

# PASTURE ∞ OPTIONS GUIDE 2018

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DELIVERED THROUGH RD1





# Pasture Options Guide

## Productive pasture

is key to a successful dairy farm so there's much to consider when choosing seed: annuals, italians, hybrids, perennial, clover, chicory, plantains...

## Our Fonterra Farm Source team

can provide pasture options for you to suit local conditions. Plus your local Technical Sales Representative can visit to make a recommendation about your pasture options, taking into account the individual factors affecting your farm.

## Our Technical Sales Representatives

are out on-farm all year round talking with specialists, industry organisations and contractors in the field. They regularly receive information about the best pasture solutions for your area which take into account climate, soil type and the DairyNZ Forage Value Index.

## Together with our specialist partners

Agriseeds, Agricom and PGG Wrightson Seeds, we've created a range of ready-made Pasture Packs to save you time and money.

## We can custom mix seed for you

using our access to all the seed varieties and expertise from leading seed production companies; including Agriseeds, Agricom, PGG Wrightson Seeds, Seed Force, and DLF Seeds – we'll work to ensure you get the pasture that meets your requirements.

**Whether you are renewing pastures post crop or improving existing pasture, we have varieties to suit your situation. Talk to your local Fonterra Farm Source team today, or call us on 0800 731 266.**



# Sowing Tips

## New pasture

For grass to grass, graze paddock hard to reduce weed cover. Allow the pasture to freshen up, and spray out with glyphosate at correct label rate. Ensure plants are actively growing and have at least 5-10 cm of green leaf for effective glyphosate absorption.

Hard graze to remove vegetation (refer to label for grazing withholding periods). Direct drill the required quantity of seed.

Where cultivation is required or preferred, leave the paddock for a further seven days after the removal of the vegetation before cultivation commences. This will allow a faster breakdown of soil particles, making it easier to form a firm seedbed.

## Undersowing into existing pasture

Graze hard to remove as much cover as possible.

Sow required seed, graze again seven days later and keep pasture cover short to allow the establishment of the new grass and clover.

Ideally clovers would not be drilled more than 1cm deep and ryegrass no more than 3cm deep. Sow mixtures at 1cm deep.

# PASTURE CONDITION SCORE TOOL



The Pasture Condition Score Tool helps determine what action to take to improve your pasture depending on its condition.

Assess each paddock on the farm and give a score from **1 to 5** using the photos and descriptions below. Consider the suggested actions to develop an action plan for each paddock.

Choose the best performing cultivar and endophyte for your farm using DairyNZ's Cultivar Selector Tool – visit

[www.dairynz.co.nz/fvi](http://www.dairynz.co.nz/fvi)

For more information, visit

[www.dairynz.co.nz/pasturerenewal](http://www.dairynz.co.nz/pasturerenewal)

5

## DESCRIPTION

Whole paddock has dense sward of desired grasses and clovers.

## SUGGESTED ACTION

No action required. Would be happy if whole farm in this state.

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## DESCRIPTION

Parts of the paddock show signs of low level damage, less vigorous grasses and some weeds.

## SUGGESTED ACTION

Check fertility. Apply summer N to encourage tillering. Paddock probably OK for coming season.



### DESCRIPTION

Majority of paddock has low level damage, weeds, and less vigorous grasses.

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### SUGGESTED ACTION

Apply summer N. Undersow in the following autumn with perennial ryegrass containing appropriate endophyte.



### DESCRIPTION

Parts of the paddock have severe damage, a lot of weeds and bare ground.

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### SUGGESTED ACTION

Either:

- Sow into summer crop this spring, and plan to sow in perennial pasture in the autumn, or;
- This spring oversow chicory with fertiliser, or undersow paddocks with chicory, and plan to renew in 6-18 months, or;
- Undersow with Italian, or annual ryegrass in autumn, and plan to renew in following 6-12 months.



### DESCRIPTION

Entire paddock severely damaged.

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### SUGGESTED ACTION

Sow into summer crop this spring, and plan to sow in perennial pasture in the autumn.

\* Suggested actions are north island based.

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# Forage Value Index Guiding Farmer Choices

Since 2012, another index as useful as the BW has been evolving. Its purpose is to help farmers choose the best-performing grasses for their dairying region.

The Forage Value Index (FVI) provides a 'star' rating for each cultivar, with five stars being the premier cultivar and one star the poorest.

Like BW for sire selection, the FVI provides farmers with an indication of the likely annual benefits of selecting a ryegrass cultivar based on its performance value, weighted by appropriate economic values for each trait included in the FVI.

Performance values are based on how well a cultivar performs in a trait, relative to older 'genetic base' cultivars such as Nui perennial ryegrass. Economic values are the change in farm operating profit in dollars/ hectare/year for a unit change in the trait.

If all farmers moved from using a three-star perennial ryegrass cultivar to a four- or five-star perennial ryegrass cultivar, it would contribute an estimated \$160 million/year extra to the dairy industry through improvements in farm profitability.

*FVI data comes from the National Forage Variety Trials, which regularly evaluate the dry matter production of cultivars being assessed.*

## A TOOL FOR ALL FARMERS

The interface between farmers and the FVI is DairyNZ's online Cultivar Selector Tool, which provides a simple five -step process to choose the right cultivar, as illustrated below. Farmers can tailor their cultivar selection based on their region, forage type, endophyte need, tetraploid versus diploid, and heading date.



Access the Cultivar Selector Tool at [dairynz.co.nz/fvi](http://dairynz.co.nz/fvi).

# Short Term Pasture Options

## Hogan

Hogan is the top performing annual in the NFVT and is 5 star rated in the winter feed category on the 2017 DairyNZ Forage Value Index (FVI) in all dairy regions except for the Lower South Island.

Key benefits from Hogan:

### **HIGH VALUE**

Hogan establishes rapidly and produces high DM yield, to out yield old (pre-1981) cultivars Moata and Tama by around 1 tDM/ha. The value of this extra cool season feed is \$380/ha\*, for an extra seed cost of \$35-45/ha to sow Hogan.

(\*\$380/ha or 38c/kgDM value for establishment autumn - spring pasture in the DairyNZ Forage Value Index.)

### **FAST ESTABLISHMENT**

A key part in breeding Hogan was rapid establishment (23% faster than old cultivars Moata and Tama). This provides 'fast feed' in autumn, critical to dairy systems.

### **SEASONAL GROWTH**

Hogan's rapid establishment is backed up by excellent growth as a winter crop, versus the widely sown Moata and Tama.

## The *SHOGUN* advantage

Shogun, with its unique combination of performance and flexibility, overcomes some of the limitations of existing pasture renewal techniques and makes higher rates of renewal a reality.

A common factor stopping farmers renewing more pasture is their high stocking rate (relative to a farm's pasture production), meaning only limited areas of the farm can be taken out of grazing for resowing. Shogun helps resolve this long-standing challenge.

Key benefits from Shogun with NEA for increased pasture renewal:

- Exceptional DM yield
- Ideal for undersowing
- Fast establishment
- Winter growth with flexibility

### **EXCEPTIONAL DM YIELD**

Over a 12 month period, Shogun produces more than most perennial ryegrasses in summer and autumn, and in winter and early spring its growth is comparable to an Italian.

### **FAST ESTABLISHMENT**

Shogun's fast establishment is comparable to that of an Italian ryegrass. This means paddocks resown with Shogun are back into the grazing rotation more quickly than those renewed with perennial or other hybrid ryegrasses.

### **UNDERSOWING**

Undersowing can improve thin pastures for 1 - 3 years prior to full renewal. Research has shown over 99% of seeds in the soil on dairy farms are weeds<sup>1</sup>, and these can take over if thin pastures aren't thickened with ryegrass. Shogun is tailor-made for this purpose, with a mix of attributes unlike any other cultivar.

Shogun establishes very rapidly, similar to Italian ryegrass, giving better, more reliable results from undersowing. This is the most important advantage of Shogun compared with undersowing perennial ryegrass, because seedlings must be able to compete well with existing pasture.

In black beetle problem areas, undersowing Shogun is highly recommended, because its NEA endophyte gives good black beetle control, limiting their numbers.

Italian ryegrasses without endophyte should not be undersown where black beetle is a problem because they are a preferred feed of this costly pest.

*Shogun produces significantly more growth over summer, increasing total feed supply over a 12 month period.*



# Alternative Species

## Cocksfoot

Cocksfoot (*Dactylis glomerata*) is a very persistent perennial grass that tolerates summer dry conditions, moderate soil fertility and insect attack.

- Cocksfoot is used to enhance the growth and persistence of permanent pastures in very dry areas. It also adds variety to the stock diet.
- New fine leaved cocksfoot cultivars are much more compatible with ryegrass, giving better long term pastures.
- Cocksfoot is quite slow to establish and has lower digestibility than most other grasses. Cocksfoot has limited winter growth but good summer growth.

## Tall fescue

Tall fescue (*Festuca arundinacea*) suits some situations but not others. It is a perennial grass more tolerant of hot summers and poorly drained soils than perennial ryegrass.

- Tall fescue is sensitive to soil temperature so must be sown when soil temperatures are above 12°C. It is slower to establish than ryegrass, so it is more important to have a good weed free seedbed.
- In NZ Tall fescue is mainly sown in dry areas for its summer growth and good clover content, performing best on clay soils, where its deeper rooting ability can utilise more soil moisture than ryegrass.
- Tall fescue needs to be grazed at the correct time in spring, more frequently than ryegrass, to prevent a loss of feed quality.
- Tall fescue cannot be sown with ryegrass, as the ryegrass is much faster to establish and will dominate the pasture.
- Sow tall fescue at 20-25 kg/ha with suitable white clovers.

READY-MADE

# Green Pack

## RYEGRASS TYPE

DIPLOID PERENNIAL

## ENDOPHYTE OPTIONS

NEA2

## SEED TREATMENT OPTIONS

AGRICOTE TREATED OR BARE

## HEADING DATE

LATE HEADING +16 DAYS

## SOWING RATE

Refer to pack label for details

<b>TROJAN</b> <sup>NEA2</sup> PERENNIAL RYEGRASS	TREATED	21kg
<b>KOTUKU</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The Green Pack is suited to high performing farm systems** where both seasonal dry matter (DM) yield and total DM yield are key requirements, along with high feed quality and excellent persistence.

- Trojan NEA2 sets a new standard of DM yield but, most importantly the variety has the ability to produce this growth at the shoulders of the season, in winter/early spring and autumn, when the normal end of season feed pinch can affect production. Trojan is now New Zealand's 'most preferred' perennial ryegrass.
- Trojan contains NEA2 endophyte making it particularly suited to areas affected by black beetle. NEA2 supports high animal performance, good control of adult black beetle, Argentine stem weevil and pasture mealy bug (provisional rating only) and moderate control of root aphid.
- The Green Pack contains the high performance white clover combination of Kotuku and Weka. Kotuku is a new large leaved clover with exceptional DM yield, and Weka is medium leaved with excellent persistence and tolerance of clover root weevil.

READY-MADE

# Gold II Pack

## RYEGRASS TYPE

DIPLOID PERENNIAL

## ENDOPHYTE OPTIONS

AR37

## SEED TREATMENT OPTIONS

AGRICOTE TREATED OR BARE

## HEADING DATE

MID HEADING +5 DAYS

## SOWING RATE

Refer to pack label for details

<b>GOVERNOR</b> PERENNIAL RYEGRASS	TREATED	21kg
<b>KOTUKU</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The Gold II Pack is suited to most farming systems, helping to provide year round yield** and a robust, high feed value pasture.

- Includes Governor AR37 a fine leaved, dense and persistent perennial ryegrass particularly suited to areas affected by black beetle or porina.
- The Gold II pack should not be considered a stand alone defence against black beetle – i.e. persistence is significantly influenced by pasture management.
- AR37 endophyte is not recommended for pasture grazed by deer or horses due to the risk of ryegrass staggers.
- This pack contains the high performance white clover combination of Kotuku and Weka. Kotuku is a new large leaved clover with exceptional DM yield, and Weka is medium leaved with excellent persistence and tolerance of clover root weevil.

READY-MADE

# Emerald Pack

## RYEGRASS TYPE

TETRAPLOID PERENNIAL

## ENDOPHYTE OPTIONS

NEA4

## SEED TREATMENT OPTIONS

AGRICOTE TREATED OR BARE

## HEADING DATE

LATE HEADING +19 DAYS

## SOWING RATE

Refer to pack label for details

<b>VISCOUNT</b> PERENNIAL RYEGRASS	TREATED	21kg
<b>KOTUKU</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The Emerald pack suits farm systems targeting high animal performance providing high quality feed in all seasons particularly early spring.**

- This pack contains Viscount, a new tetraploid perennial ryegrass.
- Viscount has very good total DM yield but importantly has improved early spring growth – a time of year when feed is of the highest value in pastoral systems.
- Viscount has all the features animals love in a pasture: excellent palatability, upright growth for ease of harvest and high quality feed with improved rust tolerance and reduced aftermath heading.
- It contains the NEA4 endophyte, for superior animal performance and improved insect resistance.
- Please note, there is limited stock currently available. Please talk to your local Fonterra Farm Source team to confirm your requirements.

READY-MADE

# Burgundy Pack

## RYEGRASS TYPE

DIPLOID PERENNIAL

## ENDOPHYTE OPTIONS

AR37

## SEED TREATMENT OPTIONS

TREATED

## HEADING DATE

LATE HEADING +20 DAYS

## SOWING RATE

Refer to pack label for details

	TREATED	21kg
<b>KOTARE</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The Burgundy Pack is suited to dairy farms, where yield advantages can be realised.** One50 diploid perennial ryegrass provides excellent summer, autumn and winter production with year round quality and palatability.

- Highly productive perennial ryegrass with the ability to stay green under summer stress which exhibits high rust tolerance.
- AR37 endophyte offers the best long-term, natural protection to porina and root aphid. It also provides very good control of Argentine stem weevil larvae and black beetle while not compromising milk production.

READY-MADE

# Platinum Pack

## RYEGRASS TYPE

TETRAPLOID/DIPLOID PERENNIAL MIX

## ENDOPHYTE OPTIONS

NEA4 (VISCOUNT)

NEA2 (TROJAN)

## SEED TREATMENT OPTIONS

AGRICOTE TREATED OR BARE

## HEADING DATE

LATE HEADING

+19 DAYS (VISCOUNT)

+16 DAYS (TROJAN)

## SOWING RATE

Refer to pack label for details

<b>TROJAN</b> <sup>TM</sup> PERENNIAL RYEGRASS	<b>TREATED</b>	<b>9kg</b>
<b>VISCOUNT</b> <sup>TM</sup> PERENNIAL RYEGRASS	<b>TREATED</b>	<b>13kg</b>
<b>KOTUKU</b> WHITE CLOVER	<b>TREATED</b>	<b>1kg</b>
<b>WEKA</b> WHITE CLOVER	<b>TREATED</b>	<b>2kg</b>

**The Platinum Pack is a unique combination of tetraploid and diploid perennial ryegrasses, to provide a balance high palatability, with improved density and persistence.**


- Viscount tetraploid ryegrass has all the features animals love in pasture: excellent palatability, upright growth for ease of harvest, high feed quality and reduced aftermath heading.
- Tetraploids don't suit every farm system, so we've added Trojan diploid ryegrass to improve pasture density and pasture persistence. So this tetraploid/diploid mix provides great animal performance with better long term yield.
- Viscount contains NEA4 endophyte, and Trojan NEA2, both providing superior animal performance and good control of insects including adult black beetle.
- The Platinum Pack contains the high performance white clover combination, of Kotuku and Weka. Kotuku is large leaved and very high yielding, and Weka is medium leaved, stoloniferous and very persistent.

READY-MADE

# Tan Pack

DIPLOID PERENNIAL  
AR37  
TREATED  
MID-LATE HEADING +12 DAYS

Refer to pack label for sowing rate.

 Prospect Perennial Ryegrass	TREATED	21kg
<b>KOTARE</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The Tan Pack is best suited to a variety of situations from hill country to highly productive dairy pastures.** The density of Prospect provides increased persistence under stock pressure. AR37 endophyte provides excellent insect tolerance.

READY-MADE

# White Pack

TETRAPLOID PERENNIAL  
AR37  
TREATED OR BARE  
LATE HEADING +22 DAYS

Refer to pack label for sowing rate.

 Base Tetraploid Perennial Ryegrass	TREATED	21kg
<b>KOTARE</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The White Pack includes Base**, a tetraploid perennial ryegrass selected from surviving ryegrasses grown under drought conditions. The AR37 endophyte has excellent persistence and low aftermath heading for better utilisation. Base is the perfect cultivar because it delivers high yields, excellent pasture quality and has a high tiller density.

READY-MADE

# Red Pack

DIPLOID PERENNIAL  
AR37  
TREATED  
MID-HEADING +7 DAYS

Refer to pack label for sowing rate.

 Excess Perennial Ryegrass	TREATED	21kg
<b>KOTARE</b> WHITE CLOVER	TREATED	2kg
<b>WEKA</b> WHITE CLOVER	TREATED	2kg

**The Red Pack includes Excess**, selected for its high yield and persistence which is further enhanced with AR37 endophyte. Excess combines the robustness of a diploid and high yield resulting in an ideal ryegrass for all dairy farms.

**CONDITIONS:** Cultivars in pack may differ to those listed due to availability at time of mixing. The sale of these goods is made strictly on the basis that Fonterra Farm Source, RD1 Limited and the vendor of the goods disclaim all liability, whether express or implied and whether in contract, tort or otherwise, for any loss, damage, claim or injury arising from the result produced by the goods or any failure of the goods to produce a desired result where such result or failure is attributable to any act or omission of the purchaser or any factor beyond the control of Fonterra Farm Source, RD1 Limited or the vendor, including without limitation, purchaser negligence, the storing and sowing of the seed, time of sowing, cultivation, soil conditions, weather conditions, third party intervention and all acts of God. If Fonterra Farm Source, RD1 Limited or the vendor of the goods is found to have any form of liability for any breach of any obligations imposed on them by law, then the purchaser agrees that liability is limited to replacement of such goods or damages not exceeding the original retail price of the goods. Fonterra Farm Source, RD1 Limited and the vendor shall not be liable for any consequential, indirect or special damages or loss of any kind whatsoever including without limitation loss of profits, whether arising from the goods, the result produced or intended to be produced, or from any other cause whatsoever. For specific advice in relation to your farm needs, please consult your local Fonterra Farm Source Technical Sales Rep.

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