





Brewing industry sustainability targets



BOORTMALT AND BASF COLLABORATE TO PROMOTE CLIMATE-SMART AGRICULTURE

20/07/22

HEINEKEN shares its Net Zero

carbon roadmap

Agriculture



23% of emissions

Grains give our beers their unique taste – but they are also the source of 23% of our carbon footprint.



NEWS

Lion launches Australia's first zero-carbon alcohol-free beer

07 JUNE 2022

By Jessica Mason

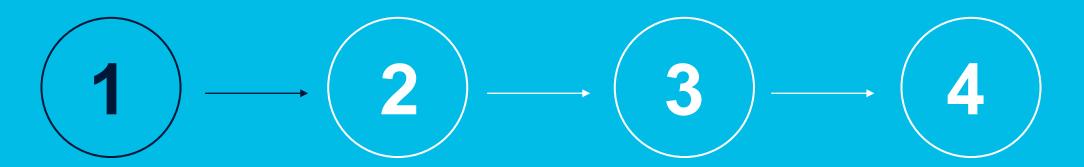
Lion has brewed Australia's first carbon-neutral certified, alcohol-free beer as part of its sustainability drive.





Our Sustainability Objectives

To be leaders in the supply of sustainable grain



WA growers to be leaders in the supply of sustainable grain.

Building the capabilities for the supply of low carbon grain. Partnering with our customers to achieve common sustainability goals - certification.

Supply of ISCC PLUS accredited grain

Increasing the amount of shipped sustainable grain.



What we have been working on

Developed markets for sustainably certified malt barley –

Intermalt – Ongoing shipments since 2020

Heineken, Mexico – since 2021

Working on future market opportunities

Biofuel trial

1st shipment grain ex Australia (Mar 2022)

Sustainable barley – Vietnam

15% reduction in carbon emissions

Low Carbon Grain

Market interest

In development – 2023/24

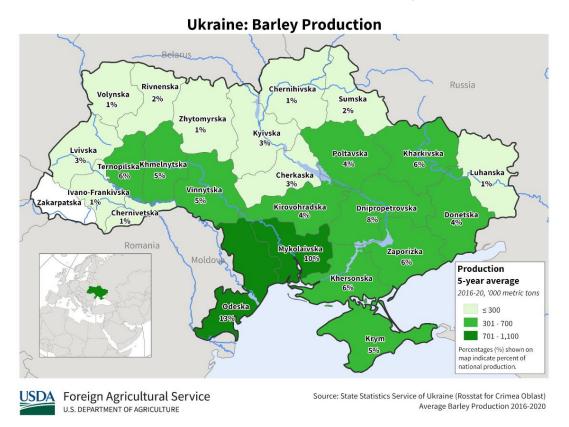






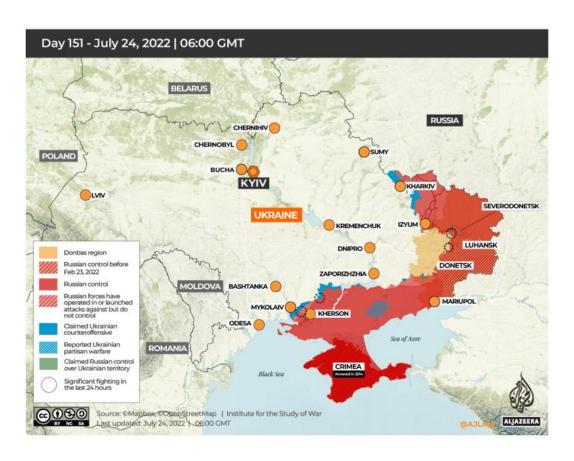
Geopolitical influences on grain markets

War in Ukraine and anti-dumping in China



Ukraine

- · Significant reduction in hectares planted
- Significant area barley production area under Russian control
- July / Aug traditional peak shipping months in Black Sea



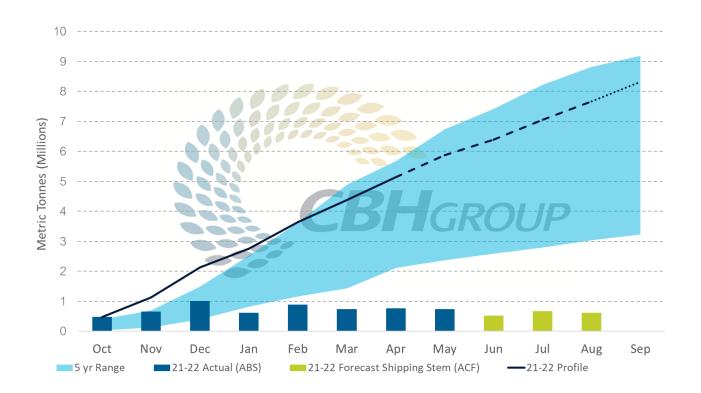
Safe grain export corridor:

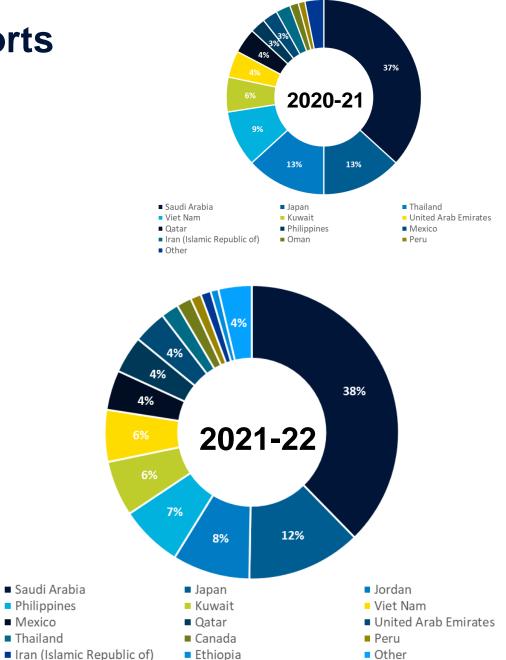
- Agreement signed UN, Turkey, Russia & Ukraine
- Physical corridor will take time to establish
- Russia / Ukraine need to demonstrate intent. e.g. weekend bombing of Odessa not positive



Current markets: 2021/22 barley exports

- Year to date Australian exports 5.86 mmt (1 Oct 21 31 May 22)
- Forecast exports for 2021-22 season are 8.3mmt
- Saudi Arabia at 38%, followed by Japan at 12%
- Other notable destinations are Ethiopia, Canada and Peru

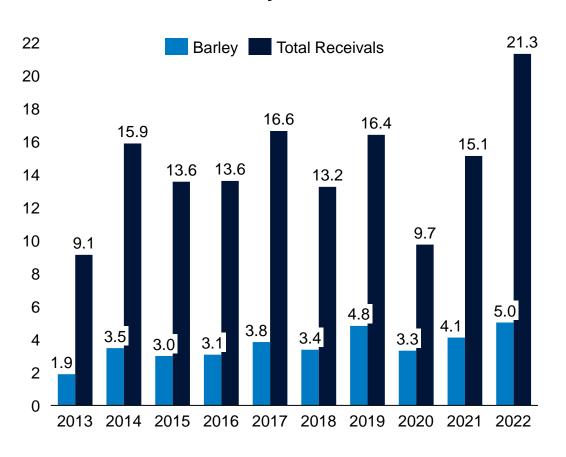




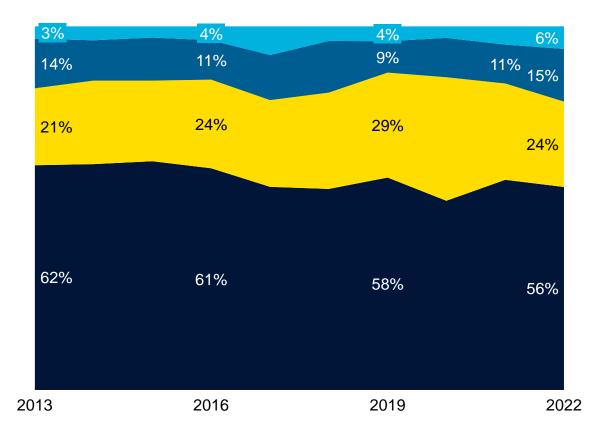
Source: ABS & ACF

WA production trends

Total Receivals and Barley Growth



WA 10 Year Commodity Mix



Barley

Canola

10 year average: 3.6mt

5 year average: 4.1mt



Malting barley premiums



- Elimination of malt premiums with the loss of China demand – May 2020
- Supply / Demand in balance with global shortage (Canadian drought) malt premiums returned late 2021
- Without China malt premiums will be driven by global supply in balances or specific domestic shortages

Global Malt Capacity

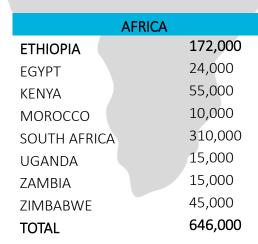
Size of markets in global regions

NEW MALTING CAPACITY

BRAZIL 240,000 (2023)

MEXICO 120,000 (2023)

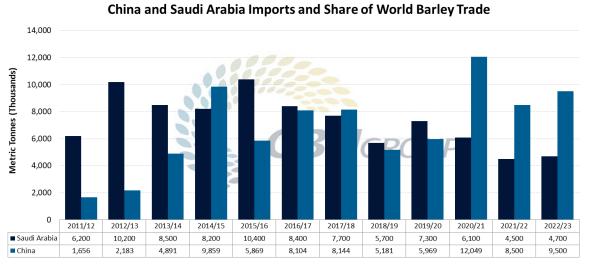
| SOUTH AMERICA | |
|---------------|-----------|
| ARGENTINA | 875,000 |
| BRAZIL | 700,000 |
| CHILE | 100,000 |
| COLOMBIA | 274,000 |
| ECUADOR | 34,000 |
| PERU | 97,000 |
| URUGUAY | 395,000 |
| TOTAL | 2,474,000 |
| | |

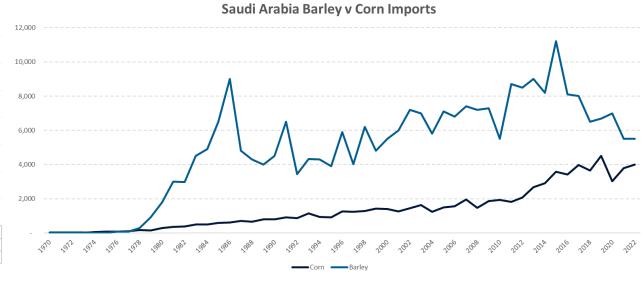




Chinese and Saudi feed markets

Major feed markets under transition





China

- Largest importer of barley
- Malting demand circa 4 million tonnes (inelastic)
- Feed barley demand elastic and sensitive to alternative feed prices

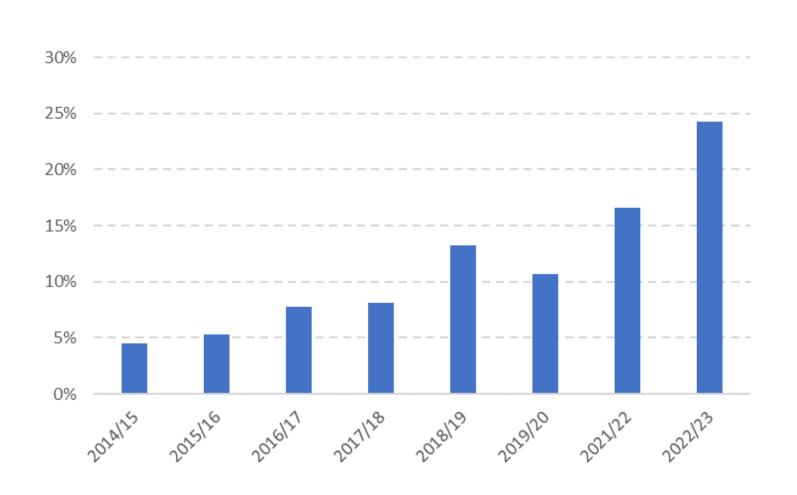
Saudi Arabia

- Market deregulation
- Increase investment in compound feeds
- Feed barley demand decreasing / Corn increasing



Case Study: Feed varieties grown in Esperance zone

Should we be breeding and growing high yielding feed varieties?



- Since 2014/15 significant increase in area sown to 'feed' varieties
- Rosalind third biggest variety by area planted at 18% total barley area
- Feed varieties include all varieties not segregated as malting (or food) barley in the Esperance port zone in the year of production



