

GIWA BARLEY RATIONALISATION MEETING

- Customers
- Local Activities
- Barley & Malting Blends
- Sustainability

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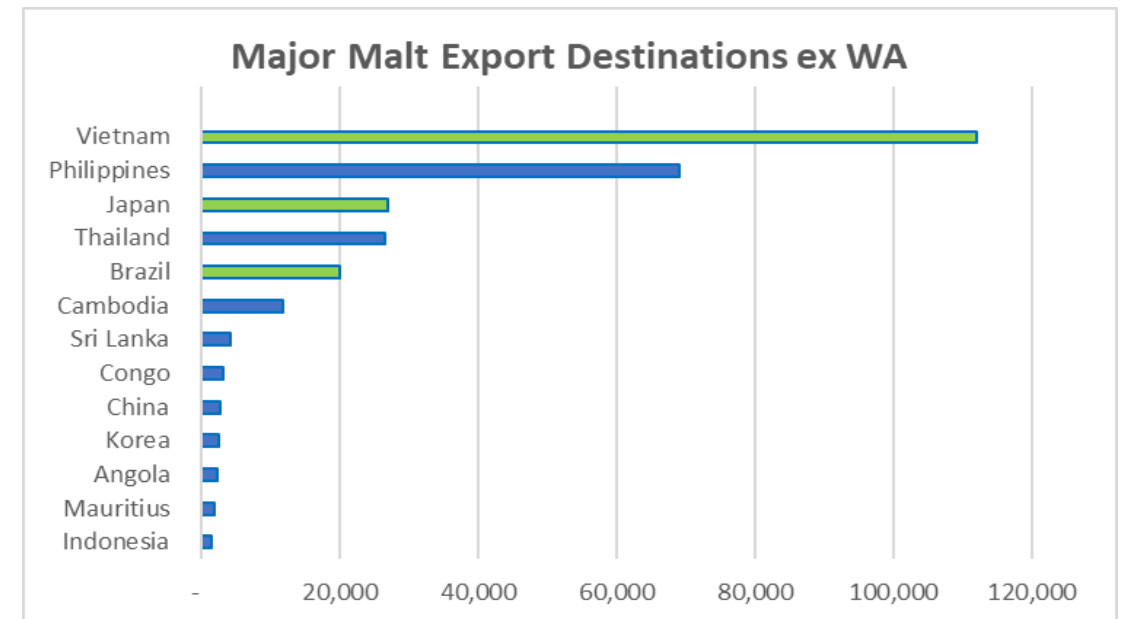
Our Malting Customers

Variety mix is based on access to wide customer base and not being excluded on basis of brewing specification

Large Brewers are Conservative, Efficient and Global

- ✦ Generally SE Asian countries use starch adjuncts (corn & rice) in brewing and are therefore looking for varieties that modify well, and are highly enzymatic.

Modification .. biochemical and physiological changes barley due malting process. Modification breaks down starch cell walls, and activation of enzymes



Our Malting Customers

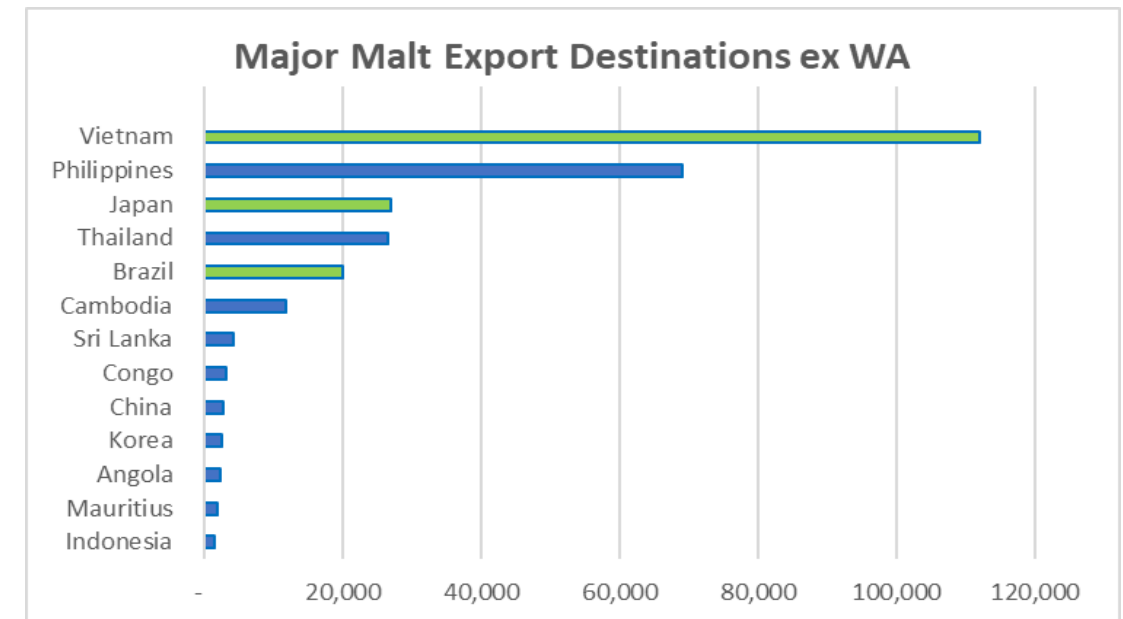
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- ❖ Generally SE Asian countries use starch adjuncts (corn & rice) in brewing and are therefore looking for varieties that modify well, and are highly enzymatic (highly fermentable).

Other Variety Constraints

- ❖ Some brewers specify variety 'incorporation' limits meaning **you can not have only one** variety
- ❖ Countries have bans on processing aids (additives in malting process)



Boortmalt in Perth

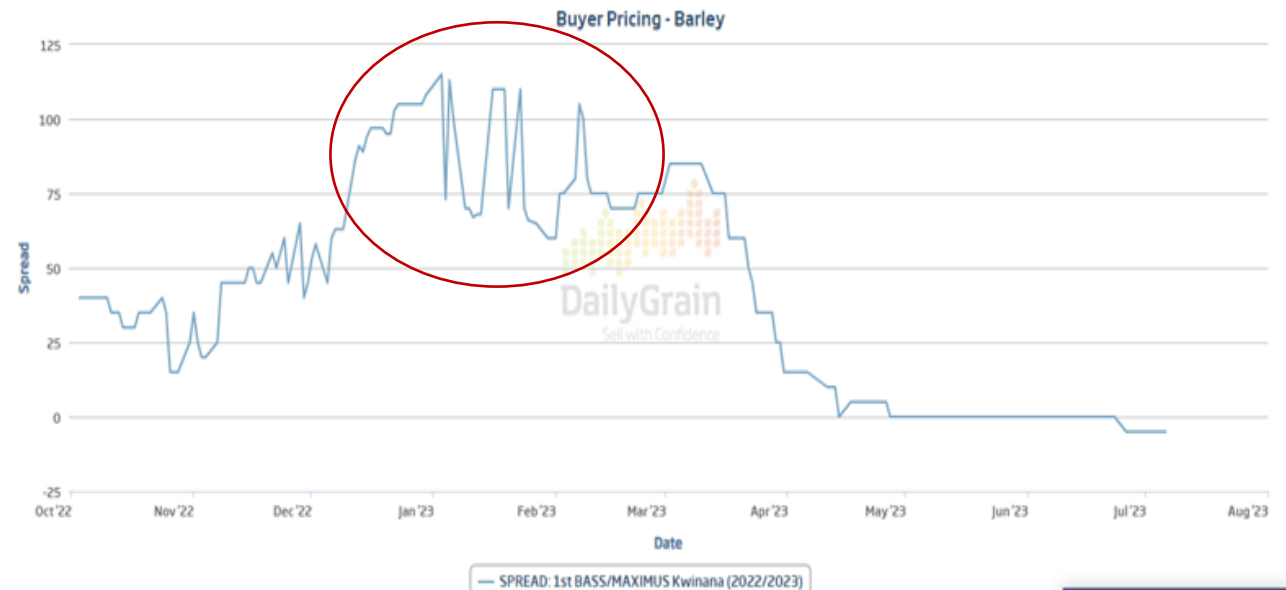


- ❖ Consumption is +250,000mt per annum of malting barley.
- ❖ Mostly draw from KWINANA zone. However, its imperative that we have access to alternative varieties.
- ❖ These varieties may be better suited to southern region
 - Growers should be acutely aware of ability to nominate Kwinana price against Albany delivery (or should seek clarification)

- ❖ Requirement for High Modification Varieties
- ❖ Using price signals ~ nominally for fixed grade

Planet & Bass + \$100-130 over Maximus

- ❖ Export market
- ❖ Malting barley versus feed barley price outlook is globally positive. Drought Spain, Poor crop Scandi



Barley Specification & Malting Blends

- ❖ Optimum protein of 10.0-10.5%. Concern we don't have Falling Number test.
- ❖ We process same crop year barley for **18 months**
- ❖ Malting is complex process, levers (time, temperature, water, air etc) which maltster can pull are very limited.
- ❖ **Variety provides strongest pre-determination of modification characteristics**
- ❖ Different varieties will modify at different rates – resulting in unsaleable malt
- ❖ We blend malt post production to ensure consistency and incorporate certain traits of each variety depending on customer requirement

Sustainability

Renewed focus on our Scope 3 Emissions, SBTi commitment by 2030

- ✦ ISCC barley
- ✦ Now we have to figure out how we can together measure, report and reduce carbon emissions.
- ✦ Partnership approach; right up & down the chain

