spring and following autumn rains.

Tall Oat Grass: very early spring growth and ability to reseed itself.

Black Mountain Rye: a perennial greenfeed with good cool season growth.

Lucerne: the most successful dryland legume. Requires good soil fertility.

Lotus: Maku for moist infertile sites and L. corniculatus for drier sites provide palatable feed with tannins.

Clover: white, red and caucasian

Chicory: a perennial broad leaf herb with high mineral content and excellent stock performance.

Sheeps Burnet: a deep-rooting herb retaining green foliage into the winter.

Plantain: a persistant pasture herb.

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Pasture Establishment

Generally paddocks will require spraying, to remove existing plants, then direct drilling with the appropriate pasture species.

Areas not suited to drilling can be oversown when soil moisture and temperature levels are suitable. Following oversowing a mob of sheep can be used to trample the seed into the soil.

Because these perennial plant species take time to establish, careful management is required during the first season.

Pasture Management

Maintaining dryland pastures in top condition involves paying attention to the frequency and intensity of grazing.

In a dryland situation large healthy perennial plants with extensive root systems are essential to sustain production. The root mass of grasses is generally similar to the leaf bulk. Frequent close grazing without sufficient recovery periods causes the root volume to decrease, reducing the plant's ability to take up water and nutrients. In this stressed condition plants are less able to withstand drought or competition from weeds.

As a general rule, take only half of the leaf bulk at any one grazing during the growing season. The remaining leaf area assists rapid leaf regrowth. Up to three quarters of the plant top can be removed following the growing season.

Mulching plant material by stock protects soils and improves moisture retention

Pasture Mulching

Periodically using a mob of stock to mulch a pasture builds organic matter on the soil surface. This in turn protects the soil surface and improves moisture retention. The organic matter also feeds the earthworms and soil organisms which in turn improve soil structure, aeration and water holding capacity.

Special Use Areas

Sunny faces can provide warm sheltered sites with good forage for stock during the critical shearing to lambing period in early spring. Prairie Grass, Tall Oat Grass and Sheeps Burnet can provide a good mix of autumn saved pasture and early spring green forage on these sites. Dorycnium and Salt Bush shrubs may further enhance the productivity of these areas.

Fodderbanks reduce the early spring feed deficit

On shady aspects, Maku or Empire lotus can produce good summer feed containing tannins beneficial for stock.

Damp gullies can be planted with suitable poplar or willow varieties and the branches lopped during drought periods to provide extra feed for stock.

Fodderbank Benefits

- Increase in available early spring feed
- Drought impacts reduce
- Soil moisture retention improves
- Soil organic matter levels improve
- Earthworm numbers increase
- Soil structure improves
- Soil losses are halted
- Weed problems reduce
- Pest risks reduce
- Shelter and shade is improved
- Pasture production responds to increased shelter and moisture retention
- Stock performance responds to increased shelter and pasture production

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