

Agronomy

Seed, fertiliser and agrochemicals

Growing your investment above and below ground.

MAY 2026

ravensdown



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Ravensdown's integrated approach

In nature, nothing happens in isolation. It's the same with producing quality grass.

It comes down to a combination of fertile soil, quality seed, weed and insect pest management, grazing management, smart thinking, attention to detail, and hard work.

Ravensdown's team aims to provide the best agronomy options for your situation. Often there is more than one solution and our team will work with you to select the smart option(s) that best suit your farming system.

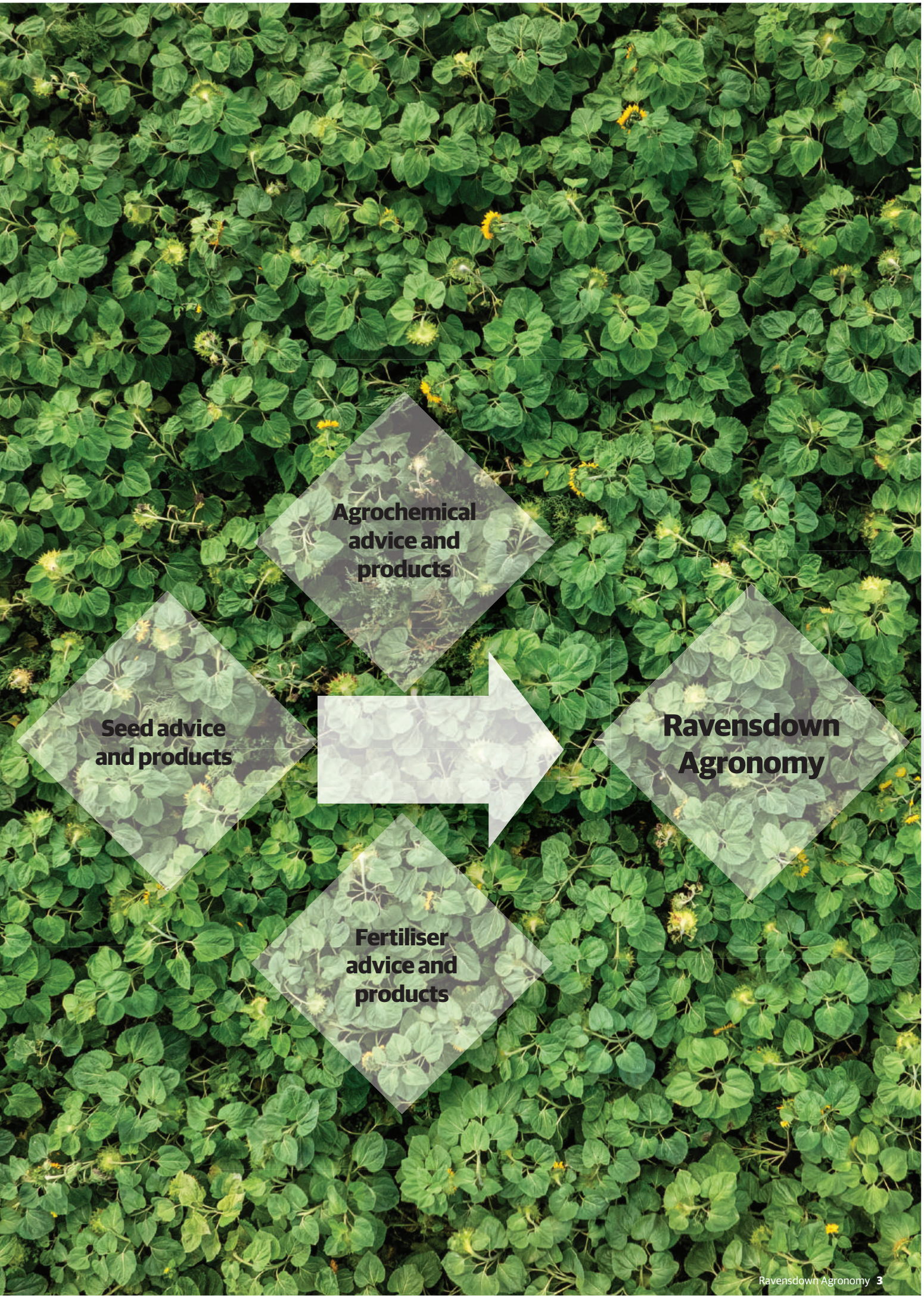
Environmental standards and regulations

Environmental standards and regulations now apply to farming. Regulations such as Freshwater Farm Plans and rules that apply to the following farming activities:

- stock exclusion
- nitrogen fertiliser cap
- agricultural intensification
- stockholding and feedlots
- wetlands
- sediment and erosion control.

If you need any help or have any questions, contact the team at Ravensdown Environmental: **environmental@ravensdown.co.nz**.




Agrochemical advice and products
Seed advice and products
Ravensdown Agronomy
Fertiliser advice and products



The benefits of modern cultivars

As a general rule, modern cultivars are fast establishing, higher yielding and have better seasonal growth patterns. Not only do they produce better quality forage with high metabolisable energy content, they also have better disease resistance and are safer for livestock.

Higher forage yield
Independent industry trials consistently show that modern perennial ryegrass cultivars yield 2–3,000kg more dry matter annually than lower-performing ones. Moreover, their seasonal production aligns well with New Zealand farming conditions, ensuring feed availability when livestock need it most.

Higher forage quality
Modern cultivars tend to have higher metabolisable energy content, higher digestibility and improved palatability from stock over older, cheaper cultivars.
Late heading with low aftermath heading. When grass goes to seed, forage quality diminishes, affecting livestock performance. Modern cultivars, with delayed heading, maintain quality longer into spring and return to vegetative state quicker after grazing, improving overall forage quality and livestock performance.

Strong disease resistance
Disease susceptibility has a direct effect on plant growth and on animal acceptability and grazing intake. Plant breeders have focused on improving disease resistance of modern cultivars — particularly against diseases such as leaf and stem rust.

Novel endophytes
Modern ryegrass cultivars typically feature novel endophytes, including the CM142 endophyte developed by Cropmark Seeds. These are fungi that offer protection against insect pests, reducing ryegrass staggers, and heat stress while enhancing livestock performance.

For a breakdown of the best cultivars to use in your farming system and environment, use the Cropmark cultivar selection tool — www.cropmarkseeds.com/forage-selector.

What's your score?

Paddock ranking system

The pasture scoring tool to the right is a way of ranking every paddock on the farm from the worst to the best. Paddocks are scored from 1 (worst) to 5 (best) using the photos and descriptions to make accurate decisions.

The system is designed to assist with plans for short, medium and long term pasture renovation and renewal strategies, depending on the farm system and feed requirements.

Look at underlying reasons for poor-performance, and make the best decisions on actions to restore these paddocks back to full production. Addressing these issues prior to regrassing will ultimately increase the return gained from regrassing.

Key recommendation
Choose the best performing cultivar and endophyte for your locality to ensure longevity of pastures and sow treated seed for proven results.

Note: This ranking is indicative only and may need to be modified for your farm location. Weed content is a vital aspect to inspect as weed species vary between regions and farms.

Credit: DairyNZ, Beef + Lamb NZ.



Description
Entire paddock severely damaged.

Suggested action
Sow into summer crop in spring, and plan to sow in perennial pasture in autumn.



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

Suggested action
Either sow in perennial ryegrass in autumn, or

undersow with Italian ryegrass in autumn and plan to renew in the following 6–12 months, or

oversow chicory with fertiliser in spring, or undersow paddocks with chicory, and plan to renew in 6–18 months.



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

Suggested action
Apply N from spring. Undersow in the autumn with perennial ryegrass containing appropriate endophyte.



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

Suggested action
Check fertility. Apply N from spring to encourage tillering. Paddock probably okay for coming season.



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.

5 steps for pasture renewal

Get the highest returns first

STEP 1

Why dilute your regrassing resources across the whole farm when you can funnel them into the areas that need them most?

Soil test
Our ARL lab can do an array of soil tests to give you a clear picture of what inputs you'll need for optimum growth.

Technology tools — HawkEye®
Our digital tools let you build up an accurate history of all harvesting, agrochemical, and fertiliser applications. It also keeps a record of all completed soil analysis on each individual paddock. Knowing your soil nutrient status means you can maximise the effectiveness of fertiliser on newly established pastures.
Learn more online at hawkeye.farm

Lime
Use lime to alter soil pH if needed. Optimum levels are between 5.8 and 6.0.

Paddock selection
It is vital to identify the paddocks that are performing worst and the reasons why they aren't up to standard. For example, soil fertility or compaction, insect damage, weeds, or pasture species present.

Pasture condition score
In combination with forage and animal production records for each paddock, a visual pasture condition score, just like you do for your stock, is recommended.

Condition scoring every paddock on the farm will help determine your under-performing paddocks and identify those which may need to be renewed.



HAWKEYE® - MAP BASED SOFTWARE FOR SMARTER DECISION MAKING.



SOIL TESTING BY ARL- CREATES A CLEAR PICTURE OF INPUTS NEEDED.



How much pasture should be renewed?

If your pastures normally need replacing every 10 years, you would need to replace 10% of the farm each year to maintain a 10-year rotation.

Source: www.pasturerenewal.org.nz/FAQ/

Match forage selection to your feed requirements

STEP 2

You may have been using the same seed for years, but is it still the best available?

Use our expertise
Your local agri manager, backed by their regional agronomist, have seed, fertiliser, and agrochemical resources to offer while our innovative seed suppliers are constantly making breakthroughs in high-performance. The new diploid perennial ryegrass, Stampede containing the exciting new endophyte CM142, is a good example of that.

Depending on the reason a paddock is not meeting your expectations, you may need to go through a break crop to lift nutrient levels, remove problem weeds, or reduce the impact of pasture damaging insects prior to sowing permanent pasture. If a break crop of brassicas is being used, the deciding factor is the time to first grazing.

For example, leafy turnips require an approximate 50 day period from germination to first grazing, with the ability to get more than one grazing off the paddock during summer in moist or irrigated environments. The next best option might be rape, with the timeframe to first grazing being 70–110 days.

Timing
Ensuring the sown crop can be grazed at the right time and meets your expectations is very important.

When it's time to sow your permanent pasture, matching the new pasture selection to your feed requirements will significantly increase the success of regrassing.

Grass species, cultivar and endophytes
There are a range of grass species, cultivars, and endophyte options with strengths and weaknesses. Making a well-informed decision on what to use is important for the best outcome. Knowing your requirements and challenges for optimum pasture growth and animal performance will help with the selection process and increase your success rate.

Ryegrass is the main pasture grass of New Zealand, but depending on your environment and grazing systems, other options include tall fescue, grazing brome, cocksfoot or other species such as herbs (chicory or plantain) and legumes (annual or perennial clovers and lucerne).



STEP 3

Always identify your targets

There are two main rivals for your grass production: insects and weeds.

You also have two main remedies for reducing their impact — our agrochemical treatments and our leading edge forage and endophyte technologies.

Insects
Endophytes are nature's in-built defence mechanisms, providing increased plant tolerance against some insects. Endophytes are fungi that live inside the plant and in return for the shelter and a food source, they release agrochemicals that affect particular insects. The range of insects affecting your pasture will determine the range of endophyte options you choose. Under certain conditions, some endophytes can have negative side effects on animal health.

Insects may also be a reason for pasture renewal; therefore identifying the damaging insects will affect the control methods used. Soil dwelling insects such as grass grub, black beetle larvae and porina will require different control methods to above ground insects such as Argentine stem weevil and slugs.

Weeds
Identifying your problem weeds allows you to control all the weeds that will cause issues after sowing. Docks, buttercups, thistles, yarrow, ragwort, and sheep sorrel are examples of some weeds that aren't fully controlled with just glyphosate. Using companion herbicides will allow more effective weed control (see below).

Weed and pest issues must be correctly identified, any underlying causes recognised and appropriate measures taken to ensure there are no negative effects on the establishment and performance of the newly sown crop or pasture.

COMPANION HERBICIDES	GRANIT® (tribenuron-methyl)	BACKUP® (thifensulfuron-methyl)	DICAM 480 (dicamba)	MULTIPLE® (clopyralid)	PASTURE GUARD® 2,4-D 680 (2,4-D ester)
Extra weeds controlled	Clovers, sheep sorrel, thistles, ragwort, wireweed, yarrow	Buttercup, dock	Clovers, dandelion, dock, mallow, pennyroyal, mayweed, ragwort, sheep sorrel, thistles, wireweed	Clovers, dandelion, plantains, thistles, yarrow	Nettles, ragwort, storksbill, thistles
Plant-back period					
Grasses and cereals	14 days	14 days	0 days	0 days	10 days
Clovers	14 days	14 days	28 days	3-6 months	21 days
Chicory	14 days	14 days	28 days	3-6 months	X
Plantain	14 days	14 days	0 days	3-6 months	X
Brassicas	14 days	14 days	0 days	0 days	28 days
Fodder beet	X	X	X	0 days	X
X – not recommended to be used in a sprayout prior to sowing these crops.					



Paddock preparation

STEP 4

Good paddock preparation, regardless of the sowing/drilling method used, will allow your sown pasture to get the best start, increasing the return on your investment.

Weed and pest control
Starting with a flat, even and firm seedbed, that is free of weed and insect pressures will allow a consistent sowing depth and competition free establishment.

Sowing depth
The sowing depth of seed is important for rapid and even establishment. It is a balance between ensuring adequate seed/soil contact, moisture supply for germination, and allowing smaller seeds such as clovers and herbs to establish. Ideally seed depth should be 5–10mm to allow clovers and herbs to establish more successfully.

Soil temperature
Soil temperature is a major factor in determining germination speed, with different pasture species requiring different temperatures for rapid germination. Soil temperatures above 10°C are ideal for the main pasture species; ryegrass, clovers and herbs. Cooler soil temperatures will reduce establishment speed, with clover and chicory being first affected.

Monitor regularly

STEP 5

With all the good work done to get the new pasture sown, it would be a shame to let things slip now and impact the new pasture performance.

Check your new pasture paddocks regularly and see what is happening. Make sure you get your hands in the grass and monitor for weeds and/or insects. There are a number of insect pests that can have a significant impact on new pastures. Using treated seed will help reduce the chance of severe insect damage, but there is still potential for pasture damage. Endophytes take at least six weeks to establish in newly sown seedlings, so it is important to use other control options to prevent damage to grasses during early establishment. Once grasses are well established with multiple tillers, then you can rely on protection from the endophyte. Weeds are far easier to control when they are small. We recommend controlling weeds prior to the first grazing for a couple of reasons;

1. The weeds are smaller and more vulnerable.
2. Removing weeds before first grazing means there's no competition for the establishing pasture post-grazing, which means faster and stronger regrowth.

We can help you get on top of the weeds with a range of broadleaf herbicides.



HERBICIDES	PASTURE GUARD® NURTURE	AIM®	PASTURE GUARD® ELITE	PASTURE GUARD® BENTAZONE
ACTIVE INGREDIENT	MCPB and MCPA	Flumetsulam	MCPB and Bentazone	Bentazone
KEY BENEFIT/ DESCRIPTION	A clover safe herbicide making it suitable for young pastures containing seedling clovers. Plus it is very effective on seedling thistles and a wide range of broadleaf weeds in new pasture.	A grass, clover and chicory friendly herbicide for broadleaf weed control in new and established pasture. Plus Aim® will control atrazine resistant fathen.	A clover friendly herbicide for selective control of thistles and certain broadleaf weeds that are difficult to control with MCPB including: chickweed, cleavers, mayweeds, nettle, spurrey, storksbill, twin cress, and willow weed.	A clover friendly herbicide that is useful in new pasture mixtures that is particularly effective against black nightshade, chamomiles, cleavers, shepherd's purse, spurrey, stinking mayweed, and storksbill.
PASTURE STAGE	Clovers must have at least 2 trifoliate leaves			
TIP	More convenient to use than tank mixing MCPA with MCPB; Can be mixed with Aim® for increased weed spectrum.	Collaborate™ Spray Oil must be used with Aim®.	Provides better control of seedling buttercup and thistles where phenoxy herbicide resistance is suspected.	Can be tank mixed with other herbicides such as Pasture Guard® Nurture or Aim®.
OTHER PRODUCTS THAT MAY BE USED FOR THE SAME PURPOSE	Tropotox®, Select™, Thistrol® Plus	Preside®, Valdo®	Pulsar®	Basagran®, Broadstar®, Dictate®, Troy®
MIXING OPTIONS	Aim®, Pasture Guard Bentazone, Pasture Guard 2,4-D 680	Pasture Guard Nurture Pasture Guard Bentazone	Aim®	Aim® Pasture Guard Nurture

Feed your pasture

First grazing and beyond

Soil moisture and nitrogen are the two main factors that limit new pasture establishment. This assumes that all other controllable factors are taken care of i.e., seed bed preparation, correct sowing depth, seed viability, suitability of the cultivar for the environment etc.

Nitrogen
There is not much we can do about the weather; however, we can manage nitrogen to improve productivity of new pastures. The quicker the establishment of the new pasture the higher likelihood of success. Grasses respond quickly to nitrogen when other growing conditions are good, however if soils are lacking in phosphorus and potassium, the pastures will not be as responsive.

Phosphate
Phosphate is required to enhance early root and leaf development.

Potassium
Potassium is important but an understanding of soil levels is needed as high concentrations of potassium can affect magnesium uptake by plants.

Maintaining soil pH and fertility
Clovers, particularly white clovers, need a continuous supply of phosphorus, potassium, sulphur, magnesium, and several trace elements. In addition, soils must not be too acidic. Where soil pH and nutrient status is less than optimal, pastures will revert back to less productive species over time.

DAP, Cropmaster 15 and Cropmaster 20
Fertilisers such as DAP, Cropmaster 15 or Cropmaster 20 can be drilled at planting (using a separate dropper to the seed) or broadcast and incorporated prior to sowing seed.

N-Protect® or urea
To increase growth and produce additional feed when needed, apply 50–80kg/ha of N-Protect or urea. If sulphur is also required, apply 90–120kg/ha of Ammo 31 instead. Ensure that total annual nitrogen applications do not exceed 190kg N/ha on grazed land.



N-PROTECT® WILL HELP ENCOURAGE TILLERING AND LEAF EXPANSION



Pluck test

Testing whether your paddock is ready for grazing is one of the simplest tests you can do; simply grasp some leaves between your thumb and forefinger and pull them.

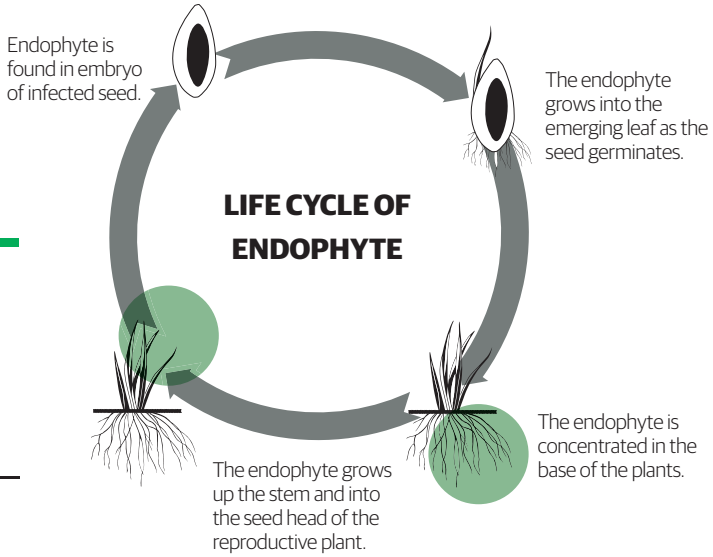
If the whole plant pulls out it's not ready, but if the leaf snaps off leaving the roots in the ground it's ready. This simulates grazing and is called the 'Pluck' test.

Grazing young pastures is ideally done when plants have adequate moisture and/or pugging damage is unlikely.

Lighter stock should be used to reduce any treading damage to the newly sown pasture, encouraging strong recovery from grazing.

Good early weed control and grazing at the right stage will assist the establishment of clovers and other herbs, as well as grasses in the new pasture mix.

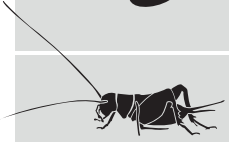
Managing pests



Cultural control
The use of different management techniques can reduce the impact some insects have on pasture production. Your local agri manager will be able to identify the damaging insect present and advise control options.

Endophyte — help plants defend themselves
Endophytes have been developed to reduce the potential impact insects have on pasture plants. There are a number of factors to consider when determining the correct endophyte for your situation.
Endophytes take at least 6–8 weeks to fully establish in newly-sown seedlings, so it is important to use other control options to prevent damage to grasses during early establishment. Once grasses are well established with multiple tillers, then you can rely on protection from the endophyte.

Strategic agrochemical intervention
Use of insecticides in the spray-out and seed treatment are valuable steps in reducing the potential of insect damage. Following drilling, monitor paddocks closely because insects can migrate from surrounding areas to newly-sown areas and cause damage.
Seed treatment is very effective with moderate insect levels, however in high insect populations there is still a risk of some pasture damage because insects have to feed on the crop to ingest the agrochemical. This means with high insect numbers there will still be enough 'bites' to cause damage. In high insect areas, the use of further agrochemical control may be required.

INSECT	CULTURAL CONTROL	ENDOPHYTE OPTIONS	AGROCHEMICAL CONTROL	IDENTIFICATION
Slugs	Cultivation and rolling	None known	Endure & Endure Mini slug bait	
Grass grub	Cultivation Mob stocking Heavy rolling with grooved roller	GrubOUT® U2 (larvae only)	Seed treatment Diazinon based products	
Porina	Cultivation	CM142 GrubOUT® U2 AR37 Standard endophyte	Avert 25WP	
Argentine stem weevil	Regrass with effective endophyte	CM142 GrubOUT® U2 AR1 RGT18 AR37 NEA2, NEAD12 Standard endophyte	Seed treatment Ecobait IP	
Black beetle	Cultivation Crop rotation	CM142 (adult only) GrubOUT® U2 (adult and larvae) RGT18 (adult only) AR37 (adult only) NEA2, NEAD12 (adult only) Standard endophyte (adult only)	Seed treatment	
Black field cricket		GrubOUT® U2	Maldison grain bait	



PRODUCT	ACTIVE INGREDIENT	LABEL USE RATE	MOST COMMON USE RATE	COMMENTS
Ecobait IP	24.2g/kg iron phosphate anhydrous.	5-7kg/ha	5-6 kg/ha	BioGro approved for use in organic production systems in NZ. Similar efficacy and bait characteristics to Endure. Can be used on all crops; agricultural, horticultural, and ornamental. 1 day pre-harvest interval for food crops.
Endure	50g/kg metaldehyde 60,000 baits/kg	4-8kg/ha	4-5kg/ha	Under high slug pressure it is usually better to make two applications of 4-5kg/ha, 3-4 weeks apart, than a single application of 8kg/ha.
Endure Mini	50g/kg metaldehyde 110,000 baits/kg	3-4kg/ha	3-4kg/ha	Endure Mini is designed for mixing with seed or applying via a precision granule applicator directly in the drill slot with the seed. The smaller bait size provides more bait points per metre of drill row.

Pasture DM production

CONTROL
781
Kg DM/Ha

20Kg N/Ha (UREA)
+29%
Kg DM/Ha

EXPRESS 20g/Ha +WIDESPREAD 1000
+33%
Kg DM/Ha

EXPRESS 20g/Ha
+ WIDESPREAD 1000 + 20Kg N/Ha
+64%*
Kg DM/Ha



RESEARCH SHOWS THAT EXPRESS® GIBBERELLIC ACID + NITROGEN WILL GIVE YOU THE HIGHEST PASTURE PRODUCTION INCREASE.

Use our expertise

Arnold van Straalen
Agronomist – Northern North Island
021 900 436

Having grown up on his family's dairy, dry stock and orchard operations, Arnold brings a broad base of agricultural and horticultural knowledge and experience.

After completing a Diploma in Horticulture Management at Massey University, he returned to work in the family business.

He and his wife Kim then went on to own and operate a 500-seat hospitality business. After selling the business, Arnold gained more than a decade's experience as a technical field representative in agriculture, followed by a role as a horticulture technical representative. He enjoys the satisfaction of achieving the best possible yields through good planning and execution.

Gemma Dorotich
Agronomist – Eastern North Island
021 226 3110

Gemma grew up in the Waikato before moving to Dannevirke, where her family farms, and her passion for the rural sector runs deep. She completed her studies at Massey University, before beginning her career as a seed representative in Dannevirke and the surrounding areas. She then spent three years working in a similar role in North Canterbury before returning home to her roots.

Gemma enjoys being out on farm, building relationships with shareholders and sharing ideas to help them achieve their goals.

Julian Nicholson
Agronomist – Western North Island
021 900 167

Julian brings a lifetime of practical farming experience to the role. After running a successful sharemilking business, he moved into a position as an agri manager before transitioning into agronomy roles.

This experience has provided him with exposure to a wide range of farm systems. Julian thrives on building relationships and working with shareholders to add value to their businesses and farm systems.

Debbie Thomson
Agronomist – Upper South Island
021 226 3110

Born and raised in the UK, Debbie has deep roots in agriculture, having grown up on dairy farms. She further developed her knowledge at Agriculture College in Edinburgh. With a broad background across dairy, beef, and sheep farming, she brought her experience to New Zealand, progressing from hands-on farm roles into leadership positions.

After transitioning from farming, Debbie moved into a technical sales role with a veterinary practice and rural retailer, where she has delivered practical solutions and strong results. She thrives on finding effective, real-world solutions, drawing on her extensive experience to optimise outcomes.

Jarrad Mehlhopt
Agronomist – Central South Island
021 405 922

Jarrad began his career as a qualified butcher, spending eight years developing a strong practical foundation before following his passion into the agricultural industry. He joined PGG Seeds, where he spent five years learning the business from the ground up and gaining hands-on experience across warehousing, logistics, and dispatch.

He later moved into a technical field representative role with Ruralco, where over nine years he built a solid knowledge of agronomy, along with exposure to animal health and wider farm systems. Jarrad enjoys working alongside farmers, building strong relationships, and supporting them with practical advice across all aspects of farming.

Hannah McCoard
Agronomist – Central South Island
021 900 967

Hannah grew up on her family's sheep, beef, and deer farm in Taihape, where she developed her passion for farming. She has built her knowledge of farm systems and pastoral agronomy through study at Massey and Lincoln University, alongside on-farm experience and her work as a technical field representative.

Hannah enjoys building relationships with farmers and working alongside them to support their farming businesses.

Stu Evans
Agronomist – Lower South Island
021 374 619

A born and bred Southlander, Stu brings a genuine passion for his work, along with the knowledge and experience gained from more than 25 years as a technical field representative in the region.

A dedicated family man and active contributor to his community, he prides himself on the strong relationships he has built with farming clients. Stu enjoys working with the Ravensdown team to add value to shareholders' and customers' businesses and farming systems.

Matthew Crampton
Technical Manager – Seed and Agchem

Matthew brings more than 25 years' experience in agriculture, supporting farmers across New Zealand with practical expertise and advice.

His career spans product development, technical agronomy, and business development roles across both producer and retail organisations.

ravensdown

0800 100 123
ravensdown.co.nz

Seed product options

Flexible options

You have specific characteristics you want in your pastures. We have a full range of forage options for inclusion in custom mixes. Your agri manager and/or regional agronomist will work with you to sort out a plan to help achieve your pasture/crop goals.

We've done the thinking for you

Our High Performance Pasture Mixes™ suit a wide range of livestock classes, farm and soil types, and geographical regions.

Each mix is designed to support you in driving performance from your farm. The use of optional extras allows you to use the High Performance Pasture Mixes as a base for your pasture, and add specific forages to lift productivity, such as red clover, chicory, and/or plantain.



Seed catalogue

Ordering is easy

Order online at
My Ravensdown
or call our Customer Centre
on **0800 100 123**.

Then pick up from your
local Ravensdown store.

ravensdown

HP Stampede CM142 Mix

Performance and persistence

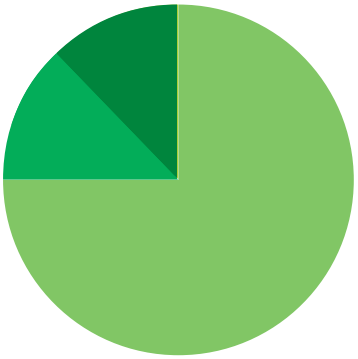
A high-performance pasture mix containing the new perennial ryegrass Stampede CM142 for improved persistence, pest protection and animal health.

Suitability/use

You have the option of treated or bare seed. Ravensdown recommends the use of treated seed to provide increased insect protection for your investment.

Ideally suited where protection against pests like black beetle adult, porina caterpillar and root aphid in addition to Argentine stem weevil is needed to help manage persistence issues. Also provides reduced risk of ryegrass staggers and heat stress.

Recommended for high-performance systems, irrigated or higher rainfall, rotational grazing and set stocking.



Pre-mixed into convenient 1ha (25kg) size bags.

Contents

- Stampede CM142
- Demand white clover
- Mantra white clover

Key traits:

- Improved persistence, insect protection and stock safety.
- Superior yield performance, year-round.
- Insect protection with reduced risk of staggers and heat stress.
- High livestock performance potential.

Pasture components

Stampede CM142 perennial ryegrass					
ENDOPHYTE	**HEADING DATE** (DAYS CF NUI)	**PLOIDY**	**SOWING RATE** (KG/HA)	**SOWING DATE**	**INSECT TOLERANCE**
CM142	+14	Diploid	18–22	Autumn and spring	Very good

Stampede CM142 is a highly tillered diploid it offers increased persistence of yield together with a high winter/early spring growth pattern. A late heading date and high leaf-to-stem ratio combine with excellent rust resistance to promote feeding value. Combined with the innovative CM142 endophyte for a high-level of insect tolerance and a new generation of livestock safety, Stampede is designed to go the distance.

CM142 is the latest epoxy-janthitrem producing endophyte to become available for the control of insect pests in ryegrass.

Key features of CM142 endophyte

- Proven efficacy against the most important insect pests in ryegrass.
- Proven animal safety with the highest 4-Star safety rating for sheep & cattle.
- Zero production of toxic lolitrem-B or ergovaline alkaloid.

2024 PBRA provisional rating for sheep and lambs (++++), full rating for cattle and dairy cows ++++.

Insect efficacy research has been conducted by independent entomologists using both controlled 'pot' experiments and field trials as appropriate. This research has tested CM142 against the following insects:

- Argentine stem weevil (ASW)
- porina
- black beetle
- root aphid.

"The CM142 endophyte combined with Cropmark's latest ryegrass genetics provides a natural mechanism to increase pasture persistence" Stephane Montel, Cropmark Seeds R&D Manager.

HP Finishing Mix

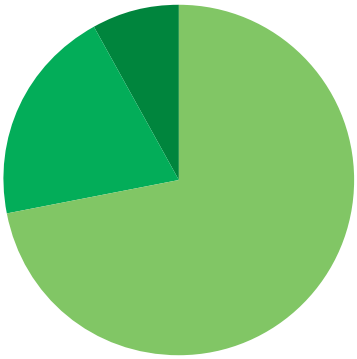
High-yield, high-quality

A high-performance, short term pasture mix designed to provide high-quality all-season forage for pastoral finishing systems. This mix is based on Frenzy LE hybrid ryegrass; providing fast establishment and strong winter production, coupled with the added high-quality of red and white clovers.

Suitability/use

Ideally suited to high-performance finishing systems throughout the country, particularly in areas where moisture is more reliable.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.



Contents

- Frenzy LE hybrid ryegrass
- Reaper red clover
- Demand white clover

Key traits:

- All-round seasonal production.
- High-quality clover content.
- High-palatability.

Pasture components

Frenzy LE hybrid ryegrass

PERSISTENCE	HEADING DATE	PLOIDY	COOL SEASON GROWTH	RUST TOLERANCE
2–3 years	Late	Tetraploid	Exceptionally high	9

Reaper red clover

PERSISTENCE	FLOWERING DATE	PLOIDY	OESTROGEN LEVELS	DISEASE TOLERANCE
2–3 years	Medium	Diploid	Low	Strong

Demand white clover

PERSISTENCE	FLOWERING DATE	LEAF SIZE	GROWTH PEAK	DISEASE TOLERANCE
3+ years	Early-mid	Medium	Spring to autumn	Strong

Average total yield (t DM/ha) from seed mixtures with varied proportions of Italian ryegrass (IR) and red clover (RC)

	SOWN SPECIES (%)		ACCUMULATED DRY MATTER TONNES / HA / YEAR
	ITALIAN RYEGRASS	RED CLOVER	
Seed mix proportions*	100	0	9.75
	83	17	13.00
	67	33	14.15
	50	50	14.22

*Source: Proceeding of the New Zealand Grassland Association 74: 201-2018 (2012) Yield of Italian ryegrass mixed with red clover and balansa clover (T.P. Ryan-Salter and A.D. Black)

HP Pinnacle Mix

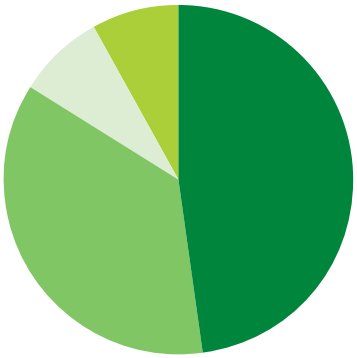
Maximise animal growth

Avatar NEA and Raider NEA2 with Mantra and Demand white clovers combine to create the optimum mix between palatability and persistence through mixing tetraploid and diploid genetics.

Suitability/use

Ideally suited to high-performance dairy and finishing systems for a range of stock classes. With NEA endophyte insect protection this mix can be used throughout the country.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.



Pre-mixed into convenient 1ha (25kg) size bags.

Contents

- Raider NEA2 perennial ryegrass
- Avatar NEA
- Demand white clover
- Mantra white clover

Key traits:

- High-yielding.
- Late heading with low aftermath heading.
- Contains NEA & NEA2 endophyte for good animal health and insect control.
- Excellent disease resistance.

Pasture components

Raider NEA2 perennial ryegrass				
PERSISTENCE	**HEADING DATE** (DAYS CF NUI)	**SOWING RATE** (KG/HA)	**SOWING DATE**	**INSECT TOLERANCE**
5+ years	+ 18	18–20	Autumn and spring	Good

A high-yielding diploid perennial ryegrass selected for superior persistence. Contains NEA2 endophyte for good animal health and insect pest control, including black beetle, Argentine stem weevil and pasture mealybug. Late heading (+ 18 days), with low aftermath heading.

Avatar NEA tetraploid perennial ryegrass					
ENDOPHYTE	**HEADING DATE** (DAYS CF NUI)	**PLOIDY**	**RUST RESISTANCE** (1 = SUSCEPTIBLE, 9 = RESISTANT)	**WINTER ACTIVITY**	**MIN RAINFALL** (ml)
Low endophyte (LE)	+ 22	Tetraploid	9	High	500+

Avatar is a very high-yielding, late heading (+22 days) tetraploid perennial ryegrass containing the NEA endophyte, bred for a combination of improved animal safety and persistence against insect pests. It has strong year-round growth performance.

HP Dairy Mix Plus

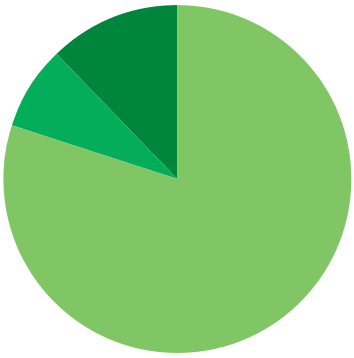
NEA2 endophyte protection

A very persistent and high-yielding diploid perennial ryegrass. Available with NEA2 endophyte for good animal health and insect pest control. Late heading (+ 18 days), with low aftermath heading and densely tillered. Rugged and dependable. Highly ranked for persistence in industry trials.

Suitability/use

Ideally suited to high-performance dairy systems throughout the country, particularly in areas where insect pressure is higher.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.



Pre-mixed into convenient 1ha (25kg) size bags.

Contents

- Raider NEA2 perennial ryegrass
- Demand white clover
- Mantra large leaf white clover

Key traits:

- High-yielding.
- Late heading (+18 days) with low aftermath heading.
- Contains the NEA2 endophyte for good animal health and insect control.
- Excellent disease resistance.

Agronomic traits

Raider NEA2 perennial ryegrass

PERSISTENCE	HEADING DATE (DAYS CF NUI)	SOWING RATE (KG/HA)	SOWING DATE	INSECT TOLERANCE
5+ years	+ 18	18-20	Autumn and spring	Good

Diploid perennial ryegrass

ENDOPHYTE	ARGENTINE STEM WEEVIL	PASTURE MEALY BUG	BLACK BEETLE ADULT	ROOT APHID	PORINA	GRASS GRUB	FIELD CRICKET
AR1	++++	++++	+	-[2]	-	-	Not tested
NEA2	+++	(++++)	+++	++	Not tested	-	Not tested
AR37	++++[1]	++++	+++	++++	+++	+	Not tested
SE	++++	++++	+++	++	+	-	Not tested
WE	-	-	-	-	-	-	Not tested

HP Dairy Mix

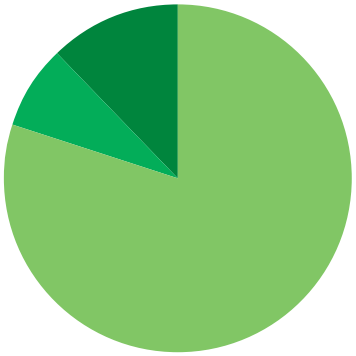
Quality and quantity

The HP Dairy Mix is designed specifically for the needs of dairy farms in regions where insects such as Argentine stem weevil are causing persistence issues. The HP Dairy Mix combines one of the leading perennial grasses for production with a well-known, trusted and persistent, high-yielding medium leaf white clover and a large leaf white clover.

Suitability/use

Ideally suited to a wide range of high-performance dairy or cattle farming systems including irrigated/higher rainfall or dryland, and to both rotational grazing and set stocking.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.



Pre-mixed into convenient 1ha (25kg) size bags.

Contents

- Ultra AR1 enhanced perennial ryegrass
- Demand white clover
- Mantra large leaf white clover

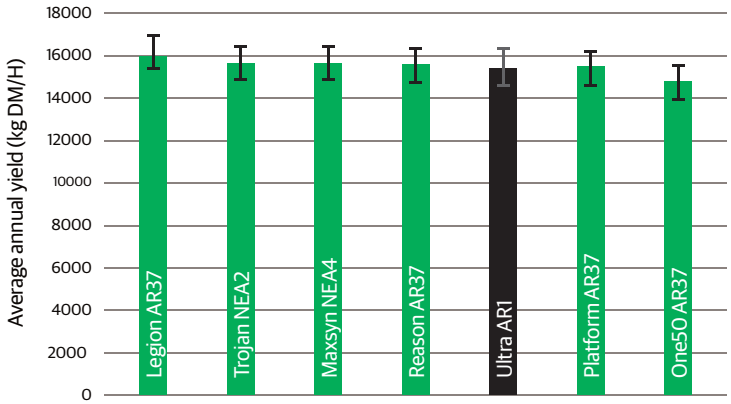
Key traits:

- High year-round pasture production and quality.
- Low aftermath seeding.
- Excellent grazing tolerance.
- High-quality clover content.

Pasture components

Ultra AR1 enhanced perennial ryegrass					
ENDOPHYTE	**HEADING DATE** (DAYS CF NUI)	**PLOIDY**	**RUST RESISTANCE** (1 = SUSCEPTIBLE, 9 = RESISTANT)	**WINTER ACTIVITY**	**MIN RAINFALL** (ml)
AR1	+ 20	Diploid	9	Very high	500+

Mean Annual Dry Matter Yield of 3 completed years, Cropmark Seeds Ltd *Lolium Perenne* Yield Trial, Burnham NZ 2021-2024 CV% 3.56



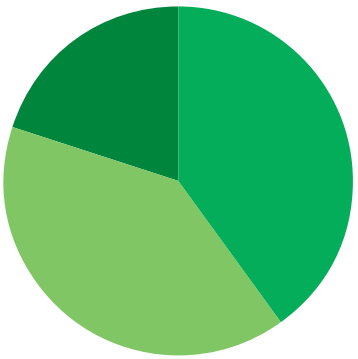
The average yield of each cultivar is represented by the end of the green bar, with the variation around the cultivar mean represented by the error bars (match-sticks at the top of the bars). Cultivars where the error bars overlap are not significantly different from each other.

HP Sheep and Beef Mix

Production when you need it

A specially designed animal-safe mix for sheep and beef pastures, based on Ultra AR1 enhanced perennial ryegrass and Governor AR1 perennial ryegrass; providing increased early spring production and summer quality.

HP Sheep and Beef Mix is designed specifically for increased winter and early spring growth for calving and lambing. Along with high-performing perennial ryegrass, it has a trusted and persistent high-yielding medium leaf white clover.



Pre-mixed into convenient 1ha (25kg) size bags.

Suitability/use

Ideally suited to a wide range of high-performance sheep, cattle and deer farming systems including irrigated/higher rainfall or dryland, and to both rotational grazing and set stocking.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.

Contents

- Ultra AR1 enhanced perennial ryegrass
- Raider NEA2
- Demand white clover

Key traits:

- High pasture production and quality.
- Increased early spring growth.
- Densely tillered grasses for increased grazing tolerance.
- Animal safe endophyte.

Pasture components

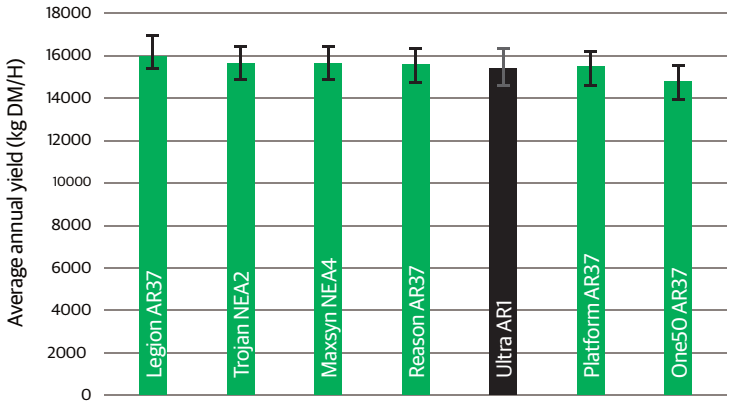
Ultra AR1 enhanced perennial ryegrass

ENDOPHYTE	HEADING DATE (DAYS CF NUI)	PLOIDY	RUST RESISTANCE (1 = SUSCEPTIBLE, 9 = RESISTANT)	WINTER ACTIVITY	MIN RAINFALL (ml)
AR1	+ 20	Diploid	9	Very high	500+

Raider NEA2 perennial ryegrass

PERSISTENCE	HEADING DATE (DAYS CF NUI)	SOWING RATE (KG/HA)	SOWING DATE	INSECT TOLERANCE
5+ years	+ 18	18-20	Autumn and spring	Good

Mean Annual Dry Matter Yield of 3 completed years, Cropmark Seeds Ltd *Lolium Perenne* Yield Trial, Burnham NZ 2021-2024 CV% 3.56



The average yield of each cultivar is represented by the end of the green bar, with the variation around the cultivar mean represented by the error bars (match-sticks at the top of the bars). Cultivars where the error bars overlap are not significantly different from each other.

HP Endurance Mix

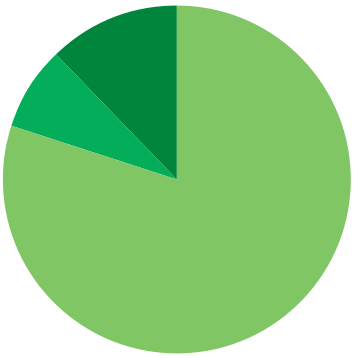
Production and persistence

A high-performance, persistent pasture mix based on Matrix standard/high endophyte enhanced perennial ryegrass.

Suitability/use

Ideally suited to areas where black beetle is prevalent (Waikato, Bay of Plenty, Northland), where persistence is an issue and where farmers are less concerned about grass staggers. Recommended for high-performance systems, irrigated or higher rainfall, rotational grazing, and set stocking.

Not recommended for animals sensitive to endophyte induced grass staggers such as deer, horses, goats, or alpacas.



Pre-mixed into convenient 1ha (25kg) size bags.

Contents

- Matrix SE enhanced perennial ryegrass
- Demand white clover
- Mantra large leaf white clover

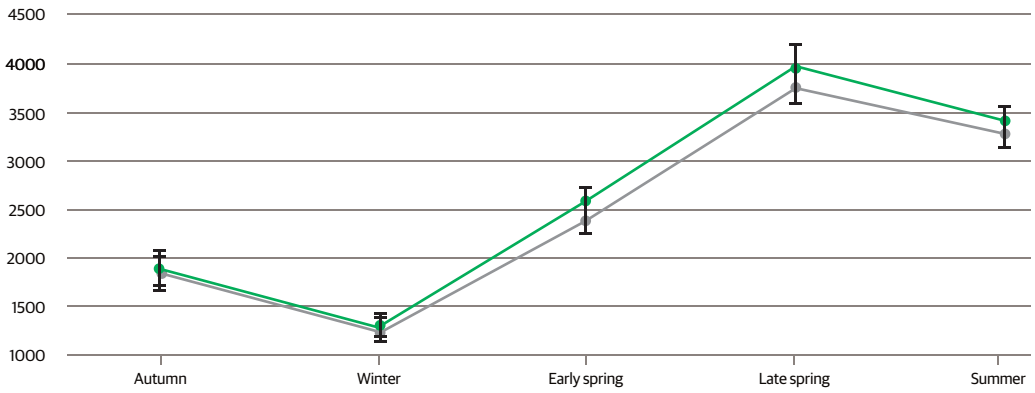
Key traits:

- Proven and reliable high-performing diploid enhanced perennial ryegrass.
- Strong persistence under insect attack.
- Very strong winter, early spring growth providing feed when most needed.
- Suitable for full pasture renovation and under-sowing.

Pasture components

Matrix SE enhanced perennial ryegrass					
ENDOPHYTE	**HEADING DATE** (DAYS CF NUI)	**PLOIDY**	**RUST RESISTANCE** (1 = SUSCEPTIBLE, 9 = RESISTANT)	**WINTER ACTIVITY**	**MIN RAINFALL** (ml)
Standard Endophyte (SE)	+23	Diploid	9	Very high	500+

Seasonal dry matter yield (kg DM/ha)



Pooled analysis of three 2021 sown yield trials in Canterbury, Waikato and Victoria. Means ± LSD.

Other ryegrass options

DIPLOID PERENNIAL RYEGRASS

CULTIVAR	ENDOPHYTE	HEADING DATE	DESCRIPTION
Stampede	CM142, LE	+14 days	Bred for persistence this new cultivar offers robust all-year growth, strong autumn rebound, and high tiller density for exceptional dry matter production.
Raider	CM142, NEA2	+18	A general purpose ryegrass with fine and densely tillered leaves with good rust tolerance. Very good late spring and summer growth.
Avatar	CM142, NEA	+22	A superior ryegrass with exceptional DM production, and palatability.
Ultra	AR1, LE	+20	A densely tillered cultivar with very high year-round production suitable for all livestock classes, with excellent disease resistance for increased forage quality.
Matrix	SE, LE	+23	Thoroughly proven cultivar with good all-year-round production with excellent growth over winter and early spring.
Excess	AR1, AR37	+7	A mid heading diploid variety suited to dairy, sheep and beef systems.
Governor	AR1, AR37, LE	+5	Ability to grow more DM on the shoulders of the season, in early spring and autumn. Shown outstanding survival through drought and high insect pressure. Fine, densely tillered and diploid.
Expo	AR1, LE	+21	A densely tillered ryegrass suited to a range of stock classes with good cool season production and low aftermath heading.
Hustle	AR1, RGT18	+8	A top performing cultivar with excellent late season growth and an upright growth habit favouring clover and herb content.
Legion	AR1, AR37	+13	A cultivar with high tiller density and outstanding summer, autumn and winter growth.
Maxsyn	NEA4	+8	High-yielding, superior summer and autumn growth and excellent insect protection.
One50	AR1, AR37, LE	+20	A general purpose medium leaf size ryegrass with high autumn and winter yields. Good tolerance to root pulling.
Prospect	AR1, AR37	+12	A densely tillered cultivar with good seasonal growth and persistence.
Request	AR1, AR37, LE	0	A low aftermath early heading cultivar with good growth in spring, summer and autumn.
Rely	AR1, AR37	0	A general purpose ryegrass with fine leaves.
Rohan	NEA2, LE	+18	A spreading ryegrass with dense tillers and fine leaves.
Three60	AR1, AR37	+20	A late heading cultivar with medium to fine tiller size, a natural successor to One50.
Trojan	NEA2, LE	+16	Bred for high forage production with key strengths in winter, early spring and autumn.

TETRAPLOID PERENNIAL RYEGRASS

Avatar	CM142, NEA	+22	A superior ryegrass with exceptional DM production, and palatability.
4Front	NEA2	Late	A cultivar with superior year-round growth, improved persistence, easy grazing, and excellent animal performance.
Base	AR1, AR37	+22	A densely tillered tetraploid ryegrass ideally suited to dairy or intense sheep/beef farms, with low aftermath heading.

ITALIAN RYEGRASS

Appeal	Without	+28	A very persistent and very high-yielding diploid Italian ryegrass, which has been developed as part of a 15 year plant breeding programme focused on developing more persistent Italian ryegrasses.
Vibe	Without	+27	A very high-yielding diploid, developed as part of a persistence breeding programme. This new Italian is high in quality and very persistent.
Asset	AR37	+14	Diploid cultivar selected for persistence into the second year. The AR37 endophyte has the potential to cause ryegrass staggers.
Feast II	Without	+17	A tetraploid cultivar with very good summer quality and production.
Lush	AR37	+17	A fast establishing tetraploid cultivar. The AR37 endophyte has the potential to cause ryegrass staggers.
Tabu+	Without	+13	A new improvement on the old Tabu. Tabu+ is fast establishing, with good winter growth and faster recovery time.

Raider NEA2

Persistent perennial ryegrass

A new high-yielding diploid perennial ryegrass selected for superior persistence. Contains NEA2 endophyte for good animal health and insect pest control, including black beetle, Argentine stem weevil and pasture mealybug. Late heading (+ 18 days), with low aftermath heading.

Suitability/use

Raider is well suited for delivering both high-performance and strong persistence under trying farming conditions and pressure from insect pests such as black beetle adult, Argentine stem weevil, and pasture mealybug. Suitable for use with cattle and sheep.

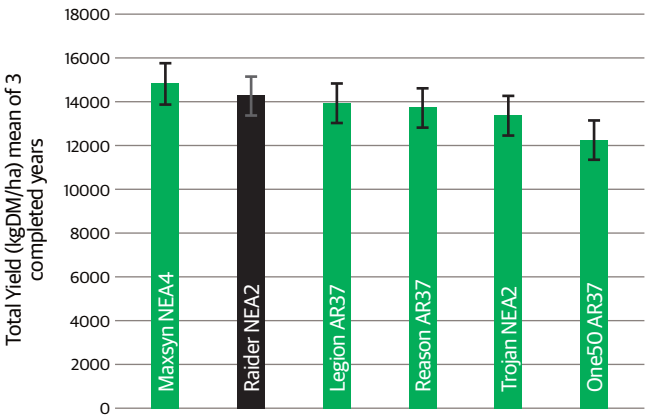
Key traits:

- Good persistence under insect pressure.
- High-yielding across all seasons; but with strong cool season growth.
- Excellent disease resistance.
- Good animal safety.

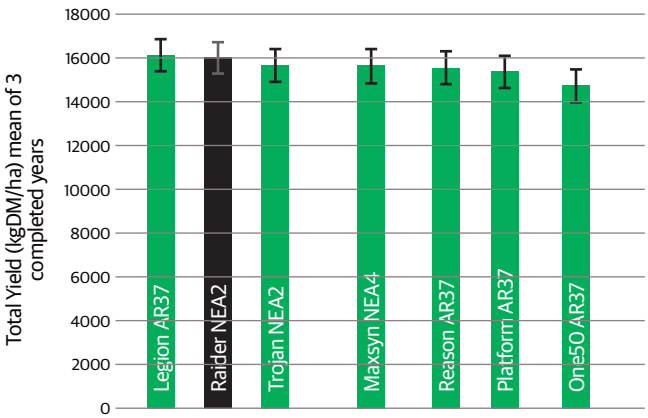
Agronomic traits

Raider NEA2 perennial ryegrass				
PERSISTENCE	**HEADING DATE** (DAYS CF NUI)	**SOWING RATE** (KG/HA)	**SOWING DATE**	**INSECT TOLERANCE**
5+ years	+ 18	18-20	Autumn and spring	Good

Mean Annual Dry Matter Yield, Cropmark Seeds Ltd *Lolium Perenne* Yield Trial, Waikato NZ 2021-2024 CV% 4.97



Mean Annual Dry Matter Yield, Cropmark Seeds Ltd *Lolium Perenne* Yield Trial, Canterbury NZ 2021-2024 CV% 3.56



* Cropmark Seeds Ltd breeding lines removed from analysis



EXCLUSIVE

Bullet tetraploid annual ryegrass

Tetraploid annual ryegrass

A densely tillered, rapidly establishing tetraploid annual ryegrass, Bullet has exceptional autumn, winter and spring production of high-quality feed (ME, digestibility and palatability). Offering sowing date flexibility, Bullet can be sown late into autumn. Bullet has potential for multiple grazings plus a cut of silage or hay.

Suitability/use

An ideal 6–9 month specialist winter feed, suited to all areas of New Zealand, for grazing as well as silage and hay use. Bullet is recommended for all livestock types, and has the potential to produce high-quality silage and hay. Bullet should be autumn sown, but can be sown later in autumn.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.

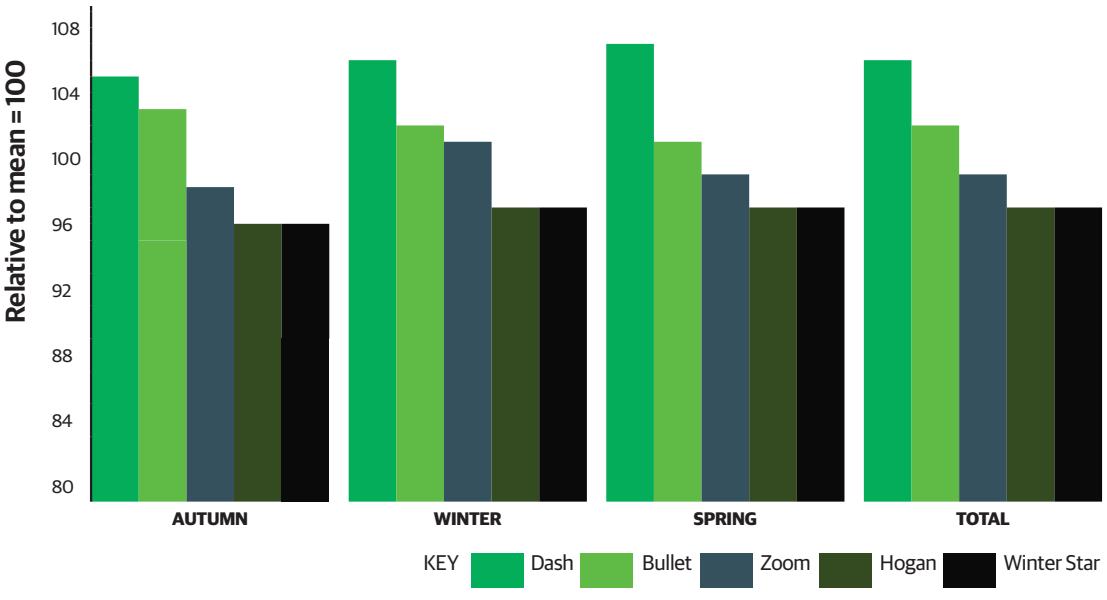
Key traits:

- A specialist winter feed which is also great for high-quality silage production.
- Fast establishing.
- High winter growth.
- Excellent disease resistance.

Bullet tetraploid annual ryegrass

Dash annual ryegrass					
PERSISTENCE	**HEADING DATE** (DAYS CF NUI)	**SOWING RATE** (KG/HA)	**RUST RESISTANCE**	**WINTER ACTIVITY**	**MIN RAINFALL** (MLS)
6–9 months	+14	25–30	9	Very high	450+

Pooled Yield Results – Annual Ryegrass (Results expressed as a % of the Trial Mean).*



*Source: Pooled yield results of 4 trials conducted by Cropmark on farms in Helensville, Hawke's Bay, South Canterbury and Southland – 2015.

Reaper red clover

Adding quality when you need it

A high-yielding New Zealand bred, large leafed, semi-erect growing diploid red clover which is suitable for grazing and for hay and silage. Reaper is a very palatable variety, with fine stems suitable for all stock types.

Suitability/use

This exciting new red clover specifically bred in New Zealand for New Zealand conditions is ideally suited for mixing with short term grasses or as a finishing crop planted on its own. Red clover is well known as a specialist lamb finishing crop and the results from Reaper will not disappoint.

You have the option of coated or bare seed.

Key traits:

- Dual purpose grazing and hay/silage use & compatible in mixes.
- High-yielding, with strong winter activity.
- Highly palatable, with finer stems.
- Low oestrogen levels.

Agronomic traits

Reaper red clover					
LEAF SIZE	**PERSISTENCE**	**SOWING RATE** (KG/HA)	**WINTER ACTIVITY**	**FLOWERING DATE**	**GROWTH PEAK**
Large	3–4 years	4–6kgs	High	Early-mid	Spring to autumn

Red clover yield			
DRY MATTER YIELDS (% RELATIVE TO MEAN = 100)			
VARIETY	**YEAR 1**	**YEAR 2**	**YEAR 3**
Reaper	118ab	116ab	125a
Rossi	115bc	121a	126a
Sensation	106de	92d	78d
Pawera	101ef	116ab	129a
Tuscan	99ef	96d	102bc
Colenso	75g	74e	70d
Mean yield kg DM	15,204	8,335	5,062
CV%	4.8	5.3	13.8
LSD	1057.4	634.8	1,012.1

*Source: Cropmark red clover yield trial, Canterbury (2013-2016)

Mantra large leaf white clover

Maximise milk production

A new large leafed mid flowering white clover with semi-erect growth habit. It has high stolon number and thick stolons. Its medium to high growing point enables better competition with grass in swards. High yields with strong winter/early spring growth, very good persistence and reasonably good tolerance to sclerotinia. Best suited to rotational grazing.

You have the option of coated or bare seed.

Key traits:

- Highly competitive in grass swards.
- High-yielding, with strong winter/early spring growth.
- High stolon density and stolon length.
- Highly palatable, with finer stems.

Agronomic traits

Mantra large leaf white clover					
LEAF SIZE	**PERSISTENCE**	**SOWING RATE** (KG/HA)	**WINTER ACTIVITY**	**FLOWERING DATE**	**GROWTH PEAK**
Very large	3–4 years	4–6kgs	High	Early-mid	Spring to autumn

White clover yield				
DRY MATTER YIELDS (% RELATIVE TO MEAN = 100)				
VARIETY	**YEAR 1**	**YEAR 2**	**YEAR 3** (AFTER 30 MONTHS)	**GROUND COVER AT END ***
Mantra	113a	109a	126ab	7.3
Kopu II	109ab	109be	112af	6
Weka	100de	115ab	121ac	6.8
Mainstay	97ef	77h	52i	3
Tribute	96ef	95jg	119ac	6.5
Apex	93fh	104cf	125ab	6.5
Demand	85i	102df	95ef	5.8
Mean (kg DM)	14733	6654	748	5.5
CV%	3.6	7.0	14.0	23

Yields bearing different superscript letters differ significantly (P<0.05).
*Ground Cover scored 1 – 9, 9 = complete ground cover

*Source: Cropmark white clover evaluation trial, Canterbury (2015-2017)

Oracle plantain

Highly palatable herb with good all-year growth

An upright herb that can grow in a range of soils and climatic conditions. Oracle has exceptional late spring, summer, and autumn growth. When clover is added this makes the ideal finishing or milking platform.

Key traits:

- Late heading for carrying quality into spring.
- High forage quality and mineral content.
- Ideal for use as a specialist forage crop, or inclusion in permanent mixes.
- Suitable for all livestock types.

Agronomic traits

Sowing rate (kg/ha)		Characteristics			
AS FORAGE CROP	IN PASTURE MIXES	HEADING DATE	FORAGE QUALITY	DROUGHT TOLERANCE	PERSISTENCE
8–10	1–2	Late	High	Very good	2–3 years

Chico chicory

Flexible multi-graze

A high-yielding, leafy chicory showing upright growth, fast establishment, and good drought tolerance. Chico is noted for its strong summer, autumn growth, providing high-quality summer forage, and for its improved winter activity. Being high in energy and minerals, Chico has very high livestock performance potential.

You have the option of treated or bare seed. We recommend treated seed to provide increased insect protection for your investment.

Key traits:

- Fast establishing and rapid re-growth.
- Very high-quality, high-yielding summer forage crop.
- Its deep root system enables it to mine soil water and minerals.

Agronomic traits

Chico chicory				
PERSISTENCE	SOWING RATE (KG/HA)	GROWTH PEAK	STOCK SUITABILITY	STOCK PERFORMANCE (1=LOW / 9=HIGH)
2–3 years	6–8 (sole species) 1–2 (in a mix)	Spring to summer	All	9



Agrochemicals catalogue

Order online at My Ravensdown, or call our Customer Centre on 0800 100 123.

Orders can be picked up from your local Ravensdown store next day, or delivered on-farm.

Key

AGRECOVERY

Free recycling is available on plastic containers up to 60L and for plastic or steel large drums from 61L–1000L.

TS

Tracked Substance; a Written Notification and Location Certificate (if required) are a legal requirement for purchase of tracked products.

RW

Restricted to a Workplace; a Written Notification is a legal requirement for purchase of products that are restricted to a workplace and use should be under the control of a competent/qualified person.

CP

Competent/Qualified Person; use of this product should be under the control of a competent/qualified person.

Disclaimer: Information provided in this document is to be used in conjunction with and is written to enhance, not replace the information provided within the product label. This product must not be used for any purpose, or in any manner, contrary to the label unless authorised under appropriate legislation. The information is provided in good faith and no warranty is expressed or implied. Always read the product label.

ravensdown

Spray-out options

Glyphosate 540™

A water-soluble herbicide for non-selective control of many annual and perennial weeds.

- A high-strength 540g/L glyphosate powered by Surfmax-G®.
- Rainfast in 20 minutes when used with Accelerate™ penetrant.
- Ideal for spray-outs prior to sowing new crops and pasture.

AGRECOVERY CP

ACTIVE INGREDIENT: glyphosate 540g/L
PACK SIZE: 20L, 200L, 1000L



Glyphosate G360™

A water-soluble herbicide for non-selective control of many annual and perennial weeds.

- Traditional strength 360g/L glyphosate powered by Surfmax-360™.
- Rainfast in 20 minutes when used with Accelerate™ penetrant.
- A broad spectrum herbicide used in a wide range of situations.

AGRECOVERY CP

ACTIVE INGREDIENT: glyphosate 360g/L
PACK SIZE: 20L, 200L , 1000L



Glyphosate 680 Dry™

A water-soluble granular herbicide for non-selective control of many annual and perennial weeds.

- A higher strength water-soluble granule.
- Packed in a convenient 10kg cardboard box.
- A broad spectrum herbicide used in a wide range of situations.

CP

ACTIVE INGREDIENT: glyphosate 688g/L
PACK SIZE: 10kg



Accelerate™

For improved penetration and uptake of glyphosate and other herbicides in broad-acre and brushweed spraying.

- Organo-silicone penetrant for use with glyphosate and other herbicides.
- Especially beneficial when used with Eliminate™, Eliminate™ Brushkiller, and Eradicate™ for brushweed control.
- Reduces the rainfast period and improves plant uptake.

AGRECOVERY

ACTIVE INGREDIENTS: organo-silicone penetrant
PACK SIZE: 5L, 20L, 200L



Backup™

A selective herbicide for use in conservation tillage and for the control of dock and buttercup in pasture, barley, oats and wheat.

- Targets difficult broadleaf weeds including giant buttercup and dock.
- Effective companion herbicide with glyphosate for a cleaner spray-out.
- Useful broadleaf herbicide in wheat, barley and oat crops.

AGRECOVERY CP

ACTIVE INGREDIENT: thifensulfuron-methyl 750g/kg
PACK SIZE: 200g



Granit®

A selective herbicide for control of certain broadleaf weeds in conservation tillage programmes, barley, oats and in wheat.

- Effective companion herbicide with glyphosate for a cleaner spray-out.
- Improves control of many broadleaf weeds.
- A short residual broadleaf herbicide for use in cereals.

AGRECOVERY CP

ACTIVE INGREDIENTS: tribenuron-methyl 750g/kg
PACK SIZE: 500g, 1kg



Spray-out options

Dicam 480™

A selective herbicide for control of certain hard to kill broadleaf weeds in conservation tillage programmes and in cereals, maize, some forage brassicas, waste areas, and spot treatment in pastures.

- Effective companion herbicide with glyphosate for a cleaner spray-out.
- No plant-back period for brassicas, grasses, maize, cereals and some other crops.
- Useful for post-emergence broadleaf weed control in many crops.

AGRECOVERY CP

ACTIVE INGREDIENTS: dicamba 480g/L
PACK SIZE: 5L, 20L



Multiple®

A selective herbicide used to control clovers, yarrow, plantains, Californian and other thistles in a range of crops, forestry and pre-cultivation.

- A grass friendly herbicide ideal for control of thistles and other broadleaf weeds.
- The best option for weed wiping Californian thistles.
- Can be used with glyphosate prior to beets, brassicas, grasses, cereals, and maize.

AGRECOVERY RW

ACTIVE INGREDIENT: clopyralid 300g/L
PACK SIZE: 5L, 20L



Other herbicides used with glyphosate to improve the range of weeds controlled include;

Active ingredient	Brands	Handling	Plantback Period	Weeds
Oxyfluorfen	Oxy™ 500SC	CP	Pasture and brassicas; when used at low rates there is no problem with germination of direct drilled or cultivated crops.	Cleavers, nettles, mallows, tall willow herb.
Saflufenacil	Sharpen®	CP	Plantback period varies depending on ground cover and crop sown, please refer to label.	Clover, dandelion, docks, mallow, plantains, tall willow herb.
Carfentrazone	Hammer® Force	CP	No plantback required for carfentrazone.	Improves control of a range of weeds not well controlled by glyphosate alone e.g. mallows.

Insecticides

Avert® 25WP

An insect growth regulator for control of porina caterpillar and clover flea in pasture.

- For the control of porina caterpillar and clover flea in pasture.
- When used correctly it will prevent significant damage from these pests.
- Low toxicity to humans and other mammals.



ACTIVE INGREDIENTS: **diflubenzuron** 250g/kg
PACK SIZE: 500g (10 x 50g water-soluble bags)

Halex[CS]

Synthetic pyrethroid for insect control in a variety of crops, amenity turf, ornamentals and public health situations.

- For control of problem caterpillars like cutworm and diamond back moth.
- Can be used in flowering crops when bees are not foraging.
- Useful to prevent aphids spreading virus in sensitive crops e.g. BYDV in cereals.



ACTIVE INGREDIENTS: **lambda-cyhalothrin** 250g/L (in the form of a capsule suspension)
PACK SIZE: 250ml, 1L

Other insecticides commonly used in forage and other crops.

Active ingredient	Brands	Mode of action group(s)	Handling	Comments
Pirimicarb	Prohive™, Piritek®, Pirimor®	Group 1 insecticide	RW	Carbamate insecticide for control of aphids in a range of crops.
Cyantraniliprole	Exirel®	Group 28 insecticide	CP	For control of caterpillars, leaf miners and suppression of grey cabbage aphid in forage brassicas.
Cyantraniliprole + pymetrozine	Minecto™ Star	Group 9 + Group 28 insecticide	CP	For control of cabbage aphid, leaf miners, caterpillars and nysius in forage brassicas.
Spinetoram	Sparta™	Group 5	CP	For control of springtails, nysius, caterpillars and leaf miners in forage brassicas, and certain pests in other crops.
Sulfoxaflor	Transform™	Group 4c insecticide	CP	Predator friendly aphicide for aphid control and virus protection in a range of crops.

Insecticides

Other insecticides commonly used in forage and other crops.

Active ingredient	Brands	Mode of action group(s)	Handling	Comments
Permethrin + pirimiphos-methyl	Ambush™, Attack®	Group 1 + Group 3	RW	Broad-spectrum insecticide for controlling a wide range of pests, including aphids, caterpillars, nysius and springtails, in forage brassicas and other crops.
Chlorantraniliprole + lambda-cyhalothrin	Ampligo®	Group 3 + Group 28	CP	Broad-spectrum insecticide for control of aphids, caterpillars, leaf miners and nysius in forage brassicas and other crops.
Diazinon granules	Gesapon 20G Diazinon 20G	Group 1 insecticide	CP	Used for control of grass grub larvae in established pasture and newly sown pastures and crops.
Diazinon EC	Diazol 800, Diazinon 800	Group 1 insecticide	RW	Liquid form of diazinon, can be used for control of grass grub larvae in established pasture.
Diazinon EW	Zagro Diazinon 600EW, DEW™	Group 1 Insecticide	CP	Lower strength diazinon liquid, can be used for control of grass grub larvae in established pasture.

New pasture options

Ecobait IP®

A bait for the control of slugs and snails in all crops; agricultural, horticultural and ornamental.

- BioGro approved for use in organic production systems in NZ.
- Similar efficacy and bait characteristics to Endure.
- 1 day pre-harvest interval for food crops.

ACTIVE INGREDIENT: iron phosphate anhydrous 24.2g/kg
PACK SIZE: 15kg, 630kg (42x15kg)



Endure®

A bait for the control of slugs and snails in crops.

- Durum wheat bait which lasts longer, especially in the wet.
- Uniform bait size for superior spreading and accurate application.
- Can be mixed and broadcast with fertiliser for easy application.

ACTIVE INGREDIENT: metaldehyde 50g/kg
PACK SIZE: 15kg, 630kg (42x15kg) or can be mixed with fertiliser at your local Ravensdown store.



Endure® Mini

- Purpose-designed mini bait for application with seed when sowing crops.
- Endure® Mini will provide protection against slugs feeding on seed in the drill row.
- The bait size (110,000 baits/kg) ensures a high number of baiting points in the drill rows.

ACTIVE INGREDIENT: metaldehyde 50g/kg
PACK SIZE: 10kg, 600kg (60x10kg)



New pasture options

Aim®

For the selective control of broadleaf weeds in new and established pasture, chicory, clover, lucerne, and maize.

- A clover friendly herbicide for broadleaf weed control in many situations.
- Ideal for use in new and established pasture, chicory, and lucerne.
- Add to Pasture Guard® Nurture to improve weeds controlled in new pasture.

AGRECOVERY CP

ACTIVE INGREDIENT: flumetsulam 800g/kg
PACK SIZE: 500g



Pasture Guard® Nurture

For the control of thistles and other broadleaf weeds in pastures, grass and white clover seed crops, peas, and cereals.

- Clover safe and ideal for broadleaf weed control in new pasture.
- Great for cleaning up silage paddocks when locked up.
- Provides above-ground control of Californian thistles.

AGRECOVERY CP

ACTIVE INGREDIENT: MCPB 375g/L and **MCPA** 25g/L
PACK SIZE: 20L, 200L



Pasture Guard® Elite

For the selective control of broadleaf weeds in new and established pastures, clover, peas and cereals.

- Clover friendly for broadleaf weed control in new pasture.
- Controls many hard to kill weeds, e.g. chickweed, cress, nettles, spurrey, and storksbill.
- Provides better control of phenoxy resistant seedling thistles and buttercups.

AGRECOVERY

ACTIVE INGREDIENTS: MCPB 200g/L and **bentazone** 200g/L
PACK SIZE: 20L



Pasture Guard® Bentazone

A selective post-emergence herbicide for use on onions, cereals, clover and grass seed crops, pasture, potatoes, soya beans, peas, lucerne, and turf.

- A grass, clover, and lucerne friendly selective herbicide.
- Use to control a range of broadleaf weeds in establishing pastures and/or crops.
- Control seedling nodding thistles in lucerne.

AGRECOVERY

ACTIVE INGREDIENT: Bentazone 480g/L
PACK SIZE: 20L



Pasture Guard® D-Amine 720

A broadleaf herbicide for control of broadleaf weeds in cereals and pasture.

- Ideal for autumn and spring weed control programmes in new and established pasture, and for control of a range of broadleaf seedlings in cereals.
- A non-volatile form of 2,4-D that is softer on clovers than ester forms of 2,4-D.
- Effective on a wide-range of seedling broadleaf weeds including thistles and ragwort.

AGRECOVERY CP

ACTIVE INGREDIENT: Contains 720g/L 2,4-D as the diethanolamine and dimethylamine salts in the form of a soluble concentrate.
PACK SIZE: 20L, 200L



Established pasture options

Pasture Guard® 2,4-D 680

A broadleaf herbicide for control of most species of thistles and many common weeds in pasture and non-crop situations.

- Ideal for autumn and winter weed control programmes in pasture.
- Effective on a wide range of broadleaf weeds, including thistles and ragwort.
- Tank mix with Multiple® for hard to kill thistles or if resistance is suspected.

AGRECOVERY CP

ACTIVE INGREDIENT: 2,4-D ethylhexyl ester 680g/L
PACK SIZE: 20L, 200L



Pasture Guard® D-Amine 720

A broadleaf herbicide for control of broadleaf weeds in cereals and pasture.

- Ideal for autumn and spring weed control programmes in new and established pasture and for control of a range of broadleaf seedlings in cereals.
- A non-volatile form of 2,4-D that is softer on clovers than ester forms of 2,4-D.
- Effective on a wide range of seedling broadleaf weeds including thistles and ragwort.

AGRECOVERY CP

ACTIVE INGREDIENT: Contains 720g/L 2,4-D as the diethanolamine and dimethylamine salts in the form of a soluble concentrate.
PACK SIZE: 20L, 200L



Pasture Guard® MCPA 750

For the control of broadleaf weeds in pastures and cereals.

- For broadleaf weed control in established pasture from winter to spring.
- Tank mix with Multiple® for hard to kill thistles or if resistance is suspected.

AGRECOVERY CP

ACTIVE INGREDIENT: MCPA 750g/L
PACK SIZE: 20L, 200L



Multiple®

A selective herbicide used to control clovers, yarrow, plantains, Californian and other thistles in a range of crops, forestry and pre-cultivation.

- A grass friendly herbicide ideal for control of thistles and other broadleaf weeds.
- The best option for weed wiping Californian thistles.
- Can be used with glyphosate prior to beets, brassicas, grasses, cereals and maize.

AGRECOVERY RW

ACTIVE INGREDIENT: clopyralid 300g/L
PACK SIZE: 5L, 20L



Established pasture options

Eliminate™ Brushkiller

A selective herbicide for control of gorse, broom, blackberry, and other brushweeds and for the spot treatment of many broadleaf weeds including ragwort, thistles, and docks.

- A powerful grass friendly herbicide for the control of brushweeds.
- Ideal for spot spraying brushweeds and a wide range of broadleaf weeds in pasture.
- Can be used year-round through a knapsack, handgun, or a mistblower.

AGRECOVERY CP

ACTIVE INGREDIENT: **triclopyr** 300g/L and **picloram** 100g/L
PACK SIZE: 20L, 200L



Fumate™

For control of grass and broadleaf weeds in fodder beet, red beet, and barley grass and annual grass weeds in pasture and sports turf.

- Control annual grass and some broadleaf weeds in fodder beet, red beet, and ryegrass.
- Used in pasture to control barley grass during the winter.
- Used both pre- and post-emergence in fodder beet weed control programmes.

AGRECOVERY CP

ACTIVE INGREDIENTS: **ethofumesate** 500g/L
PACK SIZE: 10L



Gibberellic acid

Express® Gibberellic Acid

Express® is a soluble form of the naturally occurring gibberellic acid GA3. When applied correctly to pasture, Express® will stimulate extra dry matter production under rotational grazing management.

- Water-soluble form of the naturally occurring gibberellic acid GA3.
- Stimulates extra pasture production when extra feed is needed.
- Now available in two pack sizes, 200g (10 x 20g water-soluble bags) and 1kg resealable foil packs.

ACTIVE INGREDIENT: **gibberellic acid (GA3)** 400g/kg
PACK SIZE: 200g (10 x 20g water-soluble bags)
1kg (resealable foil pack)



New lucerne options

Triflow® 480

Selective pre-emergence soil incorporated herbicide for the control of certain annual grasses and broadleaf weeds in field and vegetable brassicas, lucerne, peas, and specific vegetable crops.

- For pre-plant weed control in brassicas, lucerne and certain other crops.
- Controls a range of grass and broadleaf weeds.
- Good residual activity for weed control during establishment.

AGRECOVERY CP

ACTIVE INGREDIENT: **trifluralin** 480g/L
PACK SIZE: 20L



New lucerne options

Aim®

For the selective control of broadleaf weeds in new and established pasture, chicory, clover, lucerne, and maize.

- A clover friendly herbicide for broadleaf weed control in many situations.
- Ideal for use in new and established pasture, chicory, and lucerne.
- Add to Pasture Guard® Nurture to improve weed-control in new pasture.

AGRECOVERY

ACTIVE INGREDIENT: flumetsulam 800g/kg
PACK SIZE: 500g



Pasture Guard® Bentazone

A selective post-emergence herbicide for use on onions, cereals, clover and grass seed crops, pasture, potatoes, soya beans, peas, lucerne, and turf.

- A grass, clover, and lucerne friendly selective herbicide.
- Use to control a range of broadleaf weeds in establishing pastures and/or crops.
- Control seedling nodding thistles in lucerne.

AGRECOVERY

ACTIVE INGREDIENT: bentazone 480g/L
PACK SIZE: 20L



Other herbicides used in new lucerne include;

Active ingredient	Brands	Handling	Comments
2,4-DB	Debut®	CP	For control of seedling thistles, and a range of other broadleaf weeds.
Imazethapyr	Spinnaker®, Equate®	CP	Controls a wide range of seedling broadleaf weeds and will suppress many more.

Established lucerne options

Atratec™

For the control of broadleaf weeds and annual grasses in maize, sweetcorn, established lucerne, and linseed.

- Residual herbicide to control some grasses and many broadleaf weeds.
- Used extensively as a pre- and post-emergence herbicide in maize crops.
- Often mixed with a paraquat 250g/L in established (12 month+) lucerne.

CP

ACTIVE INGREDIENTS: atrazine 900g/kg
PACK SIZE: 10kg



Established lucerne options

Atraflo™

A selective post-emergent residual herbicide for the control of some seedling grass and broadleaf weeds in maize, sweetcorn, established lucerne, and non-cropland situations.

- Residual herbicide to control some grasses and many broadleaf weeds.
- Used extensively as a pre- and post-emergence herbicide in maize crops.
- Often mixed with a paraquat 250g/L in established (12 month+) lucerne.

AGRECOVERY CP

ACTIVE INGREDIENT: atrazine 500g/L
PACK SIZE: 20L



Terbaflo™

For the control of broadleaf and grass weeds in forestry, established maize, lucerne, peas and sweetcorn. Terbaflo™ can also be used as a non-selective, residual herbicide in non-crop areas.

- Residual triazine herbicide with stronger knockdown activity.
- Used in crops including lucerne, peas, and maize to control certain weeds.
- Used in forestry establishment or for release treatment over young trees.

AGRECOVERY CP

ACTIVE INGREDIENT: terbuthylazine 500g/L
PACK SIZE: 20L



Simaflo™

A selective pre-emergent residual herbicide for weed control in lucerne, orchards, vineyards, forestry, and some horticultural crops.

- Long-lasting residual herbicide with no knockdown of established weeds.
- Can be used in tank mix with paraquat 250g/L in established lucerne.
- Useful for barley grass control.

AGRECOVERY CP

ACTIVE INGREDIENT: simazine 500g/L
PACK SIZE: 20L



Other herbicides used in established Lucerne include;

Active ingredient	Brands	Handling	Comments
Paraquat	Flash 250	TS	Non-selective contact herbicide for control of many annual and perennial grass and broadleaf weeds. Used widely in winter lucerne spray programs. Often tank mixed with Atraflo, Atratec or Terbaflo in established lucerne.
Hexazinone	Viper®, Velpar®	CP	For control of a range of problem weeds including; clovers, nodding thistle, storksbill, woolly mullein, and yarrow.

Brassica options

Ecobait IP®

A bait for the control of slugs and snails in all crops; agricultural, horticultural and ornamental.

- BioGro approved for use in organic production systems in NZ.
- Similar efficacy and bait characteristics to Endure.
- 1 day pre-harvest interval for food crops.

ACTIVE INGREDIENT: iron phosphate anhydrous 24.2g/kg
PACK SIZE: 15kg, 630kg (42x15kg)



Endure®

A bait for the control of slugs and snails in crops.

- Durum wheat bait which lasts longer, especially in the wet.
- Uniform bait size for superior spreading and accurate application.
- Can be mixed and broadcast with fertiliser for easy application.

ACTIVE INGREDIENT: metaldehyde 50g/kg
PACK SIZE: 15kg, 630kg (42x15kg) or can be mixed with fertiliser at your local Ravensdown store.



Endure® Mini

- Purpose-designed mini bait for application with seed when sowing crops.
- Endure® Mini will provide protection against slugs feeding on seed in the drill row.
- The bait size (110,000 baits/kg) ensures a high number of baiting points in the drill rows.

ACTIVE INGREDIENT: metaldehyde 50g/kg
PACK SIZE: 10kg, 600kg (60x10kg)



Brassica options - pre emergence herbicides

Triflow® 480

Selective pre-emergence soil incorporated herbicide for the control of certain annual grasses and broadleaf weeds in field and vegetable brassicas, lucerne, peas, and specific vegetable crops.

- For pre-plant weed control in brassicas, lucerne and certain other crops.
- Controls a range of grass and broadleaf weeds.
- Good residual activity for weed control during establishment.

AGRECOVERY CP

ACTIVE INGREDIENT: trifluralin 480g/L
PACK SIZE: 20L



Other pre-emergence herbicides used in forage brassicas include;

Active ingredient	Brands	Handling	Comments
Clomazone	Magister®CS	CP	For control of grass and broadleaf weeds. One of the few herbicides that can give good control of shepherds purse.
Alachlor	Merit®, Cyclone	CP	A tank mix partner for clomazone to improve the spectrum of weeds controlled.
Clomazone + alachlor	Ombre®	CP	Herbicide combination used for control of grass and a wide range of broadleaf weeds.
Dimethenamid-P	Frontier®-P	CP	Used for control of a range of grass and broadleaf weeds, often tank mixed with clomazone.

Brassica options - post-emergence herbicides

Purge™

A selective herbicide for the control of certain broadleaf weeds in forage brassica crops.

- For broadleaf weed control in all fodder brassica crops, including bulb crops.
- Use with Collaborate™ Oil for best results.
- Can be mixed with certain other herbicides and insecticides.

AGRECOVERY RW

ACTIVE INGREDIENTS: picloram 150g/L and **clopyralid** 225g/L
PACK SIZE: 5L



Multiple®

A selective herbicide used to control clovers, yarrow, plantains, Californian and other thistles in a range of crops, forestry and pre-cultivation.

- A grass friendly herbicide ideal for control of thistles and other broadleaf weeds.
- The best option for weed wiping Californian thistles.
- Can be used with glyphosate prior to beets, brassicas, grasses, cereals, and maize.

AGRECOVERY RW

ACTIVE INGREDIENT: clopyralid 300g/L
PACK SIZE: 5L, 20L



Dicam 480™

A selective herbicide for control of certain hard to kill broadleaf weeds in conservation tillage programmes and in cereals, maize, some forage brassicas, waste areas, and spot treatment in pastures.

- Effective companion herbicide with glyphosate for a cleaner spray-out.
- No plant-back period for brassicas, grasses, maize, cereals, and some other crops.
- Useful for post-emergence broadleaf weed control in many crops including oilseed rape and kale.

AGRECOVERY CP

ACTIVE INGREDIENTS: dicamba 480g/L
PACK SIZE: 5L, 20L



Execute® 360

A selective herbicide for control of grass weeds in broadleaf crops and forestry.

- Selective grass weed control in a range of broadleaved crops, including forage crops.
- Use with Collaborate® to optimise weed control.
- Highly effective post emergence herbicide that controls a wide range of grass species.

AGRECOVERY CP

ACTIVE INGREDIENTS: clethodim 360g/L
PACK SIZE: 5L



Other herbicides used post-emergence in forage brassicas include;

Active ingredient	Brands	Handling	Comments
Oxyfluorfen + picloram	Pycus™	CP	For control of black nightshade, seedling docks, fathen, nettles, redroot (amaranthus), and thistles.
Aminopyralid	T-Max™, Tramino	CP	For control of a range of broadleaf weeds including seedling docks and willow weed.
Aminopyralid + clopyralid	Milestone™	CP	For control of black nightshade, seedling docks, fathen, nettles, redroot (amaranthus), and thistles.
Halauxifen-methyl + clopyralid	Korvetto™	CP	For control of black nightshade, fathen, fumitory, hairy nightshade and shepherds purse in forage brassicas.

Cropping options

Hat-Trick™

For the control of broadleaf weeds in wheat, barley, oats, and ryegrass seed crops.

- Triple mix broadleaf herbicide for cereals, ryegrass seed crops, and turfgrass.
- Controls some hard to kill weeds such as wireweed, fumitory, and cleavers.
- Suitable for mixing with most insecticides and fungicides.

AGRECOVERY CP

ACTIVE INGREDIENT: mecoprop 600g/L; **MCPA** 150g/L; **dicamba** 18.7g/L
PACK SIZE: 20L, 200L



Granit®

A selective herbicide for control of certain broadleaf weeds in conservation tillage programmes, barley, oats, and in wheat.

- Effective companion herbicide with glyphosate for a cleaner spray-out.
- Improves control of many broadleaf weeds.
- A short residual broadleaf herbicide for use in cereals.

AGRECOVERY CP

ACTIVE INGREDIENTS: tribenuron-methyl 750g/kg
PACK SIZE: 500g, 1kg



Holdup™

A growth regulator used to shorten and stiffen the straw of some cereal crops to improve the resistance to lodging.

- Growth regulator used to shorten and stiffen the straw of some cereal crops.
- Reduces the risk of lodging and neck break in barley, ryecorn and triticale.
- Always use with Widespread® 1000.

AGRECOVERY

ACTIVE INGREDIENT: mepiquat-chloride 305g/L and **chlorethephon** 155g/L
PACK SIZE: 20L



Fortify®

A systemic fungicide for disease control in maize, cereal and ryegrass seed crops.

- A systemic triazole fungicide for use in cereals and ryegrass seed crops.
- Long-lasting protectant, curative, and eradicant activity for up to five weeks.
- Ideal in tank mixes with strobilurin fungicides such as Inspire®.

AGRECOVERY CP

ACTIVE INGREDIENTS: epoxiconazole 125g/L
PACK SIZE: 10L



Inspire®

A fungicide for the control of a wide range of diseases in wheat, barley, ryegrass seed crops, peas, onions, potatoes, maize and sweetcorn, grapes, field tomatoes, and turf.

- Strobilurin fungicide with broad spectrum protection in many arable crops.
- Up to six weeks disease control and prevention.
- Ideal in tank mixes with triazole fungicides such as Fortify®.

AGRECOVERY CP

ACTIVE INGREDIENT: azoxystrobin 250g/L
PACK SIZE: 10L



Cropping options

Other common agrochemicals used in arable crops include;

Herbicides	Brands	Handling	Comments
Flufenacet + diflufenican	Firebird®	CP	Pre-emergence grass and broadleaf herbicide for winter sown wheat and barley.
Flufenacet	Invado®	CP	Pre-emergence grass and broadleaf herbicide for winter sown wheat and barley.
Iodosulfuron-methyl-sodium	Hussar®		Post-emergence herbicide for grass and broadleaf weed control in autumn and spring sown wheat, triticale, ryecorn, and barley.
Halauxifen + pyroxsulam	Rexade® GoDri™	CP	For control of grass and broadleaf weeds in triticale and wheat (excluding durum varieties).
Halauxifen-methyl + florasulam	Paradigm	CP	For post-emergent control of broadleaf weeds in wheat, triticale, barley, and ryegrass seed crops.
Iodosulfuron-methyl-sodium + diflufenican + mesosulfuron methyl	Othello® OD	CP	Post-emergence herbicide for control of certain broadleaf and some grass weeds in wheat.
Isoproturon	Twister®, Protugan®	CP	Post-emergence herbicide for control of grass and broadleaf weeds in wheat and winter sown barley.
Diflufenican	Quantum® , Difflan	CP	For the control of broadleaf weeds in winter and spring sown cereals except oats.
Tri-allate	Avadex® Xtra	CP	Selective pre-emergence herbicide for control of wild oats in barley, wheat, and linseed.
Pinoxaden	Twinax Xtra, Voltage		For selective control of annual ryegrass, lesser canary grass, gnawed canary grass, and wild oats in barley and wheat.
Plant Growth Regulators			
Trinexapac-ethyl	Moddus® Evo, Optimus®, Trinity™, Trexel®		To reduce the risk of lodging in wheat, barley and oats and to promote seed yield increases in ryegrass seed crops.
Chlormequat	Cycocel®, Stabilan®	RW	A plant growth regulator for use on wheat, oats, and perennial ryegrass seed crops.

Fungicides	Brands	Handling	Agrochemical/mode of action group (s)	Comments
Mefentrifluconazole	Revylution	CP	Triazole/DMI (Group3)	Systemic fungicide for control of diseases in barley and wheat.
Prothioconazole	Proline®, Vitalis®	RW	Triazole/DMI (Group 3)	Systemic fungicide for control of diseases in wheat, barley, and ryegrass seed crops.
Tebuconazole	Folicur®	CP	Triazole/DMI (Group 3)	Systemic fungicide for control of diseases in wheat, barely, oats, ryegrass seed crops, peas, and onions.
Prothioconazole + tebuconazole	Prosaro®	CP	Triazole/DMI (Group 3)	Systemic fungicide for the control of diseases in wheat, barley, and ryegrass seed crops.
Folpet	Phoenix®, Valeo	CP	Phthalimide (Group M4)	For control of speckled leaf blotch in wheat and scald in barley.
Prothioconazole + trifloxystrobin	Delaro®	CP	Triazole/DMI + Stroby/QoI (Group 3 + 11)	Systemic fungicide for the control of various fungal diseases in cereals.
Prothioconazole + bixafen	Aviator Xpro®	CP	Triazole/DMI + SDHI (Group 3 + 7)	Systemic fungicide for the control of diseases in cereals.
Fluxapyroxad	Imtrex®	CP	SDHI (Group 7)	Systemic cereal fungicide for the control of diseases in barley and wheat crops.

Cropping options

Benzovindiflupyr	Elatus™ Plus	CP	SDHI (Group 7)	For the control of a wide range of diseases in wheat.
Fluxapyroxad + mefentrifluconazole	Revystar®	CP	SDHI + triazole/DMI (Group 7 + Group 3)	Systemic fungicide for control of diseases in wheat and barley.
Isoflucypram	Vimoy Iblon®	CP	SDHI (Group 7)	Systemic fungicide for the control of diseases in barley, wheat, triticale, and ryegrass seed crops.
Isoflucypram + prothioconazole	Caley Iblon®	CP	SDHI + triazole/DMI (Group 7 + Group 3)	Systemic fungicide for the control of diseases in barley, wheat, triticale, and ryegrass seed crops.
Fenpicoxamid	Questar™	CP	QiI (Group 21)	For the control of speckled leaf blotch in wheat.

Insecticides - please refer to insecticide options on pages 38 & 39

Maize options

Maize Guard®

For the selective, pre-emergence control of certain annual grasses and broadleaf weeds in maize and sweetcorn.

- For pre-emergence grass and broadleaf weed control in maize and sweetcorn.
- An essential part of any maize planting programme.
- Tank mix with Atratec™, Atraflo™ or Terbaflo™ to increase the weed spectrum.

AGRECOVERY CP

ACTIVE INGREDIENT: **acetochlor** 840g/L
PACK SIZE: 20L, 200L, 1000L



Atratec™

For the control of broadleaf weeds and annual grasses in maize, sweetcorn, established lucerne, and linseed.

- Residual herbicide to control some grasses and many broadleaf weeds.
- Used extensively as a pre- and post-emergence herbicide in maize crops.
- Often mixed with a paraquat 250g/L in established (12 month+) lucerne.

CP

ACTIVE INGREDIENTS: **atrazine** 900g/kg
PACK SIZE: 10kg



Atraflo™

A selective post-emergent residual herbicide for the control of some seedling grass and broadleaf weeds in maize, sweetcorn, established lucerne and non-cropland situations.

- Residual herbicide to control some grasses and many broadleaf weeds.
- Used extensively as a pre- and post-emergence herbicide in maize crops.
- Often mixed with a paraquat 250g/L in established (12 month+) lucerne.

AGRECOVERY CP

ACTIVE INGREDIENT: **atrazine** 500g/L
PACK SIZE: 20L



Maize options

Dicam 480™

A selective herbicide for control of certain hard to kill broadleaf weeds in conservation tillage programmes and in cereals, maize, some forage brassicas, waste areas and spot treatment in pastures.

- Effective companion herbicide with glyphosate for a cleaner spray-out.
- No plant-back period for brassicas, grasses, maize, cereals and some other crops.
- Useful for post-emergence broadleaf weed control in many crops, including oilseed rape and kale.

AGRECOVERY CP

ACTIVE INGREDIENTS: dicamba 480g/L
PACK SIZE: 5L, 20L



Other herbicides used in maize include;

Herbicides	Brands	Handling	Comments
Saflufenacil	Sharpen®	CP	Used pre-emergence for control of broadleaf weeds in maize and sweetcorn, usually in combination with a grass herbicide.
Mesotrione	Dominator®, Primiera®	CP	Used both pre- and post-emergence for control of broadleaf weeds in silage and grain maize, often tank mixed with other maize herbicides to increase the spectrum of weeds controlled.
Topramezone	Arietta Topra®	CP	Used for post-emergence grass and broadleaf weed control in maize and sweetcorn.
Nicosulfuron	Latro WDG®	CP	For post emergence control of perennial and annual grasses and certain broadleaf weeds in maize for grain and silage.

Fodder beet options

NOTE: It is important to be aware of the potential for damage to fodder beet crops from herbicides used in previous crops. There are a limited number of companion herbicides that can be used with glyphosate in a spray-out prior to sowing beet. Spraying equipment should be decontaminated to avoid the risk of herbicide residues that may be present, causing damage to fodder beet crops. For advice contact your agri manager, regional agronomist, or give us a call on 0800 100 123.

Fumate™

For control of grass and broadleaf weeds in fodder beet, red beet, and barley grass and annual grass weeds in pasture and sports turf.

- Control annual grass and some broadleaf weeds in fodder beet, red beet, and ryegrass.
- Used in pasture to control barley grass during the winter.
- Used both pre- and post-emergence in fodder beet weed control programmes.

AGRECOVERY CP

ACTIVE INGREDIENTS: ethofumesate 500g/L
PACK SIZE: 10L



Replace®

For pre and post emergence use in red beet, fodder beet, sugar beet, and mangolds.

- For both pre and post-emergence control of a range of broadleaf weeds in fodder beet, red beet, sugar beet, and mangolds.
- Replace has the flexibility to be applied up to 6L/ha in a maximum of 3 applications per year.
- Replace is compatible with most other fodder beet herbicides and can be tank mixed to improve the spectrum of weeds controlled.

AGRECOVERY

ACTIVE INGREDIENT: metamitron 700g/L
PACK SIZE: 10L



Fodder beet options

Betamix

For the control of broad-leaved weeds in fodder, sugar, and red beets.

- For post-emergence control of a range of broadleaf weeds in fodder, sugar, and red beets.
- Betamix has the flexibility to be applied up to a total of 4.5L/ha in one or more applications per calendar year.
- Betamix is compatible with most other fodder beet herbicides, including Fumate and Replace, and can be tank mixed to improve the spectrum of weeds controlled.

AGRECOVERY

ACTIVE INGREDIENT: phenmedipham 160g/L, desmedipham 160g/L
PACK SIZE: 10L



Multiple®

A selective herbicide used to control clovers, yarrow, plantains, Californian and other thistles in a range of crops, forestry, and pre-cultivation.

- A grass friendly herbicide ideal for control of thistles and other broadleaf weeds.
- The best option for weed wiping Californian thistles.
- Can be used with glyphosate prior to beets, brassicas, grasses, cereals, and maize.

AGRECOVERY RW

ACTIVE INGREDIENT: clopyralid 300g/L
PACK SIZE: 5L, 20L



Beetrizole®

For disease control in fodder and sugar beets.

- Fungicide for disease control in fodder and sugar beets.
- Beetrizole combines two active ingredients that both offer protectant and systemic activity for use as a preventative treatment for disease control in fodder and sugar beet.
- Controls the most important diseases in beet crops; rust, powdery mildew, cercospora, and ramularia leaf spots.

AGRECOVERY

ACTIVE INGREDIENT: trifloxystrobin 375g/L, **cyproconazole** 160g/L
PACK SIZE: 5L



Other herbicides used in fodder beet programmes include;

Herbicides	Brands	Handling	Comments
Clomazone	Magister®CS	CP	A pre emergence herbicide for control of certain grass and broadleaf weeds.
Chloridazon	Chloronion™	CP	A pre- and post-emergence herbicide for weed control in fodder beet, red beet, sugar beet, mangolds, onions, chives, and leeks.
Ethofumesate + Metamitron + phenmedipham	Beetrix	CP	For control of broadleaf weeds in fodder beet, red beet, and sugar beet.
Phenmedipham + desmedipham	Betanal® Forte, Rifle™, Beetup Compact®	CP	For broadleaf weed control in fodder beet, red beet, and sugar beet.
Ethofumesate + phenmedipham + desmedipham + metamitron	Betanal® Quattro	CP	For broadleaf weed control in fodder beet, red beet, and sugar beet.

Slug bait

Ecobait IP®

A bait for the control of slugs and snails in all crops; agricultural, horticultural and ornamental.
- BioGro approved for use in organic production systems in NZ.
- Similar efficacy and bait characteristics to Endure.
- 1 day pre-harvest interval for food crops.

ACTIVE INGREDIENT: iron phosphate anhydrous 24.2g/kg
PACK SIZE: 15kg, 630kg (42x15kg)



Endure®

A bait for the control of slugs and snails in crops.
- Durum wheat bait which lasts longer, especially in the wet.
- Uniform bait size for superior spreading and accurate application.
- Can be mixed and broadcast with fertiliser for easy application.

ACTIVE INGREDIENT: metaldehyde 50g/kg
PACK SIZE: 15kg, 630kg (42x15kg) or can be mixed with fertiliser at your local Ravensdown store.



Endure® Mini

- Purpose-designed mini bait for application with seed when sowing crops.
- Endure® Mini will provide protection against slugs feeding on seed in the drill row.
- The bait size (110,000 baits/kg) ensures a high number of baiting points in the drill rows.

ACTIVE INGREDIENT: metaldehyde 50g/kg
PACK SIZE: 10kg, 600kg (60x10kg)



Brushweed options

Eliminate™ Brushkiller

A selective herbicide for control of gorse, broom, blackberry, and other brushweeds and for the spot treatment of many broadleaf weeds including ragwort, thistles, and docks.
- A powerful grass friendly herbicide for the control of brushweeds.
- Ideal for spot spraying brushweeds and a wide range of broadleaf weeds in pasture.
- Can be used year-round through a knapsack, handgun, or mistblower.

AGRECOVERY CP

ACTIVE INGREDIENT: triclopyr 300g/L and **picloram** 100g/L
PACK SIZE: 20L, 200L



Eliminate™

A general purpose herbicide for control of gorse, broom, blackberry, old man's beard, and other brushweeds.
- A grass friendly herbicide for control of broom, gorse, and other brushweeds.
- Use from late spring to early autumn when weeds are actively growing.
- Safe to grasses and widely used where damage to pasture grasses is undesirable.

AGRECOVERY CP

ACTIVE INGREDIENT: triclopyr 600g/L
PACK SIZE: 20L



Brushweed options

Eradicate™ 600

For the control of gorse, blackberry and other brushweeds in pasture, forestry and non-cropland areas.

- A powerful herbicide for brushweed control in farm and forest site preparation.
- Use from late spring to early autumn when weeds are actively growing.
- Used for weed wiping many brush and broadleaf weeds. If used for spot spraying these weeds in pasture, extreme care is required to minimise the amount of pasture damage.
- For some weeds like thistles and ragwort, spot spraying the centre of the rosette will provide effective weed control and minimise pasture damage.

AGRECOVERY CP

ACTIVE INGREDIENTS: metsulfuron-methyl 600g/kg
PACK SIZE: 500g, 1kg (pricing for larger quantities available)



Accelerate™

For improved penetration and uptake of glyphosate and other herbicides in broad-acre and brushweed spraying.

- Organo-silicone penetrant for use with glyphosate and other herbicides.
- Especially beneficial when used with Eliminate™, Eliminate™ Brushkiller, and Eradicate™ for brushweed control.
- Reduces the rainfast period and improves plant uptake.

AGRECOVERY

ACTIVE INGREDIENTS: organo-silicone penetrant
PACK SIZE: 5L, 20L, 200L



Assist™ Easy Red

A temporary red spray indicator for applications where a marker is required.

- Highly visual spray marker dye.
- Visible for up to ten days post-application.

AGRECOVERY

ACTIVE INGREDIENTS: Red spray marker dye
PACK SIZE: 5L, 20L



Long-lasting residual options

Simaflo™

A selective pre-emergent residual herbicide for weed control in lucerne, orchards, vineyards, forestry, and some horticultural crops.

- Long-lasting residual herbicide with no knockdown of established weeds.
- Can be used in tank mix with paraquat 250g/L in established lucerne.
- Useful for barley grass control.

AGRECOVERY CP

ACTIVE INGREDIENT: simazine 500g/L
PACK SIZE: 20L



Terbaflo™

For the control of broadleaf and grass weeds in forestry, established maize, lucerne, peas, and sweetcorn. Terbaflo™ can also be used as a non-selective, residual herbicide in non-crop areas.

- Residual triazine herbicide with stronger knockdown activity.
- Used in crops including lucerne, peas, and maize to control certain weeds.
- Used in forestry establishment or for release treatment over young trees.

AGRECOVERY CP

ACTIVE INGREDIENT: terbuthylazine 500g/L
PACK SIZE: 20L



Spot spraying

Multiple®

A selective herbicide used to control clovers, yarrow, plantains, Californian and other thistles in a range of crops, forestry and pre-cultivation.

- A grass friendly herbicide ideal for control of thistles and other broadleaf weeds.
- The best option for weed wiping Californian thistles.
- Can be used with glyphosate prior to beets, brassicas, grasses, cereals, and maize.

AGRECOVERY RW

ACTIVE INGREDIENT: clopyralid 300g/L
PACK SIZE: 5L, 20L



Eliminate™ Brushkiller

A selective herbicide for control of gorse, broom, blackberry, and other brushweeds and for the spot treatment of many broadleaf weeds including ragwort, thistles, and docks

- A powerful grass friendly herbicide for the control of brushweeds.
- Ideal for spot spraying brushweeds and a wide range of broadleaf weeds in pasture.
- Can be used year-round through a knapsack, handgun, or mistblower.

AGRECOVERY CP

ACTIVE INGREDIENT: triclopyr 300g/L and **picloram** 100g/L
PACK SIZE: 20L, 200L



Eradicate™ 600

For the control of gorse, blackberry and other brushweeds in pasture, forestry and non-cropland areas.

- A powerful herbicide for brushweed control in farm and forest site preparation.
- Use from late spring to early autumn when weeds are actively growing.
- Used for weed wiping many brush and broadleaf weeds. If used for spot spraying these weeds in pasture, extreme care is required to minimise the amount of pasture damage.
- For some weeds like thistles and ragwort, spot spraying the centre of the rosette will provide effective weed control and minimise pasture damage.

AGRECOVERY CP

ACTIVE INGREDIENTS: metsulfuron-methyl 600g/kg
PACK SIZE: 500g, 1kg (pricing for larger quantities available)



Assist™ Easy Red

A temporary red spray indicator for applications where a marker is required.

- Highly visual spray marker dye.
- Visible for up to ten days post application.

AGRECOVERY

ACTIVE INGREDIENTS: Red spray marker dye
PACK SIZE: 5L, 20L



Accelerate™

For improved penetration and uptake of glyphosate and other herbicides in broad-acre and brushweed spraying.

- Organo-silicone penetrant for use with glyphosate and other herbicides.
- Especially beneficial when used with Eliminate™, Eliminate™ Brushkiller, and Eradicate™ for brushweed control.
- Reduces the rainfast period and improves plant uptake.

AGRECOVERY

ACTIVE INGREDIENTS: organo-silicone penetrant
PACK SIZE: 5L, 20L, 200L



Adjuvants

Accelerate™

For improved penetration and uptake of glyphosate and other herbicides in broad-acre and brushweed spraying.

- Organo-silicone penetrant for use with glyphosate and other herbicides.
- Especially beneficial when used with Eliminate™, Eliminate™ Brushkiller and Eradicate™ for brushweed control.
- Reduces the rainfast period and improves plant uptake.

AGRECOVERY

ACTIVE INGREDIENTS: organo-silicone penetrant
PACK SIZE: 5L, 20L, 200L



Collaborate™ Spraying Oil

A paraffin based petroleum oil with a blend of surfactants and an anti-foam, which improves the efficacy of certain pesticides when used as a spray additive.

- A mineral spraying oil to improve effectiveness of some herbicides.
- Suitable for use with some insecticides and fungicides.
- Should always be used with Aim®, Purge®, and Valiant® 520 as directed.

AGRECOVERY

ACTIVE INGREDIENT: paraffin based petroleum oil
PACK SIZE: 10L



Widespread® 1000

A non-ionic spreader, sticker and wetter for use with fungicides, herbicides, insecticides and plant growth regulators.

- Get a better, more uniform spray coverage and better agrochemical adhesion to the plant leaf.
- Improve the performance of fungicides, herbicides, insecticides, and plant growth regulators that rely on a good spray coverage for best results.
- May be used with fungicides, herbicides, insecticides and plant growth regulators where a non-ionic surfactant is recommended.

AGRECOVERY

ACTIVE INGREDIENTS: non-ionic adjuvant and other non-hazardous ingredients
PACK SIZE: 1L, 5L



Assist™ Foam Marker

A highly concentrated foam detergent suitable for use through all foam marking systems.

- Long-lasting, bright white foam marker.
- Enables better use of agrochemical by assisting with precision of spray runs.
- Use in suitably equipped booms, wipers and other application equipment.

AGRECOVERY

ACTIVE INGREDIENTS: white foam marker
PACK SIZE: 20L



Accessories

Ezi Action Drum Pump

A dual action drum pump ideal for decanting out of 200L drums.

- Comes with multiple threads that will fit most 200L drums.



Agronomy planner

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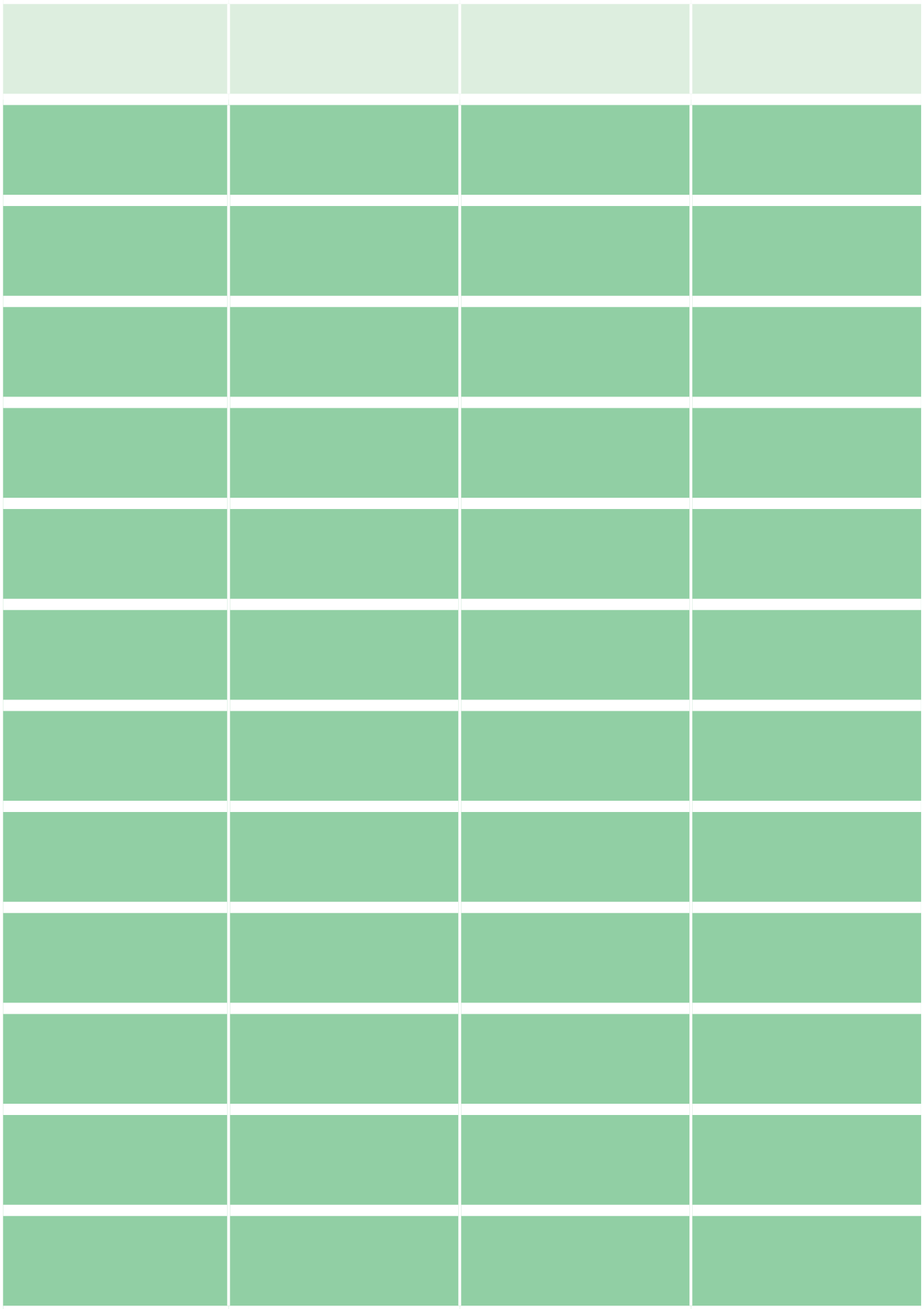



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