# PIONEER

A YATES FAMILY BUSINESS

2024-2025

# From the ground up

The Wordsworth's approach to sustainable farming

Tips for higher maize yields Rangitīkei brings home gold Give your maize seed a head start

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## very season delivers challenges of one kind or another, and the past one has been no exception. While the growing season has generally been favourable and most growers are on track to achieve average or above average yields, demand from grain end-use markets has been subdued.

The local grain industry contributes significantly to local economies and ultimately the country's overall GDP by providing income and employment for hundreds of local growers, contractors, merchants, grain and feed companies, and all the other individuals and businesses who provide farm inputs and services to growers. The Pioneer team remains committed to building the market for locally produced maize grain and exploring new end-use market opportunities.

As I write, the milk price forecast for the 2024-25 season looks more favourable than the prior season and we continue to promote the benefits of feeding maize grain to the dairy sector. Feeding maize grain delivers a number of environmental benefits to dairy farm systems. The dilution of dietary protein levels reduces nitrogen leaching and associated greenhouse gas losses. While New Zealand regulators are focused on on-farm greenhouse gas losses, many of the major purchasers of New Zealand's dairy products are also concerned about Scope 3, or value chain, greenhouse gas emissions. Recent information provided by Fonterra shows that locally grown grain-based supplements have approximately one third of the greenhouse gas emissions of palm kernel. Ultimately consumer demand will change farming practices and the demand for domestically sourced grain is expected to firm.

We are pleased to be introducing three new hybrids – P8532 (85 CRM), P92575 (92 CRM), and P9650 (96 CRM). These exciting new products join P8240 (82 CRM), P8711 (87 CRM) and P0200 (102 CRM) which were released last season, to deliver increased yield potential for grain growers in every region. Each new hybrid we bring to market has been extensively trialled across the regions where it will be grown. We only release those products which have demonstrated an agronomic, grain quality or yield advantage over existing commercial Pioneer<sup>®</sup> brand hybrids.

The release of three new hybrids of lower than 100 CRM brings exciting opportunities to growers looking for short maturity grain options. They represent the outcome of our further expanded PAT (Product Advancement Trials) and IMPACT<sup>~</sup> (Intensively Managed Product Advancement and Characterisation Training) trial programs in the lower North and South Islands.

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We value your support for Pioneer<sup>®</sup> brand products and remain committed to helping you extract the maximum value from them. If we can help you in any way, please give us a call.

With warmest regards,

within fal.

William Yates Managing Director

A detasselling crew work their way through a crop of Pioneer® hybrid seed maize on a De Costa Enterprises lease block at Patutahi near Gisborne.



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#### **COVER STORY**









# PIONEER LONG LOOK

We strive to produce the best products on the market.

We deal honestly and fairly with customers, employees and business associates.

We vigorously market our products, but without misrepresentation.

We provide helpful management information to assist customers in making optimum profits from our products.







FARM SUCCESS STORIES

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# Notill maize

CASEI

A YATES FAMILY BUSINESS

# delivers sustainable

DAVID AND ADRIENNE WORDSWORTH, TE KÕPURU



he desire to leave the land in a better state shapes farming practices for Northland maize growers David and Adrienne Wordsworth.

The couple, who were finalists in the 2023 Northland Ballance Farm Environment Awards and winners of the 2023 Maize Grower of the Year at the Arable Awards, run a mixed cropping and beef operation. Intertwined with the farm are a separate grain supply company and contracting business.

Four generations of the Wordsworth family currently live on the home farm at Te Kōpuru 14 km south of Dargaville. Steeped in family history, it was initially purchased by David's grandmother's parents in 1938 and subsequently sold to two brothers, one of whom was David's paternal grandfather, in 1953. Initially used for dairying, then beef, the farm was also home to a 150-sow breeding and finishing piggery while under the management of David's parents Wesley and Marylyn. David finished a diesel mechanic apprenticeship before returning to the farm in 1987.

"Dad and his brother bought a grain storage complex in Dargaville in the 1980's" says David. "We grew a bit of Pioneer® brand maize for the pigs in the early 1990's but the dryer quit working so we opted to buy in grain instead".

> LEFT Adrienne and David Wordsworth. David's parents Marylyn and Wesley. Daughter Janelle and grandchildren Micah, Isabella and Isla.

#### FARM SUCCESS STORIES





- 100 ha of maize grain planted in 2023-24 season
- Plants a mix of Pioneer® brand maize hybrids
- Maize Grower of the Year in 2023

"Prior to giving it a go I thought no till was a crazy idea" says David. "The first year I purchased some spiky closing wheels for the planter and crop yields were no worse than what we achieved with traditional cultivation. After that I could see the potential".

Today all the farm's maize crops are established in a single pass using a custom built, heavily modified Case planter. It is fitted with a Precision Planting row-by-row hydraulic downforce control system that measures and adjusts downforce every time there is variability in the paddock. Electric drive seed meters singulate seed and allow individual row control of population. They also enable the seed meters to turn off rowby-row at the edge of the paddock reducing input costs.

David built the planter eight seasons ago and has modified it every year as he strives to improve planting accuracy and input use efficiency. Next on David's evolving "wish list" are fertiliser flow meters which will provide realtime data on flow rates, allowing the planter operator to precisely monitor and control fertiliser usage.

"I'm always looking to get perfection from the planter" says David. "I enjoy the challenge of trying to improve it each year so that it plants accurately and evenly over a wide range of soil conditions".

Optimising nutrient inputs is another focus for the couple. The cropping area is zone soil sampled every three years and lime is applied using variable rate technology. Leaf samples are collected three times during the maize growing season.

"We use the results of the leaf testing to check we are on the right track with our nutrient management programme" says David. "Monitoring what has happened during the current growing season allows us to fine tune fertiliser inputs for the next".

Maize planting starts in early October and runs through to early December. In recent years David has moved to planting some of the area "green" which means the winter cover crop is



The installation of a new dryer at the complex in the mid 1990's opened new opportunities for growing grain locally. David planted his first maize crop in 1998 and as his passion for cropping expanded, the piggery was scaled back and ultimately closed.

"Pigs weren't for me" says David. "I prefer operating machinery and enjoy the challenge of trying to improve maize yields each year".

Today David and Adrienne own the 155 ha home farm, and lease an adjoining 27 ha grazing block as well as a 33 ha maize block. In the 2023-24 growing season they have planted around 100 ha of maize grain. The farming operation also grows around 30 ha of barley and runs 150-200 beef cattle.

The home farm is predominately Kaipara clay, a soil renowned for its ability to go from being very wet to very dry quickly. A desire to improve soil structure and retain moisture led David on a journey from traditional cultivation to minimum tillage and eventually no till.



rolled and maize is direct drilled into it. In other paddocks the cover crop is sprayed out prior to planting and sometimes, when the area is coming out of pasture, the maize is planted prior to spraying out.

"There are no fixed rules for establishing our maize crops" says David. "We look at each paddock individually to work out what is the best option for it".

The couple normally plant a range of hybrid maturities to spread the harvest and optimise yields. They have planted Pioneer® brand maize hybrids for almost 30 years, are involved in the hybrid trialling programme and are quick to adopt the latest genetics. In spring 2023 the planting plan included P8666, P8711, P9978, P0362, P0900 and P0937.

"P0362 is a main hybrid for us because it handles stressful growing seasons extremely well" says David. "It's a tough plant with good roots and stalks, excellent drought tolerance and reliable late season plant health".

Grain harvest starts in mid-March and continues through to late May or early June. Average grain yields on the lease block are around 14 t/ha with crops yielding 12 t/ha in the tougher growing seasons and 16 t/ha in the most favourable. The home farm is more variable depending on the season, averaging around 11 t/ha with no-till and precision agriculture building more resilience into the variable soil types.

David is an avid believer in no till maize, and he says the results speak for themselves.

"We have lower crop establishment costs; more efficient use of inputs and are looking after the land by retaining organic matter and improving soil structure" he says. "The difference between long term no-till and traditionally cultivated soils is chalk and cheese". 66 P0362 is a main hybrid for us because it handles stressful growing seasons extremely well. ??

Listen to an extension of David's testimonial on the Feed for Thought podcast by scanning here:



ABOVE David Wordsworth with Pioneer Grain Account Manager Hamish Johnstone.

# Even energenee a key to higher maize

very maize grower likes to see row after row of uniform plants in perfectly straight lines and it's not just about impressing their neighbours. Research shows that even plant

stands lead to improved yields and higher profits. In this article we discuss the benefits of establishing a uniform maize stand and outline eight management strategies to help achieve even emergence.



# What are the benefits of even emergence?

Maize paddocks with a tighter emergence window of 24-48 hours generally result in more uniform plant and ear size, optimising yield potential from the start. A few weeks after seedling emergence, maize plants will transition from relying on seed reserves to utilising sunlight to sustain themselves. Maize plants grow quickly to capture as much sunlight as possible. Plants that emerge a day or two later must compete for sunlight, water and nutrients with bigger, early emerging plants. Seedlings which emerge more than 48 hours after neighbouring plants will not "catch up" and will yield less than if they emerged at the same time. In extreme cases the plant will not produce a cob and therefore effectively acts as a weed.

Pioneer<sup>®</sup> brand seeds New Zealand research shows that a 3-day delay in plant emergence will result in significantly smaller plants, with an average ear size of approximately 65% compared to the neighbouring plants. When emergence was delayed by five days, ear size was further reduced to 32% of normal. Our local research indicates that if only 10% of the maize plants emerged 3 days behind the rest of the paddock, potential grain yield losses of 3.5% can be expected. The yield loss would double if the slow emerging plants were up to five days behind.

A range of overseas studies suggest that average yield losses of 5-9% can be expected with non-uniform emergence. Surprisingly, the normal plants next to the smaller plants did not appear to flex or increase in size to compensate for a smaller neighbour. Similar observations have also been reported in Pioneer studies in the USA where it was observed that plants adjacent to a skip (missing plant) only partially compensated for the missing plant despite the wider space. On average, on an individual basis, the plants next to a skip yielded 10% more grain, which was not sufficient to compensate for the missing plant.

## How can growers establish an even plant stand?

Under ideal soil and moisture conditions maize emergence usually occurs within 7-10 days, though the actual timing can vary significantly from this average depending on soil temperatures. The actual number of days to emerge is not as important as achieving uniform emergence. Ideally, every maize seed should germinate and emerge within 1-2 days of each other. Even with the best of conditions and equipment, achieving perfect uniformity of emergence is unlikely, but there are a number of things growers can do to mimimise the emergence window.

#### **INSIDE PIONEER**



# Plant high-quality seed

Maize seed lots with poor vigour can cause variability in emergence timing especially where there is additional stress during the germination period. All Pioneer® brand maize seed is extensively tested for quality throughout the production process and prior to dispatch. We use a number of tests including warm germination and the Pioneer Stress Test (PST), a proprietary vigour test which imposes extreme chilling and anaerobic stresses, beyond that of the industry standard saturated cold test.

# Use the right LumiGEN<sup>®</sup> seed treatment

Soil-borne seed diseases, insects and birds can all impact crop emergence. The risk period is longer when soils are cool, and germination and seedling growth is slow. Always consider likely pest pressure and talk to your merchant, contractor or Pioneer representative about the best seed treatment option.





# Wait until soil temperatures rise

Typically, soil warms up more slowly than air. If actual soil data is not available, physically measure the paddock soil (it should reach a minimum of 10-12°C at seeding depth). New Zealand's temperate maritime climate often means soil temperatures fluctuate in the spring. Maize seeds absorb 30% of their weight in water before they germinate. If the water they absorb is too cold or if temperatures drop after the seed has imbibed water, the seed can suffer chilling injury, resulting in either germination failure or uneven emergence.

# Keep an eye on soil moisture levels

Uneven soil moisture throughout the seed zone is a major contributor to uneven emergence. Soil moisture can vary across a field due to differences in soil characteristics and topography. A 50 cm planting depth is usually the most ideal choice for many soil conditions but increasing to 60-75 cm may be necessary in dry soil conditions. Planting shallower may increase the risk of uneven germination and emergence due to drying of the soil surface. Soil moisture tends to fluctuate more closer to the surface than at depth, hence the recommendation for deeper planting in dry conditions.

# Pay attention to tillage

Over working the soil reduces soil moisture levels and compresses the seed bed. Tilling soils which are too wet often results in a cloddy seed bed and poor seed-tosoil contact which consequently reduces germination success or increases the germination window.

# Maximise seed-to-soil contact

Soil must be firmed around the maize seed so it can absorb moisture quickly and uniformly. Poor seed to soil contact can be caused by cloddy soils, the seed being in contact with crop residue, improper closure of the seed furrow and sidewall compaction. Always make sure the seed firmers are set correctly and evaluate, and if necessary, adjust the closing wheels.







# Plant at an appropriate speed

Ensure the planter is well maintained and that meters are accurately calibrated. Worn disc openers and misadjusted closing wheels are major contributors to uneven emergence. While some planters are capable of operating at high speeds, going slightly slower usually delivers a better end result.

# Fine tune harvest management

Disproportionate residue coverage can significantly impact soil temperature as well as trigger nitrogen tie-up. Seeds under larger residue amounts are exposed to much cooler and lower nitrogen soils than those with lighter coverage, resulting with nonuniform plant sizes. Where possible adjust the combine set-up to ensure broad distribution of crop residue after crop harvest. Be conscious of harvest traffic on the field and where possible, use traffic lanes to minimise soil compaction.



ioneer has a long heritage as an industry leader – from 100 years of hybrid innovation to a world-class germplasm library. Pioneer® brand maize hybrids are for those farmers who refuse to settle for anything less than a great yield of high-quality grain.

Local testing and positioning products are cornerstone to Pioneer® brand maize hybrids delivering world-class performance. Each year Pioneer's elite genetics are tested in around 160 maize grain trials across New Zealand. They are positioned and supported in the paddock by our experienced field team who work alongside local merchants and contractors to ensure your success.

Whether you're farming in Northland, Canterbury or anywhere in between, we are confident you will find the right product for your paddock amongst this season's outstanding Pioneer hybrid line-up.

# Less than 0.01% make it

These hybrids are the best of the best. They have survived discerning breeders, laboratory tests, field tests and a comprehensive local trialling programme to make it into a Pioneer bag.

# The cream of the crop from Pioneer



BALANCED ALL-ROUND PLANT DESTINED TO "TIP THE SCALES".



#### SOLID, BALANCED HYBRID, WITH TOP-OF-THE-LINE FOLIAR HEALTH.

see page 17



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#### SECURITY WITH PERFORMANCE. see page 18

see page 16

# Trusted and proven reliable performance

Pioneer hybrids continue to prove themselves in the one place that matters the most. Your paddocks. The 2024 edition of our Maize Grain Research publication provides comprehensive data to help growers make informed decisions on which hybrid to plant. It's packed with hybrid performance comparisons plus the results of recent agronomic research projects.



Scan here for more info on hybrid performance:



NE E PIONE PR24	)_®	2.			
CRM 82 Grain yield for maturity	2	/		9	>
Early growth	6				
Stalk strength	6				
Root strength		7			
Drought tolerance		7			
Staygreen			8		
Husk cover	6				
Grain drydown		7			
			Μαχ	0	ī

# Higher yields for southern growers.

**P8240** is a high-yielding grain hybrid backed by strong drought tolerance, staygreen and standability.

- P8240 has a balanced agronomic package including superior roots which are a real asset in this maturity.
- Delivers significantly higher grain yields than P8000 and P8333 in Lower North Island and South Island.
- Established plant populations should be matched to assessed paddock yield potential.

Where high levels of Northern Leaf Blight were experienced last season, consider planting **P8532** or **P8711**.

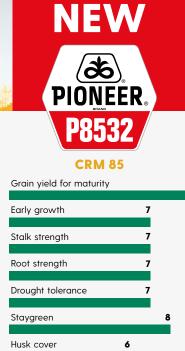
PIONEEI P8333	<b>R</b> .
<b>CRM 83</b>	
Grain yield for maturity	9
Early growth	8
Stalk strength <b>6</b>	
Root strength 5	
Drought tolerance	7
Staygreen	8
Husk cover 6	
Grain drydown	7
	Max 9

# Productive option for cooler regions.

A tall plant with a long ear, good husk cover, supported by strong all-round agronomics, superior drought tolerance and staygreen.

- Fast drydown and good test weight.
- While slightly earlier than P8666 it has similar inpaddock appearance.
- A tall leafy plant so established plant populations should be at least 5,000 per hectare less than applied for **P8240**.

Delivers higher grain yields than **P8000** in the cooler regions of the Lower North Island and South Island.



Max 9

# Balanced all-round plant destined to "tip the scales".

Grain drydown

Combines a strong agronomic profile and disease resistance package with wide adaptability across growing regions.

- Large-framed plant with excellent stalks and roots.
- Produces a long ear with good husk cover and average drydown to produce high yields.
- Has superior early growth, drought tolerance, staygreen and Northern Leaf Blight resistance.

A stable high yielding hybrid that can be grown throughout NZ where this maturity is required for grain or silage.



<b>P866</b>	
CRM 8 Grain yield for maturity	8
Early growth	8
Stalk strength	6
Root strength 5	
Drought tolerance	8
Staygreen	8
Husk cover	6
Grain drydown	7
	Max 9

## **High performance** hybrid with strong agronomic properties.

A tall imposing plant with strong all-round agronomics, superior drought tolerance, and stayareen.

- · Good husk cover, very good drydown and delivers high grain yields for maturity, with superior test weights.
- Large-framed hybrid so established plant populations should be approximately 10,000 per hectare lower than planted for P8805.
- Widely adapted from Dargaville to Ashburton where a hybrid of this maturity is required.

Plant with P8532 or P8711.

NEW
PIONEER.
<b>P8711</b>
<b>CRM 87</b>
Grain yield for maturity
Early growth <b>7</b>

Stalk strength			7	
Root strength			7	
Drought tolerance				8
Staygreen				8
Husk cover		6		
Grain drydown	5			

#### Max 9 **Defensive winner** with game-changing yields.

Tall hybrid with a balanced allround agronomic and disease resistance package.

- Very high ratings for drought, Northern Leaf Blight, Rust and staygreen deliver season-long plant health, and yield stability.
- P8711 has average drydown, good husk cover, and produces high test weight grain.
- Research results show a new level of grain yield performance compared to P8666 and P8805.

A widely adapted hybrid that will be at home in all North Island grain growing regions, particularly where Northern Leaf Blight is a significant concern.



ALL	PIONEER. P92575	
	CRM 92 Grain yield for maturity	9
	Early growth <b>7</b>	
	Stalk strength <b>7</b>	
	Root strength <b>7</b>	
	Drought tolerance 8	
	Staygreen	9
	Husk cover 5	
	Grain drydown 5	

NEW

Max 9

## Solid, balanced hybrid, with top-ofthe-line foliar health.

Plant where Northern Leaf Blight, standability & drought are seasonal concerns.

- Offers improved standability, disease resistance ratings and higher grain yields than P9127 which it replaces.
- Delivers strong emergence and early growth, is of average height while having superior roots and stalks.
- Combines excellent drought tolerance, staygreen, Northern Leaf Blight and Rust resistances to deliver season long plant health and stable high grain yields.
- Husk cover, grain drydown rates and test weights are average for maturity.

Widely adapted throughout the North Island where this maturity is required.

NE A PION P96	<u>ි</u> EER	0
CRN Grain yield for maturi Early growth		9
Stalk strength		7
Root strength Drought tolerance	6	7
Staygreen		7
Husk cover Grain drydown	6 6	
,		Max 9

Security with performance.

Offers yield stability for grain and silage.

- · A moderately tall plant with an erect leaf habit, strong standability and drought tolerance.
- Agronomically balanced with strong all-round disease resistance, including Northern Leaf Blight.
- Has good husk cover and delivers above average test weight grain.
- · Trials show P9650 is higher yielding than P9400 and P9721.

Widely adapted to North Island growing regions where this maturity is appropriate.

18



#### Very productive. Very stable. Very defensive.

P9978 is a modern erect-leaf hybrid with strong standability, drought tolerance and great all-round agronomic offering including Northern Leaf Blight resistance.

- Trials show **P9978** delivers industry leading grain yields in this maturity.
- Harvest moisture is 0.5 percent wetter than POO21.
- Delivers in challenging through to high yielding environments and will reward the time taken to plant the best seeding rate for the growing situation.
- For early spring planting into cold wet soils consider planting P9650, P0021 or P0200.

Widely adapted to all North Island growing regions where this maturity is required.

PIONEE PO200 CRM 102	
Grain yield for maturity	
Early growth <b>6</b>	
Stalk strength <b>6</b>	
Root strength	7
Drought tolerance	7

G 

F S

R  NEW

Staygreen Husk cover Grain drvdown

Max 9

## **Presents performance** and reliability.

A balanced all-round plant profile delivering yield stability.

- A great option where standability, Northern Leaf Blight & Rust are concerns.
- Superior drought tolerance, staygreen and sound ear rot resistances.
- Similar husk cover, harvest moisture and test weights to P0021.
- Down the East Coast it delivers higher yields than POO21 and P0547.
- Rangitikei growers will find it a more secure option than P0547 where NLB is a concern.

Adapted to all North Island growing regions.

			12.083	$p_{i+1}$
100				$f_{i}$
	See page 42	tor?	growing	regi
				1.5

P03	<b>52</b>			
CRM 1	03			
Grain yield for maturity				9
Early growth	6			
Stalk strength	6			
Root strength		7		
Drought tolerance		7		
Staygreen			8	
Husk cover	6			
Grain drydown 5				
Robust hybri	d v	-	<sup>Max 9</sup> h	

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PIONEER.

## R standability, foliar health and "eye appeal".

Has an exceptionally robust allround plant profile producing a chunky ear with deep grain and sound husk cover.

- A top option where standability, Northern Leaf Blight, Rust or Eyespot are concerns.
- These strengths are complemented by superior drought tolerance, staygreen, sound ear rot resistances, good test weight and yield stability.
- Compared to P0547, P0362 has better Northern Leaf Blight resistance and standability, similar yield performance while being about 1.2% wetter at harvest.

Widely adapted to North Island growing regions where a hybrid of this maturity is required.

PIONEER P0640	9
<b>CRM 106</b>	
Grain yield for maturity	9
Early growth	8
Stalk strength <b>6</b>	
Root strength <b>6</b>	
Drought tolerance	7
Staygreen	8
Husk cover 6	
Grain drydown	8
	Max 9

## Leaf disease champion delivering yield stability.

Great looking hybrid combining excellent all-round agronomics with desirable ear rot, superior Northern Leaf Blight, Common Rust, and Eyespot resistances.

- Tall plant with sound standability, staygreen and drought tolerance.
- Get the combines moving with this hybrid's very fast grain drydown.
- Companion with P0362, P0900, or P0937 after considering yield expectation, hybrid maturity and desired harvest timing.

Must be part of larger operations from Northland through Waikato, Bay of Plenty and the East Coast where its foliar health, fast drydown and yield performance deliver value.

## **PIONEER**. PNAUU **CRM 109** Grain yield for maturity Early growth 7 Stalk strength Root strength Drought tolerance Staygreen Husk cover 6 Grain drvdown

#### Max 9 Hard to fault, stable, all-round hybrid.

P0900 is a tall plant with a long ear, backed by AQUAmax® drought tolerance.

- Excellent standability, low ear placement, drought tolerance, great foliar health and staygreen.
- An exceptionally balanced package that delivers yield stability.
- East Coast growers will value strong Head Smut resistance.
- Maximise top of the line yield stability by targeting established plant populations of 80,000 to 110,000 plants per hectare according to paddock yield expectation.
- Companion with P0640, or P0937.

Now extensively planted between Dargaville and Napier.

**AQUAmax** 

PIONEER	Re	
P0937		/
CRM 109		
Grain yield for maturity		9
Early growth		8
Stalk strength <b>6</b>		
Root strength	7	
Drought tolerance		8
Staygreen		9
Husk cover <b>6</b>		
Grain drydown	7	
		Max 9

# Solid hybrid with next generation grain yield.

Widely adapted high yielding hybrid. Now the benchmark in this maturity.

- Very appealing modern plant type, with low ear placement, erect leaves, notable standability and sound husk cover.
- Combines superior resistances to Northern Leaf Blight and Rust with strong stress emergence, exceptional staygreen and drought tolerance.
- With average test weight grain will not match the food corn quality of **P0891** and **P1253**.

P0937 is extensively planted in moderate to high yielding situations in Northland, Waikato, Bay of Plenty, Gisborne and Hawke's Bay growing regions.

PIONEER.						
P125	<b>i3</b>					
CRM 10	09					
Grain yield for maturity	7					
Early growth	6					
Stalk strength	6					
Root strength 5						
Drought tolerance	7					
Staygreen	6					
Husk cover	6					
Grain drydown	6					

## Pack your paddock for top grain quality.

**P1253** is moderate in height, with low ear placement, a strong agronomic package, excellent staygreen and good drydown for maturity.

- P1253 is well adapted to moderate to higher yielding situations.
- Produces grain with high test weight and notable food corn quality.
- For early planting into cold challenging paddocks or where Northern Leaf Blight is a concern plant **P0900**, or **P0937**.

**P1253** is the preferred food corn hybrid in Gisborne and Hawke's Bay growing regions



Still available in 2024:







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**INSIDE PIONEER** 

# Secol beatment

# Giving your maize seed a head start

stablish healthy, uniform crops and maximise productivity with LumiGEN<sup>®</sup> seed treatments. This advanced seed treatment lineup from Pioneer offers industry-leading protection for your Pioneer<sup>®</sup> brand seed.

LumiGEN<sup>®</sup> seed treatments protect Pioneer genetics from early-season disease, insect and bird damage to help maximise yield potential.

#### Disease

LumiGEN<sup>®</sup> seed treatments include a robust fungicide that provides protection against a range of seed and soil-borne diseases in maize, such as Pythium, Rhizoctonia and Fusarium.

#### Insects

Protecting seedlings from insect damage is crucial for ensuring a healthy and productive maize crop. That's why we offer a range of highly effective insecticide options that provide reliable protection against common pests in New Zealand, such as Argentine stem weevil, greasy cutworm, and black beetle. The addition of a biological creates a living barrier which deters a range of nematode species and promotes healthy root development.

#### Birds

For a reliable and safe way to keep birds away from your newly planted maize seed, consider trying a scientifically formulated non-lethal bird repellent. This unique formulation is based on an organic chemical that is naturally found in a number of plants, including aloe vera and rhubarb, and it has been proven to be highly effective in stopping birds from eating the seed. Each kernel is surrounded with a protective coating which causes birds immediate, yet temporary digestive discomfort.

Talk to your local Pioneer representative, merchant or contractor to determine the best LumiGEN<sup>®</sup> seed treatment option for your growing environment.



Selected for our genetics



Verified on our genetics



Proven in the field with our genetics

#### **INSIDE PIONEER**

	Fungicide Insecticide				Bird Repellent	
	Seed & Soil borne diseases	Black Beetle	Argentine Stem Weevil	Greasy Cutworm	Nematodes <sup>1</sup>	
		₩¥	×۲	Contraction of the second seco	S	Æ
LumiGEN®						
L-200	✓					
L-200+	~					~
L-300	~	~	~			
L-300+	~	✓	~			~
L-400	~	$\checkmark$	✓*	<ul> <li>✓</li> </ul>	~	
L-400+	~	~	✓*	✓	~	~

\* Research data shows the insecticide in L-400 and L-400+ is more effective at reducing plant loss due to Argentine Stem Weevil damage than the insecticide in L-300 and L-300+

 $^{\scriptscriptstyle 1}\,$  L-400 and L-400+ contains Bacillus spp which suppresses nematode damage in maize

#### The impact of bird damage



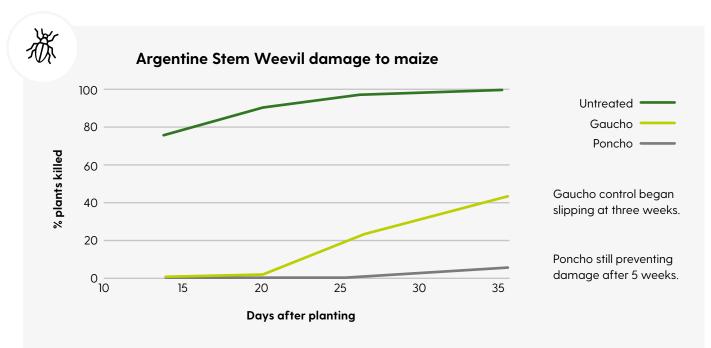
The impact of bird damage can be significant as shown by the poor establishment of a strip planted without bird repellent treatment.



#### Improved insect control with L-400

It is important to consider the range of insects controlled and the length of control required when deciding which is the right seed treatment for your crop.

AgResearch trials have demonstrated the advantage of Poncho (the insecticide in L-400) over Gaucho (the insecticide in L-300) in the long-term control of Argentine Stem Weevil. In addition, Poncho (L-400) has a label claim for the control of greasy cutworm while Gaucho (L-300) does not.



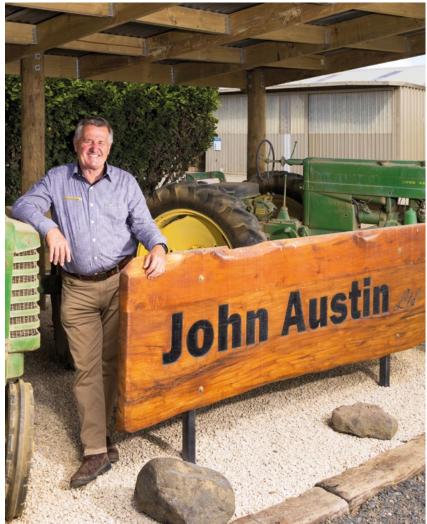
Seed safety trials have proven that L-400 is kinder to the seed and has lower impacts on both germination and vigour.

Naize grain a lifetong passion









rowing and harvesting maize has been a lifelong passion for Te Awamutu based John Austin. Supported by wife Jackie and son Michael, John runs one of the country's largest agricultural contracting businesses.

Daughter Hannah is currently working in the business which employs around 40 full-time and an additional 25 seasonal staff. The family also grow around 450 ha of maize grain and 200 ha of maize silage themselves each season.

John, who has always loved tractors and farm machinery, spent a significant chunk of his childhood riding in local contractor Peter Hoar's combine.

"In those days the dryers were open long hours and the combine had two drivers who each did a shift" says John. "Some days I would ride with Peter, then his driver and would be back in the cab when Peter started his next day".

**LEFT** Daughter Hannah, son Michael with Jackie and John Austin.





# Farm

- 450 ha of maize grain grown
- Plants a mix of Pioneer<sup>®</sup> brand maize hybrids
- Involved in the maize industry for 50 years

Eventually Peter, seeing the young lad's passion told John – "when you leave school, come and work for me".

John didn't need any further encouragement and so, at 16 years of age, he started his agricultural contracting career. Five years later, aged 21, he bought the business, which consisted of a tractor, a combine and a few implements, from Peter.

"Maize growing was very different in the 1970's" says John. "I started planting maize in a tractor which had no cab and returned home each night covered in dust. The machinery was generally less reliable, and a lot of time was spent fixing the combine which had frequent breakdowns".

John's involvement with Pioneer maize began early in his career when Peter procured some of the first Pioneer maize seed available in New Zealand and they planted a 5-acre paddock.

"I've stuck with the brand ever since" says John. "Pioneer's commitment to the maize industry has matched our own and they've worked alongside us to make maize successful". "Each season we plant a range of hybrids which are carefully matched to the growing conditions found in every paddock" says John. "We particularly look for products which deliver reliable yields, good standability and high-quality grain".

The spring 2023 plant included Pioneer® brand P9127, P9400, P9978, P0362, P0900 and P0937.

Planting starts in late September and is usually completed by mid-November. Having their maize area spread across more than 30 Waikato lease blocks ranging in size from 2-60 ha, as well as the 39 ha home farm, creates significant logistical challenges. Agronomist Marjan Kaspar coordinates day-to-day cropping operations on the lease blocks and is also responsible for scouting crops to identify weed or pest issues and determining when crops are ready for harvest.

John was at the forefront of adopting strip tillage and no-till technology more than two decades ago. Today around half of his own maize crops are established using strip till or no till.





John believes these technologies are the way forward because of the soil structure benefits they confer. At this point he is leaning towards strip till as the preferred option because fertiliser nutrients can easily be placed into the maize plants' root zone.

"I've stuck with the brand ever since" says John. "Pioneer's commitment to the maize industry has matched our own and they've worked alongside us to make maize successful".

Grain crops are generally harvested between early April and early June. Average yields are typically around 11 t/ha which is a good outcome given the fact that some of the lease blocks have significant challenges. "Our best blocks average 13-14 t/ha and we have had the best areas of grain crops yield more than 24 t/ha" says John. "But the average is pulled back by some marginal areas which yield a lot less".

John is focused on trying to improve the soils on the land he farms. A recent focus has been trying to get cover crops established on as many blocks as possible after grain harvest. John has planted annual ryegrass, oats, barley as well as a range of legumes including lupins, clover and faba beans.

"We are trying to build organic matter by maximising the number of days we have something green growing in the paddock" says John. "I like the concept of planting a winter legume which will provide 'free' nitrogen for the next maize crop".

John believes that precision farming will play an increasingly important role in maize growing. He is already using variable rate fertiliser, especially lime and is moving into variable rate seeding.

"Spending more time analysing soil nutrients by zone will allow us to improve the efficiency of fertiliser use" says John. "We are trialling technology to help us quantify soil nitrogen levels so we can quickly and accurately determine appropriate application rates".

With son Michael progressively taking over the reins of the contracting business, John is beginning to think about what the future might hold for him.

"My great love is maize grain, that's where I started and that's where my roots are" he says. "If I could choose one thing to do, it would be to be more involved in the growing of grain crops".

"Being involved in the maize industry for nearly 50 years has been fantastic" says John. "I still love the challenge of planting and the reward of harvesting a high yielding grain crop".

ABOVE John and Michael Austin with Pioneer Regional Manager Craig Maxwell.



e firmly believe in the value and benefits of feeding high quality locally grown maize grain and are focused on promoting it to the local dairy industry.

Our comprehensive Maize Grain for Dairy Cows manual outlines the economic, nutritional, and environmental benefits of feeding maize grain. It provides details on the various forms of maize grain available in New Zealand, together with processing and feeding guidelines.

We've also produced a shorter Maize Grain for High-Performing Dairy Cows brochure, which has been sent to dairy farmers around the country and have developed press and online advertising to further promote maize grain.

If you would like copies of either booklet for current or potential customers, please talk to your local Pioneer Area Manager.



For more information on the benefits of maize grain or to download a copy of the Maize Grain for Dairy Cows manual scan here:







## Supporting livestock farmers

Pioneer Farm Systems Specialists Matt Dalley and Wade Bell are available to help livestock farmers get the most out of their investment in Pioneer<sup>®</sup> brand maize.

"Maize is a high energy grain which can be used to fill energy deficits, lifting milk production and reducing body condition score loss in dairy systems. It's also an excellent feed option for improving lambing percentages, velvet yields and sheep, beef or deer weight gains".

To arrange a catch-up with Matt or Wade contact your local Pioneer representative.

# Arable Farmer

HUGH RITCHIE, OTANE

# of the Year which is a maize



ugh and Sharon Ritchie own Drumpeel Farms – a mixed cropping and drystock operation which spans across 2,000 ha on two separate blocks in Central Hawke's Bay.

The home farm, located near Otane, has been in the family since 1962, when Hugh's parents David and Sally purchased the farm in conjunction with David's brothers. It grows around 600 ha of crops annually including maize, wheat, barley, oats, process vegetables (carrots, peas, sweetcorn and beans), squash, vegetable seed (carrots, radish and beet) and grass seed. Lambs are finished on the cropping area during the winter months. The pastoral block at Horonui is mainly medium to steep rolling hill country and is used for bull beef and lambs.

Maize is the biggest proportion of cropping, both in tonnage and area. David planted the farm's first maize crop in the mid 1970's and the farm now grows between 180-200 ha of maize each year.

"Maize is a hardier crop than wheat or barley" says Hugh. "It can handle higher temperatures and makes the most of any available moisture".

Hugh was named Arable Farmer of the Year in 2023. The award recognises an arable farmer who excels in all aspects of the arable industry, with the judges looking for a sustainable farm business that balances production and profitability, and a grower who shows evidence of a long-term commitment to the industry.

It was a fitting award for Hugh whose involvement in the arable sector has included stints as Chairman of the Foundation for Arable Research. He was also a founding member and chair of local innovation centre, LandWISE.

Hugh completed a Nuffield Scholarship investigating sustainable farming practices in 2000 and continues to actively seek best practices to lower the farm's energy, water and fertiliser use. Upon returning to the farm from his Nuffield trip, he implemented strip till and direct drill crop establishment.

#### FARM SUCCESS STORIES



"Strip till maize works very well for us" says Hugh. "We have seen no downsides and maintained crop yields even in the transition phase when we were getting used to the technology".

"Precision agriculture and GPS allow us to be very accurate in what we do and the fuel load per hectare is a lot lower than it has been in the past" says Hugh. "Organic matter has increased, erosion from both wind and water has decreased, and earthworms and soil drainage have increased".



# Farm

- Grows 180-200 ha maize grain annually
- Plants a mix of Pioneer<sup>®</sup> brand maize hybrids
- Arable Farmer of the Year for 2023



Strips are pulled in the spring using the farms 12-row Orthman strip till machine. A local contractor plants the maize typically starting around the 10th October and finishing by the end of the month.

Hugh always plants a range of hybrid maturities to match growing conditions. Shorter maturity, drought tolerant hybrids are planted on the drier country while long maturity products are planted on irrigated paddocks and those with heavier soil types. In Spring 2023, the hybrid mix included Pioneer<sup>®</sup> brand P9650, P9978, P0200, P0362 and P0937.

"We look for high yielding hybrids that have excellent drought tolerance and proven disease resistance" says Hugh. "While we have irrigation, the higher value vegetable and seed crops take priority, so we are looking for maize hybrids which will not disappoint us if we can't get water to them".

"We have always had a philosophy of sticking with products which have given us good results – Pioneer maize performs well for us, and the technical backup is excellent".

Hugh soil tests regularly and uses the results and expected crop yields to determine fertiliser inputs. Typically, crops are established with 250-300 kg/ha of YaraMila Actyva S or Actyva Complex as a starter fertiliser and 200-300 kg urea/ha at side-dressing.

Crop rotations help by reducing fertiliser requirements and controlling weed pressure. "Maize is the cornerstone of our crop rotations" says Hugh. "It slots in nicely after ryegrass seed harvest because we use the early spring growth to finish lambs prior to maize planting".

"After maize grain harvest, we fallow the ground prior to establishing squash by strip till in the spring. We find the squash sit very nicely on the mulched maize stubble".

Grain harvest takes place in April and May. Dryland crops typically average 12 t/ha whilst irrigated crops are in the 16-17 t/ha range. All the grain is dried and stored on farm for sale to a range of end users throughout the year.

"We have deer farmer clients who use maize grain as drought feed and to enhance velvet yields and sheep farmers who feed it over tupping to improve their lambing percentage" says Hugh. "A key advantage of maize is that it can be fed on the ground to sheep and deer with virtually no wastage".

In 2023 the farm, like many others in the area, took a huge hit from Cyclone Gabrielle but the diverse farm system, built for resilience, is slowly but surely recovering albeit on the back of a lot of hard work.

"We were really impressed with how resilient the maize crops were under the extreme weather conditions" says Hugh. "The bulk of the crop was harvestable despite having stood in water or saturated soils for weeks".

> **RIGHT** Hugh Ritchie and Pioneer Area Manager Helen France.

\*\* We have always had a philosophy of sticking with products which have given us good results – Pioneer maize performs well for us, and the technical backup is excellent. \*\*

Hugh Ritchie

à

NSIDE PIONEER

# Rangitikei grower

PIONE

36 A YATES FAMILY BUSINESS

# SCOOPS the Paul Baker Cup

arton maize grower Simon Nitschke was the 2023 winner of the National title in the Pioneer Maize for Grain Yield Competition with a strip of Pioneer® brand P0937 which produced an impressive 20.20 t/ha of grain.

While it is the first time a Lower North Island grower has won the National cup since the competition's inception 25 years ago, it was Simon's third win of the Manawatū/Rangitīkei regional competition. In 2020, his P0937 produced 19.70 t/ha and in 2021 the same hybrid produced 20.12 t/ha.

Simon has been growing maize grain for around a decade. Each year he plants around 200 ha of Pioneer<sup>®</sup> brand maize with longer maturity hybrids being planted on river silt and shorter maturity hybrids on the heavier clay country. In the 2023-24 season he planted a mix of Pioneer<sup>®</sup> brand P9978, P0547 and P0937. Typically, crops planted on the river silt yield 15-17 t/ha while those grown in clay soils yield 13-15 t/ha. All the maize grain is dried and stored on farm prior to sale.

The 2023 winning strip, which took out the Paul Baker Memorial Cup, was planted on river silt in the Whangaehu River valley.

"It's a fertile heavy silt soil which retains a lot of moisture, and the paddock is low in altitude and gets a lot of heat" says Simon. "It's a perfect environment where a high performing hybrid can consistently deliver outstanding results".

Simon also grows malt barley and wheat as part of his cropping rotation. While he has moved to minimum till on the small grains, he has remained with a traditional cultivation system for maize.

"There is a lot of residue left in the paddocks after the harvest of high yielding maize grain crops" says Simon. "Cultivating allows us to bury the trash and helps warm up the soil".

"Planting into a warm seed bed really helps the plants jump out of the ground and we can plant longer maturity hybrids in an area which has a relatively short growing season".

The 2023-24 weather conditions have been kind and Simon hopes that his crops might again beat his fellow yield

"It's a perfect environment where a high performing hybrid can consistently deliver outstanding results".

competition contestants including the Gisborne/Hawke's Bay growers who have taken out the National title for 18 out of the last 25 years.

"I've provided enough nutrients for a 20 t/ha crop and the crop is looking really good" says Simon. "I'd like to think we've got a real fighting chance". In 2023, to mark the 25th year of the Pioneer Maize for Grain Yield Competition, Maize Product Manager Barry McCarter prepared a summary of the competition winners, hybrids, and yields.

Waikato grower John Locke was the inaugural winner of the competition with Pioneer® brand 33R87 in 1999.

"Unfortunately, we haven't located yield records for the first two years, but in 2001 the competition was won by Waikato growers Jeff and Todd Crabb with 34K77 which yielded 16.48 t/ha" says Barry.

Competition winning yields ranged between 16.48-18.62 t/ha from 2001-2007 with Gisborne grower Brian Amor breaking the 20 t/ha barrier for the first time in 2008.

"For the past five seasons the national winner has produced between 20.20 and 23.41 t/ha of maize grain" says Barry. "The competition results really demonstrate the huge advances which have been made in maize genetics as well as crop management practices over the years".

The summary of the competition data reveals that more than 30 hybrids were planted by regional winners. The most common winners over the years included 34D71, 34B97, 33J24, 34P88, P1253, P0640 and P0937.

"Pioneer® brand P0937 is a standout product which has delivered industry-leading yields in every single competition region" says Barry. "It's a fantastic product but genetic advances mean sometime soon we will have new hybrids that deliver even higher yields of quality grain".

LEFT Simon Nitschke with his father Malcolm.

# Pioneer Maize for

he Pioneer Maize for Grain Yield Competition recognises grain growers achieving the highest yields with Pioneer® brand maize hybrids on their farms. There are three categories in each

region which include early, mid and late hybrid maturity groups. All onfarm co-operators in the Pioneer Product Advancement Trials (PAT) are automatically entered into the competition for their region.

	NATIONAL	YIELD CU	P WINNERS	AUCKLAND PROVINCE & NORTH	4	
(EAR	WINNER	HYBRID	REGION	WINNER	HYBRID	
1999	John Locke	33R87	Waikato	-	-	
2000	Mo Paratene	33G26	Gisborne/Hawke's Bay	-	-	
2001	Jeff & Todd Crabb	34K77	Waikato	-	-	
2002	Brownrigg Agriculture	34V56	Gisborne/Hawke's Bay	-	-	
2003	Mike & Karen Insley	33J24	Bay of Plenty	-	-	
2004 <sup>1</sup>	Terry O'Brien	34K77	Waikato	Wharepapa Farm Ltd	36B08	
2005	Brownrigg Agriculture	34D71	Gisborne/Hawke's Bay	Paul & Susannah Ambler	34D71	
2006	Brownrigg Agriculture	33J24	Gisborne/Hawke's Bay	Pukerimu Holdings Ltd	38P05	
2007	Mark Armstrong	34B97	Gisborne/Hawke's Bay	David & Adrienne Wordsworth	38B85	
2008	Brian Amor	34B97	Gisborne/Hawke's Bay	D & A Wordsworth/Pouto Topu A Trust	35D28	
2009	Brownrigg Agriculture	34B97	Gisborne/Hawke's Bay	Pouto Topu A Trust	35A30	
2010	Brian Amor	34D71	Gisborne/Hawke's Bay	David & Adrienne Wordsworth	34P88	
2011	Geoff MacGregor	P0537	Gisborne/Hawke's Bay	Shawn & Tracey Nichols	37Y12	
012	Brian Amor	P0537	Gisborne/Hawke's Bay	Gavin Woolsey	P0537	
013	Brownrigg Agriculture	P1253	Gisborne/Hawke's Bay	Shawn & Tracey Nichols	37Y12	
2014	Brian Amor	P1253	Gisborne/Hawke's Bay	Shawn & Tracey Nichols	P0021	
2015	Brownrigg Agriculture	P1253	Gisborne/Hawke's Bay	David & Adrienne Wordsworth	P0547	
2016	Donald & Craig Stobie	P1253	Waikato	Gavin & Trish Woolsey	P9911	
2017	Bostock New Zealand	P0640	Gisborne/Hawke's Bay	Paul Bamforth	P1477W	
2018	Brian Amor	P1253	Gisborne/Hawke's Bay	David Waller	P0640	
2019 <sup>2</sup>	Not awarded in 2019	-	-	-	-	
2020	Stuart Gray	P0937	Gisborne/Hawke's Bay	Paul Bamforth	P0937	
2021	Tom Newman	P0640	Gisborne/Hawke's Bay	David & Adrienne Wordsworth	P0937	
2022	Tom Newman	P0900	Gisborne/Hawke's Bay	David & Adrienne Wordsworth	P0640	
2023	Simon Nitschke	P0937	Manawatū/Rangitīkei	Paul & Susannah Ambler	P0362	

# Grain Gield Competition

	WAIKATO		BAY OF PLENT	(	GISBORNE/HAWKE'S	BAY	MANAWATŪ/RANG	ΤĪΚΕΙ	
	WINNER	HYBRID	WINNER	HYBRID	WINNER	HYBRID	WINNER	HYBRID	
	John Locke	33R87	Mick Doherty	33R87	David Clark (Opou Station)	3514	Tim & Dennis Harris	3753	
	Jeff & Todd Crabb	34E79	Neil Rogers	33R87	Mo Paratene	33G26	Bruce Gibbons	36H36	
	Jeff & Todd Crabb	34K77	Mick Doherty	34E79	Mo Paratene	33R87	Tim Harris	34K77	
	Jeff & Todd Crabb	34E79	Neil Rogers	36B08	Brownrigg Agriculture	34V56	Paul Carter	38P05	
	David Waller	36B08	Mike & Karen Insle	33J24	Hugh Ritchie	34K77	William Duncan	38T27	
	Terry O'Brien	34K77	Mick Doherty	33J24	Mark Armstrong	33J24	Paul Carter	36B08	
	George & Ross Thompson	34D71	Mick Doherty	33J24	Brownrigg Agriculture	34D71	Patrick O'Neill	38T27	
	Wayne Henderson	34D71	Guy & Isobel Nicol	33J24	Brownrigg Agriculture	33J24	Paul Carter	38T27	
	Steve Finer	34D71	Mick Doherty	34B97	Mark Armstrong	34B97	Andrew Russell	38P05	
•	Lloyd Farms Ltd	34P88	Neil Rogers	34P88	Brian Amor	34B97	Stephen Voss	38P05	
•	Lloyd Farms Ltd	34D71	Guy & Isobel Nicol	33J24	Brownrigg Agriculture	34B97	Stewart Glasgow	37Y12	
	Bruce Bateup	35Y33	Neil Rogers	34B97	Brian Amor	34D71	Stewart Glasgow	38P05	
	Alan Henderson	34P88	Regan Studer	34P88	Geoff MacGregor	P0537	Richard Redmayne	35Y33	
•	Graeme Bateup	34P88	Joe Rua	34P88	Brian Amor	P0537	Stewart Glasgow	37Y12	
• • • •	Steve Finer	P0021	Guy & Isobel Nicol	34P88	Brownrigg Agriculture	P1253	Dennis Nitschke	P0891	
	Lloyd Farms Ltd	P0891	Dovaston Agriculture Ltd	P1253	Brian Amor	P1253	Dennis Nitschke	P0021	
	Alan Henderson	P9911	Dovaston Agriculture Ltd	P1253	Brownrigg Agriculture	P1253	Dennis Nitschke	P9721	
	Donald & Craig Stobie	P1253	Doherty & Studer Ltd	P1253	Paul Steele	P0891	Dennis & Marcus Nitschke	P9911	
	Alan Maxwell	P0640	Dovaston Agriculture Ltd	P0725	Bostock New Zealand	P0640	Stewart Glasgow	P0547	
	<b>Richard Bain</b>	P0640	Stockland Ag Ltd	P0725	Brian Amor	P1253	Dennis Nitschke	P9911	
	-	-	-	-	-	-	-	-	
	Stuart & Michele Clarke	P0937	Dovaston Agriculture Ltd	P1253	Stuart Gray	P0937	Simon Nitschke	P0937	
	Lloyd Farms Ltd	P0937	Ken & Helen Edkins	P0937	Tom Newman	P0640	Stewart Glasgow	P0362	
	Graeme Bateup	P0937	Ken & Helen Edkins	P0937	Tom Newman	P0900	Simon Nitschke	P0937	
	Bradfields Ltd	P9978	Doherty & Studer Ltd	P0640	L & B Wallace Ltd	P0937	Simon Nitschke	P0937	

# Maize grain

# Indicative maize for grain costs of production for the 2024-25 season

The economics of growing maize for grain are dependent on growing costs, crop yield and the price received per tonne of grain. As a guide, the approximate fixed and variable costs to grow maize for grain are shown in this table. All costs exclude GST and were indicative at 31 March 2024. Given current price volatility we would encourage you to complete your own budget prior to the start of the growing season. Please contact your local merchant representative or contractor to establish current costs.

Use the 'My costs' column to determine your costs based on the estimates provided.

Visit pioneer.nz to calculate your farm-specific costs.

Gro	wing and harvest costs	Indicative cost estimate (\$/ha)	My costs (\$/ha)
	Cost of leased land <sup>1</sup>	?	P
ŋ	Soil tests, other	10	P
Pre-planting	Base: Lime @ 1 t/ha + application	130	P.
e-pl	Base fertiliser: 300 kg/ha + application	350	P
Ч	Cultivation: To planting specifications	480	P
	Pioneer® brand maize seed P9978 @ 94,000/ha	585	
ŋ	FAR levy (\$1.00/10,000 kernels @ 94,000/ha)	10	P
Planting	LumiGEN <sup>™</sup> System L-400 seed insecticide treatment	150	P
đ	Starter fertiliser: 250 kg/ha DAP + application	305	2
	Planting	220	2
ğ	Pre emergence weed control + application	140	P
Post-planting	Post emergence weed control + application	145	P
st-pl	Side dressing: 250 kg/ha urea + application	325	2000 C
Po	Harvest: Combine	500	P
Toto	l input costs per hectare	\$3,350	2
Inte	rest on input costs excluding harvest		
	Interest on \$2850 @ 8% for 8 months	\$150	2
Toto	Il costs (inputs & interest)		
		\$3,500	2



# Cartage and drying costs

# Yield

Tonnes per hectare: DRY (@ 14% moisture)	10.00	11.00	12.00	13.00	14.00
Tonnes per hectare: WET (@ 22% moisture)	11.03	12.13	13.23	14.33	15.44
Cartage and drying costs (\$)					
Cartage - 50 km @ \$22 per wet tonne	243	267	291	315	340
Drying (from 22% - 14%) @ \$48 per wet tonne	529	582	635	688	741
Total drying costs per hectare	772	849	926	1,003	1,081
Cost summary (\$)					
Input costs	3,350	3,350	3,350	3,350	3,350
Interest (on input costs)	150	150	150	150	150
Drying costs & cartage costs	772	849	926	1,003	1,081
Total costs	4,272	4,349	4,426	4,503	4,581

### Assumptions

- 1. Costs to grow, harvest, transport and dry the crop are estimates only. Estimates are based on a sample of contractor rates, other typical industry charges and product costs. All costs exclude GST and were indicative at 31 March 2024.
- 2. Average land rentals have not been included because of a large regional variation. Provision to consider land rental has been included in the My Costs column.
- 3. Medium yield growing environment where 94,000 seeds of hybrid P9978 are planted per hectare.
- 4. Wet (harvest) moisture content of 22%.

#### Important

The information in this tool is general in nature and is not intended to be a representation of actual costs. We do not accept any responsibility or liability (whether as a result of negligence or otherwise) for any loss of any kind that may arise from actions based on the contents of this tool or otherwise in connection with the use of this cost guide.

## Notes:

# CALCULATORS & GUIDES

# Hybrid recommendations for grain by region

Region 1 Northland, North Auckland	
Hybrids	CRM range
P8532	<85
P8666 P8711 P8805	86-91
P92575 P9400 P9650 P9721 P9978	92-99
P0021           P0200           P0362           P0640	100-106
P0891 P0900 P0937	>107

Region 2 South Auckland, North & Central Waikato	2 the second sec
Hybrids	CRM range
P8532	<85
P8666 P8711 P8805	86-91
P92575 P9400 P9650 P9721 P9978	92-99
P0021 P0200 P0362 P0640	100-106
P0891 P0900 P0937	>107

<b>Region</b> Coastal BOP, Gisborne & Nort Hawke's Bay	
Hybrids	CRM range
P8532 P8666 P8711 P8805	86-91
월 P92575 P9400 월 P9650 P9721 P9978	92-99
P0021 P0200 P0362 P0640	100-106
P0891 P0900 P0937 P1253	>107

# **Region 4**

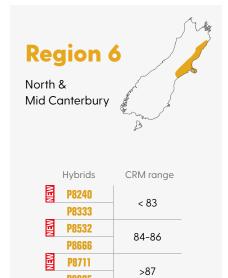
South Waikato, King Country, Coastal Taranaki, Rangitikei, Manawatū, Southern Wairarapa & Central Hawke's Bay





Marlborough





P8805



# Pioneer<sup>®</sup> brand maize for grain hybrid trait characteristics for 2024-25

		N	1aturit	y		Yield			Plant and agronomic traits							Gr	Grain quality		
	Hybrid	CRM to black layer <sup>1</sup>	CRM to silking <sup>2</sup>	CRM to grain harvest moisture (24%) <sup>3</sup>	Grain yield for maturity $^4$	Adaption to high population <sup>5</sup>	Adaption to low population (ear flex) <sup>6</sup>	Drought tolerance	Stalk strength	Root strength	Stress emergence <sup>7</sup>	Early growth <sup>8</sup>	Plant height°	Ear height <sup>10</sup>	Staygreen <sup>11</sup>	Husk cover <sup>12</sup>	Grain drydown <sup>13</sup>	Grain appearance <sup>14</sup>	Test weight
NEW	P8240	82	82	82	9	7	9	7	6	7	6	6	8	6	8	6	7	7	6
	P8333	83	83	83	9	5	9	7	6	5	6	8	7	6	8	6	7	7	7
NEW	P8532	85	85	85	9	7	9	7	7	7	7	7	7	6	8	6	6	6	8
	P8666	86	86	86	8	5	9	8	6	5	6	8	7	6	8	6	7	7	7
NEW	<b>P8711</b>	87	87	89	9	8	9	8	7	7	6	7	8	5	8	6	5	6	7
_	P8805	88	88	88	7	9	5	8	6	5	6	6	5	6	7	5	8	6	6
NEW	P92575	92	92	95	9	9	9	8	7	7	7	7	6	5	9	5	5	6	5
	P9400	94	94	94	7	6	9	7	7	7	4	7	8	7	6	5	6	7	7
NEW	P9650	96	96	97	9	9	7	7	7	6	6	6	6	5	7	6	6	6	6
	<b>P9721</b>	97	97	95	7	8	6	8	6	5	7	6	7	6	6	6	9	6	5
	P9978	99	99	99	9	9	7	7	6	6	5	6	7	6	7	6	6	6	5
_	P0021	100	100	100	7	9	6	7	6	7	7	9	6	5	7	6	6	5	6
NEW	P0200	102	102	102	9	8	6	7	6	7	6	6	6	5	7	6	6	5	6
	P0362	103	103	103	9	9	6	7	6	7	6	6	7	5	8	6	5	6	6
	P0640	106	106	104	9	7	9	7	6	6	6	8	8	6	8	6	8	6	5
	P0891	107	107	107	7	9	6	7	8	6	4	6	7	4	7	6	6	9	9
	P0900	109	109	109	9	9	9	9	7	7	7	7	7	5	8	6	5	6	6
	P0937	109	108	109	9	9	7	8	6	7	7	8	6	4	9	6	7	6	5
	P1253	109	109	109	7	6	6	7	6	5	4	6	6	5	6	6	6	9	9

Ratings 9 = Outstanding 1 = Poor CRM = Comparative Relative Maturity

n/a = Not applicable

- = Insufficient data available

NEW = New hybrid HT/AC = Refer to page 45, point 15

Pioneer sets tough yet honest standards when rating maize hybrids. These ratings are based on comparisons with other Pioneer® brand hybrids, NOT competitor hybrids and on average performance across areas of adaptation under normal conditions. The ratings are based on both customer 'side-by-side' paddock experience and research comparison data. Individual seasons and paddock ratings may show a variation from these average comparative ratings. Extreme conditions may adversely affect performance. Notes on performance traits can be found on page 45.

# **Disease precaution**

Growers should balance hybrid yield potential, hybrid maturity and cultural practices (especially stubble management) against their anticipated risk of specific diseases and need for resistance. In high disease risk situations, consider planting hybrids with resistance ratings of 6 or higher to help reduce risk. When susceptible hybrids are planted in conditions of high disease pressure, the grower assumes a higher level of risk. If conditions are severe, even hybrids rated as resistant can be adversely affected. Independent of yield reduction, diseases can predispose plants to secondary diseases such as stalk rots. This requires individual field and hybrid monitoring for stalk stability and earlier harvest if necessary.

	Food grade characteristics							D	isease	resist	ance r	atings	23		pla	nended es int populat DO'S/HA) <sup>24</sup>	ions		
Processing use <sup>15</sup>	Kernel hardness <sup>16</sup>	Kernel crown <sup>17</sup>	Kernel red streak <sup>18</sup>	Kernel size <sup>ıp</sup>	Horny endosperm <sup>20</sup>	Kernel colour <sup>21</sup>	Northern Leaf Blight <sup>22</sup>	Common rust <sup>22</sup>	Eyespot <sup>22</sup>	Head smut	Fusarium ear rot	Diplodia ear rot	Gibberella ear rot	Anthracnose stalk rot	Challenging yield environments	Medium yield environments	High yield environments	Hybrid	
n/a	7	6	7	6	6	7	5	5	7	6	6	6	6	-	90	100	115	P8240	NEW
n/a	6	6	6	7	6	6	5	6	7	4	6	6	5	-	85	95	105	P8333	
n/a	8	8	7	7	7	7	7	6	7	6	-	-	-	-	90	100	110	P8532	NEW
n/a	6	5	6	8	6	6	5	6	7	6	6	6	6	-	85	95	105	P8666	
n/a	6	6	7	7	6	7	7	7	6	5	5	-	6	-	90	100	110	<b>P8711</b>	NEW
n/a	6	5	7	6	5	6	6	7	6	6	6	7	6	-	95	105	110	P8805	
n/a	5	5	7	6	5	7	8	7	6	6	5	-	7	-	85	95	105	P92575	NEW
n/a	7	6	5	6	6	7	7	6	6	7	5	7	6	-	85	95	105	P9400	
n/a	6	7	7	9	6	7	7	7	7	6	5	-	7	-	85	95	110	<b>P9650*</b>	NEW
n/a	5	5	6	7	5	7	6	7	7	5	5	6	5	-	88	96	102	<b>P9721</b>	
n/a	5	5	6	7	5	6	7	7	6	6	5	6	5	-	85	95	105	P9978	
n/a	6	6	7	6	6	7	7	6	5	7	6	7	7	-	85	95	100	P0021	
n/a	5	5	7	7	5	7	6	7	7	6	5	-	5	-	85	95	105	P0200	NEW
n/a	6	6	7	7	6	6	6	7	7	6	6	6	5	-	85	95	105	P0362	
n/a	5	5	6	6	4	6	7	7	6	6	5	6	7	-	85	95	100	P0640	
HT/AC	9	7	7	5	8	5	6	6	6	5	5	5	6	5	85	95	105	P0891	
n/a	6	6	7	7	5	6	7	7	6	7	4	5	5	-	80	90	110	P0900	
n/a	5	6	6	6	4	6	7	6	6	5	5	5	4	-	85	95	110	P0937	
HT/AC	9	8	9	5	9	5	5	6	5	5	6	6	5	6	88	94	100	P1253	

The hybrid descriptions in all New Zealand Pioneer<sup>®</sup> brand products publications conform to strict word usage protocols approved and used by Pioneer around the world. We do not use descriptive adjectives randomly or loosely. We have a policy of avoiding exaggerated superlatives in product descriptions or product discussions. The following words are those approved for use in the product performance descriptions listed on pages 14-21 of this catalogue.

Trait ratings	Word and numeric alignment for yield & agronomic traits	Trait ratings	Word and numeric alignment for disease traits
8-9	Excellent, exceptional, outstanding, superb, impressive, industry- leading.	8-9	Highly resistant, excellent, exceptional, outstanding, impressive.
7	Superior, very good, strong, sound, reliable, stable, dependable, consistent.	6-7	Resistant, superior, strong, very good.
6	Good, above average, sound, reliable, stable, dependable, consistent.	4-5	Intermediate, moderate, adequate, acceptable.
5	Average, acceptable, adequate, moderate.	1-3	Susceptible (caution on use if disease is
4	Acceptable, slightly below average.		prevalent).
1-3	Marginal, susceptible, below average.		



# Trait characteristic notes

# Comparative Relative Maturity (CRM) to black layer:

Based on the GDUs required for a hybrid to reach black layer (physiological maturity) relative to other Pioneer® brand hybrids. It gives an indication of whether a hybrid reaches black layer early or late relative to its CRM to Harvest Moisture rating. Black layer refers to the stage of grain fill when the plant is physiologically mature and no further grain filling or weight increment will take place. Important: To help decide if a new hybrid fits your area's growing season, compare its black layer rating to a hybrid that you have planted previously, or one that is successfully used in your area.

#### <sup>2</sup> CRM to silking:

Based on the Growing Degree Units (GDUs) required for a hybrid to silk (flower) relative to other Pioneer<sup>®</sup> brand hybrids. It gives an indication of whether a hybrid flowers early or late relative to its CRM to Harvest Moisture rating. Hybrids with an early flowering CRM compared with black layer CRM will generally be better adapted to cool seasons within their area of adaption.

#### <sup>3</sup> CRM to harvest moisture:

Based on the grain moisture content at harvest, relative to other Pioneer<sup>®</sup> brand hybrids. The higher the rating, the longer the growing season required for the hybrid. It serves as a relative guide to compare the maturity difference between Pioneer<sup>®</sup> brand hybrids to the grain harvest moisture stage, stated as 22% moisture.

#### <sup>4</sup> Grain yield for maturity:

Pioneer hybrid trait comparisons should only be made within a range of + or - 4 CRM.

#### <sup>5</sup> Adaptability to high population:

A measure of the mix of genetic factors that permit a maize plant to withstand the stresses of high population and still give good standability and a high yielding ear of fine quality grain on every plant.

### <sup>6</sup> Adaptability to low population:

An indicator of a hybrid's ability to compensate (flex) ear size for low planting rates or loss from poor emergence or insect attack. Fertility levels and moisture must be adequate for 'flex' to be effective.

#### <sup>7</sup> Stress emergence:

These ratings are based on data collected from local replicated small plot trials planted early and at depth into wet and cold conditions and vigour ratings on New Zealand commercial seed provided by Pioneer's regional seed laboratory. All seed supplied to the market is expected to establish excellent plant stands if planted well and under normal germination conditions. Ratings of 7-9 indicate very good potential to establish normal stands under stressful environmental conditions of cold, wet soils. A 5-6 rating indicates good potential to establish normal stands under moderate stress conditions; and ratings of 1-4 indicate the hybrid has below average potential to establish normal stands under stress and should not be used if severe wet and cold conditions are expected after planting. Hybrids with high ratings are best adapted to early planting but due care to apply best agronomic practices is still required.

## <sup>8</sup> Early growth ratings:

Taken when two leaf collars are visible.

### <sup>9</sup> Plant height:

9 = Tall. 1 = Short.

### <sup>10</sup> Ear height:

9 = High. 1 = Low.

### Staygreen:

A measure of a hybrid's ability to stay as a green growing plant leading up to black layer (physiological maturity). It is a measure of late season plant health and drought tolerance which may affect plant standability and suitability for silage. A high rating indicates a wider "harvest window" providing a greater degree of harvest timing flexibility.

#### <sup>12</sup> Husk cover:

Measures the length of the husk leaves extending past the end of the cob, with a loose husk cover scoring one point lower for the same length of husk cover.

#### <sup>13</sup> Grain drydown:

Scores represent the rate of moisture loss after physiological maturity. Hybrids with high scores dry faster. They are not recommended for early harvest where planted as a full season hybrid.

#### <sup>4</sup> Grain appearance:

In the bin scored down for mould, cracks, red streak, etc.

#### <sup>b</sup> Processing use:

AC = Hybrids suitable for alkaline products. HT = Hybrids with hard texture, suitable for dry milling of hard textured grain such as grits.

#### Kernel hardness:

Relative rating of absolute density of kernels determined by stenvert analysis. 1-3 = Soft (low density). 4-5 = Average.

6-7 = Hard. 8-9 = Very hard.

#### <sup>17</sup> Kernel crown:

Indicates size of dent with a higher score indicating smoother (flintier) crown on the kernel.

#### <sup>18</sup> Kernel red streak:

Indicates the tendency of the kernels to red streak with a higher score indicating less tendency.

#### <sup>19</sup> Kernel size:

A higher score indicates greater percentage of larger kernels.

#### <sup>20</sup> Horny endosperm:

Score determined from visual observation of cross sectioned kernels. Score indicates that portion of the kernel with hard translucent starch suitable for dry milling into maize grits. Higher scores indicate higher percentage of hard endosperm.

#### <sup>21</sup> Kernel colour (yellow):

Higher score indicates a pale coloured kernel. Lower score indicates a darker colour. Scores in the 5-7 range indicate a more desirable yellow coloured grain.

<sup>22</sup> Northern Leaf Blight (NLB), Common Rust and Eyespot:

Caution: In conditions where leaf disease risks are high, growers should only consider planting hybrids with resistance ratings of 6 or higher for these diseases.

#### <sup>23</sup> Disease resistance ratings:

8-9 = Highly resistant. 4-5 = Moderately resistant.

- = Insufficient data available.

Disease ratings are based on overseas and New Zealand observations. Scores are based on visual assessment only and not on yield reduction data.

6-7 = Resistant.

1-3 = Susceptible.

#### <sup>4</sup> Cool environments:

In cool environments including high altitude sites (greater than approximately 150 m/500 ft above sea level) select your growing environment using the definitions below, then increase populations to the next level e.g. for P9721 in a medium yield environment at high altitude, plant to achieve 102,000 plants per hectare.

#### <sup>25</sup> Established plant populations:

These assume good seed establishment conditions. If you are planting very early or into a less than ideal seed bed or where insect pressure may be high (e.g. a shorter than optimum fallow period), seeding rates may need to be increased to compensate for reduced establishment due to field losses.

#### <sup>26</sup> Growing environment definitions:

May include some or all of the following characteristics:

#### Challenging yield environments (CYE)

 Typically light, sandy or shallow soils of low fertility, low moisture retention, and predictably low summer rainfall (drought-prone environments).

#### High cob or leaf disease pressure.

#### Medium yield environments (MYE)

- Average fertility soils with predictably adequate
  - summer rainfall and good moisture retention.
- Continuously cropped soils.
- Medium to low cob or leaf disease pressure.

#### High yield environments (HYE)

- Typically deeper, highly fertile and well structured soils
- with good moisture retention.Predictably good summer rainfall, shelter from high wind run.
- Good soils straight out of long term pasture.
- Low or no cob or leaf disease pressure.

#### Publication abbreviations

- **ha** = hectare
- **cm** = centimetres
- **m** = metres
- **km** = kilometres
- **t/ha** = tonnes per hectare
- **kg** = kilogram **kg/ha** = kilograms per hectare
- **kg/ha/year** = kilograms per hectare per year **kg/hl** = kilograms per hectolitre
- **\$/ha** = \$ per hectare
- \$/tonne = \$ per tonne



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