Wins, woes and wisdom of the 2025 season

Now that the 2025/26 cropping season is wrapping up, it's a great time to reflect on the year and our agronomic learnings. Despite the tough season with prolonged dry spells and below average growing season rainfall, there have been some pleasing yield results.

The hangover of last year's severe drought resulted in very low stored soil moisture in autumn, so we were fully relying on growing season rainfall to grow this year's crops. The start of the season had us holding our breaths, with most of the state experiencing a season break 4-6 weeks later than ideal.

We were fortunate to have a mild spring, with forecasted heat events less severe than anticipated, which allowed crops to 'hang on' better than they might have. Crops that were still green at the time of late October and November rains were able to benefit yield-wise and will subsequently have high water use efficiency (WUE). Fortunately, there were minimal frost events, which is unusual for a dry season. These conditions tested our crop management and the lessons learned this season will shape our approach to agronomy in years to come.

CROP ESTABLISHMENT AFTER A DROUGHT AND LATE BREAK

LHS was sown before 10mm rain on 27th May, RHS was sown 2 days later. Both using KPPW. Big difference in establishment!

- With a delayed seasonal break, the majority of seeding programs were dry sown at a steady pace with no significant rain event on the near forecast and virtually no stored soil moisture. However, those that were able to quickly change sowing strategy to prioritise higher value crops (e.g. wheat, lentils, canola) when a localised rainfall event was imminent were rewarded with early establishment. It's a good reminder to be prepared to change your initial plan for dry sowing if there is a chance to sow ahead of rain or into moisture.
- Investment in soil amelioration, such as deep ripping, spading, clay spreading, liming and gypsum application, is stacking up by addressing soil constraints and nutrient availability to better support crops to establish and perform well. Soils that have been ameliorated in the last few years have now 'settled' and the crop benefits shined through in the tight 2025 season. Unfortunately, for paddocks that had physical amelioration, such as deep ripping, at the start of this season, the structural soil challenges were difficult to manage in a dry year and were approached with caution to minimise erosion.
- Sowing on last year's row helped water infiltration, allowed access to residual fertiliser from 2024 and avoided pre-emergent herbicide residues. However, this strategy may not suit paddocks with high stubble-borne disease inoculum, such as paddocks with elevated crown rot levels this year.
- Although most stubble types had universally low amounts of stored soil moisture following 2024, crops established and performed significantly better on legume stubbles compared to canola stubbles. Cereals sown on cereal stubbles were lower yielding than those sown on break crops, which reinforces the importance of break crops in the rotation.

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Wind erosion exposing sown seeds on sandhills in the Mallee and causing significant soil movement.

Wheat was pre-spread at 50kg/ha on a bare sandhill in the Lower North, then sown with 90kg/ha wheat on the June long weekend during a rain event. Spread wheat did well to hold the sand together.

SAND BLASTING ON HIGH RISK SOILS

- This year saw some shocking wind events at the start of the season across the whole state, with the Mallee particularly hard hit. Sadly, these winds seemed to occur every time it tried to rain. Sand blasting of newly germinated crops in sandy soils was a major issue. Grazed paddocks were worse affected, reinforcing the importance of maintaining as much stubble cover as possible in these soils.
- Surprisingly, wheat had a better establishment success rate on large, driftable sandhills (deep white siliceous sands), as it was able to re-shoot multiple times compared to barley and rye. Re-sowing on these sandhills had roughly a 50% success rate (we classified "success" as being able to get ground cover with no expectation of harvesting).
- On smaller sandhills (typically with more colour in the sand rather than bleached white sand) with low ground cover, rye outperformed barley and wheat, in that order. Re-sowing on these sandhills had roughly a 70% success rate.
- Sowing pulses into sandy soils with limited stubble cover required extreme care, as they generally don't establish well and provide poor ground cover. In some scenarios where the risk of crop failure and subsequent soil erosion was high, it was more favourable to avoid sowing a pulse and instead swap to a cereal.
- Beyond the Mallee, bare sandhills in other regions were also under threat of erosion and struggled to establish crops. A learning from the Lower North was the success from pre-spreading wheat on a sandhill, followed by normal sowing. The sown wheat got buried too deep after soil movement from wind, but the spread wheat did a great job in holding the sand together.

DODGING A BULLET WITH HERBICIDE CARRYOVER ISSUES

- After low growing season rainfall in 2024 and a dry summer leading into this year, most residual herbicide plantback rainfall requirements were not met. This even included herbicides that have low rainfall requirements, such as Paradigm® and Rexade®, which 'only' require 100mm of rain before sowing susceptible crops.
- A cautious approach to seeding paid off, with plantback issues not as problematic as anticipated due to careful management. We could have seen a lot more widespread crop damage if we stuck to original plans. Modification of sowing plans, changing to less herbicide susceptible crops and switching to 'softer' pre-em brews in high risk situations were employed in numerous paddocks. Sowing on last year's row and sowing deeper to avoid the herbicide band were also useful strategies.
- Decent breaking rains (although they came late) and kind conditions in early winter are likely to have assisted crops in tolerating some herbicide residues.
- The residues that presented a few worrying situations were Overwatch® residue on rubbly ground bleaching lentils, Mateno® Complete/Sakura® residue on limey ground affecting lentils and canola, and Reflex® residues scorching wheat and canola.

Bioassay of lentils sown into soil that had 1.25L/ha Overwatch® applied in 2024. Improved crop safety when sowed on the row and deeper.

NEGLIGIBLE KNOCKDOWN OPPORTUNITIES PUT THE PRESSURE ON EARLY WEED CONTROL

Callisto® applied at 150ml/ha IBS, followed by 50ml/ha PSPE controlled early radish (pictured) and other broadleaf weeds well in cereals.

- The dry summer and autumn of 2024/25 provided a relatively 'easy' year for summer weed control. As a result, the number of passes required were limited to one in many instances. Conversely, there was limited opportunity for pre-seeding/knockdown weed control and the implications were felt for the rest of the season. Capeweed, medic, crop volunteers and other weeds occurred in high numbers after the break, creating challenges for early in-crop weed control.
- Callisto® was a useful tool for pre-em control of broadleaf weeds and volunteer canola in cereals and provided valuable residual control. Split applications of Callisto® were common and effective at providing in-row weed control, but also required adequate seed/herbicide separation and was best avoided in sandy, low organic carbon soil types.
- Volunteer canola was prevalent in cereal crops and lentils alike. Jaguar® (bromoxynil + diflufenican) worked well to provide 80% early control from the 2 leaf stage in cereals, followed by an additional broadleaf spray later in the season. In lentils, early Brodal® application helped tackle high numbers of volunteer canola, and other broadleaf weeds (e.g. milk thistle).
- In the Mallee, diuron applied IBS at a low rate of 250g/ha in cereals slowed down yellow burr weed enough to enable a good kill with Tigrex® later.
- Pre-emergent herbicides targeting grasses generally had good activation this year due to decent opening rains. Early grass control was surprisingly good considering there was no knockdown control achieved. Ultro® applied pre-em before lentils continues to provide solid ryegrass control and requires less rainfall for activation than propyzamide. However, the premium price tag of Ultro® will see it saved for high ryegrass population paddocks in medium to high rainfall environments. There was also a good window for early post-emergent (EPE) applications in cereals, with Mateno® Complete a popular option.
- At the end of 2025, the narrative has flipped with late season rains creating an urgent need for summer weed sprays. Timely summer weed management over this time will set up the 2026 season by preserving moisture and nutrients. Those organised to spray paddocks during harvest or bring in a contractor will reap the benefits.

Application of Brodal® from 3 leaf crop stage has improved crop safety, compared to the scenario pictured above where 50ml/ha Brodal® was applied PSPE and caused bleaching.

BROADLEAF BATTLES IN LENTILS

- Delaying the sowing of lentils until after the breaking rains enabled knockdown control of medic in high pressure paddocks and resulted in cleaner lentils in 2025. It also had an additional benefit as the later sown lentils were green enough to utilise late rains. However, the success of this strategy was very situational, and there were also some losses by delaying sowing, particularly in the Mid North.
- Dry sowing prompted cautious pre-emergent herbicide use in lentils, especially with Group 5 (C) herbicides. Rates were reduced in many paddocks to minimise the risk of seedling damage and poor establishment if a significant rain event occurred and washed the herbicides into the seed zone. Some planned IBS applications were moved to PSPE, applied after a rainfall event to slow down and buffer herbicide movement. Early weed control was compromised in exchange for crop safety in some cases, but weeds choked out the lentils anyway. This has reinforced the need for a carefully considered pre-emergent strategy particularly in dry sowing/no knockdown situations.

- This year had a good fit for paraquat + diuron 'haircuts', particularly in lentils, which aims to control any newly emerged weeds at PSPE timing, and is useful when there is no knockdown opportunity. Ideally, you want as little of the crop emerged as possible and it relies on the seed being sown deep enough and into dry soil so that the weeds emerge and are sprayed before the lentil seedlings reach the soil surface once rainfall occurs. This strategy is not suited to seasons that start with stored soil moisture, as the crop will likely have germinated in patches before the first rain brings on the flush of weeds, like what happened in 2024. This strategy was good for controlling capeweed and medic, which are particularly bad when there is no knockdown opportunity.

Solid control of group 2 resistant radish in Metro lentils after 550g/ha metribuzin application.

- Early Brodal® (diflufenican) applications in lentils had good success in controlling early broadleaf weeds. It can be finicky in terms of timing and crop bleaching but has become more necessary to control milk thistles given widespread imi resistance. Targeting the 3 node stage in lentils was ideal to control small weeds, and reduced the urgency for early imi sprays (if also required). This enabled imi applications to be done later (e.g. potentially with the second grass spray), with the lentils generally handling the imi applications better when the crop was more established. That being said, some lentils did still bleach early from the Brodal® but grew out of it with minimal yield effects.
- This year, we had good activation of pre-emergent's targeting grasses (propyzamide and Ultro®), enabling Brodal® applications to be done before the first in-crop grass spray.
- Metro lentils were grown more widely in 2025, mainly in paddocks with high broadleaf weed pressures. The in-crop application of metribuzin worked very well on a range of broadleaf weeds, including radish and medic. Unfortunately, tares were not controlled by metribuzin alone and required an imi. The yield penalty still remains high, with Metro averaging 25-30% lower than Highland/Thunder, and sometimes up to 50%.

MANAGING NITROGEN IN A TOUGH MARKET

- Nitrogen decisions were difficult to make this year due to a perfect storm of high fertiliser prices, supply issues, softer grain prices and uncertain rainfall forecasts. In a number of instances, crops were over-fertilised with nitrogen compared to yield outcomes limited by rainfall.
- It is reassuring to know that research shows that nitrogen supplied this year that wasn't used (i.e. an over-fertilised crop) will still be available for uptake next year, and often is even in a more 'plant available' form. Arranging a deep nitrogen soil test (0-60cm) will be valuable in these scenarios to determine the amount of remaining nitrogen in the soil and allow nitrogen rates to be adjusted accordingly.

Chewing damage in lentils.

WHAT'S CHEWING MY CROP?

- The presence of early insects was common, particularly in the Lower North, and resulted in some feeding damage to lentils. In a number of crops, the tops of plants were nipped off, sometimes from underground, but thankfully the lentils re-shot. It was difficult to pinpoint the exact culprit, but the suspects were mandalotus weevil, slaters and earwigs. In future, chlorpyrifos will be sorely missed for early insect control.
- 2025 was a high pressure heliothis (aka native budworm) year. This pest required multiple insecticide treatments due to multiple moth flights - one application was not enough. It reinforced the importance of continued monitoring after spraying for possible reinfestations and later grub hatchings.

THUNDER VS HIGHLAND LENTILS

- Many growers have continued growing Highland lentils, as well as the newer Thunder variety, which has allowed for some handy comparisons. Thunder lentils have a lower disease rating for ascochyta than Highland's (MRMS vs MR, respectively) and we definitely saw that this year. Even though this season was not typically conducive with high fungal disease pressure, Thunder lentils experienced early ascochyta infections in high risk scenarios (tight lentil rotations, lentils on lentils). This was manageable when detected early, but required diligence in fungicide timing and product choice. Thankfully, there have been minimal grain quality issues as a result of ascochyta.
- Highlands did well yield wise, with very little difference in yield between Highland and Thunder. As a result, many growers will continue to keep both varieties in the program to spread harvest time and risk.

Ascochyta infection in lentils, as indicated by small black dots (pycnidia) within a brown lesion.

MAKING HAY WHILE THE PRICES SHINE

- With strong hay prices, lower grain prices and dry spring conditions creating uncertainty about grain yield and quality, more cereal hay was cut 'opportunistically' this year. Unlike other years where grain crops were cut for hay due to frost damage, drought and moisture stress were the main drivers of hay cutting decisions. Although grain yield potential was uncertain, cereal crops did have good bulk and made for good yielding hay.
- Timing of hay operations was challenging, with rain finally coming just as a significant proportion of hay was already on the ground. We may have gotten away with one rain event, but subsequent rains caused downgrades for some hay quality. The late rain also resulted in regrowth, with some people struggling to bale with green plant material in between hay rows. Strategic spraying of glyphosate before cutting largely prevented these issues.

Crown rot hit as the dry spring progressed, with many 'white' heads in paddocks.

CROWN ROT CHALLENGES

- The dry spring brought on higher infections of crown rot than we usually see. While this is not surprising given that terminal drought exacerbates the symptoms of crown rot, it was disappointing to see the white heads in the paddock.
- Going forward, Predicta B soil disease testing can be arranged to determine the risk of sowing the paddock to a susceptible crop. There is also a new seed treatment available, Victrato®, which supresses crown rot and has performed well in trials. Unfortunately, it is a premium product and comes with a price tag of $34-68 for 200-400ml/100kg seed rate.

LATE RAIN, LATE WEED CONTROL

- In addition to the usual desiccation requirements for pulses and canola, many cereal crops required desiccation to deal with regrowth and late season weeds to enable timely harvest.
- The additional benefit of crop desiccation was that it has provided early summer weed control, enabling the first 'official' summer spray pass to be delayed until later. This season, many growers needed to do their first summer spray during harvest, which luckily could be done during delays due to wet weather.
- 'Weed wiping' by applying concentrated non-selective herbicides with a rope wick applicator had a good fit for late weed control in lentils this year because weeds sat above the short lentil canopy. This was useful to target ryegrass, milk thistle, prickly lettuce, volunteer canola and brassica weeds to reduce weed seed set and improve harvestability.

CEREAL VARIETIES THAT CAME OUT ON TOP

- Tomahawk CL wheat has performed well for the third year in a row. It seems to be well adapted to a range of seasonal conditions and is yielding consistently above Scepter and on par with Calibre. Considering the imi residue issues we've had over the last couple of seasons, it's great to have a strong performing imi tolerant wheat.
- Soaker is another new imi tolerant wheat, but it only has one imi tolerant gene so it can only withstand imi residues, not in-crop application. It has performed well this year and was grown more widely due to limited availability of Tomahawk CL seed. Tomahawk CL is typically the preferred option as it allows in-crop use of imi herbicides if required. Soaker and Tomahawk are both APW classified varieties.
- The new barley variety Neo CL has had variable results, but generally has struggled in the dry year. It is a Planet type barley, so it is typically more suited to medium-high rainfall and longer seasons. In regions receiving higher rainfall in 2025 (lower Yorke Peninsula and South East), Neo CL was a standout, achieving yields in excess of 6t/ha. For regions that have typically grown Planet barley, Neo CL will be a popular choice.
- There have been various grain size and quality issues with the tight finish. Before throwing a variety out due to quality frustrations, be sure to have a look at NVT grain quality results as there are lots of paddock specific challenges that can confuse a quality issue with being purely a varietal one.

GROSS MARGIN WINNERS

Canola in late July near Kapunda.

- Canola has performed exceptionally well in some areas, proving it can be a successful crop even in a late start. The lack of frost and late season heat events assisted its performances this year, as canola can otherwise be hit hard by these stresses. In some cases, canola benefited from the late rain and will likely be the highest gross margin in some regions. Unfortunately, the price difference between non-GM and GM canola remains high, with a discount of up to $100/t for GM canola.
- We unfortunately saw a reality check on lentils and were reminded that they don't always achieve prices >$900/t. However, lentils still did okay for the season, and remain a competitive break crop option in the rotation.
- Beans generally had a tough season from the start to the end. They didn't respond well to late sowing and struggled to grow biomass and pod up well in spring. Beans didn't germinate and establish as well as other crops on the low moisture, as it takes more to 'wet up' the big seed than other crop types. If your soil types can successfully grow lentils (i.e. low waterlogging risk, neutral to alkaline soils), this is often a more profitable option. Beans are a better fit than lentils if waterlogging is a risk and on more acidic soil types.