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Eating quality of dry vs wet aged beef loins

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Dry ageing of beef





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Dry vs Wet ageing





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Dry Ageing of beef

Anecdotaly:

- * Evaporative loss during dry ageing is thought to lead to higher concentration of flavour compounds in dry aged meat, thus a more intense flavour.
- * Dry aged meat is more tender



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Price of wet vs dry aged striploin Cork, Ireland



€19/kg
= \$AU 31/kg



€35/kg
= AU \$58/kg



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Price of dry aged beef in Oz



Sirloin
\$AU 65/kg



Waggu
\$AU 300/kg



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Dry Ageing of Australian Beef

In Oz



Dry ageing for up to 8 weeks



Dry ageing for up to 5 weeks



NO dry ageing



To Japan





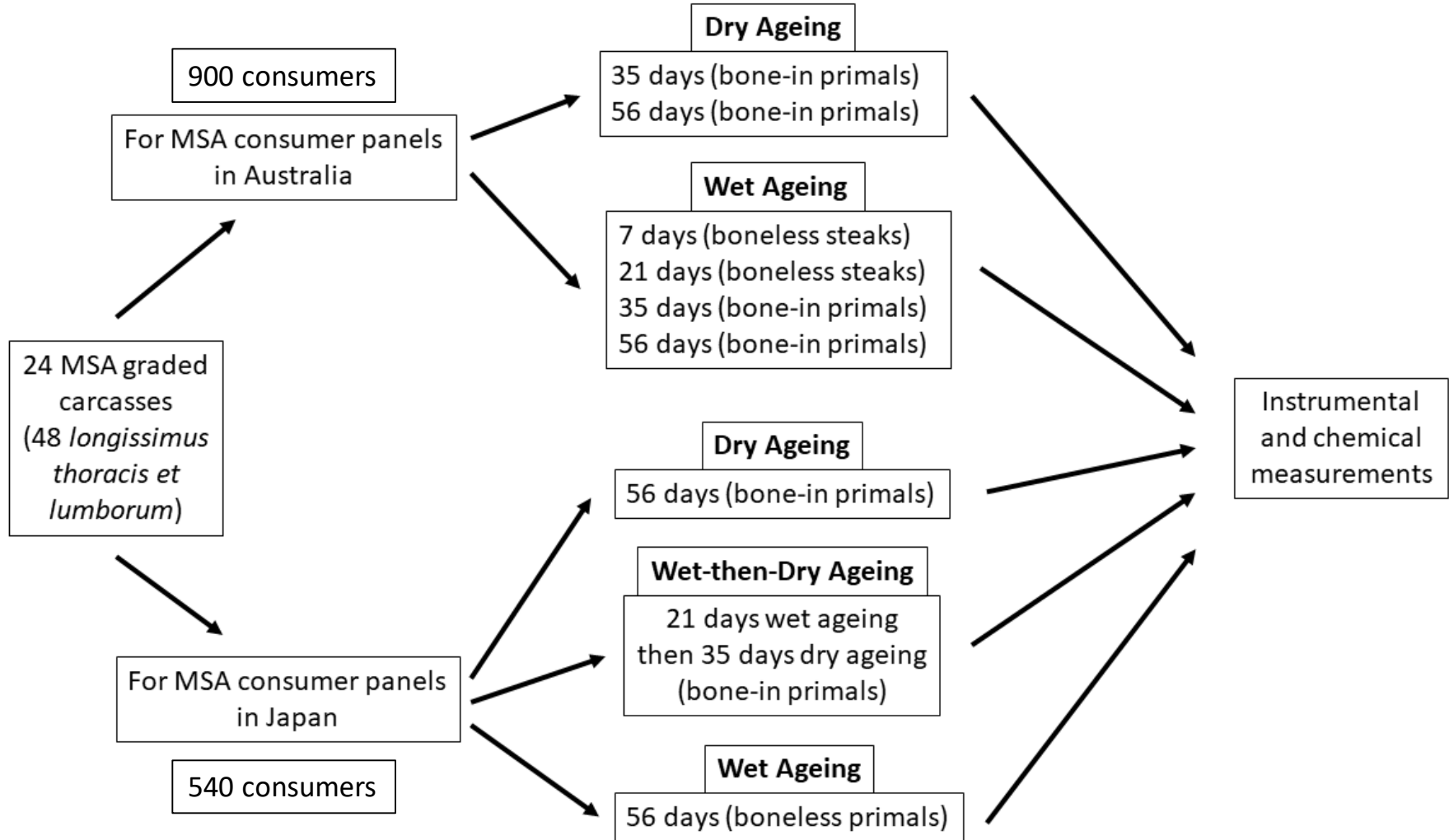
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Aims of MLA funded project

- * Investigate effects of dry ageing on eating quality of beef loins (domestic focus).
- * Investigate if wet ageing followed by dry ageing (wet-then-dry) lowers the quality of dry aged beef loins eaten in Japan (export focus).
- * To investigate differences in flavour (taste and odour) compounds between dry and wet aged beef.



Methods



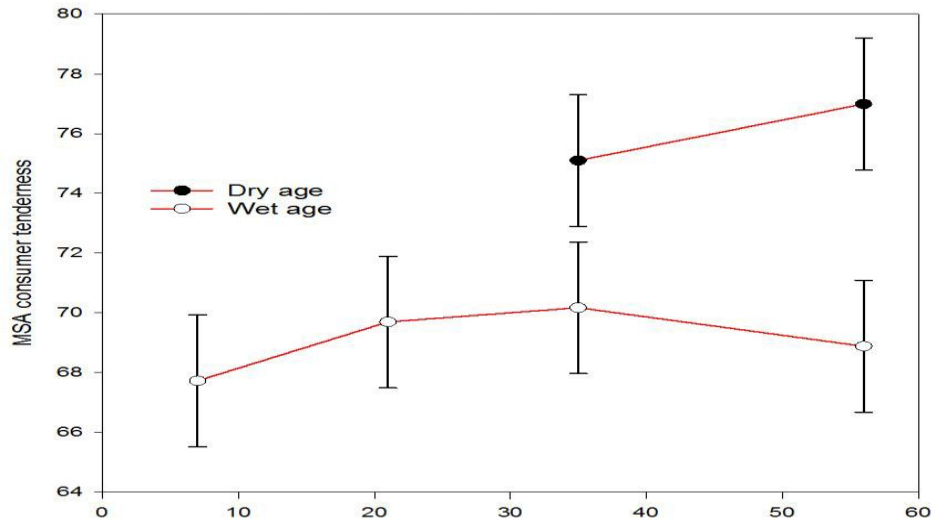


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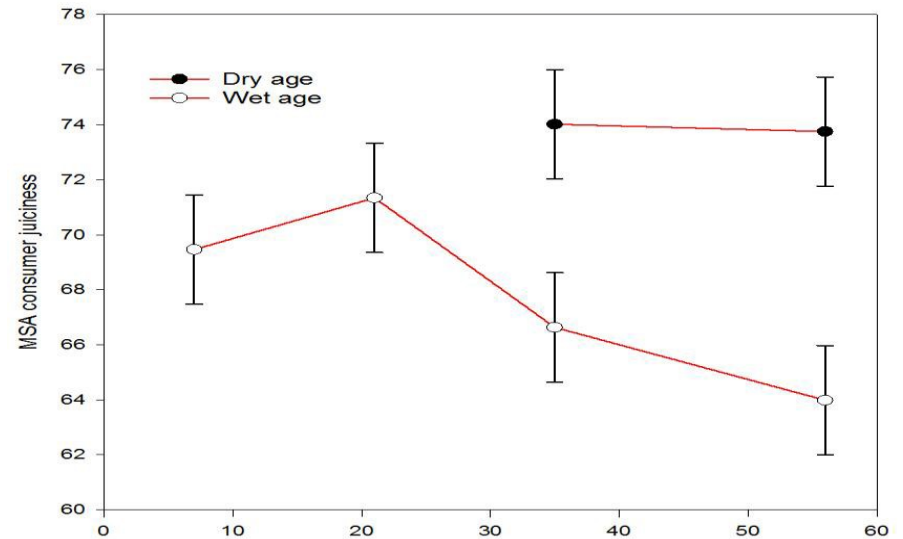
Effect of dry ageing on consumer sensory scores

Ageing type, $P < 0.001$ for all

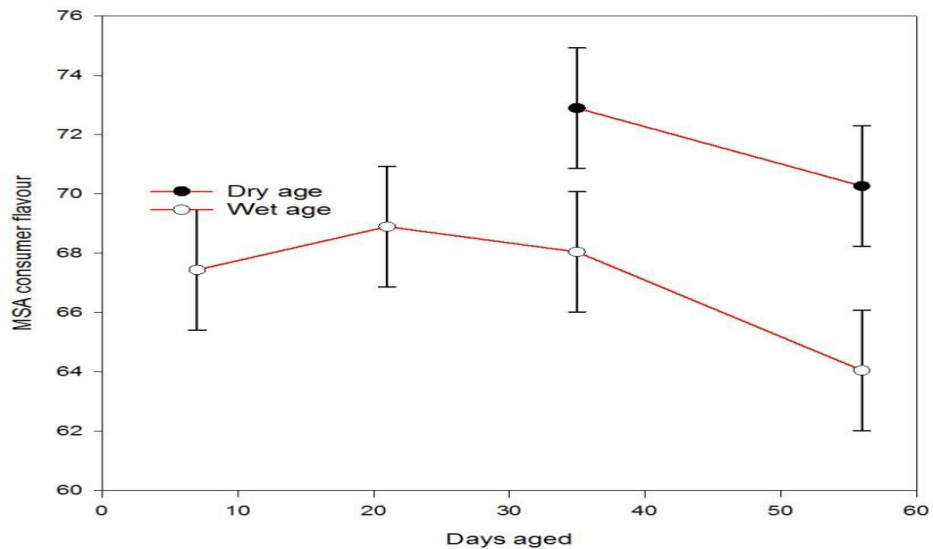
Tenderness



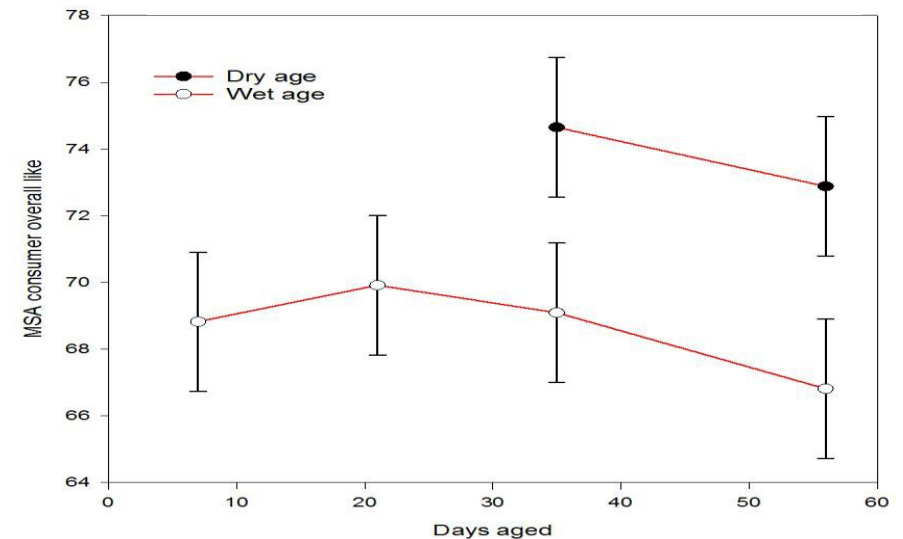
Juiciness



Flavour



Overall like

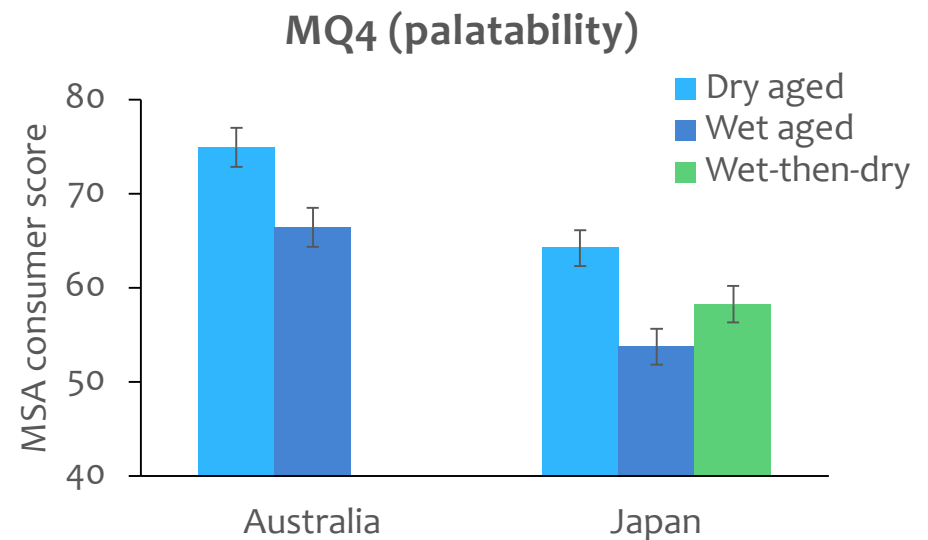
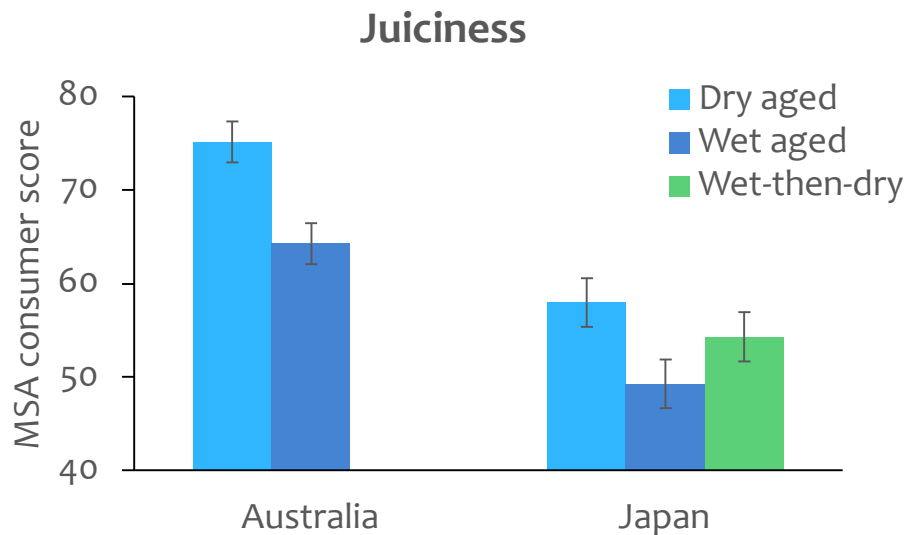
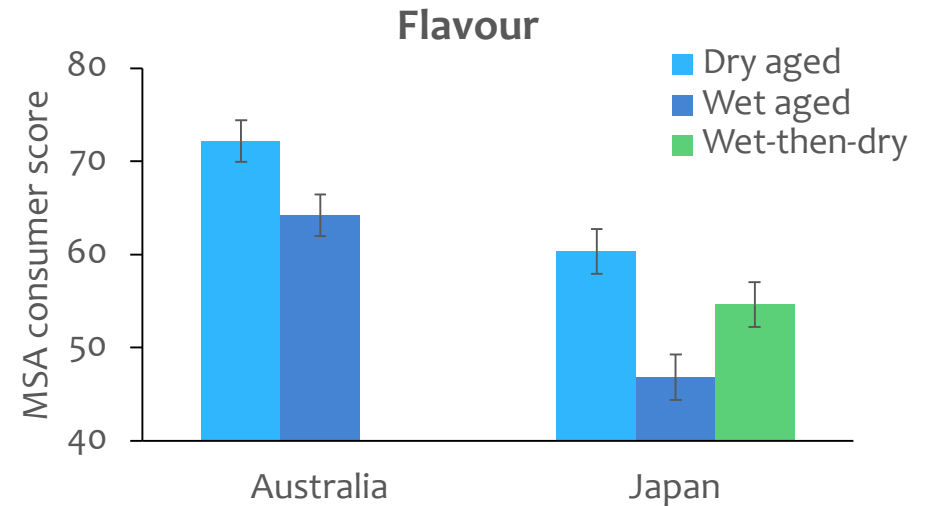
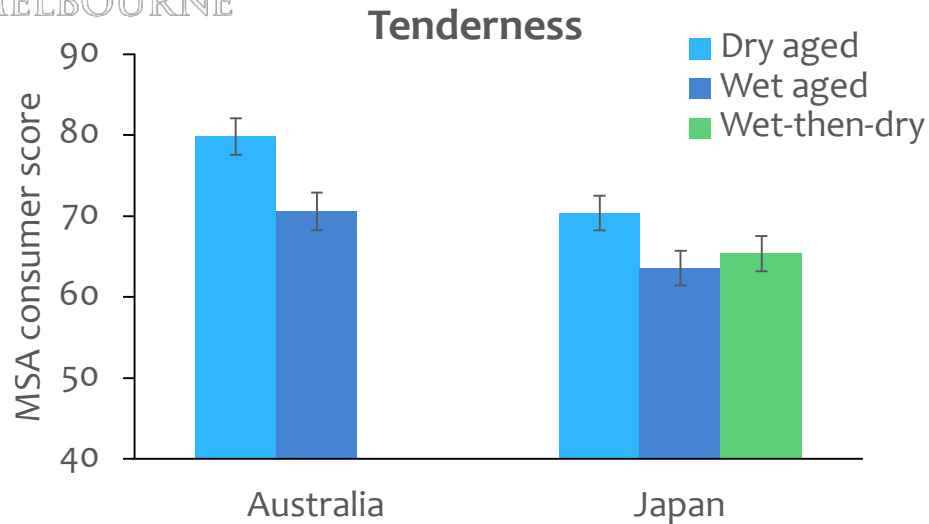




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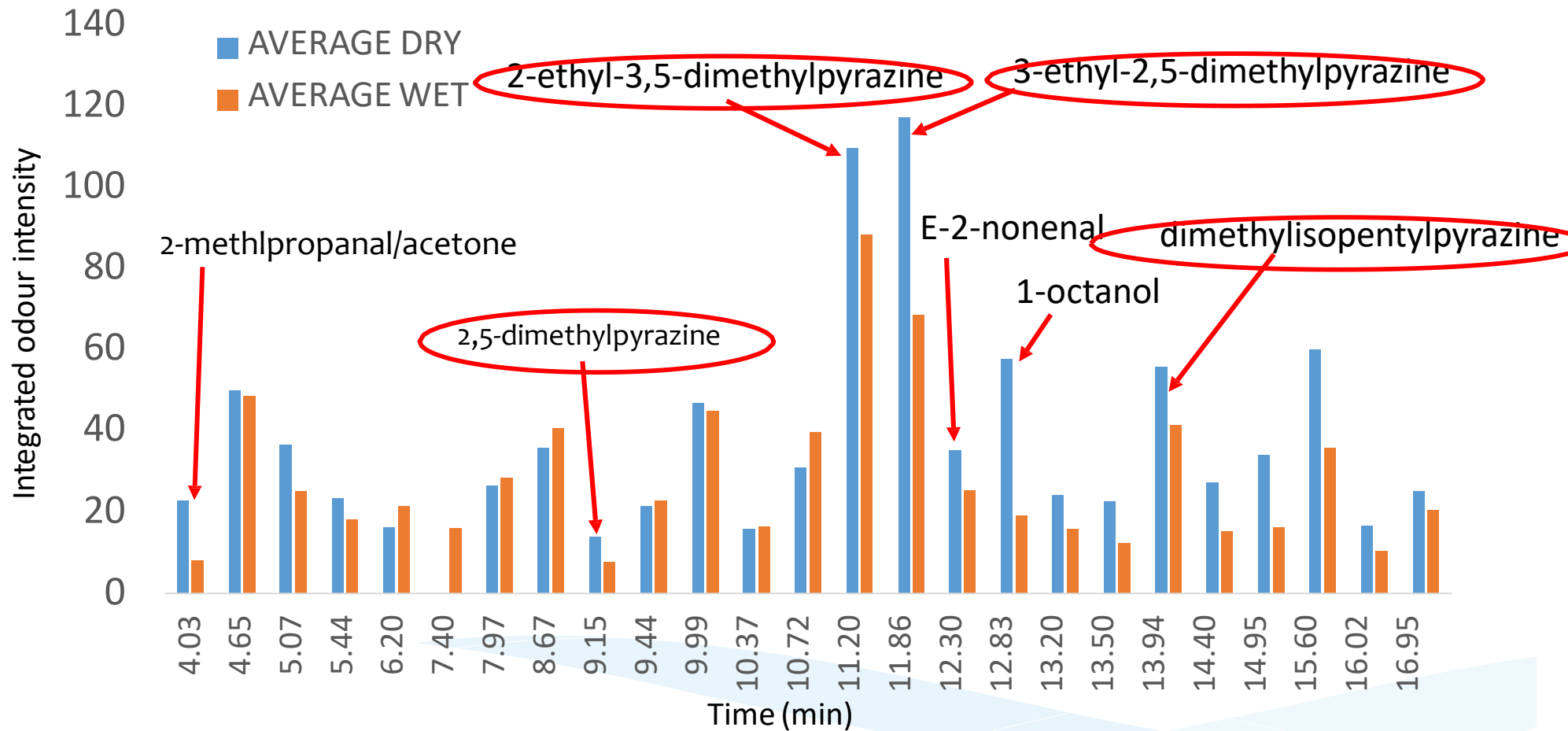
Effect of dry ageing on consumer sensory scores

Ageing method, $p < 0.001$; Ageing method \times country, $p < 0.001$





Gas Chromatography – Olfactometry (35 days aged only)



Pyrazines – involved in Maillard reaction



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Summary

- * Dry aged beef was rated highly among Australian and Japanese consumers
- * Dry ageing of wet aged beef is preferred, relative to the wet aged product – new markets for Australian exported beef
- * Compounds indicative of Maillard reaction (pyrazines) were higher in dry aged samples



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What else did we learn?

- * Product needs to be high quality, reasonable level of fat cover
- * Combination (wet for 3 weeks followed by dry for 5 weeks) had very dark fat colour





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Ongoing research

- * Non-volatiles contributing to flavour difference between dry and wet aged beef loins
- * Further study on muscles and cooking methods is needed to maximise consumer satisfaction in international markets



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Questions???

