Tower is a continental fescue that has a soft and palatable leaf and is being released after excellent performance in production trials. The late heading date and palatability of Tower makes it ideal for farmers wanting to achieve high animal performance. Tower is suited to most animals, but will have greatest benefit where high performance is required from stock (e.g. dairy cows, beef and lamb finishing), and persistent pasture is also required. Tower has a relatively fine leaf and high tiller density, giving it good tolerance to the close grazing that occurs in dryland climates. Tower has very good total growth compared with other tall fescues and is particularly productive from spring to autumn. Tower is a breakthrough cultivar for users of tall fescue. In the past, cultivars have had strengths in persistence, production, or quality – but never all three. Tower has been proven to have improved pasture production and quality, but the density and low growing point means Tower is also very likely to be very persistent.

Seed agronomy table

<table>
<thead>
<tr>
<th>Heading Date</th>
<th>Very Late</th>
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<tbody>
<tr>
<td>Lifespan</td>
<td>Very long term</td>
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Blends using this Seed

Northern Horse HS Blend

Enterprises this seed is being used for

Sheep
Beef Cattle
Diary Cattle
Horse
Hay & Silage
Viti & Horti

Strengths

- Deep rooted perennial.
- Adapted to a wide range of soil types.
- Tolerant of wet/poorly drained soils.
- Tolerant of moderate salinity.
- Provides good year-round production of quality feed.
- Does not frost off in winter as readily as phalaris and cocksfoot.

Limitations

- Relatively slow to establish.
- Heavy grazing, particularly during late spring/summer may reduce persistence particularly in drier marginal areas.
- Temperate types need significant summer rainfall or irrigation to maintain high production and persistence.
- May cause animal health problem known as 'Fescue Foot'.

Plant Description

Plant: A deep rooted, tufted, largely hairless perennial, with erect, unbranched tillers arising
from deep underground rhizomes (horizontal stems). It can grow to 2m tall at flowering.

**There are two types grown in Australia:**
Temperate varieties that grow in spring, summer and autumn and are suited to high rainfall, temperate climates. Mediterranean varieties that grow well in winter but are summer dormant and are better suited to winter rainfall regions.

**Leaves:** Numerous dark green basal leaves, 4 - 15 mm wide and 10 - 60 cm long. Leaves are rolled in bud, becoming flat and tapered at the end. The upper leaf surface is dull and the lower leaf surface is smooth glossy with the leaf edges rough to touch.

**Seedhead:** The seedhead is a loosely branching panicle, 10 - 30 cm long.

**Seeds:** The seed is about the size and shape of ryegrass, with 420,000 - 500,000 seeds per kg.

**Pasture type and use**

Tall fescue is principally sown in permanent pastures for cattle and sheep grazing.

**Where it grows**

**Rainfall:** >650 mm for the spring-summer active types preferably with summer rain >450 mm for summer dormant (winter-active) varieties.

**Soils:** Grows across a wide range of soil types from sandy to heavy clay soils. Tall fescue tolerates wet soils and short periods of flooding, but also has moderate drought tolerance. Tall fescue can tolerate soil acidity below pH Ca 4.8, and moderately high levels of soil aluminium (up to 20% of CEC). However, it is most productive when soil pH Ca is 5.0 to 6.5. On the more acid soils with high levels of exchangeable aluminium liming may be required. It can also tolerate moderately saline soils (<8 dS/m(ECe)).

**Temperature:** Tall fescue is a cool season grass and is suited to areas with mild to warm summers and cool to mild winters. It is more tolerant of frost in early winter than cocksfoot and phalaris.

**Establishment**

**Companion species:**

**Grasses:** cocksfoot, phalaris, ryegrass.

**Legumes:** subterranean, red and white clovers, lotus, lucerne.

**Sowing/planting rates as single species:** 6 -15 kg/ha.

**Sowing/planting rates in mixtures:** 3 -10 kg/ha. If using a more vigorous grass species such as perennial ryegrass a seeding rate of less than 2 kg/ha of ryegrass is preferred.

**Sowing time:** The best time to sow tall fescue is in autumn to early winter (March - June) when soil moisture is adequate. In high altitude, high rainfall areas, spring sowing (September) can also be successful.

**Fertiliser:** At sowing, a compound or starter fertiliser (containing nitrogen, phosphorus and sulphur) should be used. If applying fertiliser with seed, nitrogen rates should not exceed 20
kg N/ha.

Management

**Maintenance fertiliser:** Phosphorus and sulphur are the major nutrients of concern particularly to promote good clover growth, and hence adequate nitrogen for the grass. Annual applications of these nutrients will depend on soil nutrient levels. At moderate stocking rates of 5 - 7 DSE/ha, a maintenance dressing of 125 kg/ha of single superphosphate is often adequate. If tall fescue is not sown with a legume, nitrogen fertiliser will be required. Deficiencies of molybdenum and other trace elements should be corrected.

**Grazing/cutting:** Most tall fescue cultivars exhibit poor seedling vigour, resulting in slow establishment. Grazing management during the first 12 months after sowing is particularly important to ensure a satisfactory plant population. Establishing stands of tall fescue should only be grazed when the root system is well developed and will not be pulled out of the ground. Once established, the pasture should be kept within the 'active growth' phase to maximise pasture growth rates and feed quality, allow rapid post-grazing recovery, and encourage companion legumes. During autumn and winter (non-reproductive phase) tall fescue should be grazed in the range of 5 - 15 cm. In spring (reproductive phase), tall fescue should be grazed in the range of 3 - 10 cm (when pasture mass reaches around 2 - 3 t DM/ha) to prevent stem development and optimize palatability. Such intensive grazing means that the grazing rotation needs to be reduced to 12-14 days during spring.

**Ability to spread:** Will regenerate from seed, but has poor seedling vigour. Is able to spread slowly vegetatively by short rhizomes.

**Weed potential:** Low weed potential.

**Major pests:** Tall fescue can be attacked by pasture scarabs (but is more tolerant than most other temperate grasses), red legged earth mites, blue oat mites, field crickets, slugs and snails.

**Major diseases:** Leaf diseases (e.g. rust, blights) occasionally occur on tall fescue, particularly in humid summer conditions.

**Herbicide susceptibility:** Herbicides are available to selectively control broadleaf weeds. Generally applied after first leaf stage.

Animal production

**Feeding value:** Tall fescue has a high nutritive value comparing favourably to perennial ryegrass and phalaris. Digestibility ranges from 60-80% DMD, metabolisable energy from 8.5-11.5 MJ and crude protein from 7.5-25%.

**Palatability:** Very palatable feed.

**Production potential:** Valuable feed for maintenance, growing and finishing livestock provided management maintains pasture in vegetative phase & adequate clover.

**Livestock disorders/toxicity:** Sporadic reports of 'fescue foot' in stock grazing tall fescue dominant pasture. Symptoms include heat stress, severe lameness, reduced feed intake and...
poor weight gains. Fescue foot is caused by a toxin 'ergovaline' produced by a fungus (endophyte) associated with tall fescue plants. This condition is not common as current cultivars either have no or very low levels of endophyte.