

North Victoria Forage Value Index

Italian Ryegrass

2023 Update

The Forage Value Index (FVI) is a tool that helps Australian dairy farmers and their advisors to make more informed decisions when selecting ryegrass cultivars.

It provides an accurate, reliable and independent assessment of the potential economic value of ryegrass cultivars across three different species (Perennial, Annual and Italian ryegrass) in a number of dairy-producing regions across Australia. The FVI is calculated by multiplying the Performance Value of each cultivar (i.e. total kilograms dry matter produced per hectare per season) by its Economic Value (i.e. the estimated value of this extra production per season). Performance Values for each variety are determined by industry assessed trial data. To be included in the FVI database, each cultivar must have data from at least three trials that have been conducted using strict industry approved protocols. For Perennial ryegrass, trials must be three years in length, whilst Annual & Italian ryegrass trials must be a minimum of one full growing season.

Reference varieties

Across the three different species of ryegrass, the Performance Value is expressed as the percentage change in yield relative to a selected reference cultivar which effectively acts as the genetic base for that species in the FVI. The reference cultivar is generally a well-known variety for each ryegrass species, where farmers and advisors are more likely to have a good understanding and knowledge of its performance over many years across various environments. The reference cultivars for each species are as follows:

- Perennial ryegrass: Victorian Ryegrass (Vic Rye)
- Annual Ryegrass: Tetila (from a certified source to ensure consistency across trials)
- Italian Ryegrass: Crusader

Figure 1 Map of trial locations across south eastern Australia that contributed to the FVI in 2023



Coloured bars

The FVI for each cultivar is expressed as a numerical value and is also assigned within a coloured bar. The FVI value is a prediction of extra operating profit per hectare over and above the reference cultivar in each species, which always has an FVI value of 0. Cultivars within the same-coloured bar are not significantly different to each other at the 95 per cent confidence interval.

The FVI information allows users to rank cultivars according to their region and user nominated attributes (e.g. seasonal yields, ploidy, heading date, endophyte). The number of trials in which the cultivar has been tested is also included in the table.

Seasonal yield tables

The accompanying tables of cultivar performance during the various FVI seasons are of particular importance to dairy farmers, depending upon their farming system and calving pattern. For example, dairy farmers that calve in the autumn might favour those cultivars that have a higher performance value for autumn and winter as they would likely value greater winter growth in their pastures. The vast majority of trial data comes from the Pasture Trial Network (PTN), and users can now check out the details of individual trials on the PTN in addition to the FVI rankings. They can be accessed at etools.mla.com.au/ptn or by scanning the QR code.



Autumn seasonal values for annual and Italian ryegrass FVI's

In 2023, performance values for Autumn in the Annual & Italian ryegrass FVI's have been removed from the index. The first harvest was not taken from the majority of these trials until after the 31st May and this meant that data for Autumn (March-May) which reflects very early establishment in these varieties was too limited for us to fully be confident it accurately reflected differences in the varieties at this time of the year. The solution is to generate more yield data before 31st May by sowing these trials earlier in the growing season and that is the aim for 2023 trials. However, most trials are dryland and therefore the timing of the autumn break is a big factor in establishing trials successfully. Recent autumn breaks in many regions particularly in Victoria have been very variable. This change only applies to Annual and Italian ryegrass FVI's. Perennial trials run for three years and so sufficient data is collected in autumn in these trials.



North Victoria: Forage Value Index 2023 – ITALIAN RYEGRASS

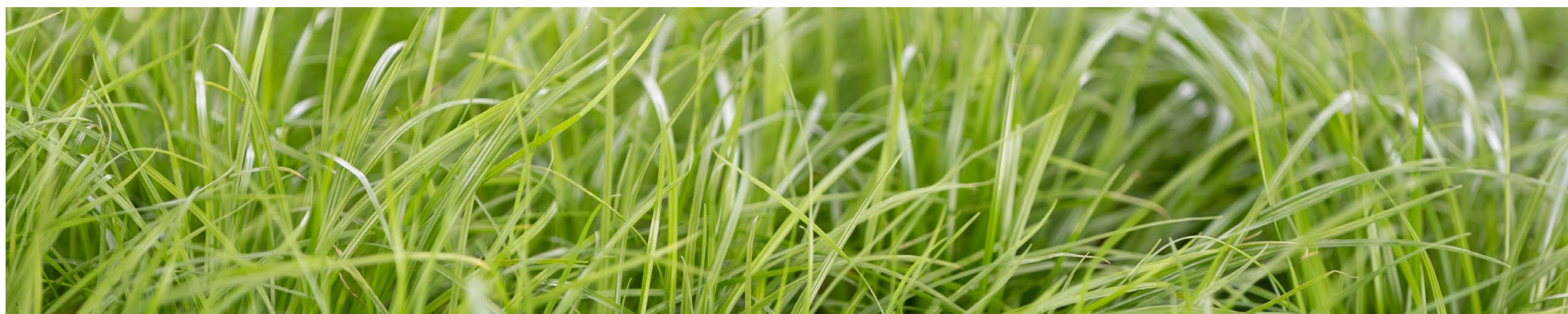
Cultivar	FVI North Vic	Winter	Early Spring	Late Spring	Summer	Endophyte	Ploidy	Heading Date	Marketer	No. of trials	
										Overall	North Vic
Tempo	57	107	103	102	101	Nil	D	Late	Barenbrug Australia	16	6
Arise	25	103	101	101	101	Nil	T	Late	Barenbrug Australia	15	5
Aston	14	104	100	100	100	Nil	T	Late	Barenbrug Australia	8	4
Concord II	12	103	101	99	100	Nil	D	Late	DLF Seeds	18	6
Manta	11	101	100	101	101	Nil	D	Late	DLF Seeds	6	1
SF Accelerate 2	10	100	100	101	100	Nil	D	Late	Seed Force	7	2
Jackpot	9	103	101	100	99	Nil	D	Late	DLF Seeds	14	5
Lush AR37	9	101	99	100	101	AR37	T	Late	DLF Seeds	8	4
Feast II	9	102	99	101	101	Nil	T	Late	DLF Seeds	18	6
Amass	7	100	99	101	101	Nil	T	Mid	Valley Seeds	7	3
Mona	3	100	99	102	100	Nil	T	Late	DLF Seeds	14	5
SF Emmerson	3	98	99	101	101	Nil	T	Late	Seed Force	3	1
Asset AR37	2	101	100	100	100	AR37	D	Late	DLF Seeds	4	1
Echo	1	101	100	100	99	Nil	T	Mid	Tas Global Seeds	4	2
SF Indulgence	0	100	100	100	100	Nil	D	Late	Seed Force	4	1
Crusader	0	100	100	100	100	Nil	D	Late	DLF Seeds	8	3
Nourish	-2	101	99	100	101	Nil	T	Late	DLF Seeds	8	4
Combat	-2	101	100	100	99	Nil	D	Mid	Upper Murray Seeds	4	1
Mohaka AR37	-2	98	100	100	101	AR37	T	Late	DLF Seeds	4	1
Pepper	-4	101	99	100	100	Nil	T	Mid/Late	Seed Force	7	2
Awesome	-6	101	100	100	98	Nil	D	Late	Upper Murray Seeds	5	1
Maverick GII	-11	99	100	100	99	Nil	D	Mid	DLF Seeds	4	1
Thumpa	-13	100	98	100	99	Nil	T	Late	DLF Seeds	18	6
Knight	-13	104	99	98	98	Nil	D	Late	DLF Seeds	18	6
Xtend	-13	98	99	101	99	Nil	D	Mid	AGF Seeds	9	2
Sonik	-16	99	99	99	99	Nil	D	Late	Cropmark Seeds	4	2
Blade	-21	98	99	100	98	Nil	D	Late	Cropmark Seeds	4	2

Notes

- 1 Crusader was chosen as the reference cultivar for the Italian ryegrass FVI, due to its relative performance being more widely known by the dairy industry compared to the other options. Unlike the Perennial and Annual FVI's where the reference cultivars used were towards the bottom of the FVI tables, Crusader is still a mid-ranking cultivar in the Italian ryegrass FVI despite being commercially available for many years. Therefore several cultivars in the Italian FVI have a negative FVI relative to Crusader. The reference cultivar in the FVI is always zero, and the FVI for all other cultivars in the list are measured against this line.
- 2 Data to create the performance values for each cultivar were taken from 18 Italian ryegrass trials. The trials were located in the following regions and were measured at various stages between 2015 and 2021 – Leongatha, Terang, Howlong (x4), Kiewa Valley, Shepparton, Taree, Aberdeen (x3), Meander Valley, Lardner Park, Bega, Warrnambool, Colac and MacArthur.
- 3 In the Italian ryegrass FVI, only trial data from the first year of growth is included in the calculations. The majority of Italian ryegrass PTN trials do not persist into a second year – in future when there is sufficient data from year 2 of a trial for Italian cultivars it will be included in a 2-year Italian ryegrass FVI.
- 4 Correction from 2021/22 FVI list: The two varieties Mohaka AR37 and Lush AR37 were incorrectly decoded from a small number of trials in the 2021/22 Italian ryegrass FVI, which may have affected their rankings. This error has now been corrected for the 2022/23 update.

Legend

Heading	Description
Cultivar	A plant variety that has been produced by selective breeding. Cultivars are as listed as on the Australian Seed Federation Pasture Seed Database.
Colour bars	Cultivars with the same colour are not significantly different from each other.
FVI	The rating is based on the outcome of economic and performance values for each cultivar.
Seasonal performance	A performance value is based on the difference in dry matter production between a cultivar's seasonal performance and that of Crusader Italian ryegrass. This is a percentage ranking – percent better or worse than Crusader ryegrass. <i>For example, Crusader is always 100 for each FVI season. A cultivar that is 110 means that it produced 110 per cent of the dry matter produced by Crusader in that particular FVI season. A cultivar that is 97 means it produced 97 per cent of the dry matter produced by Crusader in that particular FVI season.</i>
Autumn	March/April/May
Winter	June/July
Early spring	August/September
Late spring	October/November
Summer	December/January/February
Endophyte	A fungus which protects plants from a range of insect pests. Different types of endophytes affect persistence, dry matter production, insect pest species and nutritive value in different ways.
Ploidy	The number of chromosomes per cell in the plant. A diploid ryegrass has two, while a tetraploid has four.
Heading date	The date when 50 per cent of the plants of a variety have emerged seed heads in a typical year. Heading dates are listed on the Australian Seed Federation Pasture Seed Database.
Marketer	The company marketing the cultivar.
No. of trials	To be included in the Italian ryegrass Forage Value Index database, each cultivar must have data from at least three, one-year trials.



Economic values

The economic values are a key aspect of the overall forage value index. Whilst the performance values are the same across all regions in the FVI at present, the seasonal value of the extra pasture is different across the regions. Hence, localised regional tables are provided to more accurately reflect the marginal value of a kilogram of ryegrass in the different parts of the country. The way the economic values are calculated for the FVI changed for the 2022 release.

Original individual case study farm approach

When the FVI was first introduced, economic values were developed using a case study farm approach in each of the four regions where perennial ryegrass is dominant (South West Victoria, Northern Victoria, Gippsland and Tasmania). A typical dairy system based on a real farm business in each region was modelled, with the base monthly estimated metabolisable energy requirements of the herd, the feed consumed, and the pasture consumption per hectare defined. For each of the five FVI seasons, the economic value of the additional pasture to the case study farm system was estimated according to the market value of feeds that the additional pasture replaced (on an equivalent energy basis), or as the net market value of hay or silage produced if the additional pasture was surplus to the case study farm requirements. Farming systems, even within regions in Australia, are quite diverse by comparison to other pasture based dairy industries elsewhere in the world. The case study farm approach to determine economic values provided a good indication of the general value of additional pasture yield in each region, but was limited by how representative the case study farm is for each region.

New market value approach

The new approach for calculating economic values simplifies the way extra seasonal pasture production is valued. Seasons when grazed pasture is typically in deficit and in surplus are defined for each FVI region. For example, in Gippsland, pasture was assumed to be in deficit during summer, autumn and winter, and in surplus during early and late spring. Extra pasture produced in a period when it is typically in deficit is valued more than in periods when it is typically in surplus. In seasons of deficit, extra pasture is valued as its maximum replacement cost; as purchased supplementary feed, and in seasons of surplus it is valued at its minimum salvage value; as standing hay to be conserved. Market prices (2011-2018 average price) of feeds delivered to each region were used to establish these maximum and minimum economic values on an equivalent nutritive value basis.

How the new approach for calculating economic values affects the ranking of cultivars in the FVI

A previous release of the FVI was used to compare the two methods of calculating the economic values, to assess whether it made a difference to the FVI rankings. The FVI of 19 perennial ryegrass cultivars was calculated using the economic values from the original case study farm method and the market value approach, across the three Victorian regions. The 19 cultivars were compared to a common reference cultivar (Victorian), which was assigned a value of zero. Using the economic values calculated by the original method case study farm method, the 19 cultivars were calculated to be worth an extra \$0-\$180 per ha more than Victorian ryegrass, the reference cultivar. Using the economic values calculated by the market value approach, the same 19 cultivars were calculated to be worth an extra \$24-\$200/ha more than the same reference cultivar. Hence, it is clear that there is good agreement between the two methods for calculating the economic values.

Advantages of the market value approach

There are several advantages to using the market value approach. First, the economic values are applicable to all producers who buy and sell substitutes for grazed pasture, and who experience similar timings of pasture surpluses and deficits. This removes the limitations of having a single representative farm for each region. Second, the simplified approach makes it easier to communicate how the economic values have been calculated. This enables farmers to more easily consider how the FVI rankings relate to their individual circumstances. Lastly, regional differences can be accounted for in seasonality of pasture supply, and feed types and prices, and the economic values are relatively straightforward to update once established.



New economic values updated for 2022 onwards

The 2022 update of the FVI used newly updated economic values for all three ryegrass species and the same EV's are again in use for this update in 2023. In South West Victoria, Northern Victoria, Gippsland and Tasmania, grazed pasture was assumed to be in deficit during autumn, winter and summer, and surplus during early spring and late spring. In the two new regions of South Coast NSW and North Coast NSW, grazed pasture was assumed to be in deficit during autumn and winter and surplus during early spring, late spring, and summer.

Separate economic values for dry matter yield have now been calculated for perennial ryegrass cultivars and for annual/Italian ryegrass cultivars for the Victorian and Tasmanian regions. This aims to better reflect differences in the seasonal nutritive value of perennial vs. annual/Italian ryegrasses when calculating the economic values.

Perennial Ryegrass economic values for the Forage Value Index (\$/kg DM)

Region	Autumn	Winter	Early Spring	Late Spring	Summer
South West Victoria	0.36	0.37	0.31	0.29	0.32
Northern Victoria	0.36	0.37	0.30	0.28	0.32
Gippsland	0.41	0.42	0.35	0.33	0.37
Tasmania	0.39	0.41	0.31	0.30	0.36

Annual and Italian Ryegrass economic values for the Forage Value Index (\$/kg DM)

Region	Autumn	Winter	Early Spring	Late Spring	Summer
South West Victoria	0.37	0.37	0.29	0.29	0.35
Northern Victoria	0.38	0.38	0.30	0.30	0.36
Gippsland	0.42	0.42	0.35	0.35	0.40
Tasmania	0.41	0.42	0.31	0.31	0.38
South Coast NSW	0.44	0.44	0.37	0.37	0.36
North Coast NSW	0.47	0.48	0.38	0.38	0.38

North Victoria Winter seasonal performance – ITALIAN RYEGRASS

Cultivar	Winter	Early Spring	Late Spring	Summer	FVI North Vic	Endophyte	Ploidy	Heading Date	Marketer	No. of trials
Tempo	107	103	102	101	57	Nil	D	Late	Barenbrug Australia	16
Knight	104	99	98	98	-13	Nil	D	Late	DLF Seeds	18
Aston	104	100	100	100	14	Nil	T	Late	Barenbrug Australia	8
Arise	103	101	101	101	25	Nil	T	Late	Barenbrug Australia	15
Concord II	103	101	99	100	12	Nil	D	Late	DLF Seeds	18
Jackpot	103	101	100	99	9	Nil	D	Late	DLF Seeds	14
Feast II	102	99	101	101	9	Nil	T	Late	DLF Seeds	18
Lush AR37	101	99	100	101	9	AR37	T	Late	DLF Seeds	8
Pepper	101	99	100	100	-4	Nil	T	Late	Seed Force	7
Asset AR37	101	100	100	100	2	AR37	D	Late	DLF Seeds	4
Combat	101	100	100	99	-2	Nil	D	Mid	Upper Murray Seeds	4
Manta	101	100	101	101	11	Nil	D	Late	DLF Seeds	6
Nourish	101	99	100	101	-2	Nil	T	Late	DLF Seeds	8
Awesome	101	100	100	98	-6	Nil	D	Late	Upper Murray Seeds	5
Echo	101	100	100	99	1	Nil	T	Mid	Tas Global Seeds	4
Thumpa	100	98	100	99	-13	Nil	T	Late	DLF Seeds	18
SF Accelerate 2	100	100	101	100	10	Nil	D	Late	Seed Force	7
Amass	100	99	101	101	7	Nil	T	Mid	Valley Seeds	7
Mona	100	99	102	100	3	Nil	T	Late	DLF Seeds	14
Crusader	100	100	100	100	0	Nil	D	Late	DLF Seeds	8
SF Indulgence	100	100	100	100	0	Nil	D	Late	Seed Force	4
Maverick GII	99	100	100	99	-11	Nil	D	Mid	DLF Seeds	4
Sonik	99	99	99	99	-16	Nil	D	Late	Cropmark Seeds	4
SF Emmerson	98	99	101	101	3	Nil	T	Late	Seed Force	3
Blade	98	99	100	98	-21	Nil	D	Late	Cropmark Seeds	4
Xtend	98	99	101	99	-13	Nil	D	Mid	AGF Seeds	9
Mohaka AR37	98	100	100	101	-2	AR37	T	Late	DLF Seeds	4

North Victoria early Spring seasonal performance – ITALIAN RYEGRASS

Cultivar		Early Spring	Late Spring	Summer	Winter	FVI North Vic	Endophyte	Ploidy	Heading Date	Marketer	No. of trials
Tempo	■	103	102	101	107	57	Nil	D	Late	Barenbrug Australia	16
Arise	■ ■	101	101	101	103	25	Nil	T	Late	Barenbrug Australia	15
Jackpot	■ ■ ■	101	100	99	103	9	Nil	D	Late	DLF Seeds	14
Concord II	■ ■ ■ ■	101	99	100	103	12	Nil	D	Late	DLF Seeds	18
Aston	■ ■ ■ ■ ■	100	100	100	104	14	Nil	T	Late	Barenbrug Australia	8
Combat	■ ■ ■ ■ ■ ■	100	100	99	101	-2	Nil	D	Mid	Upper Murray Seeds	4
SF Accelerate 2	■ ■ ■ ■ ■ ■ ■	100	101	100	100	10	Nil	D	Late	Seed Force	7
Awesome	■ ■ ■ ■ ■ ■ ■ ■	100	100	98	101	-6	Nil	D	Late	Upper Murray Seeds	5
SF Indulgence	■ ■ ■ ■ ■ ■ ■ ■ ■	100	100	100	100	0	Nil	D	Late	Seed Force	4
Asset AR37	■ ■ ■ ■ ■ ■ ■ ■ ■ ■	100	100	100	101	2	AR37	D	Late	DLF Seeds	4
Crusader	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	100	100	100	100	0	Nil	D	Late	DLF Seeds	8
Mohaka AR37	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	100	100	101	98	-2	AR37	T	Late	DLF Seeds	4
Maverick GII	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	100	100	99	99	-11	Nil	D	Mid	DLF Seeds	4
Echo	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	100	100	99	101	1	Nil	T	Mid	Tas Global Seeds	4
Manta	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	100	101	101	101	11	Nil	D	Late	DLF Seeds	6
SF Emmerson	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	99	101	101	98	3	Nil	T	Late	Seed Force	3
Amass	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	99	101	101	100	7	Nil	T	Mid	Valley Seeds	7
Lush AR37	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	99	100	101	101	9	AR37	T	Late	DLF Seeds	8
Pepper	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	99	100	100	101	-4	Nil	T	Mid/Late	Seed Force	7
Mona	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	99	102	100	100	3	Nil	T	Late	DLF Seeds	14
Blade	■ ■	99	100	98	98	-21	Nil	D	Late	Cropmark Seeds	4
Xtend	■ ■	99	101	99	98	-13	Nil	D	Mid	AGF Seeds	9
Knight	■ ■	99	98	98	104	-13	Nil	D	Late	DLF Seeds	18
Sonik	■ ■	99	99	99	99	-16	Nil	D	Late	Cropmark Seeds	4
Nourish	■ ■	99	100	101	101	-2	Nil	T	Late	DLF Seeds	8
Feast II	■ ■	99	101	101	102	9	Nil	T	Late	DLF Seeds	18
Thumpa	■ ■	98	100	99	100	-13	Nil	T	Late	DLF Seeds	18

North Victoria late Spring seasonal performance – ITALIAN RYEGRASS

Cultivar		Late Spring	Summer	Winter	Early Spring	FVI North Vic	Endophyte	Ploidy	Heading Date	Marketer	No. of trials
Tempo	■	102	101	107	103	57	Nil	D	Late	Barenbrug Australia	16
Mona	■ ■	102	100	100	99	3	Nil	T	Late	DLF Seeds	14
Feast II	■ ■ ■	101	101	102	99	9	Nil	T	Late	DLF Seeds	18
Manta	■ ■ ■	101	101	101	100	11	Nil	D	Late	DLF Seeds	6
Amass	■ ■ ■	101	101	100	99	7	Nil	T	Mid	Valley Seeds	7
SF Accelerate 2	■ ■ ■	101	100	100	100	10	Nil	D	Late	Seed Force	7
Arise	■ ■ ■	101	101	103	101	25	Nil	T	Late	Barenbrug Australia	15
Xtend	■ ■ ■	101	99	98	99	-13	Nil	D	Mid	AGF Seeds	9
SF Emmerson	■ ■ ■	101	101	98	99	3	Nil	T	Late	Seed Force	3
Aston	■ ■ ■	100	100	104	100	14	Nil	T	Late	Barenbrug Australia	8
SF Indulgence	■ ■ ■	100	100	100	100	0	Nil	D	Late	Seed Force	4
Mohaka AR37	■ ■ ■	100	101	98	100	-2	AR37	T	Late	DLF Seeds	4
Echo	■ ■ ■	100	99	101	100	1	Nil	T	Mid	Tas Global Seeds	4
Blade	■ ■ ■	100	98	98	99	-21	Nil	D	Late	Cropmark Seeds	4
Jackpot	■ ■ ■	100	99	103	101	9	Nil	D	Late	DLF Seeds	14
Combat	■ ■ ■ ■	100	99	101	100	-2	Nil	D	Mid	Upper Murray Seeds	4
Crusader	■ ■ ■ ■	100	100	100	100	0	Nil	D	Late	DLF Seeds	8
Lush AR37	■ ■ ■ ■	100	101	101	99	9	AR37	T	Late	DLF Seeds	8
Asset AR37	■ ■ ■ ■	100	100	101	100	2	AR37	D	Late	DLF Seeds	4
Thumpa	■ ■ ■ ■	100	99	100	98	-13	Nil	T	Late	DLF Seeds	18
Awesome	■ ■ ■ ■	100	98	101	100	-6	Nil	D	Late	Upper Murray Seeds	5
Pepper	■ ■ ■ ■	100	100	101	99	-4	Nil	T	Mid/Late	Seed Force	7
Maverick GII	■ ■ ■ ■	100	99	99	100	-11	Nil	D	Mid	DLF Seeds	4
Nourish	■ ■ ■ ■	100	101	101	99	-2	Nil	T	Late	DLF Seeds	8
Concord II	■ ■ ■ ■	99	100	103	101	12	Nil	D	Late	DLF Seeds	18
Sonik	■ ■ ■ ■	99	99	99	99	-16	Nil	D	Late	Cropmark Seeds	4
Knight	■ ■ ■ ■	98	98	104	99	-13	Nil	D	Late	DLF Seeds	18

North Victoria Summer seasonal performance – ITALIAN RYEGRASS

Cultivar	Summer	Winter	Early Spring	Late Spring	FVI North Vic	Endophyte	Ploidy	Heading Date	Marketer	No. of trials
Tempo	101	107	103	102	57	Nil	D	Late	Barenbrug Australia	16
Lush AR37	101	101	99	100	9	AR37	T	Late	PGG Wrightson Seeds	8
SF Emmerson	101	98	99	101	3	Nil	T	Late	Seed Force	3
Manta	101	101	100	101	11	Nil	D	Late	DLF Seeds	6
Feast II	101	102	99	101	9	Nil	T	Late	PGG Wrightson Seeds	18
Amass	101	100	99	101	7	Nil	T	Mid	Valley Seeds	7
Arise	101	103	101	101	25	Nil	T	Late	Barenbrug Australia	15
Nourish	101	101	99	100	-2	Nil	T	Late	PGG Wrightson Seeds	8
Mohaka AR37	101	98	100	100	-2	AR37	T	Late	DLF Seeds	4
SF Accelerate 2	100	100	100	101	10	Nil	D	Late	Seed Force	7
Concord II	100	103	101	99	12	Nil	D	Late	PGG Wrightson Seeds	18
Crusader	100	100	100	100	0	Nil	D	Late	DLF Seeds	8
SF Indulgence	100	100	100	100	0	Nil	D	Late	Seed Force	4
Aston	100	104	100	100	14	Nil	T	Late	Barenbrug Australia	8
Asset AR37	100	101	100	100	2	AR37	D	Late	DLF Seeds	4
Mona	100	100	99	102	3	Nil	T	Late	DLF Seeds	14
Pepper	100	101	99	100	-4	Nil	T	Mid/Late	Seed Force	7
Echo	99	101	100	100	1	Nil	T	Mid	Tas Global Seeds	4
Sonik	99	99	99	99	-16	Nil	D	Late	Cropmark Seeds	4
Xtend	99	98	99	101	-13	Nil	D	Mid	AGF Seeds	9
Thumpa	99	100	98	100	-13	Nil	T	Late	DLF Seeds	18
Jackpot	99	103	101	100	9	Nil	D	Late	DLF Seeds	14
Maverick GII	99	99	100	100	-11	Nil	D	Mid	PGG Wrightson Seeds	4
Combat	99	101	100	100	-2	Nil	D	Mid	Upper Murray Seeds	4
Awesome	98	101	100	100	-6	Nil	D	Late	Upper Murray Seeds	5
Knight	98	104	99	98	-13	Nil	D	Late	DLF Seeds	18
Blade	98	98	99	100	-21	Nil	D	Late	Cropmark Seeds	4

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