

# Mid-north coast NSW Forage Value Index

## Italian ryegrass

### 2025 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 is updated each year with new trial data so that farmers can have up-to-date information on the performance of newly released varieties and how they compare to existing established varieties. The FVI 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. This minimum trial requirement will increase over the next couple of years. For Perennial ryegrass, trials must be three years in length, while Annual and Italian ryegrass trials must be a minimum of one full growing season.

Figure 1 Map of trial locations across South-eastern Australia used in the 2025 FVI.



## 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 that effectively acts as the genetic base for that species in the FVI.

The reference cultivar is 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 current 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.**

## 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 zero. 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 and metabolisable energy). 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](https://etools.mla.com.au/ptn) or by scanning the QR code.



## Autumn seasonal values for Annual and Italian ryegrass FVIs

In 2023, performance values for autumn in the Annual and Italian ryegrass FVIs were removed from the index. The first harvest was not taken from the majority earlier PTN trials until after 31 May and this meant that data for autumn, defined as March–May yield in the FVI, 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. Since then a sufficient amount of new trial data has become available to allow the autumn performance values for annual and Italian ryegrass to be reintroduced to the FVI calculation for this 2025 update. This issue does not affect the perennial ryegrass FVI as these trials run for three years and so sufficient autumn yield data is always collected in years two and three of these trials.

## Forage quality – Annual and Italian ryegrass

A new feature of the 2025 FVI is the expansion of forage quality estimates at a varietal level from Perennial ryegrass, to now also include some Annual and Italian ryegrass varieties. Metabolisable energy (ME) was the measure chosen to provide an indication of seasonal forage quality for each cultivar.

Pasture samples were collected at an individual plot level and ME concentration was measured using near infrared (NIR) spectroscopy analysis across all five FVI seasons. Metabolisable energy is presented in the FVI tables below as megajoules of ME per kg of dry matter. Performance values for ME were calculated using the same statistical methodology used to create seasonal and total annual dry matter yield values for each cultivar.

**For annual and Italian ryegrass, the forage quality trait has not been incorporated into the overall FVI ranking for each cultivar in each region. Two trials were analysed for forage quality in 2024 in Annual and Italian ryegrass and not every variety was included in those two trials. However, farmers can still look at the mean yearly and seasonal forage quality value for each cultivar, to get an initial idea of the variation in ME between the different cultivars.**

## Forage quality – Perennial ryegrass

For the 2025 Perennial FVI, we have included forage quality as a trait in the overall FVI calculation for each variety. This marks a significant evolution of the index to one that is based on more than one trait of economic importance to farmers (dry matter yield) to a genuine multi-trait index. The methodology used to achieve this is outlined in detail in the following paper:

**Lewis, C.D., Smith, K.F., Jacobs, J.L., Ho, C.K.M., Leddin, C.M., Moate, P.J. and Malcolm, B., 2024.** Using a two-price market value framework to value differences in metabolisable energy concentration of pasture across seasons. *Agricultural Systems*, 217, p.103939.

## Mid-north coast NSW: Forage Value Index 2025 – ITALIAN RYEGRASS

Cultivar	FVI Mid-nth coast NSW	Total trials	Autumn	Winter	Early spring	Late spring	Summer	Endophyte	Ploidy	Heading date	Marketer	Trials in Mid-nth coast NSW	Overall metabolisable energy
Arise	195	21	122	98	103	103	108	Nil	T	Late	Barenbrug Australia	5	12.16
Amass	144	11	118	92	103	106	107	Nil	T	Mid	Valley Seeds	3	12.06
Echo	142	6	129	96	101	102	99	Nil	T	Mid	Tasglobal Seeds	0	12.25
RGT Dardevyl	133	9	113	89	103	105	112	Nil	T	Late	RAGT	3	12.24
Tempo	117	25	106	98	104	106	105	Nil	D	Late	Barenbrug Australia	5	11.86
Aston	117	10	112	100	102	103	103	Nil	T	Late	Barenbrug Australia	2	11.90
Manta	89	12	107	98	99	103	108	Nil	D	Late	DLF Seeds	2	12.05
RGT Exotyl	46	7	92	97	103	106	107	Nil	D	Late	RAGT	2	12.17
Mona	39	16	109	92	100	106	100	Nil	T	Late	DLF Seeds	4	12.03
Feast II	34	27	105	94	99	104	105	Nil	T	Late	DLF Seeds	6	12.00
Concord II	9	23	107	94	99	101	102	Nil	D	Late	DLF Seeds	5	11.96
Accelerate 2	1	16	101	89	100	103	108	Nil	D	Late	RAGT	4	12.06
<b>Crusader</b>	<b>0</b>	<b>12</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Nil</b>	<b>D</b>	<b>Late</b>	<b>DLF Seeds</b>	<b>1</b>	<b>12.04</b>
Jackpot	-10	14	103	96	100	102	98	Nil	D	Late	DLF Seeds	4	
Indulgence	-25	7	101	86	104	103	101	Nil	D	Late	RAGT	2	
Awesome	-29	6	100	95	106	101	93	Nil	D	Late	Upper Murray Seeds	1	
Emmerson	-35	6	101	77	97	111	107	Nil	T	Late	RAGT	2	
Thumpa	-36	23	106	95	98	100	95	Nil	T	Late	DLF Seeds	5	12.01
Combat	-56	4	100	98	106	97	90	Nil	D	Mid	Upper Murray Seeds	1	
Gusto	-63	9	103	85	103	101	99	Nil	D	Mid/Late	AGF Seeds	1	12.20
Xtend	-131	14	99	82	95	103	100	Nil	D	Mid	AGF Seeds	2	
Blade	-307	4	93	80	92	101	84	Nil	D	Late	Cropmark Seeds	0	

### Notes

- 1 Data to create the performance values for each cultivar were taken from 27 Italian ryegrass trials. The trials were located in the following regions and were measured at various stages between 2015 and 2023 – Leongatha, Terang, Howlong (x4), Kiewa Valley, Shepparton, Taree, Aberdeen (x3), Meander Valley, Oaks, Bairnsdale, Lardner Park, Bega, Warrnambool, Colac and Macarthur. Seven new trials were added to the Italian ryegrass FVI this year from Peshurst, Colac, Bool Lagoon, Tallygaroopna, Lardner Park, Wingham and Aberdeen.
- 2 The total number of trials can be used as an indication of the reliability of the ranking for each cultivar. Cultivars with large trial numbers are likely to be more accurate in their position on the list.
- 3 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 FVIs 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 variety.
- 4 Metabolisable energy (ME) is presented for each cultivar as megajoules of ME per Kg of dry matter. These data were obtained from two PTN trials in 2023 (Aberdeen and Lardner Park). These values currently do not contribute to the overall FVI ranking for each cultivar in annual and Italian ryegrass but will do so in future when sufficient forage quality data is available. Values are provided this year to give an indication to farmers of the variation in forage quality between cultivars. Any cultivar with no metabolisable energy value shown was not entered in either of the two trials sampled for forage quality.

## 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.
Total trials	To be included in the Italian ryegrass Forage Value Index database, each cultivar must have data from at least three, one-year trials.
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 – per cent better or worse than Crusader ryegrass. 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.
Autumn	March/April/May
Winter	June/July
Early spring	August/September
Late spring	October/November
Summer	December/January/February
Endophyte	A fungus that 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.
Metabolisable energy	A measure of the Forage Quality of each cultivar, measures as megajoules of ME/kg of dry matter. Cultivars with higher ME values are likely to have greater milk production potential for the same level of dry matter intake.



## Economic values

The economic values are a key aspect of the overall Forage Value Index. While 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 methodology with which the economic values are calculated for the FVI changed for the 2022 , and now new updates to these economic values using the same methodology have been used in the 2025 FVI update.

### 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 adopted from 2022 FVI onwards

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 of greater value than 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 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 prior to the 2023 FVI update 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 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.

### Update to 2025 economic values

Using the same two-prove market value framework as described above, the feed prices used in the economic value calculations for 2025 were updated to reflect 2022 dollar values instead of 2020 dollar values. The estimated cost of hay conservation (used for the salvage value component of the equation) was also updated to reflect 2022 average prices. This allowed inflation to be accounted for and resulted in both feed cost and conservation costs used being 10 per cent greater than the previously used values.

## New economic values updated for 2025 onwards

The 2025 update of the FVI used newly updated economic values for all three ryegrass species, as described on the previous page in detail. 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 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.

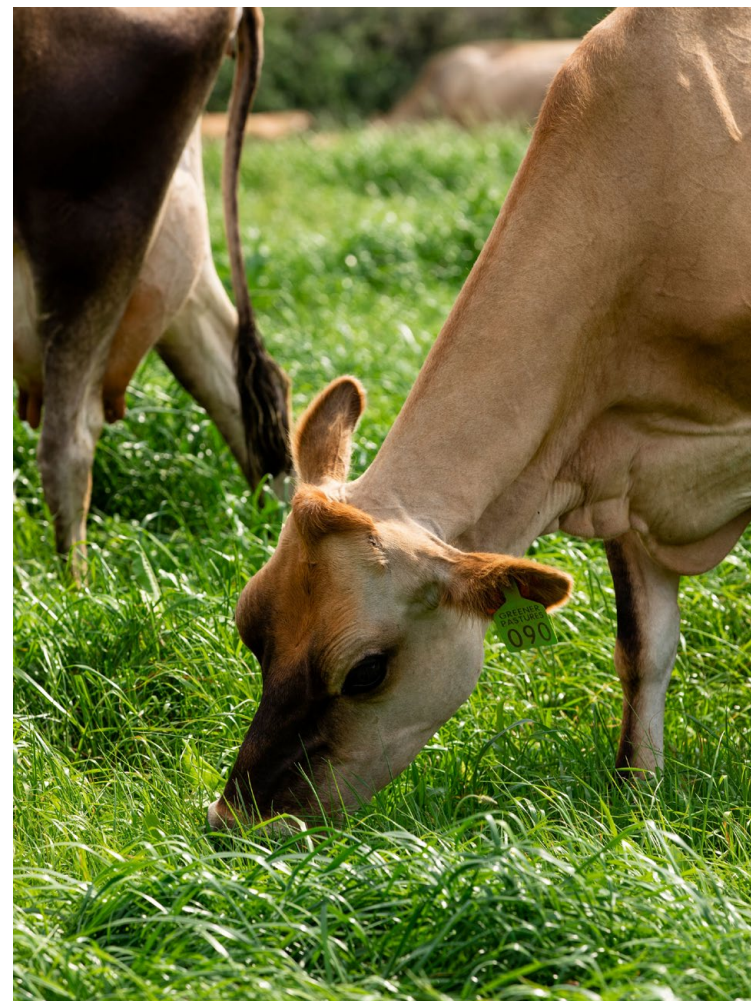
Separate economic values for dry matter yield have now been calculated for Perennial ryegrass cultivars and for Annual/Italian ryegrass cultivars for the Victorian and Tasmanian regions. This aims to better reflect differences in the seasonal nutritive value of Perennial versus Annual/Italian ryegrasses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

### Perennial ryegrass seasonal yield economic values for the 2025 Forage Value Index (\$/kg DM)

Region	Autumn	Winter	Early spring	Late spring	Summer
South-west Victoria	0.40	0.41	0.34	0.32	0.36
Northern Victoria	0.39	0.40	0.33	0.31	0.35
Gippsland	0.45	0.46	0.39	0.36	0.40
Tasmania	0.43	0.45	0.35	0.33	0.39

### Annual and Italian ryegrass seasonal yield economic values for the 2025 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
Mid-north coast NSW	0.47	0.48	0.38	0.38	0.38



## Mid-north coast NSW: Autumn seasonal performance – ITALIAN RYEGRASS

Cultivar	FVI Mid-nth coast NSW	Autumn	Winter	Early spring	Late spring	Summer	Endophyte	Ploidy	Heading date	Marketer	No. of trials	Autumn metabolisable energy
Echo	142	129	96	101	102	99	Nil	T	Mid	Tasglobal Seeds	6	12.9
Arise	195	122	98	103	103	108	Nil	T	Late	Barenbrug Australia	21	12.9
Amass	144	118	92	103	106	107	Nil	T	Mid	Valley Seeds	11	12.9
RGT Dardevyl	133	113	89	103	105	112	Nil	T	Late	RAGT	9	12.7
Aston	117	112	100	102	103	103	Nil	T	Late	Barenbrug Australia	10	12.8
Mona	39	109	92	100	106	100	Nil	T	Late	DLF Seeds	16	12.8
Manta	89	107	98	99	103	108	Nil	D	Late	DLF Seeds	12	12.8
Concord II	9	107	94	99	101	102	Nil	D	Late	DLF Seeds	23	12.5
Thumpa	-36	106	95	98	100	95	Nil	T	Late	DLF Seeds	23	12.5
Tempo	117	106	98	104	106	105	Nil	D	Late	Barenbrug Australia	25	12.7
Feast II	34	105	94	99	104	105	Nil	T	Late	DLF Seeds	27	12.7
Gusto	-63	103	85	103	101	99	Nil	D	Mid/Late	AGF Seeds	9	13.0
Jackpot	-10	103	96	100	102	98	Nil	D	Late	DLF Seeds	14	
Emmerson	-35	101	77	97	111	107	Nil	T	Late	RAGT	6	
Indulgence	-25	101	86	104	103	101	Nil	D	Late	RAGT	7	
Accelerate 2	1	101	89	100	103	108	Nil	D	Late	RAGT	16	12.8
Awesome	-29	100	95	106	101	93	Nil	D	Late	Upper Murray Seeds	6	
Combat	-56	100	98	106	97	90	Nil	D	Mid	Upper Murray Seeds	4	
<b>Crusader</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Nil</b>	<b>D</b>	<b>Late</b>	<b>DLF Seeds</b>	<b>12</b>	<b>12.7</b>
Xtend	-131	99	82	95	103	100	Nil	D	Mid	AGF Seeds	14	
Blade	-307	93	80	92	101	84	Nil	D	Late	Cropmark Seeds	4	
RGT Exotyl	46	92	97	103	106	107	Nil	D	Late	RAGT	7	12.8

## Mid-north coast NSW: Winter seasonal performance – ITALIAN RYEGRASS

Cultivar	FVI Mid-nth coast NSW	Winter	Early spring	Late spring	Summer	Autumn	Endophyte	Ploidy	Heading date	Marketer	No. of trials	Winter metabolisable energy
Aston	117	100	102	103	103	112	Nil	T	Late	Barenbrug Australia	10	12.2
<b>Crusader</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Nil</b>	<b>D</b>	<b>Late</b>	<b>DLF Seeds</b>	<b>12</b>	<b>12.1</b>
Manta	89	98	99	103	108	107	Nil	D	Late	DLF Seeds	12	12.1
Tempo	117	98	104	106	105	106	Nil	D	Late	Barenbrug Australia	25	12.2
Combat	-56	98	106	97	90	100	Nil	D	Mid	Upper Murray Seeds	4	
Arise	195	98	103	103	108	122	Nil	T	Late	Barenbrug Australia	21	12.3
RGT Exotyl	46	97	103	106	107	92	Nil	D	Late	RAGT	7	12.3
Jackpot	-10	96	100	102	98	103	Nil	D	Late	DLF Seeds	14	
Echo	142	96	101	102	99	129	Nil	T	Mid	Tasglobal Seeds	6	12.3
Thumpa	-36	95	98	100	95	106	Nil	T	Late	DLF Seeds	23	12.1
Awesome	-29	95	106	101	93	100	Nil	D	Late	Upper Murray Seeds	6	
Concord II	9	94	99	101	102	107	Nil	D	Late	DLF Seeds	23	12.1
Feast II	34	94	99	104	105	105	Nil	T	Late	DLF Seeds	27	12.0
Amass	144	92	103	106	107	118	Nil	T	Mid	Valley Seeds	11	12.1
Mona	39	92	100	106	100	109	Nil	T	Late	DLF Seeds	16	12.2
RGT Dardevyl	133	89	103	105	112	113	Nil	T	Late	RAGT	9	12.5
Accelerate 2	1	89	100	103	108	101	Nil	D	Late	RAGT	16	12.1
Indulgence	-25	86	104	103	101	101	Nil	D	Late	RAGT	7	
Gusto	-63	85	103	101	99	103	Nil	D	Mid/Late	AGF Seeds	9	12.3
Xtend	-131	82	95	103	100	99	Nil	D	Mid	AGF Seeds	14	
Blade	-307	80	92	101	84	93	Nil	D	Late	Cropmark Seeds	4	
Emmerson	-35	77	97	111	107	101	Nil	T	Late	RAGT	6	



## Mid-north coast NSW: Early spring seasonal performance – ITALIAN RYEGRASS

Cultivar	FVI Mid-nth coast NSW	Early spring	Late spring	Summer	Autumn	Winter	Endophyte	Ploidy	Heading date	Marketer	No. of trials	Early spring metabolisable energy
Combat	-56	106	97	90	100	98	Nil	D	Mid	Upper Murray Seeds	4	
Awesome	-29	106	101	93	100	95	Nil	D	Late	Upper Murray Seeds	6	
Indulgence	-25	104	103	101	101	86	Nil	D	Late	RAGT	7	
Tempo	117	104	106	105	106	98	Nil	D	Late	Barenbrug Australia	25	12.6
RGT Exotyl	46	103	106	107	92	97	Nil	D	Late	RAGT	7	12.7
RGT Dardevyl	133	103	105	112	113	89	Nil	T	Late	RAGT	9	12.9
Arise	195	103	103	108	122	98	Nil	T	Late	Barenbrug Australia	21	12.9
Amass	144	103	106	107	118	92	Nil	T	Mid	Valley Seeds	11	12.6
Gusto	-63	103	101	99	103	85	Nil	D	Mid/Late	AGF Seeds	9	12.7
Aston	117	102	103	103	112	100	Nil	T	Late	Barenbrug Australia	10	12.6
Echo	142	101	102	99	129	96	Nil	T	Mid	Tasglobal Seeds	6	12.9
Jackpot	-10	100	102	98	103	96	Nil	D	Late	DLF Seeds	14	
<b>Crusader</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Nil</b>	<b>D</b>	<b>Late</b>	<b>DLF Seeds</b>	<b>12</b>	<b>12.6</b>
Mona	39	100	106	100	109	92	Nil	T	Late	DLF Seeds	16	12.6
Accelerate 2	1	100	103	108	101	89	Nil	D	Late	RAGT	16	12.6
Manta	89	99	103	108	107	98	Nil	D	Late	DLF Seeds	12	12.7
Concord II	9	99	101	102	107	94	Nil	D	Late	DLF Seeds	23	12.5
Feast II	34	99	104	105	105	94	Nil	T	Late	DLF Seeds	27	12.6
Thumpa	-36	98	100	95	106	95	Nil	T	Late	DLF Seeds	23	12.6
Emmerson	-35	97	111	107	101	77	Nil	T	Late	RAGT	6	
Xtend	-131	95	103	100	99	82	Nil	D	Mid	AGF Seeds	14	
Blade	-307	92	101	84	93	80	Nil	D	Late	Cropmark Seeds	4	

## Mid-north coast NSW: Late spring seasonal performance – ITALIAN RYEGRASS

Cultivar	FVI Mid-nth coast NSW	Late spring	Summer	Autumn	Winter	Early spring	Endophyte	Ploidy	Heading date	Marketer	No. of trials	Late spring metabolisable energy
Emmerson	-35	111	107	101	77	97	Nil	T	Late	RAGT	6	
Tempo	117	106	105	106	98	104	Nil	D	Late	Barenbrug Australia	25	10.6
RGT Exotyl	46	106	107	92	97	103	Nil	D	Late	RAGT	7	10.9
Amass	144	106	107	118	92	103	Nil	T	Mid	Valley Seeds	11	10.8
Mona	39	106	100	109	92	100	Nil	T	Late	DLF Seeds	16	10.5
RGT Dardevyl	133	105	112	113	89	103	Nil	T	Late	RAGT	9	11.0
Feast II	34	104	105	105	94	99	Nil	T	Late	DLF Seeds	27	10.8
Arise	195	103	108	122	98	103	Nil	T	Late	Barenbrug Australia	21	10.9
Aston	117	103	103	112	100	102	Nil	T	Late	Barenbrug Australia	10	10.8
Indulgence	-25	103	101	101	86	104	Nil	D	Late	RAGT	7	
Xtend	-131	103	100	99	82	95	Nil	D	Mid	AGF Seeds	14	
Accelerate 2	1	103	108	101	89	100	Nil	D	Late	RAGT	16	10.9
Manta	89	103	108	107	98	99	Nil	D	Late	DLF Seeds	12	10.9
Echo	142	102	99	129	96	101	Nil	T	Mid	Tasglobal Seeds	6	11.0
Jackpot	-10	102	98	103	96	100	Nil	D	Late	DLF Seeds	14	
Concord II	9	101	102	107	94	99	Nil	D	Late	DLF Seeds	23	10.8
Gusto	-63	101	99	103	85	103	Nil	D	Mid/Late	AGF Seeds	9	10.9
Blade	-307	101	84	93	80	92	Nil	D	Late	Cropmark Seeds	4	
Awesome	-29	101	93	100	95	106	Nil	D	Late	Upper Murray Seeds	6	
Thumpa	-36	100	95	106	95	98	Nil	T	Late	DLF Seeds	23	10.7
<b>Crusader</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Nil</b>	<b>D</b>	<b>Late</b>	<b>DLF Seeds</b>	<b>12</b>	<b>11.0</b>
Combat	-56	97	90	100	98	106	Nil	D	Mid	Upper Murray Seeds	4	

## Mid-north coast NSW: Summer seasonal performance – ITALIAN RYEGRASS

Cultivar	FVI Mid-nth coast NSW	Summer	Autumn	Winter	Early spring	Late spring	Endophyte	Ploidy	Heading date	Marketer	No. of trials	Summer metabolisable energy
RGT Dardevyl	133	112	113	89	103	105	Nil	T	Late	RAGT	9	12.1
Accelerate 2	1	108	101	89	100	103	Nil	D	Late	RAGT	16	11.9
Manta	89	108	107	98	99	103	Nil	D	Late	DLF Seeds	12	11.8
Arise	195	108	122	98	103	103	Nil	T	Late	Barenbrug Australia	21	11.8
Emmerson	-35	107	101	77	97	111	Nil	T	Late	RAGT	6	
RGT Exotyl	46	107	92	97	103	106	Nil	D	Late	RAGT	7	12.1
Amass	144	107	118	92	103	106	Nil	T	Mid	Valley Seeds	11	11.9
Feast II	34	105	105	94	99	104	Nil	T	Late	DLF Seeds	27	12.0
Tempo	117	105	106	98	104	106	Nil	D	Late	Barenbrug Australia	25	11.2
Aston	117	103	112	100	102	103	Nil	T	Late	Barenbrug Australia	10	11.1
Concord II	9	102	107	94	99	101	Nil	D	Late	DLF Seeds	23	11.9
Indulgence	-25	101	101	86	104	103	Nil	D	Late	RAGT	7	
Mona	39	100	109	92	100	106	Nil	T	Late	DLF Seeds	16	12.0
<b>Crusader</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>Nil</b>	<b>D</b>	<b>Late</b>	<b>DLF Seeds</b>	<b>12</b>	<b>11.8</b>
Xtend	-131	100	99	82	95	103	Nil	D	Mid	AGF Seeds	14	
Echo	142	99	129	96	101	102	Nil	T	Mid	Tasglobal Seeds	6	12.2
Gusto	-63	99	103	85	103	101	Nil	D	Mid/Late	AGF Seeds	9	12.0
Jackpot	-10	98	103	96	100	102	Nil	D	Late	DLF Seeds	14	
Thumpa	-36	95	106	95	98	100	Nil	T	Late	DLF Seeds	23	12.1
Awesome	-29	93	100	95	106	101	Nil	D	Late	Upper Murray Seeds	6	
Combat	-56	90	100	98	106	97	Nil	D	Mid	Upper Murray Seeds	4	
Blade	-307	84	93	80	92	101	Nil	D	Late	Cropmark Seeds	4	

### Disclaimer

The content of this publication is provided for general information only and has not been prepared to address your specific circumstances. We do not guarantee the completeness, accuracy or timeliness of the information.

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