Agrinote

AGRICOM
Pastures for Profit.®

Grasslands
Sterling
Tetraploid
Long-Rotation Ryegrass

Background

Sterling is a very late flowering tetraploid long-rotation ryegrass, with strong-early spring activity. This allows *Sterling* to contribute valuable growth in the critical early lambing and calving period. *Sterling* is extremely palatable and produces very high growth rates in animals. *Sterling* performs best under rotational grazing in environments with medium-high soil fertility and reliable summer rainfall or irrigation.

When breeding *Sterling*, AgResearch Grasslands placed emphasis on high tiller density and recovery from grazing pressure. As a result, *Sterling* has shown excellent persistence when compared with other tetraploid ryegrasses.

Characteristics

Rust Tolerance	1000 Seed Weight	Endophyte	Ploidy
Good	3.4 grams	LE	Tetraploid

Perenniality	Leaf Size	Heading Date	Suggested Sowing Rate (kg/ha)
90% Perennial 10% Italian	Medium	Very Late (+25)	22-25

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Key Features

- ✓ Highly persistent tetraploid ryegrass
- ✓ Strong early-spring production
- ✓ Very late-heading ryegrass
- ✓ Very high feed quality

Use of AR1 Endophyte

AR1 endophyte versions of *Sterling* should be used in all regions north of Dunedin. It may also improve persistence in some circumstances in Southland and South Otago.

Production Performance

NFVT Invercargill Ryegrass Yield by Year (kg DM/ha) 2003-2006

Cultivar	Winter	Early Spring	Late Spring	Summer	Autumn	Annual
Sterling	102	101	109	107	106	107
Nui	106	97	93	99	104	98
Horizon	92	102	98	94	90	96
LSD (5% Level)	**15**	**7**	**13**	**9**	**8**	**7**
Trial Mean (kg DM/ha)	**851**	**2499**	**6030**	**6433**	**2916**	**18729**

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Grasslands Sterling Tetraploid Long-Rotation Ryegrass

Management of Tetraploid Ryegrasses

Although *Sterling* is more persistent than most other tetraploid ryegrasses, management adjustments are needed to maximise persistence. Tetraploids are easier to "over-graze" because they are more palatable, and the sugars in the stems encourage sheep to eat them closer to the ground. They can handle close grazing for short periods if they are allowed to recover, so damage is most likely to occur during lambing when pastures are short. Stocking rates should be adjusted to allow a minimum of 1200 kg DM/ha cover throughout lambing. When calculating stocking rates, allow for the higher intake by sheep on tetraploids. If covers become low, consider splitting paddocks in mid-lambing and shuffling ewes and lambs from one half to the other to give the grass a spell from grazing.

Tetraploid pastures may also need higher fertiliser rates to maintain soil fertility and pasture density. Pasture utilisation rates are higher, which exposes more nutrients to losses from the soil.

A common mistake is that farmers often use the colour of a pasture to decide if it is deficient in nitrogen. Tetraploids have a darker green colour, so often still look okay when they are deficient.

Tetraploids need to be spelled from grazing when they become moisture or heat stressed. They can be more palatable to insects, so use AR1 cultivars where insects are likely, and control insects at establishment.

Grasslands Sterling Tetraploid Long-Rotation Ryegrass

Suggested Mixes

Long-Term Tetraploid Pastures

Sterling long-rotation ryegrass	24 kg/ha
Tribute white clover	3 kg/ha
Sensation red clover	4 kg/ha
Choice chicory	1.5 kg/ha
Total	**32.5 kg/ha**

Specialist Lamb Finishing Mix – South Island

Sterling LE long-rotation ryegrass	18 kg/ha
Ohau AR1 Tetraploid long-rotation Ryegrass	6 kg/ha
Charlton Timothy	1 kg/ha
Tribute White Clover (bare seed)	4 kg/ha
Sensation red clover (bare seed)	5 kg/ha
Choice chicory (bare seed)	1.5 kg/ha
Tonic plantain	2 kg/ha
Total	**37.5 kg/ha**

Specialist Lamb Finishing Mix – North Island

Sterling LE long-rotation ryegrass	12 kg/ha
Ohau AR1 Tetraploid long-rotation Ryegrass	12 kg/ha
Tribute White Clover (bare seed)	4 kg/ha
Sensation red clover (bare seed)	5 kg/ha
Choice chicory (bare seed)	1.5 kg/ha
Tonic plantain	2 kg/ha
Total	**36.5 kg/ha**

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Environment, less than ideal

Sterling LE long-rotation ryegrass	14 kg/ha
*Supreme*PLUS long rotation ryegrass	8 kg/ha
Sensation red clover	4 kg/ha
Tribute white clover	2 kg/ha
Choice chicory	1.5 kg/ha
Total	**29.5 kg/ha**

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