Optima Tetraploid Perennial Ryegrass

*Lolium perenne*

Optima has a high sugar content that is easily digestible, allowing animals to gain a high-energy ration for milk/meat conversion. The benefits of Optima are an increase in dry matter yield, palatability during the winter months and an increase in moisture content as starch or sugar levels. As such, Optima has a higher level of stock acceptability. Optima sets new benchmarks for long-term persistence and livestock performance.

- Densely tillered with high quality nutritious broad leaves.
- A growth pattern for high feed herbage production in both winter and summer.
- Significant advantages in feed quality and animal intake, ideal for high production systems.
- Excellent pest and disease resistance.

**Seed agronomy table**

- Heading date: +26 days
- Maturity: Late
- Lifespan: 5 - 7 years
- Min Rainfall (mm): 700
- Seeding Rate: Kg/Ha
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Dryland 10-15
High Rainfall / Irrigation 25-30
Heading date: 0 days = Nui perennial ryegrass.

**Blends using this Seed**

Dairy Blend

**Enterprises this seed is being used for**

Sheep
Beef Cattle
Horse
Hay & Silage

![Establishment Guarantee](image)

**Strengths**

- Easily established, highly productive and nutritious under grazing, moderate winter and summer growth, rapid regrowth.

**Limitations**

- Requires moderate to high soil fertility. Does not withstand heavy grazing pressure through drought. Susceptible to cockchafer and cricket damage.

**Plant Description**

**Plant:** Densely tufted, multi-tillered perennial with fibrous root system.

**Stems:** 30-90 cm.

**Leaves:** fine (~7 mm), dark green, hairless, under surface shiny, blade folded about mid-rib in young shoot, leaf-base usually dark red.

**Seedhead:** spike ~20 cm, spikelet usually <10 florets/spikelet; awnless lemma.

**Seeds:** fawn, flat, awnless, ~6mm long. Approx 300,000/kg (tetraploid cvv) Tetraploid cvv: these have double the number of chromosomes, larger cells, leaves and seed.

**Pasture type and use**

Grazing and fodder conservation. Most widely sown pasture grass in temperate regions.
Where it grows

Rainfall: > 700mm+
Soils: Medium-heavy, moderate-high fertility (eg Olsen P >12, 0-10 cm). Tolerates slight salinity.
Temperature: Cold and frost tolerant, growth constrained by high temperature.

Establishment

Companion species:
Grasses: Perennial ryegrass.
Legumes: white clover, medics and sub clover.
Sowing/planting rates as single species: 10-25 kg/ha.
Sowing/planting rates in mixtures: 5-10 kg/ha.
Sowing time: Autumn and spring.
Fertiliser: P & possibly N at sowing.

Management

Grazing/cutting: Tolerates close, continuous grazing except if drought-stressed. Graze at 2.5-3 leaf stage to optimise yield under rotational grazing. Well suited to hay/silage.
Ability to spread: Will spread if allowed to seed.
Weed potential: Widely naturalised on fertile soils in temperate Australia.
Major pests: Red and black-headed cockchafer, black field cricket, white-fringed weevil, African black beetle, corbies, underground grass caterpillar.
Major diseases: Crown rust, stem rust, barley yellow dwarf virus, ryegrass mosaic virus.
Herbicide susceptibility: In considering selective herbicides consider the stage of growth of the ryegrass and what non-target companion species are present.

Animal production

Feeding value: High nutritive value.
Palatability: Palatable.
Production potential: High yields; highly responsive to fertiliser and irrigation.
Livestock disorders/toxicity: Cultivars with wild endophyte can cause perennial ryegrass toxicosis and ill-thrift. Bacterial infection of seedhead can occasionally occur and result in ergot poisoning.