Pacific Seeds

Growing possibilities

# QUEENSLAND AND NORTHERN NSW

WHEAT

pacificseeds.com.au

Our aim is to release new wheat varieties that put more money in the pocket of Australian wheat growers - it's that simple.

We know there is no such thing as an average year and there are many factors that can influence the timing of the planting operation. At Pacific Seeds, we endeavour to bring you a range of options that can offer you choice when it comes to selecting varieties that will suit your program.

Through our majority stake in LongReach Plant Breeders, we are able to breed for Australian conditions, tailoring our breeding goals to each of the wheat growing zones.

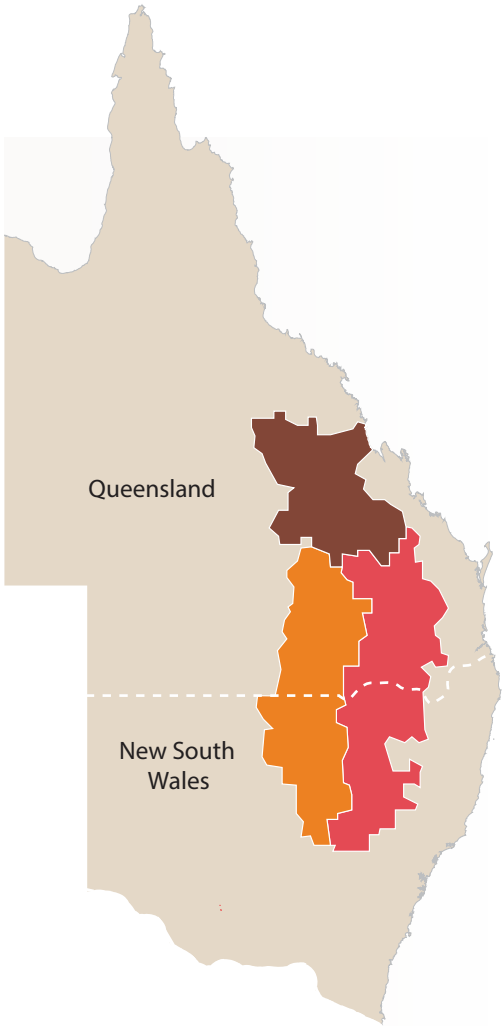
As a result our offering is particularly strong in the Northern NSW and QLD wheat growing areas, with our breeding focus on APH varieties now delivering excellent varieties that can improve your profitability.

Whether you are looking for early or late planting options, reliability in tough conditions or exceptional protein accumulation, we have a wheat variety that will meet your needs.

This regional guide will help you understand how our varieties can play an important role in improving profits from your farming operation. You simply need to choose the options that best suit your program.

Neil Comben

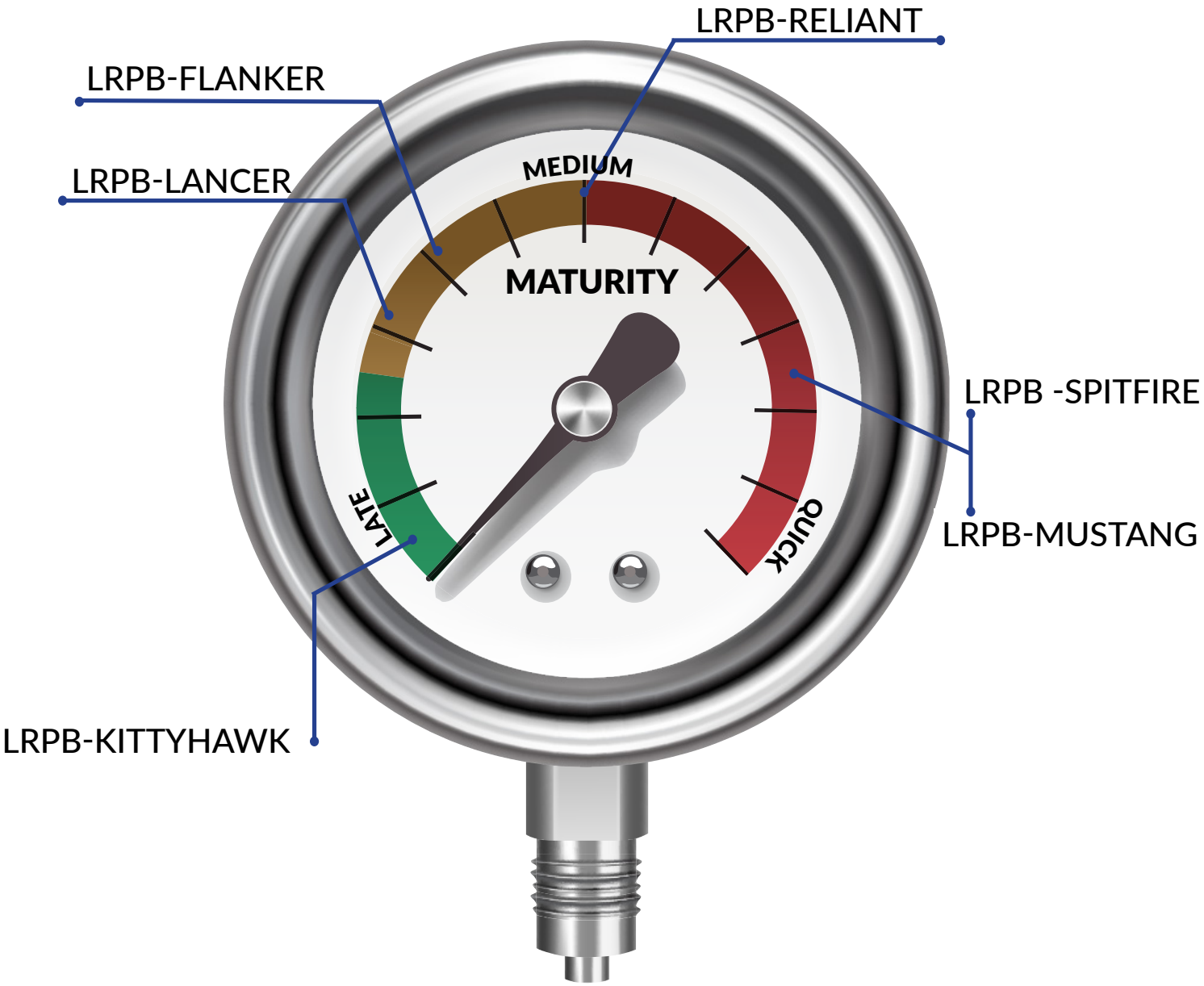
Wheat business manager
Pacific Seeds



# GAUGE WHAT YOU NEED FROM AN APH WHEAT

The Pacific Seeds range of APH wheats for NSW and QLD have been bred to encompass the full range of maturities for New South Wales and Queensland to give growers choice in their program while still providing the quality and agronomic package needed for success.

From  dual purpose winter type, Kittyhawk (most suited to southern NSW) to quicker maturing Spitfire and Mustang the Pacific Seeds wheat range has been bred to achieve APH quality in your paddock.



Queensland and Northern NSW

LongReach

# HELLFIRE

LPB14-3634

NEW

a new variety from Pacific Seeds

## VARIETY ATTRIBUTES

Medium Quick maturity for main season planting like Spitfire

11% yield increase over LRPB Spitfire while maintaining similar protein accumulation

Large grain, high protein and low screenings make LRPB Hellfire a standout grain package

Premium quality profile with APH classification in NSW and Qld

Solid disease package suitable for all main season growing areas in NSW and Qld

Medium plant height and good standability

| DISEASE RESISTANCE | | |
|---|---|---|
| Stem Rust | | MRp |
| Leaf Rust | | MSSp |
| Stripe Rust Yr17+27+ | | MRp |
| Yellow Spot | | MSSp |
| Septoria tritici | | Sp |
| Crown Rot | | MSSp |
| Prat.thornei | Res | - |
| Prat.thornei | Tol | MTMIp |
| Prat.neglectus | Res | - |
| Prat.neglectus | Tol | MTMIp |
| Black Point | | MSSp |

Resistance ratings: VS = Very Susceptible
S = Susceptible, MS=Moderately Susceptible
MR = Moderately Resistant, R = Resistant
Tol Rating - T = Tolerant, MT = Moderately Tolerant
MI = Moderately Intolerant, I = Intolerant
Data sourced NVT and LongReach Plant Breeders 2019. p = Preliminary Data Based on limited data set

## AGRONOMIC FEATURES

LRPB Hellfire is a medium quick maturing APH wheat with excellent yield performance and high protein accumulation. Quality testing during development in both the LongReach program and the NVT system has shown that LRPB Hellfire consistently produces protein levels similar to that of Spitfire, with high yields.

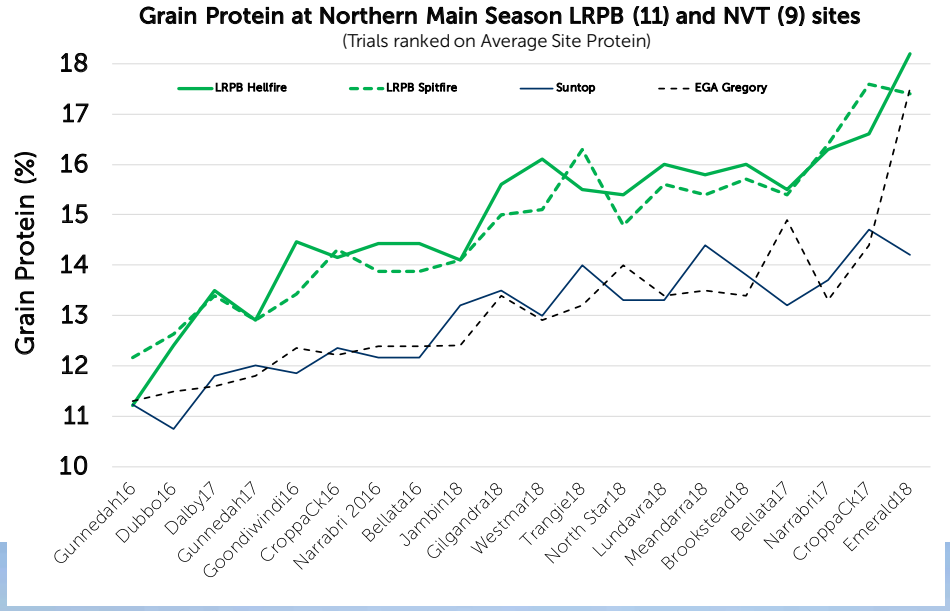
This feature makes LRPB Hellfire an important tool for growers looking to take advantage of stack averaging marketing opportunities, such as GrainCorp's Croptimise program, without sacrificing yield across the cropping program.

LRPB Hellfire shows excellent early vigour, solid resistance to Stem and Stripe rusts, good RLN tolerance, and good yield performance under the added stress of Crown Rot.

# YIELD PERFORMANCE

| Variety | Northern Main Season NVT MET analysis 2014-2018 | | | | |
|---|---|---|---|---|---|
| | NE NSW | NW NSW | SWQ | SEQ | CQ |
| LRPB Reliant | 107 | 107 | 112 | 107 | 106 |
| LRPB Flanker | 104 | 104 | 108 | 108 | 104 |
| **LRPB Hellfire*** | **105** | **106** | **106** | **104** | **104** |
| LRPB Mustang | 106 | 107 | 106 | 100 | 101 |
| Suntop | 103 | 103 | 106 | 106 | 104 |
| Sunprime | 102 | 103 | 103 | 99 | 101 |
| EGA Gregory | 99 | 99 | 102 | 103 | 98 |
| LRPB Spitfire | 96 | 94 | 94 | 96 | 95 |
| Average Yield t/ha | 3.87 | 3.41 | 2.89 | 3.88 | 3.10 |
| Trials in Analysis | 24 | 29 | 34 | 8 | 20 |

*Yield prediction based on one year of NVT trial data




LongReach Plant Breeders senior wheat breeder Bertus Jacobs and technical officer Adrian McNair in Hellfire wheat.

Pacific Seeds

LongReach

# MUSTANG

New South Wales & Queensland

LPB12-0494

## VARIETY ATTRIBUTES

Quick maturity for main season planting like Spitfire

Has shown an average yield increase over Spitfire of 11% in 61 LongReach QLD/NSW trials over 7 years

APH quality in NSW and QLD to suit all main season growing areas

Outstanding shorter canopy to make on farm management and stubble handling easier

Excellent major gene Stripe Rust resistance (RMR)

Has coped well with Crown Rot (MSS) and RLN (MTMI) in tough seasons in the north

| DISEASE RESISTANCE | | |
|---|---|---|
| Stem Rust | | MRMS |
| Leaf Rust | | S |
| Stripe Rust Yr17+27+ | | RMR |
| Yellow Spot | | MSS |
| Septoria tritici | | S |
| Crown Rot | | MSS |
| Prat.thornei | Res | MSS |
| Prat.thornei | Tol | MTMI |
| Prat.neglectus | Res | S |
| Prat.neglectus | Tol | MI |
| Black Point | | MS |

Resistance ratings: VS = Very Susceptible
S = Susceptible, MS=Moderately Susceptible
MR = Moderately Resistant, R = Resistant
Tol Rating - T = Tolerant, MT = Moderately Tolerant
MI = Moderately Intolerant, I = Intolerant
Data sourced NVT and LongReach Plant Breeders 2019. p = Preliminary Data Based on limited data set

## AGRONOMIC FEATURES

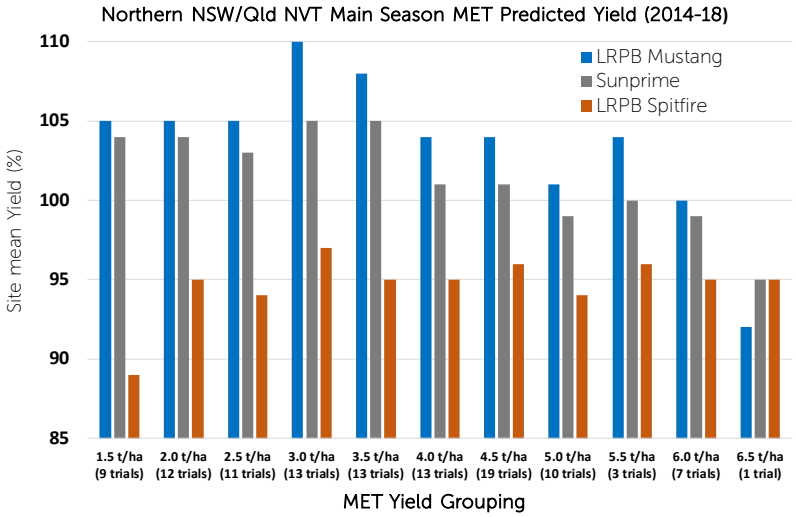
The cross (EGA Gregory/LPB1117) aimed to combine Gregory's broad adaption with the superior canopy of a high yielding breeding line. The end result has been a quick maturity APH wheat with a shorter canopy to make management easier.

Plant vigour is typical of other APH varieties with Mustang being a conservative tillering variety that has an erect open canopy. Mustang has a compact plant type throughout the season that ends up similar in height to Lancer at maturity. Mustang has a sound grain package with a good grain size and has an APH classification throughout NSW and QLD.

LongReach phenology trials have shown that LRPB Mustang tracks very similar to Spitfire at all seeding times. Mustang has shown the ability to move faster when stress comes to maximise yield.

LRPB Mustang has excellent major gene resistance to Stripe Rust (RMR) and good resistance to Stem Rust (MRMS). Mustang has moderate Yellow Spot resistance (MSS) and Black Point resistance (MS) which is an improvement over Gregory. Crown Rot Screening over the last 3 years has consistently shown Mustang to have useful Crown Rot resistance (MSS). Mustang has also shown good RLN (P.thornei) tolerance (MT-MI) that looks at least equal to Spitfire (MT-MI).

# YIELD PERFORMANCE




LRPB Mustang has consistently out yielded the most widely grown APH varieties in LongReach trials. When Mustang is compared to other quick varieties in NVT trials the data shows Mustang delivers a step up in yield to match the best mid-season varieties like Reliant.

| Qld NVT Main Season MET Yield (2014-18) | | | | | |
|---|---|---|---|---|---|
| Year | 2014 | 2015 | 2016 | 2017 | 2018 |
| Mean Yield t/ha | 2.59 | 3.68 | 4.32 | 2.19 | 2.26 |
| Variety / Trial No. | 11 | 14 | 15 | 14 | 6 |
| LRPB Mustang | | | 100 | 105 | 105 |
| LRPB Reliant | 110 | 111 | 106 | 109 | 110 |
| Suntop | 105 | 106 | 105 | 107 | 103 |
| Sunprime | | | | 104 | 103 |
| Hartog | 99 | 100 | 98 | 98 | 101 |
| Livingston | 95 | 100 | 96 | 98 | 97 |
| LRPB Spitfire | 94 | 96 | 94 | 94 | 95 |
| LRPB Crusader | 92 | 95 | 95 | 89 | 93 |
| LRPB Dart | 83 | 90 | 88 | 86 | 86 |

| NSW NVT Main Season MET Yield (2014-18) | | | | | |
|---|---|---|---|---|---|
| Year | 2014 | 2015 | 2016 | 2017 | 2018 |
| Mean Yield t/ha | 4.04 | 3.83 | 5.4 | 3.82 | 2.77 |
| Variety / Trial No. | 24 | 24 | 25 | 14 | 11 |
| LRPB Mustang | | | 100 | 106 | 103 |
| Condo | 107 | 107 | 101 | 103 | 100 |
| LRPB Reliant | 103 | 103 | 98 | 104 | 102 |
| Sunprime | | | | 104 | 103 |
| Suntop | 102 | 103 | 99 | 104 | 100 |
| Livingston | 98 | 100 | 92 | 98 | 95 |
| LRPB Spitfire | 95 | 97 | 92 | 95 | 94 |
| LRPB Crusader | 95 | 97 | 90 | 91 | 91 |
| LRPB Dart | 94 | 96 | 88 | 92 | 93 |

## ANDREW CEENEY
GUNNEDAH, NSW

"One grower north of Gunnedah had it up against mid-late maturity Lancer and the way the season went, Mustang was the better performer.

"Obviously, it was very quick to finish off with last year being well below average in terms of winter spring rainfall in the area.

"This quicker maturity and ability to fill grain earlier in the spring as conditions tighten for moisture – that was where the extra yield was created."

Another client, further west of the Liverpool plains, had it up against early-mid maturity Spitfire and it was very competitive in both yield and grain quality.

"Mustang was sitting around 3-4t/ha range across both paddocks. This was an exceptional result given well below average growing season rainfall (GSR).

"When emptying the gauges last season, GSR ranged from 80 to 150mm in an area generally receiving 250mm-plus.

"Both were very impressed with Mustang, particularly in its ability to stay compact in it vegetative stage and save stored soil moisture for the critical grain fill period.

"Mustang will fill the quick APH maturity gap. To sum up: in a tough finish it holds up well.

"Mustang's harvestability is similar to Lancer and post-harvest its shorter stature and lower biomass leaves growers with manageable residue levels."

LongReach

# RELIANT

New South Wales & Queensland

Now Free to Trade

Please complete the grower sales declaration form - available from our Pacific Seeds Website

## VARIETY ATTRIBUTES

The highest yielding Prime Hard variety in Main Season NVT trials in Northern NSW and Queensland

APH (NNSW/QLD) and AH (SNSW) with similar planting window to Suntop

Has a reliable grain package with good grain size and test weight, as well as showing lower screenings than Suntop

A double haploid variety developed from a Crusader/Gregory cross that has Gregory's tillering and Crusader's tightly packed heads

Good resistance to Stem Rust (R) and Leaf Rust (MR); has Adult Plant Resistance to Stripe Rust (MR)

| DISEASE RESISTANCE | | |
|---|---|---|
| Stem Rust | | R |
| Leaf Rust | | MR |
| Stripe Rust Yr17+27+ | | MR |
| Yellow Spot | | S |
| Septoria tritici | | S |
| Crown Rot | | MS |
| Prat.thornei | Res | MSS |
| Prat.thornei | Tol | TMT |
| Prat.neglectus | Res | SVS |
| Prat.neglectus | Tol | MTMI |
| Black Point | | MS |

Resistance ratings: VS = Very Susceptible
S = Susceptible, MS=Moderately Susceptible
MR = Moderately Resistant, R = Resistant
Tol Rating - T = Tolerant, MT = Moderately Tolerant
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Data sourced NVT and LongReach Plant Breeders 2019. p = Preliminary Data Based on limited data set

## AGRONOMIC FEATURES

Reliant has shown a broad adaptation to NSW and Queensland. Yield performance is best when planted in the main season window based on its mid-season maturity. Reliant has shown it can consistently out yield Suntop and has been the highest yielding APH variety in Queensland and Northern NSW Main Season NVT trials. Long term yield data shows it is particularly well adapted in low to medium (1-4 t/ha) yielding environments but is not recommended as an irrigated variety.

Reliant is a mix of its parents being shorter than Gregory and taller than Crusader. It has good early vigour and tillers strongly like Gregory. At maturity it has an open plant architecture with spread tillering habit and has tightly packed heads like Crusader. Lodging tolerance is better than Gregory but not as good as Crusader.

Reliant has good test weight, similar to its parents Gregory and Crusader. It has consistently delivered lower screenings than Suntop in the main season NVT trials. Grain protein is similar to other dominant yielding varieties.

Reliant has Adult Plant Resistance to Stripe Rust (MR) which is an improvement on the Crusader parent, but it still may require some fungicide support in high pressure situations.

## High yield and reliability that delivers

| Qld NVT Main Season Long Term MET Yield (2014-18) | | | | | |
|---|---|---|---|---|---|
| **Variety** | **2014** | **2015** | **2016** | **2017** | **2018** |
| | **2.59** | **3.68** | **4.32** | **2.19** | **2.26** |
| | 11 | 14 | 15 | 14 | 6 |
| LRPB Reliant | 110 | 111 | 106 | 109 | 110 |
| LRPB Flanker | 111 | 105 | 107 | 105 | 107 |
| Suntop | 105 | 106 | 105 | 107 | 103 |
| LRPB Mustang | | | 100 | 105 | 105 |
| Sunprime | | | | 104 | 103 |
| EGA Gregory | 106 | 99 | 101 | 98 | 102 |
| Hartog | 99 | 100 | 98 | 98 | 101 |
| LRPB Spitfire | 94 | 96 | 94 | 94 | 95 |

| Northern NSW NVT Main Season Long Term MET Yield (2014-18) | | | | | |
|---|---|---|---|---|---|
| **Variety** | **2014** | **2015** | **2016** | **2017** | **2018** |
| | **3.95** | **3.56** | **5** | **2.51** | **1.78** |
| | 11 | 12 | 13 | 9 | 6 |
| LRPB Reliant | 108 | 109 | 101 | 109 | 104 |
| LRPB Mustang | | | 99 | 112 | 104 |
| LRPB Flanker | 104 | 103 | 105 | 101 | 106 |
| Suntop | 103 | 104 | 102 | 106 | 100 |
| Sunprime | | | | 108 | 103 |
| EGA Gregory | 99 | 98 | 100 | 96 | 103 |
| LRPB Crusader | 101 | 99 | 93 | 93 | 88 |
| LRPB Spitfire | 97 | 97 | 93 | 96 | 91 |

## JOHN MCNAULTY
TALWOOD, QLD

"We try to chase protein wheat, either H2 or APH, but we couldn't the last few years because of the tough seasons. Hardy varieties are what we need. Something that is consistent over good and bad seasons.

"Our agronomist called saying he wanted to test new wheat Reliant in harsh conditions, so I said our red dirt would be the perfect test ground.

"The Reliant appeared to be shorter than other varieties, putting its effort into grain size rather than plant size. Grain size was good and it was plump seed, with yield at 2.2t/ha, protein at 11.4 per cent and moisture at 10.2pc."

LongReach

# FLANKER

New South Wales & Queensland

Now Free to Trade

Please complete the grower sales declaration form - available from our Pacific Seeds Website

## VARIETY ATTRIBUTES

A high yielding variety suited to NSW and Queensland

Mid late maturity with similar plasticity to EGA Gregory

Australian Prime Hard (APH) classification in Northern Zone and South Eastern Zone

Good level of resistance to Stripe Rust (RMR) Stem Rust (MR) and Leaf Rust (MR)

A reliable grain package, good test weights with sound grain size

Flanker is derived from EGA Gregory (75%) and has shown a 5% yield increase over EGA Gregory

| DISEASE RESISTANCE | | |
|---|---|---|
| Stem Rust | | MR |
| Leaf Rust | | MR |
| Stripe Rust Yr17+27+ | | RMR |
| Yellow Spot | | MSS |
| Septoria tritici | | MSS |
| Crown Rot | | MSS |
| Prat.thornei | Res | MSS |
| Prat.thornei | Tol | TMT |
| Prat.neglectus | Res | S |
| Prat.neglectus | Tol | MT |
| Black Point | | MS |

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MI = Moderately Intolerant, I = Intolerant
Data sourced NVT and LongReach Plant Breeders 2019. p = Preliminary Data Based on limited data set

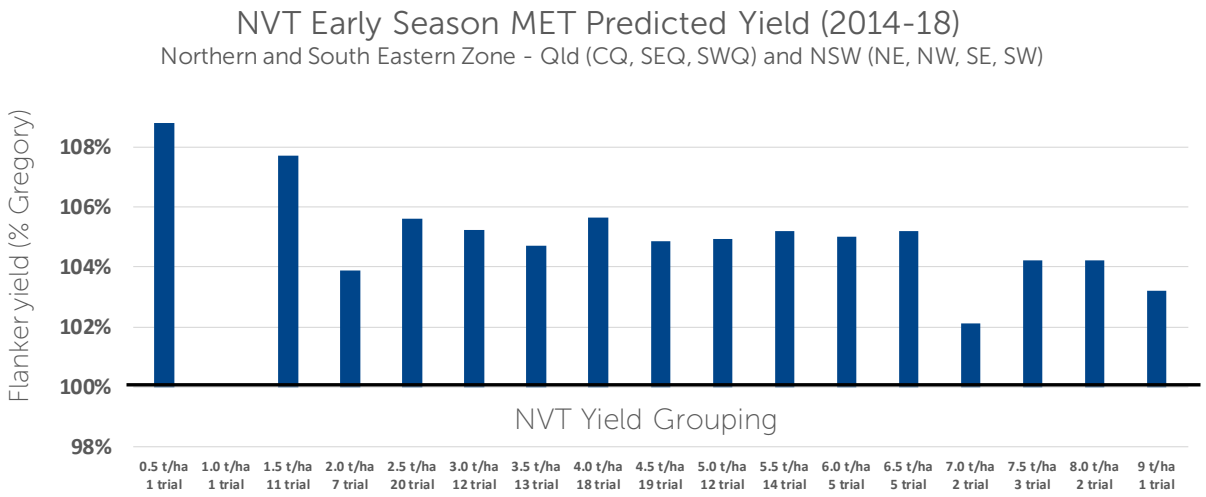
## AGRONOMIC FEATURES

The cross EGA Gregory//EGA Gregory/Lang.
Flanker is suited to all areas of NSW and Queensland where Gregory is grown. Growth habit during establishment and vegetative period is almost identical to that of Gregory.

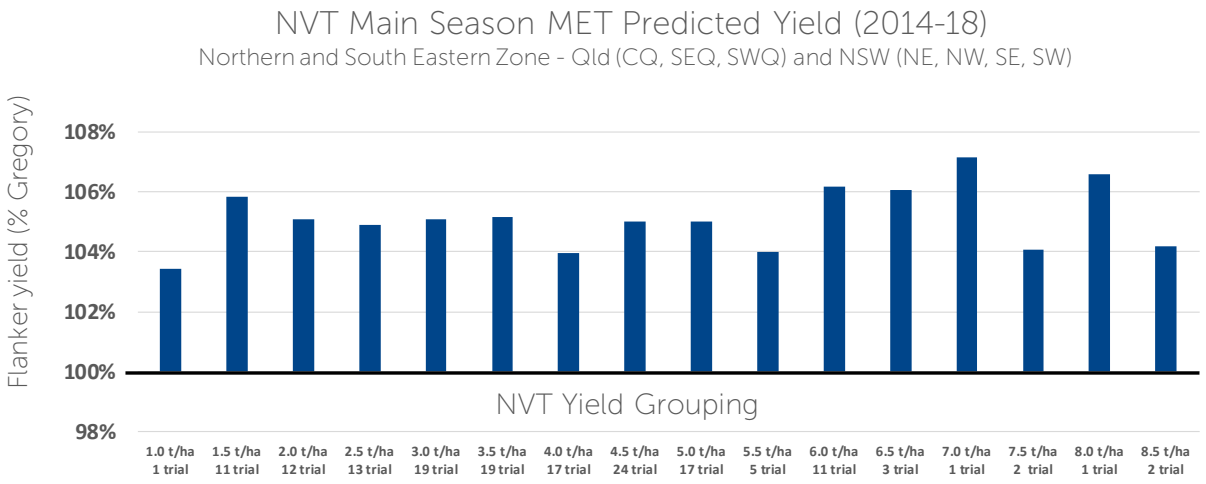
Maturity is mid-late with trials showing heading occurs within a few days of Gregory. Flanker is slightly taller than Gregory and is suited to dryland rather than irrigated production. Like Gregory, Flanker has shown excellent plasticity for its maturity suiting a wide range of planting times and areas.

Flanker has an APH classification in the Northern and South Eastern Zone and is already being regarded as having excellent Prime Hard quality.
The grain package is similar in robustness to Gregory and Flanker has shown significantly lower screenings than Suntop.

Flanker has excellent overall rust resistance and is a slight improvement over Gregory for Yellow Spot (MSS). Flanker has strong RLN (P.thornei) tolerance (TMT) with similar RLN resistance to it parents (MSS). Flanker is moderately susceptible to Crown Rot (MSS).




LRPB Flanker (146 trials) averaged 5% higher yield than Gregory in Early Season NVT trials




LRPB Flanker (158 trials) averaged 5% higher yield than Gregory in Main Season NVT trials

## PETER ANDERSON
KINGSTHORPE, QLD

Kingsthorpe grower Peter Anderson's first commercial crop of Flanker wheat earned him reserve champion in the field wheat category at the 2017 Royal Agricultural Society of Queensland crop competition.

Mr Anderson, who runs 600ha irrigated and dryland property, Arcadia, harvested the new variety in November 2016 for an average yield of six tonnes per hectare, peaking at 6.16t/ha, and registered 10.5 per cent protein for an APW classification.

"I picked this variety out because I heard some good reports about its yield potential. I'll pick yield over protein anyway.

"We always had success with Gregory and thought Lang was a good protein wheat, so we thought we'd give it a crack.

"If rainfall presents itself at the right time..., I'll be more than happy to give Flanker another try."

## MICHAEL JARVIS
ALBERT, NSW

Growing Flanker wheat for the first time last year was a positive experience for the Jarvis family at Albert, with the crop yielding well in a low rainfall season and winning them a local wheat crop competition.

Wayne and Michael Jarvis, along with their parents, John and Stacy, farm "Merndale" and "Glensneath", west of Dubbo.

Their crop of Flanker was predicted to yield 4.2 tonnes per hectare when judged prior to winning the Tullamore PA&H Wheat Crop Competition on October 19.

The crop later yielded 2.3t/ha when harvested on November 13.

Michael Jarvis said the wheat produced an excellent result despite very low in-crop rainfall.

"We like the way Flanker grows – it looked strong in a tough season, where we received just under 130mm of rain," he said.

"The flexibility of Flanker's wide seeding window is beneficial for us. It is also suited to low seeding rates as it tillers very well, and the plants make the most of our 16-inch row spacings.

"We had seen good results for Flanker from another district grower who trialled it on farm during the 2016 season, so we were eager to try it ourselves."

LongReach

# LANCER

Now Free to Trade

Please complete the grower sales declaration form - available from our Pacific Seeds Website

A mid to late maturing line which is responsive to temperature
APH classification in Northern and South Eastern Zones (All NSW and QLD)
Excellent grain package with good protein delivery, good grain size and low screenings
Solid Stripe rust resistance package based on Adult Plant Resistance (MR) very good resistance to Stem (R) and Leaf rust (RMR)
Shorter canopy height with good resistance to lodging
Performs well under crown rot pressure (MSS) and leading tolerance to RLN (T-MT)

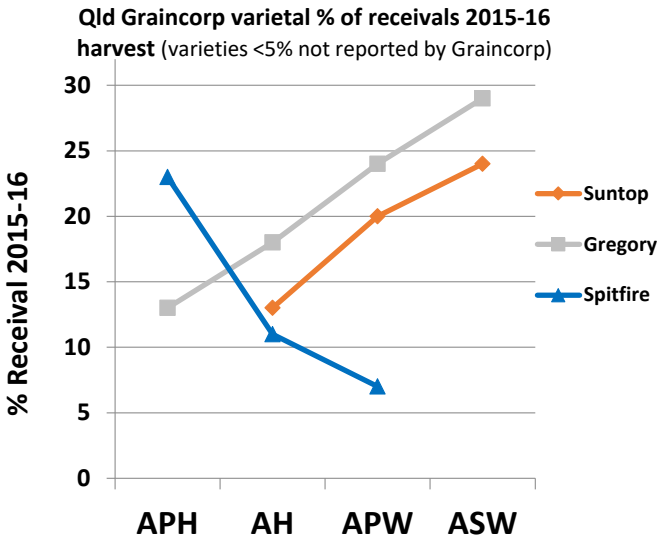
LongReach

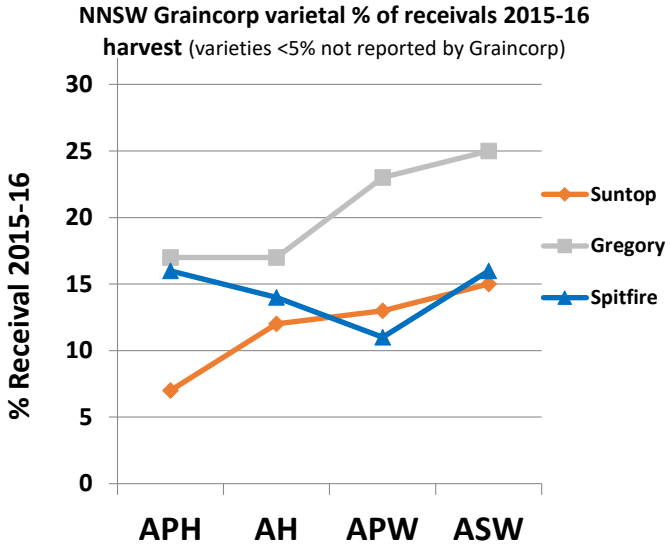
# SPITFIRE

Now Free to Trade

Please complete the grower sales declaration form - available from our Pacific Seeds Website

A high yielding variety with early mid maturity, slightly quicker than Baxter in the north and similar to Ventura in the south
Australian Prime Hard (APH) classification in Northern and South Eastern Zones
Good level of resistance to Stripe rust (MR) based on Adult Plant Resistance
Long Coleoptiles with strong early seedling vigour
Market leading grain package with large grain size and low screenings
Standout for high protein accumulation ensuring best possible opportunity for achieving APH
Good yield security under crown rot presssure (MS) and RLN (MT-MI)



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# PACIFICSEEDS.COM.AU

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Pacific Seeds™
Growing possibilities

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End Point Royalty (EPR)

Each time a grower purchases Pacific Seeds wheat seed, the grower agrees to comply with the Variety Licence and Royalty Agreement, including agreement to pay the EPR of $4.25 per tonne (GST excl). EPR is payable on all grain production, except on seed retained by the grower for replanting by the grower. The majority of the EPR will be paid by Advanta Seeds to the Breeder (LongReach Plant Breeders) for investment in future wheat breeding programs.