EverGraze
More livestock from perennials

More perennials
Better livestock
Healthier catchments

Actions

Growing and using summer-active tall fescue

Tall fescue seed head

Vegetative summer-active tall fescue

Actions summary

- ***Tall fescue is available as both winter-active and summer-active cultivars and these suit different environments and soils***
- ***This sheet provides information on how to establish and manage summer-active tall fescue in higher rainfall regions of southern Australia***
- ***Tall fescue grows vigorously in spring and summer and needs intensive rotational grazing to avoid becoming rank and unpalatable***
- ***Tall fescue is a relatively weak seedling and requires careful management pre and post sowing to ensure success***

Tall fescue – the plant

Tall fescue is a tufted, coarse-leaved perennial grass. There are two distinct agronomic types of tall fescue: summer-active and winter-active. It is essential to specify which type when requesting information or purchasing tall fescue seed. Summer-active cultivars are best suited to regions where there is soil moisture available through summer rainfall or access to water stored in the soil profile. Winter-active cultivars are quite dormant in summer and best suited to regions where perennial ryegrass has marginal persistence.

The tall fescue types are very hard to distinguish in the field. Both types are more deep rooted than ryegrass. They have dark green leaf blades that typically grow up to 30 cm long but with the potential to become longer in ungrazed conditions. The upper surface of the leaf is dull with distinct veins that run the length of the leaf blade. The purple/green seeds are held in a loosely bunched head.

Benefits of summer-active tall fescue in southern Australia

Summer-active tall fescue grows very strongly in spring and summer (when moisture is available) and has reasonable autumn and winter growth provided conditions are not too cold and wet.

At the Hamilton EverGraze Proof Site, during the drought of 2006–07, ewes grazing pastures made up of areas of lucerne, perennial ryegrass and tall fescue did not require supplementary feeding whereas those with access to perennial ryegrass only, had to be removed from the paddocks and fully supplementary fed for two months.

FUTURE FARM INDUSTRIES CRC
australian wool innovation limited
mla MEAT & LIVESTOCK AUSTRALIA

Summer-active tall fescue in November 2006 (drought year)

Summer-active tall fescue is palatable and of high nutritive value provided it is kept short with frequent grazing in spring. It is very compatible with subterranean clover and allows a high legume content.

Its tufted growth habit reduces pugging of the soil by stock in winter and allows paddocks to be grazed when wet. Summer-active tall fescue is tolerant of waterlogging for short periods.

With some summer rainfall or where soils have a high water holding capacity, summer-active tall fescue can provide a high quality pasture over summer and will continue to grow at higher temperatures, when perennial ryegrass shuts down. Figure 1 shows the growth rate of Quantum tall fescue compared to Banquet perennial ryegrass at the Hamilton Proof Site.

The summer-active cultivars commonly used in NSW and the high rainfall areas of southern Victoria include Quantum and Advance.

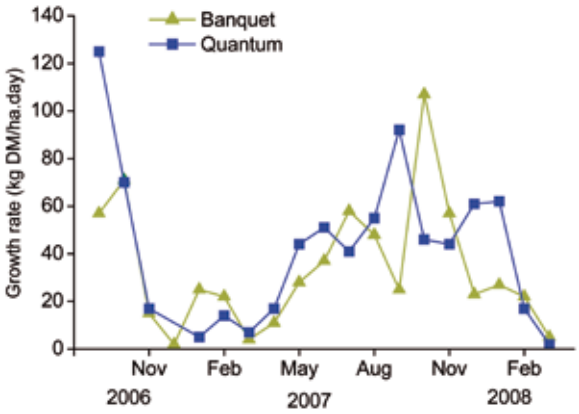

Figure 1. Comparison of Quantum tall fescue and Banquet perennial ryegrass – Hamilton Proof Site

Limitations of using tall fescue

Tall fescue has a weak seedling and is slow to establish compared to ryegrass, particularly if sown in autumn. It will not tolerate heavy grazing during the establishment year. It is essential to control weeds prior to and during establishment.

Once established, tall fescue can become rank and unpalatable if not grazed frequently in spring (at the 3-leaf stage or at 2000–2500 kg DM/ha, down to a residual of about 1000 kg DM/ha).

Climate and soil

Summer-active tall fescue requires annual rainfall of at least 600 mm. It is well suited to low lying, heavy soils that have a high water holding capacity. Tall fescue also grows well on heavy to medium textured soils with high organic matter content or on lighter soils that are not limiting in nutrients.

Tall fescue is most productive on soils with pH 5.0–6.5 (measured in calcium chloride) but will tolerate more acidic soils with moderate levels of exchangeable aluminum. It will also tolerate moderately saline soils.

Soil tests should be taken to determine fertiliser requirements. Minimum soil fertility requirements are:

- phosphorus: 15 mg/kg (Olsen P)
- potassium: 160 mg/kg (Colwell K)
- sulphur: 3 mg/kg (CPC S).

However, summer-active tall fescue will respond to higher soil fertility than these levels.

Establishing tall fescue

Managing paddocks ahead of sowing

Tall fescue is slow to establish, therefore competition from weeds must be minimised. In the spring prior to sowing, the weed seed bank must be reduced by heavy grazing or cutting the area for hay prior to seed set. Alternatively, herbicides can be used to reduce seed set of weeds.

Sowing

Spring sowing is recommended for summer-active tall fescue because of its slow growth in winter. It has poor seedling vigour and takes time for the root system to develop. Sufficient seed must be sown to ensure a high plant density. The seed is quite large and when sown as the sole grass, a rate of 15–20 kg/ha is recommended. Sowing with DAP can stimulate seedling growth.

Tall fescue should not be sown with fast establishing grass pasture species such as ryegrass. It is usually sown only with a legume. White clover can be sown in spring or sub clover oversown the following autumn.

Rotationally grazed summer-active tall fescue in May 2007

Direct drilling is preferred but sowing into a cultivated seed bed is also effective for improving seed-soil contact. Sowing should be no deeper than 12 mm. Broadcasting the seed on the soil surface is not recommended.

Grazing management in the first year

Tall fescue plants should not be grazed until the seedlings are firmly rooted. This can be checked by gently pulling the seedling. If the plant is ready for grazing the leaves should break rather than the plant being pulled out. In some situations grazing may need to be delayed for several months after sowing because of the slow development of the root system.

After grazing, the pasture should be spelled until approximately 1500–2000 kg DM/ha has accumulated, prior to another grazing for a short period.

If weeds become a problem in the establishment year, graze the pasture heavily for a short period (1–2 days). This is especially important following an autumn sowing which may need to be grazed in late winter/early spring to remove weeds. Herbicides can be used for weed control but specific agronomic advice should be sought first.

Tall fescue endophyte

Some tall fescue cultivars contain the beneficial endophyte, MaxP®. (Endophyte is an organism that lives within the plant and is transferred in the seed). This endophyte may improve the persistence of the pasture and enable it to tolerate stressful conditions. This endophyte does not harm livestock.

Grazing management of established tall fescue

The aim of grazing is to achieve high pasture utilisation, maintain feed quality and maintain plant density. This can be best achieved by rotational grazing, using the 3-leaf stage as an indicator of when the sward is ready to be grazed.

Rotational grazing allows the plants to rebuild reserves and retain residual leaf area which will allow rapid regrowth. However, if the interval between grazings is too long (after 3-leaf stage), feed quality and tiller density will decline.

Set stocked tall fescue pastures are susceptible to damage from frosts and waterlogging. If plants are grazed to less than 1000 kg DM/ha under set stocking the plants will be weakened, weeds will invade the sward and persistence will be poor.

The growth rate of Quantum tall fescue under set stocking and rotational grazing at the 3-leaf stage at the Hamilton Proof Site is shown in Figure 2.

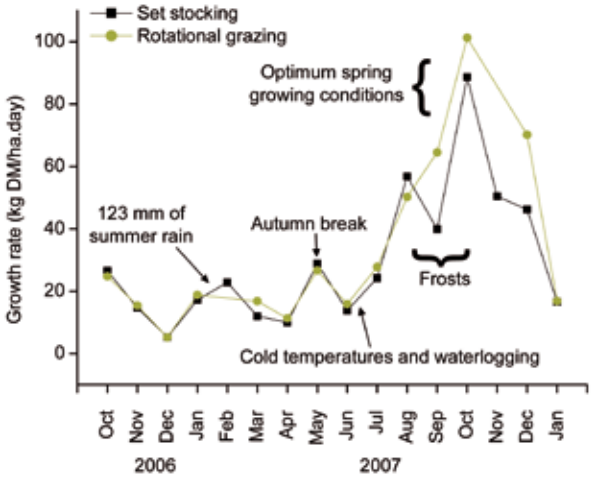

Figure 2. Growth of tall fescue under set stocking or rotational grazing – Hamilton Proof Site

Spring

Intensive rotational grazing in spring is essential to encourage tillering and keep the pasture growing vigorously and in a vegetative state. The pasture should be grazed at the 3-leaf stage (2000–2500 kg DM/ha) down to approximately 1000 kg DM/ha. Typically, grazing will need to be every 2–3 weeks in spring. If grazing in spring is lax, the pasture may become rank and unpalatable. If the pasture forms seed heads or tussocks, grazing pressure must be increased. Heavy grazing in spring will also increase clover content.

Summer

Where moisture is available, summer-active tall fescue cultivars will provide high quality herbage over summer. It should be grazed when it has 2–3 new

Tall fescue out of control in spring 2007 – Hamilton Proof Site

leaves or approximately 1500–2000 kg DM/ha. It can be grazed down to approximately 1000 kg DM/ha as long as it is rested afterwards.

Autumn and winter

Summer-active tall fescue will grow over winter except under very cold wet conditions. However, on low-lying areas prone to waterlogging pasture growth will be less than on better drained areas. Summer-active cultivars require long spells over winter to reach the 2- to 3-leaf stage (4–6 weeks) to prevent damage to the pasture through trampling and to allow the pasture to recover.

Tall fescue is generally more tolerant of heavy grazing under wet conditions than perennial or Italian ryegrasses due to the tufted nature of the species.

Trialling tall fescue on farms

- Identify whether or not your property is suitable for summer-active tall fescue.
  - Do you have available moisture over summer?
  - What time of the year do you need additional feed?
  - Do you need a high yielding hay crop?
  - Are you prepared to carefully manage grazing during establishment?
- Select a small paddock that can be easily managed.
- Soil test and create a management plan for fertiliser and weed control. Weed control needs to commence at least a year prior to sowing and should aim to prevent the seed set of any potential weeds.
- Seek local agronomist advice on cultivars, sowing rates and times, companion species, etc.
- Control weeds and limit grazing during the establishment year.
- Use rotational grazing to keep the pasture under control in spring.

Author
Margaret Raeside, Ph D Student, EverGraze project
Department of Primary Industries, PB 105, Hamilton, Victoria
margaret.raeside@dpi.vic.gov.au

Further information
Tall fescue, NSW Agriculture Agfact No. 285
3rd edition 2004, <http://www.dpi.nsw.gov.au/agriculture/field/field-crops2/pasture-species-_and_-varieties/temperate-grasses/tall-fescue>.

EverGraze on line: www.evergraze.com.au

For further details of EverGraze and to find out about activities in your area go to <www.evergraze.com.au> or write to Geoffrey Saul, National EverGraze Coordinator, 98 Leura Lane, Hamilton, VIC 3300.

EverGraze is a Future Farm Industries CRC, MLA and AWI research and delivery partnership

Established and supported under the Australian Government's Cooperative Research Centres Program. Through the implementation of innovative research outcomes and new technologies, the Future Farm Industries CRC is developing new and adaptable farming systems for Australia that will improve livestock and cropping industries productivity, offer new woody crop options, make better use of limited rainfall and create more diversity in landscapes.