

1.4.3 Tropical v temperate, pasture types, seasonality & climate change

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VETS3003



Tropical versus temperate

Most of southern Australia has a temperate type climate with tropical conditions in northern Australia

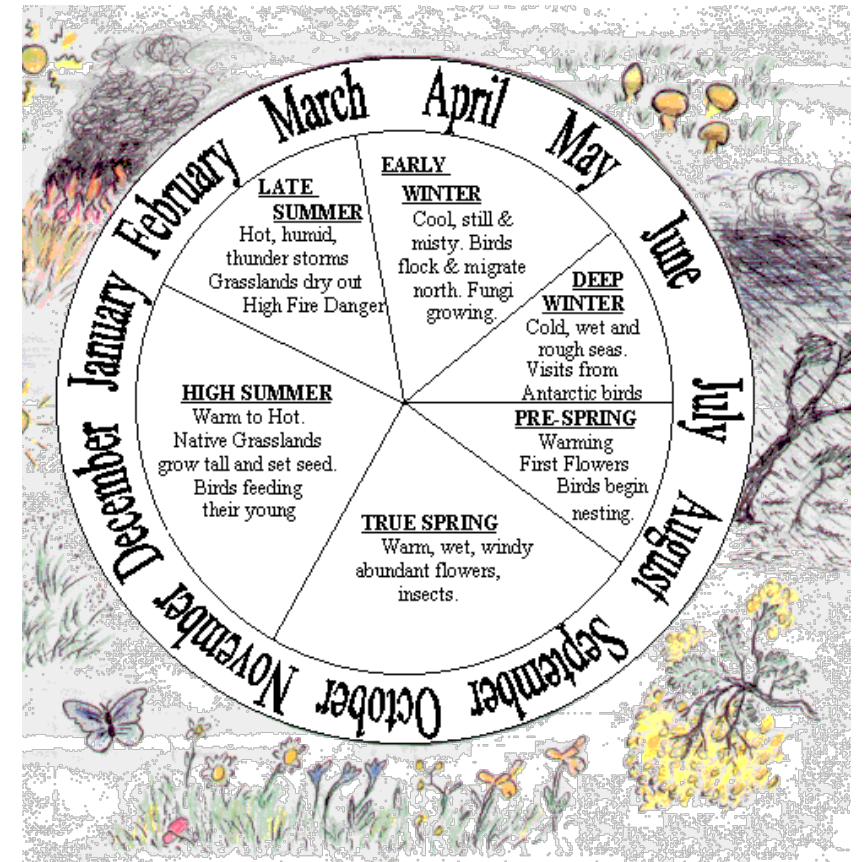
In Victoria we have four seasons (or more, sometimes in one day!) where in far northern Australia there is dry season and wet season and it is generally hot!

In northern Australia wet season normally commences late in calendar year (Nov/Dec) and continues until about April.



Indigenous seasons

- Based on plant/animal/environment
- More seasons
- Varies between different areas



<https://www.herringisland.org/seasons1.htm>

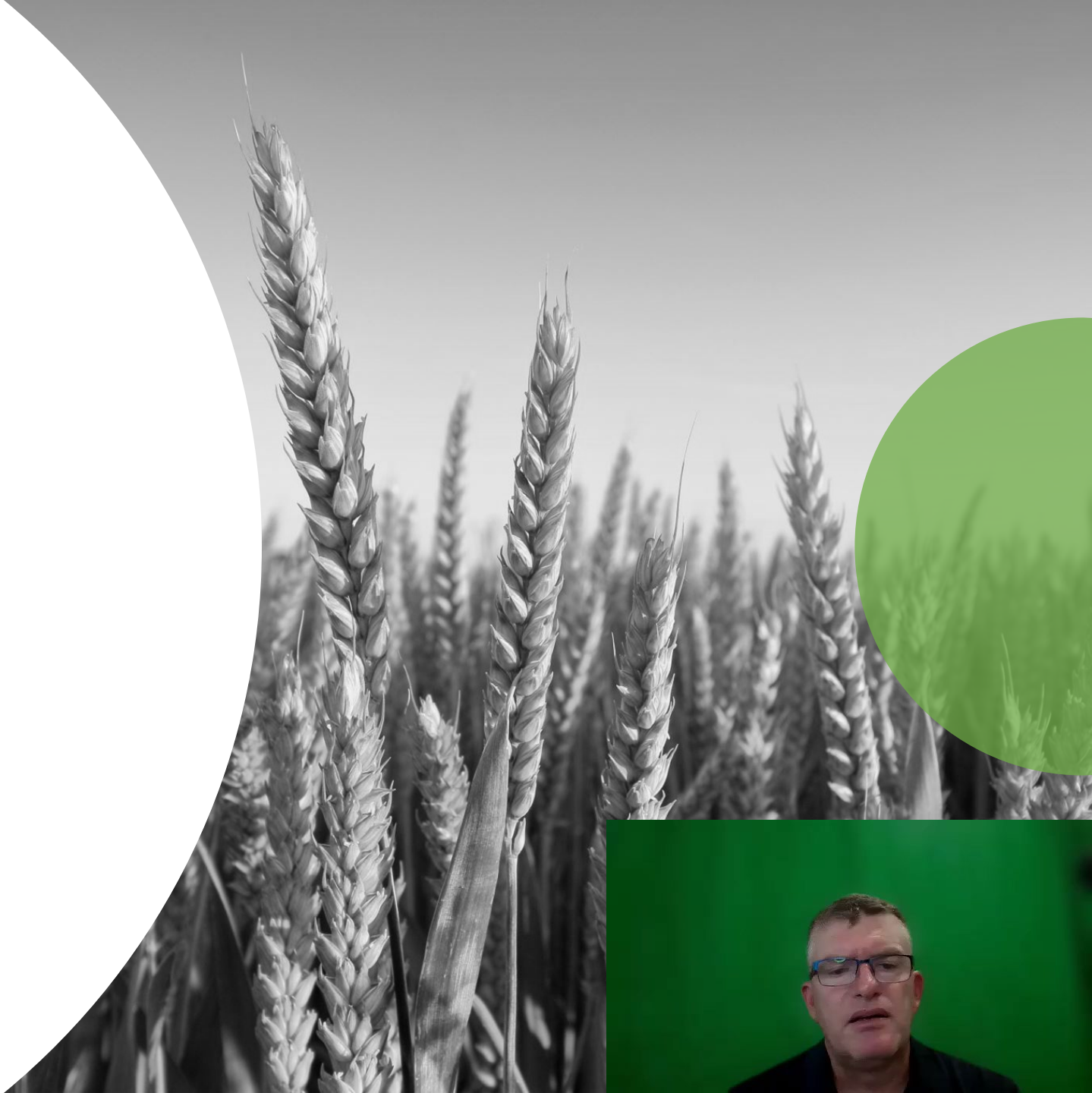
Pasture types

- Wide variety of native and “improved” pastures
- Significant cost to establish new pastures (generally seed, fertiliser and cost of sowing plus lost grazing opportunity)
- Pasture type varies with rainfall (amount and distribution), soil type, temperature – some pastures are annual and some perennial
- Higher rainfall tends to be more perennial (also irrigation)
- Temperate plants (C3) in southern Australia
- Tropically adapted (C4) plants more likely in north



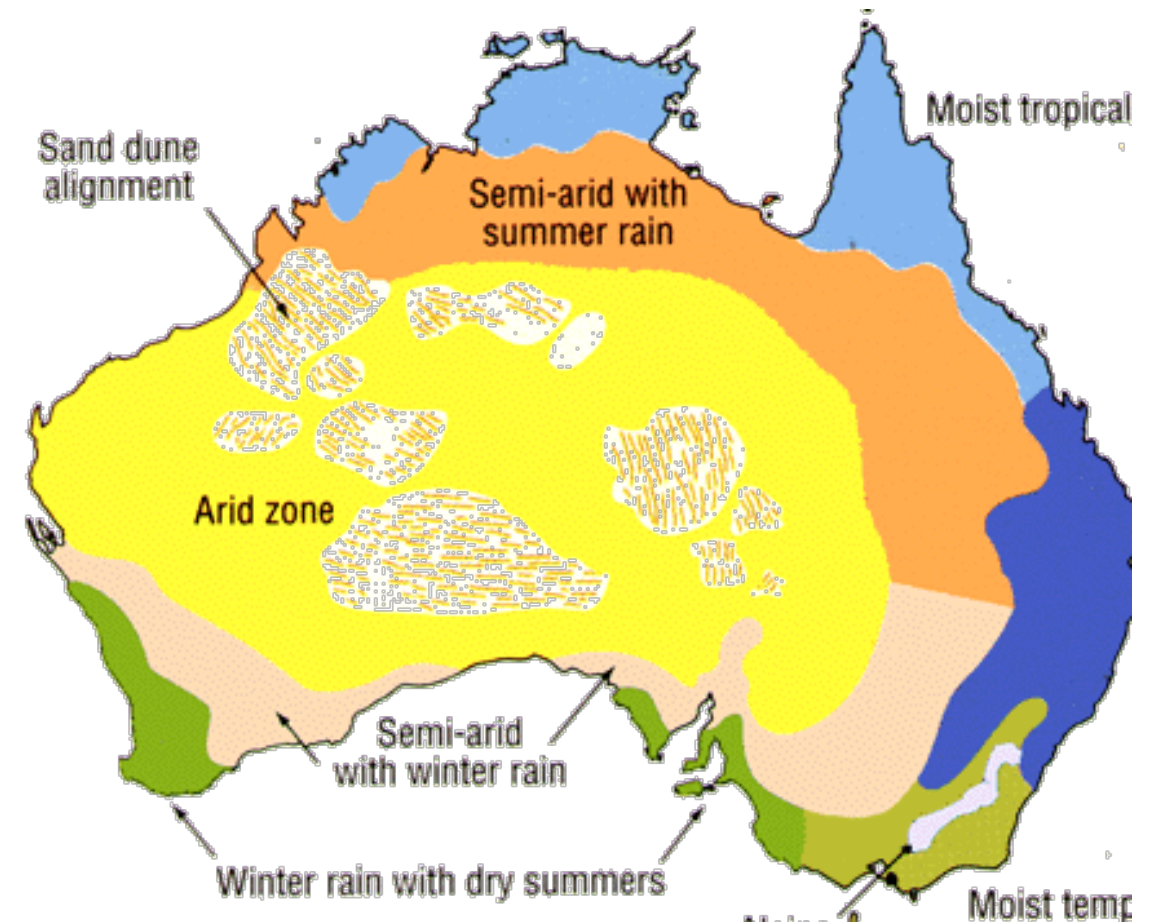
Pasture (cont)

- Mixtures of plants
 - Animal benefit
 - Plant benefit e.g. clover/rye
- Pasture toxicity
 - Ryegrass, phalaris
- Integration of cropping systems



Seasonality

- Annual rainfall
- Distribution rainfall important
- >80% of Australia has ≥ 3 months where no effective precipitation occurs
- This happens during dry season in North (our winter months)
- In South it tends to be Dec/Jan/Feb (summer)



Adapted from AUSMAP Atlas of Australia,



Length of growing season

- Determined by combining temperature data, rainfall data and evaporation data along with soil temperature where minimum temperature may limit growth
- In Melbourne, normally starts in Autumn and continues until late Spring; varies from suburb to suburb as rainfall pattern varies a little
- Some areas of Australia get year round rain so are mostly green while others may only be green for 4-5 months of the year
- This is important to understand as it can limit livestock options without supplementary feed



Climate change

- Variable potential impact on enterprises depending on location in longer term, but already some changes
- Many enterprises adding mitigation for climate change
- Industry working on reducing methane output from ruminants given potency of CH₄ as a greenhouse gas
- Likely to have significant impact across catchment zones for irrigation so significant threat to zones likely to receive less water

