



Information & Performance Guide



Farm type



Without
Endophyte

Sowing rate: pure sward



25+ kg/ha

Sowing rate: undersowing



14+ kg/ha

MORE FEED, FASTER

You expect the best from autumn sown annual ryegrasses as the window of opportunity to grow feed quickly is short. Winter Star II tetraploid annual ryegrass is fast out of the ground, provides high winter and spring yields and excellent quality.

Winter Star II tetraploid annual ryegrass is suitable for quick winter feed with improved spring quality making it ideal for silage and hay production. Winter Star II is high yielding with fast establishment giving excellent autumn growth. As a tetraploid, Winter Star II also has excellent feed quality.



Key benefits

- Ideal between maize crops
- Fast to establish
- Quick, early feed for grazing or silage
- Autumn sow for high yields of quality autumn, winter and spring feed
- Improved spring production and quality
- Ideal for undersowing into existing pastures.

Sowing and establishment

Winter Star II tetraploid annual ryegrass should be sown alone at a minimum of 25 kg/ha, using higher rates for more winter feed, or at a minimum of 14 kg/ha using Superstrike® treated seed in an undersowing situation.

Grazing management

It is recommended that a rotational grazing system be used when feeding Winter Star II, to allow improved regrowth following grazing.

Production and economic advantage of Winter Star II over Tama in Te Awamutu, Waikato

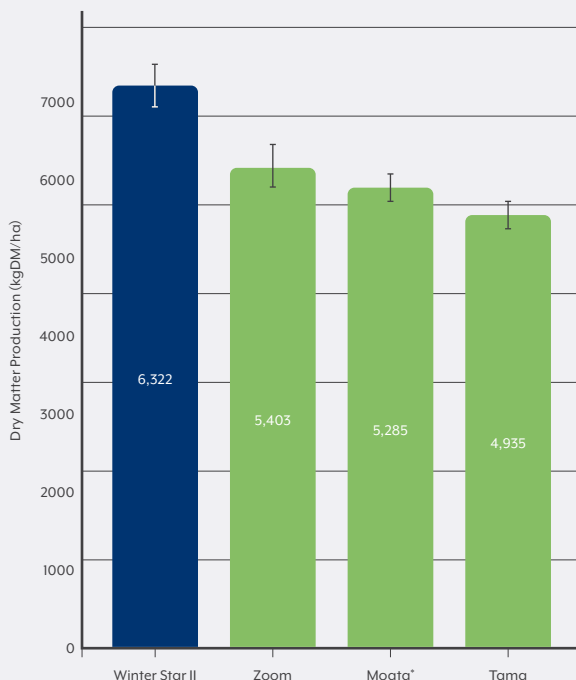
| Establishment (kgDM/ha) | Winter (kgDM/ha) | Early Spring (kgDM/ha) | TOTAL (kgDM/ha) | Cultivar Price (\$/kg) | Seed Cost/ha (\$/ha) | Profit (\$/ha) | Profit Over Tama (\$/ha) |
|-------------------------|------------------|------------------------|-----------------|------------------------|----------------------|----------------|--------------------------|
| Winter Star II | | | | | | | |
| 1539 | 2957 | 3152 | 7648 | \$4.59 | \$138 | \$1468 | \$131 |
| Tama | | | | | | | |
| 1382 | 2397 | 2972 | 6751 | \$2.71 | \$81 | \$1337 | |

The above table is a combination of three winter feed trials sown in autumn 2011, 2012 and 2014. Establishment dry matter production includes March-May, winter includes June, July and early spring includes August and September. Seed was sown bare at a rate of 30 kg/ha. Dry matter is valued at \$0.21/kgDM standing. Cultivar prices are the estimated North Island retail price for bare Winter Star II and Tama seed. Prices exclude GST.

Te Awamutu, Waikato trial results

Following the harvesting of maize, an annual ryegrass trial was sown on 7 March in Te Awamutu, Waikato. In this trial, Winter Star II out yielded all other annual ryegrass varieties growing 6,322 kgDM/ha over four grazings in June, July, August and September before replanting in maize. This trial demonstrated Winter Star II's ability to produce amazing quality feed between maize crops.

Dry matter production of annual ryegrasses Te Awamutu, Waikato 2014



Statistical significance indicated by least significant difference (LSD) error bars. Differences are significant where error bars do not cross over between varieties (LSD 5% = 540 kgDM/ha).

*Moata = Italian ryegrass.

Maxwell, Whanganui trial results

Winter Star II performed strongly in an annual ryegrass trial sown in Maxwell, Whanganui. From sowing on 31 March until 29 September, Winter Star II produced 6,921 kgDM/ha. The total yield produced was significantly higher than Tama, Hogan, Sultan and Moata ryegrass varieties.

Dry matter production of annual ryegrass cultivars in Maxwell, Whanganui 2017

| Dry Matter Production (kgDM/ha) | | | | | | | | |
|---------------------------------|---------------------|----|--------------|----|--------------------|----|-------------|----|
| Cultivar | Establishment Yield | | Winter Yield | | Early Spring Yield | | Total Yield | |
| Winter Star II | 401 | ac | 3041 | a | 3460 | a | 6921 | a |
| Zoom | 484 | a | 2681 | b | 3300 | ab | 6470 | ab |
| Tama | 323 | c | 2728 | ab | 3189 | b | 6250 | bc |
| Hogan | 431 | ab | 2604 | b | 3115 | b | 6148 | bc |
| Sultan | 346 | bc | 2530 | b | 3142 | b | 5989 | bc |
| Moata* | 324 | c | 2439 | b | 3172 | b | 5944 | c |
| Mean | 385 | | 2671 | | 3230 | | 6287 | |
| LSD 5% | 105 | | 332 | | 230 | | 500 | |
| CV% | 23 | | 8 | | 5 | | 5 | |

Results for dry matter production were recorded over April / May period for Establishment, June / July for winter and August / September for Early spring. Statistical significance lettering provided, yields with the same letter(s) are not statistically significant.

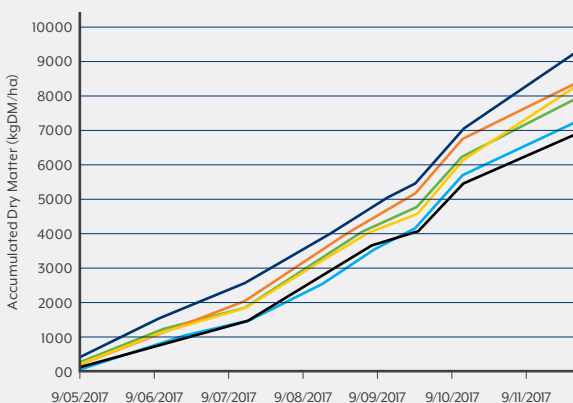
*Moata = Italian ryegrass



Ongaonga, Hawke's Bay trial results

Sown on 14 March 2017, Winter Star II has performed strongly in the 2017 Ongaonga annual ryegrass trial. In eight yield assessments completed over autumn, winter and spring, Winter Star II accumulated an amazing 9,157 kgDM/ha. Winter Star II produced 2,302 kgDM/ha more than Tama and 1,911 kgDM/ha more than Moata.

Dry matter accumulation of annual ryegrass cultivars in Ongaonga, Hawke's Bay



| Variety | Total Dry Matter Production (kgDM/ha) | |
|--------------------------|---------------------------------------|----|
| Winter Star II | 9157 | a |
| Sultan | 8341 | ab |
| Hogan | 8238 | ab |
| Zoom | 7886 | bc |
| Moata (Italian Ryegrass) | 7246 | cd |
| Tama | 6855 | c |
| P-Value | <.001 | |
| CV % | 7.9 | |
| LSD 5% | 922.6 | |
| Mean | 7954 | |

- Winter Star II
- Sultan
- Hogan
- Zoom
- Moata (Italian Ryegrass)
- Tama

Statistical significance lettering provided, yields with the same letter(s) are not statistically significant.

Impact of sowing rate, Puketaha, Waikato

Being a tetraploid, Winter Star II has a larger seed which requires higher sowing rates than diploid varieties. In this trial, the impact of Winter Star II sowing rate (20 kg/ha, 25 kg/ha and 30 kg/ha) on winter and early spring production was evaluated.

Sowing at 30 kg/ha produced the highest yield (6,861 kgDM/ha) of the three sowing rates between 2 April 2019 and 20 September 2019. Sowing at 30 kg/ha produced eight percent more yield than sowing at 20 kg/ha and three percent more than sowing at 25 kg/ha.

When winter feed was valued at \$0.21 kgDM and additional seed cost was considered, sowing at 30 kg/ha produced a \$70 per ha advantage over sowing at 20 kg/ha.

Impact of sowing rate on Winter Star II winter and early spring production

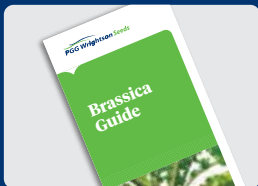
| Sowing Rate | Total Yield (kgDM/ha) | Seed Cost (\$/kg) | Seed Cost (\$/ha) | Profit (\$/ha) |
|--------------|-----------------------|-------------------|-------------------|----------------|
| 30 kg per ha | 6861 | \$4.59 | \$137.70 | \$1,303 |
| 25 kg per ha | 6646 | \$4.59 | \$114.75 | \$1,281 |
| 20 kg per ha | 6308 | \$4.59 | \$91.80 | \$1,233 |

Profit = Total Yield x Feed Value (\$0.21 per kgDM) less seed cost per hectare



Other publications

PGG Wrightson Seeds has developed a number of other publications to assist you on your farm. The following publications are available:



To get a copy of one of these publications **visit our website** or email: info@pggwrightsonseeds.co.nz with your details.

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