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FARMANCO Facts

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Photo in leaf frame:

Swathed, 2023, Helen Carpenter

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HARVESTING SHORT CROPS

By David Cameron, reviewed by Greg Easton

KEY POINTS:

- Consider whether your estimated crop yield will cover the cash cost of harvest.
- Check out DPIRD's updated tips in this article for harvesting dry season crops.
- Visit https://www.agric.wa.gov.au/harvesting/harvesting-short-patchy-crops for more details.

Patchy thin crops are the norm in dry seasons. While the plant density is better this season due to infrequent light rainfall events, they are still short and lightweight, with areas of little or no grain.

The first consideration is whether the estimated crop yield will cover the cash cost of harvest. In a low yielding year, maximising cash flow is more important than considerations like depreciation/total cost of operations. Cash costs will be wages, fuel, repairs and maintenance. If cash costs are covered by the estimated yield then strong consideration should be given to harvesting the crops. This also limits volunteers as a weed and helps manage the residue for sowing next season.

Harvesting short crops is not easy on operators or machinery. Keeping the header full means running low and fast. Grain losses as a percentage of the crop yield are higher in these situations.

Below are some updated tips for harvesting dry season crops from Glen Riethmuller, DPIRD's agricultural engineer based at Merredin. For more details, go to the DPIRD website at: https://www.agric.wa.gov.au/harvesting/harvesting-short-patchy-crops.

FINGERS

The fingers are the first part of the harvester to touch the crop. Extended and angled fingers can help catch material, especially if the stem strength is poor. Extended fingers work best on straight runs.

KNIVES

Short crops need to be cut cleanly to feed well. Knives need to be sharp and adjusted down so that there is no gap between the knife and the bottom of the knife guard. The knife guard edge needs to be changed or sharpened with an angle grinder if it is rounded and blunt. Using double density knife guards can increase yields as plants shake less when being cut.

REEL

The reel needs to be capable of pushing short material to the cross-auger or belt. Batt reels are effective at sweeping material into the front, but given these reels are uncommon, tyne reels need to be modified to perform like these. Paddle tynes can

replace some of the finger tynes in a staggered pattern to pull the cut material in. Alternatively, corflute or high-density polyethylene (HDPE) plastic can be cable tied to the tynes. HDPE is preferred now because it is robust, easy to cut and can be drilled. Corflute is more fragile, requires holes to be punched, and cores aligned to run up-and-down with the tyne for strength. HDPE of 1.5 mm thickness is adequate and can be cut with tin snips to create the batts. These should be cut to a width that just touches the knife when they are in place. Use two cable ties around the tyne and place one over the top around the reel to stop it falling down. In each reel section, there should be at least one HDPE batt per turn of the reel. Position these in a staggered pattern so that it does not have a hypnotising effect on the operator. They are not required in greater numbers, and too many will block the view of the knife. Black is the best colour for harvesting at night.

Other alternatives include air reels, which can be installed in front of the tyne reel and used to blow the cut material clear of the knife. On tin fronts, the Vibra-Mat may be useful to help move material from the knife to the cross auger.

SEPARATOR

Uneven feeding of crop material into the separator can mean a poor threshing job, and variable wind over the cleaning sieves can blow more grain out. It is possible to use less wind to retain more grain, which may need to be passed through a grain cleaner.

Figure 1: *HDPE cable tied to finger tynes. (Glen Riethmuller, DPIRD).*

In dry season crops, there may be small grains in the heads, which requires concaves and drum or rotor bars to be in good condition.

For more information on this topic and other useful harvest tips, contact Glen directly on (08) 9081 3111, mobile 0417 975 360 or email: glen.riethmuller@dpird.wa.gov.au

UTILISING THIS MIXED SEASON'S DATA FOR FUTURE MANAGEMENT

By Alice Butler, reviewed by David Cameron

KEY POINTS:

- In a dry season, spring biomass imagery and yield data can demonstrate soil water holding capacity, distinguishing soil types.
- With more years of data, you will build a library of different seasonal conditions, increasing confidence to change management decisions.

INTRODUCTION

The current season has brought mixed results across Australia's grain growing regions. Both dry and wet scenarios provide opportunities to use current satellite imagery and yield data to direct future fertiliser decisions.

In areas where growers have experienced an average to above average season, biomass imagery and yield can inform a replacement fertiliser strategy. For growers experiencing an average to below average season, spring biomass imagery and yield data can demonstrate soil water holding capacity, distinguishing the lighter sands from the duplex or heavier soil types. These soil type maps help reduce risk by enabling better matching of inputs, especially nitrogen, to yield potentials. They can also highlight potential soil constraints, such as

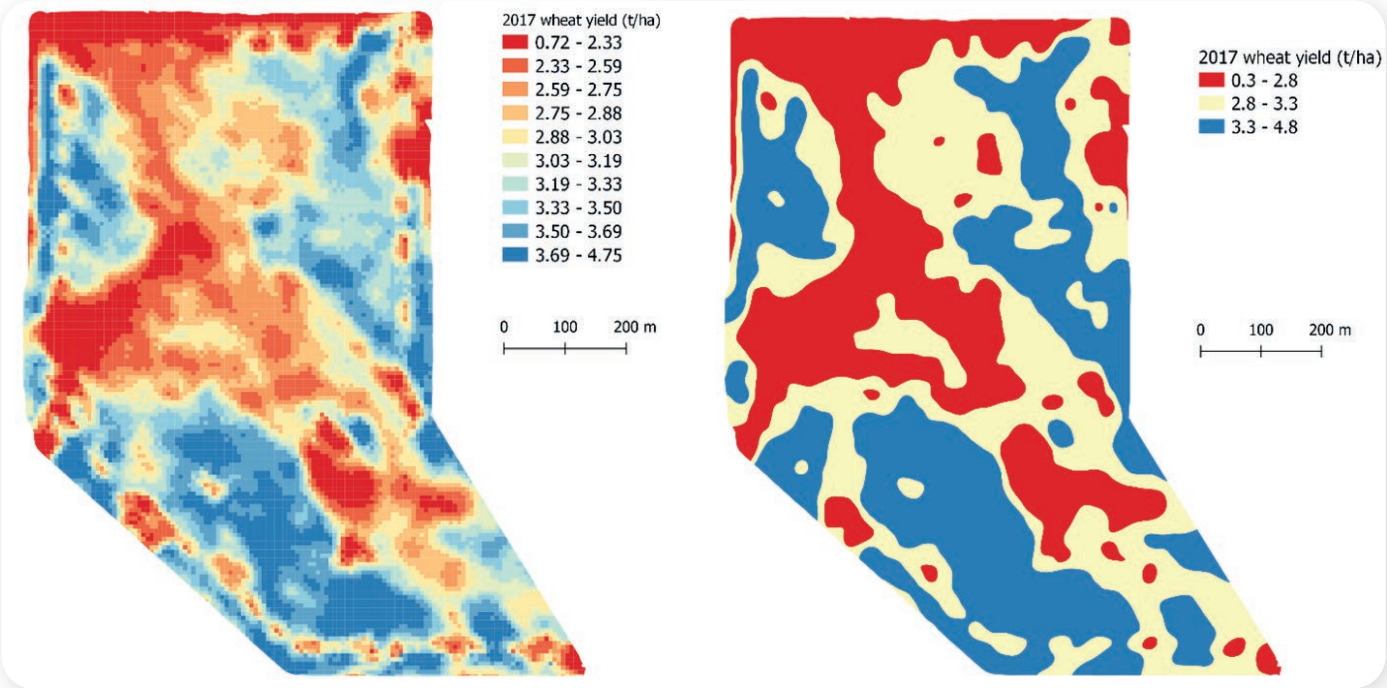

Figure 1: *2017 wheat yield map (left) and 2017 wheat yield map divided into three production zones: high, medium and low (right).*

acidity at depth, and be used to develop prescription maps for potassium, lime, and gypsum application. On top of this, they can be used to inform a nutrient replacement strategy for the next season.

DRY TO AVERAGE SEASON

Paddock production is expected to reach peak biomass around September. Therefore, spring biomass imagery can indicate areas of higher and lower nutrient removal and soil water holding capacity. Coupled with paddock knowledge, it can highlight soils with low plant available water, such as heavy clay, light sand or gravel that can hay-off in low rainfall seasons and needs to be managed accordingly. It can also identify soil constraints, such as acidity, which reduces the plants' ability to access and take up water.

Figure 1 displays a wheat yield map from a paddock located in the central wheatbelt of WA in the 2017 season. The 2016-2017 summer recorded a decile 10 summer rainfall, while the growing season rainfall was a decile 2. The average wheat yield was 3.0 t/ha. When we divide the paddock up into three production zones: low (average 2.3 t/ha), medium (average 3.0 t/ha) and high (average 3.5 t/ha), we can start to tease out paddock variability and how that impacts water use efficiency (WUE).

Using the yield potential calculation of **YP = WUE * (Summer Rainfall * 0.25 + GSR - Evaporation)**, we can work backwards to calculate WUE. The high production zone averaged a WUE of 24, the medium zone averaged 21 and the low zone averaged 16 (see **Table 1**).

The 2022-2023 summer rainfall was decile 8 and the current growing season rainfall is sitting at a decile 2. Yield potential on a decile 2 finish is calculated at around 2.0 t/ha using a WUE of 20. **Figure 2** displays the NDVI for the start of September, showing similarities to the 2017 season in the low production/low biomass area.

This is a useful guide to direct soil amelioration and manage 2024 fertiliser inputs.

AVERAGE TO ABOVE AVERAGE

For those areas experiencing average to above average seasonal conditions, biomass imagery and yield can direct replacement fertiliser strategy.

Figure 3 displays a 2021 and 2022 multi-year barley yield map from a farm along the south coast of WA. The paddock achieved above average yields in both 2021 and 2022. In 2023, using the multi-year barley yield map, the grower wanted to vary the seeding fertiliser to ensure the areas of high production

Production Zone	Average Wheat Yield (t/ha)	Wheat Yield Range (t/ha)	WUE	% of Yield Potential Using WUE 20
High	3.5	3.3 – 4.8	24	121%
Medium	3.0	2.8 – 3.3	21	104%
Low	2.3	0.3 – 2.8	16	79%

Table 1: *2017 wheat yield broken up into three production zones (high, medium and low) to calculate zone WUE and % of yield potential.*

were being looked after.

In 2023, the multi-year yield map was simplified to four yield ranges (shown in **Figure 4**) that were as follows:

- Low zone = <2.5 t/ha
- Low – medium zone = 2.5 t/ha to 3.2 t/ha
- Medium – high zone = 3.2 t/ha to 4.2 t/ha
- High zone = 4.2 t/ha to 7.6 t/ha

These different production zones within the paddock were given different rates of MAP fertiliser,

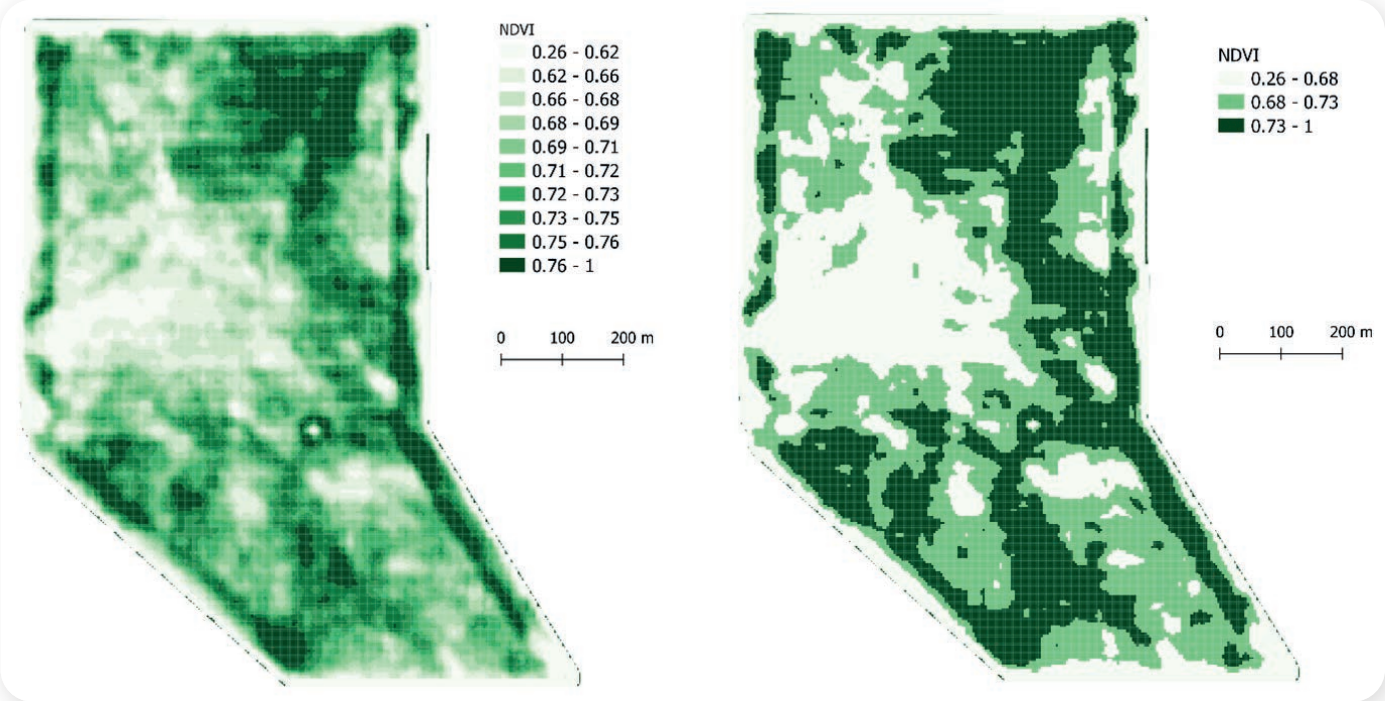

Figure 2: *2023 September NDVI (left) and 2023 September NDVI divided into three levels: high, medium and low NDVI (right).*

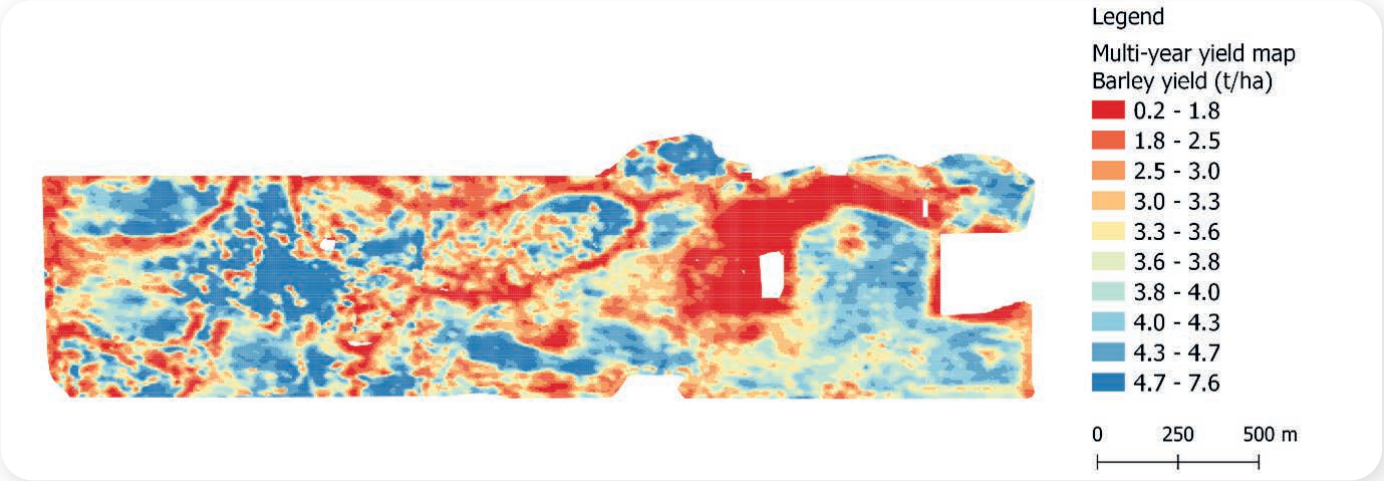

Figure 3: *2021 and 2022 multi-year yield barley yield map.*

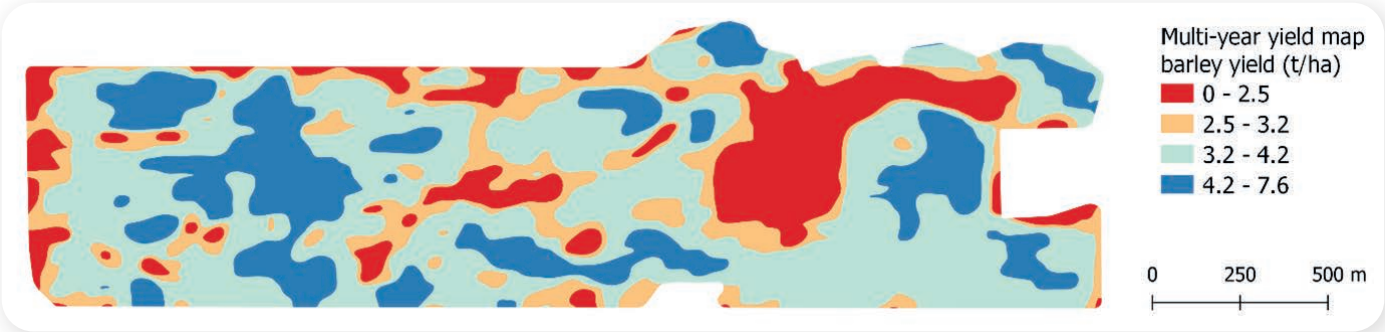

Figure 4: *Multi-year yield map (t/ha) comprised of 2021 barley yield data and 2022 barley yield data, simplified to four yield ranges.*

ranging from 60 kg/ha to 100 kg/ha, to replace what was taken off (**Table 2**) but still maintaining the standard paddock rate of 80 kg/ha of MAP fertiliser.

Figure 5 displays the current 2023 September NDVI imagery, again showing similarities with the previous 2021 and 2022 seasons in terms of the low production areas.

Production Zone	Wheat Yield (t/ha)	MAP Fertiliser Rate (kg/ha)	Equivalent Units of Phosphorus	Equivalent for Replacing Product Removal of Cereal Yield (t/ha)	Area (ha)
High	4.2 – 7.6	100	22.5	5.6	51.5
Medium – High	3.2 – 4.2	80	18.0	4.5	126.4
Low – Medium	2.5 – 3.2	70	15.8	3.9	35.3
Low	< 2.5	60	13.5	3.4	36.2

Table 2: *Yield zones with corresponding MAP fertiliser rates to meet phosphorus removal.*

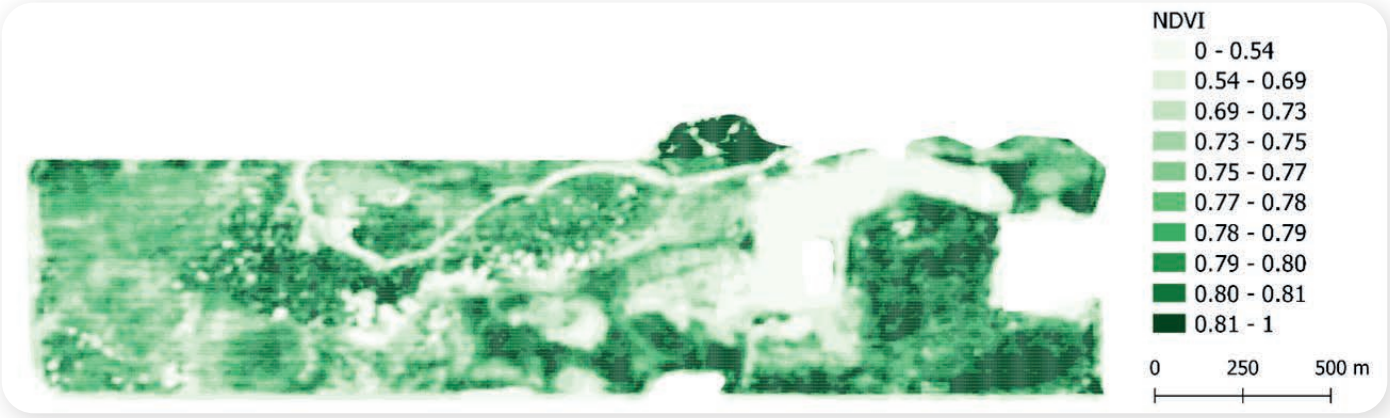

Figure 5: *2023 September NDVI.*

CONCLUSION

While all data layers require ground truthing, with more years of data, you will begin to build a library of different seasonal conditions to refer to. This will ultimately provide you with greater confidence to change management decisions. With water often being the limiting factor, biomass imagery and yield data from dry or wet seasons can help manage these soils to their potential.

THE IMPORTANCE OF SEEKING THE OTHER SIDE OF THE STORY

By Katrina Kowald, reviewed by Keith Symondson

KEY POINTS:

- Who do you trust when trying to find information, about any topic? It's increasingly difficult in the age of hyper-personalisation.
- You need to get comfortable with being uncomfortable.
- Be sceptical — is the information you are reading fact, opinion or even false?
- Why are you seeing what you are seeing?
- To get a balanced view, seek the opposing side of any story.

Figure 1: *Fake news cartoon (Source:* https://www.cantonrep.com/story/opinion/cartoons/2016/12/11/wilkinson-cartoon-fake-news/24284063007/*).*

In today's age of constant access to information, how do you know what is or isn't real? How do you know what to trust or even if you are getting all the information you require to make decisions?

We receive information all day, every day, be it from TV, radio, internet, podcasts, blogs, social media or peers, but how do you know what to trust? We all know that TV channels and newspapers have a biased perspective in how they present a story, depending on who owns the company, but they are at least held to a professional standard to tell the truth. What we see on the internet, social media and hear in podcasts, however, is someone's opinion and there's rarely anyone fact-checking it. Anyone can start a website or podcast and create an online following to share the information far and wide, and it is up to you to determine its worth.

Our brains receive 11 million pieces of information every second and we can only process up to 40 of these. Our brains make 90% of our decisions without us even knowing it, using cognitive shortcuts based on our past experiences. These past experiences are our bias and will determine how we perceive something. You may interpret a piece of information in a completely different way than someone else as a result of your environment and your past experiences.

The University of Calgary has a good cheat sheet to guide you through the disinformation minefield that is the internet: https://explore.ucalgary.ca/spotting-disinformation. While this document was put together before an election to highlight what to be wary of when reading information regarding the election campaign, its messages are relevant in many situations. Its guidelines include:

1. Be sceptical — does the story seem reasonable? Does the story identify its sources?
2. Look for established media sources — while citizen journalists can offer valuable perspectives, they are not held to the same standards as professional journalists and there is no way to hold them accountable, so they are free to speculate however they want. Remember it's often opinion, not always fact.
3. Why are you seeing what you are seeing — are you only seeing this piece of information because algorithms have directed you to it because of something else you have engaged in?
4. Don't spread fake news — fake news breeds fake news. Before you share anything, ensure that it is valid, to prevent misperceptions for other people. The more widely a piece of information is shared, even when it's wrong, the more people are likely to believe it — especially if that info comes from

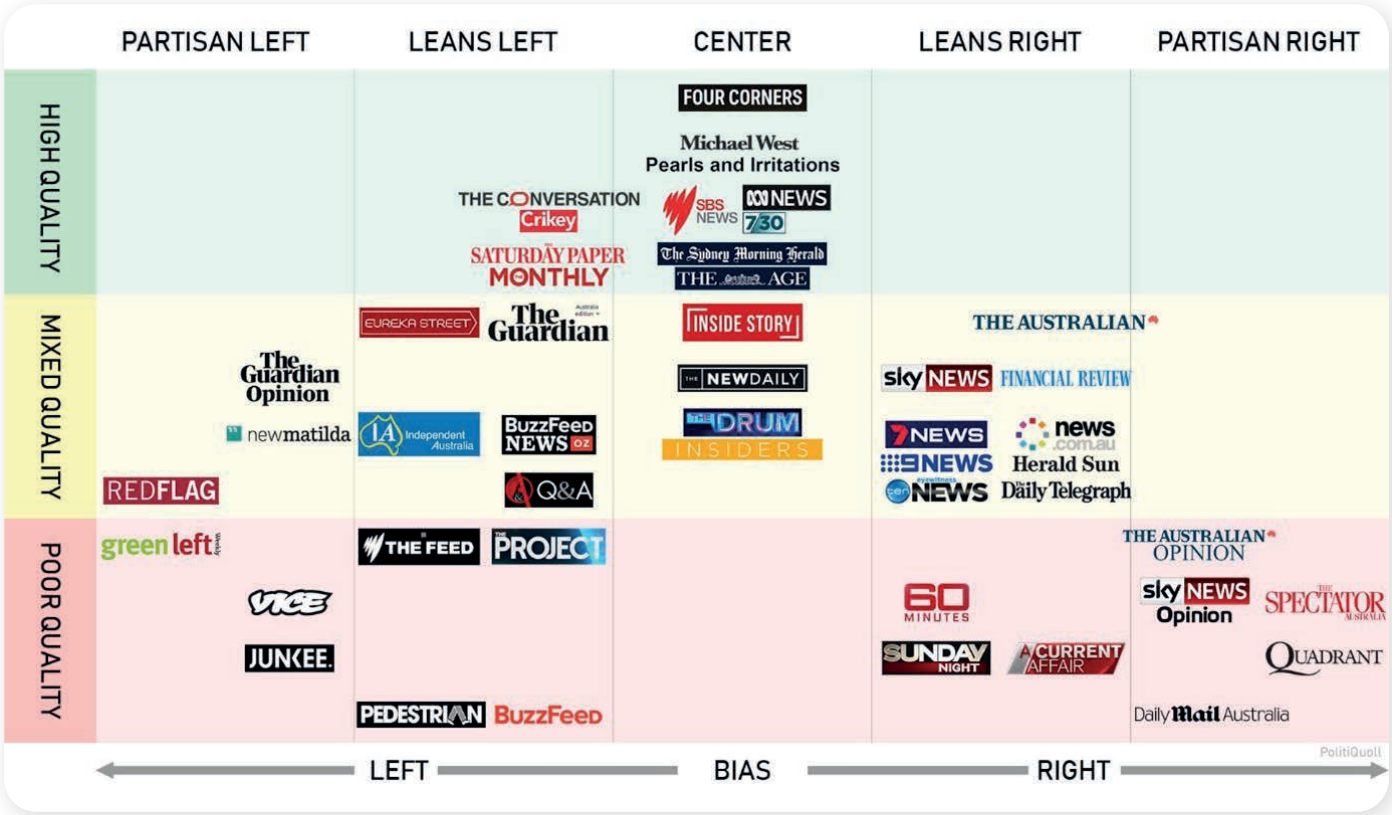

Figure 2: *University of Sunshine Coast study of the Australian Media landscape.* https://libguides.usc.edu.au/help-evaluating/bias

someone they trust (i.e., you!).

5. Get out of the bubble — gather information from a range of different sources, clear your browser search history!

THE BUBBLE

The internet is run on algorithms, with your every online move (and sometimes even your conversations) being tracked to form a profile about you, which is then used to determine the content you are shown. The more a person engages in a topic or ideology, the more content they will see on that topic, with more information biased towards that specific ideology. Do a search for a beach holiday and you will spend the next three days seeing ads for new swimwear.

These algorithms are now creating bubbles or echo chambers, where people only see information that shares a particular perspective and they often never get to see another side to the story. As with small town thinking — if you only interact with like-minded people, your views and beliefs will always be reinforced, not challenged.

In the ever-changing, fear-driven information environment that we find ourselves living in today, it is important to ensure you are getting balanced perspectives from a wide range of sources.

It requires a lot more effort to get a balanced news feed, but by doing so, you will be able to make better informed decisions for you and your business, without fear or societal pressure.

To ensure a balanced view of the world and the events that are happening in it, one of the first steps is to check that you are receiving information from a broad range of trusted sources. Most of us will routinely get our news from the same one or two sources each day, be it via radio, TV, newspapers or social media. If the source we trust is too far left or right wing, we may not be getting the whole story.

Figure 2 was produced by the University of Sunshine Coast and details the left to right wing bias of the Australian media landscape, as well as the credibility of each source. Although, if you are being cynical, you might want to question who funded the university to carry out this study!

Reading articles on the same topic from left-wing and right-wing publications is a good way to ensure you are getting the full story. While both articles may present the facts, the way in which those facts are presented and what is omitted will influence your interpretation of the information and what you do with it.

By following outlets on both sides of the bias, you will also confuse the algorithms and reduce the likelihood of getting stuck in an echo chamber.

In terms of opinion pieces, internet blogs, facebook

groups, podcasts and the like, when analysing the validity of what you are reading or hearing, the first steps are to establish:

- who owns the information
- who paid for its publication
- who benefits from you reading, believing and further promoting it

One of the best ways to receive information is from an independent source that only gets paid to provide information to you, rather than sell a product. Basically, like Farmanco consultants (but then I would say that in a publication paid for by Farmanco!).

Types of false information	
The following definitions have been taken from Macquarie Dictionary (2020)	
Term	**Definition**
Fake news	Disinformation and hoaxes published on websites for political purposes or to drive web traffic, the incorrect information being passed along by social media.
Misinformation	To give false or misleading information.
Disinformation	Misleading information supplied intentionally, as in counterespionage.
Propaganda	Dissemination of ideas, information or rumour for the purpose of injuring or helping an institution, a cause or a person.
Satire	The use of irony, sarcasm, ridicule, etc., in exposing, denouncing, or deriding vice, folly, etc.
Clickbait	An attention-grabbing link on a website which turns out to be of spurious value or interest.

Table 1: *Types of false information as defined by the Macquarie Dictionary.*

THE FUTURE OF CANOLA

By Mae Connelly, reviewed by Ryan Duane

KEY POINTS:

- Biodiesel is a major market for Australian canola.
- Globally, cars are expected to move to electrification in the coming decades.
- Electric cars mean less demand for biodiesel, so where does this leave canola?

INTRODUCTION

Currently, around 20% of global canola is used to produce biofuels. The world seems to be moving towards electric cars, so how will this impact demand for canola as a biofuel going forward?

CANOLA MARKET OVERVIEW

Each year, the world grows around 85 million tonnes (mmt) of canola. Globally, canola makes up 9% of all oilseeds exported, and canola oil makes up 7% of all vegetable oil exports. Soybeans, sunflower oil, and palm oil are its main competitors.

Australia

Production varies from 2 mmt to 8 mmt depending on price, hectares planted, and seasonal conditions. Average production is 5.1 mmt (6% of global production), making Australia the fifth largest producer behind Europe, Canada, China and India. On average, Australia exports about 75% of production, with the remaining 25% crushed domestically. Our biggest export market is Europe, accounting for about 80% to 90% of our canola exports, where it is used as biofuel. We are usually the second largest canola exporter, with an average of 4.2 mmt exports, which is around 24% of global exports.

Canada

Production varies from 13 mmt to 21 mmt, with an average of 18.2 mmt (21% of global production). Canada exports about half of their production as canola seed. The other half is crushed domestically, with the oil largely used as biodiesel, for which there is strong demand from the US. Canada is usually the biggest exporter of canola, exporting an average of 7.9 mmt, which is around 45% of global exports.

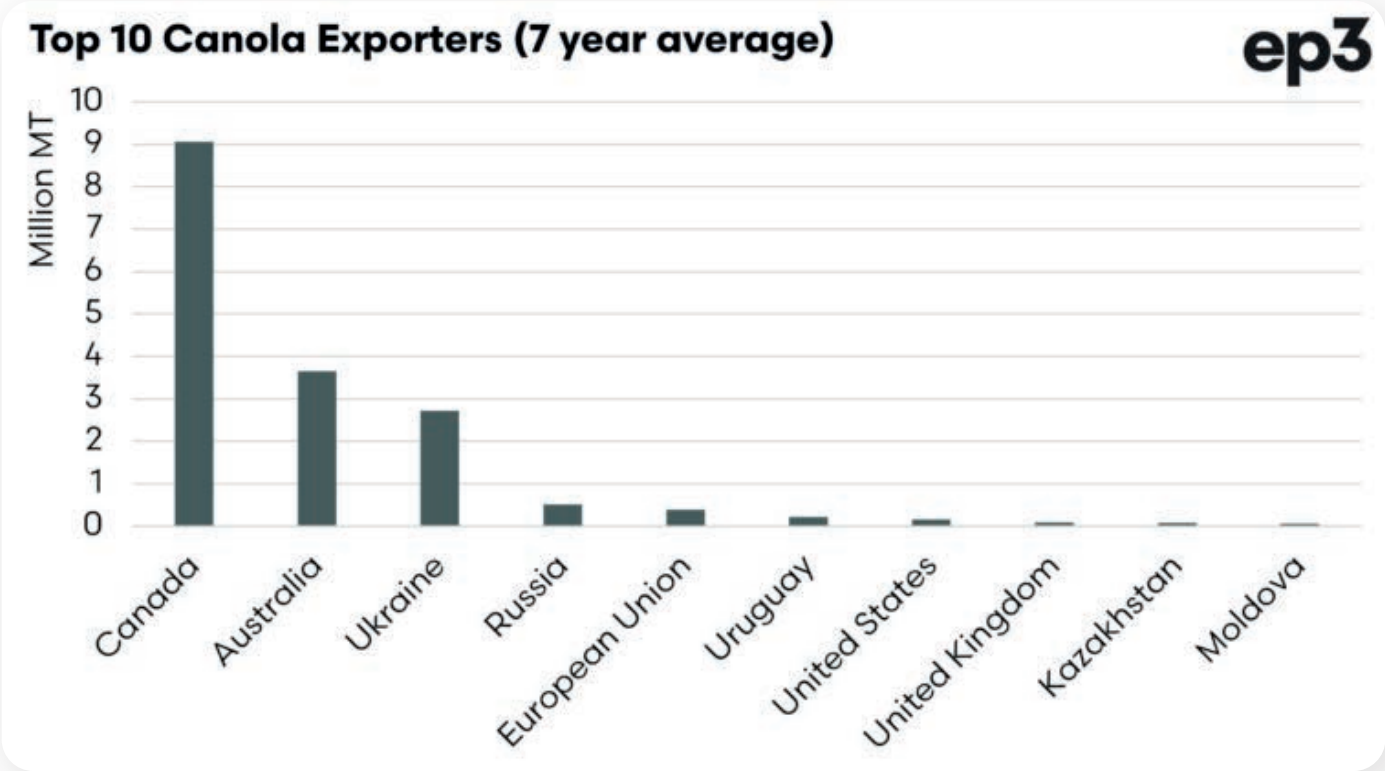

Figure 1: *Top 10 global canola exporters, 7-year average tonnes. Source: Episode3 —* https://episode3.net/grain/why-isnt-canola-a1000-per-tonne/

Ukraine

Production varies from 2 mmt to 5 mmt (average 4.3 mmt), which is mostly exported to Europe. Ukraine is usually the world's third biggest exporter, with an average of 3.8 mmt exported, which is around 22% of global exports.

Europe

The EU is usually the world's biggest canola producer, averaging 19.7 mmt (23% of world production). Production varies from 15 mmt to 25 mmt and Europe is usually a net importer of canola. On average, they import 5.4 mmt annually, which is around 33% of global imports, and most of the demand is for biodiesel. The European Commission has legislated to try to ensure that crops used for biodiesel are sustainably grown.

Other major importers of canola include:

- China average 3.4 mmt or 21% of global imports.
- Japan average 2.25 mmt or 14% of global imports.
- Mexico average 1.3 mmt or 8% of global imports.
- UAE average 1.05 mmt or 6% of global imports.
- Pakistan average 800,000 t or 5% of global imports.
- US average 425,000 t or 3% of global imports.

Figure 1 shows the major canola exporters' average tonnes over the last seven years.

BIODIESEL

Over the past three decades, biofuels have become an increasingly important source of energy. Globally, biofuel production has increased from 1.2 million barrels per day in 2011 to 1.8 million barrels per day in 2021 (an increase of 46%).

In 2021, the USA, Brazil, Europe and Indonesia were the largest consumers of biofuel, accounting for 84% of global biofuel demand. Asia (especially Indonesia, Malaysia and India) is expected to have the largest growth in demand in the future.

Canola is increasingly used as a biofuel. Currently, approximately 20% of canola is used to produce biodiesel, according to S&P Global. Emissions from biofuel are lower than traditional fossil fuels, which is the reason for the increase in demand as the world looks for ways to lower greenhouse gas emissions.

World biodiesel demand is expected to continue rising for at least a few more years, due to government mandates around the world. For example, the growth in the US Environmental Protection Agency's Renewable Fuel Standard program will likely increase US demand for biodiesel. Indonesia's Biodiesel B35 mandate requires greater domestic use of biodiesels. This has prompted the country to increase their biorefining capacity by almost 50% since 2020.

More than 60 countries have biofuel mixing requirements. Fuel mixing policies are a key driver

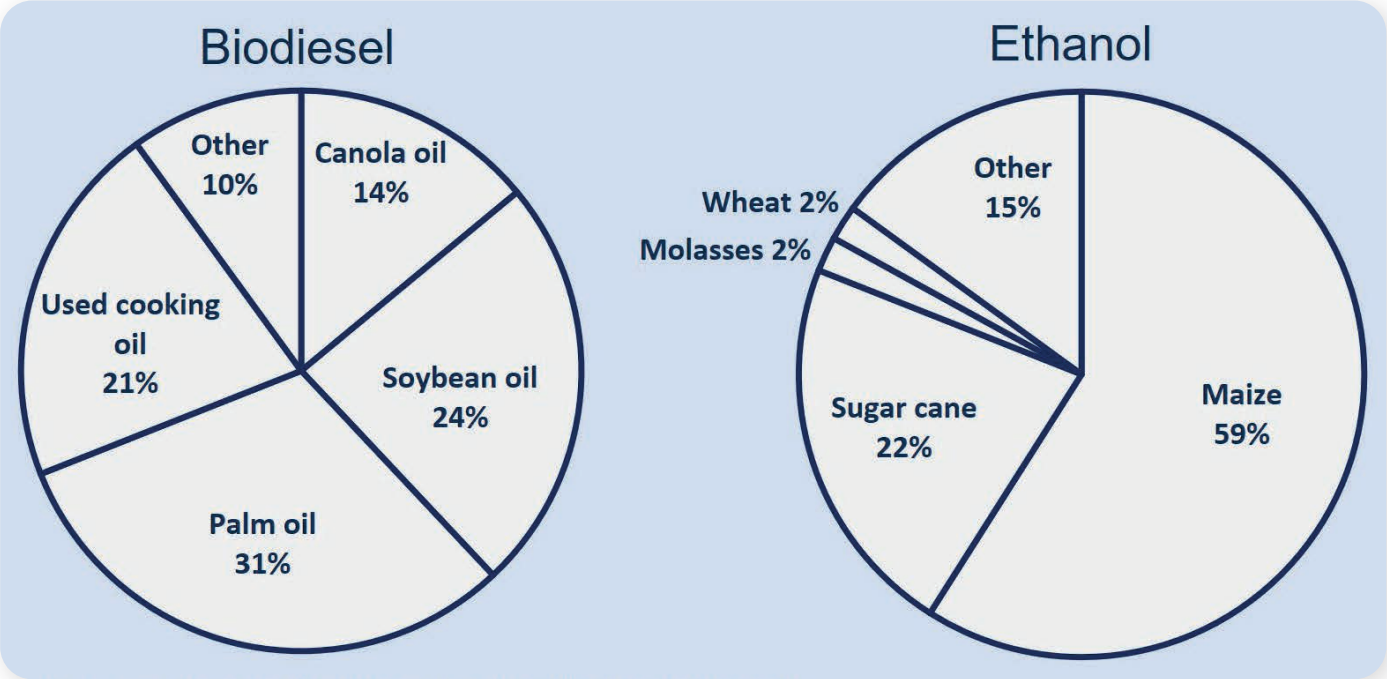

Figure 2: *World feedstock for biofuel production. Source: OECD-FAO Agricultural Outlook 2022-2031* https://www.oecd-ilibrary.org/agriculture-and-food/oecd-fao-agricultural-outlook-2022-2031_f1b0b29c-en

of global biofuel consumption and demand.

Figure 2 shows the current global feedstock for biofuel production.

THE FUTURE — POSITIVES

Palm Oil

Palm oil is mostly grown in plantations across Asia, Africa and Latin America. It is often grown on land converted from tropical forests. Around 90% of the world's palm oil trees are grown in Malaysia and Indonesia on land that was previously the most biodiverse tropical forest on the planet.

Palm oil is perceived as less *sustainable* and *green* than other biofuel feedstock crops like canola and soybeans as these are largely grown on land that is already used for cropping.

As **Figure 2** shows, palm oil is the feedstock for 31% of the world's biodiesel. In Europe, it is currently about 22%, and the EU is planning to phase out palm oil as a feedstock for biodiesel by 2030. As palm oil is phased out, this should increase the demand for canola.

Canadian Domestic Crush

Canada is planning to increase its domestic crushing capacity by nearly 6 mmt, from 11.3 mmt to 17 mmt by 2025. The impetus for this investment is to meet increasing demand for biodiesel across North America.

Currently, the Canadians average around 8 mmt of canola exports. Assuming no significant increase in production, an extra 6 mmt of domestic demand would mean Canadian exports drop from around 8 mmt to around 2 mmt. This would increase demand for Australian canola.

However, construction and labour cost increases have meant that the cost to build each crushing plant has doubled since plans were announced. So instead of an increase in domestic Canadian canola crushing of 6 mmt by 2025, it may be closer to 3 mmt. One of the proposed new plants is being developed by Viterra, which is now waiting for the Bunge merger to finalise before proceeding. Other plants are citing increased costs as reason for delay.

Canada is, however, projected to increase canola production to 25 mmt by 2025, which would be an increase of 25%. This is expected to come from increased yields rather than greater planted area.

Figures 3 and 4 show some modelling of how increased domestic crush capacity in Canada, along with their desired increase in production, may impact canola fundamentals. **Figure 3** keeps Canadian production at around 20 mmt and shows their exports dropping as domestic crushing capacity increases. **Figure 4** increases Canadian production to 25 mmt and shows their exports holding relatively steady, even with increased domestic crushing capacity.

How this situation (both the planned increase in production, and the planned increase in domestic crushing capacity) plays out in Canada will be pivotal to canola markets and prices for the rest of the decade.

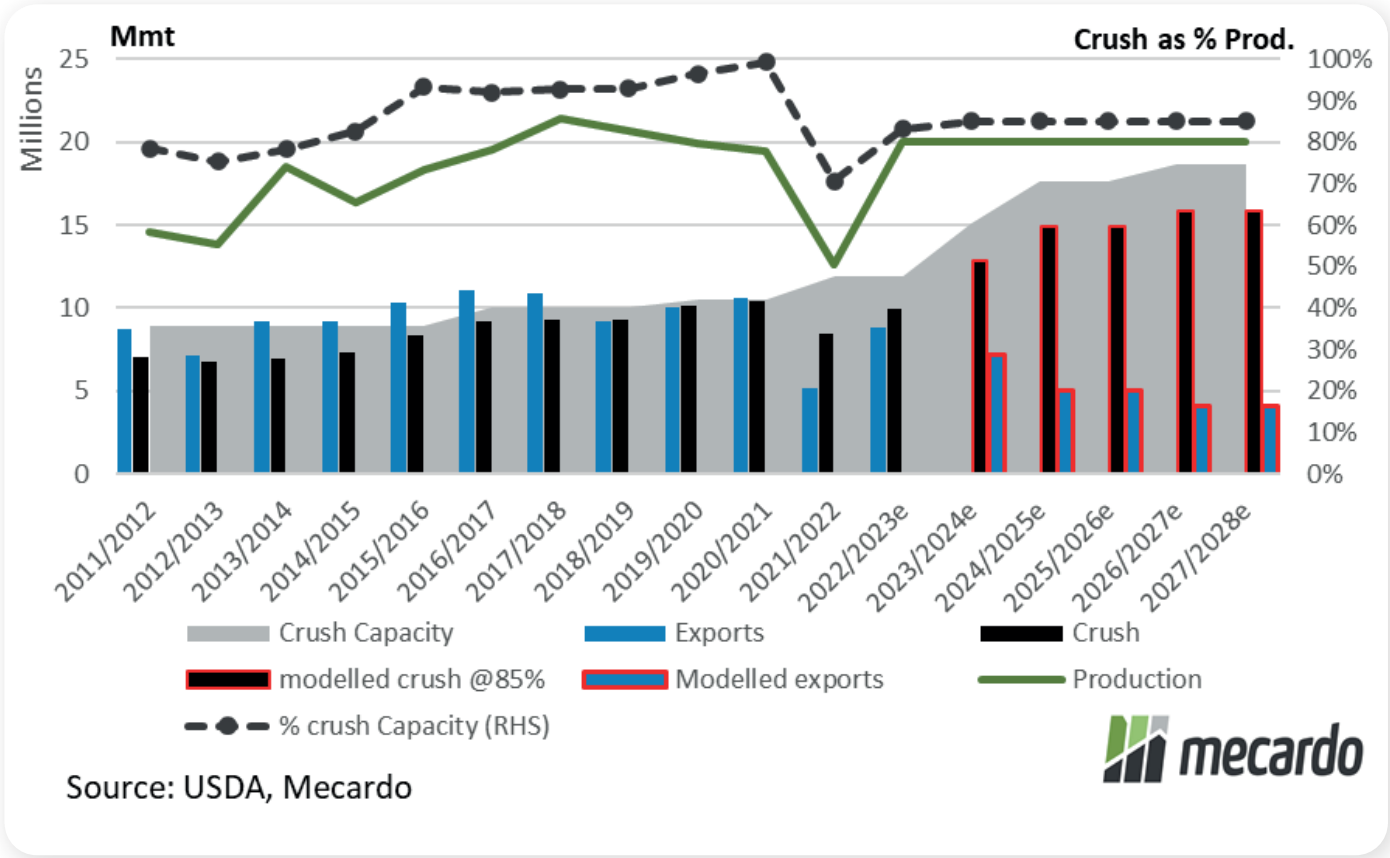

Figure 3: *MODEL 1 (No increased production) — Canadian canola production, exports and crush capacity. Source: Mecardo —* https://mecardo.com.au/canada-is-crushing-it-2

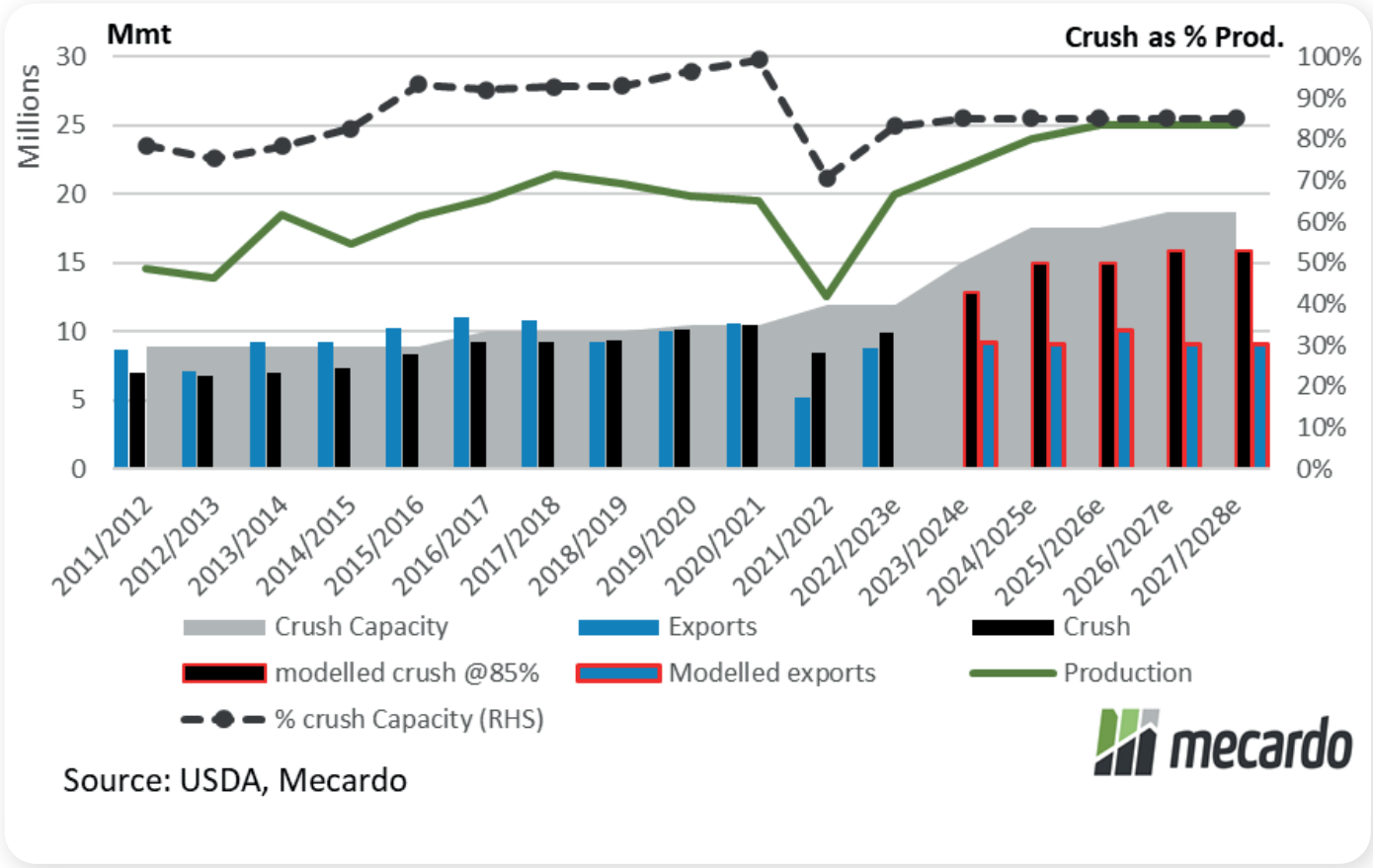

Figure 4: *MODEL 2 (increased production) — Canadian canola production, exports and crush capacity. Source: Mecardo —* https://mecardo.com.au/canada-is-crushing-it-2

Low Carbon Fuel Standards Increasing

Low carbon fuel standards are increasing in the US, especially on the west coast, which means increasing demand for biofuel and therefore increased demand for canola. However, peak demand for biofuel in the US is expected to be reached in the next few years before vehicles move to electric or hydrogen fuel sources. In California, for example, the peak of biodiesel demand is expected to occur in 2025. In environmental scenarios like this, California has generally been five to 10 years ahead of the rest of the US, implying that the US national biodiesel demand could peak around 2030 to 2035.

Air Fuel Demand

Air fuel demand might pick up some of the demand lost by the expected increase in electric cars, but air fuel demand probably won't offset the loss of car fuel demand completely due to the difference in fuel volumes.

Using Qantas as an example, they have committed to using 10% sustainable fuels, such as biodiesel from canola, in their global fuel mix by 2030. Sustainable aviation fuel (SAF) cuts greenhouse gas emissions by around 80% compared to traditional kerosene. SAFs are seen as one of the main levers to reduce aviation greenhouse gas emissions in both the short and long term.

Australian Domestic Demand

Increasing pressure to lower greenhouse gas emission levels may generate some increased domestic demand for lower carbon fuel sources such as canola. There is growing interest in this area. One example is Qantas and Airbus investing US$200 million to accelerate the establishment of a sustainable aviation fuel industry in Australia. Canola, mustard and carinata are all able to be processed into high quality aviation fuel.

It is recognised that there is significant potential for locally processed renewable fuels to help decarbonise sectors that are otherwise hard to abate (a recent CSIRO report highlighted this). Instead of exporting most of our canola to Europe to be produced into biofuels, and to count towards their emissions reductions, there could potentially be increased demand to do the same domestically instead.

THE FUTURE — RISKS

Electric Cars

Increased electric car adoption will result in less demand for biofuel, and therefore less demand for canola as a fuel.

Figure 5 shows the years to electrification mandates for various governments around the world. These mandates range from 25% to 100% electric vehicles

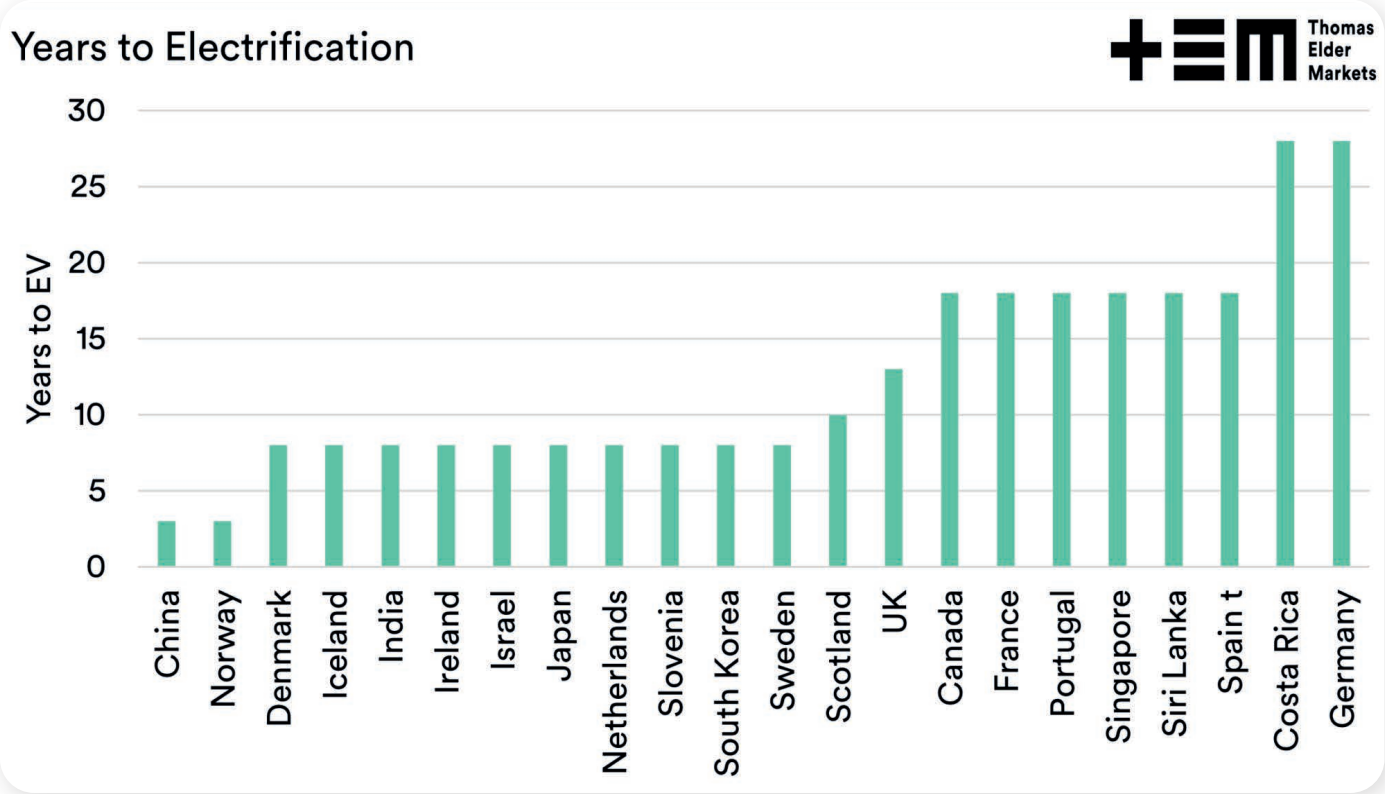

Figure 5: *Years to electrification of cars. Source: Episode 3 —* https://episode3.net/market-insights/electric-cars-could-destroy-grain-markets/

being required by this time. Most mandates fall in the 2030 to 2040 range. It could be expected that during this window, the demand for biodiesel, and therefore canola, may start to decline as electric cars are mandated.

Alternative Biodiesel Feedstock

Long term, Europe wants to eventually phase out crops for biofuel and use waste products such as used cooking oil instead. However, this won't occur for a long time. Currently, used cooking oil largely comes from Asia, but Asia will have its own renewable energy directives and will likely want to use their waste oil themselves rather than export to destinations like Europe.

CONCLUSION

There will eventually be declining demand for vegetable oils like canola for biofuel as global electrification of vehicles occurs. However, there is likely to be at least a five to 10-year window before this happens and demand is likely to increase within this window before the eventual decline. Most analysts agree that the window when we can expect demand for canola to decline (as a biofuel at least) is in the 2030s, not this decade.

Increasing demand for canola to be feedstock for aviation fuel will help to offset the decline in demand for canola as a car fuel.

FURTHER INFORMATION

Rabobank podcast "Will canola ever become a thing of the past?" — https://raboresearchfoodagri.libsyn.com/preview-anz-will-canola-ever-become-a-thing-of-the-past

FARMANCO AT THE DOWERIN MACHINERY FIELD DAYS

By Jo Smallacombe, reviewed by Keith Symondson

Another wonderful year unfolded for Farmanco at the Dowerin Machinery Field Days, reaffirming our commitment to this illustrious agricultural event.

To kick off the week, Farmanco's CEO, Keith Symondson, and Glenn Briggs from Aglytica took to the Crown Ballroom during the 'Bringing Dowerin Downtown' event. With more than 600 corporate leaders, government representatives and farmers in attendance, the event promised a stellar guest speaker lineup. Distinguished figures such as Senator the Hon Murray Watt, Minister for Agriculture, Fisheries, and Forestry; Hon Rita Saffioti MLA, Deputy Premier, Treasurer, and Minister for Transport and Tourism; Luke Chandler of John Deere; Craig James of Commonwealth Bank; Karl O'Callaghan of Wheatbelt Natural Resource Management; and Rebecca Tomkinson of the Chamber of Minerals and Energy of Western Australia, shared their insights on policies, global economic trends, and the transformative impact of technology in agriculture. It was an insightful day filled with plenty of networking opportunities for all attendees.

Wednesday marked the start of the main event — the Dowerin Machinery Field Days. This year, gates swung open at 8am, allowing early birds to seize the day and avoid the crowds. The weather smiled upon us, offering a pleasant first day, while Thursday's slightly warmer climate may have persuaded some to stay home.

The 2023 Field Days brought an array of happenings, including machinery demonstrations, fashion shows, school band battles, cooking demonstrations, dog jumping, sheep dog trials, helicopter joy flights, junior merino judging, clipper rides, and activities for the young ones such as a climbing wall, circus workshops and a traveling animal farm.

The Dowerin Machinery Field Days team revamped

the site layout in 2023, drawing attendees to explore new corners of the event. Farmanco also embraced change by relocating to the oval for 2023, carving out our own space after a few years in the pavilions. With a modified setup featuring our own marquee, comfortable seating and greenery, we welcomed visitors seeking a moment of respite and coffee amidst the bustling activities.

The move proved beneficial, as it allowed us to share space with others including Glenn Briggs and Ryan Dorrington from Aglytica, as well as Danielle McNamee, Phillip Gal and Gary Jones from ProcessWorx, and Trent Kensitt-Smith from E.E. Muir & Sons. Our team of Farmanco consultants, including David Ward, Blake O'Meagher, Rob Sands, and Stacey Bell-Crookes, were also on hand to connect with both long-time clients and newcomers.

In addition to our consultants, Michelle Prevett, Georgia King, and I had the pleasure of attending the event, enabling us to build connections with industry professionals and put faces to names of those we've spoken to for years over the phone.

The 2023 Dowerin Machinery Field Days once again showcased agriculture and entertained attendees on various fronts. Farmanco remains committed to this event and looks forward to our continued involvement in 2024. We are already in the early stages of planning for what promises to be another outstanding event.

Figure 1: *Farmanco CEO Keith Symondson and Aglytica's Business Development Manager Glenn Briggs attended the 'Bringing Dowerin Downtown' event at the Crown Ballroom.*

Figure 2: *Gary Jones (ProcessWorx), Blake O'Meagher (Farmanco), Trent Kensitt-Smith (E.E. Muir & Sons), Ryan Dorrington (Aglytica).*

Figure 3: *Glenn Briggs (Aglytica) demonstrating CashPeek, a simple to use budgeting and cash flow forecasting tool that integrates with Xero.*

Figure 4: *Farmanco Consultants Blake O'Meagher, David Ward and Rob Sands.*

WA WOOL AND LIVESTOCK MARKET REPORT

WOOL PRICING AND TRENDS

Date 14/09/2023	Market Analysis			
	Fremantle	Micron Spread		Percentile Years 10
Micron	c/kg	c/kg	%	
18	1550	205	15%	40%
19	1448	146	11%	75%
20	1345	43	3%	75%
21	1302	0	0%	75%

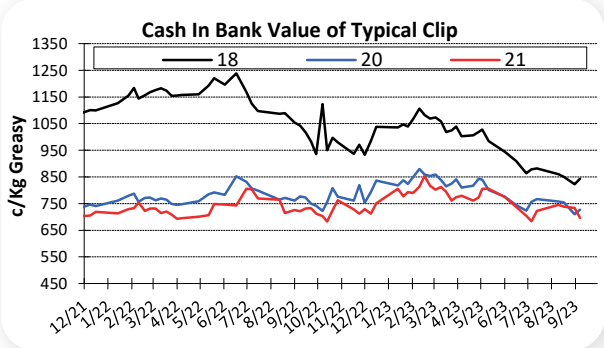

Figure 1: *Cash in Bank Value of Typical Clip*

SHEEP PRICING AND TRENDS

Date 13/09/2023	Katanning Market Analysis			
	Market Spread		Average	Percentile Years 9
Class	High $/hd	Low $/hd	$/Hd	
Young Lamb (18.1-20)	86	86	86	13%
XB Lamb (16.1-18)	75	50	63	1%
MR Young Ewe (14.1-18)	22	22	22	9%
MR Young Wether (14.1-18)	20	17	19	4%
MR Ewe (18.1-24)	23	20	22	1%
LE Wethers (18.1-24)	65	46	56	6%
RM Rams (26.1+)	20	20	20	4%

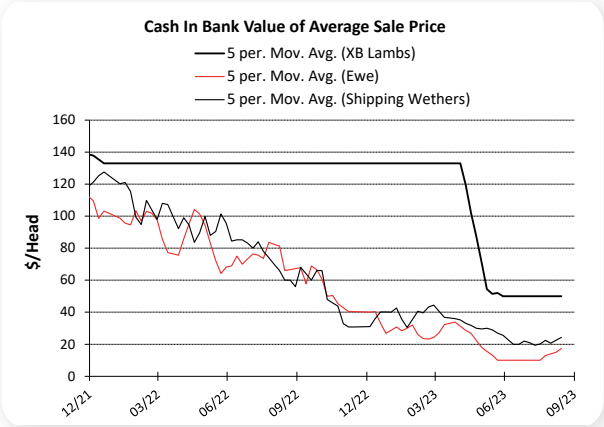

Figure 2: *Cash In Bank Value of Average Sale Price*

CATTLE PRICING AND TRENDS

Date 18/09/2023	Muchea Market Analysis			
	Market Spread		Average	Percentile Years 9
Class	High c/kg	Low c/kg	c/kg	
Vealer Steer (200 - 280)	328	328	328	49%
Vealer Heifer (200 - 280)	248	248	248	37%
Yearling Steer (200 - 280)	120	116	118	4%
Yearling Heifer (200 - 280)	152	152	152	62%
Grown Steer (500 - 600)	254	254	254	26%
Grown Heifer (0 - 540)	220	220	220	30%
Cows (400 - 520)	190	130	160	16%
Bulls (600+)	200	200	200	12%
Yearling Steer PC (200 - 280)	326	326	326	78%
Yearling Heifer PC (200 - 280)	224	100	162	37%
Grown Steer PC (500 - 600)	244	244	244	35%
Grown Heifer PC (0 - 540)	250	150	200	25%
Cows PC (400 - 520)	214	199	207	53%
Bulls PC (600+)	280	280	280	77%

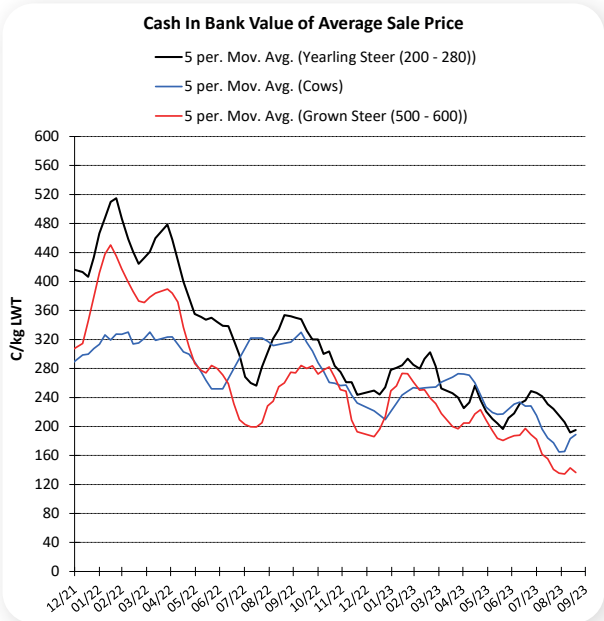

Figure 3*: Cash In Bank Value of Average Sale Price*

Analysis Assumptions: The data being analysed is for each 'Sale Week'. Sales data is supplied by MLA Livestock Report Service.

NSW / VIC WOOL AND LIVESTOCK MARKET REPORT

WOOL PRICING AND TRENDS

Date 14/09/2023	Market Analysis			
	Melbourne	Micron Spread		Percentile Years
Micron	c/kg	c/kg	%	10
18	1567	205	15%	43%
19	1449	87	6%	40%
20	1362	0	0%	42%
21	1311	-51	-4%	41%
22	1295	-16	-1%	42%

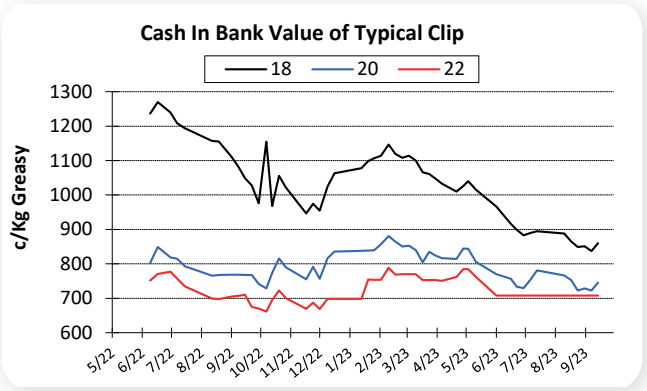

Figure 1: *Cash in Bank Value of Typical Clip*

SHEEP PRICING AND TRENDS

Date 14/09/2023	NSW Wagga Wagga Market Analysis	
Class	$/hd	Percentile Years 4
Restocker Lamb (20-22kg)	100	34%
Restocker Merino Lamb (16-18kg)	36	0%
1st Cross Lamb (18-20kg)	73	1%
Feeder Lamb (26-30kg)	152	49%
Processor Young Lamb (22-24kg)	128	3%
Ewe (24kg+)	29	0%

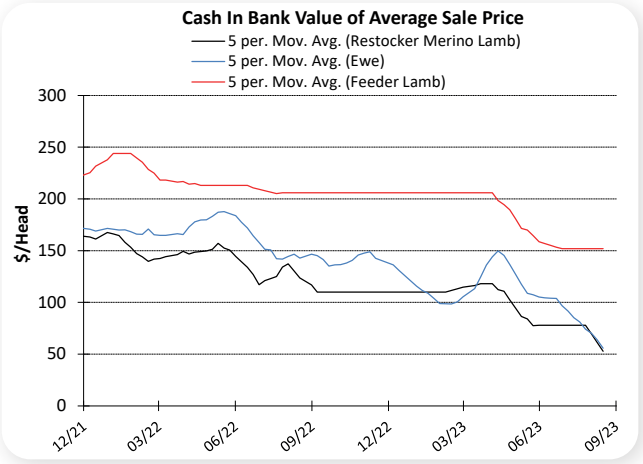

Figure 2: *Cash In Bank Value of Average Sale Price*

CATTLE PRICING AND TRENDS

Date 18/09/2023	NSW Wagga Wagga Market Analysis	
Class	c/kg	Percentile Years
Vealer Steer (280-330kg)	302	31%
Vealer Heifer (280-330kg)	212	3%
Yearling Steer (330-400kg)	220	3%
Yearling Heifer (330-400kg)	210	4%
Grown Steer (400-500kg)	282	36%
Manufacturing Steer (540kg+)	185	11%
Cow (400-520kg)	145	3%

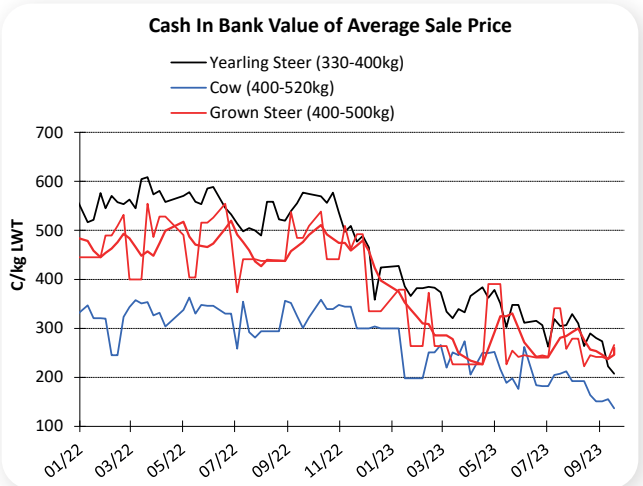

Figure 3: *Cash In Bank Value of Average Sale Price*

Analysis Assumptions: Sales data is supplied by MLA Livestock Report Service. Data was a composite of NSW yards until 01 June 2018