

The International Comparative Economic Advantages of Multispecies Systems: What's At Stake

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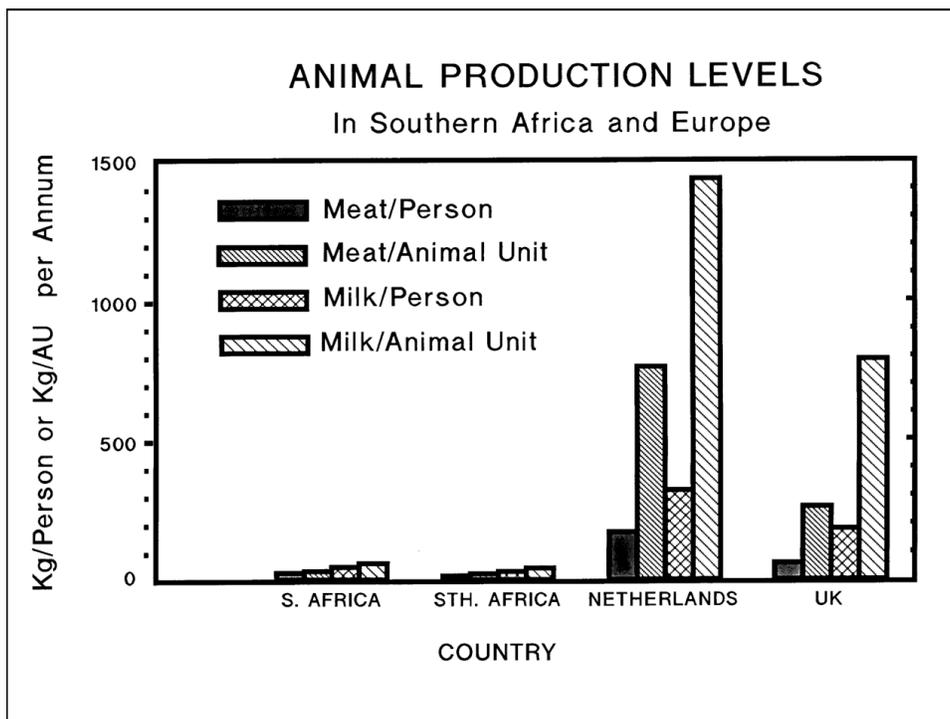
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Animal and rangeland production systems

- Systems have evolved over last two millennia from indigenous extensive multispecies wildlife systems (MS) of >20 species
- To single species (SS) fenced ranching systems over the past 100 years
- The ability of SS systems to meet production *and* conservation goals is questionable in both commercial and communal land use systems

Animal and rangeland production systems

- SS systems cannot meet production levels of meat and milk they seek to emulate or compete with in temperate environments
- Meat and milk production are about 5 per cent of the levels in Europe and North America



Production systems in large semi arid landscapes

- Economic and financial outcomes of land use has focused on Single Species (SS) largely cattle, production systems
- Especially true for subsidized cattle production for export markets
- Consequences, causes and symptoms
 - market failure
 - overstocking
 - bush encroachment
 - disease constraints,
 - Droughts

Animal Production in KAZA TFCA

Sustainable animal production development must consider:

- The KAZA landscape includes an arid or semi-arid eutrophic region with uncertain rainfall
- Characterised by high spatial and temporal variability, increasingly influenced now by climate change
- In higher rainfall areas (Miombo) soils are mostly infertile, leached and low in nutrients with unpalatable plants
- The soils in arid areas are richer but plant growth is constrained by lack of moisture resulting in a lower biomass.
- Livestock numbers are near a ceiling with more humans than livestock units in the region,

BUT

Animal Production in KAZA TFCA

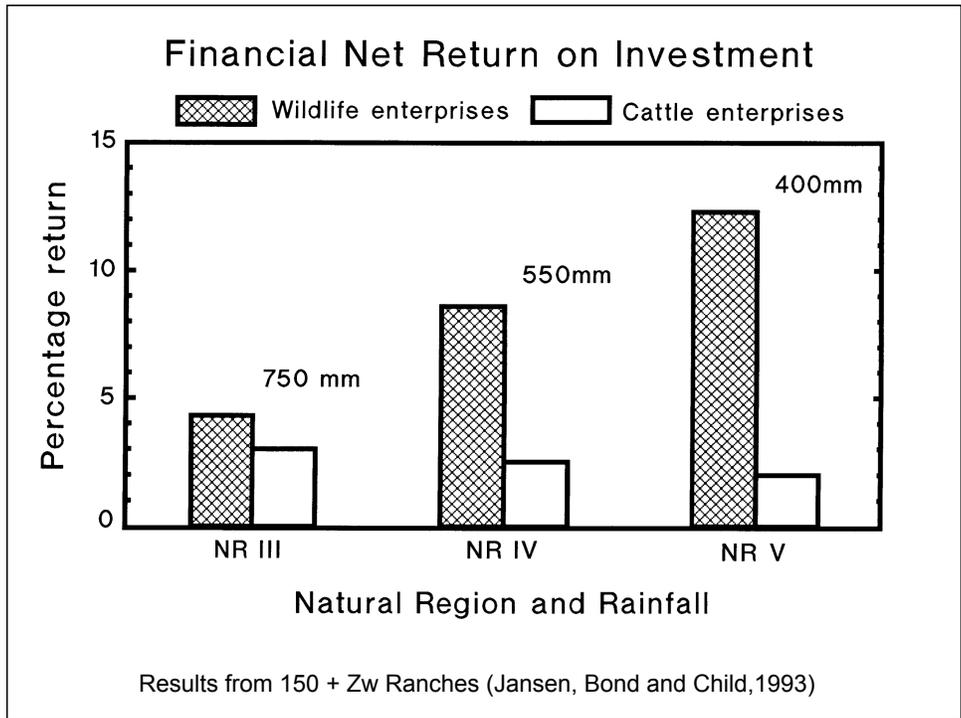
KAZA and the region carry a full range of charismatic large wild mammals that, appropriately managed (with livestock), can provide an unmatched global comparative advantage in animal production

Because

Nature-based tourism already contributes more to GDP than livestock production in Southern Africa

Comparative advantages of wildlife based Multispecies (MS) Production Systems

- Many commercial farmers have switched to mixed wildlife-livestock MS systems, or to wildlife-only MS systems, using nature-based tourism as the economic driver



Disease Issues and Markets

Southern Africa cannot compete in beef exports to Europe?

	Southern Africa ^a	South America ^b
Human Pop Density (people/km ²)	19	19
Agricultural Population (%)	39	10
Meat produced / cow (Kg)	27	45
Meat produced / person (Kg)	16	92

a – Botswana, Namibia, South Africa, Zimbabwe
b - Argentina, Brazil, Uruguay

Southern Africa's Comparative Advantage is its Wildlife
e.g. Nature based tourism > Agriculture + Forestry + Fisheries in SA

Source: Cumming & Atkinson (2012)

THE BIG FIVE
Where else in the World?



Or THE BIG SIX