



CHAMPIONS
OF THE FVI
LOWER NORTH ISLAND



FORAGE VALUE INDEX

The Forage Value Index (FVI) is a welcome relief for anyone looking for more objective data on ryegrass cultivars in the NZ market.

DairyNZ has worked with the country's main seed suppliers (including Agriseeds) to develop a profit index for ryegrass for dairy farmers, similar to 'breeding worth' in cows.

These show that old plant genetics don't stack up, and just how important choosing the right cultivar is.

This booklet presents the FVI data what it means, and how to use it.

FVI at a glance

■ Profit \$/ha

The FVI provides a \$/ha value on the predicted extra profit to a dairy farm from sowing different ryegrass cultivars, compared to pre-1996 cultivars as the genetic base. In each table cultivars are split into 5 groups, each with a star rating (5 star = top, 1 star = bottom).

■ Ryegrass types

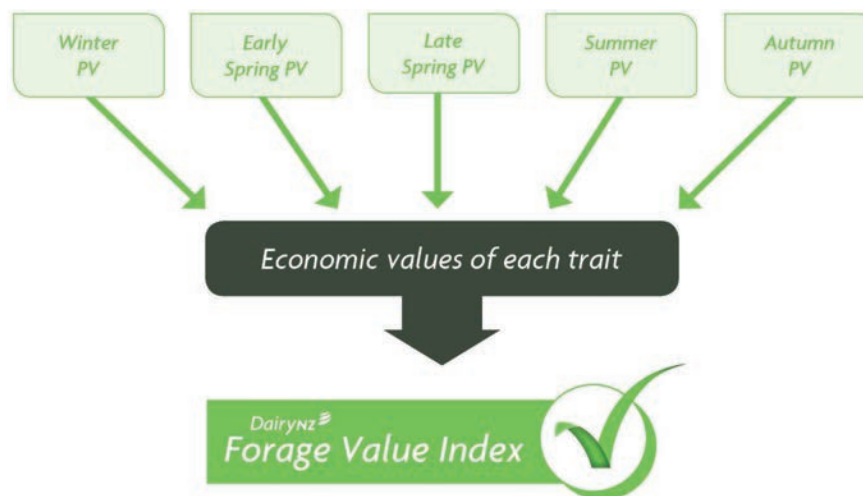
There are separate FVIs for perennial ryegrass, 12 month ryegrass, i.e. Italians and winter feed, i.e. annual ryegrass.

■ Regions

The FVI divides New Zealand into four regions – each with their own economic values – reflecting the differing farm systems through New Zealand.

■ Seasonal growth

As seasonal growth can be important, this is also rated for each cultivar on a 5=good, to 1=poor.



How a cultivars' FVI is calculated

1. The FVI is based on seasonal DM yield data (or PV = performance value) of ryegrass cultivars from the industry run National Forage Variety Trials (NFVT).
2. A 'Farmax Dairy Pro' model shows how a dairy farm operates including MS production, costs and operating profit. This model determines the economic value (EV) in farm operating profit for extra pasture grown in each season (e.g. early spring feed is very valuable, at \$0.42 - \$0.48/kgDM for different regions, when feed is short; In late spring feed is only worth \$0.17 - \$0.29 as farms are often in a feed surplus and extra pasture may need made into silage).
3. The NFVT yield data for each cultivar (PV) is then multiplied by the value of that DM yield (EV), to calculate the predicted \$/ha farm operating profit which is the cultivars' FVI.

Perennial Ryegrass Forage Value List



Cultivars are sorted by star rating, and then by confidence level

Note: Perennial ryegrass FVI is currently a combination of seasonal dry matter performance values and economic values

Cultivar	FVI ¹ (Star rating)	FVI Star Band (\$/ha)	Conf ²	Performance Values ³ (1-5 Rating)					Endo ⁴	Ploidy ⁵	HD ⁶	Marketer
				Winter	Early Spring	Late spring	Summer	Autumn				
One50 AR37			10+	5	2	3	5	5	AR37	D	L	Agricom
Arrow AR1			10+	3	4	5	5	4	AR1	D	M	Agriseeds
Alto AR37	★★★★★	\$477 to \$602	10+	5	3	4	4	4	AR37	D	L	Agriseeds
Trojan NEA2			8	5	4	4	5	4	NEA2	D	L	Agriseeds
Base AR37			6	4	3	4	5	5	AR37	T	VL	PGG Wrightson Seeds
Request AR37			6	5	5	2	3	4	AR37	D	M	Agricom
Alto AR1			10+	3	3	3	4	3	AR1	D	L	Agriseeds
Bealey NEA2			10+	4	2	2	4	3	NEA2	T	VL	Agriseeds
One50 AR1	★★★★★	\$352 to \$476	10+	3	1	2	4	4	AR1	D	L	Agricom
Ultra AR1			10+	4	3	2	4	4	AR1	D	L	Cropmark Seeds
Halo AR37			10+	4	1	2	4	4	AR37	T	VL	Agricom
Matrix SE			10	3	4	3	4	4	SE	D	VL	Cropmark Seeds
Prospect AR37			8	5	2	2	5	4	AR37	D	L	Agricom
Banquet II Endo5			9	3	1	1	3	3	Endo5	T	L	PGG Wrightson Seeds
Expo AR1			9	3	3	2	3	2	AR1	D	L	PGG Wrightson Seeds
Samson AR37	★★★	\$227 to \$351	4	4	5	2	1	2	AR37	D	M	Agricom
AberMagic AR1	★★★		3	2	1	5	5	3	AR1	D	L	Germinal
Expo AR37			3	4	1	2	3	2	AR37	D	L	PGG Wrightson Seeds
Samson SE	★★	\$102 to \$226	10+	2	3	1	2	2	SE	D	M	Agricom
Ohau AR37	★★		5	4	3	2	2	1	AR37	T	L	Agricom
Nui SE	★	-\$23 to \$101	10+	1	3	1	1	1	SE	D	M	Common
Pacific SE			5	1	2	1	1	1	SE	D	M	PGG Wrightson Seeds

¹ 5 = top rank, 1 = bottom rank, ² Confidence (number of trials), ³ Winter = Winter dry matter production (May-June), Early Spring = Early spring dry matter production (July-Aug), Late Spring = Late spring dry matter production (Sept-Oct), Summer = Summer dry matter production (Nov-Jan), Autumn = Autumn dry matter production (Feb-April), ⁴ Endophyte, ⁵ Ploidy (D=Diploid, T=Tetraploid), ⁶ Heading date (M=Mid, L=Late, VL=Very late). For more information visit www.dairynz.co.nz/fvi

PERENNIAL RYEGRASS EXAMPLE

We have taken the average operating profit/ha of the upper and lower values in the FVI to show what the benefits could be

Sowing Trojan perennial ryegrass is predicted to give \$342/ha/year extra farm operating profit over sowing Nui, each year, on a lower North Island dairy farm.

Cost/benefit of using Trojan over Nui

	Trojan	Nui
Average FVI Value	\$540	\$39
Cost of seed/ha	\$209	\$50
Net benefit (FVI Value - seed cost)	\$331	-\$11
Trojan advantage \$/ha per year	\$342/ha	

Even though Trojan seed costs more than Nui, it delivers this extra benefit per hectare!

*This is worked out by subtracting the Trojan net benefit from the Nui net benefit.
i.e. \$331 less -\$11 = \$342/ha/year*

12 Month – Ryegrass Forage Value List



Cultivars are sorted by star rating and then by confidence level

- The short term ryegrasses are sown by dairy farmers for 12 month production
- The FVI for 12 month ryegrasses is a combination of seasonal dry matter performance and economic values only
- WE is without endophyte or also referred to as nil endophyte
- 12 month options include Hybrid and Italian ryegrasses.

Type	Cultivar	FVI (Star rating) ¹	FVI Star Band (\$/ha)	Conf ²	Performance values ³ (1-5 rating)					Endo ⁴	Ploidy ⁵	HD ⁶	Marketer
					EST	Winter	Early Spring	Late spring	Summer				
▲	Shogun NEA	★★★★★	\$713 to \$937	4	3	5	5	5	5	NEA	T	Very Late	Agriseeds
□	Tabu WE	★★★★★	\$490 to \$712	10+	4	5	4	3	4	WE	D	Late	Agriseeds
□	Asset AR37	★★★★★	\$490 to \$712	10+	4	5	2	2	4	AR37	D	Late	Agricom
□	Lush AR37	★★★★★	\$490 to \$712	8	5	5	2	1	3	AR37	T	Late	PGG Wrightson Seeds
□	Feast II WE	★★★★	\$266 to \$489	10+	3	3	1	2	3	WE	T	Late	PGG Wrightson Seeds
□	Sonik WE	★★★★	\$266 to \$489	7	3	4	4	2	3	WE	D	Late	Cropmark Seeds
□	Asset WE	★★★★	\$266 to \$489	4	3	3	1	3	4	WE	D	Late	Agricom
□	NA	★★★	\$43 to \$265										
□	Moata WE	★★★	-\$181 to \$42	10+	1	1	1	1	1	WE	T	Late	Common

▲ Hybrid □ Italian

¹5= Top rank, 1 = Bottom rank, ²Confidence (number of trials), ³EST = establishment dry matter production (Mar-May), Winter = Winter dry matter production (June-July), Early spring= Early spring dry matter production (Aug, Sept), Late spring= Late spring dry matter production (Oct, Nov), Summer = Summer dry matter production (Dec-Feb), ⁴Endophyte WE is without endophyte, ⁵Ploidy (D=Diploid, T=Tetraploid) ⁶Heading date. For more information visit www.dairyNZ.co.nz/fvi

12 MONTH RYEGRASS EXAMPLE

Cost/benefit of using Shogun over Moata

	Shogun	Moata
Average FVI Value	\$825	-\$70
Cost of seed/ha	\$194	\$66
Net benefit (FVI Value - seed cost)	\$631	-\$136
Shogun advantage \$/ha per year		\$767/ha

Sowing Shogun hybrid ryegrass is predicted to give \$767/ha extra farm operating profit, and sowing Tabu Italian ryegrass an extra \$612/ha, over sowing Moata as a 12 month pasture in the lower North Island.

Note: Shogun also has the huge added advantage of persisting for up to three years.

Cost/benefit of using Tabu over Moata

	Tabu	Moata
Average FVI Value	\$601	-\$70
Cost of seed/ha	\$125	\$66
Net benefit (FVI Value - seed cost)	\$476	-\$136
Tabu advantage \$/ha per year		\$612/ha

This is worked out by subtracting the Shogun net benefit from the Moata net benefit.

i.e. \$631 less -\$136 = \$767/ha/year

Winter Feed – Ryegrass Forage Value List

Evaluation date: Oct 2015



- The short term cultivars are sown by dairy farmers for fast establishing, high quality winter-spring production
- The FVI for Winter Feed is a combination of seasonal dry matter performance and economic values only
- WE is without endophyte or also referred to as nil endophyte
- Winter Feed options include Annual and Italian ryegrasses

Type	Cultivar	FVI (Star rating) ¹	FVI Star Band (\$/ha)	Conf ²	Performance value ³ (1-5 rating)			Endo ⁴	Ploidy ⁵	HD ⁶	Marketer
					EST	Winter	Early Spring				
<input type="checkbox"/>	Tabu WE			10+	4	5	5	WE	D	Late	Agriseeds
<input type="checkbox"/>	Asset AR37			10	4	5	3	AR37	D	Late	Agricom
<input type="checkbox"/>	Lush AR37	★★★★★	\$244 to \$314	7	5	5	3	AR37	T	Late	PGG Wrightson Seeds
<input type="checkbox"/>	Sonik WE			6	3	4	5	WE	D	Late	Cropmark Seeds
<input type="checkbox"/>	Hogan WE			5	5	5	3	WE	T	Late	Agriseeds
<input type="checkbox"/>	Winter Star II WE	★★★★★	\$173 to \$243	3	4	4	3	WE	T	Late	PGG Wrightson Seeds
<input type="checkbox"/>	Feast II WE			10+	3	3	3	WE	T	Late	PGG Wrightson Seeds
<input type="checkbox"/>	Asset WE	★★★	\$103 to \$172	3	3	3	2	WE	D	Late	Agricom
<input type="checkbox"/>	Zoom WE			3	3	3	2	WE	T	Late	Cropmark Seeds
<input type="checkbox"/>	Progrow WI	★★	\$32 to \$102	5	4	2	1	WE	D	Late	Agricom
<input type="checkbox"/>	Moata WE	★	-\$38 to \$31	10+	1	1	2	WE	T	Late	Common
<input type="checkbox"/>	Tama WE			10	1	2	1	WE	T	Late	Common

Annual Italian

¹5= Top rank, 1 = Bottom rank, ²Confidence (number of trials), ³EST = Establishment dry matter production (Mar-May), Winter = Winter dry matter production (Jun-July), Early spring = Early spring dry matter production (Aug, Sept), ⁴Endophyte, ⁵Ploidy (D=Diploid, T=Tetraploid), ⁶Heading date. For more information visit www.dairynz.co.nz/fvi

WINTER FEED RYEGRASS EXAMPLE

Sowing Hogan annual ryegrass is predicted to give \$240/ha extra farm operating profit, and sowing Tabu Italian ryegrass an extra \$224/ha, over sowing Tama as a winter feed in the lower North Island.

Cost/benefit of using Hogan over Tama

	Hogan	Tama
Average FVI Value	\$279	-\$4
Cost of seed/ha	\$109	\$66
Net benefit (FVI Value - seed cost)	\$170	-\$70
Hogan advantage \$/ha per year	\$240/ha	

This is worked out by subtracting the Hogan net benefit from the Tama net benefit.

i.e. \$170 less -\$70 = \$240/ha/year

Cost/benefit of using Tabu over Tama

	Tabu	Tama
Average FVI Value	\$279	-\$4
Cost of seed/ha	\$125	\$66
Net benefit (FVI Value - seed cost)	\$154	-\$70
Tabu advantage \$/ha per year	\$224/ha	





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