



**CHAMPIONS**  
**OF THE FVI**  
LOWER SOUTH ISLAND

**agriseeds**   
superior pastures

# 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

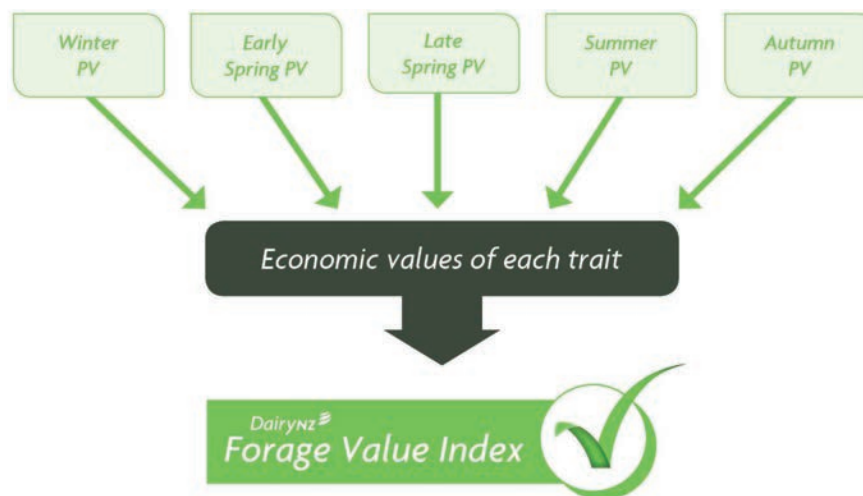
There are separate FVIs for perennial ryegrass, 12 month ryegrass, i.e. Italians and winter feed, i.e. annual ryegrass.

### ■ 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 <sup>1</sup> (Star rating)	FVI Star Band (\$/ha)	Conf <sup>2</sup>	Performance Values <sup>3</sup> (1-5 Rating)					Endo <sup>4</sup>	Ploidy <sup>5</sup>	HD <sup>6</sup>	Marketer
				Winter	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			10+	5	3	4	4	4	AR37	D	L	Agriseeds
Trojan NEA2	★★★★★	\$325 to \$411	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
Ultra AR1			10+	4	3	2	4	4	AR1	D	L	Cropmark Seeds
Matrix SE	★★★★★	\$240 to \$324	10	3	4	3	4	4	SE	D	VL	Cropmark Seeds
Prospect AR37			8	5	2	2	5	4	AR37	D	L	Agricom
Samson AR37			4	4	5	2	1	2	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			10+	3	1	2	4	4	AR1	D	L	Agricom
Halo AR37			10+	4	1	2	4	4	AR37	T	VL	Agricom
Expo AR1	★★★★	\$155 to \$239	9	3	3	2	3	2	AR1	D	L	PGG Wrightson Seeds
Ohau AR37			5	4	3	2	2	1	AR37	T	L	Agricom
Expo AR37			3	4	1	2	3	2	AR37	D	L	PGG Wrightson Seeds
AberMagic AR1			3	2	1	5	5	3	AR1	D	L	Germinal
Samson SE	★★★	\$69 to \$154	10+	2	3	1	2	2	SE	D	M	Agricom
Banquet II Endo5	★★		9	3	1	1	3	3	Endo5	T	L	PGG Wrightson Seeds
Nui SE	★	-\$16 to 68	10+	1	3	1	1	1	SE	D	M	Common
Pacific SE			5	1	2	1	1	1	SE	D	M	PGG Wrightson Seeds

<sup>1</sup> 5 = top rank, 1 = bottom rank, <sup>2</sup> Confidence (number of trials), <sup>3</sup> 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), Autumn = Autumn dry matter production (Mar-May), <sup>4</sup> Endophyte, <sup>5</sup> Ploidy (D=Diploid, T=Tetraploid), <sup>6</sup> Heading date (M=Mid, L=Late, VL=Very late). For more information visit [www.dairyNZ.co.nz/fvi](http://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 \$183/ha/year extra farm operating profit over sowing Nui, each year, on a lower South Island dairy farm.*

### Cost/benefit of using Trojan over Nui

	Trojan	Nui
Average FVI Value	\$368	\$26
Cost of seed/ha	\$209	\$50
Net benefit (FVI Value - seed cost)	\$159	-\$24
Trojan advantage \$/ha per year	\$183/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. \$159 less -\$24= \$183/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) <sup>1</sup>	FVI Star Band (\$/ha)	Conf <sup>2</sup>	Performance values <sup>3</sup> (1-5 rating)					Endo <sup>4</sup>	Ploidy <sup>5</sup>	HD <sup>6</sup>	Marketer
					EST	Winter	Early Spring	Late spring	Summer				
▲	Shogun NEA	★★★★★	\$435 to \$551	3	1	4	5	5	5	NEA	T	Very Late	Agriseeds
□	Tabu WE	★★★★★	\$318 to \$434	10+	5	4	3	3	4	WE	D	Late	Agriseeds
□	Feast II WE	★★★★★	\$318 to \$434	10+	5	3	2	3	4	WE	T	Late	PGG Wrightson Seeds
□	Lush AR37	★★★★★		7	5	4	4	1	3	AR37	T	Late	PGG Wrightson Seeds
□	Asset AR37	★★★★	\$202 to \$317	8	3	5	1	1	4	AR37	D	Late	Agricom
□	Sonik WE	★★★★		7	4	3	2	2	3	WE	D	Late	Cropmark Seeds
□	Asset WE	★★★	\$85 to \$201	4	2	2	1	3	4	WE	D	Late	Agricom
□	Moata WE	★	-\$31 to \$84	10+	1	1	1	1	1	WE	T	Late	Common

▲ Hybrid □ Italian

<sup>1</sup>5= Top rank, 1= Bottom rank, <sup>2</sup>Confidence (number of trials), <sup>3</sup>EST = 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), <sup>4</sup>Endophyte WE is without endophyte, <sup>5</sup>Ploidy (D=Diploid, T=Tetraploid), <sup>6</sup>Heading date. For more information visit [www.dairynz.co.nz/fvi](http://www.dairynz.co.nz/fvi)

## 12 MONTH RYEGRASS EXAMPLE

### Cost/benefit of using Shogun over Moata

	Shogun	Moata
Average FVI Value	\$493	\$27
Cost of seed/ha	\$194	\$66
Net benefit (FVI Value - seed cost)	\$299	-\$40
Shogun advantage \$/ha per year		\$339/ha

Sowing Shogun hybrid ryegrass is predicted to give \$339/ha extra farm operating profit, and sowing Tabu Italian ryegrass an extra \$291/ha, over sowing Moata as a 12 month pasture in the lower South 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	\$376	\$27
Cost of seed/ha	\$125	\$66
Net benefit (FVI Value - seed cost)	\$251	-\$40
Tabu advantage \$/ha per year		\$291/ha

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

i.e. \$299 less -\$40 = \$339/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) <sup>1</sup>	FVI Star Band (\$/ha)	Conf <sup>2</sup>	Performance value <sup>3</sup> (1-5 rating)			Endo <sup>4</sup>	Ploidy <sup>5</sup>	HD <sup>6</sup>	Marketer
					EST	Winter	Early Spring				
<input type="checkbox"/>	Tabu WE	★★★★★	\$254 to \$321	10+	5	4	4	WE	D	Late	Agriseeds
<input type="checkbox"/>	Lush AR37	★★★★★	\$254 to \$321	5	5	4	5	AR37	T	Late	PGG Wrightson Seeds
<input type="checkbox"/>	Feast II WE	★★★★★	\$187 to \$253	10+	5	3	3	WE	T	Late	PGG Wrightson Seeds
<input type="checkbox"/>	Asset AR37	★★★★★	\$187 to \$253	5	4	5	2	AR37	D	Late	Agricom
<input type="checkbox"/>	Hogan WE	★★★★★	\$187 to \$253	4	5	4	3	WE	T	Late	Agriseeds
<input type="checkbox"/>	Sonik WE	★★★★	\$120 to \$186	5	4	3	3	WE	D	Late	Cropmark Seeds
<input type="checkbox"/>	Zoom WE	★★★★	\$120 to \$186	4	4	3	3	WE	T	Late	Cropmark Seeds
<input type="checkbox"/>	Winter Star II WE	★★★★	\$120 to \$186	3	4	3	3	WE	T	Late	PGG Wrightson Seeds
<input type="checkbox"/>	NA	★★★	\$53 to \$119	NA	NA	NA	NA	NA	NA	NA	NA
<input type="checkbox"/>	Moata WE	★★★	\$53 to \$119	10+	1	1	2	WE	T	Late	Common
<input type="checkbox"/>	Tama WE	★★★	\$53 to \$119	10+	1	2	1	WE	T	Late	Common
<input type="checkbox"/>	Progrow WE	★★★	\$53 to \$119	6	5	1	1	WE	D	Late	Agricom
<input type="checkbox"/>	Asset WE	★★★	\$53 to \$119	4	3	2	1	WE	D	Late	Agricom

Annual     Italian

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

## WINTER FEED RYEGRASS EXAMPLE

*Sowing Hogan annual ryegrass is predicted to give \$158/ha extra farm operating profit, and sowing Tabu Italian ryegrass an extra \$210/ha, over sowing Tama as a winter feed in the lower South Island.*

### Cost/benefit of using Hogan over Tama

	Hogan	Tama
Average FVI Value	\$220	\$19
Cost of seed/ha	\$109	\$66
Net benefit (FVI Value - seed cost)	\$111	-\$47
Hogan advantage \$/ha per year	\$158/ha	

*This is worked out by subtracting the Hogan net benefit from the Tama net benefit.  
i.e. \$111 less -\$47 = \$158/ha/year*

### Cost/benefit of using Tabu over Tama

	Tabu	Tama
Average FVI Value	\$288	\$19
Cost of seed/ha	\$125	\$66
Net benefit (FVI Value - seed cost)	\$163	-\$47
Tabu advantage \$/ha per year	\$210/ha	









Member of the Royal Barenbrug Group

Agriseeds © is a registered trademark of New Zealand Agriseeds Limited.  
Copyright © 2015 by New Zealand Agriseeds Limited.

Superior pastures from Agriseeds  
**0800 449 955 [www.agriseeds.co.nz](http://www.agriseeds.co.nz)**

DairyNZ Incorporated, DairyNZ Limited and their respective officers, agents, employees and contractors ("DairyNZ") provides no assurance or warranty in respect of any information contained in the DairyNZ Forage Value Index or at [www.dairynz.co.nz/fvi](http://www.dairynz.co.nz/fvi). DairyNZ has no liability to anyone arising from reliance upon any information contained in or omitted from such information sources.