

Pre-Season Variety Update 2025

Welcome to the first edition of the SA Delta Agronomy Newsletter compiled by the SA Delta Ag Advisory Team. It is our aim to keep you up to date and abreast of any relevant agronomy topics throughout the season. For 2025, you will now receive timely and regular newsletters from the Delta advisory team.

The purpose of our first newsletter is to provide guidance on winter crop varietal selection for 2025. This is based on trial data, paddock observations and performance for the major winter crop types grown throughout the South-East, Yorke Peninsula, Eyre Peninsula, Mid-North, Adelaide Hills and Mallee regions of SA. This variety update will provide a brief overview of current varieties, highlighting those new to the market in 2025 and which ones are worth considering for seed increase for future use.

Once the National Variety Trials and any internal Delta Ag trial results from the 2024 season become available, an updated newsletter will be sent outlining specific varietal performance.

This year, South Australian farmers faced significant challenges due to one of the worst droughts in recent memory. The combination of record-low rainfall and severe frosts led to many crops failing to reach harvest, particularly in regions like the Mid North, far West Coast, lower Yorke peninsula and the South-East.

The harsh conditions have resulted in the state's grain harvest being estimated at 5.3 million tonnes, valued at \$2.1 billion. This represents a 42% decrease from the five-year average and is the lowest yield since the 2008/09 season.

Without a doubt 2024 will rank as one of the most challenging years on record. However, as we near the start of a new year, focus now needs to turn to key decisions for the 2025 season ahead.

The Delta Ag team wish you and your families all the very best for the festive season. We thank you for your ongoing support and look forward to partnering with you to generate strong results in 2025.

The SA Delta Ag Advisory Team.



The Delta Ag Advisory Team 2024.

Wheat

The 2024 season for majority of SA has been the worst on record with some of the far northern cropping districts resulting in complete crop failure. Early yield results for the southern cropping districts have been better than expected, with most earlier maturing varieties yielding average or above for any crops which could tap into stored sub soil moisture from summer rainfall events.

The biggest issue for most of SA next year will be herbicide residue management. Due to the increasing number of lentil hectares and lack of rainfall in the state, most of these hectares that received IMI chemistry will require a CL wheat or residue manager.

In the last few years, SA has seen a broad variation in varieties grown throughout the state. Varieties like Scepter, Vixen and Rockstar which have been solid performers are starting to be replaced by Calibre, Matador and Brumby, especially Matador and Brumby for growers who need a higher level of powdery mildew resistance.

Recommended varieties:

Main season

- Tomahawk CL
- Brumby
- Matador
- Calibre

Long season:

- Anapurna
- Big red
- Triple 2

Seed increase:

- Tomahawk CL
- Soaker CL

SA still has a high area of CL wheat grown for residue management in lower rainfall areas with Sunblade CL, Sherrif CL and Razor CL being the common varieties, but not preferred due to their disease ratings and lower yield potential. The recent releases of Tomahawk CL and Soaker have been well timed with the extra demand on CL plantings in 2025 and their higher yield potential compared to older CL varieties. The only negative so far on Tomahawk and Soaker is the APW classification. Both varieties will need to be monitored closely for powdery mildew in high pressure environments.

A preventative fungicide strategy will need to be used in these areas, especially where fungicide resistance has become a concern.



Clients attending the 2024 Growers Supplies Field Day on the Yorke Peninsula.

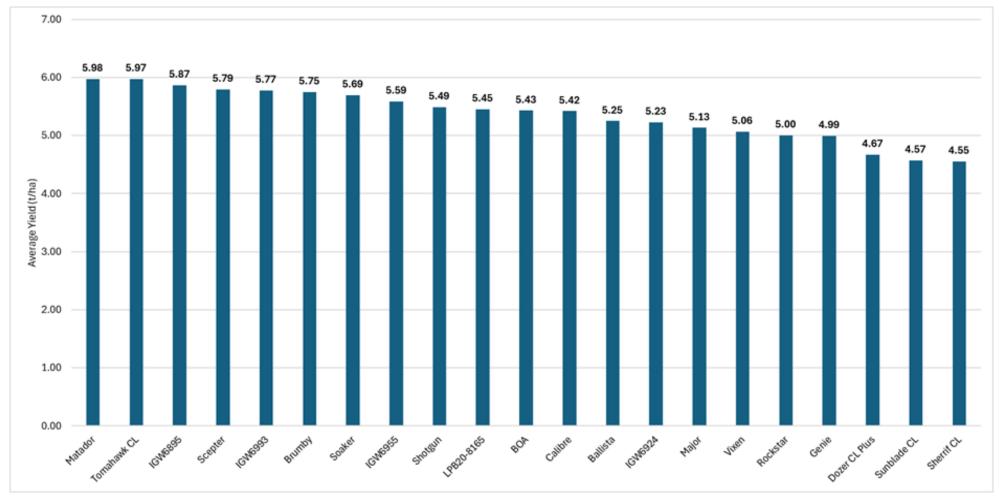


Figure 1: Delta Ag/Growers Supplies – Stansbury Scrub main season wheat variety trial 2024. Sowing date was 20/05/2024. Trial germinated in the 1st week of June.

Yield differences are completely dependent on varietal traits. There was no variation on the site.

New and recent releases:

Main Season

Matador

- AH quality
- Quick mid maturing (like Scepter but shorter canopy)
- Powdery mildew MS
- Septoria S (P)
- Stripe rust MS
- Longreach

Tomahawk CL

- APW quality
- Quick mid maturing (Similar to Scepter)
- Powdery mildew, S-VS
- Septoria S (P)
- Stripe rust, M-S
- AGT

Soaker CL

- APW quality
- Quick mid maturing (Similar to Scepter)
- Single-gene IMI tolerant wheat
- Powdery mildew S (P)
- Septoria S (P)
- Stripe rust MS (P)
- Longreach

Shotgun

- AH quality
- Mid-season maturing (similar to Scepter)
- Powdery mildew S (P)
- Septoria S (P)
- Stripe rust MS (P)
- AGT

Boa

- AH quality
- Quick-mid maturing (traits of Scepter & Cobra)
- Powdery mildew S (P)
- Septoria S (P)
- Stripe rust, MR-MS (P)
- Longreach

Winter Wheat Varieties

Winter wheat varieties are a key feature of the cereal rotation in the higher rainfall, longer season regions of SA. Winter wheat offers the benefits of maximizing yield potential through seasonal length as well as some tolerance to water logging. The dual-purpose benefit of winter wheat also helps mixed farmers fill their autumn/winter feed gap. They have also provided growers with some excellent disease resistance to the key leaf diseases.

Anapurna, Big Red, and Cesario continue to be the dominant varieties of red feed wheat for growers in the southeast of SA. High yield potential coupled with good disease resistance, stem strength to lodging and good grain retention makes them great options. Accroc was previously the most popular variety and is still grown by many today, but its disease resistance has decreased, placing it under high pressure and requiring a proactive fungicide strategy to maximize yield.

Length of maturity (time to flowering) is always a topic of discussion when choosing winter wheat varieties. Accord, and subsequent varieties like Anapurna and Big Red have been proven to have a reliable maturity time that helps maximize yield potential in strong seasons while also finishing quickly in a drying season.

New and recent releases:

Triple 2

- · Awned red feed wheat
- Dual purpose with mid maturity
- Strong disease package
- Very high yielding in trials as a coded variety (AGFWH010222)
- Suited to medium-high rainfall environments
- AGF

Longford

- Awned red feed wheat
- Dual purpose and late maturity
- Strong disease package and good lodging tolerance
- Suited to high rainfall environments





Longford and Triple 2 on display at an AGT field day in Smeaton in October 2024.

Table 1: Wheat varietal characteristics

| Maturity | Variety | Grain Quality | Supplier | Year of Release | EPR \$/f (GST ex.) | E. Coast Stripe Rust | Septoria Tritici Blotch | Yellow Leaf Spot | Powdery Mildrew | Stem Rust | Leaf Rust | Crown Rot | Lodging | Acid Soil | Comments | SA Av. t/ha Long Term MET | TOS |
|----------------------|-------------|------------------|------------|--------------------|-----------------------|----------------------------|-------------------------------|------------------------|--------------------|--------------|--------------|--------------|---------|--------------|---|------------------------------------|----------|
| | Accroc | FEED | RAGT | 2016 | \$4.00 | R-MR | MS | MR-MS | MS-S | MS | S-VS | S-VS | R-MR | -1 | Medium-long growing season wheat with potential for high yields in medium-high rainfall zones. | 7.85 | |
| | Anapurna | FEED | AGT | 2020 | \$3.20 | R-MR | MR-MS | MR-MS | R-MR | MS-S | MS | S-VS | R-MR* | - | Excels in very long season, high rainfall environments. | 7.08 | _ |
| Winter | Big Red | FEED | AGF SEEDS | 2022 | \$3.65 | R-MR | MR | MR | R-MR | S | MR-MS | MS-S | - | - | Performs well under irrigation. Can be used as dual- purpose when early sowing is achieved. | 7.31 | Long S |
| | Cesario | FEED | RAGT | 2021 | \$4.00 | R-MR | MR-MS | MR | R-MR | R-MR | R-MR | VS | - | - | Awnless. | 7.51 | Seasor |
| | Triple 2 | FEED | AGF SEEDS | 2024 | \$4.00 | R-MR* | MR-MS* | - | R-MR* | - | MR-MS* | - | - | 1 | Tested in a range of environments, has consistently shown its potential to out yield competitors. | 7.29 |] |
| Slow | Longford | FEED | AGF SEEDS | 2023 | \$3.85 | R-MR | MR-MS/S | MR-MS | R-MR | R-MR | R-MR | MS-S | - | ı | High yield potential red wheat with a strong disease package and lodging tolerance. | 7.26 | |
| | Genie | АН | Intergrain | 2023 | \$3.50 | MR-MS* | S* | MR-MS | S-VS* | MS* | S* | - | - | - | 1-2% yield increase over Rockstar. | 4.29 | Early |
| Mid - Slow Spring | Rockstar | АН | Intergrain | 2019 | \$3.50 | S | S | MR-MS | S-VS | MR-MS | S | S | MR* | - | Wide adaptability to a range of environments. | 3.89 | y Season |
| | Sheriff CL | APW | Intergrain | 2016 | 4.25 | S-VS | S | MR-MS | S-VS | MS | S-VS | S | MR* | - | Similar to LRPB Trojan and can be sown earlier than other CL varieties. | 3.53 | son |
| | Brumby | APW | Intergrain | 2022 | \$3.50 | MS | S | MR-MS | MR-S | MR | S-VS | S | - | 1 | High yielding APW & APWN wheat with a very attractive disease resistance profile | 3,34 | |
| | Matador | АН | LongReach | 2023 | \$3.50 | MS | S* | MS | MS | MS | MS-S | S | MR-MS* | MT-T | Bred from a cross with Sceptor and has similar maturity but a shorter canopy. | 3.36 | |
| | Scepter | АН | AGT | 2015 | \$3.25 | MS-S | S | MR-MS | S-VS | MR-MS | MS-S | MS-S | MR | MT-T | Very reliable, high yielding and holds in a tight finish, suits sodic soils. | 3.36 | |
| Mid Spring | Shotgun | АН | AGT | 2024 | \$3.90 | MS* | S* | MR-MS* | S* | MR-MS* | MS-S* | - | - | 1 | Viewed as an alternative to Rockstar. | 3.57 | |
| | Soaker CL | APW | AGT | 2023 | \$3.50 | MS* | S* | MS* | S* | MR* | S* | - | - | MT-T | Higher yielding Scepter replacement. | 3.31 | Main |
| | Sunblade CL | APH | AGT | 2020 | \$4.35 | MR-MS* | S* | MS-S* | S* | MS* | MS-S* | S* | 1 | ı | Slightly slowly maturity than Scepter | 3.22 | Se |
| | Tomahawk CL | APW | AGT | 2023 | \$4.15 | MS-S | S* | MR-MS | S-VS | MR | S | S | - | - | Scepter type clearfield. | 3.57 | ason |
| | Ballista | АН | AGT | 2020 | \$3.50 | MS-S | S-VS | MS | S-VS | MR | S | S | MR* | - | Stable yield across a range of conditions. Alternative to Scepter, Vixen and Calibre | 3.30 | |
| Quick Mid Spring | Boa | АН | LongReach | 2024 | TBC | MR-MS* | S* | MS* | S* | MS* | MR* | - | - | MT-T | A shorter canopy with an erect growth habit to handle high input systems. | 4.46 | |
| | Calibre | АН | AGT | 2021 | \$3.50 | S | S | MR-MS | MS-S | MR | S | S | - | - | Good sprouting tolerance and longer coleoptile than most commonly grown varieties. | 3.41 | |
| Quick Spring | Vixen | АН | Intergrain | 2018 | \$3.50 | S-VS | S | MR-MS | S-VS | MR-MS | S-VS | S | MR* | - | Short plant height reducing stubble load in high yielding environments. | 3.33 | |

^{*} Preliminary rating to be used with caution.

New varieties in red.

Source NVT Online.

Barley

Barley accounted for circa 800,000 ha, 20% of the SA 2024 winter crop (PIRSA). It was a dry start to the season and most, if not all, areas struggled with establishment. Rainfall averages were well below and continued throughout the season in most areas, resulting in a challenging year. The degree of damage seen from the mid-September frosts varied on a paddock-to-paddock basis. Thankfully, there were later sown barley paddocks that were still in the boot stage, therefore were not as exposed to frost damage.

Varieties that performed well in the tough conditions were Beast, Combat and Commodus CL. Commodus CL and Maximus CL continue to be the most extensively grown varieties due to their high yield performance and Clearfield herbicide trait even in tough years. This trend should continue with the potential of IMI residue carryover in the 2025 season. Neo CL performed very

Recommended varieties:

- Neo CL
- Maximus CL
- Commodus CL
- RGT Planet
- Combat

Seed increase:

- Neo CL
- Granite CL

well in areas with a good level of stored soil moisture. It wasn't best suited to low production areas of ~3t/ha or less but it will continue to have a fit in mid-high rainfall areas and looks very promising. There are also pockets of Titan AX and some conventional varieties being grown predominantly in the Mid North.

The barley export price this year was lower as global production is up. Feed barley was highly sought after with local yields down on previous years and reduced pasture growth across the state. Seed for new varieties in 2025 will have a limited availability due to the dry season this year. It will be important to contact your local Delta Ag store or supplier regarding availability and to secure seed.

New and recent releases:

Granite CL

- Feed classification
- Shown good test weight and grain size in trials
- Quick-mid maturity
- Erect growth habit and medium plant height
- Suited to low-medium rainfall environments
- Improved spot form and net form ratings
- Intergrain

Pegasus AX

- Allows group 1 herbicide, Quizalofop-P-Ethyl to be applied in crop
- Feed classification
- Quick-mid maturity
- Short height, less risk of lodging
- Suited to medium-high rainfall environments
- Improved disease package compared to Titan AX
- AGT

Bigfoot CL

- Feed classification
- Marketed as higher yielding than Maximus and Commodus
- Mid maturity
- Suited to low-medium rainfall environments
- AGT

Spinnaker

- Currently undergoing malt accreditation
- Quick maturity
- Suited to medium-high rainfall environments
- Improved leaf scald compared to other conventional varieties
- AGT

Neo CL

- High yielding CL variety
- Feed classification, undergoing malt accreditation
- Improved grain size on Planet
- Mid maturity
- Suited to medium-high rainfall zones
- Good powdery mildew resistance
- Intergrain

Combat

- Malt classification
- Low screenings and high grain retention
- Prone to lodging and head loss in high yielding situations
- Quick-mid maturity, intermediate growth type
- University of Adelaide



The South Australian Advisory team inspecting a Growers Supplies cereal variety trial on the Yorke Peninsula.

Table 2: Barley varietal characteristics.

| Variety | Grain Class | Breeder | Year of Release | EPR \$/t (GST ex) | Leaf Scald | Leaf Rust | Powd. Mild. | Spot FNB | Net NFNB | Comments | SA Av. t/ha Long Term MET |
|-------------|----------------|----------------|--------------------|----------------------|---------------|--------------|----------------|-------------|-------------|---|------------------------------------|
| Beast | Feed | AGT | 2020 | \$4.00 | S-VS | MS | S | MS | MR-MS/S | A very high yield potential in low to medium rainfall conditions. | 4.39 |
| Bigfoot CL | Feed | AGT | 2024 | \$4.35 | VS* | \$* | \$* | MS* | MR-MS* | High yielding with solid grain package and plant height similar to Maximus. | 4.04 |
| Combat | Feed | Intergrain | 2022 | \$3.50 | MS-S | S-VS | MS | R-MR | MR-MS/S | Described as a broadly adapted, mid-season feed variety. A high yielding variety suited to earlier sowing. | 4.54 |
| Granite CL | Feed | InterGrain | 2024 | \$3.90 | MR-S* | \$* | S* | MR-MS | MR-MS | Mid maturity, suited to low - medium rainfall. Medium plant height and strong lodging tolerance. | = |
| Neo CL | Feed | Intergrain | 2023 | \$4.25 | S* | MS-S* | R-MR* | MR * | MS* | Suited in medium-high rainfall, good lodging tolerance. | 4.55 |
| Pegasus AX | Feed | AGT | 2024 | \$4.15 | MS-S* | MS* | \$* | MS-S* | MR-MS* | Hindmarsh type with lower lodging risk. Screenings risk. | 2.91 |
| Spinnaker | Feed | Secobra | 2024 | \$4.00 | S | S | R-MR | S-VS | S-VS | Early - mid maturity, suited to medium rainfall. | 4.21 |
| Titan AX | Feed | AGT | 2022 | \$4.55 | VS | S-VS | MS-S | MS | MR-MS/S | The first barley variety in the world that offers tolerance to Aggressor (a group 1, Quizalofop-p-Ethyl herbicide). | 4.28 |
| Commodus CL | Malt | Intergrain/GIA | 2021 | \$4.25 | MS-S/S-VS | S | MS-S | MS-S | MR-MS/S | Ideally suited to lighter soils and medium - low rainfall environments, agronomically like compass. | 4.20 |
| Maximus CL | Malt | InterGrain | 2020 | \$4.25 | R/S-VS | S | S | MS | MR-MS | Spartacus replacement with improved yield and a general disease package improvement. | 4.29 |
| Planet | Malt | RAGT | 2017 | \$4.00 | R/S-VS | S | R-MR | S-VS | MR-MS/S-VS | Very high yielding malt variety, good tillering habit. | 4.07 |
| Zena CL | Malt | Intergrain/GIA | 2022 | \$4.25 | R/S-VS | S | R-MR | S | MR-S | A Clearfield barley well suited to medium-high rainfall environments and is agronomically simialr to RGT Planet. | 4.03 |

*Provisional rating,

New Variety 2025

Source: NVT online

Delta Agribusiness

Oats

In South Australia, the area sown to oats for grain during the 2024 season was approximately 70,000 hectares. This reflects a stable to slightly increasing trend, influenced by the use of oats in both animal feed and domestic demand for milling oats and growers keen to take advantage of milling oat contracts with local buyers. These contracts are often comparable to forward contracts for both wheat and barley. There has also been some recent investment into milling oats in Australia with Intergrain picking up the SARDI milling oats breeding program, releasing two new varieties for 2025, these are Goldie and Millie.

Recommended varieties:

- Goldie
- Koala

New and recent releases:

Goldie

- High yield milling oat
- Strong grain quality package
- Mid-spring maturity
- Tall plant height (15cm taller than Bilby)
- Intergrain

Minnie

- High yield milling oat
- Mid-slow maturity
- Short-medium plant height
- Improved lodging tolerance
- Intergrain

Koala

- Suited to medium-high rainfall zones
- Mid-late maturity
- A tall dwarf variety (Similar height to Bannister)
- Resistant to cereal cyst nematode
- Seednet

Bilby

- Quick maturity
- A dwarf variety
- Yields similar to Bannister
- SARDI

Table 3: Oat characteristics and disease ratings SA

| Variety | Plant Height | Septoria | Stem Rust | Leaf Rust | BYDV | CCN Resistance | Red Leather Leaf | SA Av. t/ha Long Term MET |
|-----------|---------------|----------|-----------|-----------|------|-------------------|---------------------|---------------------------------|
| Bannister | Tall Dwarf | M-MS | S | MS-S | MS | MR | MS-S/S-VS | 2.77 |
| Bilby | Dwarf | S | S | MS-S | S | S | MS | 2.68 |
| Goldie | Moderate Tall | MS | S-VS | S-VS | MS | MR | S-VS | 2.95 |
| Koala | Tall Dwarf | MS-S | MS | MS-S | MS-S | R | S | 2.69 |
| Kowari | Dwarf | S | S | S-VS | S | S | S | 2.54 |

Disease ratings: VS = very susceptible, S = susceptible, MS = moderatly susceptible, MR = moderatley resistant, R = resistant (P) = Provisonal Ratings

[#] May be suscepitable to alternate pathotypes

Hay Oats

2024 has resulted in reduced hay yields due to dry conditions leaving a short fall in domestic and export oaten hay stocks as well as shortages in hay seed. Late rains have also affected production in some regions. Moving forward, local export companies are expanding operations to allow for more production to come from areas south of Adelaide, improving profitability and marketability of export hay production and providing closer access to markets for producers in nearby regions.

Conventional oaten hay varieties are not tolerant to IMI herbicide carryover and this will be an important consideration for oaten hay production in 2025 and therefore,

consideration for oaten hay production in 2025 and therefore, farmers will need to consider Kingbale or Archer Oats to manage IMI carryover where appropriate or for specific grass weed management such as brome grass with the use of preemergent IBS OnDuty only.

Recommended varieties:

- Kingbale
- Mulgara

Seed increase:

Kultarr

New and recent releases:

Archer

- Single gene IMI tolerant
- Mid maturity
- Medium height, good early colour and hay colour retention
- Interarain

Kingbale

- Single gene IMI tolerant
- Mid maturity, tall height, good early vigour
- Intergrain

Wallaby

- Slow maturity
- Good digestibility, high water soluble carbohydrate & low NDF.
- Medium-tall height
- Suited to medium-high rainfall zones
- Intergrain

Kultarr

- Quick-mid maturity
- Higher hay yields than Brusher and Mulgara
- Tall height
- Suited to medium rainfall zones
- Intergrain

Table 4: Oat hay characteristics and disease ratings SAYield data for Kingbale and Archer only present in 2021 & 2022.

| Variety | Plant Height | Septoria | Stem Rust | Leaf Rust | BYDV | CCN Resistance | Red Leather Leaf | WA MET Intergrain 17-22 |
|----------|---------------|----------|-----------|-----------|-------|-------------------|---------------------|----------------------------|
| Archer | Moderate | MR-MS* | MS-S | R/S* | MS-S* | VS* | S-VS* | 10.20 |
| Kingbale | Tall | MS-S | MS-S | S | MS | R | \$* | 10.41 |
| Kultarr | Tall | MS* | S-VS* | MR* | MS-S* | MR-MS* | \$* | 10.42 |
| Mulgara | Tall | S/MS | S | MR | MS-S | R | S-VS | 10.06 |
| Wallaby | Moderate Tall | MS* | S-VS* | MR* | MS* | MR* | S-VS* | 10.31 |
| Winteroo | Tall | MS# | S | S | MS | R | S | 10.29 |

Disease ratings: VS = very susceptible, S = susceptible, MS = moderatly susceptible, MR = moderatley resistant, R = resistant (P) = Provisonal Ratings

[#] May be suscepitable to alternate pathotypes

Canola

Canola remains a very profitable crop for South Australian growers. It's an excellent break crop to reduce the prevalence of cereal root diseases and is well suited to cleaning up problem weeds in paddocks prior to cereal rotations. Modern plant breeding and genetic modification (GM) programs have produced canola varieties with excellent yield potential, agronomic traits that allow a wide range of chemical control options in-crop and improved genetic resistance to key establishment diseases such as blackleg.

The 2024 growing season proved to be a challenging year for canola production in South Australia. The late patchy start, record or near record dry conditions and widespread frost events impacted canola production across the state. Canola has proven to be a remarkably resilient crop under these adverse conditions. While yields and oil content have been down due to these factors, and some crops were cut for hay due to frost damage, overall, the performance of our modern canola varieties has been remarkable. Early blackleg (stem canker) was well controlled this season using seed dressings and robust

Recommended varieties:

Clearfield

- 44Y94CL
- PY421C
- 45Y95CL

Triazine Tolerant

- Hvttec Trifecta
- Hyttec Trophy
- Hyola Blazer TT
- PY429T

GM

- InVigor LR4540P
- 44Y27RR
- PY428R

Dual Stack

- Hyola Regiment XC
- PY520TC
- Hyola Defender CT

and new varietal blackleg resistance gene combinations. Aerial blackleg and sclerotinia infections did not occur in most cases due to the dry conditions. The 20% flowering fungicide application remained a key tool in protecting yields in the HRZ of the Lower SE.

Pioneer's 44Y94CL continues to be the benchmark for the MRZ, with unfrosted crops averaging 2 t/ha+. Badly frosted 44Y94CL crops recovered to yield around 1-1.2 t/ha. This recovery appears to have been due to the ability of late pods on the lateral stems to fill, and increased seed size in partially frosted pods. The replacement for 44Y94CL, PY421C was sown over a limited area due to supply, however, visually it looks like a step up from 44Y94CL, with better early vigour and more yield potential. Once harvest is completed, we will have a better idea of PY421C's full potential. This year again saw the hybrid Clearfield varieties as the standouts for yield in paddocks with low annual ryegrass (ARG) pressure and/or low resistance to clethodim/Intervix. However, where clethodim/Intervix is beginning to fail on ARG or other weeds (such as wild radish), alternative chemistry should be considered. These alternatives are the triazine tolerant (TT) varieties or the genetically modified (GM) varieties such as TruFlex, OptimumGly, Liberty Link or combinations with multiple herbicide tolerant traits called "stacks".

Since the lifting of South Australia's GM crop ban in 2020, there has been a gradual uptake of GM canola varieties, particularly those tolerant to glyphosate (Roundup Ready/TruFlex/OptimumGly) or glufosinate (Liberty Link). These varieties have proven effective in managing paddocks with weeds resistant to clethodim and IMI chemistries, though traditional 'single stack' GM varieties cannot be planted where IMI residue persists.

The introduction of 'multiple stack' varieties like Pioneer's PY424GC, which combines glyphosate and Clearfield traits, addresses this limitation. Non-GM options, such as triazine-tolerant (TT) varieties like HyTec Trident and the "multiple stack" PY520TC, also provide flexibility for managing IMI residues. Whilst GM canola offers benefits like better weed control, wider application windows and higher yields in resistant paddocks, challenges include a 5–10% price penalty, higher seed cost, limited delivery sites and the need to manage existing glyphosate resistance.

With the release of many new varieties of canola and new chemical traits in recent years, the table below gives an outline of these new traits and codes. It's important to understand these names and codes, as they provide information on variety traits, target rainfall zones, phenology (time to maturity) and chemical tolerance traits. Varieties can have just one herbicide tolerant trait (e.g., CL - Clearfield) or multiple stacked traits(e.g., GC - Optimum Gly and Clearfield), to give greater flexibility in chemical use.

| Code | Technology | Chemical tolerance | GM | Comments |
|-----------------|----------------------|---|-----|---|
| T or TT | Triazine Tolerant | Triazines (e.g. Atrazine) | No | Can be a yield penalty when triazine trait is used – up to 30% penalty compared to the best CL hybrids. Improved weed control on IMI resistance weeds. |
| C or CL | Clearfield | Clearfield - imidazolinones (e.g. Intervix) | No | Higher yielding than glyphosate/triazine tolerant varieties. Increasing IMI resistance occurring in key weeds. No plantback issues to IMIs. |
| R or RR | Roundup Ready | Glyphosate | Yes | Small seed size and lower yield potential compared to CL hybrids. Less robust glyphosate rates and timings compared to Optimum Gly/TruFlex varieties. 2 x glyphosate applications of 621g ai/ha up to 6 leaf stage only |
| X or R or TF | TruFlex | Glyphosate | Yes | Small seed size and lower yield potential compared to CL hybrids. More robust glyphosate rates and timings compared to first generation Roundup Ready hybrids. 2 x glyphosate applications of 900g ai/ha or 3 x glyphosate applications of 621g ai/ha up to early flowering stage |
| G | Optimum Gly | Glyphosate | Yes | Small seed size and lower yield potential compared to CL hybrids. More robust glyphosate rates and timings compared to first generation Roundup Ready hybrids. 3 x glyphosate applications of 621-1080g ai/ha up to early flowering stage |
| L or LL | Liberty Link | Glufosinate | Yes | Alternative mode of action to glyphosate and IMI. Greater rotation flexibility with no residue issues. Requires 2 x glufosinate applications 7-14 days apart in opposite directions, sunshine, humidity, SOA and high water rates. |

New and recent releases:

Clearfield

PY327C

- Early maturity
- Tall plant height
- High-very high oil
- Pioneer

PY421C

- Early-mid maturity
- Group A blackleg
- MR upper canopy infection
- Slightly earlier flowering than 44Y94
- Medium plant height
- High-very high oil
- Pioneer

Triazine Tolerant

PY429T

- Early-mid maturity
- Group ABH Blackleg
- R upper canopy infection
- Medium-tall plant height
- Moderate-high oil
- Pioneer

Triazine Tol. & Clearfield (Multi Trait)

Griffon TTI

- Early-mid maturity
- Group AC blackleg
- R-MR upper canopy infection
- Medium-tall height
- Triazine and Clearfield tolerant
- Nuseed

Roundup Ready - GM

PY428R

- Early-mid maturity (low-medium rainfall)
- Group AB blackleg
- Medium-tall plant height
- High-very high oil
- Pioneer

Opti Gly & Clearfield (Multi Trait) - GM

PY424GC

- Early-mid maturity (low-medium rainfall)
- Group BC blackleg
- MR-MS upper canopy infection
- Medium plant height
- Pioneer

Liberty & Truflex (Multi Trait) - GM

Invigor LR3540P

- Early-mid maturity (medium rainfall)
- Group BF blackleg
- MR upper canopy infection
- Short plant height
- High oil
- BASF



Elyssa Hausler inspecting 45Y95 at Ullswater.

Table 5: Canola varietal characteristics.

| Canola System | Variety | Company | Year of Release | Maturity **** | Blackleg Rating (Bare) | Blackleg Rating (Saltro) | Blackleg Group | OP or Hybrid | Plant Height | SA Av. t/ha Long Term MET |
|-------------------|-------------------|---------|--------------------|---------------|------------------------------|--------------------------------|-------------------|-----------------|-------------------|---------------------------------|
| | HyTTec Velocity | Nuseed | 2023 | Early | MR | | AB | Hybrid | Moderate | 2.39 |
| ŧ | InVigor T 4511 | BASF | 2023 | Early - Mid | R-MR | R (ILeVo) | TBC | Hybrid | Moderate | 2.76 |
| Ē | Renegade TT | AGT | 2023 | Early - Mid | MR | R | Α | OP | Short to Moderate | 2.52 |
| <u> </u> | HyTTec Trophy | Nuseed | 2018 | Early - Mid | R | R | AD | Hybrid | Moderate | 2.87 |
| Ĕ | Hyola Blazer TT | Pacific | 2021 | Early - Mid | R-MR | R | ADF | Hybrid | Moderate | 2.83 |
| Iriazine Tolerant | RGT Capacity TT | RGT | 2022 | Early - Mid | MR-MS | R | В | Hybrid | Moderate | 2.65 |
| ig. | PY429T | Pioneer | 2025 | Early - Mid | R | R | ABH | Hybrid | Moderate to tall | 2.90 |
| Ė | HyTTec Trifecta | Nuseed | 2021 | Mid | R | R | ABD | Hybrid | Moderate to tall | 2.86 |
| | RGT Baseline TT | RGT | 2023 | Mid - Late | MR-MS | R | В | Hybrid | Moderate to tall | 2.57 |
| | Nuseed Ceres IMI | Nuseed | 2024 | Early | R-MR | | AD | Hybrid | Moderate to tall | 2.60 |
| ᅙ | 43Y92 CL | Pioneer | 2018 | Early | R-MR | R | В | Hybrid | Moderate | 2.86 |
| Clearfield | PY327C | Pioneer | 2025 | Early | R | R | TBC | Hybrid | Tall | 3.15 |
| □ | 44Y94 CL | Pioneer | 2021 | Early - Mid | R-MR | R | ВС | Hybrid | Moderate to tall | 3.07 |
| ŏ | PY421C | Pioneer | 2024 | Early - Mid | R-MR | R | Α | Hybrid | Moderate to tall | 3.10 |
| | 45Y95 CL | Pioneer | 2022 | Mid | R-MR | R | С | Hybrid | Moderate to tall | 3.03 |
| | Griffin TTI | Nuseed | 2025 | Early - Mid | R-MR | | AC | Hybrid | Moderate to tall | 2.32 |
| CL & TT | PY520TC | Pioneer | 2023 | Mid | MR | R | BC | Hybrid | Moderate | 2.74 |
| | Hyola Defender CT | Pacific | 2024 | Mid | R | R | ADF | Hybrid | Moderate | 2.72 |
| Opti Gly & CL | PY424GC | Pioneer | 2025 | Early - Mid | MR-MS | R | TBC | Hybrid | Moderate | 3.24 |
| Truflex & CL | Hyola Regiment XC | Pacific | 2023 | Early - Mid | R | R | ADFH | Hybrid | Moderate | 3.32 |
| RoundUp Ready | PY428R | Pioneer | 2025 | Early - Mid | R-MR | TBC | AB | Hybrid | Moderate to tall | 3.46 |
| | PY323G | Pioneer | 2025 | Early | MR-MS | R | ВС | Hybrid | Moderate | 3.36 |
| Optimum GLY | PY422G | Pioneer | 2024 | Early - Mid | MR | R | AB | Hybrid | Moderate to tall | 3.09 |
| *gg | PY525G | Pioneer | 2024 | Mid | MR | R | AB | Hybrid | Moderate to tall | 3.05 |
| | Nuseed Hunter TF | Nuseed | 2023 | Early - Mid | R-MR | R | AB | Hybrid | Moderate | 3.45 |
| TruFlex | InVigor R 4520P | BASF | 2021 | Early - Mid | MR-MS | R (ILeVo) | В | Hybrid | Moderate | 3.38 |
| Illoriex S | Nuseed Eagle TF | Nuseed | 2023 | Mid | R | R | ABD | Hybrid | Tall | 3.58 |
| | InVigor LR 3540P | BASF | 2025 | Early | MR | R (ILeVo) | AB | Hybrid | Short | |
| Liberty & TF | InVigor LR 4540P | BASF | 2024 | Early - Mid | R-MR | R (ILeVo) | В | Hybrid | Moderate | 3.47 |
| | InVigor LR 5040P | BASF | 2025 | Mid | R-MR | R (ILeVo) | AB | Hybrid | Moderate | 3.35 |
| Liberty & TT | InVigor LT 4530P | BASF | 2022 | Early - Mid | R-MR | R (ILeVo) | BF | Hybrid | Moderate to tall | 2.63 |

^{**} Varieties highlighted in red are new for 2025 (TBC = To be confirmed).

^{***} All NVT data based on mid sown canola trials. Includes modelled data for years where varieties not in NVT trials.

^{****} Phenology rating refers to time to flowering

^{*****} Maturity rating refers to time to physiological maturity/harvest

Lentils

The lentil boom in SA continued in 2024, with areas of increased growth being the Eyre Peninsula. The eastern EP tripled from 20,000 ha's in 2023 to 60,000 ha's and the southern mallee quadrupled from 6,000 ha's to 25,000 ha's (PIRSA).

In traditional lentil growing regions like the Yorke Peninsula there has been extensive trial work completed over the years. We are now seeing more R & D in lentils than ever before with new research coming from the SA Mallee and Eyre Peninsula. This

Recommended varieties:

- Thunder
- Lightning
- Highland XT

new research in new varieties and weed control has been a massive driver in lentil growth and a positive for all lentil growers in the state.

Lentil varieties in SA have been dominated by Hurricane XT and Highland XT for several years. The recent releases of Thunder and Lightning have given growers a new benchmark with the high yielding Thunder and a sandy soil specialist in Lightning which is more suited to lower rainfall areas. The most exciting advancement in new lentil varieties has been the release of dual herbicide tolerant varieties Metro (metribuzin tolerant) and Sire (clopyralid tolerant). These varieties give growers new options for weed control, especially where group B resistance has become issue.

ALB Terrier is a small, red, IMI tolerant lentil variety bred from PBA Hurricane XT and PBA Jumbo2 It is a high-yielding variety with provisional disease ratings MR to the Hurricane virulent and R to the Nipper virulent of Ascochyta Blight and MRMS to Botrytis Grey Mould (BGM). It can be broadly adapted with mid flowering and mid maturity.

New and recent releases:

ALB Terrier:

- Small red lentil
- High yielding variety
- Mid flowering
- Mid maturity
- IMI tolerant

GIA Thunder:

- Small round lentil
- High, stable yields in all regions and most broadly adapted IMI-tolerant lentil
- Mid flowering
- Mid maturity
- Similar IMI and soil residue SU herbicide tolerance to existing XT varieties
- Small premium round market for grain similar size to PBA Hurricane XTA

GIA Lightning:

- Small round lentil
- Best adapted lentil to light-textured sandy soils (Mallee regions)
- Upright bush plant structure May aid in harvestability in lower rainfall areas
- Similar IMI and soil residue SU herbicide tolerance to existing XT varieties
- Mid-Late flowering
- Mid maturity

GIA Metro:

- Large red grain
- First dual herbicide tolerant lentil with IMI and ET tolerance
- Expanded weed control option with metribuzin
- Significantly lower yield under low weed pressure
- Late flowering

GIA Sire:

- Premium small round red lentil
- First lentil with improved tolerance to clopyralid soil residues from a prior crop
- Similar IMI and soil residue SU herbicide tolerance to existing XT varieties
- Short slow growing with increased branching
- Best suited to early sowing in soils optimum for lentil growth
- Mid-Late flowering
- Low yielding compared to commonly grown varieties

Table 6: Lentil varietal characteristics and disease resistance ratings

| Variety | Grain Type | Flowering | Herbicide Tolerance | Lodge Res* | Pod Drop | Height | A.blight Hurricane Virulent | A.blight Nipper Virulent | BGM | SA Av. t/ha Long Term MET |
|-----------------|------------|-----------|------------------------|---------------|----------|-----------|-----------------------------------|--------------------------------|--------|---------------------------------|
| ALB Terrier | Small Red | Mid | IMI | MR-MS | MR | Med | MR* | R | MR-MS* | 2.28 |
| GIA Lightning | Small Red | Mid | IMI | MR | MR | Med | MR-MS* | R* | MS* | 2.44 |
| GIA Metro | Large Red | Late | IMI & MET | MR | MR | Short/Med | R-MR* | MR* | MR-MS* | 1.79 |
| GIA Sire | Small Red | Mid-Late | IMI & Clopyralid | MR | MR | Short | MR-MS* | R* | MS* | 2.06 |
| GIA Thunder | Small Red | Mid | IMI | MR-MS | MR | Med | MR-MS* | R* | MR-MS* | 2.46 |
| PBA Highland XT | Medium Red | Early-Mid | IMI | MR-MS | MR | Med | MR* | MR | MS | 2.32 |

^{*}Provisional rating



Growers Supplies facilitating a client day at their Lentil trial site on the Yorke Peninsula.

Faba Bean

The 2024 faba bean growing season in South Australia has been particularly challenging due to dry weather conditions throughout the season. The absence of opening rains until mid-June significantly impacted the ability of growers to plant and establish faba beans effectively. As a result, many growers were forced to sow beans in dry soil rather than into a band of desired moisture.

Recommended varieties:

- PBA Samira
- PBA Bendoc
- PBA Amberley

Growers who chose to plant early, in anticipation of potential rainfall, found their crops were sitting in dry soil for up to two months before any signs of germination. This prolonged period, combined with limited moisture, led to patchy and weak germination. Faba bean crops that did eventually emerge showed low vigour, with growth rates that were far below typical expectations.

Despite the challenges of one the driest growing seasons in 100 years, the yield results from the major faba bean growing areas of the state have been surprisingly positive. While the yields were notably lower than average, particularly in comparison to previous years, there were still areas where faba beans performed better than anticipated. At the time of writing, beginning from the lowest amount of growing season rainfall, the Mid North, yields ranged from 500 kg/ha to 1 t/ha. The Upper South East saw yields ranging from 500 kg/ha to 2.2 t/ha, while the Lower South East experienced yields ranging from 2.5 t/ha to 4 t/ha. These figures highlight the region-specific variations, with the Lower South East showing the most favourable outcomes despite the overall challenges of the season.

New and recent releases:

PBA Samira

- High yielding, widely adapted
- Mid flowering
- Large bean, good colour
- Seednet

PBA Amberley

- High yielding
- Later flowering suited to longer season environments
- Improved chocolate spot resistance
- Seednet

Table 6: Faba bean varietal characteristics and long term.

| Variety | Maturity | Ascochyta | Chocolate | Rust | SA | |
|--------------|--------------|-----------|-----------|-------|---------------|--|
| | | Blight | Spot | | Av. t/ha | |
| | | | | | Long Term MET | |
| Farah | Medium | S | S | VS | 3.32 | |
| Nura | Short | MS | MS | VS | 3.24 | |
| PBA Amberley | Medium | MR-MS | MR-MS | VS | 3.27 | |
| PBA Bendoc | Medium | S | S | VS | 3.31 | |
| PBA Marne | Medium-Short | MS* | MS* | MR-MS | 3.64 | |
| PBA Rana | Medium-tall | MS | MS | VS | 2.94 | |
| PBA Samira | Medium | MS | MS | S | 3.32 | |
| PBA Zahra | Medium-tall | MS | MS | S | 3.36 | |

^{*}Provisional Rating