Effective ground cover is critical in protecting soil from erosion, especially after prolonged dry periods or bushfires. There are some good reasons why it is important to hold soil in place. The key is to act early and maintain acceptable cover.

Why prevent soil erosion?

- Soil lost means nutrients lost; the fine particles removed by wind contain most of the fertility (phosphorous and nitrogen) and organic matter of that soil.
- Soil erosion leads to off-site damage such as drifting of sand onto fences, roadways and other infrastructure. Clearing of drift sand has a cost.
- Soil erosion can blow away valuable pasture seed, such as medic, which has a cost to replace.
- When a prolonged dry period ends, recovery of pasture is quicker where there is remaining ground cover.
- Dust storms and drift create hazards to road and rail traffic, endangering lives. Dust can also impact on other industries such as horticultural crops and lower product quality.

Tactics

There are a number of tactics that can be adopted to hold your soil in place:

- Maintain cropping paddocks with a cover of stubble or plant residue or at least retain a rough cloddy soil surface.
- Decide on what core breeding stock can be fed and do a feed budget.
- Remove stock from a paddock when ground cover is reduced to a critical level; giving priority to the lighter textured part of the paddock in this decision.
- There is a very fine line between having sufficient or having insufficient cover to hold the soil. A 30 – 50 per cent cover of anchored plant material will generally prevent erosion.
- Use of ground cover conserved over summer by not grazing can be deferred to autumn.
- Don't open all the gates to allow stock to wander all over the farm. Stock trafficking ruins feed and loosens soil.
- Grazing of crops which won't make harvest must be very carefully considered. Ground cover is rapidly removed by grazing and often provides little feed.
- Hand feeding can be very effectively done in conjunction with confining stock to a small holding area on heavy soil or stony ground, i.e., a feedlot or stock containment area.
- Financial assistance may be available from your local Catchment Management Authority to help set up stock containment areas.

Stock containment areas

- A containment area will help prevent destruction of the remaining ground cover and reduce the potential for erosion.
- Select a site that is on heavy soil (less likely to erode) or stony ground.
- Select an area close to the homestead or an existing water supply where water can be reticulated by pipeline to a trough.
- Stone may need to be dumped around the watering point to prevent erosion and subsequent undermining of the trough.
- The size of the containment area will depend on the number of stock to be fed. No more than 500 sheep per area, allowing five square meters per sheep.
- The containment area should be located downwind of shelter. Some shade in the holding area is desirable.
- The watering point should be located furthest from the shelter so that the main stock camp is not at the same location as the watering point.
- Ideally the water point and feeders should be at opposite ends of the stock containment area or as far apart as
possible to ensure that all stock will have the opportunity to access feed and water.

- Use of temporary fencing and/or incorporation of an existing corner of a paddock will reduce costs. A permanent purpose built stock containment area is desirable.

Vegetation

- It is undesirable to use areas of important remnant vegetation already fenced-off or to use stands of susceptible trees. Only incorporate hardy trees (Mallee).
- Flora and fauna on roadsides and farms are also under pressure during dry times. Heavy grazing of roadsides may undo years of protection of rare or threatened species and damage understory and regeneration of grasses, herbs, shrubs and trees.
- Financial assistance may be available to fence off remnant vegetation from grazing through the Property Enhancement Grants Scheme in areas of high priority.

Wind erosion control

Despite the best of intentions there are occasions when soils become bare (exposed) and begin to drift. It is essential to minimise soil movement in summer so that farms are in the best position for cropping in autumn. Mechanical means are available to minimise soil drift.

Minimising soil drift

The main need is to reduce wind speed at the soil surface so that drift does not occur. Roughening the soil surface will achieve this by reducing wind speed at the soil surface.

Ridging

The creation of ridges on soil is not always effective but may be a helpful measure as a last resort. Ridging, even adjacent to public utilities, did not always prevent channels from filling. The creation of ridges on soil is not always effective but may be a helpful measure as a last resort. Ridging, even adjacent to public utilities, did not always prevent channels from filling.

Heavy soils

Surface roughness sufficient to stop soil movement can be achieved with a chisel plough or similar implement.

Lighter sandier soils and deep sands

Where cloddy material can only be obtained from depth, north - south ridging is the only workable technique.

Where cloddy material is unavailable using a ridger or a chisel plough, the above mechanical measures do not apply. If ridging equipment does not uplift clod then the soil should not be disturbed.

Guidelines for ridging operation

| Ridge height | Aim to get a ridge height of 30 cm above natural surface - depth of furrow unimportant, 30cm high ridge provides three metres of protection. |
| Ridge material | Ridger must bring up cloddy material to ensure long life of ridge. |
| Spacing | Three metre maximum between each ridge (also allows for repeat operation in between, if found necessary). |
| Direction | North / south across majority of prevailing winds. |
| Extent | Whole of area drifting and likely to drift. |
| Starting point | Preferably at west side i.e., at source of drift. |
| Timing | On susceptible areas before actual drifting occurs. |

Rabbits, foxes and cats

Prolonged dry periods provide an ideal opportunity to control rabbits and enter the subsequent cropping year with very low numbers. Foxes and feral cats may also be targeted. Communities working together on vertebrate pests is more efficient than individuals working alone.

Recovery

It is desirable to have rabbits under control before the autumn break as other workloads will then become pre-eminent. Areas near public utilities which do suffer severe erosion should be sown as soon as the autumn break arrives.