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for

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Wool

Management of Temperate Perennial Pastures for Wool Production: Native vs Improved Species

Produced for the CRC for Premium Quality Wool undergraduate program by;
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Perennial pastures: native vs introduced+improved

- New England region of NSW (Armidale)
- “old” warm season native pasture:
 - dominated by tussocky Poa, interspersed with Kangaroo grass (Themeda), Red grass (Bothriochloa)
- “young” improved pasture:
 - phalaris and white clover, plus fertiliser application
- stocking rates (continuous)
 - 1.9, 3.7 and 5.6 fine wool Merino ewes per hectare

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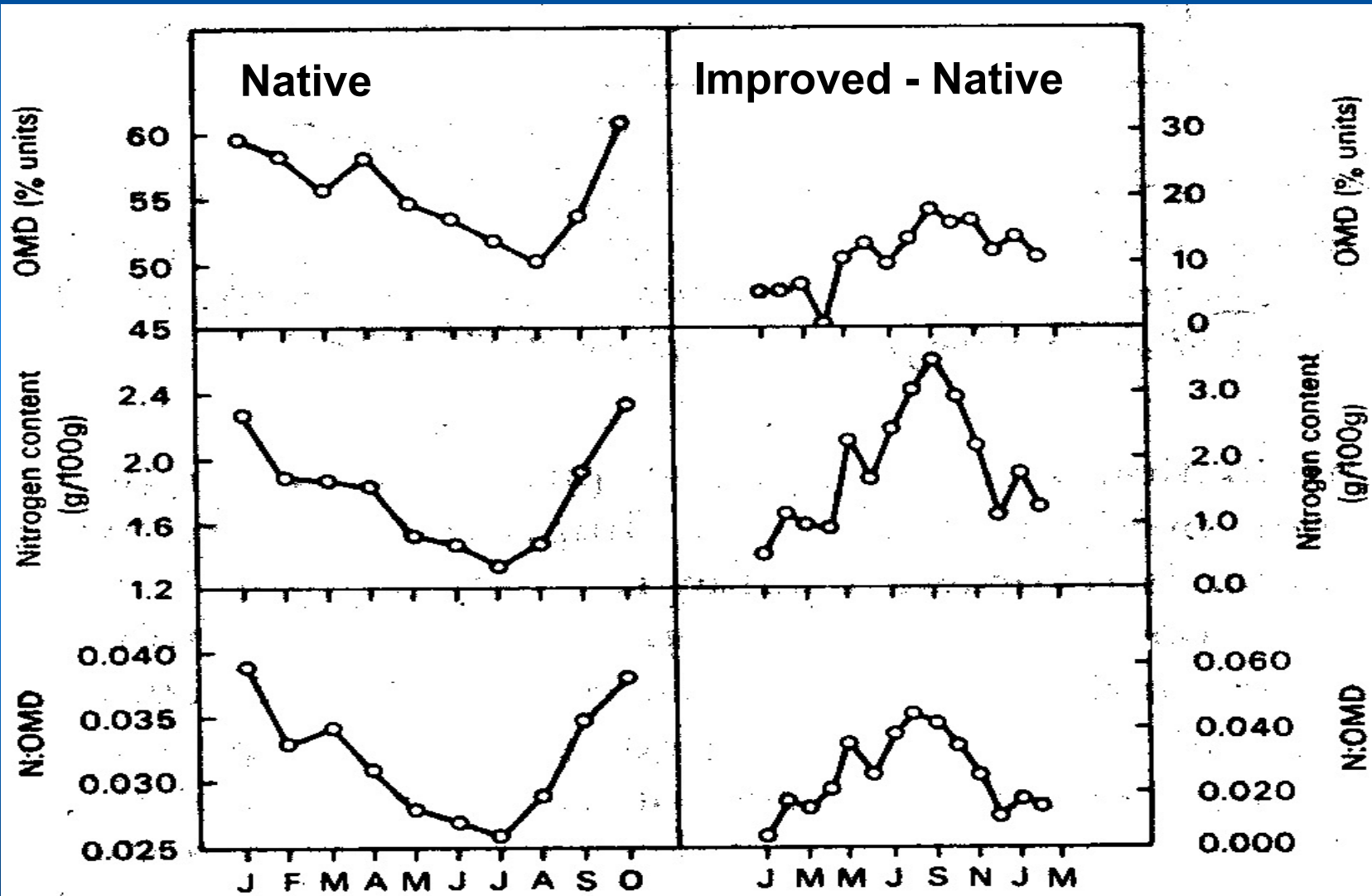
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Seasonal changes in mean organic matter digestibility (OMD) and nitrogen content (N) of diet selected by sheep grazing native pasture, and the difference in the diet between sheep grazing improved and native pasture, adjusted to common stocking rate of 7.2 sheep per ha.



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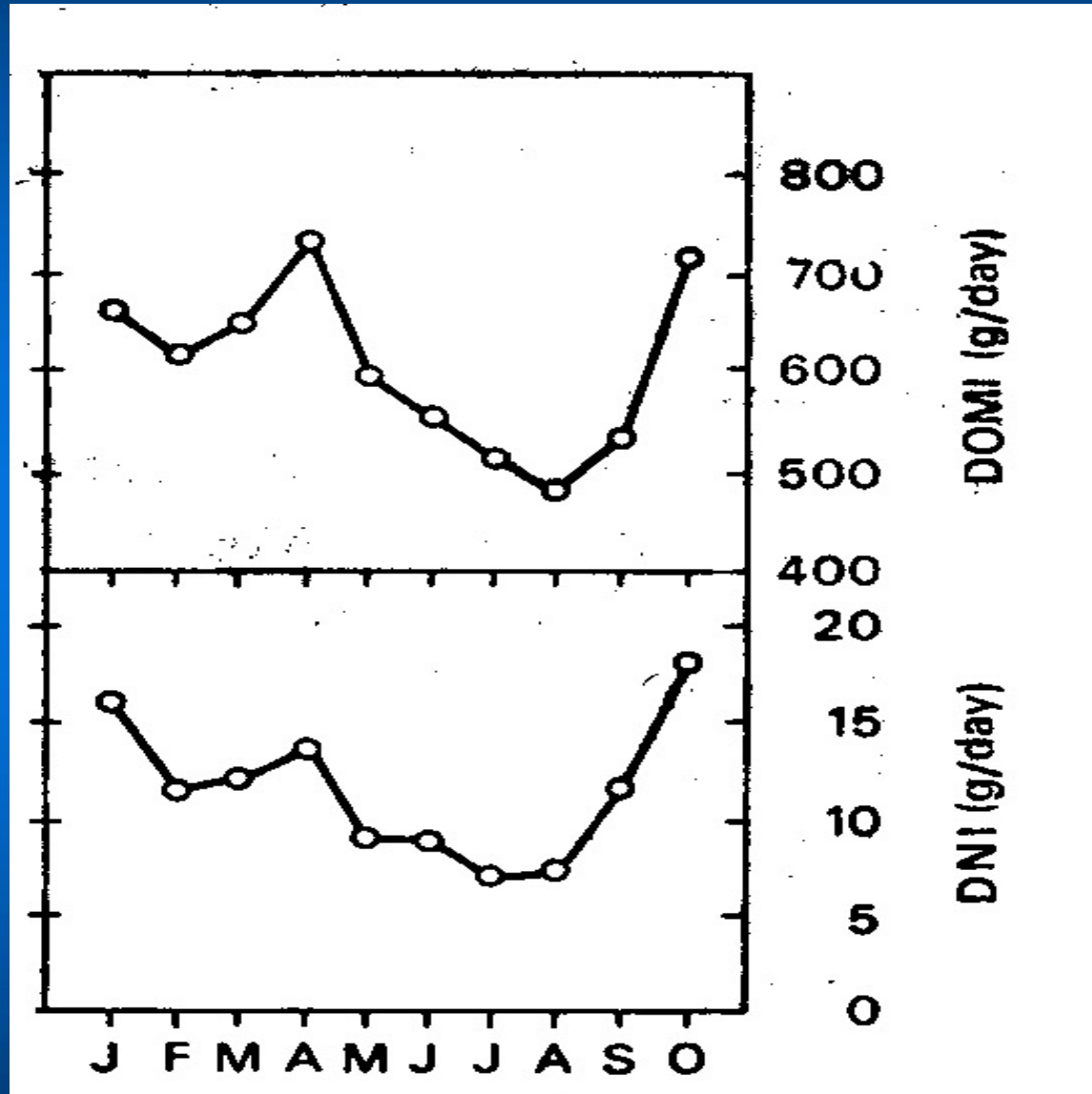
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Seasonal changes in mean digestible organic matter (DOMI) and digestible nitrogen (DNI) intakes of sheep grazing native pasture.



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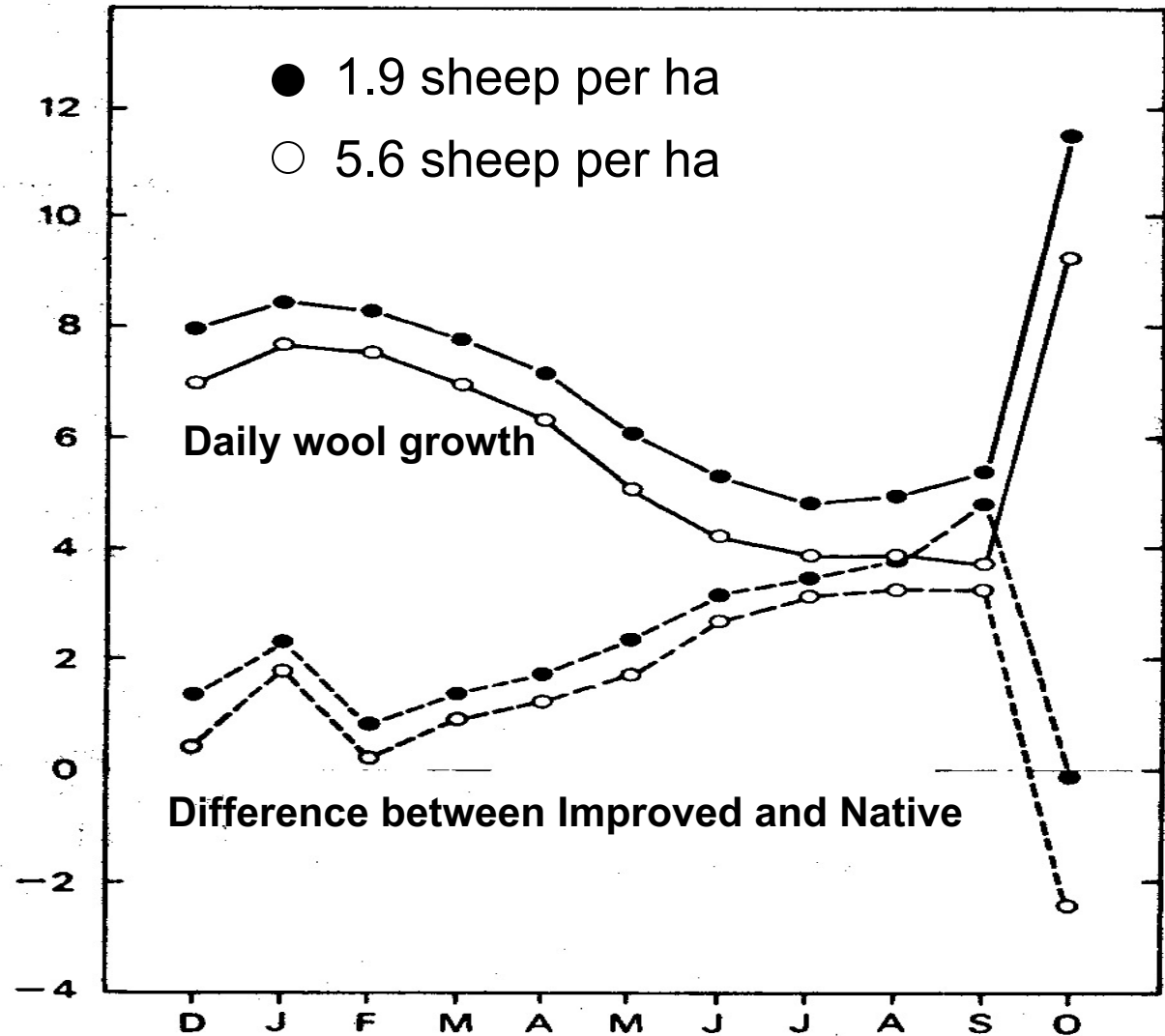
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Seasonal changes in daily wool growth rate of sheep grazing native pasture at 1.9 and 5.6 sheep per ha, and the difference between improved and native pasture at these stocking rates



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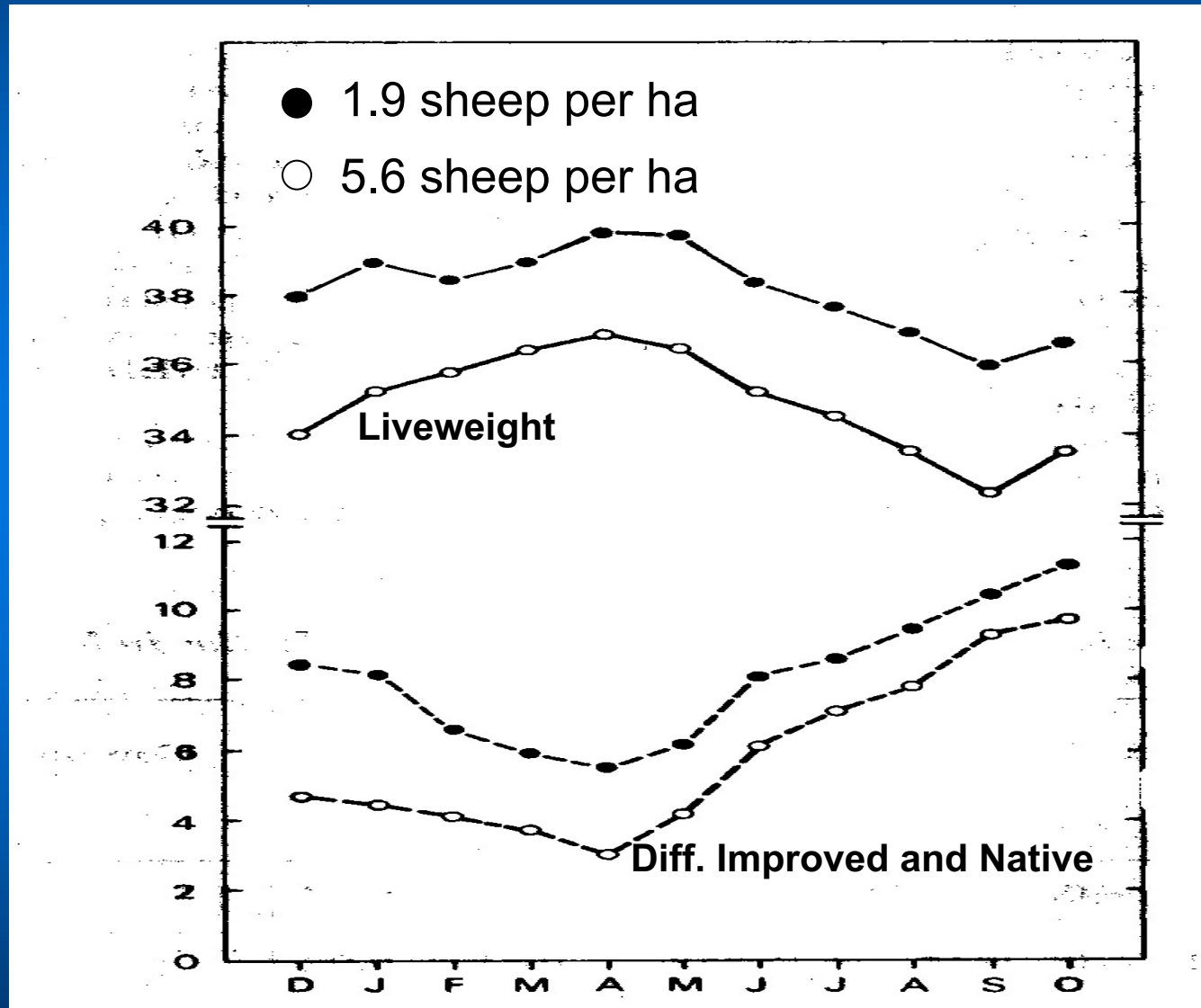
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Source: Langlands and Bowles, (1974)



Seasonal changes in live weight of sheep grazing native pasture at 1.9 and 5.6 sheep per ha, and the difference between improved and native pasture at these stocking rates



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- **As stocking rate increased:**
 - live weight and wool cut per head declined
 - annual rhythm in wool growth rate increased
- **At the same stocking rate:**
 - improved pasture gave 28% higher clean wool per head
 - higher annual rhythm in wool growth rate on native pasture
 - native pasture gave better handle (fineness) but poorer crimp definition
- **At the same wool cut per head:**
 - markedly higher stocking rates achieved on improved pasture:
 - 18 vs 1.9 sheep per ha: 9.5x ↑ wool per ha
 - 22 vs 3.7 sheep per ha: 5.9x ↑ wool per ha
 - 24 vs 5.6 sheep per ha: 4.3x ↑ wool per ha

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