4front

Lead from the front

4front NEA2 takes you to the forefront of tetraploid perennial ryegrass, in animal performance, easy grazing, and superior year-round growth. It's better for the environment too.

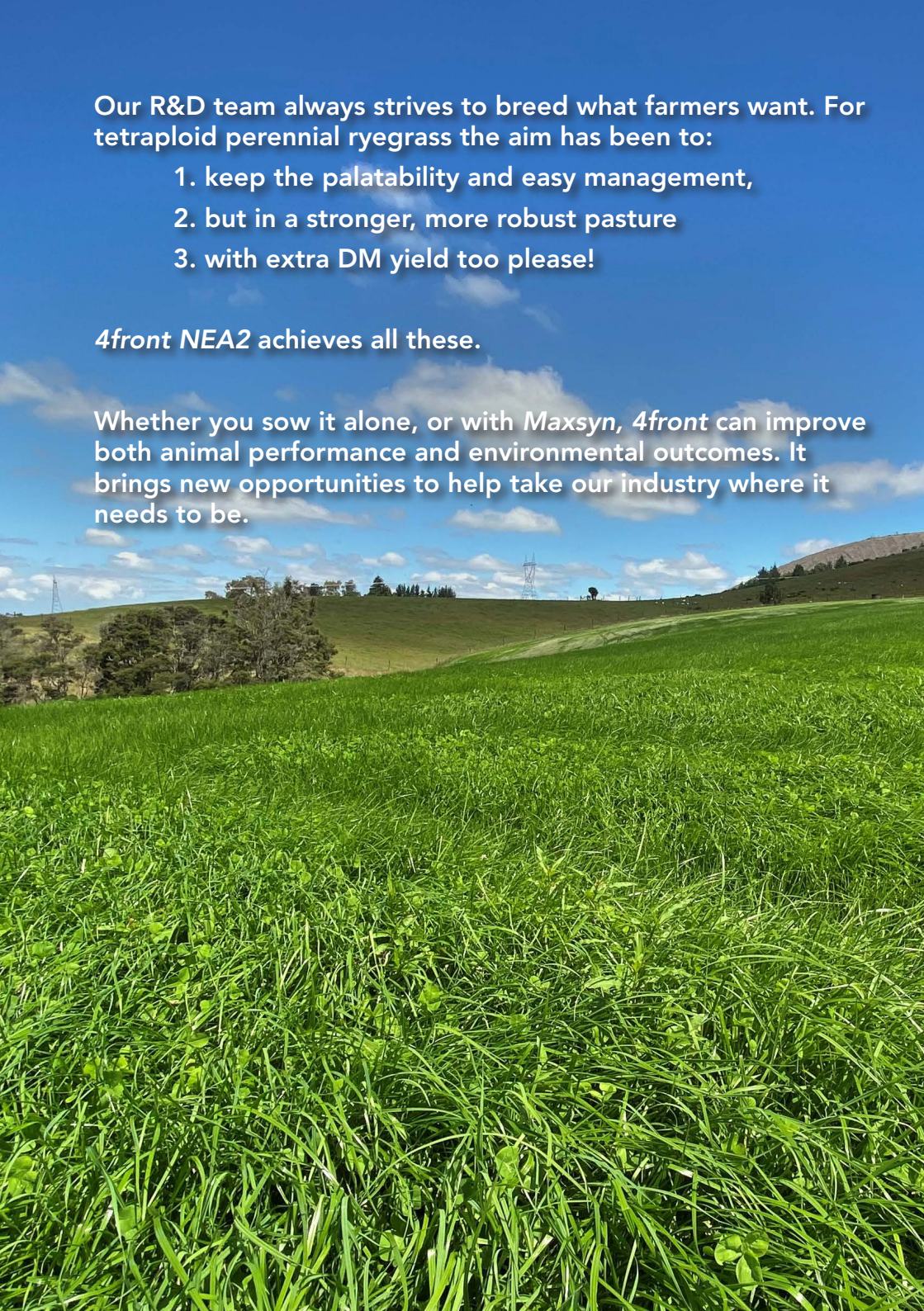
BARENBRUG

Our R&D team always strives to breed what farmers want. For tetraploid perennial ryegrass the aim has been to:

1. keep the palatability and easy management,
2. but in a stronger, more robust pasture
3. with extra DM yield too please!

4front NEA2 achieves all these.

Whether you sow it alone, or with *Maxsyn*, *4front* can improve both animal performance and environmental outcomes. It brings new opportunities to help take our industry where it needs to be.

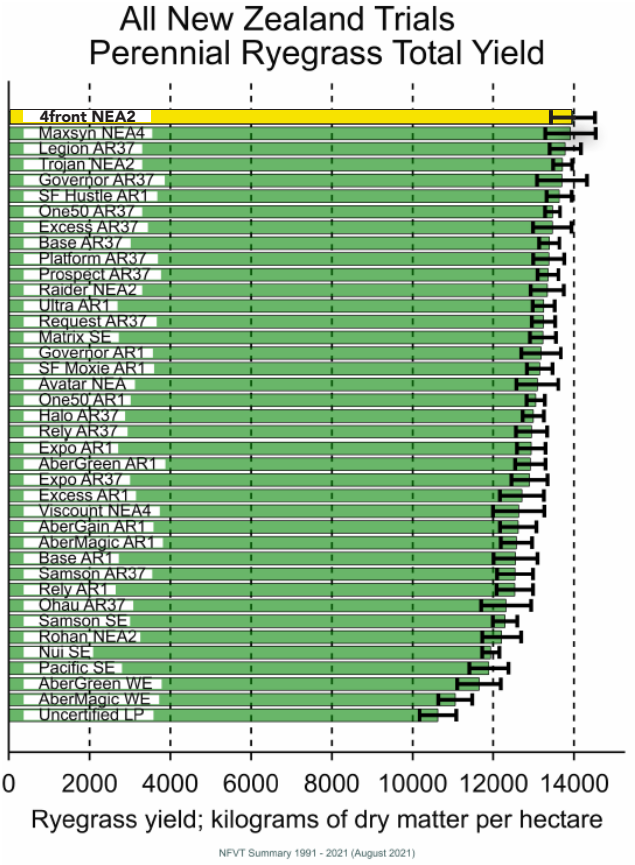


Best of the best

4front is the highest yielding tetraploid perennial we've bred, equally important is the way it does this, with high yield across both the cool and warm seasons.

Unbeaten in the NFVTs

In the 2021-22 industry National Forage Variety Trials (NFVT) results *4front NEA2* is unbeaten for total yield across all New Zealand trials.

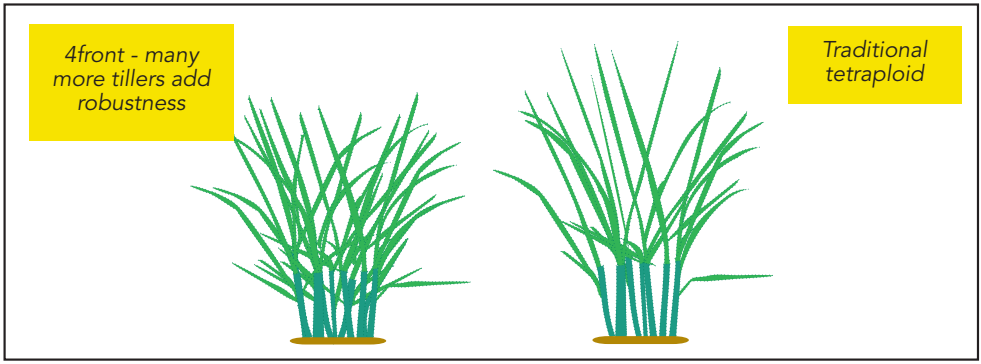


Only FVI 5-star nationwide

In the 2022 DairyNZ Forage Value Index (FVI) *4front NEA2* is the only 5-star cultivar in the perennial ryegrass lists across all four regions of New Zealand. This result comes from *4front's* outstanding combination of yield and feed quality.

More tillers

The more tillers in a pasture, the more robust it is. Each tiller is an individual which can be killed by a range of stressors, including drought, pugging, insects and overgrazing. *4front's* enhanced tillering helps it persist when conditions are tough.



Piece of cake!

Animals love tetraploids. That simplifies grazing management. Soft, high ME, legume-friendly tetraploid pasture makes life easier for livestock, too. Every bite takes less effort, encouraging animals to eat more for higher daily intakes. The result? More milk in the vat, and faster LWG for finishing stock.

Grazing is hard work! A cow on pasture might take 25,000 bites every day; a ewe, 40,000. *4front's* soft leaves make a big difference to their quality of life.

Animals work hard on pasture – a cow might take 25,000 bites a day, a ewe 40,000 – softer leaves of the likes of 4front make a big difference to their life!

Dairy farmers typically find milk production lifts on tetraploid paddocks, and stock finishers achieve faster LWG.

Lose less N and GHG

With higher animal intakes and easier management, *4front* can help lighten your farm footprint.

Tetraploid ryegrass-based pastures, or tetraploid/diploid mixes, allow farm system changes to reduce N leaching while improving pasture growth and animal intakes, which is the future direction dairy farming needs to take.

A dramatic example of this is the Lincoln University Dairy Farm (LUDF). It has cut N leaching by 40% and greenhouse gases (GHG) by about 22%, by making a range of systems changes including:

- Capturing more photosynthesis – pre-grazing covers are 300 kg DM/ha higher with tetraploids, growing an extra 1.2 t DM/ha/year across the farm.
- Longer grazing round (average 4 days longer) meaning fewer grazings per paddock and 30% better N use efficiency.
- Higher per cow production (+26 kg MS/cow) from fewer cows and better pasture intakes.
- Applying 170 kg/ha/year less N fertiliser.

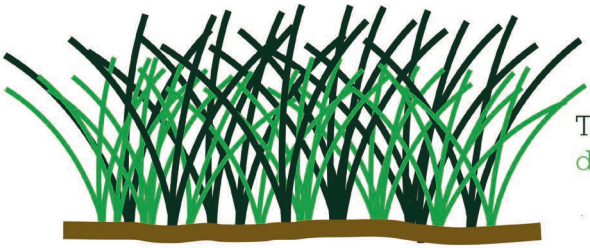
LUDF could not have achieved this without sowing tetraploid ryegrass in every paddock but one. Download the *"4front System"* from www.barenbrug.co.nz to learn more.

Cows grazing 4front/Maxsyn pasture at LUDF. Tetraploid/diploid mixes have been key in growing more DM plus increasing cow intakes.

Mixing *4front* & *Maxsyn*

While *4front* can be sown alone, mixing *4front* with a diploid perennial ryegrass like *Maxsyn* extends tetraploid benefits to a wider range of farm systems.

Some farmers struggle to avoid over grazing straight tetraploids, and don't get the persistence they want. Adding a denser, finer diploid ryegrass to the mix makes it more robust. Diploid plants protect the tetraploid.



Pre-grazing
Tetraploid plants (dark green) & diploid (light green) are mixed up.

Post-grazing
Tougher diploid stems help protect tetraploid plants from over-grazing.

On many farms tetraploid/diploid perennial ryegrass pasture is now the norm, striking a near-ideal balance between palatability and robustness, growing more ME/ha and being much easier to manage than straight diploid perennial ryegrass.

Suggested seed mixes

4front can improve animal performance and environmental outcomes across many farm systems. Below are three examples.

Dairy		kg/ha
Top performing tetraploid pasture, with *Captain* to reduce N leaching.	*4front* perennial ryegrass	25-30
	Kotuku white clover	2
	Weka white clover	2
	Captain CS plantain	2-4
	Total	31-38

Dairy		kg/ha
Top performing tetraploid/ diploid mix pasture, for greater robustness & density.	*4front* perennial ryegrass	15
	Maxsyn perennial ryegrass	10
	Kotuku white clover	2
	Weka white clover	2
	Total	29

Sheep, Beef, Deer		kg/ha
Top performing tetraploid/ legume/plantain finishing pasture.	*4front* perennial ryegrass	22-25
	Weka white clover	3
	Morrow red clover	4
	Captain CS plantain	2
	Laser Persian clover	3
	Total	34-37