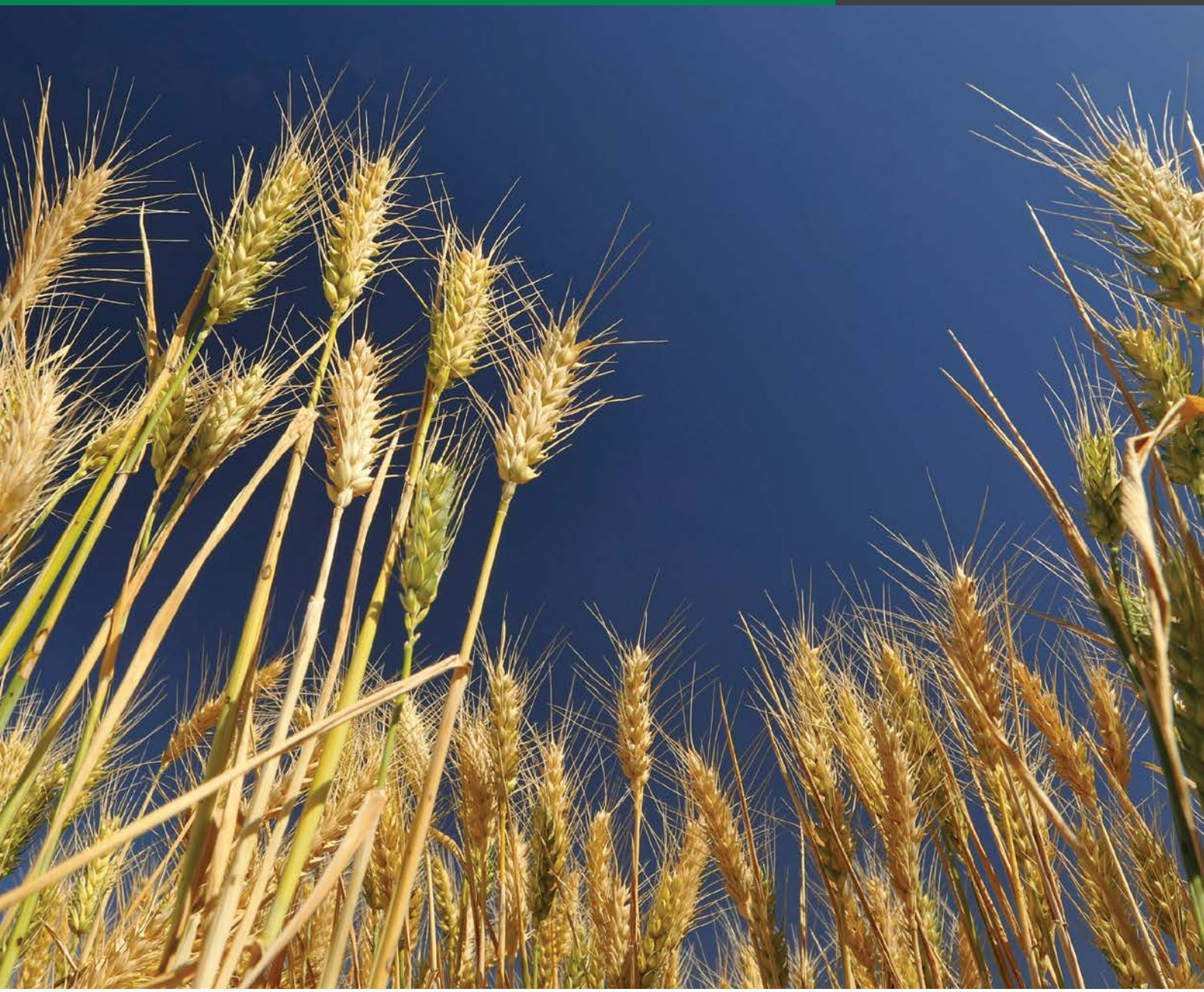
2025
VICTORIAN AND TASMANIAN CROP SOWING GUIDE

GRDC™
GRAINS RESEARCH & DEVELOPMENT CORPORATION

VICTORIA AND TASMANIA
DECEMBER 2024



GRDC NATIONAL VARIETY TRIALS™

ARE YOU GROWING THE BEST VARIETY FOR YOUR SITUATION?

grdc.com.au

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GRDC contact details:
PO Box 5367
KINGSTON ACT 2604
Tel: 02 6166 4500
Email: comms@grdc.com.au

Design and production:
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PHOTO: Brad Collis

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This guide can be downloaded to your computer or tablet at: https://grdc.com.au/victorian-crop-sowing-guide. Remember to update it each year.

THE VICTORIAN AND TASMANIAN CROP SOWING GUIDE

The *2025 Victorian and Tasmanian Crop Sowing Guide* outlines information on current varieties of the major winter crops grown in Victoria and Tasmania. The publication aims to prompt growers to ask themselves, 'Am I growing the best variety for my situation?'

The sowing guide is independently compiled by Astute Ag, with sources of additional information listed in each chapter. Growers are encouraged to use this publication as a guide for discussion with consultants, advisers and marketing agents, acknowledging that local advisers are a key resource for information relevant to their local area.

The sowing guide is published every spring, a timely release to assist growers in making variety choices for the coming season. It is important for growers and advisers to review the latest disease resistance ratings when they are updated in March. This season's National Variety Trials (NVT) results will also be available early in the new year via the NVT website, the Long Term Yield Reporter and the NVT Harvest Reports.

The sowing guide is a Grains Research and Development Corporation (GRDC) investment to support informed decision-making.

Photo: Ben O'Connor

Kaniva canola National Variety Trials.

INTRODUCTION

NATIONAL VARIETY TRIALS (NVT)

The trials presented in this book are sourced from the National Variety Trials (NVT) program through GRDC investment. The local trial service providers in 2023 were:

- Birchip Cropping Group (BCG) in Mallee and North West Victoria;
- Kalyx Australia in Wimmera and North East Victoria; and
- Southern Farming Systems (SFS) in South West Victoria and Northern Midlands (Tasmania).

The NVT program provides independent information on varieties for growers. The aim of each NVT is to document a ranking of new and widely adopted varieties according to grain yield and to provide grain quality information relevant to delivery standards. GRDC also supports the NVT pathology program, which determines independent disease resistance ratings used in this sowing guide.

Conducted to a set of predetermined protocols, NVT are sown and managed as close as possible to local best practice such as sowing time, fertiliser application, weed management and pest and disease control, including fungicide application. NVT are not designed to grow varieties to their maximum yield potential.

GRDC recognises that sustaining a project of this nature hinges on the collaboration of growers who willingly provide sites and often lend a hand in trial management on their properties. Equally significant is the partnership with seed companies that participate in the NVT program to ensure the continued delivery of performance results for growers.

For more information on the NVT program visit the NVT website at nvt.grdc.com.au.

NVT HARVEST REPORTS

The NVT Harvest Reports are a valuable extension to the sowing guide and include the latest yield reports and disease reactions. The NVT Harvest Reports are published in March/April each year at nvt.grdc.com.au/harvest-reports.

PLANT BREEDER'S RIGHTS

Varieties subject to Plant Breeder's Rights (PBR) at the time of printing are annotated with the symbol (D). PBR are a form of intellectual property that provides exclusive commercial rights to a registered variety of plant for up to 20 years (25 years for trees and some types of vines). They give exclusive rights to:

- produce or reproduce the plant material;
- condition the plant material for the purpose of propagation (conditioning includes cleaning, coating, sorting, packaging and grading);
- offer the plant material for sale;
- sell the plant material;
- import and export the plant material; and
- stock the plant material for any of the purposes described above.

Royalties collected are used to support ongoing research and the breeding of new and improved varieties.

In most instances, the breeder will license these rights to a selected seed company (the licensee). Exceptions to PBR are the rights of growers to save seed for sowing future commercial crops. However, harvested material derived from farm-saved seed will be subject to the end point royalty (EPR) applying to that variety.

Where EPRs apply, growers are required to enter arrangements with the breeder or licensee whereby royalties are paid on delivery of the grain. Some varieties may have a seed royalty (SR) paid on purchase of seed rather than an EPR.

END POINT ROYALTIES

End point royalties (EPRs) payable for harvest 2024-25 are quoted at $/tonne excluding GST from varietycentral.com.au. Compliance with EPR systems is vital to ensure the future of the Australian grains industry through the funding of new varieties and long-term productivity gains. EPRs for 2025-26 harvest will become available early in 2025 at Variety Central.

SELECTION CRITERIA

Growers are encouraged to select varieties based on all available information, including yield, quality, agronomic attributes, disease and pest resistance, individual farm and paddock situation, the access and availability of target markets, and storage and handling facilities.

COMPROMISED TRIALS

The purpose of the NVT is to allow growers to make informed variety selection decisions. However, trials that are compromised by frost, drought, animal damage, spray drift or other issues are not suitable for this purpose.

When trials are compromised to the extent that they may be misleading and not suitable for comparing genetics, they are made available as quarantined trial reports at nvt.grdc.com.au/trials/quarantined-trial-reports.

LONG-TERM YIELD RESULTS

The long-term yield results presented in this sowing guide are an output of NVT Multi Environment Trial (MET) analysis. NVT run in all cropping regions in Victoria, the Northern Midlands in Tasmania and other states across Australia. A five-year rolling dataset is used.

A mixed model approach is used in the MET analysis, drawing on expertise from GRDC's investment in the Analytics for the Australian Grains Industry (AAGI) program. This approach generates long-term MET results for varieties at an individual trial level.

This sowing guide presents the MET results on a region-by-year basis across the five years used in the MET dataset. The analysis, and subsequent reporting systems, have allowed NVT to bring together very large datasets to provide more refined, relevant and robust data about the relative performance of each variety across different locations and seasons. These provide a detailed understanding of a variety's performance over several years.

Readers can further interrogate the results online to better understand the performance of varieties under a range of situations using the NVT Long Term Yield Reporter. The long-term yield results are best viewed at the individual trial/environment level; however, these detailed datasets are too large for printed sowing guides or quick reference summaries, such as the *2025 Victorian and Tasmanian Crop Sowing Guide*.

Users can choose to view the results in year or yield-based groupings and can filter results to region or location selections to suit their own needs. In this sowing guide, we present results in year groupings and only for varieties present in trials.

The NVT Long Term Yield Reporter is designed to run on all web browsing platforms on computers, tablets and phones, and is available online at app.nvt.grdc.com.au.

INTERPRETING DISEASE RESISTANCE CLASSIFICATIONS

These classifications are a guide; yield losses will depend on the environment and seasonal conditions. Resistant varieties may still require additional protection if resistance is overcome through pathogen evolution. Disease ratings can change throughout the year. Refer to the most up-to-date ratings at NVT Disease Ratings or find ratings and more information in the Agriculture Victoria Cereal Disease Guide, Pulse Disease Guide and the Blackleg Management Guide.

COLOUR LEGEND – MEAN VARIETY YIELD PERFORMANCE

HIGH **LOW**

Long-term mean yield illustrated by colour gradient from highest (green) to lowest (red) within each year.

CEREALS

R Resistant: disease may be found but will be at such a level that no economic management is required, even in instances of high disease pressure.

MR Moderately resistant: disease may be observed but no economic management decisions will be required. Preventive sprays are not necessary but disease should be monitored. Management of seed quality may be required.

MS Moderately susceptible: in the presence of inoculum and in seasons conducive to disease, disease will be seen more readily when inspecting the crop. If seen early in the season, economic management decisions (preventive sprays) may be appropriate. Later occurrence may not require any action. Management of seed quality will be required.

S Susceptible: disease will be found easily in the crop. Management decisions will be required to reduce yield loss and will most probably be economic to do so. Management of seed quality will be required.

VS Very susceptible: do not grow the variety if the disease in question is a regular occurrence or risk. The risk of large losses is high if additional disease management is not applied.

PULSES

R Resistant: no symptoms visible.

RMR Resistant to moderately resistant: the disease may be visible but will not cause significant plant damage or loss. However, under extreme disease pressure or highly favourable environments/conditions fungicide applications may be required, e.g., to prevent seed staining.

MR Moderately resistant: the disease may be visible but will not cause significant plant damage or loss. However, under high disease pressure or highly favourable environments/conditions, fungicide applications may be required, e.g., to prevent seed staining.

MRMS Moderately resistant to moderately susceptible: the disease symptoms are moderate and may cause some yield and/or seed quality losses in conducive conditions. Fungicide applications, if applicable, may be required to prevent yield loss and seed staining.

MS Moderately susceptible: disease symptoms are moderate to severe and will cause significant yield and seed quality loss in the absence of fungicides in conducive seasons, but not complete crop loss.

S Susceptible: the disease is severe and will cause significant yield and seed quality loss, including complete crop loss in the absence of fungicides, in conducive conditions.

VS Very susceptible: growing this variety in areas where a disease is likely to be present is a very high risk. Significant yield and seed quality losses, including complete crop loss, can be expected without control and the increase in inoculum may create problems for other growers.

NEMATODES

R Resistant: nematode numbers will decrease when this variety is grown.

MR Moderately resistant: nematode numbers will slightly decrease when this variety is grown.

MS Moderately susceptible: nematode numbers will slightly increase when this variety is grown.

S Susceptible: nematode numbers will increase greatly in the presence of this variety.

VS Very susceptible: a large increase in nematode numbers can occur when this variety is grown and may cause problems to a following intolerant crop.

COLOUR LEGEND – DISEASE RATING

R	RMR	MR	MRMS	MS	MSS	S	SVS	VS

Resistance ranked from best (R) to worst (VS).

R = Resistant; RMR = Resistant to moderately resistant; MR = Moderately resistant; MRMS = Moderately resistant to moderately susceptible; MS = Moderately susceptible; MSS = Moderately susceptible to susceptible; S = Susceptible; SVS = Susceptible to very susceptible; VS = Very susceptible.

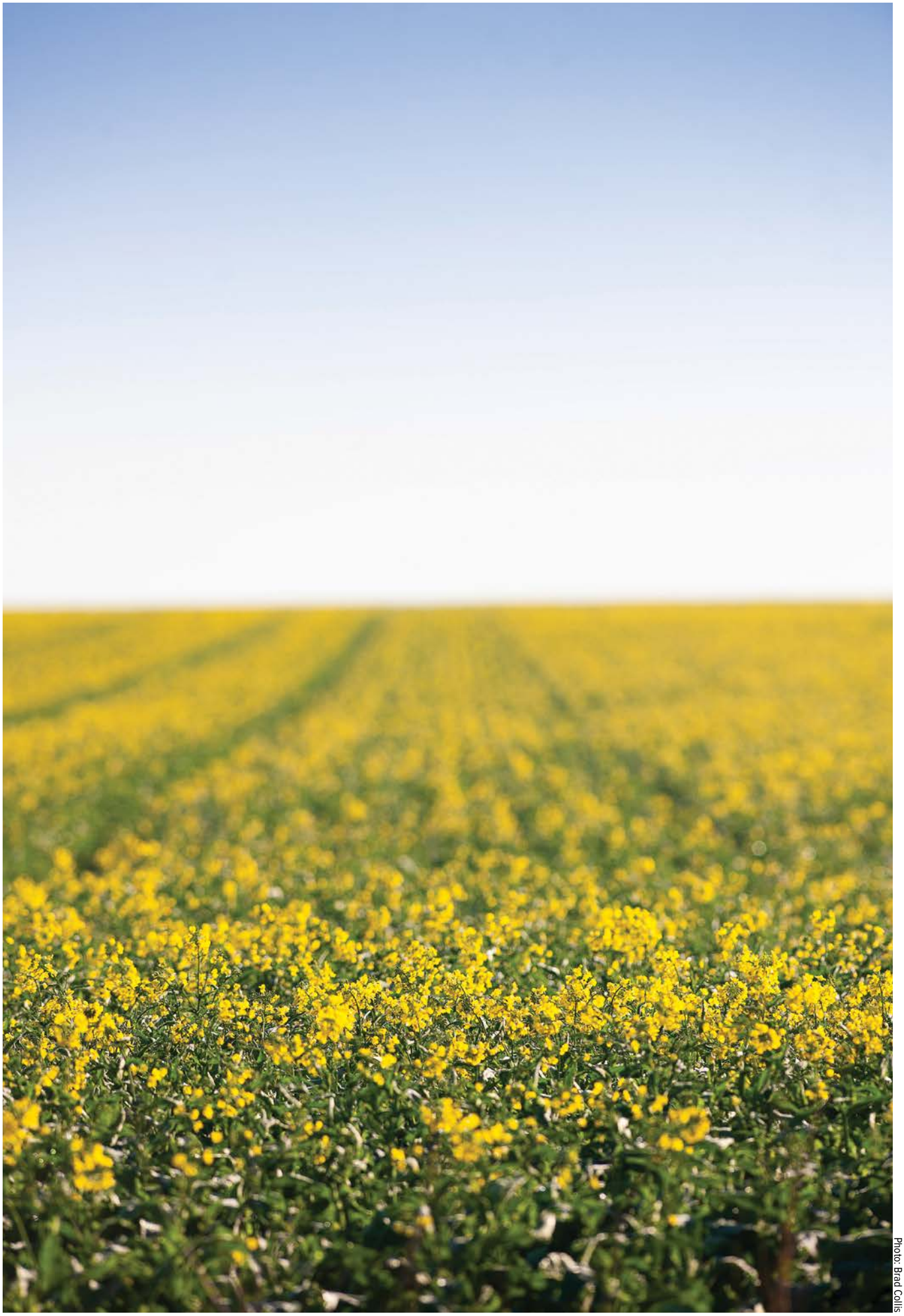

Photo: Brad Collis

Canola paddock in flower.

WHEAT

Wheat variety selection is based on considerations including grain yield and quality, disease resistance, maturity, local adaptation (e.g. rainfall, soil type, temperatures, elevation) and in some cases grazing suitability. This chapter aims to provide information about these attributes to assist with variety selection.

NEW VARIETIES

The new bread wheats added this year are:

- Avoca(ϕ)
- Boa(ϕ)
- Brighton(ϕ)
- Dozer(ϕ) CL Plus
- EG Jet(ϕ)
- Ironbark(ϕ)
- Leverage(ϕ)
- Mammoth(ϕ)
- RGT Healy(ϕ)
- RGT Ponsford(ϕ)
- Shotgun(ϕ)
- Soaker(ϕ)
- Sundancer(ϕ).

The new feed wheats are:

- Longford(ϕ)
- Triple 2.

New varieties are not necessarily entered into the NVT system, which means that some disease resistance and yield performance information may be missing from this guide. Please contact your local agronomist for more information.

INDUSTRY UPDATE

Australian Crop Breeders has released an industry guide for wheat variety maturity descriptions (Table 3). This is intended to provide a consistent approach to the relative heading date. As a result, there are some changes to the maturity ratings for varieties in this sowing guide.

QUALITY

Grain Trade Australia (GTA) has introduced a new ASW milling grade with a minimum nine per cent protein (ASW9) in response to declining protein in the Western Australian crop. The ASW9 classification will potentially enable growers to access a premium price over ASW1.

Further information regarding wheat quality can be found at wheatquality.com.au.

DISEASE

Important foliar diseases of wheat can be managed through careful variety selection, with recommended minimum disease ratings shown in Table 6. Avoiding highly susceptible varieties reduces reliance on fungicides and production costs. Overuse of fungicides promotes development of resistance to fungicides in pathogen populations, making diseases difficult to control. Disease ratings help to identify and select varieties that will require less management with minimal fungicide use.

Always consult the latest disease resistance ratings as they can change with changes in disease virulence. Resistance ratings are updated in February/March each year at NVT Disease Ratings or in the Agriculture Victoria Cereal Disease Guide.

The rusts, being the most important foliar pathogens of wheat, are closely monitored by the Australian Cereal Rust Control Program. This provides industry with early warnings of changes in the rust that may impact varieties. The StripeRustWM app is a useful tool to help with in-crop management of stripe rust. For the latest reports on the rust situation and information on how to submit samples see 'More information' below.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Wheat Southern Region

DISEASE MANAGEMENT

- NVT Disease Ratings
- Agriculture Victoria, Cereal Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of wheat, for disease identification and management
- University of Sydney, Australian Cereal Rust Survey reports on the rust situation and information on how to submit samples
- StripeRustWM app to support decision-making for management of stripe rust in wheat
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
ⓟ	Denotes Plant Breeder's Rights apply
CCN	Cereal cyst nematode
APH	Australian Prime Hard (min protein 13%)
AH	Australian Hard (min protein 11.5%)
APW	Australian Premium White (min protein 10%)
ASW	Australian Standard White
ADR	Australian Premium Durum
ASFT	Australian Soft (protein 9.5%)
AWW	Australian White Wheat
FEED	Australian Feed
IMI	Imidazolinone
GIA	Grains Innovation Australia
SADGA	Southern Australia Durum Growers Association

BREAD WHEAT

ASCOT$^{\Phi}$

APW quality. Ascot$^{\Phi}$ is a mid-slow maturing spring wheat suited to medium to high-rainfall zones. Released 2020. Bred by RAGT (previously BASF). Marketed by Seednet. EPR $3.50.

NEW – AVOCA$^{\Phi}$

AH quality. Slow to very slow maturing awned spring wheat suited to early sowing in high-rainfall areas. Head emergence a week later than RockStar$^{\Phi}$ and almost a week earlier than Stockade$^{\Phi}$. Compact canopy less prone to lodging than taller varieties. Released 2024 (tested as L14049-044). Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.90.

BALLISTA$^{\Phi}$

AH quality. Quick-mid maturing spring wheat, slightly quicker than Mace$^{\Phi}$. Yield stability across a range of environmental conditions. Released 2020. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.50.

BECKOM$^{\Phi}$

AH quality. Mid maturing spring wheat suited to sowing in early May. Beckom$^{\Phi}$ has a short stature and moderate straw strength and performs well across all rainfall zones. Released 2015. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.25.

NEW – BOA$^{\Phi}$

AH quality. Boa$^{\Phi}$ is a quick-mid maturing wheat that combines the best attributes of its Scepter$^{\Phi}$ x LRPB Cobra$^{\Phi}$ parentage to deliver a shorter canopy wheat with an erect growth habit to suit high-rainfall and irrigation areas. Acid and boron tolerant. Evaluation is currently limited in NVT. Released in 2024 (tested as LPB19-8035). Bred by LongReach and seed available exclusively through Baker Seed Co. EPR $4.00.

NEW – BRIGHTON$^{\Phi}$

AH quality. A quick-mid winter maturing, dual-purpose awned wheat. Developed for early sowing and winter grazing. Released 2024 (tested as V14051-172). Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $4.10.

BRUMBY$^{\Phi}$

APW quality. A mid maturing spring wheat suited to early May sowing. Brumby$^{\Phi}$ has yield stability across a range of environmental conditions and sprouting tolerance. Released 2022. Bred by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $3.50.

CALIBRE$^{\Phi}$

AH quality. Quick-mid maturing spring wheat derived from Scepter$^{\Phi}$. Moderately long coleoptile length. Released 2021. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.50.

CATAPULT$^{\Phi}$

AH quality. Mid-slow maturing spring wheat, suitable for late April to mid-May sowing. Suitable across a range of conditions and environments. Closely related to Scepter$^{\Phi}$ with similar grain quality, high test weight and low screenings. Released 2019. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.25.

CHIEF CL PLUS$^{\Phi}$

APW quality. A mid maturing spring wheat with good pre-anthesis vigour. Clearfield® tolerance to label rates of Intervix® herbicide. Released 2016. Marketed by InterGrain and available through InterGrain Seedclub Members. Not eligible for farmer-to-farmer trade. EPR $4.25.

NEW – DOZER$^{\Phi}$ CL PLUS

APW quality. Dozer$^{\Phi}$ CL Plus is a quick-mid maturing Clearfield® Plus wheat. Best suited to low to medium-rainfall areas with a mid-May sowing. An excellent alternative to Chief CL Plus$^{\Phi}$ and Hammer CL Plus$^{\Phi}$. Good lodging resistance, moderate early vigour, medium plant height and medium coleoptile length. Released in 2023 (tested as IGW6783). Bred by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $3.90.

DS BENNETT$^{\Phi}$

ASW quality. Tall awnless, mid-slow winter maturing wheat suited to medium to high-rainfall zones and for grain and graze applications. Released 2018. Bred by Dow Seeds, seed available from Seednet. EPR $4.25.

DS PASCAL$^{\Phi}$

APW quality. Mid-slow maturing spring wheat suited to medium to high-rainfall zones and irrigation. Released 2015. Bred by Dow Seeds and marketed by Seednet. EPR $4.25.

NEW – EG JET$^{\Phi}$

APW quality. Mid maturing spring wheat that performs well in the medium to high-rainfall zones. EG Jet$^{\Phi}$ has short to medium height straw. Re-released 2024. Bred by Elders and available from EPG Seeds. EPR $3.00.

EG TITANIUM

AH quality. A mid-slow maturing spring wheat targeted for early planting in medium to high-rainfall zones. Good early vigour. Released 2018. Bred by Elders and available from EPG Seeds. EPR $3.00.

GENIE(Φ)

AH quality. Genie(Φ) is a mid-slow maturing spring wheat suitable for late April sowing with a maturity slightly later than RockStar(Φ). Particularly suited to high-yielding environments in medium to high-rainfall areas. Long coleoptile to enable deeper planting. Medium plant height and good sprouting tolerance. Smaller grain than RockStar(Φ) and may be vulnerable to screenings in a tight finish or when sown outside the optimum window. Released in 2023 (tested as IGW6754). Bred by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $3.50.

HAMMER CL PLUS(Φ)

AH quality. Quick to mid maturing spring wheat. Two-gene Clearfield® tolerance to label rates of Intervix® herbicide. Closely related to Mace(Φ) with similar maturity and adaptability. Released 2020. Bred and marketed by AGT. EPR $4.25.

ILLABO(Φ)

AH quality. A quick-mid winter maturing, dual-purpose, awned wheat. Developed for early sowing and winter grazing. Good lodging and black point resistance. Released 2018. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.50.

NEW – IRONBARK(Φ)

AH quality. Mid maturing spring wheat with broad adaptation. Tolerant to boron and aluminium and particularly suited to acid soils. Similar to Beckom(Φ) but with improved yield and larger grain size. Released 2024 (tested as V14035-125). Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.90.

KINGSTON(Φ)

AH quality. Mid maturing spring wheat with a compact plant type with broad adaptation. Released 2022. Bred by RAGT (previously BASF). Marketed by Seednet. EPR $3.55.

NEW – LEVERAGE(Φ)

AH quality. Mid-slow maturing spring wheat, suited to late April to early May planting. Released 2023 (tested as SUN1087I). Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $4.00.

LONGSWORD(Φ)

AWW quality. A quick winter maturing, dual-purpose wheat suited to low to medium-rainfall areas. Suits April sowing and offers grazing potential. Late to flower, but quick to mature once its vernalisation requirement is met. Released 2017. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $2.75.

LRPB ANVIL(Φ) CL PLUS

AH quality. Quick maturing spring wheat suited to low to medium-rainfall areas. Two-gene Clearfield® tolerance to label rates of Intervix® herbicide. Good early growth and fast grain fill with large grain. Released 2022. Bred by GIA, developed by LongReach and marketed by Pacific Seeds. EPR $4.25.

LRPB BALE(Φ)

APW quality. A slow maturing spring wheat aimed at medium to high-rainfall areas. Long coleoptile length. Delayed flowering and awnless qualities allow it to be delivered as grain or cut for hay, making it a good option for frost-prone areas. Released 2021. Bred by CSIRO and marketed by LongReach. Free to trade. EPR $3.50.

LRPB DUAL(Φ)

AH quality. Mid-slow maturing, awnless spring wheat aimed at low to medium-rainfall areas. A mid-long coleoptile length. Delayed flowering and awnless qualities allow it to be delivered as grain or cut for hay, making it a good option for frost-prone areas. Released 2021. Bred by CSIRO and marketed by LongReach. Free to trade. EPR $3.50.

LRPB KITTYHAWK(Φ)

AH quality. Mid winter maturing wheat, similar to EGA Wedgetail(Φ). Developed for early sowing, suited to medium to high-rainfall areas. Susceptible to CCN. Dual-purpose wheat suitable for early winter grazing. Released 2017. Marketed by Pacific Seeds. Free to trade. EPR $4.25.

LRPB MAJOR(Φ)

AH quality. LRPB Major(Φ) is a mid to slow maturing spring wheat suited to medium to high-rainfall areas. With a similar maturity to RockStar(Φ), it is suited to a late April to early May sowing window. Strong yield performance in both acidic and sodic soils. Good overall disease package with improved Septoria resistance over Beckom(Φ). Released in 2023 (tested as LPB18-7203) Bred by LongReach and marketed by Pacific Seeds. EPR $4.00.

LRPB MATADOR(Φ)

AH quality. LRPB Matador(Φ) is a mid maturing spring wheat. Bred from a cross with Scepter(Φ), it has a similar maturity but with a shorter canopy for better tolerance to lodging. Improved powdery mildew and stripe rust resistance over its Scepter(Φ) parent. Released in 2023 (tested as LPB18-4160). Bred by LongReach and marketed by Pacific Seeds. EPR $3.50.

LRPB SCOUT(Φ)

AH quality. Mid maturing spring wheat with wide adaptation. Adapted to alkaline soils. Released 2009. Bred by LongReach. Marketed by Pacific Seeds. Free to trade. EPR $2.80.

LRPB TROJAN(Φ)

APW quality. Mid-slow maturing spring wheat suited to medium to high-rainfall areas. Released 2013. Bred by LongReach. Marketed by Pacific Seeds. Free to trade. EPR $4.00.

NEW – MAMMOTH(Φ)

APW quality. A very slow spring wheat, maturity between Illabo(Φ) and Valiant(Φ) CL Plus. Suitable across all environments when sown in its ideal sowing window in an early break scenario. May be vulnerable to screenings in a tight finish or when sown outside the optimum window. Released in 2024 (tested as IGW6755). Bred by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $3.50.

MOWHAWK(Φ)

APW quality. Quick winter wheat with a similar growth habit and maturity to Longsword(Φ). Quicker to head than Illabo(Φ). Mowhawk(Φ) has broad general adaptation and is ideally suited to higher production areas and early break scenarios. Released in 2023 (tested as LPB19-14343). Bred and marketed by LongReach. Free to trade. EPR $4.00.

RAZOR CL PLUS(Φ)

ASW quality. Quick-mid maturing spring wheat derived from Mace(Φ). Two-gene Clearfield® tolerance to label rates of Intervix® herbicide. Released 2018. Bred and marketed by AGT. EPR $3.30.

REILLY(Φ)

AH quality. Mid maturing spring wheat with medium plant height, suited to low to medium-rainfall zones. Released 2022. Bred by RAGT (previously BASF). Marketed by Seednet. EPR $3.55.

NEW – RGT HEALY(Φ)

Classification pending but AH/APH anticipated. Quick-mid maturing spring wheat suited to sowing in late May. Performs well across all rainfall zones but suited to higher yielding environments. Medium stature and moderate straw strength. Released 2024 (tested as BH130130S-B3). Bred and marketed by RAGT. EPR $4.25.

NEW – RGT PONSFORD(Φ)

Classification pending but AH/APH anticipated. Mid maturing spring wheat suited to early May sowing. Performs well across all rainfall zones. Medium stature and moderate straw strength. Released 2024 (tested as 16Q2H0055). Bred and marketed by RAGT. EPR $4.00.

ROCKSTAR(Φ)

AH quality. Mid-slow maturing spring wheat suited to a late April sowing. Good grain size and moderate plant height. Released 2019. Bred and marketed by InterGrain and available through InterGrain Seedclub members. Free to trade. EPR $3.50.

SCEPTER(Φ)

AH quality. Mid maturing spring wheat with broad adaptability. Medium height. Released 2015. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.25.

SHERIFF CL PLUS(Φ)

APW quality. Mid-slow maturing spring wheat with good yield stability. Clearfield® tolerance to label rates of Intervix® herbicide. Released 2018. Bred and marketed by InterGrain and available through InterGrain Seedclub members. Not eligible for farmer-to-farmer trade. EPR $4.25.

NEW – SHOTGUN(Φ)

AH quality. Mid-maturing spring wheat. Derived from and expected to replace Scepter(Φ). Agronomically very similar to Scepter(Φ). Released 2024 (tested as RAC3227). Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.90.

NEW – SOAKER(Φ)

APW quality. Mid-maturing spring single-gene IMI-tolerant wheat intended to be used in situations where IMI-herbicide residues may remain in the soil. Derived from Scepter(Φ) with similar agronomic traits including tolerance to boron and aluminium. Released in 2023 (tested as LPB19-6184). Bred by GIA, developed by LongReach and marketed by AG Schilling & Co. Free to trade. EPR $3.50.

STOCKADE(ф)

APW quality. A very slow maturing spring wheat with similar maturity to the winter wheat RGT Accroc(ф). Awned with white grain. Suited to high-rainfall areas due to its slow maturity. Released in 2022 (tested as LPB16-0598). Bred by LongReach and marketed by AGF Seeds. EPR $3.65.

SUNBLADE CL PLUS(ф)

AH quality. Mid maturing spring wheat suited to mid-May sowing across all environments. Two-gene Clearfield® tolerance to label rates of Intervix® herbicide. Medium plant height, moderate grain size but can be prone to higher levels of screenings than other IMI-tolerant varieties. Released 2020. Bred and marketed by AGT. EPR $4.35.

NEW – SUNDANCER(ф)

Classification pending but AH/APH anticipated. Mid-slow maturing spring wheat, suited to late April/early May planting. Excellent rust resistance, medium to short plant stature and good lodging tolerance. Released 2023 (tested as SUN1161A). Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $4.00.

SUNMASTER(ф)

APH quality. Mid maturing spring wheat of medium height, more suited to the North East. Sunmaster(ф) is intended as a replacement for Suntop(ф) and these two varieties are the only ones offering potential access to the premium APH quality in the southern region. Released 2020. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.60.

TOMAHAWK CL PLUS(ф)

APW quality. Quick-mid maturing spring wheat. Two-gene Clearfield® tolerance to label rates of Intervix® herbicide. Agronomically similar to Scepter(ф) with the benefit of IMI tolerance. Released in 2023 (tested as RAC3261), bred by AGT. Seed is available from AGT affiliates. EPR $4.15.

VALIANT(ф) CL PLUS

AH quality. Slow maturing spring wheat. Clearfield® tolerance to label rates of Intervix® herbicide. Long coleoptile and ideally suited to mid to late April sowing. Useful where there are residue concerns from previous crops. Released 2021. Bred and marketed by InterGrain. EPR $4.35.

VIXEN(ф)

AH quality. Quick maturing spring wheat suited to low to medium-rainfall areas. Yield flexibility allows it to capitalise on softer finishes. Suitable for mid-May onwards sowing with moderate plant height. Released 2018. Bred and marketed by InterGrain. Free to trade. EPR $3.50.

WILLAURA(ф)

AH quality. Slow to very slow maturing spring wheat, similar to LRPB Beaufort(ф). Ideally suited to early sowing in medium to high-rainfall areas. Good lodging resistance coupled with compact plant height leads to good performance in high-rainfall zones and under irrigation. Released 2022. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.50.

SPECIALTY WHEAT

LRPB ORYX(ф)

ASFT quality. Mid-maturing spring (soft biscuit) wheat suited to medium-rainfall zones in Victoria. Released 2020. Bred by LongReach. Marketed by Pacific Seeds. Free to trade. EPR $3.75.

FEED/DUAL-PURPOSE WHEAT

ANAPURNA

FEED quality. Mid to slow maturing winter wheat, similar to RGT Accroc(ф). Awned with red grain. Dual-purpose variety suitable for graze-and-grain production when sown early in high-rainfall areas or under irrigation. Good resistance to lodging and disease. Released 2020. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.20.

BIGRED(ф)

FEED quality. Mid to slow maturing winter wheat. Awned with red grain. Suited to medium to high-rainfall zones and irrigation. Suitable for dual-purpose applications with early sowing. Released 2021. Marketed by AGF Seeds. EPR $3.65.

NEW – LONGFORD(ф)

FEED quality. Slow to very slow maturing winter wheat. Awned with red grain. Suited to long-season environments. Good potential for dual-purpose graze-and-grain production from early planting. Strong lodging and disease resistance characteristics. Released 2024 (tested as AGFWH004818). Bred by KWS and marketed by AGF Seeds. EPR $3.85.

LRPB BEAUFORT(Φ)

FEED quality. Slow maturing spring wheat. Awnless with red grain. Suited to high-rainfall zones and certain medium-rainfall zones. Suits acid soils due to aluminium tolerance. Good resistance to lodging. Released 2008. Bred by CC Benoist and marketed by GrainSearch. EPR $3.00.

RGT ACCROC(Φ)

FEED quality. A mid to slow maturing winter wheat. Awned with red grain. Suited to medium to high-rainfall areas and irrigation for dual-purpose applications when early sowing is possible. Released 2017. Bred and marketed by RAGT. EPR $4.00.

RGT CALABRO

FEED quality. A slow maturing winter wheat. Awned with red grain. Suited to the high-rainfall zone. Released 2017. Bred and marketed by RAGT. EPR $4.00.

RGT CESARIO(Φ)

FEED quality. Mid to slow winter wheat. Awnless with red grain. For medium to high-rainfall areas of Victoria. A multipurpose variety that is suited to grazing, silage and grain production. Released 2021. Bred and marketed by RAGT. EPR $4.00.

RGT WAUGH(Φ)

FEED quality. A slow maturing winter wheat. Awned with white grain. For medium to high-rainfall zones and irrigation. Suitable for dual-purpose applications when early sowing is possible. Released 2022. Bred and marketed by RAGT. EPR $4.00.

RGT ZANZIBAR

FEED quality. Very slow maturing spring wheat. Awned with red grain. Suited to North Central, North East and South West with grazing potential. Released 2017. Bred and marketed by RAGT. EPR $4.00.

SEVERN(Φ)

FEED quality. Quick-mid maturing winter wheat. Awnless with white grain. Suitable for spring and winter grazing, hay and silage production. Dense tillering habit with excellent straw strength for standability. Suitable for medium and high-rainfall areas in Victoria. Released 2021. Developed by S&W Seed Company. EPR $3.00.

NEW – TRIPLE 2

FEED quality. Mid winter maturing wheat, slightly slower than LRPB Beaufort(Φ). Awned with red grain. Suited to medium to high-rainfall areas. As a quicker maturity winter wheat, Triple 2 has a wider sowing window and adaptability compared with longer season winter wheats. Released 2024 (tested as AGFWH010222). Bred by Breun and marketed by AGF Seeds. EPR $4.00.

DURUM WHEAT

BITALLI(Φ)

ADR quality. A quick-mid maturing durum wheat suited to low to medium-rainfall areas. Produces low screenings and high test weight. Released 2019. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.50.

DBA-AURORA(Φ)

ADR quality. A mid maturing durum wheat with good early vigour and weed competitiveness. Released 2014. Bred by Durum Breeding Australia and marketed by SADGA. EPR $3.00.

PATRON(Φ)

ADR quality. A mid maturing durum wheat, similar to DBA-Aurora(Φ). Low screenings and high test weight. Suited to medium to high-rainfall areas. Released 2022. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $4.00.

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Table 1: Recommended sowing window for wheat by phenology and region.

This table is a guide only and has been compiled from research from the National Phenology Initiative (UOM1806-001RTX and CSP2206-012RTX – National Phenology Initiative – Phase 2). These projects undertook time of sowing x variety experiments across Victoria to determine optimal sowing times for different cultivars in different environments. They also simulated optimal flowering periods in different environments and quantified variety development speed relative to each other.

Type	Phenology	Example variety	March				April				May				June			
MALLEE																		
Winter	Mid	LRPB Kittyhawk(Ф)																
Winter	Quick	Mowhawk(Ф)																
Spring	Mid-slow	LRPB Major(Ф)																
Spring	Mid	Scepter(Ф)																
Spring	Quick-mid	Calibre(Ф)																
Spring	Quick	Vixen(Ф)																
WIMMERA			**March**				**April**				**May**				**June**			
Winter	Mid	LRPB Kittyhawk(Ф)																
Winter	Quick	Mowhawk(Ф)																
Spring	Slow-very slow	LRPB Beaufort																
Spring	Mid-slow	LRPB Major(Ф)																
Spring	Mid	Scepter(Ф)																
Spring	Quick-mid	Calibre(Ф)																
Spring	Quick	Vixen(Ф)																
NORTH CENTRAL			**March**				**April**				**May**				**June**			
Winter	Mid	LRPB Kittyhawk(Ф)																
Winter	Quick	Mowhawk(Ф)																
Spring	Slow-very slow	LRPB Beaufort																
Spring	Mid-slow	LRPB Major(Ф)																
Spring	Mid	Scepter(Ф)																
Spring	Quick-mid	Calibre(Ф)																
Spring	Quick	Vixen(Ф)																
NORTH EAST			**March**				**April**				**May**				**June**			
Winter	Mid	LRPB Kittyhawk(Ф)																
Winter	Quick	Mowhawk(Ф)																
Spring	Very slow	Stockade																
Spring	Mid-slow	LRPB Major(Ф)																
Spring	Mid	Scepter(Ф)																
Spring	Quick-mid	Calibre(Ф)																
Spring	Quick	Vixen(Ф)																
SOUTH WEST			**March**				**April**				**May**				**June**			
Winter	Slow	RGT Calabro																
Winter	Mid	LRPB Kittyhawk(Ф)																
Spring	Very slow	Stockade(Ф)																
Spring	Mid-slow	LRPB Major(Ф)																
Spring	Mid	Beckom(Ф)																

Yellow = earlier than optimum.
Green = optimum sowing time.
Red = later than optimum.
Blue = dual-purpose (grain and graze).

Table 2: Agronomic characteristics of wheat varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeders, National Variety Trials, GRDC research projects and seed companies. Maximum quality for the southern zone has been sourced from Wheat Quality Australia (2024).

Variety	Maximum quality	Rainfall			Spring maturity	Winter maturity	Height	Awn	Soil tolerance	
		Low <350mm	Med 350–500mm	High >500mm					Boron	Acid
BREAD WHEAT										
Ascot(Φ)	APW		✓	✓	M-S		M	A		
Avoca(Φ)	AH			✓	S-VS		M	A		
Ballista(Φ)	AH	✓	✓		Q-M		S	A		
Beckom(Φ)	AH	✓	✓	✓	M		S	A	MT	MT-T
Boa(Φ)	AH		✓	✓	Q-M		S	A	MT	MT-T
Brighton(Φ)	AH	✓	✓	✓		Q-M	M	A		
Brumby(Φ)	APW	✓	✓	✓	M		MT	A		
Calibre(Φ)	AH	✓	✓		Q-M		M	A		
Catapult(Φ)	AH	✓	✓	✓	M-S		M	A	MT	MT-T
Chief CL Plus(Φ)	APW	✓	✓	✓	M		M	A		
Dozer(Φ) CL Plus	APW	✓	✓		Q-M		M	A		
DS Bennett(Φ)	ASW		✓	✓		M-S	T	AL		
DS Pascal(Φ)	APW		✓	✓	M-S		M	A		
EG Jet(Φ)	APW		✓	✓	M		SM	A		
EG Titanium	AH		✓	✓	M-S		S	A		MT-T
Genie(Φ)	AH		✓	✓	M-S		M	A		
Hammer CL Plus(Φ)	AH	✓	✓		Q-M		S	A		
Illabo(Φ)	AH	✓	✓	✓		Q-M	S	A	I (P)	MT (P)
Ironbark(Φ)	AH	✓	✓		M		M	A		
Kingston(Φ)	AH		✓	✓	M		S	A	MT	
Leverage(Φ)	AH		✓	✓	M-S		M	A		
Longsword(Φ)	AWW	✓	✓	✓		Q	M	A	MT (P)	MT (P)
LRPB Anvil(Φ) CL Plus	AH	✓	✓		Q		MT	A	MI	MT
LRPB Bale(Φ)	APW		✓		S		T	AL	MT	MT-T
LRPB Dual(Φ)	AH	✓	✓		M-S		MT	AL	MT	MT
LRPB Kittyhawk(Φ)	AH		✓	✓		M	M	A	I	MT-MI
LRPB Major(Φ)	AH		✓	✓	M-S		SM	A	MT	MT-T
LRPB Matador(Φ)	AH		✓	✓	M		SM	A	MT	MT-T
LRPB Scout(Φ)	AH	✓	✓	✓	M		M	A	MI	MT-T
LRPB Trojan(Φ)	APW		✓	✓	M-S		M	A	MI	MT-MI
Mammoth(Φ)	APW		✓	✓	VS		M	A		
Mowhawk(Φ)	APW		✓	✓		Q	M	A	MT	MT-T
Razor CL Plus(Φ)	ASW	✓	✓		Q-M		M	A	MT	MT-T
Reilly(Φ)	AH	✓	✓		M		M	A	MI	
RGT Healy(Φ)	Pending		✓	✓	Q-M		M	A		
RGT Ponsford(Φ)	Pending	✓	✓	✓	M		M	A		
RockStar(Φ)	AH	✓	✓	✓	M-S		M	A		
Scepter(Φ)	AH	✓	✓		M		M	A	MT	MT-T
Sheriff CL Plus(Φ)	APW		✓	✓	M-S		M	A		
Shotgun(Φ)	AH	✓	✓	✓	M		M	A		
Soaker(Φ)	APW	✓	✓	✓	M		M	A	MT	MT-T
Stockade(Φ)	APW			✓	VS		M	A	MI	MT

Continued on next page

Table 2: Agronomic characteristics of wheat varieties (continued).

	Maximum quality	Rainfall			Spring maturity	Winter maturity	Height	Awn	Soil tolerance	
		Low <350mm	Med 350–500mm	High >500mm					Boron	Acid
BREAD WHEAT (continued)										
Sunblade CL Plus[Ф]	AH	✓	✓	✓	M		M	A		
Sundancer[Ф]	pending		✓	✓	M-S		S	A		
Sunmaster[Ф]	APH	✓	✓	✓	M		M	A		
Tomahawk CL Plus[Ф]	APW	✓	✓		Q-M		M	A		
Valiant[Ф] CL Plus	AH	✓	✓	✓	S		M	A		
Vixen[Ф]	AH	✓	✓	✓	Q		M	A		
Willaura[Ф]	AH		✓	✓	S-VS		M	A		
SPECIALTY WHEAT										
LRPB Oryx[Ф]	ASFT		✓		M		M	A	I	MI-I
FEED WHEAT										
Anapurna	FEED		✓	✓		M-S	S	A		
BigRed[Ф]	FEED		✓	✓		M-S	M	A		
Longford[Ф]	FEED			✓		S-VS	M	A		
LRPB Beaufort[Ф]	FEED		✓	✓	S		M	AL		MT
RGT Accroc[Ф]	FEED		✓	✓		M-S	M	A		
RGT Calabro	FEED			✓		S	M	A		
RGT Cesario[Ф]	FEED		✓	✓		M-S	M	AL		
RGT Waugh[Ф]	FEED			✓		S	M	A		
RGT Zanzibar	FEED	✓	✓	✓	VS		MT	A		
Severn[Ф]	FEED		✓	✓		Q-M	MT	AL		
Triple 2	FEED		✓	✓		M	M	A		
DURUM WHEAT										
Bitalli[Ф]	ADR	✓	✓	✓	Q-M		M	A		
DBA-Aurora[Ф]	ADR		✓	✓	M		M	A	MT	
Patron[Ф]	ADR		✓	✓	M		M	A		

Maximum quality abbreviations listed on page 10.
Maturity: VQ = very quick, Q = quick, M = mid, S = slow, VS = very slow. Height: S = short, M = medium, T = tall.
Awn type: A = awned, AL = awnless.
Soil tolerance: T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant.

Table 3: An industry guide for wheat variety maturity description.

Maturity description	Abbreviation	Quick wheat boundary	Slow wheat boundary
SPRING WHEAT			
Very quick	VQ		Axe[Ф]
Very quick to quick	VQ-Q	> Axe[Ф]	Vixen[Ф]
Quick	Q	> Vixen[Ф]	Corack[Ф]/LRPB Mustang[Ф]
Quick to mid	Q-M	> Corack[Ф]/LRPB Mustang[Ф]	Mace[Ф]/Suntop[Ф]
Mid	M	> Mace[Ф]/Suntop[Ф]	LRPB Reliant[Ф]/Sheriff CL Plus[Ф]/LRPB Trojan[Ф]
Mid to slow	M-S	> LRPB Reliant[Ф]/Sheriff CL Plus[Ф]/LRPB Trojan[Ф]	Yitpi/EGA Gregory[Ф]
Slow	S	> Yitpi/EGA Gregory[Ф]	Sunzell
Slow to very slow	S-VS	> Sunzell	Sunmax[Ф]
Very slow	VS	> Sunmax[Ф]	
WINTER WHEAT			
Quick	Q		Illabo[Ф]
Mid	M	> Illabo[Ф]	RGT Accroc[Ф]
Slow	S	> RGT Accroc[Ф]	

Source: Australian Crop Breeders Ltd

Table 4: Domestic flour millers' assessment – southern zone wheat varieties (updated 2022).

HARD WHEAT	Max class grade	End product category		Comment
		Plant bakery	Artisan breads	
Ascot[Ф]	APW	2	1	Acceptable APW. Good milling extraction. Acceptable/variable bake performance.
Ballista[Ф]	AH	2	2	Acceptable domestic AH. High dough resistance and good stability. May suit specialist application.
Beckom[Ф]	AH	2	2	Some interest. Marginal long mix time and tough dough.
Brumby[Ф]	APW	2	1	Some domestic interest. Very good milling yield, low water absorption and short mix requirement. Moderate bake results.
Calibre[Ф]	AH	2	2	Some domestic interest. Good water absorption, strong dough, long mix time. Acceptable bake performance.
Catapult[Ф]	AH	2	2	Suit domestic mills. Good balanced dough. Acceptable bakery water absorption and performance.
Chief CL Plus[Ф]	APW	2	1	Acceptable APW. Low water absorption, short mix time. Acceptable rapid bake performance.
DS Bennett[Ф]	ASW	2	1	Acceptable ASW. Low water absorption and dough strength, acceptable mix time and marginal bake performance.
DS Pascal[Ф]	APW	2	1	Limited data available. Potentially limited domestic interest.
EG Titanium	AH	2	2	Suit domestic mills. Marginal long mix requirement. Acceptable water absorption.
Hammer CL Plus[Ф]	AH	2	2	Acceptable domestic AH. Good bake results.
Illabo[Ф]	AH	1	2	Strong dough characteristics. Long mix requirement in bakery. Suit specialist bakery application only.
Kingston[Ф]	AH		2	Limited data available. Indication it is most likely suitable for domestic mills.
LRPB Anvil[Ф] CL Plus	AH			Data unavailable.
LRPB Bale[Ф]	APW	2	1	Acceptable APW. Acceptable milling yield. Good water absorption with short mix requirement. Acceptable bake performance.
LRPB Dual[Ф]	AH	2	1	Acceptable AH. Acceptable milling yield. Good water absorption, short mix requirement, marginal dough strength. Acceptable bake performance.
LRPB Kittyhawk[Ф]	AH	2	2	Acceptable for domestic mills. Good water absorption and strong doughs. Acceptable bake performance.
LRPB Scout[Ф]	AH	2	1	Suitable AH. Marginal long mix time.
LRPB Trojan[Ф]	APW	2	1	Some interest from domestic mills. Marginal water absorption, long mix time but good bake volume.
Razor CL Plus[Ф]	ASW	2	1	Acceptable ASW. Good water absorption, short mix time, short dough extensibility and low dough strength.
Reilly[Ф]	AH		2	Limited data available. Indication it is most likely suitable for domestic mills.
RockStar[Ф]	AH	2	2	Suit domestic mills. Marginal bakery water absorption but acceptable bakery performance.
Scepter[Ф]	AH	2	1	Suit domestic application. Acceptable AH quality.
Sheriff CL Plus[Ф]	APW	1	1	Suit domestic mills. Acceptable APW. Marginal water absorption and extraction. Short mix time, marginal extensibility and acceptable bake performance.
Sunblade CL Plus[Ф]	AH	3	1	Acceptable domestic AH. Good milling extraction and rapid bake performance.
Sunmaster[Ф]	APH	1	2	Some domestic interest. Good water absorption, long mix time, strong dough. Suit specialist bakery application.
Valiant[Ф] CL Plus	AH	3	1	Suitable as domestic AH. Balanced dough properties.
Vixen[Ф]	AH	3	2	Suit domestic mills. Acceptable AH. Good extraction, good water absorption and balanced dough. Acceptable bake performance.
Willaura[Ф]	AH	3	2	Suit domestic mills. Acceptable AH. Acceptable extraction, good water absorption and strong balanced dough. Acceptable bake results.

SOFT OR NOODLE WHEAT	Max class grade	End product category			Comment
		Biscuit	Cake	Hot plate goods	
LRPB Oryx[Ф]	SF1	3	2	1	Acceptable biscuit quality.

Source: Peter Cobb and David Hogan, quality manager and former quality manager, Laucke Flour Mills

End-use ratings: 3 preferred, 2 suitable, 1 not suitable.
Maximum class grade abbreviations listed on page 10.

Table 5: Disease resistance ratings of wheat varieties.

Variety	Rust			*Septoria tritici* blotch	Yellow leaf spot	Powdery mildew	Crown rot	CCN resistance	Root lesion nematode (*Pratylenchus*)	
	Stem	Stripe	Leaf						*P. neglectus*	*P. thornei*
BREAD WHEAT										
Ascot(Þ)	MRMS	MSS	RMR	S	MRMS	S	S	MR	S	S
Avoca(Þ)	MRMS (P)	MRMS (P)	S (P)	MSS (P)	MSS (P)	MRMS (P)	–	–	–	–
Ballista(Þ)	MR	MSS	S	SVS	MS	SVS	S	MRMS	S	MRMS
Beckom(Þ)	MRMS	MRMS	MSS	S	MSS	MSS	S	R	S	MSS
Boa(Þ)	MS (P)	MRMS (P)	MR# (P)	S (P)	MS (P)	S (P)	–	–	–	–
Brighton(Þ)	MRMS	MRMS	S	S	MRMS	S	SVS	R (P)	S	MS
Brumby(Þ)	MR	MS	SVS	S	MRMS	MR/S	S	MRMS	MRMS	MS (P)
Calibre(Þ)	MR	S	S	S	MRMS	MSS	S	MRMS	S	MSS
Catapult(Þ)	MR	S	S	MSS	MRMS	S	MSS	R	S	MS
Chief CL Plus(Þ)	MR	SVS	MR	S	MRMS	SVS	MSS	MS	MRMS	MSS
Dozer(Þ) CL Plus	MS	S	MSS	S (P)	MS	S	S	MS (P)	MRMS	S
DS Bennett(Þ)	MS	S	SVS	MSS	MRMS	R	VS	S	S	S
DS Pascal(Þ)	MSS	MRMS	MRMS#	MSS	MS	RMR	S	S	S	S
EG Jet(Þ)	S	MRMS	S	MSS	MRMS	SVS	S	MRMS	S	S
EG Titanium	MS	MR	MS	MSS	MSS	S	MSS	R	MSS	MSS
Genie(Þ)	MS (P)	MRMS (P)	S (P)	S (P)	MRMS (P)	SVS (P)	–	–	–	–
Hammer CL Plus(Þ)	MR	MS	S	MSS	MRMS	S	MSS	MRMS	MSS	S
Illabo(Þ)	MRMS	MRMS	S	MSS	MS	R	S	MRMS	MSS	MSS
Ironbark(Þ)	MRMS (P)	MR (P)	MRMS# (P)	S (P)	MSS (P)	MSS (P)	–	–	–	–
Kingston(Þ)	S	MSS	S	S	MSS	S	S	R	S	MRMS
Leverage(Þ)	MR	MRMS	RMR#	S	MRMS	S	S	MS (P)	S	MS
Longsword(Þ)	MR	MRMS/MS	MS	MS	MRMS	S	MSS	MRMS	MRMS	MRMS
LRPB Anvil(Þ) CL Plus	MR	S	SVS	VS	MSS	SVS	MSS	MS	MSS	S
LRPB Bale(Þ)	MRMS	MRMS	MSS	MSS	SVS	MS	S	R	S	S
LRPB Dual(Þ)	MRMS	MS	MSS	MSS	S	S	S	R	MSS	MSS
LRPB Kittyhawk(Þ)	MRMS (S)	MR	MR	MRMS	MRMS	MS	SVS	S	S	S
LRPB Major(Þ)	MRMS	MRMS	MR#	MSS	MS	MS	S	MRMS (P)	MSS	MSS
LRPB Matador(Þ)	MS	MS	MSS	S (P)	MRMS	MS	S	MS (P)	S	MRMS
LRPB Scout(Þ)	MRMS	MS	MS	S	SVS	MRMS	S	R	S	MSS
LRPB Trojan(Þ)	MRMS	S	MR#	S	MSS	S	MS	MS	MSS	MSS
Mammoth(Þ)	MRMS	MSS	MS	MSS	MRMS	S	S	MSS	MSS	MR
Mowhawk(Þ)	RMR (P)	–	MR (P)	MSS (P)	MRMS (P)	MR	–	–	–	–
Razor CL Plus(Þ)	MRMS	MRMS	S	SVS	MSS	MSS	S	MR	S	MS
Reilly(Þ)	MRMS	MS	MSS	S	S	MSS	S	R	MS	MSS
RGT Healy(Þ)	MRMS	MR	RMR	MSS	MSS	SVS	S	MR	MSS	MR
RGT Ponsford(Þ)	RMR	MRMS	MR#	MSS	MS	S	S	MS	MSS	S
RockStar(Þ)	MRMS	S	S	S	MRMS	SVS	S	MSS	MRMS	MS
Scepter(Þ)	MRMS	MSS	MSS	S	MRMS	SVS	MSS	MRMS	S	MSS
Sheriff CL Plus(Þ)	MS	SVS	SVS	S	MRMS	SVS	S	MS	MRMS	MRMS
Shotgun(Þ)	MRMS (P)	MS (P)	MSS (P)	S (P)	MRMS (P)	S (P)	–	–	–	–
Soaker(Þ)	MR (P)	MS (P)	S (P)	S (P)	MS (P)	S (P)	–	–	–	–
Stockade(Þ)	MS	MR	MR	MS	MRMS	SVS	S	MRMS	S	MSS
Sunblade CL Plus(Þ)	MS	MRMS	MSS	S	MSS	S	S	MSS	MSS	MRMS
Sundancer(Þ)	MR	MR	RMR	MSS	MS	S	MSS	MS (P)	MSS	MS
Sunmaster(Þ)	MS	MRMS	RMR	S	MSS	MSS	MSS	MSS	MRMS	MS
Tomahawk CL Plus(Þ)	MR	MSS	S	S (P)	MRMS	SVS	S	MRMS (P)	S	MS

Continued on next page

Table 5: Disease resistance ratings of wheat varieties (continued).

Variety	Rust			*Septoria tritici* blotch	Yellow leaf spot	Powdery mildew	Crown rot	CCN resistance	Root lesion nematode (*Pratylenchus*)	
	Stem	Stripe	Leaf						*P. neglectus*	*P. thornei*
BREAD WHEAT (continued)										
Valiant[Φ] CL Plus	MR	S	S	MSS	MRMS	VS	MSS	MSS (P)	S	S (P)
Vixen[Φ]	MRMS	SVS	SVS	S	MRMS	SVS	S	MSS	MRMS	MS
Willaura[Φ]	MR	S	MRMS	S	MS	SVS	S	MS	MSS	MRMS
SPECIALTY WHEAT										
LRPB Oryx[Φ]	MR	MS	RMR#	SVS	MSS	MR	MSS	S	MSS	MSS
FEED WHEAT										
Anapurna	MSS	RMR	MS	MRMS	MRMS	RMR	SVS	MRMS	MS	S (P)
BigRed[Φ]	S	RMR	MRMS	MR	MR	RMR	MSS	S	MS	MS
Longford[Φ]	RMR	RMR	RMR	MRMS/S	MRMS	RMR	MSS	MS	S	S
LRPB Beaufort[Φ]	SVS	RMR	MSS	S	MRMS	RMR	S	MS	MS	MSS
RGT Accroc[Φ]	MS	RMR	SVS	MS	MRMS	MSS	SVS	S	MS	MSS
RGT Calabro	MS	RMR	MSS	MRMS	MR	RMR	SVS	S	S	MS
RGT Cesario[Φ]	RMR	RMR	RMR	MRMS	MR	RMR	VS	MSS (P)	MRMS	MSS
RGT Waugh[Φ]	MS	RMR	S	MRMS#	MRMS	R	S	MS	MSS	MSS
RGT Zanzibar	VS	MR	SVS	MSS	MS	RMR	S	MSS	S	MS (P)
Severn[Φ]	MS	RMR	MRMS	MSS	MRMS	RMR	S	MSS (P)	S	MRMS
DURUM WHEAT										
Bitalli[Φ]	RMR	–	MR	MSS	MRMS	S	SVS	MSS	MSS	RMR
DBA-Aurora[Φ]	RMR	MRMS	RMR	MRMS/S	MRMS	MSS	SVS	MSS	MRMS	RMR
Patron[Φ]	RMR	MRMS	MR#	MRMS	MRMS	MSS	SVS	S	MRMS	MR

– denotes no rating available.

Source: NVT Disease Ratings and the Agriculture Victoria Cereal Disease Guide

Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptiblee. (P) = provisional rating.

- hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes, ^ line contains a few susceptible off types, ( ) show outlier.

Table 6: Suggested minimum levels of wheat disease resistance for the southern region.

Annual rainfall	Rust			*Septoria tritici* blotch	Powdery mildew	Yellow leaf spot
	Stem	Stripe	Leaf			
Low <350mm	MSS	MSS	S	S	MSS	MSS
Medium 350–500mm	MSS	MS	MSS	MS	MSS	MS
High >500mm*	MS	MS	MS	MRMS	MSS	MS

*unless a suitable program of disease control by fungicide applications can be planned and carried out.

Reviewed by Dr Grant Hollaway, Astute Ag (2024)

Table 7: Mallee and Wimmera (main season) wheat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

		MALLEE						WIMMERA					
Year			2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)			3.26	3.35	2.31	4.63	4.25		4.33	3.82	1.57	5.23	4.38
	Quality	No. trials	5	8	8	8	8	No. trials	4	3	1	3	3
Ascot(Ф)		37	101	100	100	107	100	13	96	103	98	107	101
Ballista(Ф)	AH	37	115	109	114	110	108	14	111	111	118	106	112
Beckom(Ф)	AH	37	106	102	104	112	104	14	98	106	108	111	104
Boa(Ф)			–	–	–	–	–	3	–	–	–	–	111
Boree(Ф)	AH	32	–	107	107	100	106	10	–	105	109	99	109
Brumby(Ф)	APW	24	–	–	109	104	109	6	–	–	114	104	110
Calibre(Ф)	AH	32	–	110	118	105	109	10	–	110	127	102	113
Catapult(Ф)	AH	37	105	105	104	98	106	14	109	103	107	99	106
Chief CL Plus(Ф)	APW	37	96	98	89	83	100	13	100	89	83	84	99
Coota(Ф)	AH		–	–	–	–	–	14	99	99	97	95	104
Corack(Ф)	APW	13	101	101	–	–	–	7	106	83	–	–	–
Cutlass(Ф)	APW	37	93	98	97	109	103	14	98	105	106	116	96
Denison(Ф)	APW		–	–	–	–	–	7	–	106	112	103	–
Dozer(Ф) CL Plus	APW	16	–	–	109	–	105	3	–	–	–	–	110
EG Jet(Ф)	APW		–	–	–	–	–	10	–	104	92	119	92
EG Titanium	AH	32	–	97	95	95	98	10	–	98	96	102	94
Elmore CL Plus(Ф)	AH	29	90	94	94	101	–	11	92	97	96	105	–
Emu Rock(Ф)	AH	37	102	98	99	96	95	14	95	94	94	90	99
Genie(Ф)	AH	8	–	–	–	–	103	2	–	–	–	–	102
Grenade CL Plus(Ф)	AH	29	94	93	96	100	–	11	91	95	96	98	–
Hammer CL Plus(Ф)	AH	37	99	98	99	92	98	10	–	93	99	90	98
Jillaroo(Ф)	AH	8	–	–	101	–	–	1	–	–	99	–	–
Kingston(Ф)	AH	37	107	105	97	101	106	13	100	102	89	100	109
Kord CL Plus(Ф)	AH	29	90	91	94	93	–	11	92	90	95	93	–
LRPB Anvil(Ф) CL Plus	AH	32	–	97	102	95	95	7	–	–	101	86	100
LRPB Beaufort(Ф)	FEED		–	–	–	–	–	4	–	107	110	–	–
LRPB Dual(Ф)	AH	24	–	–	100	93	95	6	–	–	101	93	95
LRPB Major(Ф)	AH	8	–	–	–	–	103	5	–	–	–	105	101
LRPB Matador(Ф)	AH	16	–	–	–	103	109	6	–	–	–	98	115
LRPB Optimus(Ф)			–	–	–	–	–	2	–	–	–	–	94
LRPB Oryx(Ф)	ASFT		–	–	–	–	–	14	93	98	98	106	92
LRPB Parakeet(Ф)	ANW		–	–	–	–	–	14	93	93	89	97	88
LRPB Scout(Ф)	AH	37	100	100	106	108	97	14	99	105	107	107	99
LRPB Trojan(Ф)	APW	37	98	101	97	103	104	13	100	103	98	106	101
Mace(Ф)	AH	29	104	100	99	92	–	11	102	94	97	88	–
Razor CL Plus(Ф)	ASW	37	109	102	105	97	101	14	104	98	105	91	105
Reilly(Ф)	AH	37	104	101	107	106	98	13	101	104	109	103	101
RGT Ponsford(Ф)		24	–	–	105	105	109	6	–	–	109	107	108
RockStar(Ф)	AH	37	110	109	110	107	109	13	112	110	115	108	110
Scepter(Ф)	AH	37	111	106	107	102	107	14	109	104	110	98	109
Sheriff CL Plus(Ф)	APW	37	103	102	98	93	102	13	104	97	94	92	104
Shotgun(Ф)	AH	8	–	–	–	–	114	3	–	–	–	–	119
Soaker(Ф)	APW	8	–	–	–	–	106	3	–	–	–	–	107
Sunblade CL Plus(Ф)	AH	37	107	104	106	112	105	14	102	108	111	112	105
Sunmaster(Ф)	APH	24	–	–	98	115	105	7	–	–	103	117	102
Tomahawk CL Plus(Ф)	APW	16	–	–	–	105	112	6	–	–	–	98	116
Valiant(Ф) CL Plus	AH	16	–	–	97	105	–	9	–	103	99	109	97
Vixen(Ф)	AH	37	120	110	112	104	106	14	110	106	108	94	116
Yitpi	AH	37	88	94	92	93	95	14	95	93	92	97	90

Maximum quality abbreviations listed on page 10, * default classification (system no longer in use), – denotes no data available.

Source: National Variety Trials

GRDC

Table 8: North Central and North East (main season) wheat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

		NORTH CENTRAL						NORTH EAST					
Year			2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)			2.96	4.33	4.93	6.32	6.65		4.08	5.71	6.80	6.44	6.88
	Quality	No. trials	3	2	2	2	2	No. trials	4	3	3	2	3
Ascot(ф)	APW	11	103	99	102	102	101	15	104	102	106	97	97
Ballista(ф)	AH	11	122	108	108	105	104	15	112	103	105	105	104
Beckom(ф)	AH	11	108	105	104	105	106	15	107	106	106	105	105
Boa(ф)		2	–	–	–	–	108	3	–	–	–	–	107
Boree(ф)	AH	8	–	110	107	89	103	11	–	105	106	92	106
Brumby(ф)	APW	6	–	–	106	100	107	8	–	–	104	102	106
Calibre(ф)	AH	8	–	113	106	95	108	11	–	106	102	98	107
Catapult(ф)	AH	11	117	109	105	84	102	15	111	104	105	82	102
Chief CL Plus(ф)	APW	11	105	100	95	68	97	15	105	97	97	77	100
Coolah(ф)	AH	11	88	96	100	99	96	15	94	100	105	96	98
Coota(ф)	AH	11	106	101	101	85	102	15	107	103	106	82	98
Cosmick(ф)	AH	10	100	100	102	105	95	1	96	–	–	–	–
Cutlass(ф)	APW	11	92	101	102	104	101	15	97	104	106	103	103
Denison(ф)	APW	6	–	109	106	89	–	8	–	106	107	90	–
Dozer(ф) CL Plus	APW	2	–	–	–	–	102	3	–	–	–	–	103
EG Jet(ф)	APW		–	–	–	–	–	11	–	102	110	111	97
EG Titanium	AH	8	–	96	96	93	96	12	92	99	97	84	94
EGA Gregory(ф)	APW*	10	80	92	90	90	91	15	85	92	88	94	96
Elmore CL Plus(ф)	AH	9	87	93	96	98	–	12	92	96	97	94	–
Genie(ф)	AH	2	–	–	–	–	101	3	–	–	–	–	101
Grenade CL Plus(ф)	AH	9	102	94	96	99	–	12	98	92	90	96	–
Hammer CL Plus(ф)	AH	8	–	101	94	88	99	11	–	95	85	91	98
Ironbark(ф)	AH	2	–	–	–	–	108	3	–	–	–	–	107
Kingston(ф)	AH	11	113	106	105	100	105	15	109	105	105	100	103
Kord CL Plus(ф)	AH	9	99	95	93	91	–	11	96	92	87	96	–
LRPB Anvil(ф) CL Plus	AH	6	–	–	100	85	95	8	–	–	87	88	97
LRPB Beaufort(ф)	FEED	4	–	99	108	–	–	6	–	104	114	–	–
LRPB Cobra(ф)	AH	3	102	–	–	–	–	12	106	101	107	92	–
LRPB Dual(ф)	AH	6	–	–	92	86	92	8	–	–	90	85	92
LRPB Major(ф)	AH	4	–	–	–	104	101	5	–	–	–	101	101
LRPB Matador(ф)	AH	4	–	–	–	97	110	5	–	–	–	93	106
LRPB Optimus(ф)		2	–	–	–	–	96	3	–	–	–	–	95
LRPB Oryx(ф)	ASFT	11	102	98	97	102	96	14	97	93	90	105	98
LRPB Parakeet(ф)	ANW	11	96	96	96	97	91	15	92	91	87	92	92
LRPB Scotch(ф)	FEED		–	–	–	–	–	8	–	–	115	112	96
LRPB Scout(ф)	AH	11	107	107	108	106	100	7	102	103	–	–	–
LRPB Trojan(ф)	APW	11	101	104	103	92	102	15	103	105	106	89	102
Mace(ф)	AH	9	112	100	94	85	–	12	107	96	91	87	–
Razor CL Plus(ф)	ASW	11	115	100	97	90	101	15	109	96	93	91	96
Reilly(ф)	AH	11	110	107	106	105	101	15	104	102	103	99	101
RGT Ponsford(ф)		6	–	–	109	100	107	8	–	–	111	101	108
RGT Zanzibar	FEED	10	80	95	106	131	104	15	94	108	119	125	102
RockStar(ф)	AH	11	121	111	112	99	105	15	115	108	113	97	105
Scepter(ф)	AH	11	120	108	105	97	107	15	114	105	105	99	105
Sheriff CL Plus(ф)	APW	11	112	104	101	79	100	15	109	101	102	82	100
Shotgun(ф)	AH	2	–	–	–	–	113	3	–	–	–	–	109
Soaker(ф)	APW	2	–	–	–	–	104	3	–	–	–	–	103
Sunblade CL Plus(ф)	AH	11	104	104	106	107	108	15	108	109	113	103	103
Suncentral(ф)	FEED	4	–	102	104	–	–	6	–	106	109	–	–
Sunmaster(ф)	APH	8	–	102	105	115	110	11	–	111	114	113	105
Tomahawk CL Plus(ф)	APW	4	–	–	–	95	111	5	–	–	–	99	109
Valiant(ф) CL Plus	AH	8	–	95	101	99	96	11	–	98	105	99	98
Vixen(ф)	AH	11	126	112	107	86	106	15	117	105	106	91	107
Yitpi	AH	11	93	98	93	83	92	15	91	93	86	80	94

Maximum quality abbreviations listed on page 10, * default classification (system no longer in use), – denotes no data available.

Source: National Variety Trials

Table 9: Mallee and Wimmera (early season) wheat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

		MALLEE						WIMMERA					
Year			2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)			4.60	5.30	3.76	4.46	5.81		5.11	3.58		5.73	
	Quality	No. trials	1	1	1	1	1	No. trials	1	1		1	
Ascot(b)	APW		–	–	–	–	–	1	103	–	Data not available*	–	Data not available*
Brighton(b)	AH	1	–	–	–	–	100		–	–		–	
Brumby(b)	APW	1	–	–	–	–	105		–	–		–	
Catapult(b)	AH	5	98	110	111	92	106	3	105	103		86	
Coolah(b)	AH		–	–	–	–	–	1	95	–		–	
Coota(b)	AH	4	–	101	104	92	104	2	–	103		73	
Cutlass(b)	APW	4	–	104	105	101	103	2	–	103		102	
Denison(b)	APW	4	–	109	106	97	109	2	–	104		91	
DS Bennett(b)	ASW	1	115	–	–	–	–	1	108	–		–	
DS Pascal(b)	APW	5	109	94	102	104	94	3	99	103		104	
EG Jet(b)	APW		–	–	–	–	–		–	–		–	
EG Titanium	AH	5	103	92	96	98	98	3	96	101		85	
EGA Wedgetail(b)	APW*	5	100	90	88	101	88	3	90	89		115	
Elmore CL Plus(b)	AH	3	96	101	99	–	–	2	93	91		–	
Genie(b)	AH	1	–	–	–	–	109		–	–		–	
Illabo(b)	AH	5	98	95	90	108	97	3	98	97		119	
Longsword(b)	AWW	5	84	98	83	94	102	3	94	88		90	
LRPB Bale(b)	APW	3	–	–	92	103	88	1	–	–		99	
LRPB Beaufort(b)	FEED	5	101	106	105	115	107	3	110	110		127	
LRPB Kittyhawk(b)	AH	1	–	93	–	–	–	1	–	89		–	
LRPB Major(b)	AH	1	–	–	–	–	108		–	–		–	
LRPB Nighthawk(b)	APW	5	97	100	95	101	94	3	96	92		117	
LRPB Trojan(b)	APW	1	–	108	–	–	–	1	–	100		–	
Mammoth(b)	APW	1	–	–	–	–	103		–	–		–	
Mowhawk(b)	APW	1	–	–	–	106	–	1	–	–		105	
RockStar(b)	AH	5	107	109	117	104	105	3	110	112		105	
Scepter(b)	AH		–	–	–	–	–		–	–		–	
Sheriff CL Plus(b)	APW	5	103	100	106	89	97	3	97	99		79	
Stockade(b)	APW	1	–	–	–	118	–	1	–	–		137	
Valiant(b) CL Plus	AH		–	–	–	–	–	1	–	–		94	
Wallaroo(b)		1	–	–	–	–	107		–	–		–	
Yitpi	AH	4	–	92	96	95	98	2	–	99		80	

Maximum quality abbreviations listed on page 10, * default classification (system no longer in use), – denotes no data available.
*The Wimmera trial at Minyip was compromised in 2021 and failed in 2023.

Source: National Variety Trials

Table 10: North East and South West (early season) wheat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

		NORTH EAST						SOUTH WEST					
Year			2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)			5.86	6.94	6.95	4.80	7.15		6.05	6.59	6.58	5.07	5.15
	Quality	No. trials	1	2	2	1	2	No. trials	3	2	3	3	3
Ascot(Φ)	APW	7	–	99	97	90	100	11	–	104	99	101	106
Avoca(Φ)		2	–	–	–	–	110	3	–	–	–	–	97
Beckom(Φ)	AH	8	106	97	96	86	103	14	105	104	94	94	106
BigRed(Φ)	FEED	5	–	–	115	135	100	9	–	–	124	136	103
Brighton(Φ)	AH	3	–	–	–	106	98	6	–	–	–	103	99
Catapult(Φ)	AH	8	112	95	98	79	107	14	104	104	97	90	111
Coolah(Φ)	AH	8	101	96	98	93	100	3	97	–	–	–	–
Coota(Φ)	AH	8	108	93	94	76	103	14	105	104	92	90	108
Cutlass(Φ)	APW	8	105	96	100	94	105	14	92	96	98	87	99
Denison(Φ)	APW	8	110	98	100	89	108	14	101	102	97	90	106
DS Bennett(Φ)	ASW	1	103	–	–	–	–	14	98	100	114	108	100
DS Pascal(Φ)	APW	8	98	103	99	104	98	14	105	103	96	104	100
EG Jet(Φ)	APW	1	99	–	–	–	–	14	109	105	101	112	102
EG Titanium	AH	1	97	–	–	–	–	14	92	94	89	84	96
EGA Gregory(Φ)	APW*	8	96	86	93	85	96		–	–	–	–	–
EGA Wedgetail(Φ)	APW*	8	87	95	95	105	91	14	86	88	91	91	85
Elmore CL Plus(Φ)	AH	3	96	90	–	–	–	5	91	94	–	–	–
Genie(Φ)	AH	2	–	–	–	–	108	3	–	–	–	–	109
Illabo(Φ)	AH	8	93	105	100	115	96	14	103	100	95	107	94
Leverage(Φ)	AH	2	–	–	–	–	114		–	–	–	–	–
Longford(Φ)	FEED	3	–	–	106	133	–	9	–	–	111	135	94
Longsword(Φ)	AWW	8	103	100	99	100	104	14	100	100	92	92	99
LRPB Beaufort(Φ)	FEED	8	108	115	114	123	111	14	110	109	114	117	107
LRPB Kittyhawk(Φ)	AH	7	–	94	94	102	90	2	–	89	–	–	–
LRPB Major(Φ)	AH	3	–	–	–	104	109	6	–	–	–	100	106
LRPB Nighthawk(Φ)	APW	8	91	102	99	116	96	14	94	94	93	98	88
LRPB Scotch(Φ)	FEED	3	–	–	–	114	103	6	–	–	–	107	100
LRPB Trojan(Φ)	APW	8	107	93	95	78	103	14	104	103	94	90	108
Mammoth(Φ)	APW	2	–	–	–	–	99	3	–	–	–	–	108
Manning(Φ)	FEED		–	–	–	–	–	14	98	96	111	121	91
Mowhawk(Φ)	APW	1	–	–	–	111	–	3	–	–	–	111	–
RGT Accroc(Φ)	FEED	8	96	113	112	126	98	14	108	106	123	130	102
RGT Calabro	FEED	6	91	110	106	121	–	14	108	105	115	128	99
RGT Cesario(Φ)	FEED	7	–	113	112	131	97	11	–	102	122	128	98
RGT Waugh(Φ)	FEED	7	–	108	101	113	84	11	–	108	115	136	101
RGT Zanzibar	FEED	8	107	117	113	129	111	14	111	109	108	116	104
RockStar(Φ)	AH	8	115	104	104	89	111	14	118	114	106	107	118
Scepter(Φ)	AH	1	112	–	–	–	–	3	100	–	–	–	–
Severn(Φ)	FEED	5	–	–	101	109	98	9	–	–	100	110	100
Sheriff CL Plus(Φ)	APW	8	107	94	94	78	103	14	105	104	92	91	108
Stockade(Φ)	APW	5	–	–	108	121	102	9	–	–	108	114	99
Sundancer(Φ)	FEED	2	–	–	–	–	110		–	–	–	–	–
Sunflex(Φ)	AH	6	97	103	–	106	99	11	105	102	–	100	97
Tungsten(Φ)	AH	5	–	95	96	90	–		–	–	–	–	–
Valiant(Φ) CL Plus	AH	7	–	103	102	101	105	11	–	104	101	102	105
Wallaroo(Φ)		2	–	–	–	–	103	3	–	–	–	–	102
Willaura(Φ)	AH	5	–	–	109	100	111	9	–	–	117	95	104

Maximum quality abbreviations listed on page 10, * default classification (system no longer in use), – denotes no data available.

Source: National Variety Trials

Table 11: South West Victoria and Northern Midlands Tasmania (long season) wheat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

		SOUTH WEST VICTORIA						NORTHERN MIDLANDS TASMANIA					
Year			2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)			5.66	7.96	4.71	5.81	5.45		11.41	10.69	10.91	10.17	6.99
	Quality	No. trials	2	1	1	1	2	No. trials	1	1	1	1	1
Anapurna	FEED	7	104	114	110	127	115	5	103	112	115	124	111
BigRed(Φ)	FEED	4	–	–	118	129	112	3	–	–	121	122	110
Brennan	FEED	5	81	91	97	87	–	4	96	94	97	82	–
Brighton(Φ)	AH	2	–	–	–	–	107	1	–	–	–	–	101
Denison(Φ)	APW	3	–	88	87	78	–	3	–	99	92	90	–
DS Bennett(Φ)	ASW	7	110	104	125	90	95	5	108	100	105	88	98
DS Pascal(Φ)	APW	2	99	–	–	–	–	1	96	–	–	–	–
EG Jet(Φ)	APW	5	–	99	78	83	105	4	–	92	83	100	94
EGA Wedgetail(Φ)	APW*	7	88	88	86	79	85	4	95	88	–	81	90
Einstein		7	87	98	117	106	83	5	107	99	107	89	99
Forrest	APW	2	89	–	–	–	–	1	97	–	–	–	–
Illabo(Φ)	AH	7	99	97	89	95	99	5	100	93	89	97	100
Longford(Φ)	FEED	4	–	–	110	134	111	3	–	–	121	123	112
Longsword(Φ)	AWW	3	101	77	–	–	–	2	90	93	–	–	–
LRPB Beaufort(Φ)	FEED	7	117	107	103	106	111	5	109	96	92	108	111
LRPB Kittyhawk(Φ)	AH	5	–	93	86	88	88	4	–	93	91	90	91
LRPB Nighthawk(Φ)	APW	7	90	95	84	91	95	5	94	93	89	96	95
LRPB Trojan(Φ)	APW	4	102	84	74	–	–	1	96	–	–	–	–
Mammoth(Φ)	APW	4	–	–	122	89	111	3	–	–	113	101	95
Manning(Φ)	FEED	7	101	94	113	118	97	5	105	110	117	99	106
Naparoo(Φ)	FEED	7	55	94	92	76	62	5	95	79	81	74	83
RGT Accroc(Φ)	FEED	7	110	114	132	123	107	5	112	112	120	112	111
RGT Calabro	FEED	7	112	102	113	127	110	5	107	113	117	113	113
RGT Cesario(Φ)	FEED	5	–	117	130	125	106	4	–	114	124	116	108
RGT Ivory	FEED		–	–	–	–	–	5	93	104	108	99	92
RGT Waugh(Φ)	FEED	5	–	107	110	135	104	4	–	114	121	119	111
RGT Zanzibar	FEED	7	112	101	92	102	108	5	104	94	88	105	108
Severn(Φ)	FEED	4	–	–	83	99	100	3	–	–	95	98	99
SQP Revenue(Φ)	FEED	7	110	107	124	95	98	5	109	100	105	94	100
Stockade(Φ)	APW	4	–	–	117	106	111	2	–	–	–	113	103
Valiant(Φ) CL Plus	AH	4	–	–	94	79	100	3	–	–	90	94	92
Willaura(Φ)	AH	3	–	–	–	86	109	2	–	–	–	94	101

Maximum quality abbreviations listed on page 10, * default classification (system no longer in use), – denotes no data available.

Source: National Variety Trials

Table 12: Wimmera (durum) wheat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

Year			2019	2020	2021	2022	2023
Mean yield (t/ha)			4.39	4.61	3.88	5.09	4.96
	Quality	No. trials	1	1	1	1	1
Bitalli(Φ)	ADR	5	105	109	106	106	102
Caparoi(Φ)	ADR	5	94	92	93	92	98
DBA Bindaroi(Φ)	FEED	5	96	93	94	93	98
DBA Lillaroi(Φ)	FEED	1	–	87	–	–	–
DBA Mataroi(Φ)	FEED	3	–	–	102	103	102
DBA Spes	ADR	5	101	107	104	102	101
DBA Vittaroi(Φ)	ADR	5	105	106	99	98	101
DBA-Artemis(Φ)	ADR	5	96	102	104	103	100
DBA-Aurora(Φ)	ADR	5	104	111	106	104	102
EGA Bellaroi(Φ)	ADR	2	90	85	–	–	–
Hyperno(Φ)	ADR	5	96	100	102	101	100
Patron(Φ)	ADR	3	–	–	117	118	105
Saintly(Φ)	ADR	5	101	95	94	94	99
Tjilkuri	ADR	4	95	99	100	98	–
Westcourt(Φ)	ADR	5	97	96	101	102	99
WID802	ADR	4	103	104	101	101	–

Maximum quality abbreviations listed on page 10, * default classification (system no longer in use), – denotes no data available.

Source: National Variety Trials

Photo: Nicole Baxter

Wheat harvest.

BARLEY

Barley growers in Victoria have access to many varieties. Identifying the variety that is best suited to a region and giving the greatest return requires consideration of several factors including relative yield, disease resistance, marketing options and the probability of achieving target quality grades. The decision to grow either a malting or non-malting variety may depend on one or more factors, including the price difference between malting and non-malting grades related to yield differences, the probability of producing a malting grade, availability of malting storage segregations in storage facilities, disease resistance and agronomic considerations. It is important that growers contact grain marketers to discuss market demand. Malting barley is grown, stored and sold on a variety-specific basis and it is important to ascertain if the variety chosen can be stored and marketed in your area.

NEW VARIETIES

The following new feed barley varieties have been added this year:

- Bigfoot CL[Φ]
- Granite[Φ] CL
- PegasusAX[Φ]
- RGT Atlantis[Φ].

MATURITY

Variety maturity has been reviewed by breeders and as a result there are some changes to the maturity ratings in this edition of the sowing guide.

MALT AND QUALITY

The following varieties received malt accreditation from Grains Australia in March/April 2024:

- Commodus[Φ] CL
- Minotaur[Φ]
- Zena[Φ] CL.

The Grains Australia website lists malting varieties that are preferred by industry members (see ‘More information’).

The level of demand for domestic and export markets in Victoria and the timeline for varieties undergoing malt evaluation are listed in Table 2.

Grain Trade Australia (GTA) has made no major changes to the quality standards of barley for the 2024-25 season.

DISEASE

The impact of diseases on barley crops can be reduced by avoiding varieties that are highly susceptible to regionally important foliar diseases. Recommended minimum ratings for important foliar diseases are provided in Table 4. When varieties do not have adequate levels of resistance, additional cultural and/or chemical control should be implemented.

Always consult the latest disease resistance ratings as they can change with changes in disease virulence. Resistance ratings are updated in February/March each year at NVT Disease Ratings or in the Agriculture Victoria Cereal Disease Guide.

The stubble-borne disease net form net blotch (NFNB) is increasing in importance in Victoria due to the increased adoption of highly susceptible varieties. Unfortunately, fungicide resistance in NFNB is increasing with resistance to Group 7 (SDHI) and reduced sensitivity to Group 3 (DMI) fungicides detected in Victoria. Therefore, these fungicides may no longer be reliable when used for NFNB control. Refer to the Australian Fungicide Resistance Extension Network for fungicide resistance management strategies.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Barley Southern Region

GRAINSAUSTRALIA.COM.AU

- Preferred malting barley varieties
- Status of varieties under malt barley evaluation

DISEASE MANAGEMENT

- NVT Disease Ratings
- Agriculture Victoria, Cereal Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of barley, for disease identification and management
- University of Sydney, Australian Cereal Rust Survey reports on the rust situation and information on how to submit samples
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
ⓟ	Denotes Plant Breeder's Rights apply
NFNB	Net form of net blotch
SFNB	Spot form of net blotch
IMI	Imidazolinone

MALTING BARLEY

ALESTAR[Φ]

Alestar[Φ] is a mid maturing variety suited to medium to high-rainfall regions. It has good straw strength, head retention and test weight. Alestar[Φ] consistently produces high-quality malt that is ideal for domestic and boutique brewing, as well as export brewing. Released 2017 and achieved malt accreditation in 2021. Bred by Elders and available from EPG Seeds. EPR $3.00.

BOTTLER[Φ]

A quick-mid maturing variety suited to medium to high-rainfall environments, with export malt type grain. Released by GrainSearch in 2018 and achieved malt accreditation in 2022. Malt markets are developing. Bred by Sejet. Marketed by Seednet. EPR $4.00.

COMMODUS[Φ] CL

Commodus[Φ] CL is a mid-quick maturing Clearfield® malting barley, agronomically similar to Compass[Φ]. Ideally suited to lighter soils and medium to low-rainfall environments. Excellent grain size but possesses poor lodging tolerance and a medium head loss risk. Released 2020 and achieved malt accreditation in 2024. Multiple segregations now available in Victoria and South Australia. Bred and marketed by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $4.25.

COMPASS[Φ]

Compass[Φ] is a quick maturing variety. Has different development controls, mostly explained by a reduced responsiveness to photoperiod, that enables earlier flowering with typical May sowing and potentially higher yields. Compass[Φ] has poor lodging tolerance and a medium head loss risk. Released 2013 and achieved malt accreditation in 2018. Limited domestic demand in Victoria. Bred by University of Adelaide. Marketed by Seednet. EPR $3.80.

LA TROBE[Φ]

Quick to mid maturing malting variety for low to medium-rainfall environments. A semi-dwarf plant type providing resistant to moderately resistant lodging resistance and moderately resistant head loss risk. The variety has a short coleoptile and sowing depth should be considered carefully. Good sprouting tolerance, excellent test weight and moderately good grain plumpness. Has largely been displaced by Spartacus CL[Φ] and Maximus[Φ] CL and malting segregations are very limited. Released 2013 and achieved malt accreditation in 2015. Bred by InterGrain. Free to trade. EPR $4.00.

LEABROOK[Φ]

Leabrook is a quick maturing barley. Medium to tall with similar plant type to Compass[Φ], higher plump grain percentage and lower screenings. Released 2020 and achieved malt accreditation in 2021. Bred by University of Adelaide. Marketed by Seednet. EPR $3.80.

MAXIMUS[Φ] CL

Maximus[Φ] CL is a mid-quick maturing Clearfield® malting barley for low to medium-rainfall environments. A replacement for Spartacus CL[Φ] with an improved net blotch package. It has a short coleoptile length and sowing depth should be considered carefully. Released 2020 and achieved malt accreditation in 2021. Demand is good for both domestic and export markets. Bred and marketed by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $4.25.

MINOTAUR[Φ]

Minotaur[Φ] is a mid-slow maturity variety, slightly slower in maturity than RGT Planet[Φ]. Minotaur[Φ] has shown wide adaptation to multiple environments but performs best under high yield potential or softer environments in the medium to high-rainfall zones. Released 2021 and achieved malt accreditation in 2024. Malt markets are developing. Bred by AGT. Seed available through AGT Affiliates and eligible for AGT Seed Sharing™. EPR $4.00.

RGT PLANET[Φ]

A mid maturing variety. It has elastic maturity, making it suited to low to high-rainfall regions. RGT Planet[Φ] is quick to establish and produces high early biomass for excellent weed competition. Good straw strength. It has short rachilla hair length, reducing itchiness. Released 2016 and achieved malt accreditation in 2019. Demand is good for both domestic and export markets. Bred and marketed by RAGT. EPR $4.00.

SCOPE CL[Φ]

A moderately tall, quick maturing barley suitable across a range of medium-rainfall environments. Scope CL[Φ] can be prone to head loss and lodging under certain environmental conditions. Scope CL[Φ] has moderate grain size and inherently low grain protein. It is registered for the use of appropriate imidazolinone herbicides. Accredited as malting barley in 2013, but now outclassed. Growers are advised to consult with their grain marketer about segregation and pricing. Released 2010. Marketed by Seednet. EPR $3.50.

SPARTACUS CL[Φ]

Spartacus CL[Φ] is a quick-mid maturing Clearfield® barley. Suited to the low to medium-rainfall environments. Good resistance to lodging and relatively low risk of head loss. It has short rachilla hair length, reducing itchiness. It has a short coleoptile length and sowing depth should be considered carefully. Released 2015 and achieved malt accreditation in 2018. Spartacus CL[Φ] has now been superseded by Maximus[Φ] CL, which offers improved yield, disease and quality attributes. Growers are advised to consult with their grain marketer about segregation and pricing. Bred by InterGrain. EPR $4.25.

ZENA[Φ] CL

A mid maturing Clearfield® malting barley variety suited to medium to high-rainfall environments. Closely related to RGT Planet[Φ] with similar agronomic characteristics, with the addition of herbicide tolerance. It has short rachilla hair length, reducing itchiness. Released 2022 and achieved malt accreditation in 2024. Malt markets are developing. Bred by GIA and InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $4.25.

FOOD GRADE BARLEY

HINDMARSH[Φ]

A quick maturing, semi-dwarf variety recommended for the 325mm to 450mm rainfall regions. Hindmarsh[Φ] has a relatively short coleoptile and deep sowing should be avoided to maximise crop establishment and yield potential. Hindmarsh[Φ] is free-threshing with good resistance to head loss among non-malting varieties. Released 2006. Marketed by Seednet. EPR $1.50.

NON-MALTING BARLEY

NEW – BIGFOOT CL[Φ]

A quick-mid maturity Clearfield® barley. Agronomically similar to Compass[Φ], but with a shorter height and greatly improved lodging risk compared with other Compass[Φ] types. Broadly adapted but particularly suited to the low to medium-rainfall environments. Bigfoot CL[Φ] is a feed only variety. Released 2024 (tested as AGTB0669). Bred by AGT. Seed available through AGT Affiliates. EPR $4.35

COMBAT[Φ]

Mid maturing feed variety best sown early. A semi-prostrate growth habit and high early vigour provide more weed competition than erect varieties such as Rosalind[Φ]. Moderately susceptible to lodging and head loss. Released 2022. Bred by InterGrain. Free to trade. EPR $3.50.

FANDAGA[Φ]

A medium height, mid-slow maturing, high-yielding barley. Suited to medium to high-rainfall rainfall regions. Improved NFNB resistance compared with other popular varieties. Approved internationally as a malt variety, yet to be classified in Australia. Currently feed classification. Released 2022. Marketed by AGF Seeds. EPR $3.65.

FATHOM[Φ]

A quick maturing feed variety with broad adaptation. Fathom[Φ] has a long coleoptile and excellent early vigour, giving weed competitiveness and tolerance to deep planting, especially on sandy soils. Fathom[Φ] is well suited to wider row spacings and is an alternative to Hindmarsh[Φ], particularly where more reliable establishment and improved early vigour are sought. Fathom[Φ] is moderately tall, possesses good head loss tolerance and low screenings but is prone to lodging in high-yielding environments. Released 2011. Bred by University of Adelaide. Marketed by Seednet. EPR $2.00.

NEW – GRANITE[Φ] CL

A quick to mid Clearfield® feed barley suited to low to medium-rainfall areas. Erect growth habit and medium plant height similar to Rosalind[Φ] and Maximus[Φ] CL with improved yield performance. Strong lodging tolerance and low head loss risk. Good physical grain qualities including good grain size and test weight. Released 2024 (tested as IGB21092T). For planting from 2026 through InterGrain Seedclub members and local resellers. EPR $3.90.

NEWTON

Newton is a winter feed barley. The first new winter barley since Urambie in 2005, it requires a period of cold temperatures (vernalisation) to switch from vegetative to reproductive growth. A dual-purpose variety suitable for grazing when sown early. Time to flowering is comparable with the winter wheat DS Bennett$^{\Phi}$. Its high tillering potential and prostrate growth habit result in high biomass and weed competitiveness. Canopy management is needed in high-rainfall areas with early sowing to achieve high yield potential and reduce lodging. Newton$^{\Phi}$ was also evaluated as part of the Hyper Yielding Cereals project. Released in 2024. Bred by Secobra Recherches. Marketed by Seednet. EPR $3.50.

NEW – PEGASUSAX$^{\Phi}$

A quick-mid maturity, agronomically similar to Rosalind$^{\Phi}$, with the addition of CoAXium® tolerance to Group 1 herbicide Aggressor®. PegasusAX$^{\Phi}$ offers CoAXium® technology in an alternative plant type to the previously released Titan AX$^{\Phi}$. Broadly adapted but particularly suited to the medium-rainfall environments. Short and erect plant type with lower lodging risk compared with the taller Compass$^{\Phi}$ types, and similar to other short types such as Rosalind$^{\Phi}$ and Cyclops$^{\Phi}$. PegasusAX$^{\Phi}$ is a feed only variety. Released 2024 (tested as AGTB0667). Bred by AGT. Seed available through AGT Affiliates and eligible for AGT Seed Sharing™. EPR $4.15

NEW – RGT ATLANTIS$^{\Phi}$

A world-first waterlogging-tolerant barley. Mid maturing and suited to medium to high-rainfall regions where transient waterlogging occurs. It is agronomically identical to RGT Planet$^{\Phi}$ – quick to establish with high early biomass for excellent weed competition. Good straw strength. It has short rachilla hair length, reducing itchiness. It is anticipated that RGT Atlantis$^{\Phi}$ will start stage one malt evaluation in 2025. Released 2024 (tested as RP22054 (P-52)). Bred By UTAS and RAGT. Marketed by RAGT. EPR $4.25.

ROSALIND$^{\Phi}$

A very broadly adapted, quick-mid maturing, semi-dwarf feed variety with good yield stability. Maturity is typically slightly later than La Trobe$^{\Phi}$. It is ideally suited to May sowings. Rosalind$^{\Phi}$ has strong lodging tolerance and low head loss risk. It has a short coleoptile length and sowing depth should be considered carefully. Released 2015. Bred by InterGrain. Free to trade. EPR $3.50.

VARIETIES UNDER MALT EVALUATION

BEAST$^{\Phi}$

Beast$^{\Phi}$ is a quick maturing variety, quicker than Compass$^{\Phi}$. Suited to low to medium-rainfall environments and performs well in stressed growing conditions. Similar plant type to Compass$^{\Phi}$ offering useful levels of early vigour and weed competitiveness, but care should be taken in lodging-susceptible conditions. Beast$^{\Phi}$ continues to undergo stage two malt evaluation in 2024, with the earliest possible decision expected in 2025. Released 2022. Bred by AGT. Seed available through AGT Affiliates and eligible for AGT Seed Sharing™. EPR $4.00.

CYCLOPS$^{\Phi}$

Cyclops$^{\Phi}$ is a quick-mid maturity, slightly slower than Spartacus CL$^{\Phi}$. Broadly adapted but particularly suited to the low to medium-rainfall environments. Short plant type with lower lodging risk compared with the taller Compass$^{\Phi}$ types. Cyclops$^{\Phi}$ continues to undergo stage two malt evaluation in 2024, with the earliest possible decision expected in 2025. Released 2021. Bred by AGT. Seed available through AGT Affiliates and eligible for AGT Seed Sharing™. EPR $4.00

LAPEROUSE$^{\Phi}$

A mid-quick maturing variety with potential for early sowing with a medium plant height. Very good straw strength and standability and good head loss resistance. Laperouse$^{\Phi}$ continues to undergo stage two malt evaluation in 2024, with the earliest possible decision expected in 2025. Released 2020. Bred by University of Adelaide and SECOBRA Recherches. Marketed by Seednet. EPR $3.80.

NEO$^{\Phi}$ CL

Neo$^{\Phi}$ CL is a mid-slow maturing Clearfield® barley variety. Ideally suited to medium to high-rainfall environments. It has similar agronomic characteristics to RGT Planet$^{\Phi}$ but with improved disease profile, yield potential and grain size. Neo$^{\Phi}$ CL started stage two malt evaluation in 2024, with the earliest possible decision expected in 2025. Released in 2023 (tested as IGB22102T). Bred by InterGrain. Available through InterGrain Seedclub members and local resellers. EPR $4.25.

SPINNAKER(Φ)

A mid-quick maturing variety. Targeted for medium to high-rainfall areas where RGT Planet(Φ) has performed well. It has a prostrate growth habit and a mature height between Laperouse(Φ) and RGT Planet(Φ). Spinnaker(Φ) started stage one malt evaluation in 2024, with the earliest possible decision expected in 2026. Released 2024 (tested as SCA21-Y003). Bred by SECOBRA Recherches, marketed by Seednet. EPR $4.00.

TITAN AX(Φ)

Titan AX(Φ) was the world's first CoAXium® barley variety, with tolerance to Group 1 herbicide Aggressor®. Titan AX(Φ) is a mid-slow maturing variety agronomically similar to Compass(Φ) but slightly later maturity, similar to RGT Planet(Φ). Widely adapted but best suited to low to medium-rainfall or Mallee environments. Titan AX(Φ) started stage two malt evaluation in 2024, with the earliest possible decision expected in 2025. Released 2022. Bred by AGT. Seed available through AGT Affiliates and eligible for AGT Seed Sharing™. EPR $4.55.

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Table 1: Barley time of sowing guide based on phenology speed.

This table is a guide only and has been compiled from the National Phenology Initiative, funded by GRDC (Research project ULA1703-004).

Phenology	Example variety	April				May				June			
MALLEE													
Mid-slow	Titan AX(Φ)												
Mid	Zena(Φ) CL												
Quick	Beast(Φ)												
WIMMERA		**April**				**May**				**June**			
Mid-slow	Titan AX(Φ)												
Mid	Zena(Φ) CL												
Quick	Beast(Φ)												
NORTH CENTRAL		**April**				**May**				**June**			
Mid-slow	Titan AX(Φ)												
Mid	Zena(Φ) CL												
Quick	Beast(Φ)												
NORTH EAST		**April**				**May**				**June**			
Mid-slow	Titan AX(Φ)												
Mid	Zena(Φ) CL												
Quick	Beast(Φ)												
SOUTH WEST		**April**				**May**				**June**			
Mid-slow	Titan AX(Φ)												
Mid	Zena(Φ) CL												
Quick	Beast(Φ)												

Yellow = earlier than optimum.
Green = optimum sowing time.
Red = later than optimum.

Table 2: Barley variety demand[1] for preferred malting varieties and agronomic characteristics.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeders and seed companies. Domestic and export market demand has been sourced from Grains Australia.

Variety	Domestic brewing industries[2]	Export brewing industries	Height	Maturity	Plump grain rating
MALTING BARLEY					
Alestar(Ф)	Low		M	M	8
Bottler(Ф)	Developing markets		M	Q-M	–
Commodus(Ф) CL	Developing markets		MT	M-Q	9
Compass(Ф)	–	–	MT	Q	9
La Trobe(Ф)	Liaise with local maltsters as demand is still high		S-MS	Q-M	6
Leabrook(Ф)	–	–	MT	Q	9
Maximus(Ф) CL	Medium/high	High	MS	M-Q	8
Minotaur(Ф)	Developing markets		M	M-S	7
RGT Planet(Ф)	Medium/high	High	M	M	7
Scope CL(Ф)	Outclassed		MT	Q	6
Spartacus CL(Ф)	Medium/high	High	MS	Q-M	7
Zena(Ф) CL	Developing markets		M	M	7
NON-MALTING BARLEY					
Bigfoot CL(Ф)			M	Q-M	8
Combat(Ф)			M	M	–
Fandaga(Ф)			M	M-S	–
Fathom(Ф)			MT	Q	9
Granite(Ф) CL			MS	Q-M	–
Hindmarsh(ФF)			S-MS	Q	6
Newton			–	Mid-winter	–
PegasusAX(Ф)			MS	Q-M	6-7
RGT Atlantis(Ф)			M	M	–
Rosalind(Ф)			MS	Q-M	6-7
BARLEY UNDER MALT EVALUATION					
Variety	**Target accreditation date**		**Height**	**Maturity**	**Plump grain rating**
Beast(Ф)	2025		MT	Q	9
Cyclops(Ф)	2025		MS	Q-M	8
Laperouse(Ф)	2025		M	M-Q	8-9
Neo(Ф) CL	2025		M	M-S	–
Spinnaker(Ф)	2026		M	M-Q	7-8
Titan AX(Ф)	2025		MT	M-S	9

[1] Demand in Victoria is determined by marketing companies. [2] Domestic demand by Australian malting companies: malt produced may be used by the domestic brewing industry or exported.
[F] Food grade barley.
Height: T = tall, MT = moderately tall, M = medium, MS = moderately short, S = short.
Maturity: spring unless specified, VQ = very quick, Q = quick, M = mid, S = slow.
Plump grain relative scale: 1 = small or unreliable grain size; 9 = large or reliable grain size.
– denotes no rating available.

Table 3: Disease resistance ratings of barley varieties.

Variety	Net form of net blotch	Spot form of net blotch	Scald	Powdery mildew	Leaf rust	CCN resistance	Root lesion nematode (*Pratylenchus*)	
							P. neglectus	*P. thornei*
MALTING BARLEY								
Alestar(Φ)	S	S	SVS	MR	MS	R^ (P)	MR	MR
Bottler(Φ)	MR	MSS	SVS	RMR	MRMS	–	MS	RMR
Commodus(Φ) CL	MSS	MSS	SVS	MSS	S	R	MRMS	MRMS
Compass(Φ)	MS	MS	SVS	S	SVS	R	MRMS	MR
La Trobe(Φ)	MS	S	SVS	MSS	S	R	MRMS	MRMS
Leabrook(Φ)	MS#	MS	SVS	S	SVS	RMR	MRMS	RMR
Maximus(Φ) CL	MRMS	MS	SVS	S	S	R	MRMS	MRMS
Minotaur(Φ)	MRMS	S	VS	S	VS	R	MRMS	MRMS
RGT Planet(Φ)	SVS	SVS	SVS	RMR	MRMS	R (P)	MRMS	MR
Scope CL(Φ)	MR#	MSS	SVS	MRMS	S	S	MRMS	MRMS
Spartacus CL(Φ)	S	S	SVS	MSS	S	R	MRMS	MRMS
Zena(Φ) CL	SVS	S	S	RMR	MS	R	MRMS	MR
NON-MALTING BARLEY								
Bigfoot CL(Φ)	MRMS (P)	MRMS (P)	VS (P)	S (P)	S (P)	R	RMR (P)	RMR (P)
Combat(Φ)	MRMS#	RMR	S	MS	S	MR	MRMS	MS
Fandaga(Φ)	MRMS	S	SVS	R	MSS	R	MR	MR
Fathom(Φ)	MSS	RMR	S	MRMS	MS	R	MRMS	MR
Newton	RMR (P)	MS (P)	R# (P)	RMR (P)	MR (P)	MSS (P)	MR (P)	MRMS
PegasusAX(Φ)	MR (P)	MSS (P)	S (P)	S (P)	MRMS (P)	R	MR (P)	MRMS
RGT Atlantis(Φ)	SVS (P)	S (P)	SVS (P)	R (P)	MRMS (P)	R (P)	RMR (P)	RMR (P)
Rosalind(Φ)	MR	S	S	MSS	MRMS	R	MRMS	MRMS
BARLEY UNDER MALT EVALUATION								
Beast(Φ)	MRMS	MS	SVS	S	S	MR	MRMS	MRMS
Cyclops(Φ)	MRMS	MS	S	SVS	SVS	S	MRMS	MRMS
Laperouse(Φ)	MRMS#	MRMS	VS	MSS	SVS	S	MRMS	MR
Neo(Φ) CL	MS (P)	MR (P)	S (P)	RMR (P)	S (P)	R	RMR (P)	MR (P)
Spinnaker(Φ)	S	SVS	S	RMR	S	S	MR	MS
Titan AX(Φ)	MS	MS	VS	MSS	SVS	MR (P)	MR	MR

– denotes no rating available.

Source: NVT Disease Ratings and the Agriculture Victoria Cereal Disease Guide

Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.

- hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes, ^ line contains a few susceptible off types, ( ) show outlier.

Table 4: Suggested minimum levels of barley disease resistance for Victoria.

Annual rainfall	Net form of net blotch	Spot form of net blotch	Scald	Powdery mildew	Leaf rust
Low <350mm	S	S	S	S	S
Medium 350–500mm	MSS	MSS	MSS	MSS	MSS
High >500mm*	MS	MS	MS	MS	MS

*Unless a suitable program of disease control by fungicide applications can be carried out.

Reviewed by Dr Hari Dadu, Agriculture Victoria (2024)

GRDC

Table 5: Mallee and Wimmera (main season) barley yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

	MALLEE						WIMMERA					
Year		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)		3.33	3.56	2.51	5.53	3.75		5.72	4.77	1.39	6.53	4.19
	No. trials	5	6	6	6	6	No. trials	4	3	1	3	2
MALTING BARLEY												
Alestar(ф)	24	–	91	87	97	89	13	97	96	92	99	88
Bass(ф)	5	96	–	–	–	–	4	95	–	–	–	–
Bottler(ф)		–	–	–	–	–	13	100	101	100	106	93
Buff(ф)	29	100	100	101	97	99	13	102	100	96	93	104
Commander(ф)	29	93	97	102	98	100	13	98	103	102	93	104
Commodus(ф) CL	24	–	101	111	94	98	9	–	99	107	91	106
Compass(ф)	29	107	102	113	95	98	13	96	100	109	92	107
Kiwi		–	–	–	–	–	13	96	98	96	101	89
La Trobe(ф)	29	104	102	100	94	103	13	101	94	92	92	103
Leabrook(ф)	29	109	106	116	101	104	13	100	104	112	98	110
Maximus(ф) CL	29	104	105	103	94	111	13	96	94	99	95	103
Minotaur(ф)	24	–	109	108	109	115	9	–	106	108	109	108
RGT Planet(ф)	29	104	102	98	110	99	13	108	105	101	114	98
Scope CL(ф)	29	92	93	91	91	93	4	94	–	–	–	–
Spartacus CL(ф)	29	103	102	99	92	106	13	97	92	94	92	101
Westminster(ф)		–	–	–	–	–	7	90	93	–	–	–
Zena(ф) CL	12	–	–	–	107	97	6	–	–	99	112	96
NON-MALTING BARLEY												
Banks(ф)	5	103	–	–	–	–	4	98	–	–	–	–
Biere(ф)	5	84	–	–	–	–	4	87	–	–	–	–
Bigfoot CL(ф)	6	–	–	–	–	112		–	–	–	–	–
Combat(ф)	12	–	–	–	113	117	6	–	–	110	109	118
Explorer		–	–	–	–	–	4	102	–	–	–	–
Fandaga(ф)		–	–	–	–	–	6	–	–	104	112	100
Fathom(ф)	29	106	103	107	96	101	13	100	99	101	95	105
Hindmarsh(ф)	5	106	–	–	–	–	4	99	–	–	–	–
Keel	11	101	96	–	–	–		–	–	–	–	–
Maltstar(ф)	5	94	–	–	–	–	4	100	–	–	–	–
Nitro		–	–	–	–	–	7	103	105	–	–	–
RGT Atlantis(ф)		–	–	–	–	–	2	–	–	–	–	93
Rosalind(ф)	29	110	108	105	104	108	13	104	101	103	107	104
SakuraStar	23	94	94	–	90	94	12	97	97	–	83	102
BARLEY UNDER MALT EVALUATION												
Beast(ф)	29	110	106	114	97	105	13	98	100	109	95	109
Cyclops(ф)	24	–	111	113	107	120	9	–	105	108	103	114
Laperouse(ф)	29	101	105	108	100	113	13	98	100	106	98	107
Neo(ф) CL	6	–	–	–	–	118	2	–	–	–	–	109
Spinnaker(ф)	12	–	–	–	111	104	6	–	–	103	113	103
Titan AX(ф)	12	–	–	–	101	106	5	–	–	–	95	113
Yeti(ф)	29	106	106	109	99	110	13	97	98	108	99	105

– denotes no data available.

Source: National Variety Trials

Table 6: North Central and North East (main season) barley yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

	NORTH CENTRAL						NORTH EAST					
Year		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)		3.98	4.38	5.22	6.87	6.88		5.63	5.09	5.33	5.72	6.23
	No. trials	1	1	2	2	2	No. trials	1	1	1	1	1
MALTING BARLEY												
Alestar(Ф)	8	91	94	97	99	99	5	97	99	100	102	103
Bass(Ф)	1	94	–	–	–	–	1	94	–	–	–	–
Bottler(Ф)	8	95	97	102	105	101	5	101	101	101	106	104
Buff(Ф)	8	105	101	102	98	95	5	102	92	92	92	99
Commander(Ф)	8	99	100	97	94	95	5	96	91	94	89	96
Commodus(Ф) CL	7	–	98	95	92	85	4	–	94	94	91	90
Compass(Ф)	8	102	99	96	93	83	5	99	94	93	91	89
Kiwi		–	–	–	–	–	5	98	98	99	102	102
La Trobe(Ф)	8	105	101	99	96	98	5	101	98	97	96	98
Leabrook(Ф)	8	106	102	101	98	90	5	102	97	96	95	93
Maximus(Ф) CL	8	101	101	93	93	104	5	93	108	107	100	95
Minotaur(Ф)	7	–	107	105	106	113	4	–	108	108	106	103
RGT Planet(Ф)	8	104	103	112	114	109	5	110	105	103	112	111
Scope CL(Ф)	1	92	–	–	–	–	1	92	–	–	–	–
Spartacus CL(Ф)	8	101	100	95	93	100	5	96	104	102	98	96
Westminster(Ф)		–	–	–	–	–	2	90	98	–	–	–
Zena(Ф) CL	6	–	–	109	112	107	3	–	–	102	111	109
NON-MALTING BARLEY												
Banks(Ф)	1	99	–	–	–	–	1	100	–	–	–	–
Biere(Ф)		–	–	–	–	–	1	86	–	–	–	–
Combat(Ф)	6	–	–	115	112	109	3	–	–	99	103	104
Fandaga(Ф)		–	–	–	–	–	3	–	–	101	107	109
Fathom(Ф)	8	105	101	100	97	93	5	102	97	96	95	95
Hindmarsh(Ф)	1	103	–	–	–	–	1	100	–	–	–	–
Maltstar(Ф)	1	94	–	–	–	–	1	100	–	–	–	–
Nitro	2	99	101	–	–	–	2	103	104	–	–	–
RGT Atlantis(Ф)	2	–	–	–	–	105	1	–	–	–	–	107
Rosalind(Ф)	8	107	104	105	106	106	5	106	108	105	108	103
BARLEY UNDER MALT EVALUATION												
Beast(Ф)	8	105	102	98	95	90	5	100	99	97	95	91
Cyclops(Ф)	7	–	109	105	103	111	4	–	105	105	101	100
Laperouse(Ф)	8	101	103	95	95	105	5	94	105	106	98	95
Neo(Ф) CL	2	–	–	–	–	123	1	–	–	–	–	112
Spinnaker(Ф)	4	–	–	–	114	109	2	–	–	–	111	109
Titan AX(Ф)	4	–	–	–	96	92	2	–	–	–	91	93
Yeti(Ф)	8	101	102	95	96	101	5	95	108	107	102	94

– denotes no data available.

Source: National Variety Trials

Table 7: South West Victoria and Northern Midlands Tasmania (long season) barley yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

	SOUTH WEST VICTORIA						NORTHERN MIDLANDS TASMANIA					
Year		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)		5.74	6.34	8.86	5.93	4.61			10.11	9.85	8.28	7.81
	No. trials	3	3	2	3	3	No. trials		1	1	1	1
MALTING BARLEY												
Alestar[Ф]	14	106	101	103	95	91	4	No trial	98	101	93	103
Bottler[Ф]	14	102	103	101	96	99			–	–	–	–
Commander[Ф]	14	93	93	95	99	102	4		92	95	92	95
Compass[Ф]	11	94	100	97	107	–	3		105	99	104	–
Kiwi	14	99	98	99	99	98	4		95	99	95	99
Leabrook[Ф]	14	94	103	99	111	111	4		103	104	115	99
Maximus[Ф] CL	14	100	101	97	104	114	4		109	93	107	96
Minotaur[Ф]	11	–	100	102	103	96	4		93	93	96	93
RGT Planet[Ф]	14	115	112	112	100	98	4		112	112	106	115
Spartacus CL[Ф]	14	96	97	96	105	96	4		93	88	106	83
Westminster[Ф]	14	95	96	97	96	91	4		94	100	98	97
Zena[Ф] CL	6	–	–	–	101	97	2		–	–	106	109
NON-MALTING BARLEY												
Banks[Ф]	3	100	–	–	–	–		No trial	–	–	–	–
Capstan	3	93	–	–	–	–			–	–	–	–
Explorer	3	91	–	–	–	–			–	–	–	–
Fandaga[Ф]	8	–	–	105	101	104	3		–	100	111	104
Maltstar[Ф]	3	98	–	–	–	–			–	–	–	–
Newton	3	–	–	–	–	58	1		–	–	–	84
Nitro	5	109	101	–	–	–	1		101	–	–	–
Oxford	3	100	–	–	–	–			–	–	–	–
RGT Atlantis[Ф]	3	–	–	–	–	88	1		–	–	–	105
Rosalind[Ф]	14	99	110	104	114	115	4		112	111	124	106
Topstart	14	101	102	100	92	89	4		106	106	105	105
Urambie	14	86	93	93	96	77	4		88	103	108	90
BARLEY UNDER MALT EVALUATION												
Beast[Ф]	2	98	–	–	–	–		No trial	–	–	–	–
Cyclops[Ф]	11	–	109	107	110	114	4		108	101	108	104
Laperouse[Ф]	14	101	99	98	102	101	4		99	90	101	91
Neo[Ф] CL	3	–	–	–	–	110	1		–	–	–	112
Spinnaker[Ф]	8	–	–	108	104	106	3		–	109	108	111
Titan AX[Ф]	3	–	–	–	104	–	1		–	–	100	–
Yeti[Ф]	11	99	100	99	105	–	3		99	94	104	–

– denotes no data available.

Source: National Variety Trials

Photo: Evan Collis

Barley.

OAT

NEW VARIETIES

No new oat varieties are planned for release in this region for the 2025 season. The variety listed last year as 13008-18 has been named Goldie(Φ).

Minnie(Φ) has been released in Western Australia by InterGrain but is not yet available in eastern states.

QUALITY

Goldie(Φ), Koala(Φ) and Minnie(Φ) have been classified as milling as part of the new National Oat Classification Program led by the Grains Australia Oat Council.

Global demand for oat-based food and beverage products, and Australian exports, has risen with greater recognition of their nutritional and health benefits.

Variety selection should be based on agronomic traits, potential grain quality and marketing or end-use options.

Oats can be grown for grain – either for human consumption (milling) or animal feed – or for oaten hay.

Regardless of the targeted end-use, growers are advised to discuss varieties and specific requirements with their local or export marketers ahead of the growing season as these will differ depending on the company.

Growing oats for hay can be a profitable break crop that spreads risk, improves the diversity of timing, and provides a tool to manage herbicide resistance. Important hay quality traits include high digestibility, high water-soluble carbohydrates, low fibre and high protein.

Market demand for export hay continues to be strong, but the export market demands the highest quality for the international dairy industry.

DISEASE

Red leather leaf and bacterial blight are common foliar diseases of oats in Victoria, while crown and stem rusts may be an issue following wet summer conditions. Red leather leaf is most severe in medium and high-rainfall zones, while bacterial blight can be found in all oat-growing regions. To reduce risk of loss from these stubble-borne diseases, growers should avoid sowing into oat stubble and avoid highly susceptible varieties where possible.

Always consult the latest disease resistance ratings as they can change with changes in disease virulence. Resistance ratings are updated in February/March each year at NVT Disease Ratings or the Agriculture Victoria Cereal Disease Guide.

ROYALTIES

Where applicable, growers selling oat grain/seed or export hay will pay an end point royalty (EPR). Refer to Variety Central for further information on hay, grain and seed royalties.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Oats Southern Region

DISEASE MANAGEMENT

- NVT Disease Ratings
- Agriculture Victoria, Cereal Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of oats
- University of Sydney, Australian Cereal Rust Survey reports on the rust situation and information on how to submit samples
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

AEXCO.COM.AU

- Producing Quality Oat Hay booklet

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied below long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
Ⓓ	Denotes Plant Breeder's Rights apply
AEXCO	Australian Exporters Company
CCN	Cereal cyst nematode
IBS	Incorporated by sowing
IMI	Imidazolinone
SARDI	South Australian Research and Development Institute

MILLING OAT

BANNISTER[Φ]

A mid maturing tall dwarf milling variety with wide adaptation. Compared with Mitika[Φ], it is about 13cm taller and flowers three to four days later. Similar to Mitika[Φ] for groat percentage. Not suited to areas where CCN is a problem. Released 2013. Bred by SARDI National Oat Breeding Program and marketed by Seednet. Grain EPR $2.30, hay EPR $2.00.

BILBY[Φ]

A quick-mid maturing dwarf milling oat. Grain yield similar to Williams[Φ] and Bannister[Φ], with improved grain quality, low screenings, high groat percentage and improved beta-glucan content. Not suited to areas where CCN is a problem. Released 2019. Bred by SARDI National Oat Breeding Program and marketed by Barenbrug. Grain EPR $2.50.

DURACK[Φ]

Very quick maturing, moderately tall variety widely adaptable to low to medium-rainfall zones and late planting in high-rainfall regions. Good early vigour and good lodging resistance with low screenings. Released 2016. Bred by SARDI National Oat Breeding Program and marketed by Barenbrug. Grain EPR $2.30, hay EPR $2.00.

GOLDIE[Φ]

A mid maturing variety, three to five days earlier to flower than Bannister[Φ]. A tall broadly adapted variety that has outperformed Bannister[Φ], Bilby[Φ] and Mitika[Φ] for grain yield with low screening losses and good test weight. Goldie[Φ] has moderate CCN resistance. It has good panicle emergence with promising preliminary hay yield and quality data. Released 2024 (tested as 13008-18). Seed available from InterGrain Seedclub members and local resellers. Grain and hay EPR $3.50.

KOALA[Φ]

A mid-slow maturing, tall dwarf milling variety suited to medium to high-rainfall environments. Similar to Bannister[Φ] but can be up to seven days later to head. Released 2023. Bred by SARDI National Oat Breeding Program and marketed by Seednet. Grain and hay EPR $2.50.

KOWARI[Φ]

A mid maturing dwarf milling variety, slightly taller than Mitika[Φ] and suited to medium to high-rainfall zones. It has good grain quality, improved beta-glucan content and low screenings with good feed value. Not suited to areas where CCN is a problem. Released 2017. Bred by SARDI National Oat Breeding Program and marketed by Barenbrug. Grain EPR $2.50.

MITIKA[Φ]

A quick maturing dwarf variety suited to high-rainfall areas. Good grain quality and high groat percentage. It is not suited to areas where CCN is a problem. Released 2005. Marketed by Barenbrug. Grain EPR $2.00.

WILLIAMS[Φ]

A quick maturing, mid-tall milling oat suited to 350mm-plus rainfall zones. It is 15cm taller than Mitika[Φ], 5cm taller than Bannister[Φ] and 15cm shorter than Yallara[Φ]. A similar variety to Bannister[Φ] but with slightly inferior grain quality. Produces high screenings when grown in low-rainfall areas. It is not suited to areas where CCN is a problem. Released 2013. Bred by SARDI National Oat Breeding Program and marketed by Barenbrug. Grain EPR $2.30, hay EPR $2.00.

YALLARA[Φ]

A quick maturing, medium to tall variety suited to milling and hay. Suitable for growing in drier areas. Released 2009. Bred by SARDI and marketed by Seednet. Grain and hay EPR $2.00.

HAY OAT

ARCHER(Φ)

Mid maturing hay oat with single-gene IMI tolerance variety suitable for IBS situations. Medium-tall plant height with good early vigour, biomass and colour. Currently registered for IBS Sentry® herbicide for hay, forage, seed and domestic feed grain production. Grain can only be used for the domestic feed market or consumed on-farm; it cannot be delivered to grain receival sites. Released 2022. Bred by GIA and marketed by InterGrain with seed available from local resellers and InterGrain Seedclub members. Grain and hay EPR $3.65.

BRUSHER

Quick maturing tall oat, well suited to low and medium-rainfall areas. Released 2003. Bred by SARDI.

FORESTER(Φ)

A very slow maturing hay variety with medium height. Adapted to high-rainfall and irrigated cropping regions. It has excellent lodging and shattering resistance and good early vigour. Released 2012. Bred by SARDI and marketed by AEXCO. Grain and hay EPR $2.00.

KINGBALE(Φ)

Kingbale(Φ) is a single-gene IMI-tolerant variety suitable for IBS situations. Mid-slow maturing, tall variety with high biomass and good quality. Currently registered for IBS Sentry® herbicide for hay, forage, seed and domestic feed grain production. Grain can only be used for the domestic feed market or consumed on-farm; it cannot be delivered to grain receival sites. Released 2019. Bred by GIA and marketed by InterGrain with seed available from local resellers and InterGrain Seedclub members. Grain and hay EPR $3.65.

KULTARR(Φ)

A mid maturing hay oat with high biomass and very tall plant height. Slightly later to flower than Brusher, similar to Mulgara(Φ). Hay quality data indicated suitable quality profile. Released 2022. Marketed by InterGrain with seed available from local resellers and InterGrain Seedclub members. Free to trade. Grain and hay EPR $3.00.

MULGARA(Φ)

Quick maturing tall oat. Excellent hay colour and quality similar to Wintaroo with good grain yield. Released 2009. Bred by SARDI and marketed by AEXCO. Grain and hay EPR $2.00.

TUNGOO(Φ)

A mid-slow maturing, medium to tall variety. Grain yield poor, but hay yield similar to Kangaroo. Released 2012. Bred by SARDI and marketed by AEXCO. Grain and hay EPR $2.00.

WALLABY(Φ)

Mid-slow maturing hay oat with market-leading hay quality and colour. To get best hay biomass, Wallaby(Φ) should be sown 10 to 14 days before Mulgara(Φ) and Brusher. Moderately tall plant height and likely suited to medium to high-rainfall zones. Released 2022. Bred by SARDI and marketed by InterGrain with seed available from local resellers and InterGrain Seedclub members. Free to trade. Grain and hay EPR $3.00

WINTAROO

A mid maturing tall variety for all rainfall zones. Released 2003. Bred by SARDI.

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Table 1: Recommended sowing window for oat by phenology and region.

This table is a guide only and has been compiled from data provided by SAGIT Project S319 (Improving productivity of oats) and AgriFutures Australia Project PRJ-011029 (National Hay Agronomy).

Phenology	Example variety	April				May				June			
MALLEE													
Very slow	Forester(d)												
Mid-slow	Kingbale(d)												
Mid	Goldie(d)												
Quick	Yallara(d)												
Very quick	Durack(d)												
WIMMERA		**April**				**May**				**June**			
Very slow	Forester(d)												
Mid-slow	Kingbale(d)												
Mid	Goldie(d)												
Quick	Yallara(d)												
Very quick	Durack(d)												
NORTH CENTRAL		**April**				**May**				**June**			
Very slow	Forester(d)												
Mid-slow	Kingbale(d)												
Mid	Goldie(d)												
Quick	Yallara(d)												
Very quick	Durack(d)												
NORTH EAST		**April**				**May**				**June**			
Very slow	Forester(d)												
Mid-slow	Kingbale(d)												
Mid	Goldie(d)												
Quick	Yallara(d)												
Very quick	Durack(d)												
SOUTH WEST		**April**				**May**				**June**			
Very slow	Forester(d)												
Mid-slow	Kingbale(d)												
Mid	Goldie(d)												
Quick	Yallara(d)												
Very quick	Durack(d)												

Yellow = earlier than optimum.
Green = optimum sowing time.
Red = later than optimum.

Table 2: Agronomic characteristics and disease ratings of oat varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, National Oat Breeding Program, and seed companies.

Variety	End-use	Height	Maturity	Hectolitre weight	Rust		Red leather leaf	*Septoria avenae*	Bacterial blight	BYDV	CCN resistance
					Stem	Leaf					
MILLING OATS											
Bannister(Φ)	M/H	TD	M	H	S	MSS	MSS-SVS	MSS	S	MS	MR
Bilby(Φ)	M	D	Q-M	H	S	MSS	MS	S	SVS	S	S
Durack(Φ)	M/H	MT	VQ	H	S	S	SVS	S	S	S	MRMS
Goldie(Φ)	M/H	T	M	H	SVS	SVS	SVS	MS	S	MS	MR
Koala(Φ)	M/H	TD	M-S	H	MS	MSS	S	MSS	S	MSS	R
Kowari(Φ)	M	D	M	H	S	SVS	S	S	S	S	S
Mitika(Φ)	M	D	Q	H	S	S	SVS	SVS	S	SVS	VS
Williams(Φ)	M	MT	Q	H	S	MRMS	MS	MSS	MSS	MSS	S
Yallara(Φ)	M/H	MT	Q	H	S	S	SVS	MSS	S	S	R
HAY OATS											
Archer(Φ)	H	M	M		MSS	R/S (P)	SVS (P)	MRMS (P)	MSS (P)	MSS (P)	–
Brusher	H/G/F	T	Q	M	SVS	MR	MS	MSS	SVS	S	MR
Forester(Φ)	H	M	VS	L	–	–	–	–	–	–	–
Kingbale(Φ)	H	T	M-S		MSS	S	S (P)	MSS	MSS (P)	MS	R
Kultarr(Φ)	H	VT	M		SVS (P)	MR (P)	S (P)	MS (P)	MS (P)	MSS (P)	–
Mulgara(Φ)	H/F	T	Q	M	S	MR	SVS	S/MS	MSS	MSS	R
Tungoo(Φ)	H	MT	M-S	L	S	MR	MRMS	MRMS#	S	MSS	MR
Wallaby(Φ)	H	MT	M-S		SVS (P)	MR (P)	SVS (P)	MS (P)	MSS (P)	MS (P)	–
Wintaroo	H/G	T	M	M	S	S	S	MS#	S	MS	R

– denotes no rating available.

Source: NVT Disease Ratings

End-use: M = milling, F = feed grain, G = grazing, H = hay. Plant height: D = dwarf, TD = tall dwarf, T = tall, ST = short tall, MT = moderate tall, VT = very tall.

Maturity: VQ = very quick, Q = quick, M = mid, S = slow, VS = very slow. Hectolitre weight: VH = very heavy, H = heavy, M = medium, L = light.

Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

R = resistant, MR = moderately resistant, MRMS = moderately resistant to moderately susceptible, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.

- hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes, ^ line contains a few susceptible off types, ( ) show outlier.

Table 3: North Central and North East oat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

	NORTH CENTRAL						NORTH EAST					
Year		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)		1.99	4.66	6.00	5.33	4.62		2.87	4.20	5.16	4.09	4.83
	No. trials	2	2	2	2	2	No. trials	1	1	1	1	1
Archer(b)	2	–	–	–	–	102	1	–	–	–	–	96
Bannister(b)	10	109	106	113	102	105	5	99	106	123	105	106
Bilby(b)	10	105	100	100	103	103	5	112	105	109	104	107
Durack(b)	10	94	90	79	91	92	5	108	84	58	94	91
Echidna	10	95	104	107	107	103	5	90	110	120	100	103
Goldie(b)	6	–	–	113	101	107	3	–	–	127	110	113
Kingbale(b)	2	–	–	–	–	81	1	–	–	–	–	64
Koala(b)	10	107	110	121	102	105	5	84	110	133	97	102
Koorabup(b)	8	92	93	84	86	–	4	88	72	46	97	–
Kowari(b)	10	101	97	94	100	100	5	111	101	96	99	103
Kultarr(b)	2	–	–	–	–	89	1	–	–	–	–	77
Minnie(b)	4	–	–	–	96	108	2	–	–	–	92	117
Mitika(b)	10	96	95	90	98	97	5	106	96	84	98	98
Wallaby(b)	2	–	–	–	–	100	1	–	–	–	–	97
Williams(b)	10	96	104	104	104	101	5	90	96	99	119	98
Yallara(b)	10	99	93	84	85	91	5	99	73	49	98	84

– denotes no data available.

Source: National Variety Trials

Table 4: South West oat yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

Year		2019	2020	2021	2022	2023
Mean yield (t/ha)		4.90	4.75	5.65	6.07	3.06
	No. trials	2	2	2	1	2
Archer(b)	2	–	–	–	–	96
Bannister(b)	9	114	109	112	116	106
Bilby(b)	9	103	109	102	100	113
Durack(b)	9	76	83	76	66	91
Echidna	9	109	107	112	119	101
Goldie(b)	5	–	–	107	104	122
Koala(b)	9	117	106	116	126	97
Koorabup(b)	7	82	71	82	76	–
Kowari(b)	9	94	102	93	89	107
Minnie(b)	3	–	–	–	86	124
Mitika(b)	9	89	95	90	86	99
Wallaby(b)	2	–	–	–	–	87
Williams(b)	9	115	103	119	121	99
Yallara(b)	9	81	74	79	70	80

– denotes no data available

Source: National Variety Trials

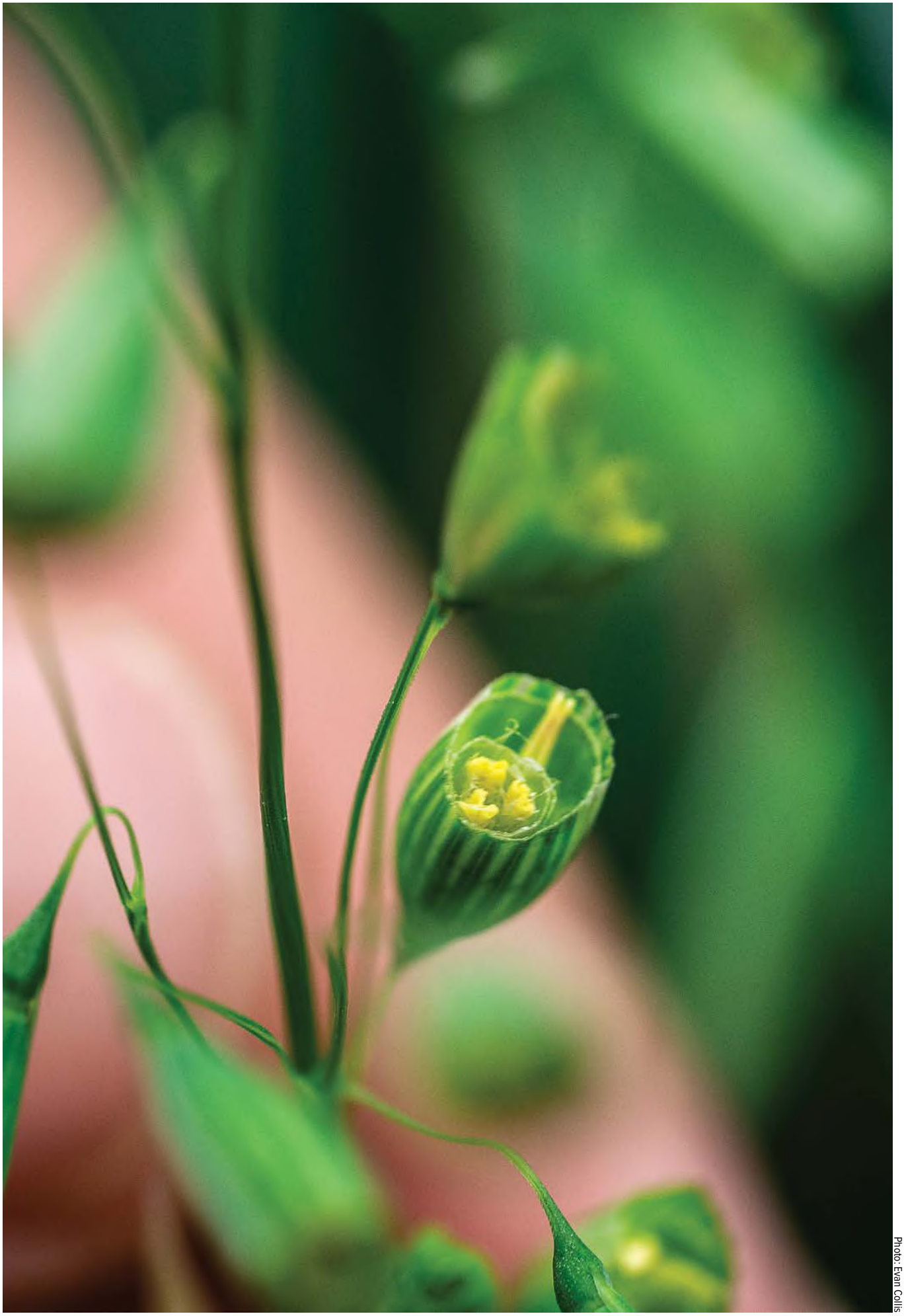

Photo: Evan Collis

Oat.

TRITICALE

Triticale is no longer evaluated as part of the GRDC National Variety Trials (NVT) program.

Triticale, a cross between wheat and cereal rye, has a niche on farms across Victoria due to several attributes. It has a reputation for tolerance to harsh soil conditions such as acid and alkaline soils and soils of low trace element availability. It is a tall crop bred for greater straw strength, which can be useful in rocky paddocks or circumstances where crops have been known to lodge.

NEW VARIETIES

No new triticale varieties are planned for release in this region for the 2025 season.

Two varieties have been added to the guide – Woomera, released in 2023, and Yowie has returned to the guide due to continued demand.

DISEASE

In general, triticale has useful levels of resistance to diseases and requires less disease protection than other cereal crops. However, rusts may need management following the development of more virulent pathotypes.

As triticale is not part of GRDC's NVT disease screening project, disease rating data may be less current and/or based on breeder assessment.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results up to 2015
- NVT Long Term Yield Reports app
- NVT Disease Ratings

GRDC.COM.AU

- GrowNotes™ Triticale Southern Region

DISEASE MANAGEMENT

- NVT Disease Ratings
- Agriculture Victoria, Cereal Disease Guide
- University of Sydney, Australian Cereal Rust Survey reports on the rust situation and information on how to submit samples
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
(Þ	Denotes Plant Breeder's Rights apply

ASTUTE(ф)

A mid season fully awned triticale suited to medium to high-yielding environments. An alternative to Hawkeye(ф). Released 2015. Bred and marketed by AGT, available through AGT Seed Sharing™ and through AGT Affiliates. Free to trade. EPR $2.75.

BISON(ф)

An early to mid season reduced awn triticale best suited to low to medium-yielding environments. Released 2015. Bred and marketed by AGT, available through AGT Seed Sharing™ and through AGT Affiliates. Free to trade. EPR $2.75.

CARTWHEEL(ф)

A long-season dual-purpose triticale suitable for grazing and grain. Recovery from grazing is excellent in the winter months. Grain yield is equivalent to Tobruk(ф) in southern NSW dual-purpose mixed-cereal trials. Released 2017. Bred by University of Sydney. Seed available from AGF Seeds. Seed purchase management fee $90/t ex-GST.

FUSION(ф)

A mid season, fully awned, grain only triticale. Moderately tall and yields well in dry or short finishes. Released 2012. Bred and marketed by AGT, available through AGT Seed Sharing™. Free to trade. EPR $3.00.

JOEY

An early to mid season tall, reduced awn triticale suitable for forage and grain production. Joey has good early vigour and fast winter forage production. High test weight. Released 2020. Bred by Cooper & Elleway. No EPR.

KOKODA(ф)

A long season dual-purpose triticale that can be sown early March (some off-types may occur when sown early). Good early dry matter production equivalent to Endeavour(ф) and excellent recovery in winter for second dry matter production. Useful for hay production as it is semi-awnless. Released in 2019. Bred by University of Sydney. Seed available from AGF Seeds. Seed purchase management fee $90/t ex-GST.

RAZOO

A spring triticale with mid maturity, medium-tall height and reduced awns suitable for forage and grain production. Good early vigour, fast winter forage growth, good weed competition and soil erosion control. Large, dense grain suitable for milling as well as feed. Released 2022. Bred by Cooper & Elleway. No EPR.

WONAMBI

A later maturing spring or facultative type triticale suitable for grazing, forage conservation and grain production. Released 2018 by Cooper & Elleway and marketed by Naracoorte Seeds. No EPR.

WOOMERA

A later maturing spring triticale with reduced-awn head type, suitable for forage and grain production. Dense grain suitable for milling as well as feed use. Reliable producer in dry or wet seasons. Released 2023 (tested as WMRA31-3). Bred by Cooper & Elleway. No EPR.

YOWIE

A medium maturity spring triticale with fully awned head type and larger, medium-density grain. Suitable for grazing and grain production. Good for stabilising sandy soils and good lodging resistance. Released 2011. Bred by Cooper & Elleway. No EPR.

ACKNOWLEDGEMENTS

James Whiteley – Australian Grain Technologies
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Grant Hollaway – Astute Ag

Table 1: Recommended sowing window for triticale by phenology and region.

This table is a guide only and has been compiled from observations of the breeder and agronomists.

	April				May				June				July			
MALLEE																
Late																
Mid-late																
Mid																
Early-mid																
WIMMERA																
Late																
Mid-late																
Mid																
Early-mid																
NORTH CENTRAL																
Late																
Mid-late																
Mid																
Early-mid																
NORTH EAST																
Late																
Mid-late																
Mid																
Early-mid																
SOUTH WEST																
Late																
Mid-late																
Mid																
Early-mid																

Yellow = earlier than optimum.
Green = optimum sowing time.
Red = later than optimum.

Table 2: Agronomic characteristics and disease ratings of triticale varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder.

Variety	Rainfall			Maturity	Height	Rust			Yellow leaf spot	*Septoria tritici*	CCN resistance	Disease rating source
	Low <350mm	Med 350–550mm	High >550mm			Stem	Stripe	Leaf				
Astute(ф)		✓	✓	M	M-T	MR	MSS	RMR	MRMS	RMR	R	AgVic
Bison(ф)	✓	✓		E-M	T	–	–	–	–	–	–	NA
Cartwheel(ф)		✓	✓	L		R	RMR	R	MR	RMR	R (P)	NVT
Fusion(ф)	✓	✓		M	M-T	R	RMR (S)	R	MS	RMR	R	NVT
Joey	✓	✓		E-M	T	S	MR	RMR	MR	RMR	MS	AgVic
Kokoda(ф)		✓	✓	M-L		R	RMR	RMR	MR	RMR	MR	AgVic
Razoo	✓	✓		M	M-T	MRMS (P)	MR	RMR# (P)	MR (P)	RMR (P)	–	NVT
Wonambi		✓	✓	M-L	T	R	MRMS	R	MR	RMR	MS	AgVic
Woomera		✓	✓	M-L	T	MS	MR	RMR^	MR	RMR	MS	NVT
Yowie	✓	✓		M	M-T	–	–	–	–	–	–	NA

– denotes no rating available.
Source: NVT Disease Ratings and the Agriculture Victoria, Cereal Disease Guide
Maturity: VE = very early, E = early, M = mid, L = late; Height: M = medium, T = tall.
Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.
- hyphen indicates a range, / indicates pathotype differences, # warning, may be more susceptible to alternate pathotypes,
^ line contains a few susceptible off types, ( ) show outlier.

Photo: Bob Freebairn

Triticale.

CANOLA

Canola is used for its seed, which is crushed for edible and industrial purposes. The majority of Australian canola is exported to Europe for biodiesel; however, canola grown in Victoria and Tasmania is more likely to be sold to the domestic crushing market for use in margarine, cooking oil, salad oil and edible oil blends. After the oil is extracted, the by-product is a protein-rich meal used by intensive livestock industries.

SUSTAINABILITY CERTIFICATION

Sustainability certification is essential when supplying canola to the European biofuel market and is increasingly valued by local crushing markets. Certification demonstrates that the crop is grown with appropriate land stewardship, good agricultural practice and meets legal obligations.

International Sustainability and Carbon Certification (ISCC) can be undertaken via the Sustainable Grain Australia (SGA) program. Growers should take this process seriously as independent audits are randomly conducted each year. SGA coordinates the audit process and provides support to growers during an audit.

NEW VARIETIES

Several new canola varieties have been released for 2025:

GLYPHOSATE TOLERANT

- DG Buller G
- Pioneer® PY323G
- Pioneer® PY428R

IMIDAZOLINONE TOLERANT

- Pioneer® PN526C
- Pioneer® PY327C

TRIAZINE TOLERANT

- Monola® H524TT
- Pioneer® PY429T

DUAL TOLERANCE – IMIDAZOLINONE + TRIAZINE

- Nuseed® Griffon TTI

DUAL TOLERANCE – GLYPHOSATE + IMIDAZOLINONE

- Pioneer® PY424GC

DUAL TOLERANCE – GLUFOSINATE + GLYPHOSATE

- InVigor® LR 3540P
- InVigor® LR 5040P

New varieties are not necessarily entered into the NVT system, which means that some disease resistance and yield performance information may be missing from this guide. Please contact your local agronomist for more information.

Varieties removed from the guide are:

GLYPHOSATE TOLERANT

- DG Bindo TF
- DG Drummond TF (as DG 2104XX)
- Hyola® 410XX
- InVigor® R 4022P
- Nuseed® Condor TF
- Pioneer® 44Y30 RR
- Pioneer® 45Y28 RR

IMIDAZOLINONE TOLERANT

- Hyola® Continuum CL
- Hyola® Equinox CL
- Pioneer® 45Y93 CL

TRIAZINE TOLERANT

- ATR Stingray
- ATR Wahoo$^{\Phi}$
- Bandit TT$^{\Phi}$
- DG Murray TT$^{\Phi}$
- InVigor® T 4510
- InVigor® T 6010
- Monola® 420TT

DUAL TOLERANCE – GLYPHOSATE + IMIDAZOLINONE

- Hyola® Garrison XC

HERBICIDE USE

Grain Trade Australia (GTA) has recommended that Australian growers do not use haloxyfop on canola to prevent residue detection above new European Union (EU) maximum residue limits (MRLs). The EU banned the use of haloxyfop in canola in 2020 and in August 2024 implemented a reduced MRL for canola. The only way for Australia to safely meet this MRL is to avoid using the herbicide.

DISEASE

BLACKLEG

Blackleg can cause severe yield losses in canola, but it can be successfully managed. Blackleg occurs in two forms in Australia. Crown canker is still the main risk to growers, but upper canopy infection (UCI) can also cause significant yield losses.

In most seasons, crops will not be prone to both crown canker and UCI. Crops that are sown early and germinate early may grow quickly enough to avoid seedling infection and crown canker (plant growth prior to winter may avoid blackleg infection). However, early sown crops are more likely to start flowering in winter while blackleg is still active – this is the critical time for UCI.

Blackleg is controlled by two forms of genetic resistance – major gene and quantitative. Both are important for blackleg control and require management to maintain them. The blackleg rating for each variety is based on a combination of both major gene and quantitative resistance.

Major gene resistance

Major gene resistance (MGR) controls blackleg at all stages of plant development, protecting against leaf lesions, crown canker, UCI and pod infection. Varieties can have single or multiple MGR genes and are classified into the resistance groups A, B, C, D, F, H and S (Table 2).

Varieties will be rated R while the MGR is effective and will not have any yield losses from blackleg. As most MGRs in Australian canola varieties are no longer effective, breeders combine MGRs to restore effectiveness and/or combine MGR and quantitative resistance (QR) to create resistance.

When blackleg evolves to overcome the MGR the variety will become susceptible. MGR effectiveness is monitored to identify which genes remain effective in Australian canola growing regions. Growers can use this information in combination with their own on-farm observations to select varieties from resistance groups that are likely to be effective.

Quantitative resistance

Quantitative resistance (QR) is the combination of several resistance genes where each gene has a small effect on reducing blackleg severity. An MR-rated variety may have more QR genes than an MS variety. QR controls both crown canker and UCI severity but may not offer complete protection, so a variety will likely still suffer some crown canker and UCI.

Growing the same variety intensively for more than three years is likely to lead to reduced effectiveness of that variety's QR. Again, monitoring is essential to determine whether resistance remains effective on your farm.

Managing blackleg

Growers are encouraged to consult the latest resistance ratings in the BlacklegCM app, the Blackleg Management Guide or the NVT Disease Ratings. These are updated twice a year to reflect changes in blackleg resistance.

For the first time, the spring 2024 Blackleg Management Guide includes UCI blackleg ratings.

The BlacklegCM app is designed to predict yield losses and enable you to explore different management and fungicide options.

The UCI BlacklegCM app is a spray decision tool based on the presence of leaf lesions (which indicates that a major gene has been overcome), date of first flower and possible fungicide options.

SCLEROTINIA

Australian canola varieties have no known resistance to Sclerotinia. In some seasons, the level of Sclerotinia stem rot varies between canola varieties; this relates to differences in region, time of flowering and rainfall events. The SclerotiniaCM app can predict yield losses and provide likely estimates of economic returns from fungicide applications.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Canola Southern Region
- Blackleg Management Guide updated each autumn and spring
- Tips & Tactics: Better Mouse Management
- 20 Tips for Profitable Canola – Victoria

EXTENSIONAUS.COM.AU/FCDVIC

- extensionAUS Field Crop Diseases, Foliar diseases of canola

DISEASE APPS

- BlacklegCM app – decision support tool for profitable management of blackleg. Best used on tablet. Not available on iPhone.
- UCI BlacklegCM app – decision support tool for profitable management of UCI blackleg. Available on Android and iPhone.
- SclerotiniaCM app – forecasting model to assist canola growers with fungicide application decisions. Best used on tablet. Not available on iPhone.

CANOLAFLOWERING.COM.AU

- A simple phenology model that uses 60 years of local weather data to calculate a range of possible flowering dates for a specific environment. Developed by CSIRO.

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
ⓟ	Denotes Plant Breeder's Rights apply
ISCC	International Sustainability and Carbon Certification
MGR	Major gene resistance
OP	Open pollinated
QR	Quantitative resistance
UCI	Upper canopy infection

CONVENTIONAL VARIETIES

Conventional canola was last tested in NVT in 2020.

HYBRID – NUSEED® DIAMOND

Early maturing hybrid of medium height suited to low to medium rainfall areas. Blackleg rating RMR and MR-UCI (group ABF). NVT tested 2012–20. Released 2013. Bred and marketed by Nuseed.

HYBRID – NUSEED® QUARTZ

Mid maturing hybrid of medium height. Suited to medium to high-rainfall areas. Blackleg rating RMR and MR-UCI (group ABD). NVT tested 2016–20. Released 2017. Bred and marketed by Nuseed.

OP – OUTLAW$^{\phi}$

Early maturing OP conventional canola variety. Suited to low to medium-rainfall areas. Tall plant height and high oil content. Blackleg rating RMR and MR-UCI (group A). Released 2022. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $10.00.

GLYPHOSATE-TOLERANT VARIETIES

NEW – HYBRID – DG BULLER G

Early-mid maturing Optimum GLY® hybrid. Suited to medium to high-rainfall areas. Blackleg pending (breeder advises group H). NVT tested 2024 as DG8253G. Released 2025. Bred and marketed by Nutrien Ag Solutions.

HYBRID – DG HOTHAM TF

Mid maturing TruFlex® hybrid with medium-tall height. Suited to medium to high-rainfall areas. Blackleg rating R and R-UCI (group ABH). NVT tested 2021–24. Released 2022. Bred and marketed by Nutrien Ag Solutions.

HYBRID – DG LOFTY TF

Early maturing TruFlex® hybrid. Medium height and very good seedling vigour. Blackleg rating R and R-UCI (group ABH). NVT tested 2021-22. Released 2021. Bred and marketed by Nutrien Ag Solutions.

HYBRID – INVIGOR® R 4520P

Early to mid-season Truflex® hybrid with PodGuard®. Good seedling vigour and medium height. InVigor® R 4520P is widely adapted in Victoria. Blackleg rating MRMS and MRMS-UCI (group B). NVT tested 2019–24. Released 2020. Bred and marketed by BASF.

HYBRID – NUSEED® EAGLE TF

Mid maturing TruFlex® hybrid. Suited to medium to high-rainfall areas. Tall plant height. Blackleg rating R and MR-UCI (group ABD). NVT tested 2021–24. Released 2022. Bred and marketed by Nuseed.

HYBRID – NUSEED® EMU TF

Early maturing TruFlex® hybrid. Suited to low and medium-rainfall areas. Medium to tall height. Blackleg rating MR and MR-UCI (group AB). NVT tested 2019–24. Released 2021. Bred and marketed by Nuseed.

HYBRID – NUSEED® HUNTER TF

Early-mid maturing TruFlex® hybrid. Suited to low to medium-rainfall areas. Medium height. Blackleg rating RMR and MR-UCI (group AB). NVT tested 2021–24. Released 2022. Bred and marketed by Nuseed.

HYBRID – NUSEED® RAPTOR TF

Early-mid maturing TruFlex® hybrid. Suited to medium rainfall areas. Medium height. Blackleg rating R and MR-UCI (group AD). NVT tested 2017–24. Released 2019. Bred and marketed by Nuseed.

HYBRID – PIONEER® 44Y27 RR

Early-mid maturing Roundup Ready® hybrid. Ideally suited to low to medium-rainfall areas. Blackleg rating RMR and MR-UCI (group B). NVT tested 2016–24. Released 2017. Marketed by Pioneer Seeds.

NEW – HYBRID – PIONEER® PY323G

Early maturing Optimum GLY® hybrid variety suited to low to medium-rainfall areas. Medium height. Blackleg rating MRMS and MRMS-UCI (group BC). NVT tested 2023–24. Released 2023. Marketed by Pioneer Seeds.

HYBRID – PIONEER® PY422G

Early-mid season Optimum GLY® hybrid variety suited to medium-rainfall areas. Mid-tall height. Blackleg rating MR and MR-UCI (group AB). NVT tested 2023–24. Released 2023. Marketed by Pioneer Seeds.

NEW – HYBRID – PIONEER® PY428R

Early-mid maturing Roundup Ready® hybrid with mid-tall height. Suited to low to medium-rainfall areas. Blackleg pending. NVT tested 2023-24 as D257-18. Released 2024. Marketed by Pioneer Seeds.

HYBRID – PIONEER® PY525G

Mid-maturing Optimum GLY® hybrid variety suited to medium to high-rainfall areas. Mid-tall height. Blackleg rating MR and MR-UCI (group AB). NVT tested 2023-24. Released 2023. Marketed by Pioneer Seeds.

VICTORY® SPECIALTY HYBRID – VICTORY® V55-04TF

Mid maturing TruFlex® specialty (high oleic, low linoleic oil) hybrid. Medium height. Suited to early sowing. Blackleg rating R and MR-UCI (group AB). NVT tested 2021 and 2024. Released 2022. Bred and marketed by Cargill on a hectare contract with no ISCC requirement.

IMIDAZOLINONE-TOLERANT VARIETIES

HYBRID – CAPTAIN CL

Mid-late maturing winter dual-purpose Clearfield® hybrid with potential to produce very high biomass and good oil. Suited to early sowing and spring sowing in high-rainfall areas. Blackleg rating R and R-UCI (group AH). Not tested in NVT. Tested in company trials 2020–24 and FAR Hyper Yielding Crops trials 2021–23. Released 2023. Marketed by AGF Seeds. EPR $5.00.

HYBRID – HYOLA® 970CL

Late maturing winter dual-purpose hybrid with high biomass and tall plant height. Adapted to high to very high-rainfall areas. Blackleg rating R and R-UCI (group H). Not tested in NVT. Tested in company trials 2016–24. Released 2014. Bred and marketed by Pacific Seeds.

HYBRID – HYOLA® FEAST CL

Mid-late maturing winter hybrid, slightly earlier than Hyola® 970CL. Adapted to medium-high to very high-rainfall areas. Blackleg rating R and R-UCI (group H). Not tested in NVT. Tested in company trials 2018–24. Released 2021. Bred and marketed by Pacific Seeds.

HYBRID – HYOLA® SOLSTICE CL

Early-mid maturing Clearfield® hybrid. Suited to low to medium-high rainfall areas. Blackleg rating R and R-UCI (group ADFH). NVT tested 2021–24. Released 2022. Bred and marketed by Pacific Seeds.

HYBRID – NUSEED® CERES IMI

Early maturing imidazolinone hybrid. Suited to low to medium-rainfall areas. Medium to tall plant height. Blackleg rating RMR and MR-UCI (group AD). NVT tested 2021–24. Released 2023. Bred and marketed by Nuseed.

HYBRID – PHOENIX CL

Mid-late maturing dual-purpose winter hybrid. Potential to produce very high biomass, with a slightly shorter plant height than some other dual-purpose canola. Suited to early sowing and spring sowing in high-rainfall areas. Blackleg rating R and MR-UCI (group B). Not tested in NVT. Released 2019. Marketed by AGF Seeds.

HYBRID – PIONEER® 43Y92 CL

Early maturing hybrid suited to low to medium-rainfall areas. Medium height. Blackleg rating RMR and MR-UCI (group B). NVT tested 2016–24. Released 2017. Marketed by Pioneer Seeds.

HYBRID – PIONEER® 44Y94 CL

Mid-early maturing Clearfield® hybrid suited to medium to high-rainfall and irrigation areas. Mid-tall height. Blackleg rating RMR and MR-UCI (group BC). NVT tested 2019–24. Released 2020. Marketed by Pioneer Seeds.

HYBRID – PIONEER® 45Y95 CL

Mid maturing hybrid. Suited to medium to high-rainfall and irrigation areas. Mid-tall height. Blackleg rating RMR and MR-UCI (group C). NVT tested 2021–24. Released 2021. Marketed by Pioneer Seeds.

NEW – SPECIALTY HYBRID – PIONEER® PN526C

Mid maturing specialty Clearfield® hybrid suited to high-rainfall areas. Medium height. Blackleg rating RMR and MR-UCI (group ABD). NVT tested 2022-23 as HH2990I. Released 2024. Marketed by Pioneer Seeds.

NEW – HYBRID – PIONEER® PY327C

Early maturing Clearfield® hybrid suited to low to medium-rainfall areas. Tall height. Blackleg pending. NVT tested 2023-24 as AA0424I. Released 2024. Marketed by Pioneer Seeds.

HYBRID – PIONEER® PY421C

Early to mid-maturing hybrid variety broadly adapted across low to high-rainfall areas. Medium height. Blackleg rating RMR and MR-UCI (group A). NVT tested 2022–24. Released 2023. Marketed by Pioneer Seeds.

HYBRID – RGT CLAVIER CL

Late maturing winter dual-purpose hybrid with very high biomass and mid-tall plant height. Adapted to high to very high-rainfall areas. Blackleg rating R and R-UCI (group ACH). Not tested in NVT. Released 2022. Marketed by RAGT. EPR $12.00.

HYBRID – RGT NIZZA® CL

Early winter dual-purpose hybrid. Suited to early sowing and spring sowing in high-rainfall areas and irrigation. Mid-tall height. Blackleg rating R and MR-UCI (group B). Not tested in NVT. Released 2021. Marketed by RAGT. EPR $12.00.

VICTORY® SPECIALTY HYBRID – VICTORY® V75-03CL

Mid maturing specialty (high oleic, low linolenic acid oil) hybrid. Medium plant height. Blackleg rating RMR and MR-UCI (group AB). NVT tested 2018–21 and 2023-24. Released 2019. Bred and marketed by Cargill on a hectare contract.

TRIAZINE-TOLERANT VARIETIES

OP – ATR-BLUEFIN(ϕ)

Early maturing triazine-tolerant OP variety. Suited to low-rainfall areas. Short to medium height. Blackleg rating RMR and MR-UCI (group AB). NVT tested 2020–24. Released 2021. Bred and marketed by Nuseed. EPR $5.00

OP – ATR BONITO(ϕ)

Early-mid maturing triazine-tolerant OP variety. Suited to low to medium-rainfall areas. Short to medium height. Blackleg rating MS and MS-UCI (group A). NVT tested 2012–24. Released 2013. Bred and marketed by Nuseed. EPR $5.00.

OP – ATR-SWORDFISH(ϕ)

Early-mid maturing OP variety. Suited to low to medium-rainfall areas. Medium height. Blackleg rating MRMS and MRMS-UCI (group AB). NVT tested 2021–24. Released 2022. Bred and marketed by Nuseed. EPR $5.00.

OP – DG AVON TT(ϕ)

Early maturing, OP triazine variety suited to low to medium-rainfall areas. Blackleg rating MR and MR-UCI (group AC). NVT tested 2022–24. Released 2023. Bred and marketed by Nutrien Ag Solutions. EPR $5.00.

OP – DG BIDGEE TT(ϕ)

Early-mid maturing OP variety. Medium height. Blackleg rating R and R-UCI (group H). NVT tested 2020–24. Released 2021. Bred and marketed by Nutrien Ag Solutions. EPR $5.00.

OP – DG TORRENS TT(ϕ)

Early-mid maturing OP triazine-tolerant variety with short-medium height. Suited to low to medium-rainfall areas. Blackleg rating RMR and R-UCI (group H). NVT tested 2020–24. Released 2022. Bred and marketed by Nutrien Ag Solutions. EPR $5.00.

HYBRID – HYOLA® BLAZER TT

Mid-early maturing hybrid. Suited to low to very high-rainfall areas including irrigation. Blackleg rating RMR and MR-UCI (group ADF). NVT tested 2019–24. Released 2020. Bred and marketed by Pacific Seeds.

HYBRID – HYTTEC® TRIDENT

Early maturing hybrid. Medium to tall height. Suited to low to medium-rainfall areas. Blackleg rating R and MR-UCI (group AD). NVT tested 2017–24. Released 2019. Bred and marketed by Nuseed. EPR $5.00.

HYBRID – HYTTEC® TRIFECTA

Mid maturing hybrid. Tall height. Suited to medium to high-rainfall areas. Blackleg rating R and MR-UCI (group ABD). NVT tested 2018–24. Released 2020. Bred and marketed by Nuseed. EPR $5.00.

HYBRID – HYTTEC® TROPHY

Early to mid-maturing hybrid. Medium to tall height. Blackleg rating R and MR-UCI (group AD). NVT tested 2017–24. Released 2017. Bred and marketed by Nuseed. EPR $5.00.

HYBRID – HYTTEC® VELOCITY

Early maturing triazine-tolerant hybrid. Suited to low to medium-rainfall areas. Medium height. Blackleg rating MR and MR-UCI (group AB). NVT tested 2020–24. Released 2022. Bred and marketed by Nuseed. EPR $5.00.

HYBRID – INVIGOR® T 4511

Early-mid triazine-tolerant hybrid of medium height. Excellent early vigour ideally suited to early and mid-season growing regions. Higher seedling vigour and higher oil, a replacement for InVigor® T 4510. Blackleg rating RMR and MR-UCI (group pending). NVT tested 2021–24. Released 2022. Bred and marketed by BASF.

SPECIALITY OP – MONOLA® 422TT

Early-mid maturing OP specialty variety. Short height. Suited to low to medium-rainfall areas. Blackleg rating MRMS and MRMS-UCI (group BC). NVT tested 2020–24. Released 2021. Marketed under a closed loop contract through Nuseed.

SPECIALTY HYBRID – MONOLA® H421TT

Early maturing hybrid specialty variety. Medium height. Suitable for low-rainfall areas. Blackleg rating RMR and MR-UCI (group BC). NVT tested 2019–23. Released 2020. Marketed under closed loop contract through Nuseed.

NEW – SPECIALTY HYBRID – MONOLA® H524TT

Early-mid maturing triazine-tolerant hybrid with excellent early vigour. Medium height. Suited to medium to high-rainfall areas. Blackleg rating R and MR-UCI (group AD). NVT tested 2021–24. Released 2024. Marketed under closed loop contract through Nuseed.

NEW – HYBRID – PIONEER® PY429T

Early-mid maturing triazine-tolerant hybrid with mid-tall plant height. Widely adapted, but best suited to medium to medium-high rainfall areas. Blackleg rating R and R-UCI (group ABH). NVT tested 2023-24 as AA902T. Released 2024. Marketed by Pioneer Seeds.

OP – RENEGADE TT(ϕ)

Early-mid maturing triazine-tolerant OP canola. Widely adapted but best suited to low to medium-rainfall areas. Short to medium plant height. Blackleg rating MR and MR-UCI (group A). NVT tested 2021–24. Released 2022. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $10.00.

HYBRID – RGT BASELINE® TT

Mid maturing triazine-tolerant hybrid suited to medium to high-rainfall areas. High oil. Medium height. Blackleg rating MRMS and MRMS-UCI (group B). NVT tested 2021–24. Released 2022. Marketed by RAGT. EPR $10.00

HYBRID – RGT CAPACITY® TT

Early-mid maturing hybrid suited to low-medium rainfall areas. Medium height. Blackleg rating MRMS and MRMS-UCI (group B). NVT tested 2019–24. Released 2021. Marketed by RAGT. EPR $10.00.

HYBRID – SF DYNATRON TT®

Mid maturing hybrid suited to medium to high-rainfall areas. Medium-tall height. Blackleg rating MRMS and MRMS-UCI (group BC). NVT tested 2019–24. Released 2020. Marketed by RAGT. EPR $10.00.

HYBRID – SF SPARK® TT

Early maturing hybrid suited to low-medium rainfall areas. Short to mid height. Blackleg rating MR and MR-UCI (group ABDS). NVT tested 2018–24. Released 2018. Marketed by RAGT. EPR $10.00.

DUAL TOLERANCE: GLUFOSINATE + GLYPHOSATE

NEW – HYBRID – INVIGOR® LR 3540P

TruFlex® + LibertyLink® hybrid with PodGuard®. Early maturing and suited to lower rainfall and shorter season areas. Short height. Blackleg rating MR and MR-UCI (group AB). NVT tested 2022–24 as AN22LR007. Released 2024. Bred and marketed by BASF.

HYBRID – INVIGOR® LR 4540P

TruFlex® + LibertyLink® hybrid with PodGuard®. Early-mid maturing and widely adapted in Victoria. Short height. Blackleg rating RMR and MR-UCI (group B). NVT tested 2022–24. Released 2023. Bred and marketed by BASF.

NEW – HYBRID – INVIGOR® LR 5040P

TruFlex® + LibertyLink® hybrid with PodGuard®. Mid maturing and suited to medium to high-rainfall areas. Medium height. Blackleg rating RMR and MR-UCI (group AB). NVT tested 2022–24 as AN22LR010. Released 2024. Bred and marketed by BASF.

DUAL TOLERANCE: GLUFOSINATE + TRIAZINE

HYBRID – INVIGOR® LT 4530P

LibertyLink® hybrid with tolerance to both Liberty® + triazine herbicides and PodGuard®. Early-mid maturing and suited to medium-rainfall areas. Blackleg rating RMR and MR-UCI (group BF). NVT tested 2020–24. Released 2021. Bred and marketed by BASF.

DUAL TOLERANCE: GLYPHOSATE + IMIDAZOLINONE

HYBRID – HYOLA® BATTALION XC

TruFlex® + Clearfield® hybrid. Early maturing with medium height. Suited to low and medium-rainfall areas. Blackleg rating RMR and MR-UCI (group ADF). NVT tested 2020–23. NVT yields listed in glyphosate-tolerant tables. Released 2021. Bred and marketed by Pacific Seeds.

HYBRID – HYOLA® REGIMENT XC

TruFlex® + Clearfield® hybrid variety. Early to mid maturing and suited to low to high-rainfall areas. Blackleg rating R and R-UCI (group ADFH). NVT tested 2021–24. NVT yields listed in glyphosate-tolerant tables. Released 2022. Bred and marketed by Pacific Seeds.

NEW – HYBRID – PIONEER® PY424GC

Optimum GLY® + Clearfield® hybrid. Early to mid maturing suited to the low to medium-rainfall areas. Blackleg rating MRMS and MRMS-UCI (group BC). NVT tested 2023-24. NVT yields listed in glyphosate-tolerant tables. Released 2023. Marketed by Pioneer Seeds.

DUAL TOLERANCE: IMIDAZOLINONE + TRIAZINE

HYBRID – HYOLA® DEFENDER CT

Clearfield® and triazine-tolerant hybrid. Mid-early maturing and suited to medium to high-rainfall areas. Blackleg rating R and MR-UCI (group ADF). NVT tested 2022–24. NVT yields listed in triazine-tolerant tables. Released 2023. Bred and marketed by Pacific Seeds.

HYBRID – HYOLA® ENFORCER CT

Clearfield® and triazine-tolerant hybrid. Early-mid maturing and suited to low to medium-high rainfall areas. Medium height. Blackleg rating R and MR-UCI (group ADF). NVT tested 2019–23. NVT yields listed in triazine-tolerant tables. Released 2020. Bred and marketed by Pacific Seeds.

NEW – HYBRID – NUSEED® GRIFFON TTI

Imidazolinone and triazine-tolerant hybrid. Early to mid maturing. Medium plant height. Suited to low to medium-rainfall areas. Blackleg rating RMR and MR-UCI (group AC). NVT tested 2023-24. NVT yields listed in triazine-tolerant tables. Released 2024. Bred and marketed by Nuseed.

HYBRID – PIONEER® PY520TC

Clearfield® + triazine-tolerant hybrid. Mid maturing with medium height. Suited to medium to high-rainfall areas. Blackleg rating MR and MR-UCI (group BC). NVT tested 2021–24. NVT yields listed in both tolerance trials. Released 2023. Marketed by Pioneer Seeds.

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Table 1: Canola time of sowing guide based on phenology speed.

Recommended sowing dates for key Victorian locations for three phenology* types (slow, mid and fast).
This is a guide to assist with targeting varieties to flower within their ideal optimal start of flowering (OSF) window.

MALLEE	March				April				May			
Slow												
Mid												
Fast												
WIMMERA	**March**				**April**				**May**			
Slow												
Mid												
Fast												
NORTH EAST	**March**				**April**				**May**			
Slow												
Mid												
Fast												
SOUTH WEST	**March**				**April**				**May**			
Slow												
Mid												
Fast												

# Phenology response to early sowing, before 15 April. Rankings may vary for later sowing dates.
Yellow = earlier than optimum; potential yield reduction.
Green = optimum sowing time.
Red = later than optimum; potential yield reduction.

Source: GRDC's 20 Tips for Profitable Canola, December 2019

Table 2: Canola variety summary and spring 2024 blackleg ratings.

Blackleg resistance ratings are updated in autumn and spring each year in the Blackleg Management Guide.

Variety	Maturity	Phenology* (response to early sowing)	Year of release	2024 blackleg rating bare	2024 blackleg rating ILeVo®	2024 blackleg rating Saltro®	2024 upper canopy infection blackleg rating	Major gene resistance group	Type
CONVENTIONAL CANOLA									
Nuseed® Diamond	Early	Fast	2013	RMR	R	R	MR-UCI	ABF	Hybrid
Nuseed® Quartz	Mid	Mid	2017	RMR	–	–	MR-UCI	ABD	Hybrid
Outlaw(b)	Early	Mid-fast	2022	RMR	–	–	MR-UCI	A	Open pollinated
GLYPHOSATE-TOLERANT CANOLA									
DG Hotham TF	Mid		2022	R	–	–	R-UCI	ABH	Hybrid, TruFlex®
DG Lofty TF	Early		2021	R	–	–	R-UCI	ABH	Hybrid, TruFlex®
InVigor® R 4520P	Early-mid	Mid	2020	MRMS	R	–	MRMS-UCI	B	Hybrid, Truflex®
Nuseed® Eagle TF	Mid	Mid-slow (B)	2022	R	–	–	MR-UCI	ABD	Hybrid, TruFlex®
Nuseed® Emu TF	Early	Fast (B)	2021	MR	–	–	MR-UCI	AB	Hybrid, TruFlex®
Nuseed® Hunter TF	Early-mid	Mid-fast (B)	2022	RMR	–	–	MR-UCI	AB	Hybrid, TruFlex®
Nuseed® Raptor TF	Early-mid	Mid-fast	2019	R	–	–	MR-UCI	AD	Hybrid, TruFlex®
Pioneer® 44Y27 RR	Early-mid	Mid-fast	2017	RMR	R	R	MR-UCI	B	Hybrid, Roundup Ready®
Pioneer® PY323G	Early	Fast (B)	2023	MRMS	–	R	MRMS-UCI	BC	Hybrid, Optimum GLY®
Pioneer® PY422G	Early-mid	Mid (B)	2023	MR	–	R	MR-UCI	AB	Hybrid, Optimum GLY®
Pioneer® PY428R	Early-mid	Mid-fast (B)	2024	Pending	–	–	–	–	Hybrid, Roundup Ready®
Pioneer® PY525G	Mid	Mid-slow (B)	2023	MR	–	R	MR-UCI	AB	Hybrid, Optimum GLY®
VICTORY® V55-04TF	Mid	Slow	2022	R	R	R	MR-UCI	AB	High stability oil, hybrid, TruFlex®
IMIDAZOLINONE-TOLERANT CANOLA									
Captain CL	Mid-late	Winter	2023	R	–	–	R-UCI	AH	Winter, hybrid, Clearfield®
Hyola® 970CL	Late	Winter	2014	R	–	R	R-UCI	H	Winter, hybrid, Clearfield®
Hyola® Feast CL	Mid-late	Winter	2021	R	–	R	R-UCI	H	Winter, hybrid, Clearfield®
Hyola® Solstice CL	Early-mid		2022	R	–	R	R-UCI	ADFH	Hybrid, Clearfield®
Nuseed® Ceres IMI	Early	Mid-fast	2023	RMR	–	–	MR-UCI	AD	Hybrid, imidazolinone

Continued on next page

Table 2: Canola variety summary and spring 2024 blackleg ratings (continued).

Variety	Maturity	Phenology* (response to early sowing)	Year of release	2024 blackleg rating bare	2024 blackleg rating ILeVo®	2024 blackleg rating Saltro®	2024 upper canopy infection blackleg rating	Major gene resistance group	Type
IMIDAZOLINONE-TOLERANT CANOLA (continued)									
Phoenix CL	Mid-late	Winter	2019	R	–	–	MR-UCI	B	Winter, hybrid, Clearfield®
Pioneer® 43Y92 CL	Early	Mid-fast	2017	RMR	–	R	MR-UCI	B	Hybrid, Clearfield®
Pioneer® 44Y94 CL	Mid-early	Mid-fast (B)	2020	RMR	–	R	MR-UCI	BC	Hybrid, Clearfield®
Pioneer® 45Y95 CL	Mid	Mid-slow (B)	2021	RMR	–	R	MR-UCI	C	Hybrid, Clearfield®
Pioneer® PN526C	Mid	Mid-slow (B)	2024	RMR	–	–	MR-UCI	ABD	High stability oil, hybrid, Clearfield®
Pioneer® PY327C	Early	Fast (B)	2024	R	–	–	–	–	Hybrid, Clearfield®
Pioneer® PY421C	Early-mid	Mid-fast (B)	2023	RMR	–	R	MR-UCI	A	Hybrid, Clearfield®
RGT Clavier® CL	Late	Winter	2022	R	–	–	R-UCI	ACH	Winter, hybrid, Clearfield®
RGT Nizza® CL	Early	Winter	2021	R	–	–	MR-UCI	B	Winter, hybrid, Clearfield®
VICTORY® V75-03CL	Mid	Mid-slow	2019	RMR	–	–	MR-UCI	AB	High stability oil, hybrid, Clearfield®
TRIAZINE-TOLERANT CANOLA									
ATR-Bluefin$^{\phi}$	Early	Fast (B)	2021	RMR	–	–	MR-UCI	AB	Open pollinated, triazine
ATR-Bonito$^{\phi}$	Early-mid	Mid-fast	2013	MS	RMR	R	MS-UCI	A	Open pollinated, triazine
ATR-Swordfish$^{\phi}$	Early-mid	Mid-fast	2022	MRMS	–	–	MRMS-UCI	AB	Open pollinated, triazine
DG Avon TT$^{\phi}$	Early		2023	MR	R	R	MR-UCI	AC	Open pollinated, triazine
DG Bidgee TT$^{\phi}$	Early-mid	Mid	2021	R	R	R	R-UCI	H	Open pollinated, triazine
DG Torrens TT$^{\phi}$	Early-mid	Mid	2022	RMR	–	–	R-UCI	H	Open pollinated, triazine
Hyola® Blazer TT	Mid-early		2020	RMR	–	R	MR-UCI	ADF	Hybrid, triazine
HyTTec® Trident	Early	Mid-fast	2019	R	–	–	MR-UCI	AD	Hybrid, triazine
HyTTec® Trifecta	Mid	Mid	2020	R	–	–	MR-UCI	ABD	Hybrid, triazine
HyTTec® Trophy	Early-mid	Mid	2017	R	R	R	MR-UCI	AD	Hybrid, triazine
HyTTec® Velocity	Early	Fast (B)	2022	MR	–	–	MR-UCI	AB	Hybrid, triazine
InVigor® T 4511	Early-mid	Mid-fast	2022	RMR	R	–	MR-UCI	Unknown	Hybrid, triazine
Monola® 422TT	Early-mid		2021	MRMS	–	–	MRMS-UCI	BC	Open pollinated, triazine
Monola® H421TT	Early		2020	RMR	–	–	MR-UCI	BC	High stability oil, hybrid, triazine
Monola® H524TT	Early-mid	Mid-fast	2024	R	–	–	MR-UCI	AD	High stability oil, hybrid, triazine
Pioneer® PY429T	Early-mid	Mid (B)	2024	R	–	R	R-UCI	ABH	Hybrid, triazine
Renegade TT$^{\phi}$	Early-mid	Mid	2022	MR	–	–	MR-UCI	A	Open pollinated, triazine
RGT Baseline® TT	Mid	Mid	2022	MRMS	R	R	MRMS-UCI	B	Hybrid, triazine
RGT Capacity® TT	Early-mid	Mid-fast	2021	MRMS	RMR	R	MRMS-UCI	B	Hybrid, triazine
SF Dynatron TT®	Mid	Mid-slow	2020	MRMS	R	R	MRMS-UCI	BC	Hybrid, triazine
SF Spark® TT	Early	Fast	2018	MR	R	R	MR-UCI	ABDS	Hybrid, triazine
GLUFOSINATE AND GLYPHOSATE-TOLERANT CANOLA									
InVigor® LR 3540P	Early		2024	MR	R	–	MR-UCI	AB	Hybrid, LibertyLink®, TruFlex®
InVigor® LR 4540P	Early-mid	Mid-fast	2023	RMR	R	–	MR-UCI	B	Hybrid, LibertyLink®, TruFlex®
InVigor® LR 5040P	Mid	Mid	2024	RMR	R	–	MR-UCI	AB	Hybrid, LibertyLink®, TruFlex®
GLUFOSINATE AND TRIAZINE-TOLERANT CANOLA									
InVigor® LT 4530P	Early-mid	Mid	2021	RMR	R	–	MR-UCI	BF	Hybrid, LibertyLink®, triazine
GLYPHOSATE AND IMIDAZOLINONE-TOLERANT CANOLA									
Hyola® Battalion XC	Early	Fast (B)	2021	RMR	–	–	MR-UCI	ADF	Hybrid, TruFlex®, Clearfield®
Hyola® Regiment XC	Early-mid		2022	R	–	R	R-UCI	ADFH	Hybrid, TruFlex®, Clearfield®
Pioneer® PY424GC	Early-mid	Mid-fast (B)	2023	MRMS	–	R	MRMS-UCI	BC	Hybrid, Optimum GLY®, Clearfield®
IMIDAZOLINONE AND TRIAZINE-TOLERANT CANOLA									
Hyola® Defender CT	Mid-early		2023	R	–	R	MR-UCI	ADF	Hybrid, Clearfield®, triazine
Hyola® Enforcer CT	Early-mid		2020	R	–	–	MR-UCI	ADF	Hybrid, Clearfield®, triazine
Nuseed® Griffon TTI	Early-mid		2024	RMR	–	–	MR-UCI	AC	Hybrid, imidazolinone, triazine
Pioneer® PY520TC	Mid	Mid	2023	MR	–	R	MR-UCI	BC	Hybrid, Clearfield®, triazine

– denotes no rating available.

Source: GRDC Blackleg Management Guide, spring (2024) except for phenology

* Phenology response to early sowing (before 15 April). Rankings may vary for later sowing dates. Phenology is sourced from GRDC's 20 Tips for Profitable Canola, December 2019 and NSW Department of Primary Industries and Regional Development. Gaps filled using breeder data marked (B).

R = resistant, RMR = resistant to moderately resistant, MR = moderately resistant, MRMS = moderately resistant to moderately susceptible, MS = moderately susceptible.

Table 3: Mallee (low-medium rainfall) canola yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient by herbicide tolerance type within each year. These trials were not structured to allow comparisons between different herbicide tolerance types.

GLYPHOSATE-TOLERANT CANOLA						
Year		2019	2020	2021	2022	2023
Mean yield (t/ha)		1.67	2.40		3.21	1.94
	No. trials	3	2		2	2
DG 408RR	3	101	–	Data not available*	–	–
DG Lofty TF	4	–	–		96	86
Hyola® 404RR	3	80	–		–	–
Hyola® 410XX	7	88	97		92	–
Hyola® Battalion XC	6	–	93		95	90
Hyola® Garrison XC	5	92	99		–	–
Hyola® Regiment XC	2	–	–		–	104
InVigor® LR 3540P	4	–	–		100	98
InVigor® LR 4540P	4	–	–		107	109
InVigor® LR 5040P	2	–	–		–	105
InVigor® R 3520	5	105	98		–	–
InVigor® R 4022P	9	114	103		101	101
InVigor® R 4520P	6	–	108		106	109
Nuseed® Emu TF	6	–	103		93	100
Nuseed® Hunter TF	4	–	–		106	108
Nuseed® Raptor TF	6	–	97		104	99
Pioneer® 43Y29 RR	5	111	105		–	–
Pioneer® 44Y27 RR	9	99	101		103	100
Pioneer® 44Y30 RR	4	–	–		104	103
Pioneer® PY323G	2	–	–		–	102
Pioneer® PY422G	2	–	–		–	93
Pioneer® PY424GC	2	–	–		–	102
IMIDAZOLINONE-TOLERANT CANOLA						
Year		2019	2020	2021	2022	2023
Mean yield (t/ha)		1.68	2.27		3.18	2.09
	No. trials	3	2		2	2
Hyola® 575CL	3	92	–	Data not available*	–	–
Hyola® Continuum CL	4	–	–		100	103
Hyola® Equinox CL	2	–	–		97	–
Hyola® Solstice CL	2	–	–		–	104
Nuseed® Ceres IMI	4	–	–		95	101
Pioneer® 43Y92 CL	9	95	98		100	100
Pioneer® 44Y90 CL	5	110	103		–	–
Pioneer® 44Y94 CL	4	–	–		110	110
Pioneer® PY327C	2	–	–		–	105
Pioneer® PY421C	2	–	–		–	115
Saintly CL	3	102	–		–	–
VICTORY® V7002CL	5	93	89		–	–

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Table 3: Mallee (low-medium rainfall) canola yield (continued).

TRIAZINE-TOLERANT CANOLA						
Year		2019	2020	2021	2022	2023
Mean yield (t/ha)		1.42	2.31		2.98	1.89
	No. trials	3	2		2	2
ATR-Bluefin$^{\Phi}$	6	–	93		87	80
ATR Bonito$^{\Phi}$	9	100	94		93	87
ATR Flathead	2	83	–		–	–
ATR Stingray	7	83	87		86	–
ATR Swordfish$^{\Phi}$	4	–	–		92	83
Bandit TT$^{\Phi}$	4	–	–		98	95
BASF 3000 TR	3	103	–		–	–
DG Avon TT$^{\Phi}$	4	–	–		93	91
DG Bidgee TT$^{\Phi}$	4	–	–		102	104
DG Murray TT$^{\Phi}$	3	97	–		–	–
DG Torrens TT$^{\Phi}$	2	–	–		–	88
Hyola® 350TT	5	105	97		–	–
Hyola® 550TT	3	99	–		–	–
Hyola® Blazer TT	5	114	108		–	114
Hyola® Defender CT	4	–	–		107	109
Hyola® Enforcer CT	8	93	100	Data not available*	104	107
HyTTec® Trident	9	103	104		109	111
HyTTec® Trophy	9	103	104		107	110
HyTTec® Velocity	5	–	109		104	112
InVigor® LT 4530P	6	–	103		107	103
InVigor® T 3510	3	105	–		–	–
InVigor® T 4510	9	107	103		106	105
InVigor® T 4511	4	–	–		103	103
Monola® H421TT	4	–	–		87	90
Nuseed® Griffon TTI	2	–	–		–	108
Pioneer® 44T02 TT	5	92	97		–	–
Pioneer® PY429T	2	–	–		–	118
Renegade TT$^{\Phi}$	4	–	–		102	102
RGT Capacity TT	6	–	103		101	106
SF Dynatron TT®	5	111	105		–	–
SF Spark® TT	9	96	99		99	100

– denotes no data available.
* In 2021 all Mallee low-medium rainfall canola trials failed.

Source: National Variety Trials

Table 4: North Central and North East (medium-high rainfall) canola yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient by herbicide tolerance type within each year. These trials were not structured to allow comparisons between different herbicide tolerance types.

	NORTH CENTRAL						NORTH EAST					
GLYPHOSATE-TOLERANT CANOLA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.90**	**2.87**	**3.04**	**3.30**	**3.47**		**1.39**	**3.10**	**3.13**	**2.99**	**2.08**
	No. trials	**2**	**2**	**2**	**2**	**2**	**No. trials**	**2**	**2**	**2**	**2**	**2**
DG 408RR	2	96	–	–	–	–	2	88	–	–	–	–
DG Bindo TF	4	–	–	97	95	–	3	–	–	97	97	–
DG Drummond TF	2	–	–	–	–	98	5	–	–	101	106	99
DG Hotham TF		–	–	–	–	–	5	–	–	98	101	90
DG Lofty TF	6	–	–	93	90	92	5	–	–	91	88	80
Hyola® 410XX	6	93	92	96	–	–	4	88	95	–	–	–
Hyola® 506RR		–	–	–	–	–	2	89	–	–	–	–
Hyola® 540XC	2	87	–	–	–	–	2	76	–	–	–	–
Hyola® Battalion XC	4	–	95	97	–	–	1	–	102	–	–	–
Hyola® Garrison XC	6	98	92	99	–	–	8	92	100	103	82	–
Hyola® Regiment XC	4	–	–	107	–	101	6	–	–	111	93	109
InVigor® LR 4540P	4	–	–	–	112	109	4	–	–	–	104	105
InVigor® LR 5040P	4	–	–	–	120	113	4	–	–	–	112	116
InVigor® R 3520	2	97	–	–	–	–		–	–	–	–	–
InVigor® R 4022P	10	105	104	98	105	105	10	119	102	97	98	104
InVigor® R 4520P	10	114	109	105	116	110	10	129	111	103	112	112
InVigor® R 5520P	4	100	98	–	–	–	6	105	98	94	–	–
Nuseed® Condor TF	2	106	–	–	–	–	4	103	108	–	–	–
Nuseed® Eagle TF		–	–	–	–	–	4	–	–	–	109	103
Nuseed® Emu TF	8	–	102	96	92	102	3	115	98	–	–	–
Nuseed® GT-53	2	95	–	–	–	–	4	84	98	–	–	–
Nuseed® Hunter TF	5	–	–	106	106	106	4	–	–	–	104	104
Nuseed® Raptor TF	10	98	100	104	95	98	10	91	101	106	99	95
Pioneer® 43Y29 RR	4	105	104	–	–	–	4	108	105	–	–	–
Pioneer® 44Y27 RR	10	97	102	102	98	99	4	95	98	–	–	–
Pioneer® 44Y30 RR	2	–	–	–	–	104	4	–	104	–	–	100
Pioneer® 45Y25 RR		–	–	–	–	–	2	92	–	–	–	–
Pioneer® 45Y28 RR		–	–	–	–	–	8	–	106	108	109	104
Pioneer® PY323G	2	–	–	–	–	100	2	–	–	–	–	92
Pioneer® PY422G	2	–	–	–	–	100	2	–	–	–	–	102
Pioneer® PY424GC	2	–	–	–	–	101	2	–	–	–	–	96
Pioneer® PY428R		–	–	–	–	–	2	–	–	–	–	115
Pioneer® PY525G	2	–	–	–	–	100	2	–	–	–	–	108
VICTORY® V5003RR	4	85	89	–	–	–	6	73	86	90	–	–
VICTORY® V55-04TF		–	–	–	–	–	2	–	–	96	–	–
IMIDAZOLINONE-TOLERANT CANOLA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.79**	**2.94**	**3.15**	**3.13**	**3.39**		**1.15**	**2.99**	**2.98**	**3.17**	**2.07**
	No. trials	**2**	**2**	**2**	**2**	**2**	**No. trials**	**2**	**2**	**2**	**2**	**2**
Hyola® 575CL	2	92	–	–	–	–	2	80	–	–	–	–
Hyola® Continuum CL	4	–	–	–	109	102	4	–	–	–	111	97
Hyola® Equinox CL	6	–	99	103	87	–	6	–	107	107	86	
Hyola® Solstice CL	6	–	–	110	93	106	5	–	–	116	93	113
Nuseed® Ceres IMI	4	–	–	–	90	101	6	–	–	102	86	97
Pioneer® 43Y92 CL	6	101	102	–	–	101		–	–	–	–	–
Pioneer® 44Y90 CL	4	104	104	–	–	–	4	105	103	–	–	–
Pioneer® 44Y94 CL	8	–	110	111	119	107	10	112	109	109	119	102
Pioneer® 45Y91 CL		–	–	–	–	–	4	98	100	–	–	–
Pioneer® 45Y93 CL	2	107	–	–	–	–	9	105	107	106	123	107
Pioneer® 45Y95 CL	2	–	–	–	–	108	6	114	–	113	120	108

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Table 4: North Central and North East (medium-high rainfall) canola yield (continued).

	NORTH CENTRAL						NORTH EAST					
IMIDAZOLINONE-TOLERANT CANOLA (continued)												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.79**	**2.94**	**3.15**	**3.13**	**3.39**		**1.15**	**2.99**	**2.98**	**3.17**	**2.07**
	No. trials	**2**	**2**	**2**	**2**	**2**	**No. trials**	**2**	**2**	**2**	**2**	**2**
Pioneer® PN526C	2	–	–	–	–	82	4	–	–	–	90	83
Pioneer® PY327C	2	–	–	–	–	110		–	–	–		
Pioneer® PY421C	2	–	–	–	–	114	4	–	–	–	122	116
Pioneer® PY520TC	2	–	–	–	–	95	4	–	–	–	102	99
Saintly CL	2	105	–	–	–	–	2	114	–	–	–	–
VICTORY® V7002CL	6	89	91	89	–	–	4	87	88	–	–	–
VICTORY® V75-03CL	2	–	–	–	–	93	6	78	89	–	–	91
TRIAZINE-TOLERANT CANOLA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.57**	**2.31**	**2.95**	**2.99**	**3.21**		**1.26**	**2.85**	**2.72**	**2.78**	**2.16**
	No. trials	**2**	**1**	**2**	**2**	**2**	**No. trials**	**2**	**2**	**2**	**2**	**1**
ATR-Bluefin$^{\Phi}$	7	–	85	84	83	90	1	–	83	–	–	–
ATR Bonito$^{\Phi}$	9	92	91	89	94	96	5	–	90	–	89	97
ATR Flathead	2	73	–	–	–	–	2	72	–	–	–	–
ATR Stingray	5	–	87	89	81	–		–	–	–	–	–
ATR Swordfish$^{\Phi}$	2	–	–	87	–	–		–	–	–	–	–
Bandit TT$^{\Phi}$	3	–	–	92	–	98	2	–	–	87	–	92
BASF 3000 TR	2	94	–	–	–	–		–	–	–	–	–
DG 670TT		–	–	–	–	–	4	105	104	–	–	–
DG Avon TT$^{\Phi}$	2	–	–	–	–	94		–	–	–	–	–
DG Bidgee TT$^{\Phi}$	6	–	–	103	102	98	4	–	–	106	110	104
DG Murray TT$^{\Phi}$	4	92	–	–	88	–	5	79	–	99	94	–
DG Torrens TT$^{\Phi}$	7	–	98	98	100	98	5	–	99	99	103	103
Hyola® 350TT	2	101	–	–	–	–	2	108	–	–	–	–
Hyola® 550TT	2	100	–	–	–	–	2	99	–	–	–	–
Hyola® Blazer TT	7	–	113	112	118	108	7	–	113	113	123	107
Hyola® Defender CT	4	–	–	–	119	105	3	–	–	–	125	101
Hyola® Enforcer CT	9	105	100	104	93	101	9	104	106	107	94	104
HyTTec® Trident	9	102	108	109	96	102	9	99	105	111	98	89
HyTTec® Trifecta	6	–	–	114	113	108	8	115	116	116	118	111
HyTTec® Trophy	9	109	110	111	109	106	9	109	110	112	111	101
HyTTec® Velocity	4	–	–	–	104	107		–	–	–	–	–
InVigor® LT 4530P	7	–	103	99	107	106	7	–	103	97	100	104
InVigor® T 4510	9	108	107	106	107	106	9	114	107	105	105	101
InVigor® T 4511	6	–	–	106	107	105	5	–	–	107	107	104
InVigor® T 6010	1	–	105	–	–	–	9	116	110	105	116	117
Monola® 416TT		–	–	–	–	–	2	77	–	–	–	–
Monola® 420TT	5	80	88	–	79	–	8	79	81	84	74	–
Monola® 422TT	5	–	89	–	81	90	7	–	85	88	80	85
Monola® H421TT	6	85	88	–	73	91	9	85	87	91	68	84
Monola® H524TT	5	–	–	103	95	96	5	–	–	104	100	92
Nuseed® Griffon TTI	2	–	–	–	–	106	1	–	–	–	–	100
Pioneer® 44T02 TT	3	89	92	–	–	–		–	–	–	–	–
Pioneer® 45T03 TT		–	–	–	–	–	2	91	–	–	–	–
Pioneer® PY429T	2	–	–	–	–	108	1	–	–	–	–	100
Pioneer® PY520TC	2	–	–	–	–	105	4	–	–	110	121	103
Renegade TT$^{\Phi}$	5	–	–	97	116	108	4	–	–	93	108	108
RGT Baseline® TT	5	–	–	107	117	105	5	–	–	108	123	112
RGT Capacity TT	9	111	106	105	113	107	9	117	108	104	112	109
SF Dynatron TT®	9	109	110	108	117	107	9	113	108	107	117	103
SF Ignite TT		–	–	–	–	–	6	103	105	103	–	–
SF Spark® TT	9	97	100	100	96	98	4	95	99	–	–	–
SF Turbine TT	5	103	102	101	–	–	6	106	102	101	–	–

– denotes no data available.

Source: National Variety Trials

GRDC

Table 5: Wimmera and South West (medium-high rainfall) canola yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient by herbicide tolerance type within each year. These trials were not structured to allow comparisons between different herbicide tolerance types.

	WIMMERA						SOUTH WEST					
GLYPHOSATE-TOLERANT CANOLA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**2.03**	**3.50**	**3.00**	**2.81**	**2.71**		**2.94**	**3.75**	**4.34**	**3.99**	**3.87**
	No. trials	**2**	**2**	**2**	**2**	**2**	**No. trials**	**2**	**2**	**3**	**3**	**3**
DG 408RR	2	94	–	–	–	–		–	–	–	–	–
DG Bindo TF	4	–	–	97	99	–	4	–	–	99	98	–
DG Drummond TF	5	–	–	100	105	102	9	–	–	106	104	105
DG Hotham TF	6	–	–	99	104	100	7	–	–	104	104	101
DG Lofty TF	4	–	–	–	97	94		–	–	–	–	–
Hyola® 410XX	6	94	94	97	–	–	4	90	84	–	–	–
Hyola® 506RR	2	89	–	–	–	–	2	82	–	–	–	–
Hyola® 540XC	2	89	–	–	–	–	4	90	86	–	–	–
Hyola® Battalion XC	4	–	95	96	–	–		–	–	–	–	–
Hyola® Garrison XC	10	99	95	98	80	96	7	93	82	93	–	–
Hyola® Regiment XC	4	–	–	104	–	103	6	–	–	–	95	102
InVigor® LR 4540P	4	–	–	–	105	103	6	–	–	–	105	101
InVigor® LR 5040P	4	–	–	–	109	103	3	–	–	–	–	105
InVigor® R 3520	2	96	–	–	–	–		–	–	–	–	–
InVigor® R 4022P	10	105	100	99	99	98	7	99	101	93	–	–
InVigor® R 4520P	10	113	106	104	109	105	13	109	110	103	106	106
InVigor® R 5520P	6	102	96	94	–	–	7	101	100	95	–	–
Nuseed® Condor TF	8	105	106	106	99	–	10	105	100	108	105	–
Nuseed® Eagle TF	5	–	–	105	106	106	9	–	–	111	108	110
Nuseed® Emu TF	2	–	96	–	–	–		–	–	–	–	–
Nuseed® GT-53	4	94	102	–	–	–	4	98	98	–	–	–
Nuseed® Hunter TF	5	–	–	107	103	105	6	–	–	–	106	104
Nuseed® Raptor TF	10	97	103	105	98	104	2	99	–	–	–	–
Pioneer® 43Y29 RR	4	105	104	–	–	–	2	–	109	–	–	–
Pioneer® 44Y27 RR	4	94	102	–	–	–		–	–	–	–	–
Pioneer® 44Y30 RR	8	–	105	105	108	104	11	–	108	104	108	105
Pioneer® 45Y25 RR	2	102	–	–	–	–	2	109	–	–	–	–
Pioneer® 45Y28 RR	8	–	106	105	106	107	11	–	105	111	108	110
Pioneer® PY323G	2	–	–	–	–	103		–	–	–	–	–
Pioneer® PY422G	2	–	–	–	–	102	3	–	–	–	–	106
Pioneer® PY424GC	2	–	–	–	–	101		–	–	–	–	–
Pioneer® PY428R	2	–	–	–	–	108	3	–	–	–	–	108
Pioneer® PY525G	2	–	–	–	–	104	3	–	–	–	–	111
VICTORY® V5003RR	6	87	89	90	–	–	6	88	88	89	–	–
VICTORY® V55-04TF	2	–	–	95	–	–	2	–	–	95	–	–
IMIDAZOLINONE-TOLERANT CANOLA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**2.03**	**3.46**	**2.69**	**2.71**	**2.71**		**3.16**	**3.59**	**4.25**	**4.06**	**3.80**
	No. trials	**2**	**3**	**3**	**2**	**3**	**No. trials**	**3**	**2**	**3**	**3**	**3**
Hyola® 575CL	2	94	–	–	–	–	3	94	–	–	–	–
Hyola® Continuum CL	5	–	–	–	112	107	6	–	–	–	113	110
Hyola® Equinox CL	6	–	99	103			5	–	85	93		
Hyola® Solstice CL	8	–	–	109	86	107	6	–	–	–	97	103
Nuseed® Ceres IMI	6	–	–	105	87	98		–	–	–	–	–
Pioneer® 43Y92 CL	7	100	–	–	102	102		–	–	–	–	–
Pioneer® 44Y90 CL	5	102	105	–	–	–		–	–	–	–	–
Pioneer® 44Y94 CL	13	106	111	110	119	113	12	111	118	117	119	117
Pioneer® 45Y91 CL	5	102	101	–	–	–	5	105	106	–	–	–
Pioneer® 45Y93 CL	8	106	109	–	–	110	14	113	118	117	115	118
Pioneer® 45Y95 CL	9	110	–	109	116	114	12	112	–	119	117	119

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Table 5: Wimmera and South West (medium-high rainfall) canola yield (continued).

	WIMMERA						SOUTH WEST					
IMIDAZOLINONE-TOLERANT CANOLA (continued)												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**2.03**	**3.46**	**2.69**	**2.71**	**2.71**		**3.16**	**3.59**	**4.25**	**4.06**	**3.80**
	No. trials	**2**	**3**	**3**	**2**	**3**	**No. trials**	**3**	**2**	**3**	**3**	**3**
Pioneer® PN526C	5	–	–	–	94	87	6	–	–	–	90	91
Pioneer® PY327C	3	–	–	–	–	110		–	–	–		
Pioneer® PY421C	5	–	–	–	118	115	6	–	–	–	116	119
Pioneer® PY520TC	5	–	–	–	101	98	6	–	–	–	98	102
Saintly CL	2	104	–	–	–	–	3	102	–	–	–	–
VICTORY® V7002CL	8	92	89	91	–	–		–	–	–	–	–
VICTORY® V75-03CL	11	90	94	96	–	93	10	93	95	94	–	93
TRIAZINE-TOLERANT CANOLA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.80**	**3.15**	**2.56**	**2.54**	**2.45**		**2.96**	**3.23**	**3.88**	**3.46**	**3.55**
	No. trials	**2**	**3**	**3**	**2**	**3**	**No. trials**	**3**	**2**	**3**	**3**	**2**
ATR-Bluefin$^{\Phi}$	1	–	85	–	–	–		–	–	–	–	–
ATR Bonito$^{\Phi}$	8	–	91	–	94	88	5	–	–	–	86	87
ATR Flathead	2	77	–	–	–	–		–	–	–	–	–
ATR Wahoo$^{\Phi}$		–	–	–	–	–	11	99	97	96	91	–
Bandit TT$^{\Phi}$	5	–	–	94	–	91	1	–	–	88	–	–
DG 670TT	5	105	102	–	–	–	5	103	101	–	–	–
DG Avon TT$^{\Phi}$	5	–	–	–	90	92		–	–	–	–	–
DG Bidgee TT$^{\Phi}$	8	–	–	101	106	105	5	–	–	–	106	109
DG Murray TT$^{\Phi}$	10	94	95	96	92	–	8	–	90	99	92	–
DG Torrens TT$^{\Phi}$	8	–	99	–	102	99	5	–	100	–	99	–
Hyola® 350TT	2	100	–	–	–	–		–	–	–	–	–
Hyola® 530XT	2	95	–	–	–	–	3	93	–	–	–	–
Hyola® 550TT	2	100	–	–	–	–	3	92	–	–	–	–
Hyola® 580CT	5	90	96	–	–	–	5	94	94	–	–	–
Hyola® Blazer TT	12	110	113	109	118	115	10	–	117	120	121	120
Hyola® Defender CT	5	–	–	–	123	113	5	–	–	–	123	119
Hyola® Enforcer CT	10	104	101	104	91	–	6	99	92	100	–	–
HyTTec® Trident	13	98	106	115	98	108		–	–	–	–	–
HyTTec® Trifecta	11	–	112	110	111	115	13	111	111	118	116	118
HyTTec® Trophy	13	106	109	110	109	111	13	106	109	113	115	112
InVigor® LT 4530P	9	–	100	98	101	100	10	–	103	94	98	99
InVigor® T 4510	13	106	105	106	105	106	8	104	106	104	–	–
InVigor® T 4511	8	–	–	106	104	107	3	–	–	106	–	–
InVigor® T 6010	13	113	106	98	111	107	13	111	110	108	106	112
Monola® 416TT	2	86	–	–	–	–		–	–	–	–	–
Monola® 420TT	2	81	–	–	–	–	3	84	84	–	–	–
Monola® H421TT	2	86	–	–	–	–	1	82	–	–	–	–
Monola® H524TT		–	–	–	–	–	6	–	–	107	106	102
Nuseed® Griffon TTI	3	–	–	–	–	104		–	–	–	–	–
Pioneer® 45T03 TT	2	97	–	–	–	–	5	96	92	–	–	–
Pioneer® PY429T	3	–	–	–	–	117		–	–	–	–	–
Pioneer® PY520TC	7	–	–	108	118	113	8	–	–	119	120	118
Renegade TT$^{\Phi}$	7	–	–	94	110	99	4	–	–	94	–	101
RGT Baseline® TT	8	–	–	102	117	110	8	–	–	117	114	118
RGT Capacity TT	13	110	106	101	109	106	1	108	–	–	–	–
SF Dynatron TT®	13	107	109	106	116	110	8	–	–	112	116	114
SF Ignite TT	6	–	105	97	–	–	8	109	110	110	–	–
SF Spark® TT	13	97	100	102	97	100		–	–	–	–	–
SF Turbine TT	8	103	102	100	–	–		–	–	–	–	–

– denotes no data available.

Source: National Variety Trials

CHICKPEA

NEW VARIETIES

No new chickpea varieties are planned for release in this region for the 2025 season.

QUALITY

Grain Trade Australia (GTA) has formally recognised a new desi chickpea grade of No.3. This is to cater for a higher level of defective grains than the existing No.2 grade, specifically to allow for any mouldy grains. This grade has been widely referenced in industry contracts due to recent wetter seasonal conditions. Details are available on the GTA website.

DISEASE

Given the limited genetic resistance in chickpea to common diseases, it is important to implement an integrated disease management (IDM) plan. For chickpea, critical elements of this plan are avoiding the most susceptible varieties, rotating crops and timely preventive fungicide applications before rainfall where required. Good agronomy, seed treatments and in-crop monitoring are also essential.

Disease ratings are updated in February/March each year to reflect changes in disease virulence. Always consult the latest disease resistance ratings via the NVT Disease Ratings or the Agriculture Victoria Pulse Disease Guide.

To minimise the development of resistance to fungicides it is best to follow recommendations from the Australian Fungicide Resistance Extension Network (AFREN), with the most important being the mixing and rotating of registered fungicides.

AGRONOMY

Chickpea has a relatively broad sowing window, particularly in the medium and high-rainfall zones, if subsoil moisture is available. While long-term results indicate that sowing early within the window is generally most profitable, recent seasons have demonstrated the poor tolerance of chickpea to cold temperatures during flowering and podding. Later sowing in June–July or even spring sowing can be a profitable option for chickpea and minimises both the costs associated with disease control and the impact of cold temperatures. In the high-rainfall zone, chickpea can be spring sown to avoid the risk of waterlogging. Chickpea has adaptation to higher temperatures during the reproductive phase relative to the other winter pulse crops, when stored soil moisture is available. However, later sowing can put crops under greater pressure from insects as there is less green material around.

Crops to be exported to India must not contain seeds of Italian ryegrass (*Lolium multiflorum*) or wild radish (*Raphanus raphanistrum*). While trace amounts of these weeds meet Grain Trade Australia receival standards, any grain destined for the Indian market must be completely free of these weeds.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Chickpea Southern Region

DISEASE MANAGEMENT

- Agriculture Victoria, Pulse Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of chickpea
- extensionAUS Field Crop Diseases, Fungicide options in pulses
- Grain Producers Australia, Industry Pesticide Minor Use Permits
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
ⒹⒷ	Denotes Plant Breeder's Rights apply
CBA	Chickpea Breeding Australia
PBA	Pulse Breeding Australia

Table 1: Chickpea adaptability for Victorian rainfall zones.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Rainfall zone		
	Low <350mm	Medium 350–500mm	High >500mm
DESI CHICKPEA			
CBA Captain(Ⓓ)	✓	✓	
PBA Slasher(Ⓓ)		✓	
PBA Striker(Ⓓ)	✓	✓	
KABULI CHICKPEA			
Genesis® 090	✓	✓	
Genesis® Kalkee		✓	✓
PBA Magnus(Ⓓ)	✓	✓	✓
PBA Monarch(Ⓓ)	✓	✓	✓
PBA Royal(Ⓓ)	✓	✓	✓

DESI TYPE

CBA CAPTAIN(Φ)

Medium seed size desi chickpea with broad adaptation to Victorian growing areas. Erect plant type with good height and height to lowest pod. Mid flowering and early to mid maturing in Victorian growing environments. Good grain size, similar to PBA HatTrick(Φ), and meets the requirements of a 'Jimbour type', suitable for the subcontinent market. Released 2020. Bred by Chickpea Breeding Australia with seed available from PB Seeds. EPR $4.50.

PBA SLASHER(Φ)

PBA Slasher(Φ) is a mid flowering and maturing desi chickpea. Seed is medium sized, tan-brown in colour and has excellent milling quality. Suitable for both split and whole seed markets. Released 2009. Seed available from Seednet. EPR $4.00.

PBA STRIKER(Φ)

Excellent adaptation to short season environments due to early flowering and maturity. Medium seed size. Excellent milling quality. Released 2012. Seed available from Seednet. EPR $4.00.

KABULI TYPE

GENESIS® 090

Genesis® 090 is a small seed (7-8mm) type kabuli. Typically grown as a higher-yielding but potentially lower-priced grain alternative to large seed type kabuli varieties such as PBA Magnus(Φ) and Genesis® Kalkee. Released 2005. Seed available from PB Seeds. EPR $5.00.

GENESIS® KALKEE

Genesis® Kalkee is mid-late flowering and late maturity kabuli chickpea with seed size larger than PBA Royal(Φ), PBA Monarch(Φ) and Almaz(Φ). It has a tall and erect plant habit. Released 2012. Seed available from PB Seeds. EPR $5.00.

PBA MAGNUS(Φ)

The largest seeded kabuli chickpea with similar plant type to Genesis® 090. Early-mid flowering and maturing. Adapted to current kabuli growing regions of Victoria and South Australia. An excellent replacement for Genesis® Kalkee due to its larger seed size, where an erect plant type is not essential. Very good seed size and shape. Released 2020. Seed available from PB Seeds. EPR $6.50.

PBA MONARCH(Φ)

A kabuli chickpea suited to shorter season medium-rainfall environments due to improved adaptation through earlier flowering and maturity. Medium seed size, larger than Genesis® 090, similar to Almaz(Φ). Semi-spreading plant similar to PBA Slasher(Φ). Some susceptibility to lodging, particularly when biomass is high. Released 2013. Seed available from Seednet. EPR $6.50.

PBA ROYAL(Φ)

A medium seeded kabuli chickpea with a larger seed size and higher yield than Genesis® 090 in medium-rainfall Victorian environments. Released 2019. Seed available from Seednet. EPR $6.50.

ACKNOWLEDGEMENTS

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Joshua Fanning – Agriculture Victoria
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Janine Sounness – PB Seeds
Simon Crane – Seednet

Table 2: Agronomic characteristics of chickpea varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Av. 100 seed weight (g)	Seed size group	Seed size (mm)	Vigour	Flowering	Maturity	Height	Lodging resistance
DESI CHICKPEA								
CBA Captain(Ф)	20	Medium		Good	Mid	Early-mid	Tall	MR
PBA Slasher(Ф)	18	Medium		Poor-moderate	Mid	Mid	Short-mid	MS
PBA Striker(Ф)	22	Medium		Good	Early	Early	Short-mid	MS
KABULI CHICKPEA								
Genesis® 090	31	Small	7-8	Good	Mid	Mid	Mid	MR
Genesis® Kalkee	45	Large	8-10	Good	Mid-late	Late	Tall	R
PBA Magnus(Ф)	47	Large	8-10	Poor-moderate	Early-mid	Early-mid	Mid	MS
PBA Monarch(Ф)	40	Medium	8-9	Poor-moderate	Early	Early	Mid	S
PBA Royal(Ф)	36	Medium	8	Moderate	Mid	Mid	Mid	MR

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible.

Table 3: Disease resistance ratings of chickpea varieties.

All chickpea varieties are rated as S or MS to foliar Ascochyta blight infection. Chickpea crops will require multiple fungicide applications to control Ascochyta blight in most seasons. All varieties are susceptible to pod infection and will require protection during podding to prevent seed staining and abortion.

Variety	Ascochyta blight* (foliar)	Root lesion nematode (*Pratylenchus*)	
		P. neglectus	*P. thornei*
DESI CHICKPEA			
CBA Captain(Ф)	S	MR	MS
PBA Slasher(Ф)	S	MRMS	MRMS
PBA Striker(Ф)	S	MRMS	MRMS
KABULI CHICKPEA			
Genesis® 090	MS	MRMS	MS
Genesis® Kalkee	S	MRMS	MS
PBA Magnus(Ф)	S	MR	MSS
PBA Monarch(Ф)	S	MRMS	MS
PBA Royal(Ф)	MS	MR	MS

Source: NVT Disease Ratings

Additional information: Agriculture Victoria, Pulse Disease Guide.
Ascochyta blight pathogen group 1 is more prevalent in the southern region.
Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.
R = resistant, MR = moderately resistant, MRMS = moderately resistant to moderately susceptible, MS = moderately susceptible, S = susceptible.

Table 4: Mallee and Wimmera chickpea yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient by chickpea type within each year.

	MALLEE						WIMMERA					
DESI CHICKPEA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.40**	**1.84**	**1.78**	**1.73**	**2.00**		**1.47**	**1.63**		**1.80**	**1.15**
	No. trials	**2**	**2**	**2**	**1**	**2**	**No. trials**	**2**	**2**		**2**	**2**
Ambar(ф)	2	106	–	–	–	–	2	108	–	Data not available*	–	–
CBA Captain(ф)	9	104	97	103	93	101	8	98	96		92	95
Neelam(ф)	9	102	102	99	103	105	8	102	103		100	104
PBA Maiden(ф)	9	107	102	99	103	111	8	107	105		97	104
PBA Seamer(ф)	1	–	–	–	92	–	2	–	–		96	–
PBA Slasher(ф)	9	107	101	105	103	102	8	102	106		104	108
PBA Striker(ф)	9	114	104	103	107	113	8	107	111		102	116
KABULI CHICKPEA												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**1.46**	**1.81**	**1.75**	**1.37**	**2.04**		**1.38**	**1.73**		**1.53**	**1.24**
	No. trials	**2**	**2**	**2**	**1**	**2**	**No. trials**	**2**	**2**		**2**	**2**
Almaz(ф)	7	92	101	–	100	90	8	90	94	Data not available*	105	100
Genesis® 090	9	96	99	104	100	94	8	100	101		107	97
Genesis® Kalkee	7	90	102	88	99	–	8	88	89		98	97
PBA Magnus(ф)	8	102	96	100	–	102	8	98	94		86	91
PBA Monarch(ф)	9	97	100	95	99	99	8	97	95		97	98
PBA Royal(ф)	9	99	99	106	98	93	8	93	101		106	105

– denotes no data available.
* In 2021 the Horsham trials were compromised and the Kaniva trials failed.

Source: National Variety Trials

Photo: Melanie Jenson

Chickpeas being harvested.

FABA BEAN

NEW VARIETIES

No new faba bean varieties are planned for release in this region for the 2025 season.

DISEASE

As faba beans are vulnerable to several foliar diseases, it is important to use an integrated disease management (IDM) strategy to protect crops. A key component of this strategy is to avoid highly susceptibility varieties wherever possible to reduce reliance on fungicides, particularly in higher-rainfall areas. A successful IDM plan combines the most resistant varieties with an appropriate fungicide strategy (including seed treatment), paddock selection and good agronomy.

Disease ratings are updated in February/March each year to reflect changes in disease virulence. Always consult the latest disease resistance ratings via the NVT Disease Ratings or the Agriculture Victoria Pulse Disease Guide.

To slow the development of resistance to fungicides the Australian Fungicide Resistance Extension Network (AFREN) provides several recommendations. The most important are to avoid highly susceptible varieties, when possible, mix and rotate registered fungicides and only apply fungicides when necessary.

AGRONOMY

New rhizobium strains were released for the 2024 season with improved tolerance to acid soils. The new Group F (faba bean and broad bean) strain SRDI-969 replaced WSM-1455. SRDI-969 provides optimal nodulation down to pH_{Ca} 5.0 and improved nodulation to 4.5. In acid soils, reinoculation is still required for subsequent pulse crops.

With the recent introduction of the herbicides Overwatch® and Reflex®, which provide broad spectrum weed control, growers can be less reliant on the IMI tolerance provided by PBA Bendoc$^{\phi}$, particularly in higher weed populations. Growers should always consult their agronomist and follow label guidelines when deciding on a weed control strategy.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Faba Bean Southern Region

DISEASE MANAGEMENT

- Agriculture Victoria, Pulse Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of faba bean
- extensionAUS Field Crop Diseases, Fungicide options in pulses
- Grain Producers Australia, Industry Pesticide Minor Use Permits
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
⒫	Denotes Plant Breeder's Rights apply
IMI	Imidazolinone
PBA	Pulse Breeding Australia

Table 1: Faba bean adaptability for Victorian rainfall zones.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Rainfall zone		
	Low <350mm	Medium 350–500mm	High >500mm
FABA BEAN			
Farah	✓	✓	✓
Nura⒫		✓	✓
PBA Amberley⒫		✓	✓
PBA Bendoc⒫		✓	✓
PBA Marne⒫	✓	✓	✓
PBA Rana⒫		✓	✓
PBA Samira⒫	✓	✓	✓
PBA Zahra⒫		✓	✓
BROAD BEAN			
Aquadulce		✓	✓
PBA Kareema		✓	✓

FABA BEAN VARIETIES

FARAH

Farah is an early-mid maturing older faba bean variety, best adapted to medium-rainfall environments. It has increased susceptibility to disease and lower yields compared with current industry standards, PBA Samira$^{\Phi}$ and PBA Amberley$^{\Phi}$. Released 2003. Free to trade. EPR $3.00.

NURA$^{\Phi}$

Shorter than Farah and less likely to lodge; however, bottom pods are closer to the ground. Needs to be sown early as it flowers about seven days later than Farah, but it matures at a similar time. Released 2005. Seed available from Seednet. EPR $3.00.

PBA AMBERLEY$^{\Phi}$

Mid flowering and mid/late maturing. Good standing ability and a low level of necking. Grain size similar to PBA Samira$^{\Phi}$, although slightly larger. High yield advantage over other varieties in high-rainfall regions. PBA Amberley$^{\Phi}$ has the highest resistance rating to chocolate spot with an MRMS, the first faba bean variety to achieve this. Developed by PBA. Released 2019. Seed available from Seednet. EPR $3.50.

PBA BENDOC$^{\Phi}$

Mid flowering and early to mid maturing faba bean, with medium height. Medium-sized seed suited to the Middle East markets. Improved tolerance to some Group 2 herbicides, with Nufarm's Intercept® registered for use on PBA Bendoc$^{\Phi}$. It is important to note that growers must adhere to product label rates, plant back periods and all label directions for use. Released 2018. Developed by PBA. Seed available from Seednet. EPR $3.90.

PBA MARNE$^{\Phi}$

An early-mid flowering, high-yielding faba bean with good adaptation to the lower-rainfall and short-season areas. Potential to expand faba bean production into areas that are considered marginal and improve reliability in established areas during below-average rainfall seasons. Light brown, medium-sized seed. Suitable for mixing with current faba bean varieties for export to the major food markets in the Middle East. Released 2018. Developed by PBA. Seed available from Seednet. EPR $3.50.

PBA RANA$^{\Phi}$

Mid flowering and maturing faba bean suited to higher-rainfall, long-season regions. Seed is medium-large and is considered high quality by the major Egyptian market. Released 2011. Developed by PBA. Seed available from Seednet. EPR $3.50.

PBA SAMIRA$^{\Phi}$

A high-yielding faba bean with wide adaptation. Later flowering compared with Farah means PBA Samira$^{\Phi}$ can take advantage of late rainfall in longer-season environments. Seed is slightly larger than Farah and is suited to Middle East markets. Released 2014. Developed by PBA. Seed available from Seednet. EPR $3.50.

PBA ZAHRA$^{\Phi}$

A high-yielding, mid flowering and mid-late maturing faba bean. Performs well in longer-season environments. Seed is larger than Farah and similar to PBA Rana$^{\Phi}$, suitable for Middle East markets. Released 2016. Developed by PBA. Seed available from Seednet. EPR $3.50.

BROAD BEAN VARIETIES

AQUADULCE

Tall, late-flowering broad bean with some tolerance to waterlogging as well as iron and manganese deficiencies. Best suited to high-rainfall districts. Released 1982. No EPR.

PBA KAREEMA

PBA Kareema is a direct replacement for the variety Aquadulce. Requires a long growing season like Aquadulce, best suited to high-rainfall districts. Released 2010. No EPR.

ACKNOWLEDGEMENTS

Audrey Delahunty – Agriculture Victoria
Joshua Fanning – Agriculture Victoria
Simon Crane – Seednet
Samuel Catt – University of Adelaide

Table 2: Agronomic characteristics of faba bean varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Seed size	Seed colour	Plant height	Flowering time	Maturity	Lodging resistance
FABA BEAN						
Farah	Medium	Light brown/brown	Medium	Early-mid	Early-mid	MS
Nura[Ф]	Small-med	Light buff	Short	Mid	Early-mid	MR
PBA Amberley[Ф]	Med-large	Light brown	Medium	Mid	Mid-late	R
PBA Bendoc[Ф]	Medium	Light brown	Medium	Mid	Early-mid	MS
PBA Marne[Ф]	Medium	Light brown	Medium	Early-mid	Early-mid	MR
PBA Rana[Ф]	Med-large	Light brown	Med-tall	Mid	Mid	MR
PBA Samira[Ф]	Medium	Light brown	Medium	Mid	Mid	MR
PBA Zahra[Ф]	Med-large	Light brown	Med-tall	Mid	Mid-late	MR
BROAD BEAN						
Aquadulce	Large	Light brown	Tall	Late	Mid-late	MS
PBA Kareema	Large	Light brown	Tall	Late	Late	MS

Reviewed by Samual Catt, University of Adelaide (2024)

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.

Table 3: Disease resistance ratings of faba bean varieties.

Variety	Ascochyta blight	Chocolate spot (Botrytis)	Cercospora	Rust	Root lesion nematode (*Pratylenchus*)	
					P. neglectus	*P. thornei*
FABA BEAN						
Farah	MS	S	S	VS	MR	MS
Nura[Ф]	MR (P)	MS	S	VS	–	MS
PBA Amberley[Ф]	MR	MRMS	S	VS	MR	MRMS
PBA Bendoc[Ф]	MR	S	S	VS	MR	MRMS
PBA Marne[Ф]	MS	MS (P)	S	MRMS	MR	MS
PBA Rana[Ф]	MRMS (P)	MS	S	VS	RMR (P)	MS
PBA Samira[Ф]	MR (P)	MS	S	S	MR	MRMS
PBA Zahra[Ф]	MRMS	MS	S	S	MR	MRMS
BROAD BEAN						
Aquadulce	MS	MS	S	MR	MR	MS
PBA Kareema	MR	MS	S	MRMS	–	–

– denotes no rating available.

Source: NVT Disease Ratings unless otherwise specified

Additional information and source for *P. neglectus* and all broad bean ratings: Agriculture Victoria, Pulse Disease Guide.

Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.

Table 4: North East and South West faba bean yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

	NORTH EAST						SOUTH WEST					
Year		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield t/ha			4.03	5.22	3.67	3.39			4.16	6.38	3.38	4.82
	No. trials		1	1	1	1	No. trials		1	1	1	1
Farah	4		100	97	90	94	4		96	90	88	96
Fiesta VF	4		101	98	93	92	4		100	91	94	96
Nura[Φ]	4		100	86	70	99	4		96	86	57	94
PBA Amberley[Φ]	4		101	100	103	99	4		104	97	101	98
PBA Bendoc[Φ]	4	No trial	95	90	75	108	4	No trial	87	91	61	99
PBA Marne[Φ]	4		94	106	97	88	4		78	94	107	101
PBA Rana[Φ]	3		–	86	89	82	3		–	88	87	84
PBA Samira[Φ]	4		100	102	106	98	4		103	99	107	99
PBA Zahra[Φ]	4		94	102	101	105	4		89	97	96	102

– denotes no data available.

Source: National Variety Trials

Table 5: Wimmera faba bean yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

Year		2019	2020	2021	2022	2023
Mean yield t/ha		2.80	4.50	2.78	3.67	3.62
	No. trials	2	3	3	1	2
Farah	11	87	98	97	92	99
Fiesta VF	11	86	98	97	94	98
Nura[Φ]	11	94	104	94	75	94
PBA Amberley[Φ]	11	89	101	100	103	101
PBA Bendoc[Φ]	11	101	101	97	83	99
PBA Marne[Φ]	11	90	85	99	101	102
PBA Rana[Φ]	8	76	–	91	79	86
PBA Samira[Φ]	11	92	100	101	105	102
PBA Zahra[Φ]	11	94	95	102	105	105

– denotes no data available.

Source: National Variety Trials

Photo: Sophie Clayton

FIELD PEA

NEW VARIETIES

APB Bondi(ф) is a new Kaspa-type field pea, bred by Agriculture Victoria and available from Seednet.

DISEASE

Use the disease ratings to select varieties that are less susceptible to the diseases most relevant to your situation. In addition to variety selection, integrated disease management (IDM) strategies such as crop rotation and fungicides are important, noting that fungicides will not provide control of bacterial blight.

Disease ratings are updated in February/March each year to reflect changes in disease virulence. Always consult the latest disease resistance ratings via the NVT Disease Ratings or the Agriculture Victoria Pulse Disease Guide.

The forecasting model Blackspot Manager uses weather data to predict disease risk, which can assist growers with its management. For more information and to register for forecasts visit agric.wa.gov.au/n/6988.

AGRONOMY

New rhizobium strains were released for the 2024 season with improved tolerance to acid soils. The new Group E (field pea, lentil and vetch) strain WSM-4643 replaced WSM-1455/SU-303. WSM-4643 provides optimal nodulation down to pH_{Ca} 5.0 and improved nodulation to 4.6. In acid soils, reinoculation is still required for subsequent pulse crops.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Field Pea Southern Region

DISEASE MANAGEMENT

- Agriculture Victoria, Pulse Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of field pea
- extensionAUS Field Crop Diseases, Fungicide options in pulses
- Grain Producers Australia, Industry Pesticide Minor Use Permits
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
ⒹⓅ	Denotes Plant Breeder's Rights apply
APB	Australia Pea Breeding
BLR	Bean leafroll virus
GIA	Grains Innovation Australia
IMI	Imidazolinone
PSbM	Pea seed-borne mosaic virus
PBA	Pulse Breeding Australia
SU	Sulfonylurea

KASPA GRAIN TYPE

NEW – APB BONDIⒹⓅ

APB BondiⒹⓅ is a Kaspa-type field pea with mid flowering and mid maturity. It is a widely adapted semi-leafless semi-dwarf. It is resistant to the viruses PSbM and BLR. Tolerant to boron toxicity and moderately tolerant to salinity. Released 2023 (tested as OZP1903). Bred by Agriculture Victoria. Seed available from Seednet. EPR $2.70.

GIA KASTARⒹⓅ

GIA KastarⒹⓅ is the first Kaspa-type field pea with improved tolerance to registered in-crop and residual IMI herbicides. Mid flowering and early to mid maturing. Erect growth habit with a semi-leafless plant type, resistant to pod shatter at maturity. Uniform red to brown coloured seed coat, medium in size, marketable for human consumption in the Indian/Asian subcontinent. Released 2019. Bred by GIA with seed available from AG Schilling & Co. EPR $3.00.

Table 1: Field pea adaptability for Victorian rainfall zones.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Rainfall zone		
	Low <350mm	Medium 350–500mm	High >500mm
KASPA GRAIN TYPE			
APB BondiⒹⓅ	✓	✓	✓
GIA KastarⒹⓅ		✓	
Kaspa		✓	✓
PBA ButlerⒹⓅ	✓	✓	✓
PBA GunyahⒹⓅ	✓	✓	
PBA TaylorⒹⓅ	✓	✓	
PBA WhartonⒹⓅ	✓	✓	
DUN GRAIN TYPE			
GIA OurstarⒹⓅ	✓	✓	
PBA OuraⒹⓅ	✓	✓	
BLUE PEA GRAIN TYPE			
PBA NoosaⒹⓅ	✓	✓	

KASPA

A late flowering, semi-leafless semi-dwarf field pea. Kaspa is the benchmark for field peas with its broad adaptation and high yield potential. Suited to longer growing season environments. Kaspa has fair to good lodging resistance at maturity and pods are resistant to shattering. Released 2002. Seed available from Seednet. EPR $2.00.

PBA BUTLER$^{\Phi}$

Mid to late flowering semi-dwarf field pea. High yield potential and adapted to medium to high-rainfall regions. Grains are similar to PBA Gunyah$^{\Phi}$ in colour and size. PBA Butler$^{\Phi}$ is the only Kaspa-type pea recommended for environments where bacterial blight is a risk. Released 2017. Seed available from Seednet. EPR $2.70.

PBA GUNYAH$^{\Phi}$

An early to mid flowering, semi-leafless semi-dwarf field pea. Broadly adapted and suited to shorter growing season environments. Fair to good lodging resistance at maturity and pods are resistant to shattering. Released 2010. Seed available from Seednet. EPR $2.50.

PBA TAYLOR$^{\Phi}$

PBA Taylor$^{\Phi}$ is an early to mid flowering and maturity semi-dwarf, semi-leafless Kaspa-type field pea with non-shattering pod. Wide adaptation and good yield potential, which makes it suitable for cultivation across the southern cropping belt. Resistant to the viruses PSbM and BLR. Released 2021. Seed available from Seednet. EPR $2.70.

PBA WHARTON$^{\Phi}$

An early-mid flowering and early maturity, semi-dwarf field pea. Adapted across short to medium growing season environments and is suitable for crop-topping when sowing is delayed. Resistant to the viruses PSbM and BLR. PBA Wharton$^{\Phi}$ has improved tolerance to soil boron and salinity, and pods are resistant to shattering. Released 2013. Seed available from Seednet. EPR $2.60.

DUN GRAIN TYPE

GIA OURSTAR$^{\Phi}$

GIA Ourstar$^{\Phi}$ is the first Dun-type pea with improved tolerance to registered in-crop and residual Group 2 herbicides (combined IMI and SU). Early to mid flowering and early-mid maturing. Similar plant type and growth habit to PBA Oura$^{\Phi}$. Medium size, light green to tan coloured grain, suited to human consumption markets or stockfeed. Released 2019. Seed available from AG Schilling & Co. EPR $3.00.

PBA OURA$^{\Phi}$

Early to mid flowering and maturing, semi-dwarf, erect growing field pea. Good yield potential and broadly adapted. Fair to good lodging resistance at maturity and has moderate non-sugar-pod resistance to shattering. Released 2011. Seed available from Seednet. EPR $2.60.

BLUE PEA TYPE

PBA NOOSA$^{\Phi}$

Early-mid flowering and maturing blue field pea. PBA Noosa$^{\Phi}$ is the first blue pea to be released with improved bleaching tolerance. Improved level of resistance to downy mildew and resistant to virus BLR. Comparative yield to Kaspa and Dun-type varieties and higher than existing blue pea variety Excell. Non-shattering type pod. To maintain grain quality, growers should focus on pea weevil management and timely harvest. Opportunity for premium quality niche markets, initially for domestic human consumption. Released 2021. Seed available from PB Seeds. EPR $6.50.

ACKNOWLEDGEMENTS

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Babu Pandey – Agriculture Victoria
Larn McMurray – Grains Innovation Australia
Janine Sounness – PB Seeds
Simon Crane – Seednet

Table 2: Agronomic characteristics of field pea varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Plant habit	Plant vigour, early season	Flowering time	Maturity time	Plant lodging resistance at maturity	Pod shattering at maturity	Boron tolerance	Salinity tolerance
KASPA GRAIN TYPE								
APB Bondi(Ф)	SD-SL	Moderate	Mid	Mid	Fair-good	R: SP	MT	MT
GIA Kastar(Ф)	SD-SL	Moderate-low	Mid	Early-Mid	Fair-good	R: SP	–	–
Kaspa	SD-SL	Moderate	Late	Mid	Fair-good	R: SP	I	I
PBA Butler(Ф)	SD-SL	High	Mid-late	Mid	Good	R: SP	I	I
PBA Gunyah(Ф)	SD-SL	High	Early-mid	Early	Fair-good	R: SP	I	MI
PBA Taylor(Ф)	SD-SL	High	Early-mid	Early-mid	Fair-good	R: SP	I	I
PBA Wharton(Ф)	SD-SL	Moderate	Early-mid	Early	Fair-good	R: SP	MT	MT
DUN GRAIN TYPE								
GIA Ourstar(Ф)	SD-SL	Moderate-low	Early-mid	Early-mid	Fair-good	MR: NSP	–	–
PBA Oura(Ф)	SD-SL	Moderate	Early-mid	Early-mid	Fair-good	MR: NSP	MI	I
BLUE PEA GRAIN TYPE								
PBA Noosa(Ф)	SD-SL	High	Early-mid	Early-mid	Fair-good	R: SP	I	MT

– denotes no rating available.
Plant habit: C = conventional, SD = semi-dwarf, SL = semi-leafless.
Pod shatter: R = resistant, MR = moderately resistant, SP = sugar pod type pod, NSP = non-sugar-pod type.
T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant.

Table 3: Disease resistance ratings of field pea varieties.

Variety	Blackspot (Ascochyta)	Bacterial blight	Downy mildew	Powdery mildew	Pea seed-borne mosaic virus (PSbMV)	Bean leaf roll virus (BLRV) field rating	Root lesion nematode (*Pratylenchus*)	
							P. neglectus	*P. thornei*
KASPA GRAIN TYPE								
APB Bondi(Ф)	MS	S	RMR (S)	RMR	R	R	RMR	MSS
GIA Kastar(Ф)	MS	S	S	RMR	–	–	MR	MS
Kaspa	–	S	S	S	S	S	RMR	MRMS
PBA Butler(Ф)	MS	MS	S	S	S	S	RMR	MRMS
PBA Gunyah(Ф)	MS	S	S	S	S	S	RMR	MRMS
PBA Taylor(Ф)	MS	S	S	S	–	–	RMR	MRMS
PBA Wharton(Ф)	MS	S	S	RMR	R	R	MR	MRMS
DUN GRAIN TYPE								
GIA Ourstar(Ф)	MS	S (P)	S	S	–	–	MRMS	MS
PBA Oura(Ф)	MS	MS	S	S	S	R	MR	MRMS
BLUE PEA GRAIN TYPE								
PBA Noosa(Ф)	MS	S	MS	S	S	R	RMR	MRMS

– denotes no rating available.
Source: NVT Disease Ratings unless otherwise specified
Additional information and source for blackspot, PSbMV and BLRV ratings: Agriculture Victoria, Pulse Disease Guide, and breeders.
Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating. ( ) show outlier.

Table 4: Mallee and Wimmera field pea yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

	MALLEE						WIMMERA					
Year		2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
Mean yield (t/ha)		2.04	1.77	2.31	3.28	2.4		2.11	3.72		2.37	1.86
	No. trials	3	4	3	2	4	No. trials	2	2		1	2
APB Bondi(Ф)	13	–	107	109	115	111	5	–	108	Data not available*	97	106
GIA Kastar(Ф)	13	–	75	88	75	83	5	–	79		69	76
GIA Ourstar(Ф)	13	–	87	82	75	79	5	–	87		91	83
Kaspa	16	103	97	106	100	104	7	85	97		102	103
PBA Butler(Ф)	12	111	–	109	112	111	5	101	–		107	109
PBA Gunyah(Ф)	12	100	–	101	94	98	5	91	–		96	99
PBA Noosa(Ф)	16	101	99	102	107	104	7	101	100		100	101
PBA Oura(Ф)	16	96	102	94	93	93	7	109	100		100	97
PBA Pearl	16	106	110	100	115	106	7	129	110		113	108
PBA Percy	16	93	102	93	92	93	7	112	99		115	102
PBA Taylor(Ф)	16	109	104	108	106	107	7	95	104		95	103
PBA Wharton(Ф)	16	99	100	98	94	94	7	97	100		82	92

– denotes no data available.
* In 2021 the Horsham trial was compromised and the Kaniva trial failed.

Source: National Variety Trials

Photo: Arthur Mostead

Field pea flowers.

LENTIL

NEW VARIETIES

ALB Terrier(ɬ) is a new IMI-tolerant red lentil, bred by Agriculture Victoria and available from Seednet.

DISEASE

The important diseases of lentil are Botrytis grey mould and Ascochyta blight. Fortunately, there are varieties with improved levels of resistance that can contribute towards integrated disease management (IDM). In addition to avoiding highly susceptible varieties, an effective IDM plan includes paddock rotation, good agronomy, seed treatments, in-crop monitoring and timely fungicide application.

Where fungicides are required, adopt strategies that protect fungicides from resistance in the disease. The Australian Fungicide Resistance Extension Network (AFREN) recommends several strategies, with the most important being the mixing and rotating of registered active ingredients when fungicides are required.

Disease ratings are updated in February/March each year to reflect changes in disease virulence. Always consult the latest disease resistance ratings via the NVT Disease Ratings or the Agriculture Victoria Pulse Disease Guide.

AGRONOMY

With the introduction of newer varieties with different herbicide tolerance traits, it is essential to adhere to the latest available herbicide application requirements as specified on labels. Also consider the implications of the use of these traits across the whole farming system, as some herbicides can remain at residual concentrations in the soil and affect the growth of subsequent crops.

Sow lentils in the optimal sowing window for the cropping region and avoid delayed sowing. In Victoria, heat events and rapidly drying soil during late spring in the flowering and podding phase occur almost every year and can cause significant yield loss when sowing has been delayed. As a result, earlier sowing has generally proved beneficial.

Vegetative and reproductive frosts are common. Differences in variety susceptibility to vegetative frost has been observed, with some varieties having increased sensitivity (Table 2).

New rhizobium strains were released for the 2024 season with improved tolerance to acid soils. The Group E (field pea, lentil and vetch) new strain is WSM-4643, which replaced WSM-1455/SU-303. Note that lentil has moved from Group F to Group E. WSM-4643 provides optimal nodulation down to pH_{Ca} 5.0 and improved nodulation to 4.6. In acid soils, reinoculation is still required for subsequent pulse crops.

Crops exported to India must not contain seeds of Italian ryegrass (*Lolium multiflorum*) or wild radish (*Raphanus raphanistrum*). While trace amounts of these weeds meet Grain Trade Australia receival standards, any grain destined for the Indian market must be completely free of these weeds.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Lentil Southern Region

DISEASE MANAGEMENT

- Agriculture Victoria, Pulse Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of lentil
- extensionAUS Field Crop Diseases, Fungicide options in pulses
- Grain Producers Australia, Industry Pesticide Minor Use Permits
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End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
℗	Denotes Plant Breeder's Rights apply
BGM	Botrytis grey mould
GIA	Grains Innovation Australia
IMI	Imidazolinone
PBA	Pulse Breeding Australia
SARDI	South Australian Research and Development Institute
SU	Sulfonylurea

Table 1: Lentil adaptability for Victorian rainfall zones.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Rainfall zone		
	Low <350mm	Medium 350-500mm	High >500mm*
CONVENTIONAL LENTIL			
PBA Ace℗		✓	✓
PBA Bolt℗	✓	✓	
PBA Giant℗		✓	
PBA Greenfield℗		✓	
PBA Jumbo2℗	✓	✓	✓
IMIDIAZOLINONE-TOLERANT LENTIL			
ALB Terrier℗	✓	✓	✓
GIA Leader℗	✓	✓	✓
GIA Lightning℗	✓	✓	✓
GIA Thunder℗	✓	✓	✓
PBA Hallmark XT℗	✓	✓	✓
PBA HighlandXT℗	✓	✓	
PBA Hurricane XT℗	✓	✓	✓
PBA KelpieXT℗	✓	✓	✓
DUAL HERBICIDE-TOLERANT LENTIL			
GIA Metro℗	✓	✓	✓
GIA Sire℗	✓	✓	✓

* Lentils are highly susceptible to waterlogging and soil acidity; caution is advised in areas where these issues are likely to be a concern.

CONVENTIONAL LENTIL

PBA ACE(Φ)

Vigorous medium-sized, mid-season red lentil with grey seed coat. Best suited to medium to higher-rainfall areas. Intolerant to salinity and boron. High milling quality. Released 2012. Seed available from PB Seeds. EPR $5.00.

PBA BOLT(Φ)

Medium-sized red lentil with grey seed, adapted to the Mallee and northern Wimmera. Early-mid maturing with improved boron and salinity tolerance. Its susceptibility to BGM makes it less suited to medium to high-rainfall areas in wetter years and with early sowing. A good variety for timely crop topping to control weeds. Erect habit and good lodging resistance make it easier to harvest in dry seasons. Released 2012. Seed available from PB Seeds. EPR $5.00.

PBA GIANT(Φ)

Largest seeded green lentil in Australia. PBA Giant(Φ) is broadly adapted but best suited to the medium-rainfall growing regions. Similar yield to Boomer with improved shattering resistance, although timely harvest is still required to minimise shattering. Less susceptible to lodging at maturity than Boomer. Released 2014. Seed available from PB Seeds. EPR $5.00.

PBA GREENFIELD(Φ)

Medium-sized green lentil broadly adapted but best suited to the medium-rainfall growing regions. Yields similar to PBA Ace(Φ). Improved salinity tolerance and resistance to shattering, although timely harvest is still required. Released 2014. Seed available from PB Seeds. EPR $5.00.

PBA JUMBO2(Φ)

High-yielding conventional red lentil. Mid flowering with mid maturity. Well suited to no-till inter-row sowing into standing stubble. Tolerance to soil boron is similar to PBA Bolt(Φ). Due to its good level of disease resistance, it is a good variety for medium to high-rainfall regions where it produces uniform larger seed size. Well suited to premium large red split markets. Released 2014. Seed available from PB Seeds. EPR $5.00.

IMIDAZOLINONE-TOLERANT LENTIL

NEW – ALB TERRIER(Φ)

An IMI-tolerant, small red lentil with mid flowering and maturity. Broadly adapted to all lentil regions with good disease resistance and improved boron tolerance. Bred by Agriculture Victoria. Released 2023 (tested as CIPAL2122). Seed available from Seednet. EPR $5.40.

GIA LEADER(Φ)

An IMI-tolerant red lentil variety with good disease resistance and improved vegetative frost tolerance over GIA Lightning(Φ). Tolerant to applied IMI (Intercept®, as per label) and residual levels of IMI and SU herbicide, similar to existing XT varieties. Medium-sized seed with a grey coat colour. Mid-late maturing and a good fit for disease-prone medium to high-rainfall regions requiring an IMI-tolerant lentil. Spreading plant type that can assist protection of pods at maturity. Suited to early sowing times. Released 2021. Bred by GIA with seed available from PB Seeds. EPR $5.40.

GIA LIGHTNING(Φ)

A broadly adapted, IMI-tolerant, small, round red lentil with improved boron plus salt tolerance. Tolerant to applied IMI (Intercept®, as per label) and residual levels of IMI and SU herbicide, similar to existing XT varieties. Upright plant structure aids harvestability, with superior adaptation to light sandy soils compared with GIA Thunder(Φ), making it suitable for growing in Mallee regions. GIA Lightning(Φ) is more susceptible to BGM than GIA Thunder(Φ) and is not well suited to soil types or regions prone to BGM. Released 2022. Bred by GIA with seed available from PB Seeds. EPR $5.40.

GIA THUNDER(Φ)

High-yielding and broadly adapted, IMI-tolerant, small, round red lentil with a uniform grey seed coat. Tolerant to applied IMI (Intercept®, as per label) and residual levels of IMI and SU herbicide, similar to existing XT varieties. Mid flowering and mid maturing variety with better vegetative frost tolerance than several IMI-tolerant varieties. GIA Thunder(Φ) is rated moderately intolerant to boron and salt – the same as PBA Bolt(Φ) – which is an improvement over most other lentil varieties. GIA Thunder(Φ) has a better BGM rating over PBA Hurricane XT(Φ) and GIA Lightning(Φ) but is similar for Ascochyta blight. Well suited to the small premium round grain market. Released 2022. Bred by GIA, with seed available from PB Seeds. EPR $5.40.

PBA HALLMARK XT$^{\phi}$

Mid-season maturing red lentil with a medium seed size and grey seed coat. Greater early vigour than PBA Hurricane XT$^{\phi}$. Tolerant to Intercept® herbicide (as per label), improved tolerance to the herbicide flumetsulam plus reduced sensitivity to some SU and IMI herbicide residues from prior crop applications, and improved tolerance to Brodal®. Provides an alternative market class option to the small red lentil PBA Hurricane XT$^{\phi}$. Released 2018. Seed available from PB Seeds. EPR $5.40.

PBA HIGHLANDXT$^{\phi}$

Herbicide tolerant small red lentil variety. Tolerant to Intercept® herbicide (as per label), improved tolerance to the herbicide flumetsulam plus reduced sensitivity to some SU and IMI herbicide residues from prior crop applications. Early-mid maturing, which can suit drier seasons and regions such as the Victorian Mallee. Moderate to good early vigour and early flowering traits. Good resistance to Ascochyta blight. Released 2019. Seed available from PB Seeds. EPR $5.40.

PBA HURRICANE XT$^{\phi}$

A small-seeded red lentil with mid flowering and mid maturity. Tolerant to Intercept® herbicide (as per label), improved tolerance to the herbicide flumetsulam plus reduced sensitivity to some SU and IMI herbicide residues from prior crop applications. Released 2013. Seed available from PB Seeds. EPR $5.00.

PBA KELPIEXT$^{\phi}$

Large-seeded herbicide-tolerant red lentil. PBA KelpieXT$^{\phi}$ seed size is 93 per cent of PBA Jumbo2$^{\phi}$, with a grey seed coat and red cotyledon. Moderate to good early vigour, early-mid flowering and maturing, it is widely adapted to lentil growing regions of Australia. Released 2020. Seed available from Seednet. EPR $5.40.

DUAL HERBICIDE-TOLERANT LENTIL

GIA METRO$^{\phi}$

GIA Metro$^{\phi}$ is the first lentil to combine IMI and metribuzin herbicide tolerances. This combination of herbicide tolerance expands production and weed control options in lentils, particularly on light-textured soils prone to damage from applications of Group 5 herbicides. Metribuzin is now registered under APVMA Permit 92810 for application to GIA Metro$^{\phi}$ at the three to six node lentil growth stage. Grain yields are significantly lower than existing lentil varieties in the absence of weed pressure or where weeds are effectively controlled without crop damage from Group 5 herbicides. GIA Metro$^{\phi}$ has good tolerance to vegetative frost and a mid-late maturity. It has a large, lens-shaped red lentil with a grey seed coat. Released 2022. Bred by GIA using a metribuzin trait from a project supported by GRDC and SARDI. Seed available from PB Seeds. EPR $7.50.

GIA SIRE$^{\phi}$

The first IMI-tolerant lentil with improved tolerance to clopyralid herbicide soil residues from a prior crop, applied according to product label directions. A very small, rounded red lentil with a grey seed coat, suitable for the Indian subcontinent's small-sized lentil markets. GIA Sire$^{\phi}$ is a shorter variety so is best suited to early sowing and favourable lentil growing areas to maximise growth, height and yield. It is short and very bushy and sensitive to frost. Standing stubble can be very beneficial for harvestability. Avoid low fertility sandy soils and low-rainfall, frost-prone environments. Released 2022. Bred by GIA with seed available from PB Seeds under small-scale controlled release. EPR TBC.

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Janine Sounness – PB Seeds
Larn McMurray – Grains Innovation Australia
Simon Crane – Seednet

Table 2: Agronomic characteristics of lentil varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Flowering time	Maturity	Vigour	Vegetative frost*	Lodging	Shattering	Salinity	Boron
CONVENTIONAL LENTIL								
PBA Ace(Ф)	Mid	Mid	Good	Moderate-good	MRMS	MRMS	I	I
PBA Bolt(Ф)	Early-mid	Early-mid	Moderate-good	Moderate-good	R	R	MI	MI
PBA Giant(Ф)	Mid	Mid-late	Good		MS	MRMS	I	MI
PBA Greenfield(Ф)	Mid	Mid-late	Good		MS	MR	MI	I
PBA Jumbo2(Ф)	Mid	Mid	Moderate-good	Moderate-good	MRMS	R	I	MI
IMIDIAZOLINONE-TOLERANT LENTIL								
ALB Terrier(Ф)	Mid	Mid	Moderate	Moderate	MRMS	MR	MI	MI
GIA Leader(Ф)	Mid-late	Mid-late	Moderate	Moderate-good	MR	RMR (P)	I	I
GIA Lightning(Ф)	Mid-late	Mid	Moderate	Moderate	MR	RMR (P)	MI	MI
GIA Thunder(Ф)	Mid	Mid	Moderate	Moderate-good	MRMS	RMR (P)	MI	MI
PBA Hallmark XT(Ф)	Mid	Mid	Moderate-good	Poor-moderate	MR	R	MI	I
PBA HighlandXT(Ф)	Early	Early-mid	Moderate-good	Poor-moderate	MR	MR	MI	I
PBA Hurricane XT(Ф)	Mid	Mid	Moderate	Poor	MR	R	I	I
PBA KelpieXT(Ф)	Early/mid	Early-mid	Moderate-good	Moderate-good	MRMS	R	MI	I
DUAL HERBICIDE-TOLERANT LENTIL								
GIA Metro(Ф)	Late	Mid-late	Poor-moderate	Good	MR	RMR (P)	I	I
GIA Sire(Ф)	Mid-late	Mid	Poor	Poor	MR	RMR (P)	MI (P)	I

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.
I = intolerant, MT = moderately tolerant, MI = moderately intolerant. (P) = provisional ratings.
* Vegetative frost ratings based on opportunistic observations.

Table 3: Seed quality of lentil varieties.

The seed quality characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and marketing companies.

Variety	Market category	Grain type	Seed coat	Seed shape
CONVENTIONAL LENTIL				
PBA Ace(Ф)	MRS	Red	Grey	Lens
PBA Bolt(Ф)	MRS	Red	Grey	Lens
PBA Giant(Ф)	Large green	Yellow	Green	Lens
PBA Greenfield(Ф)	Medium green	Yellow	Green	Lens
PBA Jumbo2(Ф)	LRS	Red	Grey	Lens
IMIDIAZOLINONE-TOLERANT LENTIL				
ALB Terrier(Ф)	SRP	Red	Grey	Round
GIA Leader(Ф)	MRS	Red	Grey	Lens
GIA Lightning(Ф)	SRP	Red	Grey	Round
GIA Thunder(Ф)	SRP	Red	Grey	Round
PBA Hallmark XT(Ф)	MRS	Red	Grey	Lens
PBA HighlandXT(Ф)	SRP	Red	Grey	Round
PBA Hurricane XT(Ф)	SRP	Red	Grey	Round
PBA KelpieXT(Ф)	LRS	Red	Grey	Lens
DUAL HERBICIDE-TOLERANT LENTIL				
GIA Metro(Ф)	LRS	Red	Grey	Lens
GIA Sire(Ф)	SRP	Red	Grey	Round

SRP = small red premium round, MRS = medium red split, LRS = large red split.

Table 4: Disease resistance ratings of lentil varieties.

Variety	Ascochyta blight (foliar)	Botrytis grey mould (BGM)	Root lesion nematode (*Pratylenchus*)	
			P. neglectus	*P. thornei*
CONVENTIONAL LENTIL				
PBA Ace[Ф]	MR	MS	MR	MRMS
PBA Bolt[Ф]	MRMS	S	MR	MR
PBA Jumbo2[Ф]	RMR	MR (P)	MR	MRMS
IMIDAZOLINONE-TOLERANT LENTIL				
ALB Terrier[Ф]	MR (P)	MRMS (P)	MR	MR
GIA Leader[Ф]	MR (P)	MRMS (P)	MRMS (P)	MR (P)
GIA Lightning[Ф]	MRMS (P)	MS (P)	MRMS (P)	MR (P)
GIA Thunder[Ф]	MRMS (P)	MRMS (P)	MR (P)	MR (P)
PBA Hallmark XT[Ф]	MRMS	MRMS	MR	MRMS
PBA HighlandXT[Ф]	MR (P)	MS	MR	MRMS
PBA Hurricane XT[Ф]	MRMS (P)	MS	MRMS	MRMS
PBA KelpieXT[Ф]	MRMS	MS	MRMS	MRMS
DUAL HERBICIDE-TOLERANT LENTIL				
GIA Metro[Ф]	MR (P)	MRMS (P)	MR (P)	MRMS (P)
GIA Sire[Ф]	MRMS (P)	MS (P)	MRMS (P)	MRMS (P)

Source: NVT Disease Ratings unless otherwise specified

Additional information: Agriculture Victoria, Pulse Disease Guide. The Ascochyta blight rating combines the PBA Hurricane XT[Ф] and Nipper[Ф] virulent strains as both are widespread.

Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.

Table 5: Mallee and Wimmera lentil yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient by chickpea type within each year.

	MALLEE						WIMMERA					
CONVENTIONAL LENTIL												
Year		**2019**	**2020**	**2021**	**2022**	**2023**		**2019**	**2020**	**2021**	**2022**	**2023**
Mean yield (t/ha)		**2.06**	**1.68**	**2.79**	**3.13**	**1.84**		**1.97**	**2.48**		**2.17**	**1.21**
	No. trials	**2**	**3**	**1**	**3**	**3**	**No. trials**	**2**	**2**		**1**	**1**
Nipper[Ф]	11	87	68	–	95	90	6	87	94	Data not available*	106	76
PBA Ace[Ф]	12	105	96	107	89	103	6	106	106		80	84
PBA Blitz[Ф]	8	91	72	–	88	–	5	93	103		98	–
PBA Bolt[Ф]	12	98	99	102	78	95	6	99	103		67	107
PBA Jumbo2[Ф]	12	103	95	99	116	99	6	104	104		131	112
HERBICIDE-TOLERANT LENTIL												
ALB Terrier[Ф]	7	–	–	102	122	108	2	–	–	Data not available*	129	99
GIA Leader[Ф]	9	99	97	99	–	104	6	99	97		107	83
GIA Lightning[Ф]	10	–	114	110	94	105	4	–	108		83	110
GIA Thunder[Ф]	10	–	112	106	124	108	4	–	107		135	116
PBA Hallmark XT[Ф]	12	94	98	94	102	98	6	92	93		104	95
PBA HighlandXT[Ф]	12	100	99	100	96	96	6	100	103		96	112
PBA Hurricane XT[Ф]	9	99	96	99	–	100	6	99	99		103	92
PBA KelpieXT[Ф]	12	98	82	96	101	91	6	100	106		114	111
DUAL HERBICIDE-TOLERANT LENTIL												
GIA Metro[Ф]	6	–	–	–	75	87	2	–	–	Data not available*	75	50
GIA Sire[Ф]	7	–	–	97	62	91	2	–	–		44	83

– denotes no data available.

Source: National Variety Trials

* In 2021 the Horsham trials were compromised and the Kaniva trials failed.

LUPIN

NEW VARIETIES

No new lupin varieties are planned for release in this region for the 2025 season.

Rosemont(ϕ) has been released in Western Australia by AGT but is not yet available in eastern states.

DISEASE

As there are several important diseases of lupin in Victoria it is important to utilise an integrated disease management plan to prevent disease. This includes paddock rotation, good agronomy, selecting more resistant varieties, seed treatments, in-crop monitoring and timely fungicide application.

Disease ratings are updated in February/March each year to reflect changes in disease virulence. Always consult the latest disease resistance ratings via the NVT Disease Ratings or the Agriculture Victoria Pulse Disease Guide.

There are restrictions for lupin seed entering Victoria that must be complied with to avoid lupin anthracnose. This also applies to machinery used for lupins and used packaging. For more information contact the Agriculture Victoria plant biosecurity officer on 1800 878 962.

MORE INFORMATION

NVT.GRDC.COM.AU

- Detailed NVT results
- NVT Long Term Yield Reports app
- NVT Disease Ratings
- NVT Harvest Reports – Southern Region

GRDC.COM.AU

- GrowNotes™ Lupin Southern Region

DISEASE MANAGEMENT

- Agriculture Victoria, Pulse Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of lupin
- extensionAUS Field Crop Diseases, Fungicide options in pulses
- Grain Producers Australia, Industry Pesticide Minor Use Permits
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, NVT, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, in addition to data supplied from long-term NVT results, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

End point royalty (EPR) 2024-25 quoted $/tonne ex-GST.

Abbreviations used	
ⓟ	Denotes Plant Breeder's Rights apply
PBA	Pulse Breeding Australia

Table 1: Lupin adaptability for Victorian rainfall zones.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Rainfall zone		
	Low <350mm	Medium 350-500mm	High >500mm*
NARROW-LEAFED LUPIN			
Coyote ⓟ	✓	✓	
Jenabillup ⓟ		✓	✓
Lawler ⓟ	✓	✓	✓
Mandelup ⓟ	✓	✓	
PBA Barlock ⓟ	✓	✓	
PBA Bateman ⓟ	✓	✓	✓
PBA Jurien ⓟ	✓	✓	
ALBUS LUPIN			
Luxor ⓟ		✓	
Murringo ⓟ		✓	

Table 2: Agronomic characteristics of lupin varieties.

The agronomic characteristics in this table are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and seed companies.

Variety	Flowering time	Height	Lodging	Pod shattering	Aphid resistance
NARROW-LEAFED LUPIN					
Coyote ⓟ	E	T	MR	MR (P)	–
Jenabillup ⓟ	M	T	MR	MS	MR
Lawler ⓟ	VE-E	M-T	MS (P)	MR (P)	–
Mandelup ⓟ	VE-E	T	MS	MS	R
PBA Barlock ⓟ	E	M	MR	MR	R
PBA Bateman ⓟ	E	T	MRMS	MRMS	R
PBA Jurien ⓟ	E	T	MS	MS	–
ALBUS LUPIN					
Luxor ⓟ	E-M	M-T	R	R	S
Murringo ⓟ	M	M	R	R	S

– denotes no rating available.
Flowering time: VE = very early, E = early, M = mid, L = late. Height: S = short, M = medium, T = tall.
R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.

Reviewed by Matt Aubert, AGT Breeding (2024)

NARROW-LEAFED LUPIN VARIETIES

COYOTE[Φ]

Coyote[Φ] performs well across a very broad range of soil types, rainfall zones and yield potentials. It is early maturing (slightly slower than PBA Jurien[Φ]), with metribuzin tolerance similar to Mandelup[Φ]. Coyote[Φ] is susceptible to stem Phomopsis, therefore graze lupin stubbles with care in high-risk environments. Released 2019. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.00.

JENABILLUP[Φ]

Tall, mid flowering narrow-leaf lupin with early vigour. Moderately resistant to lodging and suitable for medium to high-rainfall areas. Longer flowering window compared with Mandelup[Φ], making it less suitable for crop-topping. Poor tolerance of foliar metribuzin. Released 2007. Free to trade. EPR $2.30.

LAWLER[Φ]

Very early maturing narrow-leaf lupin, slightly quicker than Mandelup[Φ]. Lawler[Φ] is widely adapted throughout southern and eastern Australian lupin growing areas. Lawler[Φ] has an improved stem Phomopsis rating compared with Coyote[Φ] and is tolerant of metribuzin. Released 2022. Bred and marketed by AGT and eligible for AGT Seed Sharing™. EPR $3.00.

MANDELUP[Φ]

A tall, very early flowering and maturing narrow-leaf lupin suited to low to medium-rainfall zones. Suitable for crop-topping. Mandelup[Φ] may lodge in high-rainfall zones. Delayed harvest can lead to pod shatter. Potential for reduced germination and establishment when using seed retained from crops exposed to rain before harvest. It can produce unacceptable levels of seed Phomopsis under high disease pressure. Good tolerance to metribuzin. Released 2004. Free to trade. EPR $2.30.

PBA BARLOCK[Φ]

Early narrow-leaf lupin with slightly later flowering and maturity than Mandelup[Φ] and greater yield potential, reduced lodging and good resistance to pod shatter. Similar metribuzin tolerance to that of Mandelup[Φ] and better than Wonga. Released 2014. Commercialised by Seednet. EPR $2.50.

PBA BATEMAN[Φ]

Early flowering narrow-leaf lupin with improved virus resistance. Well suited to high-rainfall zones. PBA Bateman[Φ] has similar harvest grain loss risk and resistance to pod shatter as PBA Barlock[Φ]. Similar tolerance to metribuzin as PBA Jurien[Φ], PBA Barlock[Φ] and PBA Gunyidi[Φ]. Released 2017. Seed available from Seednet. EPR $2.60.

PBA JURIEN[Φ]

Early maturing narrow-leaf lupin. Early flowering, slightly earlier than PBA Barlock[Φ]. Similar in height to Mandelup[Φ], moderately susceptible to lodging in high-rainfall regions. Medium to large seed, similar to Mandelup[Φ]. Alkaloid content similar to PBA Gunyidi[Φ]. Tolerance to metribuzin is better than Mandelup[Φ]. Released 2015. Developed by PBA. Commercialised by Seednet. EPR $2.50.

ALBUS LUPIN VARIETIES

LUXOR[Φ]

Luxor[Φ] is earlier flowering than its sister line Rosetta. Resistant to Pleiochaeta root rot (the cause of many seedling deaths in older varieties). Released in 2005. Commercialised by Seednet. EPR $2.80.

MURRINGO[Φ]

Mid flowering albus lupin suited to medium to high-rainfall zones. Slightly longer maturity time than Luxor[Φ]. Suitable sowing time window of late April to mid May. Murringo[Φ] should not be grown within one kilometre of other albus lupin varieties to avoid contamination. Released 2017. Seed available from Seednet. EPR $3.20

ACKNOWLEDGEMENTS

Audrey Delahunty – Agriculture Victoria
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Matt Aubert – Australian Grain Technologies
Simon Crane – Seednet

Table 3: Disease resistance ratings of lupin varieties.

Variety	Brown leaf spot	Pleiochaeta root rot	Cucumber mosaic virus (CMV) seed transmitted	Anthracnose	Phomopsis		Sclerotinia stem rot
					Stem	Pod/seed	
NARROW-LEAFED LUPIN							
Coyote[Φ]	MS (P)	MR (P)	MRMS	MRMS	S	MRMS	S (P)
Jenabillup[Φ]	MRMS	MR (P)	MRMS	MS	MS	MR	S (P)
Lawler[Φ]	MS (P)	MR (P)	MRMS	MR	MR	MS	S (P)
Mandelup[Φ]	MS	MRMS (P)	MRMS	MRMS	MR	S	S (P)
PBA Barlock[Φ]	MS	MRMS	MRMS	RMR	MR	MR	S (P)
PBA Bateman[Φ]	MS	MR (P)	MR	MRMS	RMR	MS	S (P)
PBA Jurien[Φ]	MS	MR	MS	RMR	RMR	MRMS	S (P)
ALBUS LUPIN							
Luxor[Φ]	MR	R	Immune	VS	MR	S	–
Murringo[Φ]	MR	MR	Immune	VS	MS	S	–

– denotes no rating available.

Source: NVT Disease Ratings unless otherwise specified

Additional information and source for brown leaf spot, Pleiochaeta root rot and all Albus lupin ratings: Agriculture Victoria, Pulse Disease Guide, and breeders. Anthracnose is exotic to Victoria and must be reported to Agriculture Victoria.

Disease ratings change as diseases evolve and new data becomes available. Therefore, always consult the latest NVT or Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible. (P) = provisional rating.

Table 4: Mallee narrow-leafed lupin yield.

NVT long-term yield expressed as a percentage of mean yield. Yield illustrated by colour gradient within each year.

Year		2019	2020	2021	2022	2023
Mean yield (t/ha)		1.27	1.49	1.74	3.42	1.85
	No. trials	2	2	2	2	1
Coyote[Φ]	7	–	100	107	99	113
Jenabillup[Φ]	7	117	103	–	108	115
Lawler[Φ]	6	–	100	105	98	–
Mandelup[Φ]	9	101	101	101	102	100
PBA Barlock[Φ]	9	114	105	96	111	111
PBA Bateman[Φ]	9	124	103	101	107	120
PBA Gunyidi[Φ]	8	121	103	99	106	118
PBA Jurien[Φ]	8	110	105	100	110	106
Quilinock	8	109	103	97	107	–
Rosemont[Φ]	2	–	–	–	100	–
Wonga	9	103	100	88	105	109

– denotes no data available.

Source: National Variety Trials

VETCH

Vetch is a multipurpose crop and grown mostly as a break crop in rotation with cereals in a wide range of soil types. Common vetch varieties are versatile, providing crop for grain production, early grazing as green pasture or for dry grazing, hay production or green and brown manure.

Vetch is valued for benefits to subsequent cereal and oilseed crops in the rotation. These benefits are usually greater than from other pulses, particularly in lower-rainfall areas. On sandy soils vetches provide better soil protection than field pea and provide better stubble retention in the soil. It can also be a useful tool for managing herbicide-resistant grass weeds and soil-borne cereal diseases provided that grass weeds are managed.

Early sowing is recommended where high biomass is required, such as for grazing or green or brown manure. For other end-uses, early sowing may lead to early canopy closure and increase the risk of disease losses later in the season.

Grain from the newer varieties of common vetch can be used without limit to feed all ruminants, and up to 20 per cent in the diet of pigs. These varieties possess less toxin in grain compared with Blanchefleur and Languedoc.

Forage vetches (purple vetch or woolly pod vetch) are used only for hay, green manure or mid to late winter feed for grazing and grow successfully in areas with rainfall above 400mm annually.

Vetch grain is not suitable for human consumption, and grain from forage vetches (purple and woolly pod) cannot be used to feed livestock.

End point royalties (EPR) are not payable on vetch.

NEW VARIETIES

No new vetch varieties are planned for release in this region for the 2025 season.

The common vetches Blanchefleur and Languedoc, along with the woolly pod vetches Capello and Haymaker Plus, have been removed as they have been outclassed.

DISEASE

The main diseases of concern in vetch are Botrytis grey mould (BGM) and Ascochyta blight. When rotating crops remember that BGM in vetch is caused by the same pathogens that cause BGM in lentil and chocolate spot in faba bean, which means these crops should not be grown in close rotation.

Rust resistance in varieties is important due to the risk of abortions in livestock fed on infected plants.

Disease screening in vetch is not part of NVT. It is undertaken sporadically and ratings should only be used as a guide. Agriculture Victoria screened for BGM and Ascochyta blight in 2020, while rust ratings are provided by the breeders.

A successful integrated disease management plan in vetch will include paddock rotation, good agronomy, selecting a more resistant variety, seed treatments and in-crop monitoring. While fungicide applications and rotation of fungicide actives can play a role, it is important to consider the end-use of a vetch crop (grain, hay, feed, manure, etc.) when assessing the cost of disease management strategies and any relevant withholding periods. Grazing is an alternative approach that can help to open up the crop and reduce disease pressure.

AGRONOMY

New rhizobium strains were released for the 2024 season with improved tolerance to acid soils. The new Group E (field pea, lentil and vetch) strain is WSM-4643, which replaced WSM-1455/SU-303. The new strain provides optimal nodulation down to pH_{Ca} 5.0 and improved nodulation to 4.6. In acid soils, reinoculation is still required for subsequent pulse crops.

INSECTS

All vetch species and varieties are susceptible in early growth stages to redlegged earth mite and lucerne flea. They can also be susceptible to blue green and cowpea aphids from early growth through to pod maturity, as well as to native budworm during pod formation and filling.

HERBICIDE TOLERANCE

COMMON VETCH

There are no differences between common vetch varieties to registered herbicides to control broadleaf and grass weeds.

PURPLE VETCH

Flumetsulam herbicides can be used to control some broadleaf weeds in Popany only. All herbicides registered for use on crops must be used according to the label.

WOOLLY POD VETCH

As this species is a poor competitor with weeds early in the season, care should be taken with paddock selection and herbicide choices. There is little difference in variety tolerances to registered herbicides.

MORE INFORMATION

GRDC.COM.AU

- GrowNotes™ Vetch Southern Region

DISEASE MANAGEMENT

- Agriculture Victoria, Pulse Disease Guide
- extensionAUS Field Crop Diseases, Foliar diseases of vetch for disease identification and management
- extensionAUS Field Crop Diseases, Fungicide options in pulses
- Grain Producers Australia, Industry Pesticide Minor Use Permits
- Australian Fungicide Resistance Extension Network (AFREN), afren.com.au

VARIETY DESCRIPTIONS

Varieties have been listed in alphabetical order according to type, not in order of preference. The agronomic characteristics in these descriptions are provided as a guide only and have been compiled from observations of the breeder, agronomic research projects and/or seed companies.

When selecting a variety, growers are encouraged to consider their individual farm and paddock situation along with marketing requirements and access to markets. Where possible, growers should seek locally relevant agronomy results published through Online Farm Trials, GRDC updates and various grower group publications.

Abbreviations used	
ⓟ	Denotes Plant Breeder's Rights apply
NVBP	National Vetch Breeding Program
SARDI	South Australian Research and Development Institute

COMMON VETCH (*VICIA SATIVA*)

MORAVA

Morava is a late flowering vetch with 100 per cent soft seeds. Grain yield is superior to other varieties in high-rainfall areas (>420mm). It has large seed and is more resistant to shattering than other vetch varieties. Morava produces higher herbage yields than all other common vetch varieties. This can be a disadvantage for disease management in high-rainfall areas, particularly for BGM. As a later flowering variety, grain yield will be reduced in environments with dry finishes. Bred by SARDI NVBP and released in 1998. Seed available from Barenbrug.

RASINA

Rasina is an early-mid maturing, soft-seeded vetch that replaced Languedoc and Blanchefleur in low to medium-rainfall areas for grain production. It is a smaller plant with podding starting lower in the plant. Rasina has a high grain yield potential, particularly in rainfall environments below 380mm, and dry matter production is moderate. While susceptible to Ascochyta and BGM, its open canopy leads to less infection. Rasina has a dark brown speckled seed coat with dark beige cotyledons. Bred by SARDI NVBP and released in 2006. Seed available from Barenbrug.

STUDENICA$^{\Phi}$

Studenica$^{\Phi}$ is a very early flowering and maturing vetch (flowering between 85–90 days) with white flowers. It is targeted at mixed farmers in low-rainfall areas (<350mm) looking to fill the winter feed gap or late planting for spring fodder and hay. Although grain yields are similar to other varieties, its strength is its early vigour and ability to generate more biomass prior to September. It reaches peak biomass earlier than other varieties and produces good winter growth and vigour. It is more tolerant to vegetative frost than other varieties. Bred by SARDI NVBP in conjunction with GRDC and SAGIT and released in 2021. Seed available from S&W Seed Co.

TIMOK$^{\Phi}$

Timok$^{\Phi}$ is a mid maturing, multipurpose vetch suitable for grain/seed and hay/silage production. Timok$^{\Phi}$ is targeted at medium to high-rainfall areas (>380mm) but will still perform for grain production in low-rainfall environments. It is a high-yielding common vetch variety with good early establishment and is soft seeded. Bred by SARDI NVBP and released in 2012. Seed available from S&W Seed Co.

VOLGA$^{\Phi}$

Volga$^{\Phi}$ is an early maturing, high-yielding grain/seed vetch particularly suited to low and medium-rainfall areas. Early maturity may limit yield potential relative to longer growing season varieties in high-rainfall areas. It is earlier flowering and maturing than Blanchefleur and Rasina, which results in earlier nodule development. Volga$^{\Phi}$ has high grain and herbage yields. Well suited to situations where the season finishes sharply. Suitable in many soil types with pH 5.8 to 9.4. Volga seed size is very similar to Morava. Bred by SARDI NVBP and released in 2012. Seed available from Barenbrug.

PURPLE VETCH (*VICIA BENGHALENSIS*)

Grain from purple vetch cannot be used to feed livestock.

BENATAS

Benatas is a cool season, soft-seeded purple vetch. A later-flowering alternative to Popany in longer growing regions. Tolerant to moderate waterlogging, it is suitable for rainfall areas between 350 and 800mm and cooler conditions. Suitable for pasture, hay/silage and green manure. Bred by Tasglobal Seeds and available through local seed sellers.

POPANY

Popany is a late maturing vetch. Suitable for medium to high-rainfall areas (>400mm) for hay/silage. With smaller seed size than common vetch varieties, grain yield is significantly lower and seeding rates should be lowered accordingly. Grain from this variety can be used as a bird feed mix with other recommended grains. Seed coat is black with distinctive white hilum. Popany has the best tolerance of all vetches to waterlogging.

WOOLLY POD VETCH (*VICIA VILLOSA* SUBSP.)

Grain from woolly pod vetch cannot be used to feed livestock.

RM4Φ

A multipurpose vetch used for hay/silage, grazing, green/brown manure or seed. Suitable for a range of soil types. RM4Φ produces high levels of dry matter with good early establishment. Considered a soft seed variety although a small percentage may be dormant. Early maturing and will produce significantly more dry matter than Capello or Haymaker Plus in rainfall areas of less than 400mm. Also suitable for rainfall areas up to 600mm. Grazing from 10-node stage to podding only. Performs better for grain production in sharp finishing seasons compared with other woolly pod varieties. Bred by SARDI NVBP. Seed available from Barenbrug.

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Melissa McCallum – South Australian Research and Development Institute

Table 1: Vetch adaptability for Victorian rainfall zones.

Vetch varieties listed by end usage. The characteristics in this table are provided as a guide only and have been compiled from data from the South Australian Crop Sowing Guide, observations of the breeder, agronomic research projects and seed companies.

Variety	Rainfall zone				
	<350mm	350–400mm	400–450mm	450–600mm	>600mm
GRAIN					
Morava		✓	✓	✓	✓
Rasina	✓	✓	✓	✓	
StudenicaΦ	✓	✓	✓		
TimokΦ	✓	✓	✓	✓	✓
VolgaΦ	✓	✓	✓		
HAY, SILAGE, GRAZING AND GREEN MANURE					
Benatas		✓	✓	✓	✓
Morava	✓	✓	✓	✓	✓
Popany		✓	✓	✓	✓
Rasina	✓	✓			
RM4Φ	✓	✓	✓	✓	✓
StudenicaΦ	✓	✓	✓		
TimokΦ	✓	✓	✓	✓	✓
VolgaΦ	✓	✓	✓		

Source: Stuart Nagel, South Australian Research and Development Institute (reviewed 2024)

Table 2: Agronomic characteristics and disease ratings of vetch varieties.

Variety	Maturity	Yield potential	Dry matter	Flower colour	% of pod shattering	% of hard seeds	Rust	Ascochyta blight	Botrytis grey mould
COMMON VETCH									
Morava	Late	High	High	Purple	0	0	R	MS (P)	VS (P)
Rasina	Early-mid	High	Moderate	Purple	0-2	0	R	S (P)	S (P)
Studenica[◊]	Very early	High	High	White	0-2	0	R	MR (P)	S (P)
Timok[◊]	Mid	High	Very high	Purple	0-2	0-2	R	S (P)	S (P)
Volga[◊]	Early	Very high	High	Purple	0-2	2-5	R	MRMS (P)	S (P)
PURPLE VETCH									
Benatas	Late	Low	Very high	Purple	Low	Low	–	MRMS (P)	S (P)
Popany	Very late	Low	High	Purple	20-30	5-10	R	MR (P)	S (P)
WOOLLY POD VETCH									
RM4[◊]	Mid	Mod	Very high	Purple	2-5	2-5	R	MR (P)	S (P)

– denotes no data available.

Disease ratings do change as diseases evolve and new data becomes available. Therefore, always consult the latest Agriculture Victoria disease guides (typically updated in March each year) to ensure use of the most current ratings.

Note, vetch is not included in NVT. Rust ratings provided by breeders and the remainder by Agriculture Victoria.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible,. (P) = provisional rating.

Source agronomy: Stuart Nagel, South Australian Research and Development Institute (reviewed 2024)

Source disease: Agriculture Victoria, Pulse Disease Guide

Table 3: Grain and dry matter yield for vetch varieties.

This table has been compiled from independent trials with a five-year average over five different trial sites in South Australia.

Variety	Grain yield		Dry matter yield		Dry matter yield	
	(t/ha)	% of Volga[◊]	(t/ha)	% of Morava	(t/ha)	% of Capello
COMMON VETCH						
Morava	1.59	82	5.14	100		
Rasina	1.79	92	–	–		
Studenica[◊]	1.66	86	4.73	92		
Timok[◊]	1.93	100	4.92	96		
Volga[◊]	1.94	100	4.82	94		
Mean yield	**1.78**		**4.90**			
WOOLLY POD VETCH						
Capello					5.70	100
RM4[◊]					5.90	104
Mean yield					**5.80**	
PURPLE VETCH						
Popany					5.28 (2009–12)	85

– denotes no data available.

Source: Stuart Nagel, South Australian Research and Development Institute (reviewed 2024)

Table 4: Hay yields of common vetch varieties from low-rainfall cropping environments.

Data compiled from independent trials over three years at four different sites in South Australia.

Variety	Hay yield (t/ha)			
	2014	2015	2016	3-year average
Rasina	–	2.86	2.21	2.54
Studenica[(b)]	2.24	3.09	2.19	2.51
Timok[(b)]	2.13	3.15	2.08	2.45
Volga[(b)]	2.26	3.06	2.45	2.59

– denotes no data available.

Source: Stuart Nagel, South Australian Research and Development Institute (reviewed 2024)

Table 5: Plant density and recommended seeding rates for vetch.

End-use	Common vetch		Woolly pod vetch		Purple vetch	
	Plant density (plants per m^2)	Sowing rate (kg/ha)	Plant density (plants per m^2)	Sowing rate (kg/ha)	Plant density (plants per m^2)	Sowing rate (kg/ha)
Grain	40–60	40–50	40–50	25–40	40–50	25–40
Hay/silage	50–70	50–60	50–60	30–45	50–60	30–45
Grazing	50–70	50–60	50–60	30–45	50–60	30–45
Green manure	60–70	55–65	60–70	45–50	50–60	30–45

Source: Stuart Nagel, South Australian Research and Development Institute (reviewed 2024)

NOTES

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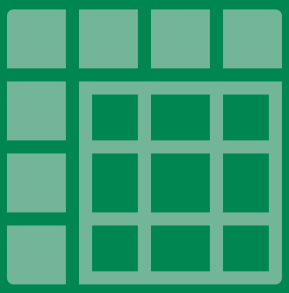

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