Agriculture Notes

Tall Fescue establishment and management in saline areas

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Tall Fescue *(Festuca arundinacea)* is one of the most-productive perennial pasture species for temperate areas in south-east Australia. It supplies high-quality feed later in the growing season.

New varieties developed over the past 10 years are highly palatable, persistent, and drought- and salt-tolerant, making Tall Fescue an ideal perennial grass for low-lying, moderately saline areas on farms.

Tall Fescue is also:

- tolerant of high soil aluminium levels (up to 15%)
- tolerant of acidic soils (4.8 to 8.5 pH Ca)
- tolerant of low-fertility soils (Olsen P <10)
- tolerant of moderately saline (<10 dS/m) and waterlogged soils
- a deep-rooted hardy perennial, once established
- capable of producing green feed in summer (Continental types)
- free of toxins harmful to livestock, unlike other perennials grasses
- drought tolerant.

Tall Fescue is native to Europe, Western Asia and North Africa.

There are two main types of Tall Fescue: Continental (summer active) and Mediterranean (winter active). Winter-active types do best in temperate areas receiving at least 500 mm annual rainfall. The summer-active types are best suited to areas with at least 650 mm.

Cultivars vary in their growth patterns; some Continental types have limited production in winter and some Mediterranean types have limited production in summer.

An Advance and Resolute (70-30% mix) Tall Fescue pasture established in a low-lying saline area (6 dS/m) at Caramut south-west Victoria.

Establishing a Tall Fescue pasture

Tall Fescue prefers medium to heavy-textured soils (high clay content), but will grow in lighter soils. Ideally, soil Olsen P levels should be around 20 mg/kg at sowing and soil acidity levels about 4.9 pH Ca.

Tall Fescue seedlings are slow to establish and inherently weak, so it is important to have a finely prepared, weed-free seed bed, especially if conventionally sowing. Tall Fescue can be direct drilled, but good weed control is essential. Paddocks coming out of one or two years of crop rotations are an ideal weed-free environment for Tall Fescue establishment.

The best results are achieved by sowing Tall Fescue as the sole grass, with companion legume species such as Balansa and Strawberry Clovers. Tall Fescue can be sown with other grasses in moderately saline areas (<10 dS/m), such as Phalaris (<6 dS/m) and Tall Wheat Grass.

A Continental-type (summer active) Tall Fescue is ideal for saline discharge areas that are usually moist in summer because it can provide green feed for grazing.

An ideal Tall Fescue mix would be 70% summer-active and 30% winter-active cultivars.

Winter-active cultivars provide some winter growth and limited grazing over this period. Cold temperatures significantly slow down the germination of Tall Fescue. Winter active Tall Fescue is best sown in autumn but has been successfully sown in spring as part of a seed mix.

Summer-active Tall Fescue is best sown in spring, but can be established as part of a pasture mix in autumn. Spring sowing of low-lying discharge areas may not be possible if the area is too wet for machinery access.

An ideal seed mix for a moderately saline discharge area (<10 dS/m) in a 550-700 mm rainfall area would be:

- 10 kg/ha of Advance MaxP Tall Fescue (summer active)
- 5 kg/ha of Resolute MaxP Tall Fescue(winter active)
- 2 kg/ha of Bolta Balansa Clover
- 3 kg/ha of Strawberry Clover.

This seed mix should be sown with a high nitrogen fertiliser such as DAP or MAP at a minimum rate of 100 kg/ha. This provides a high nitrogen boost for emerging seedlings and improves seedling vigour. Pasture pests need to be monitored pre- and post-emergence and treated, if necessary, to avoid poor pasture establishment or total failure.

Management

Once established (usually around seven months after sowing), Tall Fescue pastures can be lightly grazed when plants are well anchored and the area is not too wet.

An easy way to establish if plants are anchored enough for grazing involves grabbing a plant between your forefinger and thumb and trying to pull it up. If it pulls out of the ground easily, defer grazing, but if it offers good resistance it can be lightly grazed.

Sites should not be grazed if they are waterlogged or wet, as this can cause significant pugging, destroying soil structure and plants.

For best results, and to maintain a high-quality pasture, growth should be monitored closely for the first two years. Short rotational grazings are best, especially in spring, to control weeds and encourage tillering of the newly sown pasture. Once well-established, Tall Fescue pastures become quite hardy and can stand hard grazing for short periods of time.

Keep pasture below 10 cm in height to provide high-quality feed throughout the growing season.

Pasture can be cut for hay or silage, if it is cut early enough (before stem elongation) to preserve quality.

Correct grazing management is essential for good pasture quality and long-term sustainability.

Commercial varieties available (2007)

Early flowering Continental-type (summer active)

- Dovey
- Quantum
- Quantum Max P

Mid-late flowering Continental-type (summer active)

- Advance
- Advance Max P
- Demeter
- Jessup
- Jessup Max P
- Lunibelle
- Torpedo
- Typhoon
- Vulcan II

Mediterranean-type (winter active)

- Flecha
- Flecha Max P
- Fraydo
- Prosper
- Resolute
- Resolute Max P.

Tall Fescue pasture (seed head inset).

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