



## Management of Tall Wheat Grass

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Tall Wheat Grass (*Thinopyrum poticum*) is a summer-active perennial grass tolerant of both saline and waterlogged conditions.

Sown as a pasture mix with Strawberry or Balansa Clover, Tall Wheat Grass can improve the productivity of untreated saline areas from 0.5 DSE/ha to 8 DSE/ha. Its summer-active habit makes it a useful species for supplementing the summer-autumn feed gap on farms, but good management is important if this species is to realise its potential.

Crude protein levels in spring can be as high as 18.9%, with a digestibility of 75.3%, when Tall Wheat Grass is kept below 20 cm. Once Tall Wheat Grass plants grow above 1 m, crude protein levels drop to 7.6% and digestibility falls to 52.4%.

When combined with suitable legumes, such as Balansa or Strawberry Clovers, pastures kept below 20 cm can promote growth in weaner stock and will maintain sheep weights over summer (up to 8 DSE/ha).



Tall Wheat Grass Plants showing the seed-head 'spikelet'.



A Tall Wheat Grass Plant in a vegetative stage of growth.

### Establishment

Tall Wheat Grass is recommended for saline sites that are to be grazed for production. It should not be sown in or next to naturally saline areas where there is potential for it to spread into wetlands and threaten native plant communities. Areas where it is sown should be fenced and rotationally grazed to prevent seed set.

Soil testing is important to determine sowing rates and fertiliser requirements at sowing. A standard soil test plus ECe should be done. Tall Wheat Grass has a high requirement for nitrogen and phosphorus at germination and both these are often low in saline areas. Apply 100 kg/ha (or rate recommended by soil test results) of a nitrogen-based fertiliser such as MAP at sowing. Sulphur is not generally required.

There are two commercial varieties of Tall Wheat Grass: Tyrell and Dundas. Dundas produces greater seedling densities, and has more leaf dry matter and digestible dry matter.

Sowing rates are influenced by the severity of salinity at the site, particularly in the top 10 cm:

- In areas of low salinity - class 1 (2-4 dS/m), an ideal mix is Tall Wheat Grass 7 kg/ha, Phalaris 2 kg/ha, Strawberry Clover 1 kg/ha and Balansa Clover 0.5 kg/ha.

- In areas of moderate salinity - class 2 (4-8 dS/m), a good mix is Tall Wheat Grass 10-15 kg/ha, Strawberry Clover 2 kg/ha and Balansa Clover 1.5 kg/ha.
- In highly saline areas - class 3&4 (>8 dS/m), Tall Wheat Grass is best sown at 10-15 kg/ha as a single species.

Scalded or bare areas usually indicate severe soil salinity in the top 10 cm and are better suited to more salt-tolerant species.

Sowing in early autumn gives the best results, but establishment may be undertaken in spring if the site is accessible to machinery and summer rainfall is reliable. Balansa Clover should not be sown in spring and may be sown the following autumn.

The site to be sown should be fenced with the support of a salinity survey, which can identify salinity at depth. Help with this is available from your local DPI office.

Any existing pasture on the site should be spray-topped in spring the year prior to sowing, then grazed over summer. The area should be scarified where possible before direct drilling the pasture with fertiliser in autumn.

### Managing Tall Wheat Grass in the first year

Tall Wheat Grass is a weak seedling, but persists well once established. Careful grazing is required in the first year to maintain leafiness and optimise establishment rates.

A new pasture should be top-dressed with 100-150 kg/ha urea in spring because of the plant's high need for nitrogen and phosphorus. Any legume component of the pasture should supply most of the nitrogen needed in the following years.

Sites with low to moderate salinity levels (class 1&2 (2-8 dS/m), without spring waterlogging can be lightly grazed in early September if Tall Wheat Grass seedlings are firmly anchored to the ground. Grazing should be deferred if seedlings can be easily pulled out.

Pastures sown with Balansa Clover should be spelled during clover flowering (September–December) to ensure seed set for the following year. The pasture should then be crash grazed down to 10 cm to remove excess growth, help control weeds, encourage leaf growth and make grazing management easier over summer. Subsequent light grazing over summer and autumn down to 5 cm will promote strong root development and water use, remove excess trash and provide favourable conditions for the Balansa Clover to regenerate.

It is crucial not to graze the pasture over winter or spring if the site is waterlogged.

Areas with high to severe salinity, (class 3&4 (8-16+ dS/m), may need to be grazed lightly or spelled from grazing for up to two years after sowing to optimise establishment rates and other management options (such as slashing) may be necessary to prevent Tall Wheat Grass from seeding.

### Managing stands two years and older

Tall Wheat Grass stands should receive 100 kg/ha/year of a phosphorus-based fertiliser, such as triple super, to maintain productivity.

Tall Wheat Grass handles hard grazing well. Stands should be grazed hard in early spring to make use of the Balansa Clover and this grazing stopped at the first sign of Balansa flowering until seed set is complete. Once Balansa Clover seed set is complete (mid to late December) the stand should be crash grazed again to remove excess Balansa growth and Tall Wheat Grass stems that have started to run up to flower.

Over summer and autumn, grazing should aim to maintain a pasture height below 10 cm until the paddock becomes too wet for stock.

Crash grazing to a uniform height of less than 10 cm prevents the pasture going rank and clumpy. If stock selectively graze areas, increase the stocking rate or set up electric fences to force grazing.

### Reclaiming old stands

Tall Wheat Grass can form a monoculture of erect clumps up to 2 m high when left unmanaged. In this state the pasture makes no contribution to farm productivity (much lower feed value and palatability to livestock) and can spread seed to roadsides and native plant communities. These stands can be brought back into production using either mulching and slashing, or burning.

### Mulching and slashing

Mulching and slashing remove rank leaf material and stems. Mulching breaks stems into smaller segments allowing for quicker breakdown of trash, but mulching machinery is not always readily available. Slashing is often an easier option, but leaves trash in a heavier mat that takes longer to break down and can smother pasture regrowth.

Mulching or slashing should be done in mid-to-late December, when plants are sending up flowering stems. This removes both old and new flowering stems and promotes leaf growth that can be grazed over the following summer months.

Stands should be cut to a height of 10 cm to maximise trash removal while protecting the plant crown.

Grazing and management should then follow the recommendations outlined for the management of new stands in their second and subsequent years.

## Burning

Burning removes all old growth and is best done after stem elongation starts in December, to reduce the chance of flowering in the same season. Burning may be done earlier to comply with annual fire restrictions.

If sufficient moisture is available plant regrowth will occur over the following summer-autumn months. Stands should be grazed to maintain a pasture height of 10 cm.

Grazing and management should then follow the recommendations outlined for the management of new stands in their second and subsequent years.

## Introducing clover to old stands

Most old stands of Tall Wheat Grass have no legume content. Legumes are crucial to achieve a high-quality pasture for grazing. They can be introduced by broadcasting Balansa Clover seed with the fertiliser in early autumn. Balansa Clover will readily germinate as long as rank grass is removed and there is some bare ground visible between plants.

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