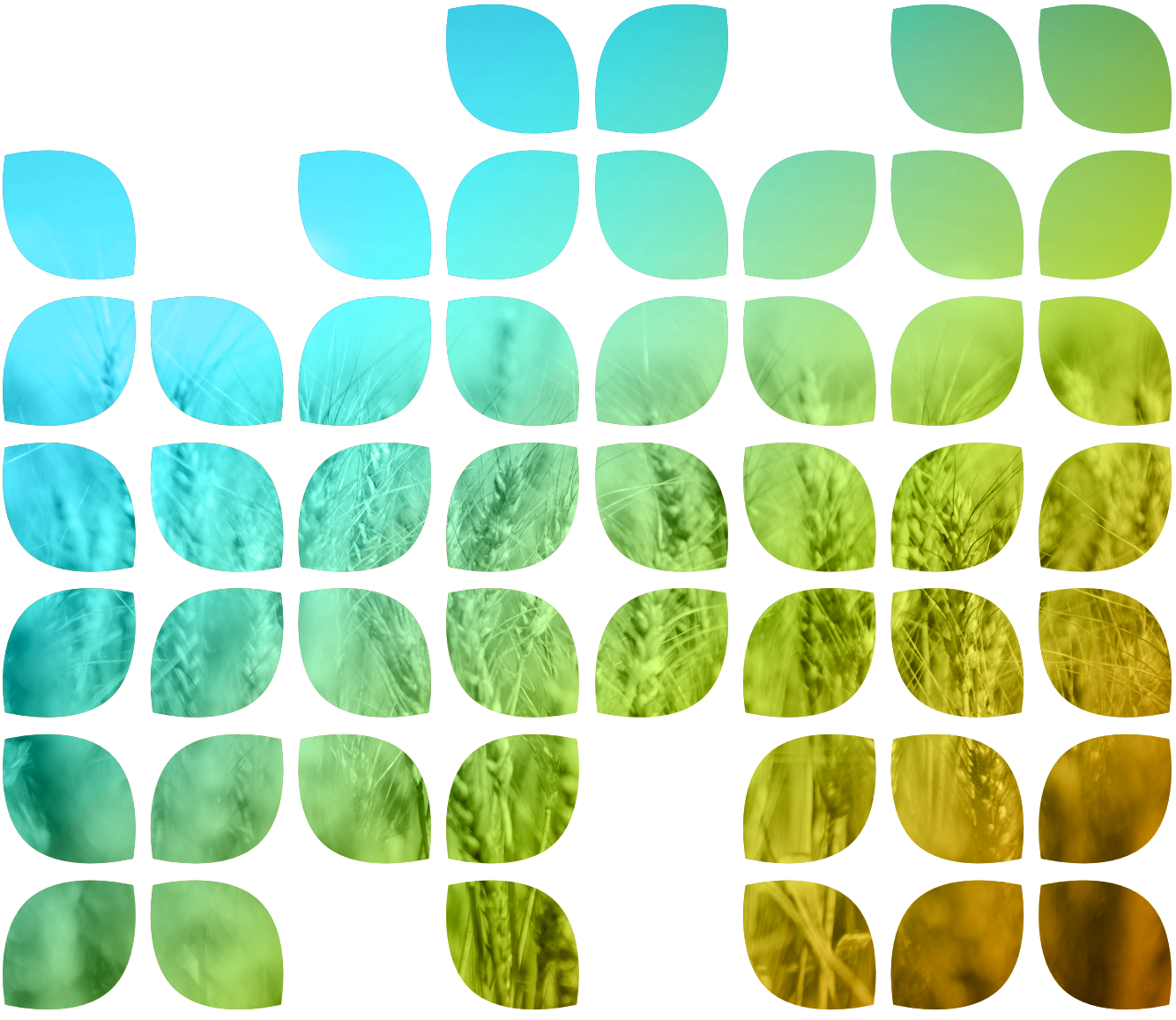

Strategic Priorities for the Western Australian Grain Industry 2035+

Commodity Specific Priorities

Growing Western Australia's agricultural powerhouse

Commodity Specific Priorities for the Western Australian Grain Industry

The WA Government, through the Department of Primary Industries and Regional Development, funded the Grains Industry Association of Western Australia (GIWA) to develop Strategic Priorities for the WA Grain Industry covering the decade to 2035.

These were developed in 2025 through extensive consultation with WA grain supply chain representatives and informed by the strategic plans, policies and priorities of relevant State and national industry organisations servicing the grains industry.

In March and April 2025, workshops were held with GIWA's Wheat, Barley, Oat, Oilseeds and Pulse Councils to:

- Obtain input from these five Councils into the development of the strategic priorities that have the greatest potential impact for the entire WA grain industry over the decade to 2035 and which require a shared understanding and the collective involvement and support of key industry stakeholders to address.
- Identify the top two or three issues that could/will impact the sustainability and profitability of particular commodities for the next decade.

These issues provide an opportunity for the GIWA Councils to consider a decade long strategic view beyond the immediate challenges and business of each Council.

These issues will be shared with national and State organisations and agencies to inform their planning, actions and investment, and it is GIWA's intention to have its commodity Councils review these commodity specific priorities on an annual or biennial basis to determine their currency.

The distilled lists of commodity specific issues are shown below for each grain commodity.

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Wheat

Wheat remains WA's largest crop but has declined from about 60% to 50% of the cropped area over the past decade.

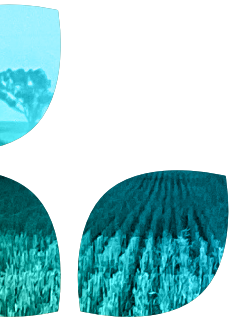
With production typically between 9 and 12 million tonnes, it is by far the dominant crop in the Geraldton port zone and least dominant in the Albany port zone where it has been displaced by barley and canola.

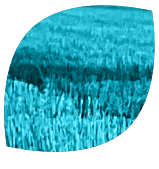
Growers, and their consultants remain firmly focused on wheat yield as a driver of profitability. Higher yielding varieties, weed and disease management and earlier sowing have successfully fought the cost-price squeeze. But this has resulted in a decline in wheat protein levels. It has become clear that fertiliser applied nitrogen cannot replace the role that legumes (pastures, lupins and pulses) play in building the form of soil nitrogen reserves which drives protein accumulation in the wheat grain.

There is now a very high reliance on feed markets for WA's increasing volumes of low protein grades, however it is evident that current protein price signals have yet to impact grower's decision making. But a point will surely be reached in the next decade when the WA industry will be left with a large quantity of low specification product competing with cheap filler Black Sea wheat for milling and abundant genetically modified (GM) corn in export feed markets.

The WA industry still effectively services the premium paying Udon noodle market, but this is not a growth market. The genetics of WA's dominant varieties and WA's receival standards provide many characteristics sought by millers in Asia but WA's growers are increasingly challenged to meet the protein (gluten) specifications required, particularly in high production years when protein is further diluted in the grain.

There is mixed opinion regarding the size and viability of a soft wheat biscuit and cake market in Asia.





Priorities

1. Optimise the shape of the wheat product mix to maximise its value to WA

This will remain a dynamic issue requiring greater engagement and understanding between marketers, accumulators, breeders, agronomists, growers and their consultants. It will include:

- Reviewing and optimising the classification, grading and segregation systems
- Protecting the noodle wheat market
- Deciding if soft wheat production in WA stacks up
- Addressing pulses/pasture opportunities and risks for growers to lift wheat protein and reduce nitrogen fertiliser costs.
- A future looking competitor and market risk analysis for low protein feed wheat. E.g. Australia currently enjoys a 7% tax advantage over some other origins into the Philippine feed market.
- Regulatory compliance and managing market risk of introducing GM and/or gene edited wheat varieties.

2. Implications of sustainability criteria in existing and potential markets

This is not seen as an immediate priority as the European Union (EU) which is at the forefront of this issue, is not a current market for WA wheat. However, there are signs that such criteria may become features for marketing to premium paying Asian markets over the next decade. There will be learnings from the canola industry dealings with the EU.

Barley

Barley remains WA's second largest crop making up about 20% of the cropped area, with production typically between 4 and 6 million tonnes. The Albany and Kwinana zones produce 80% of the harvest.

The WA industry remains orientated to producing and selling premium quality malting barley, however there is a growing shift towards more growers growing for yield rather than targeting malt quality. The domestic malting industry consumes approximately 300,000t/annum and premium malting barley export markets consume approximately 1,000,000t/annum. The China market favours Fair Average Quality (FAQ) malting barley for non-premium beer production. In practical terms, FAQ still receives a modest price premium, but this may not translate transparently to the grower.

The Feed segregation is still largely made up of varieties that were bred for malting rather than for unrestricted yield and/or feed functionality.

Robust disease management packages remain important for barley growers, impacting protein and screenings as well as yield. Disease resistance profiles are an important factor for grower variety choice.

Given the complexities of malting barley varietal classification and the malting market's reluctance to accept co-mingled varieties, production becomes dominated by a small number of varieties. This lack of genetic diversity increases the risk of a disease pandemic or seasonal environmental shock.

With the lifting of the prohibitive tariffs Chain applied to barley in 2022, China has quickly returned to become by far WA's largest export market with much smaller quantities going to Japan and Saudi Arabia. Work is in train via Grains Australia with support from the Australian Export Grains Innovation Centre (AEGIC) to negotiate market access for malting barley to Mexico, Colombia, Brazil and India. India is likely to be the least quality sensitive.

Barley as a feed commodity is at price threat from increasing volumes of GM corn out of the US and possibly soon out of China.

Priorities

1. Receival standards and segregations that better match market demand

This will remain a dynamic issue requiring ongoing engagement between marketers, accumulators, breeders, agronomists and growers. GIWA plays a significant role in this space for malting barley.

- Greater collective emphasis needs to be placed on shaping the WA barley crop with an eye on the 2035 horizon.
- Can we brand and market 'premium' and 'FAQ' malting barley better?

2. Educate South East Asian feed markets of the nutritional value of barley to increase market depth

The threat is coming from large quantities of cheap GM corn from the US (and potentially soon from China) as well as feed wheat – putting downward pressure on feed barley prices.

- Requires a better understanding of current rations and specific ruminant and monogastric functionality requirements in order to educate customers on how to substitute barley into their rations.
- Requires a balance of breeding for malt quality and unconstrained yield and feed functionality.

Canola

Canola has become the third biggest crop in WA, peaking at 2.1 million hectares sown in 2022.

This increase is attributed to the higher yields and oil content from hybrid canola, effective weed control (particularly GM varieties) and the consistent EU biodiesel market underpinning favourable prices.

WA's domestic crush capacity is approximately 120,000 tonnes/annum and this supplies domestic and export oil markets. There has been significant interest shown in building a much larger (0.5–1mmt) crush facility in Kwinana to supply biodiesel and Sustainable Aviation Fuel (SAF) markets, but in the absence of government mandates or subsidies, this will likely remain uneconomical for the foreseeable future. Significantly increasing the volumes of canola crushed in WA would also require additional effort to be given to developing export markets for the resultant meal.

GM varieties now account for approximately 75% of the sown area in WA, but with price premiums for non-GM canola being around $100/t and the EU requiring ISCC certified non-GM varieties for biofuel production, the need to maintain a segregation system capable of separately handling and shipping both GM and non-GM remains.

Priorities

1. Diversify markets

In the face of potential trade disruption affecting market access and the current dependence on the EU for biofuels demand:

- Identify and scope out pathways to alternative high value markets, including Sustainable Aviation Fuel
- Encourage increased onshore (local WA) processing and scope markets for oil and meal

2. Streamline the development of sustainability credentials

Given the high dependence on the EU market, canola is the most vulnerable of WA grains exports to sustainability certification and traceability requirements:

- Maintain confidence of customers in the ability to segregate GM and non-GM canola.
- Develop the mechanisms for traceability back to individual loads delivered to receival points. The European Union Database for Biofuels is moving towards requiring this.
- Prepare an evidence-based case to avoid EU farmer restrictions on pesticide and herbicide use being applied by the EU to WA grown canola, based on our different production and environmental considerations (drier, negligible waterways pollution risk etc.)

Oats

Oat production in WA remains volatile from season to season as growers jump in and out of the crop owing to market signals and availability of suitable weed free paddocks. The cliff face price risk for OAT 3 is a significant factor in this regard.

The overarching objective of the WA oat industry is to grow the scale of the industry to match growing demand, including different segments (currently focussed on rolled oats) and underpin onshore processing investment. A consistent base production of around 600,000 tonnes was a suggested target, with conservative annual increases in production that align with market growth.

China remains an export market opportunity with AEGIC conducting market segment and customer preference work there. But in the current trading environment, it will be a price sensitive market with competition from inferior quality, lower cost Russian oats.

The beta-glucan health benefits of oats are relatively well known by the food industry, but other consumer benefits also need to be promoted. An ability to label oats 'gluten free' is being taken up with Food Standards Australia New Zealand (FSANZ).

Oats are sensitive to heat and water stress, so low rainfall environments are challenging. There is an apparent oat 'yield ceiling' in medium and high rainfall environments with current varieties not responding in grain yield to applied nitrogen relative to barley. This requires deeper agronomic and genetic understanding of the crop in the WA environment.

Weed control remains a big issue for growers with limited post-emergent options available.

Priorities

1. Chemical control of weeds

Limited new chemistry on the horizon. Herbicide tolerant varieties would likely see a 20% increase in area sown.

- Risk of herbicide tolerant genes out crossing to wild oats needs to be considered as this could create an unacceptable risk to wheat and barley in the system.
- Explore off-patent chemistry, novel mixtures and products used overseas.
- Work with chemical manufacturers to encourage product registrations on oats.
- More herbicide tolerance testing of promising varieties in the breeding pipeline.

2. Unstable pricing

Volatile pricing impacts growers' planting decisions and therefore industry scale.

- Need a stronger understanding of demand into premium markets.
- The domestic milling market sets the OAT 1 price, with prices typically falling significantly once domestic contracts are filled.
- Find a use for OAT 3 and post a price.
- Do we need a tighter oat supply chain cooperative model?

3. The yield ceiling

This needs a boost in R&D effort. The ability to grow international markets is limited by low oat yields – "WA oats are the most expensive in the world".

- Improve nitrogen responsiveness and use efficiency – pulling a team of agronomists and specialist physiologists together, working closely with breeders and growers.
- Explore Welsh, Canadian and South American germplasm.

Pulses

Lupins remain the dominant pulse, even after more than halving in size since its peak in 1999.

Lupins remain the dominant pulse crop by area, even after more than halving in size since its peak in 1999. All other pulses are at a very small scale with field peas the largest at just 10% of the area of lupin production. Together with the decline in pastures, the lack of legumes in the system is a major contributor to the decline in wheat protein. If the profitability of pulses and lupins is not addressed, there is a risk of reliance on canola as the major break crop in the system, which carries market and disease risks.

The issues blocking an expansion of the traditional food pulses and those confronting lupins are quite different. Pulses have a range of production challenges and, until they gain scale, niche marketing arrangements. Lupins are often not profitable in the year they are grown but offer rotational benefits to the following crops. Lupin growers need higher returns, which requires breaking the price nexus with GM soybean meal.

Priority lupin issues

1. Breeding for yield and protein enhancement

- This will improve grower profitability and assist the penetration of premium livestock, aquaculture, pet food and protein food markets.
- Maintaining low alkaloids and exploring separate feed grade and ultra-low alkaloid food grade standards.

2. A well-resourced and fact-based marketing campaign to raise awareness and end-user/ consumer demand

- Fact based data (nutrition, health, safety, sustainability) packaged for food markets (consumers and food manufacturers in targeted countries) as the product still remains widely undiscovered.
- Human health trials on the dietary fibre benefits of WA lupins (eg. gut health and gut microbiome).
- Updated dossiers on the nutritional and functional value of lupin in high performance feed rations.
- Hard data for Life Cycle Assessments evaluating the carbon footprint, other environmental and sustainability impacts of production and supply chain systems.

Priority for other pulse issues

1. Increased crop breeding effort to target the adaptation of the pulses for WA's soil types and growing conditions – focus on the best pulse for the region and soil-type.

2. Extension campaign to breakdown ingrained views and barriers for growers getting into pulse production

- Training for next generation of agronomists, consultant and advisers.
- 'OatsPo' type extension effort to lift the understanding, breakdown barriers by demonstration.
- Study tours to, and hosting visiting growers and agronomists from South Australia (faba beans and lentils) and New South Wales (chickpeas).
- Look at different storage and handling options – on farm storage and education on soft handling equipment.

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