

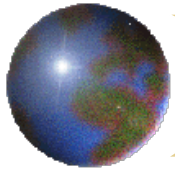
A note on Australia's (and SA's) contribution to global food security

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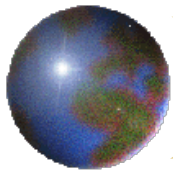
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Crawford Fund for Food Security's Symposium on
Food Security in a Challenging World: SA's Contribution
Waite Campus, Adelaide, 13 October 2026



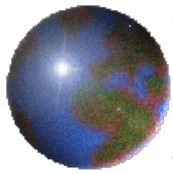
Australia as a food bowl for the world

- ✚ Early European settlers in Australia struggled to feed themselves
 - ▣ a net importer of grain well into 19th century
- ✚ Took until 1870s before Aust wheat export trade was established
 - ▣ although SA was a grain exporter from 1845, & had >50% of Australia's wheat area until 1890s
- ✚ For many decades now Australia, and SA, have been feeding several times their populations



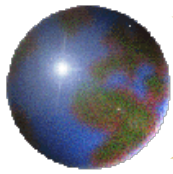
Early European settlement in Australia

- ✿ Majority of settlers were engaged in ag value chain
- ✿ Initially imported ag. technologies, & adapted them
- ✿ They created labour-saving mechanical innovations
 - ✦ Riley's harvester stripper 1843; stump-jump plough 1876
- ✿ Govt developed colleges for agric research and education
 - ✦ Roseworthy 1883; Hawksbury 1891; ...
- ✿ Created state Departments of Agriculture (SA 1902)
- ✿ Universities established agricultural science departments
 - ✦ UofM 1905; UofS 1910; UofWA 1914; UofA and UofQ 1927
- ✿ CSIRO's predecessor was formed in 1916
- ✿ Two-way international sharing of ag technologies & seeds

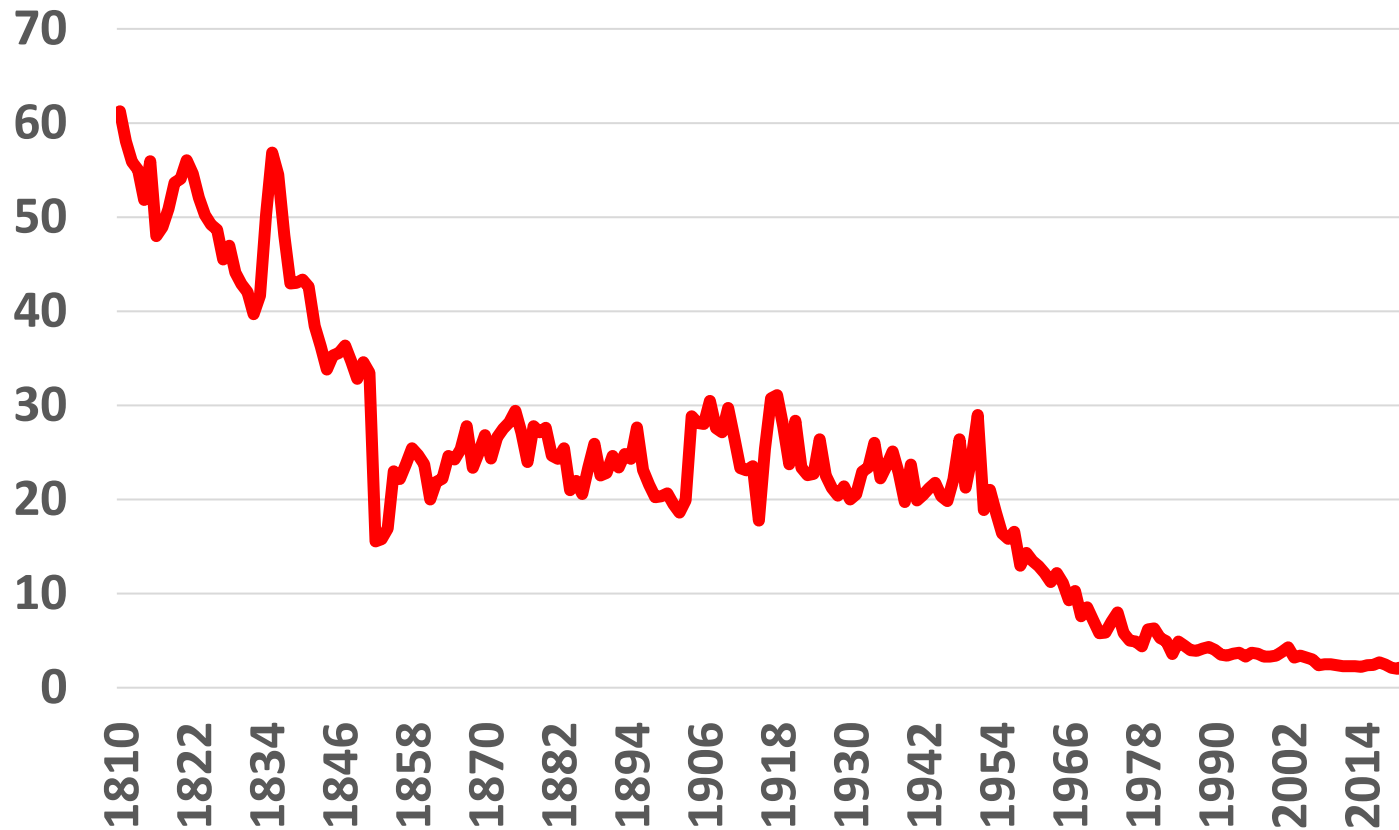


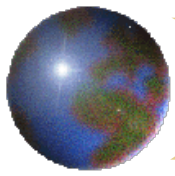
Ag's role in economic development

- ✚ Historically, agricultural activities have dominated primitive economies/societies
- ✚ But industrial and service sectors typically grew faster than the agric sector, so ag's shares of GDP, employment and (usually also) exports decline as an economy grows
- ✚ **But Australia, and SA, are exceptional:**
no decline in ag's share of GDP for 100 years,
from the early 1850s to the early 1950s

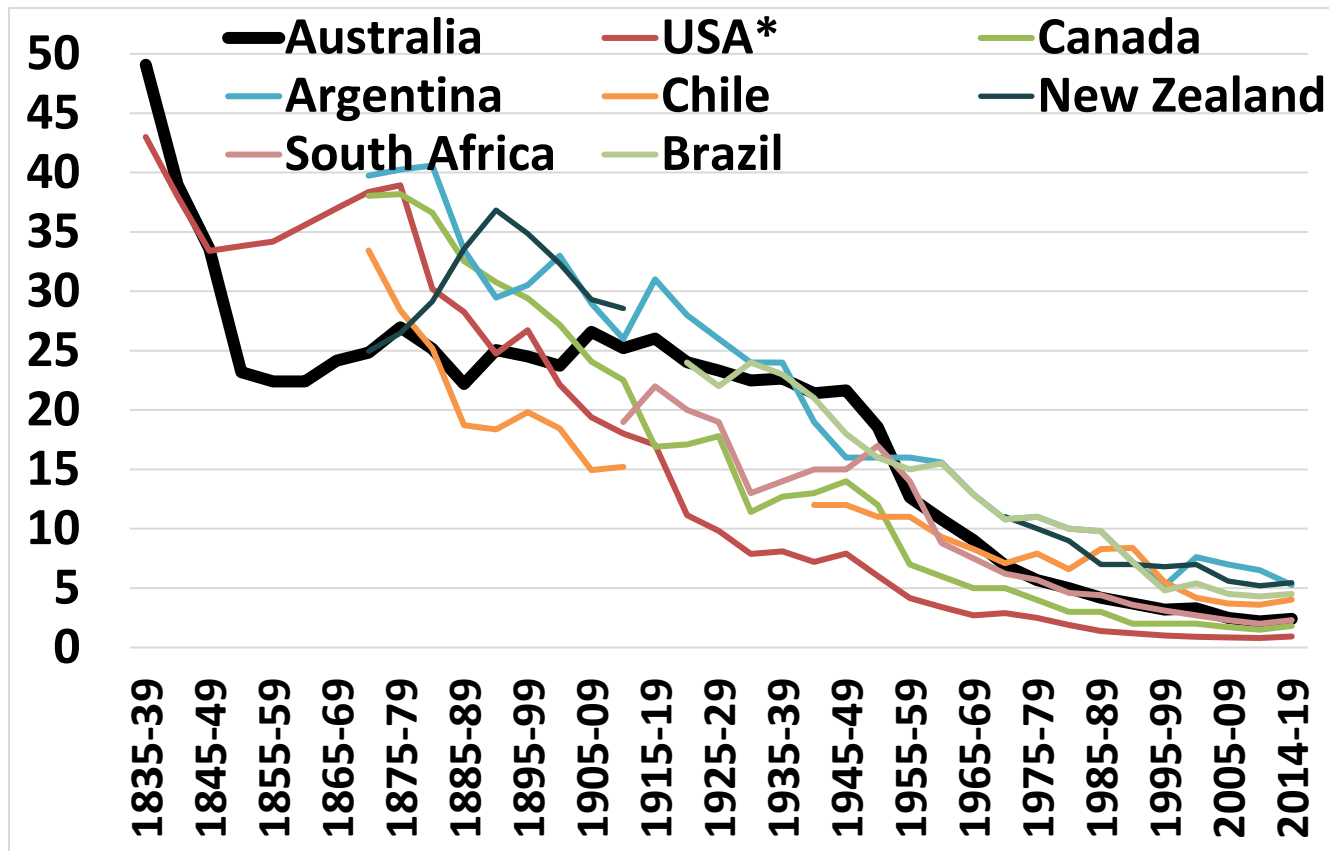


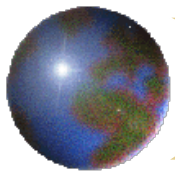
Agric. share of Aust. GDP (%)





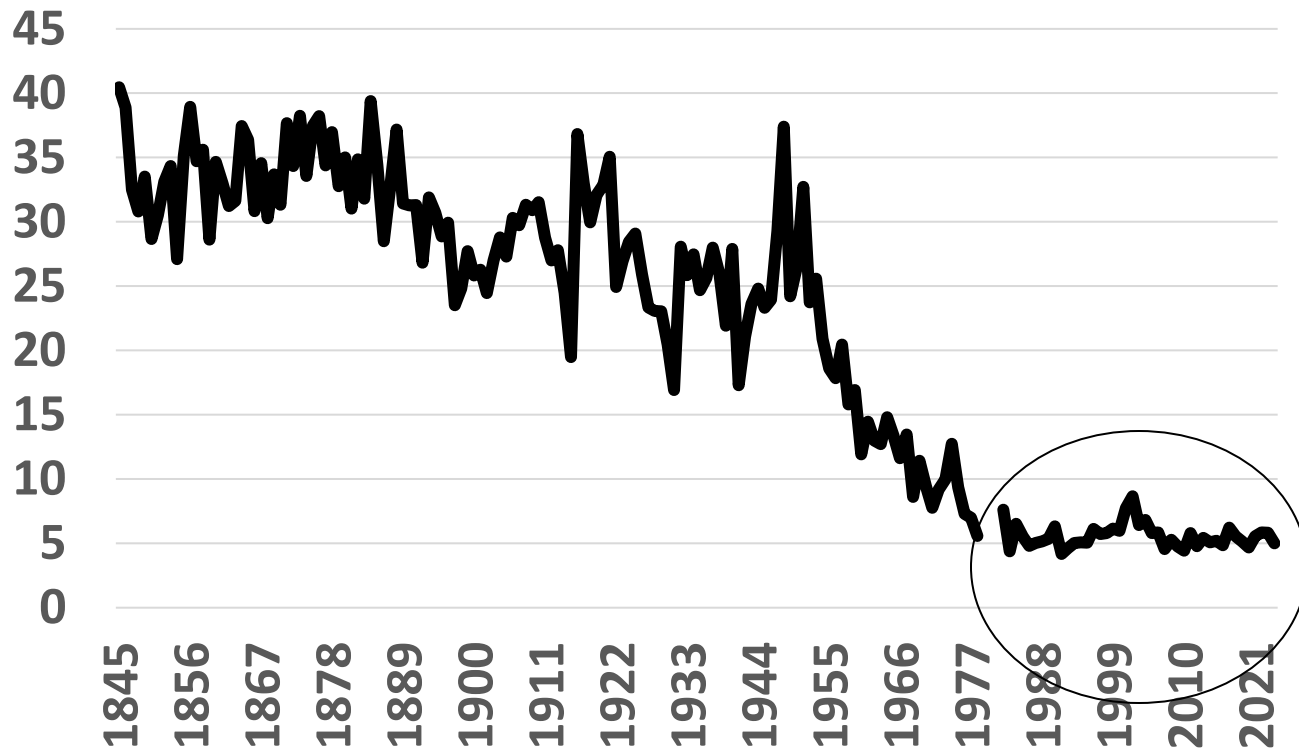
Agric shares of GDP (%): Australia vs other New World

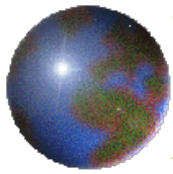




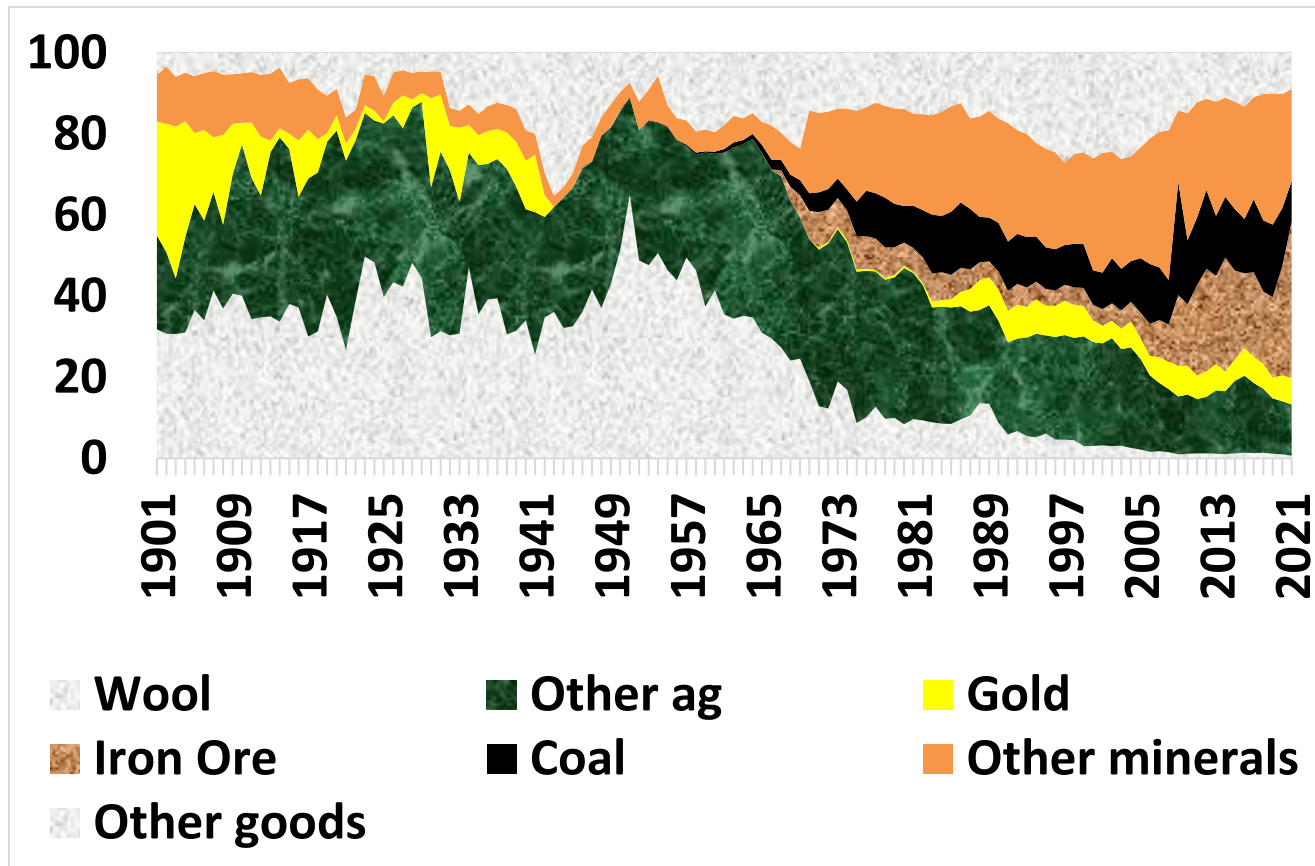
Agric share of GDP (%):

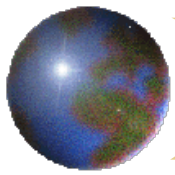
South Australia (also flat since 1980)



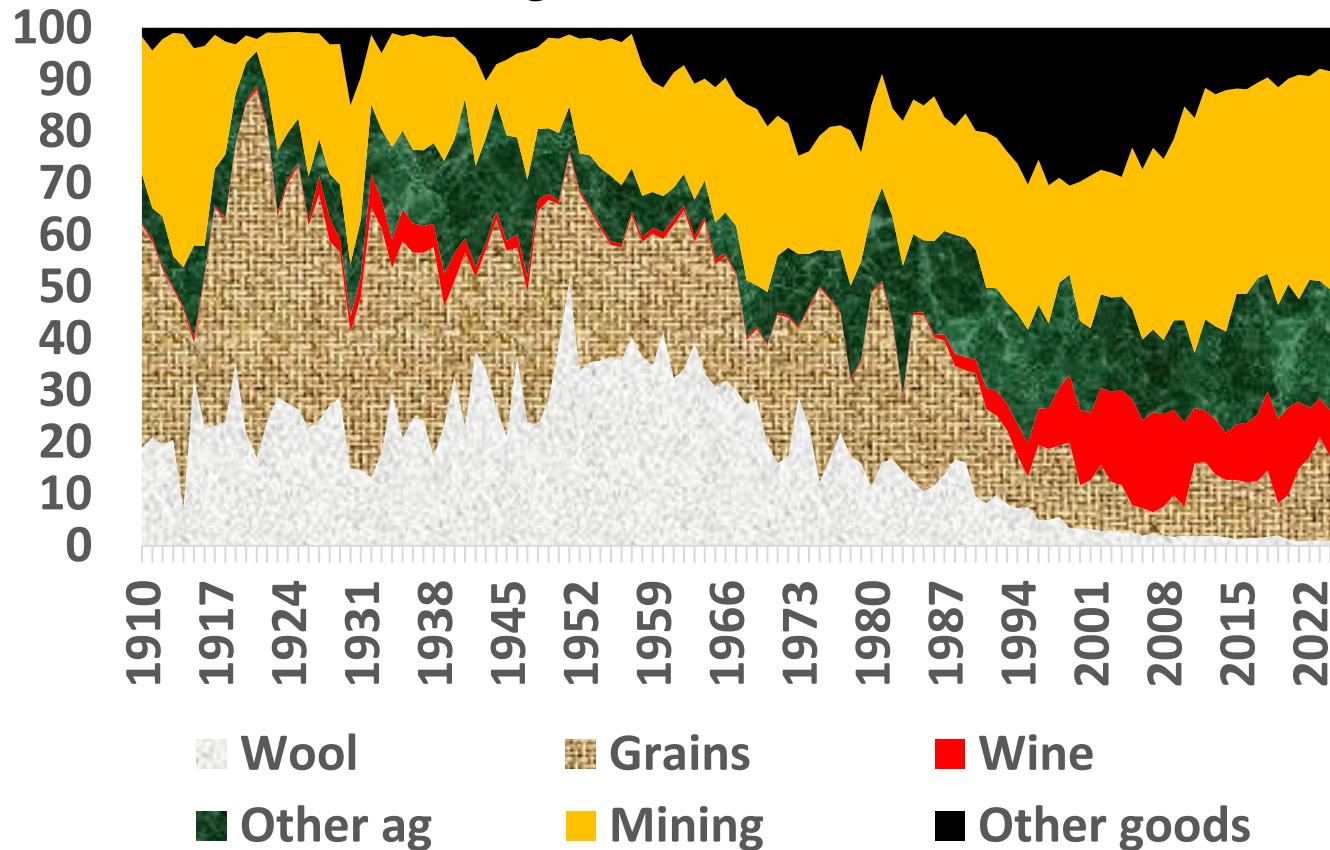


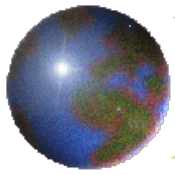
Shares of Aust. exports (%): from Federation in 1901





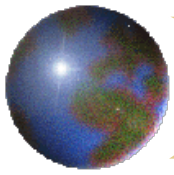
Shares of SA exports (%): from 1910



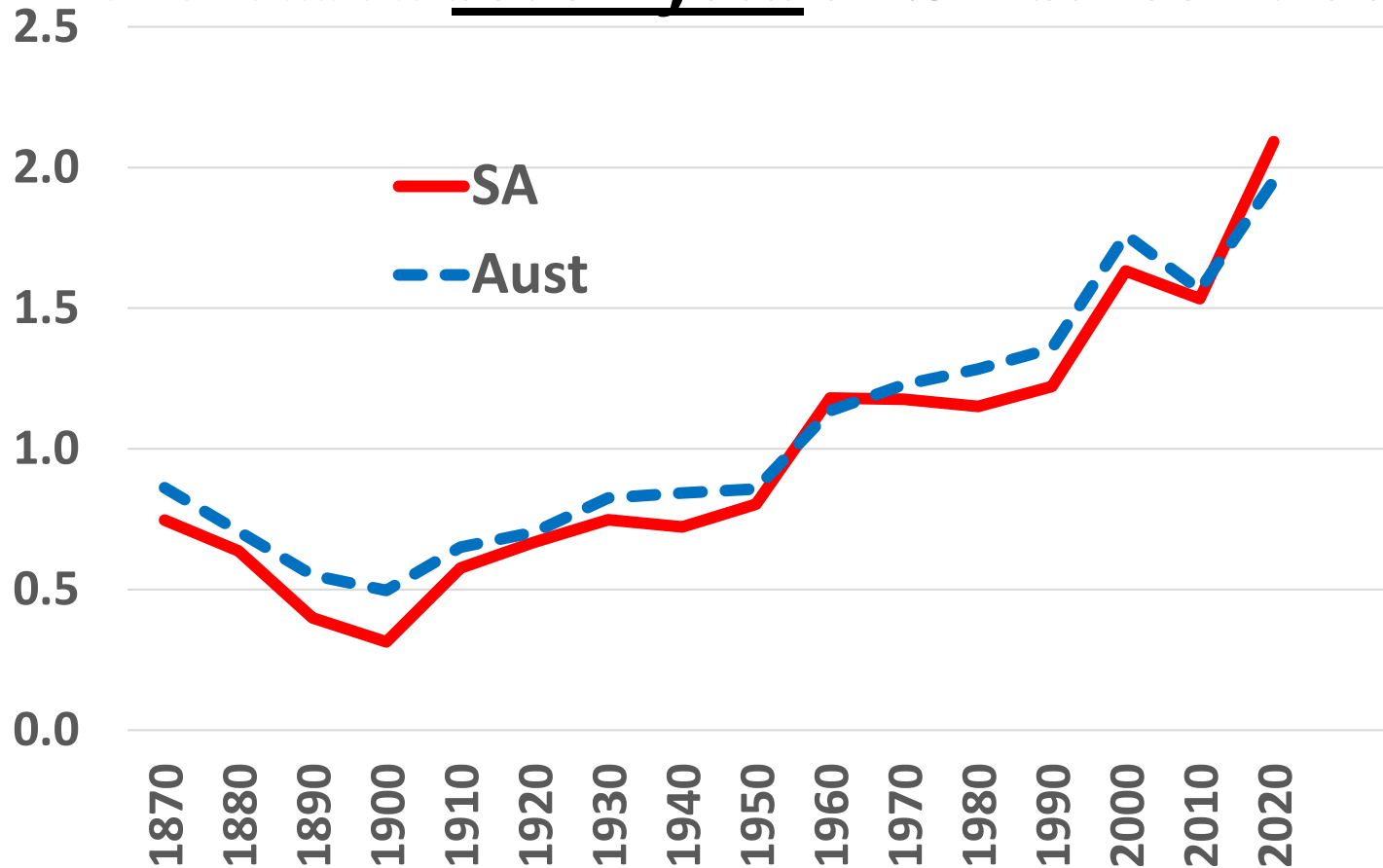


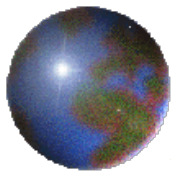
The role of new ag technologies

- ✚ Among the several contributors to the unusually large and persistent contribution of agriculture to the Aust economy were imports of technologies and seeds from abroad, plus domestic ag R&D investments
- ✚ And its persistence in **SA** over the past four decades is due in part to **exceptional farm land, labour & total productivity growth**



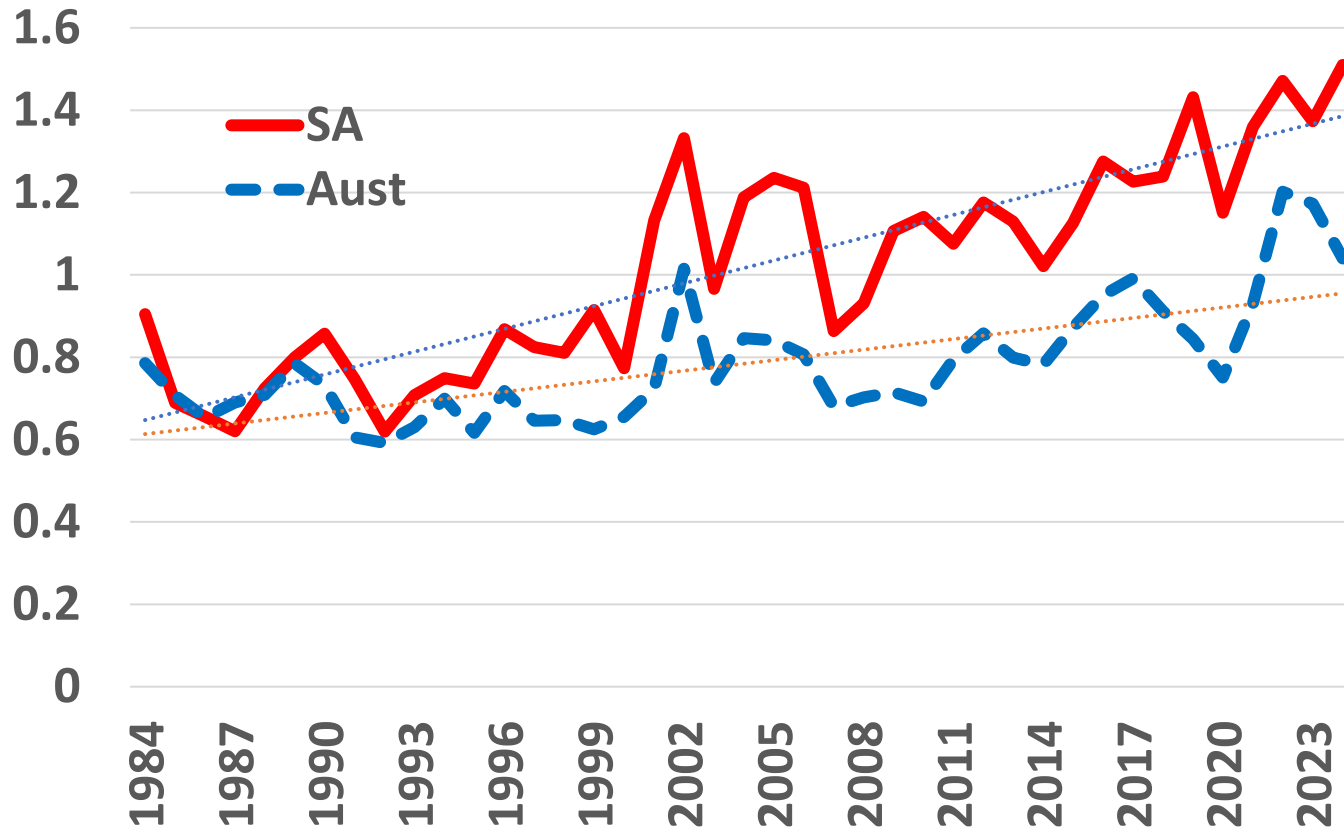
Cropland productivity (wheat yields, t/ha):
increased seven-fold in SA since 1900

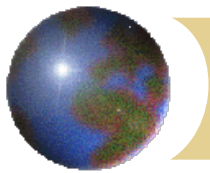




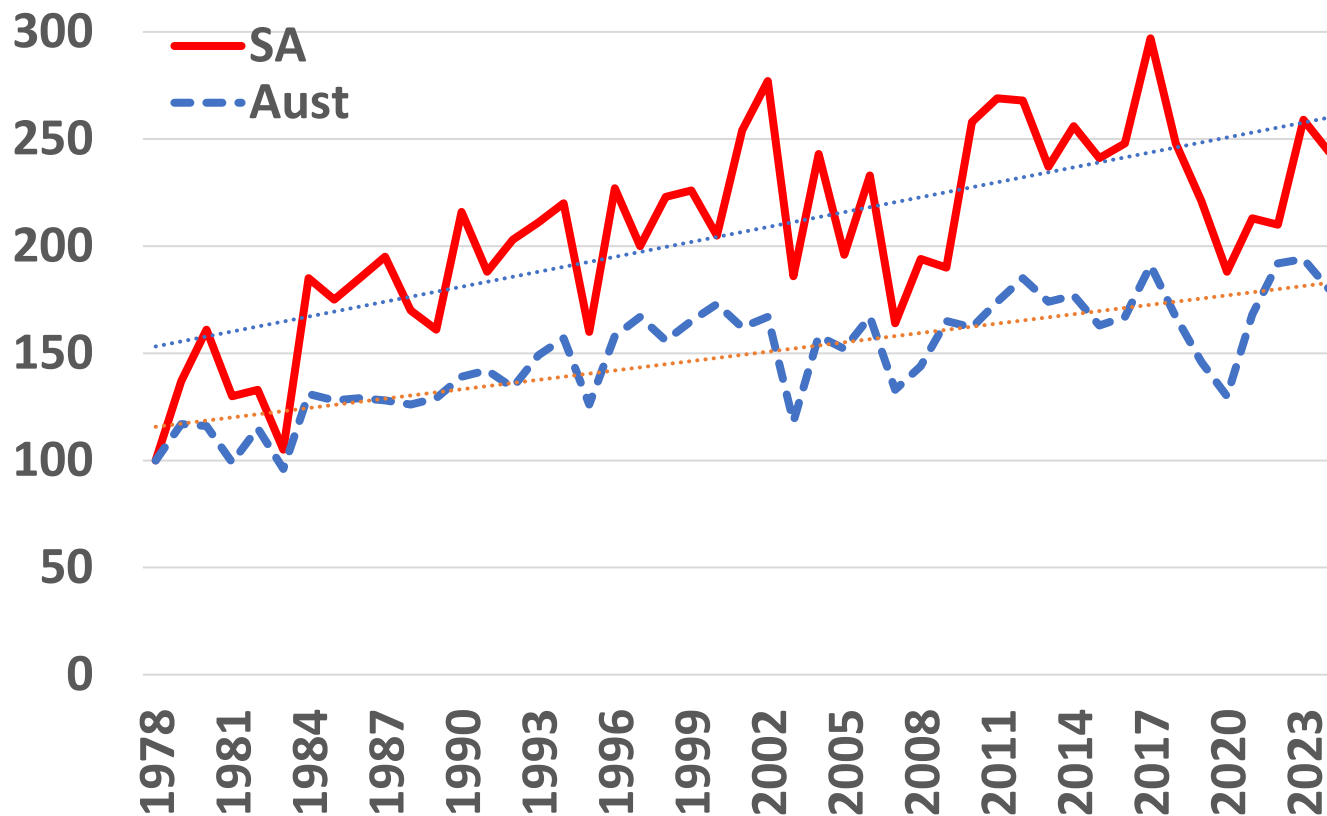
Farm labour productivity: doubled in SA

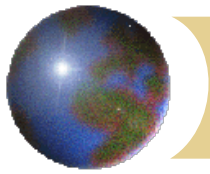
(Ag GDP share/Ag employment share)





Multifactor farm productivity: *doubled in SA since 1980*





References

🌐 **Articles on how and why** (and data availability):

Anderson, K. (2024), "Why Did Agriculture's Share of Australian GDP Not Decline for a Century?", *Australian Journal of Agricultural and Resource Economics* 68(1): 1-22.

<https://doi.org/10.1111/1467-8489.70143>

Data freely available at <https://doi.org/10.25909/33085040>

Anderson, K. (2026), "Forces Behind South Australia's Unusual Structural Changes Since 1840", *Australian Journal of Agricultural and Resource Economics* 70(4) (forthcoming).

<https://doi.org/10.1111/1467-8489.70143>

Data freely available at <https://doi.org/10.25909/3308503>