

Managing the balance

production, landscape function, profit and consumption

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Landcare Farming Forum, 2007

AIMS

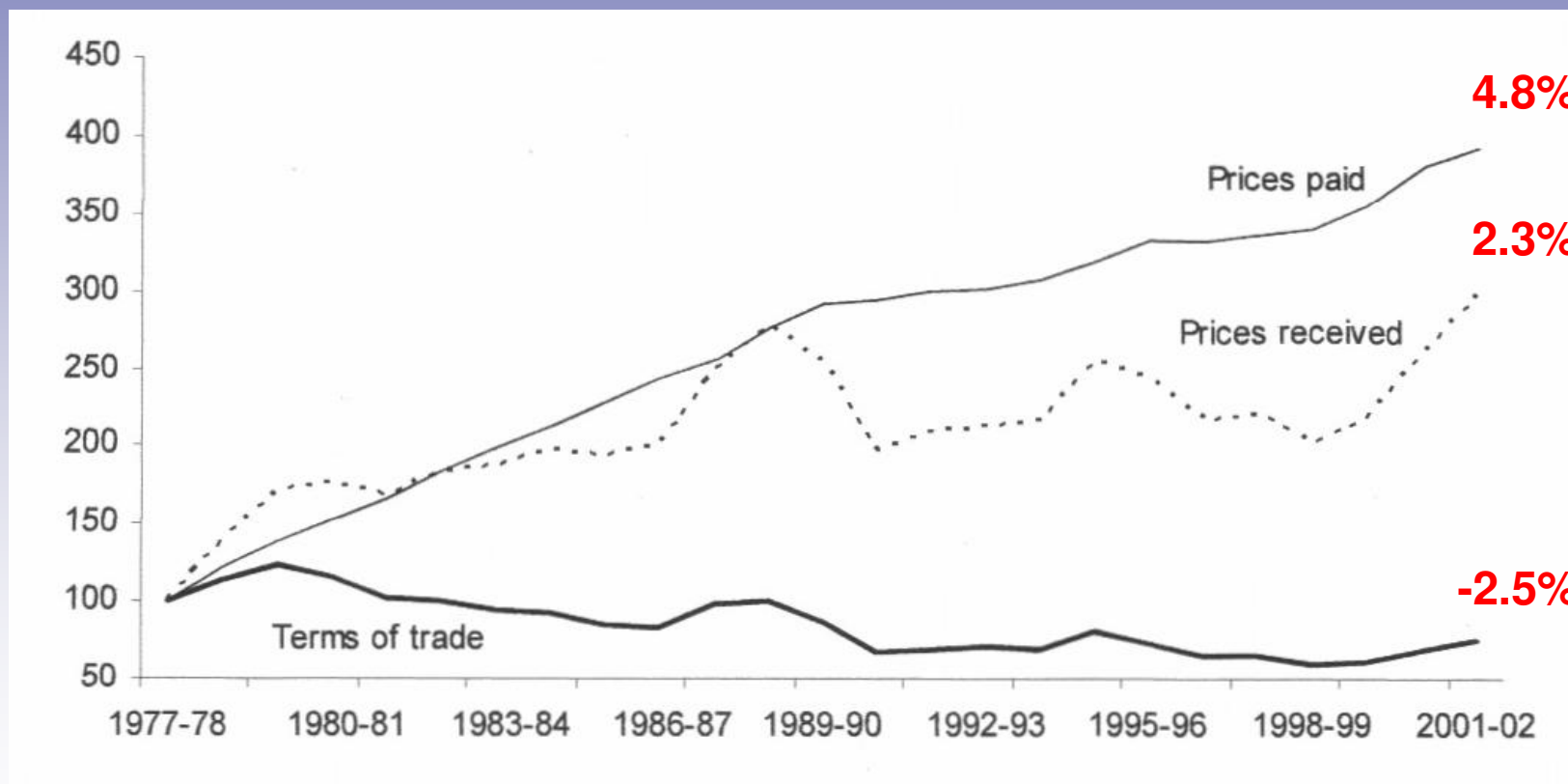
Agricultural Information
& Monitoring Services

Broadacre agriculture

- Most farmers are price takers
 - dependent on world markets
- Real cost of inputs has increased steadily
- Real price of commodities has increased more slowly and sporadically
- Net effect is a decline in terms of trade
 - 50% over the period 1977 - 2002

Terms of trade broadacre farms

1977-78 to 2001-2002



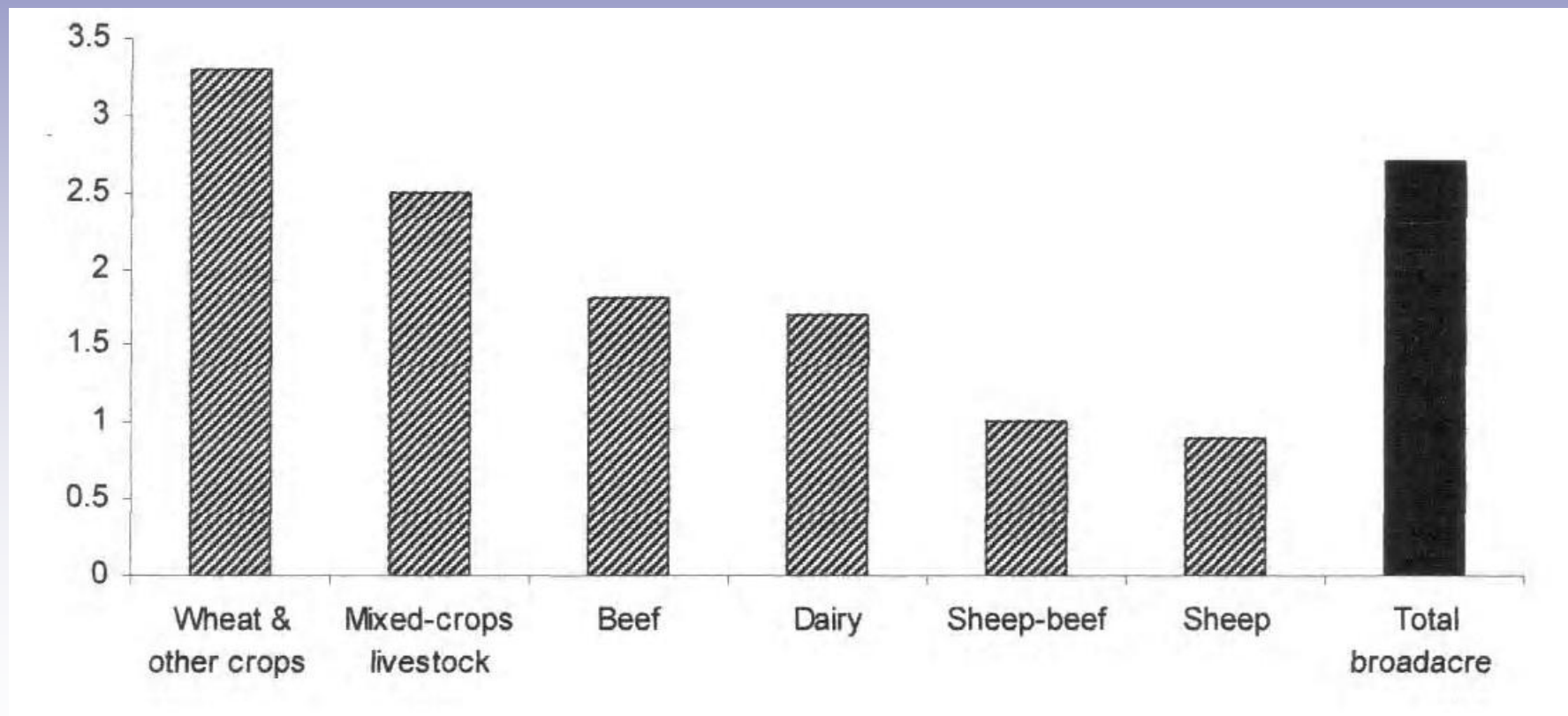
Source: *ABARE Farm Surveys*

Response to decline in terms of trade

- Increase productivity growth
 - efficiency with which inputs are used to produce outputs
- Productivity growth
 - labour productivity
 - capital productivity
- In a way that limits exposure to risk

Productivity growth varied among enterprises

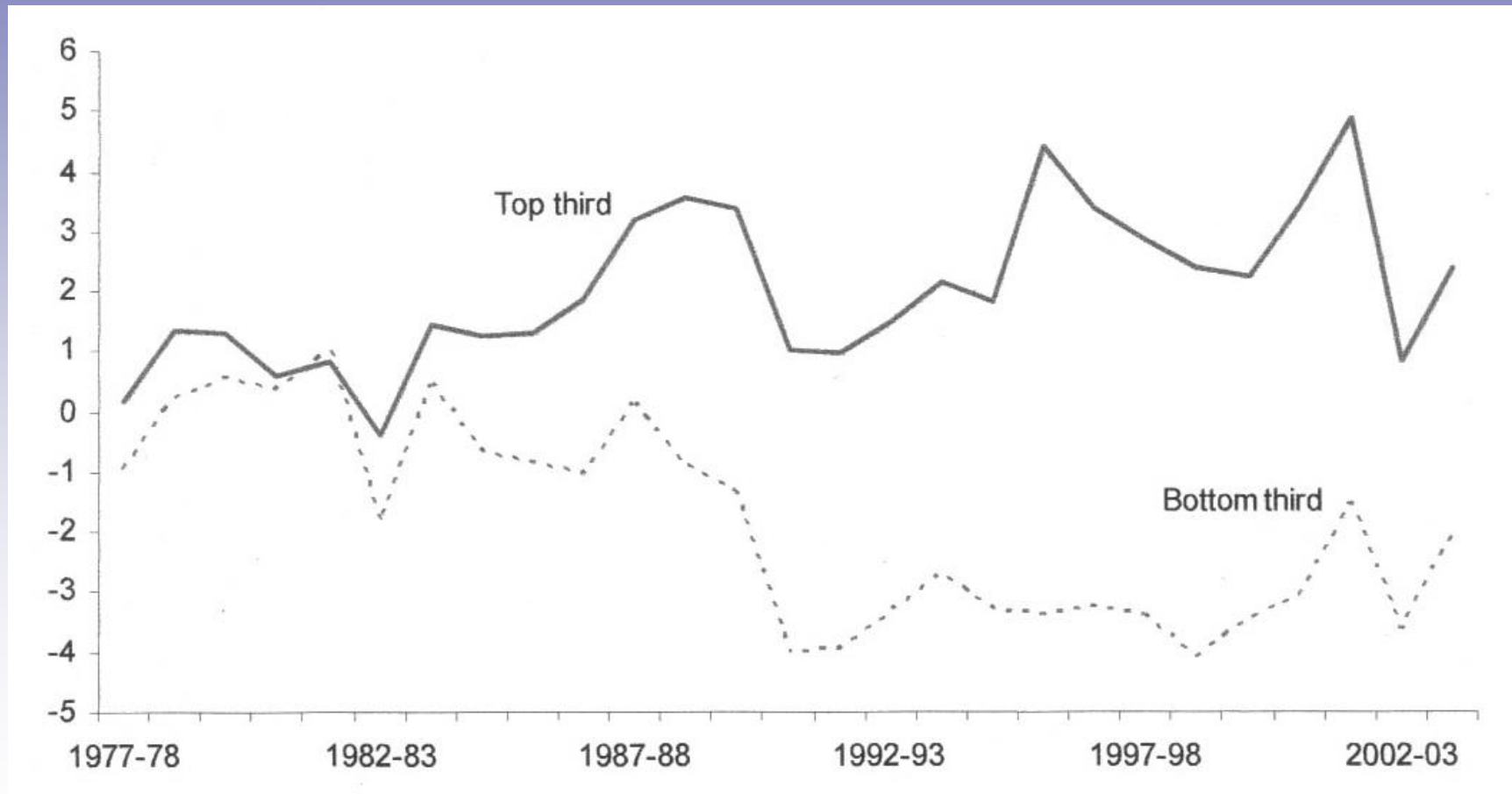
1977-78 to 2001-2002



Source: *ABARE Farm Surveys*

Rate of return varied among farmers

1977-78 to 2003-2004



Source: *ABARE Farm Surveys*



Run-down in capital assets



Run-down in natural assets



Producer's managing the balance

- Desire to make a change and take control
 - hard to know what is possible
 - perception that every farm is different
 - defining what you want
- Taking control of the grazing process by allocating animals to the landscape
 - planning and budgeting
 - spatial allocation, absolute numbers & timing of events
- Management responding to the seasons
 - flexibility
 - risk management
- Quantifying performance to identify response

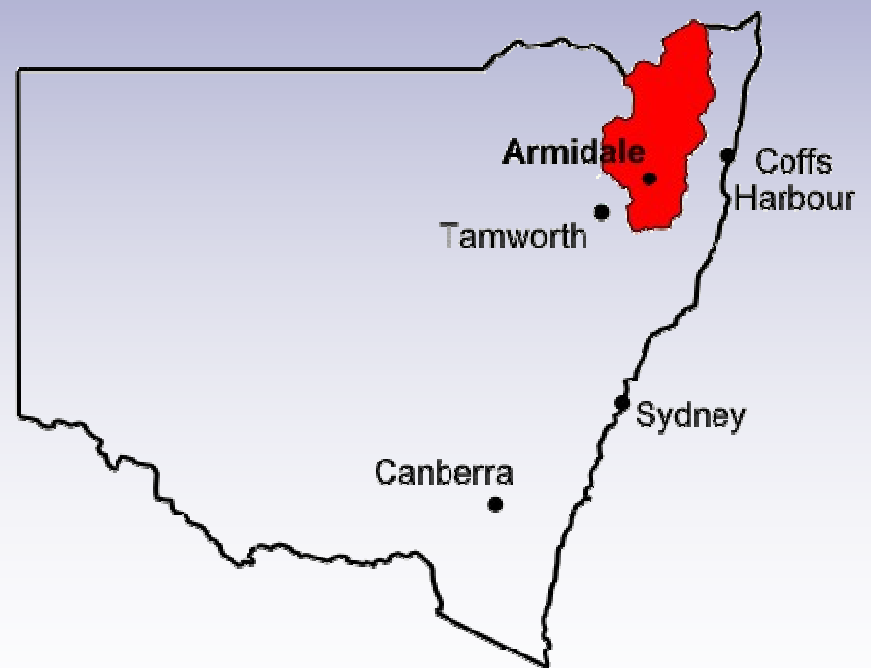
Managing the balance

case studies

Mid-north South Australia

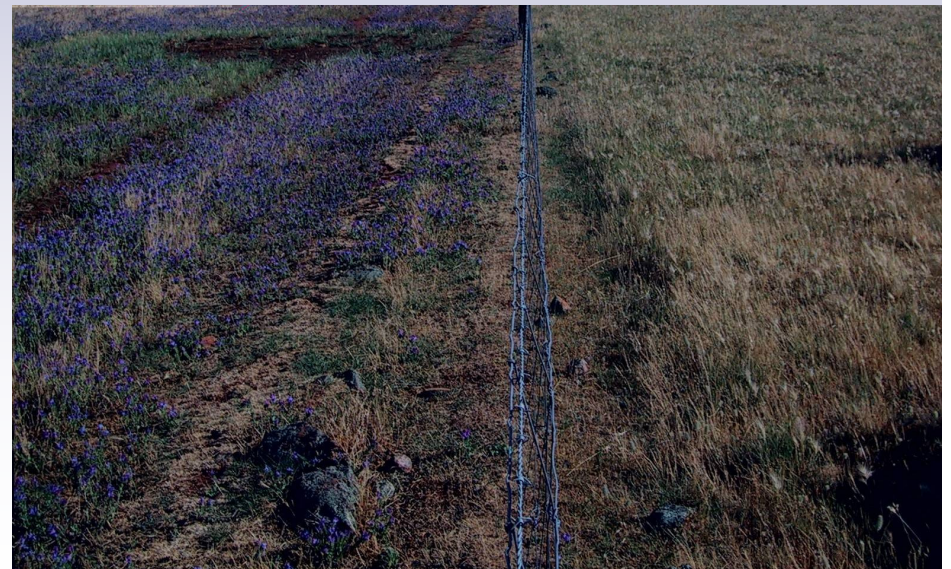


Northern Tablelands NSW



Management

- Empower producers
- Paddock subdivision
- Mob aggregation
- Grazing plans
- Pasture allocations
- Feed budgets
- Manage on-farm risk



Measurements

- Production
 - animals
 - pastures / grasslands
- Landscape function
 - perenniality
 - bare ground
 - rainfall infiltration
- Profit
 - gross margins



Managing the balance

case studies

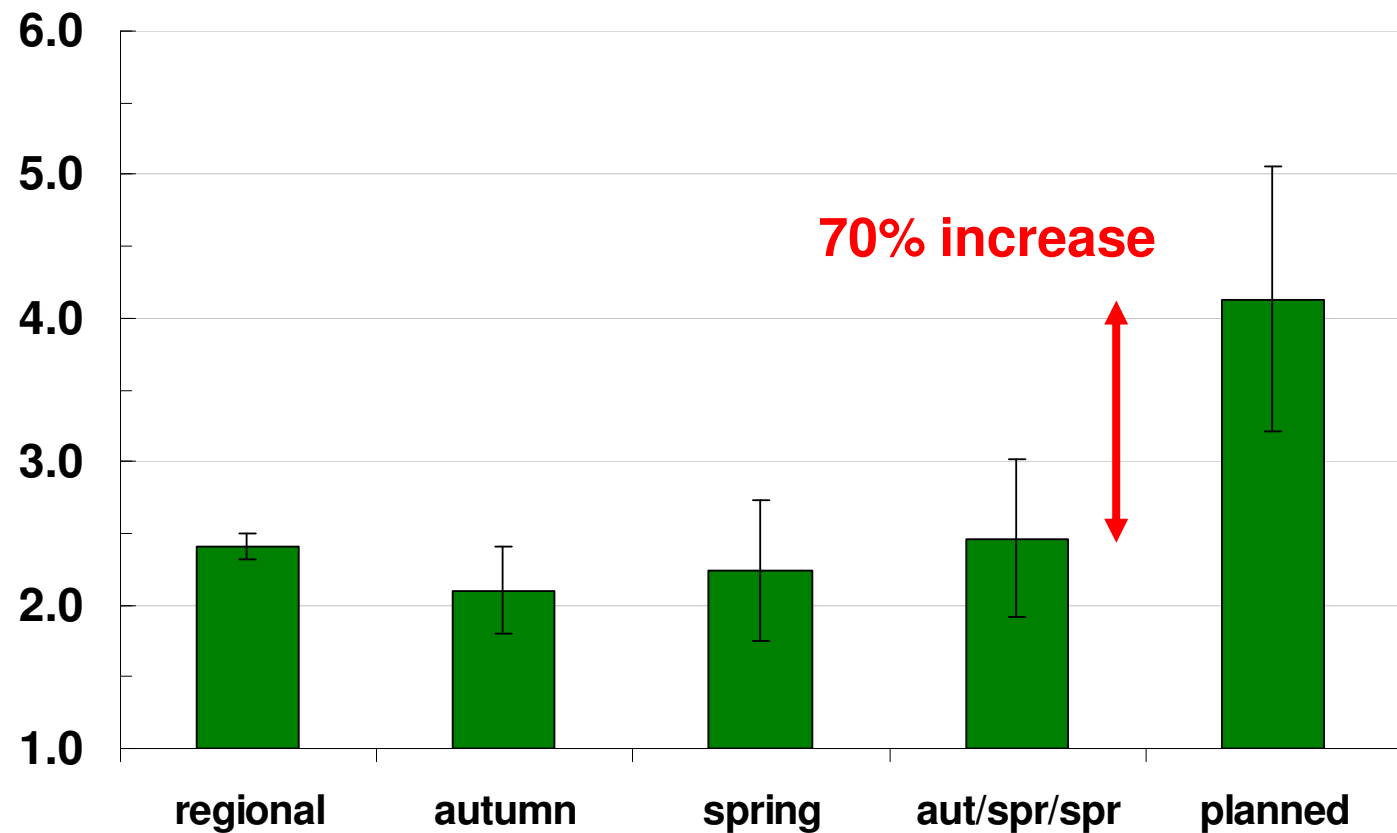
Mid-north South Australia



Planning led to an increased stocking rate

Mid-north South Australia 2001-2005

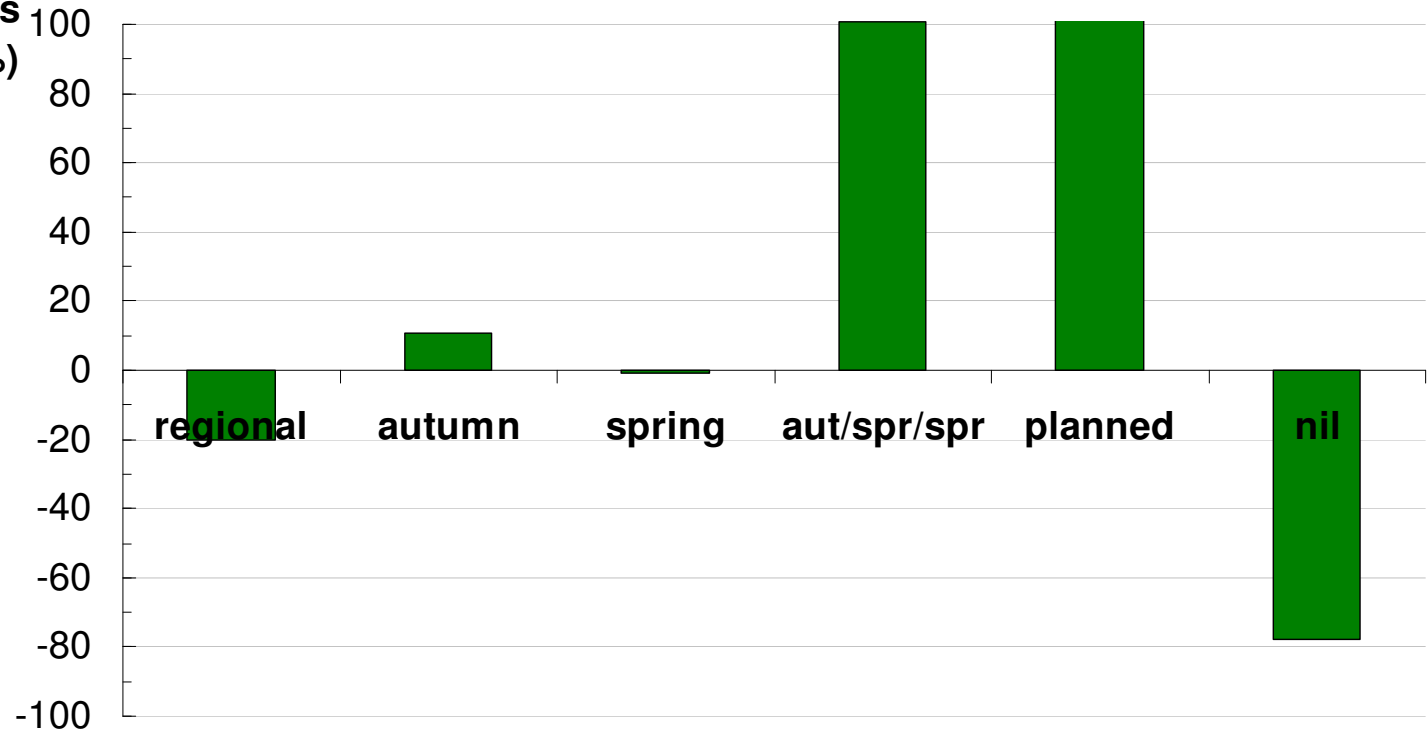
Annual
stocking rate
(DSE/ha)



Planning led to an increased cover of native perennial grasses

Mid-north South Australia 2001-2005

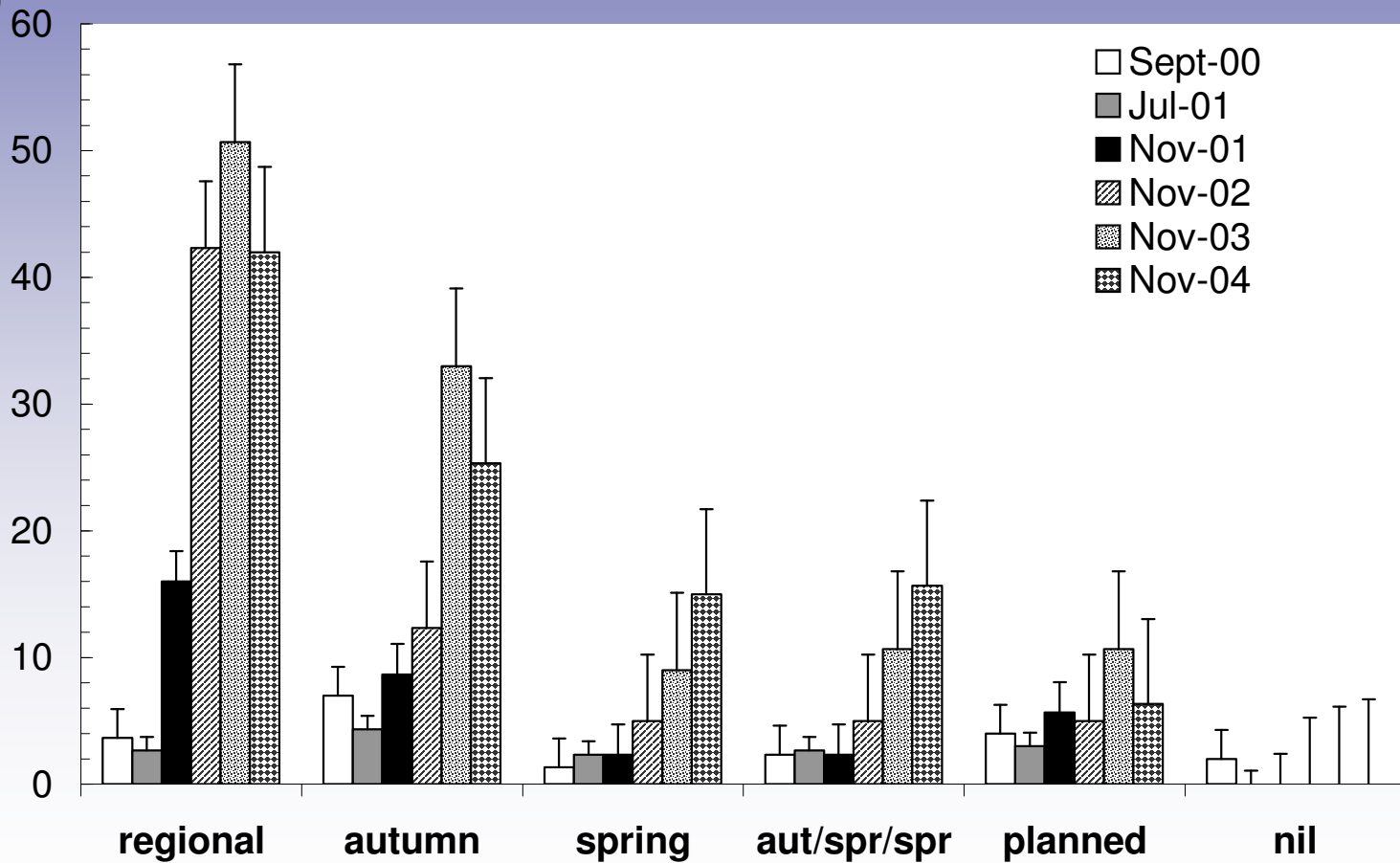
Change in
perennial grass
basal cover (%)



Planning maintained ground cover

Mid-north South Australia 2001-2004

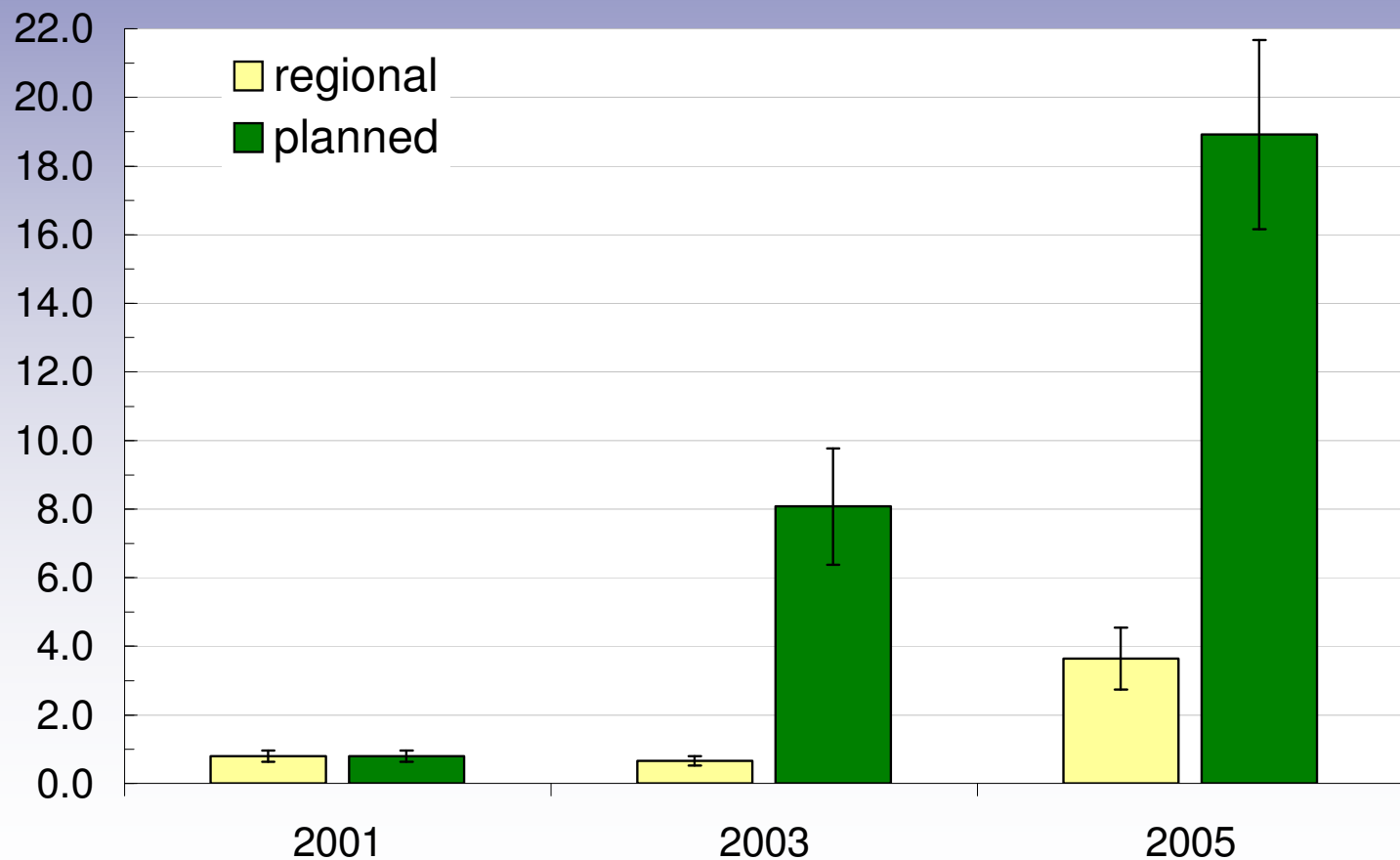
Bareground (%)



Planned grazing led to increased water infiltration

Water infiltration rate (mm/min)

Mid-north South Australia 2001-2005



Managing the balance

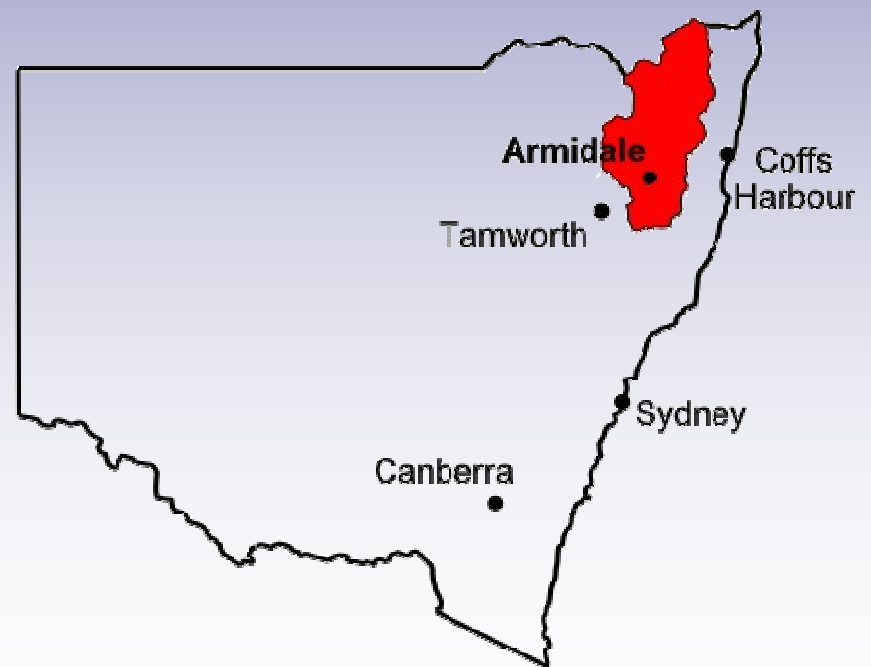
case studies

CG low: continuous grazing at low stocking rate

CG high: continuous grazing at higher stocking rate

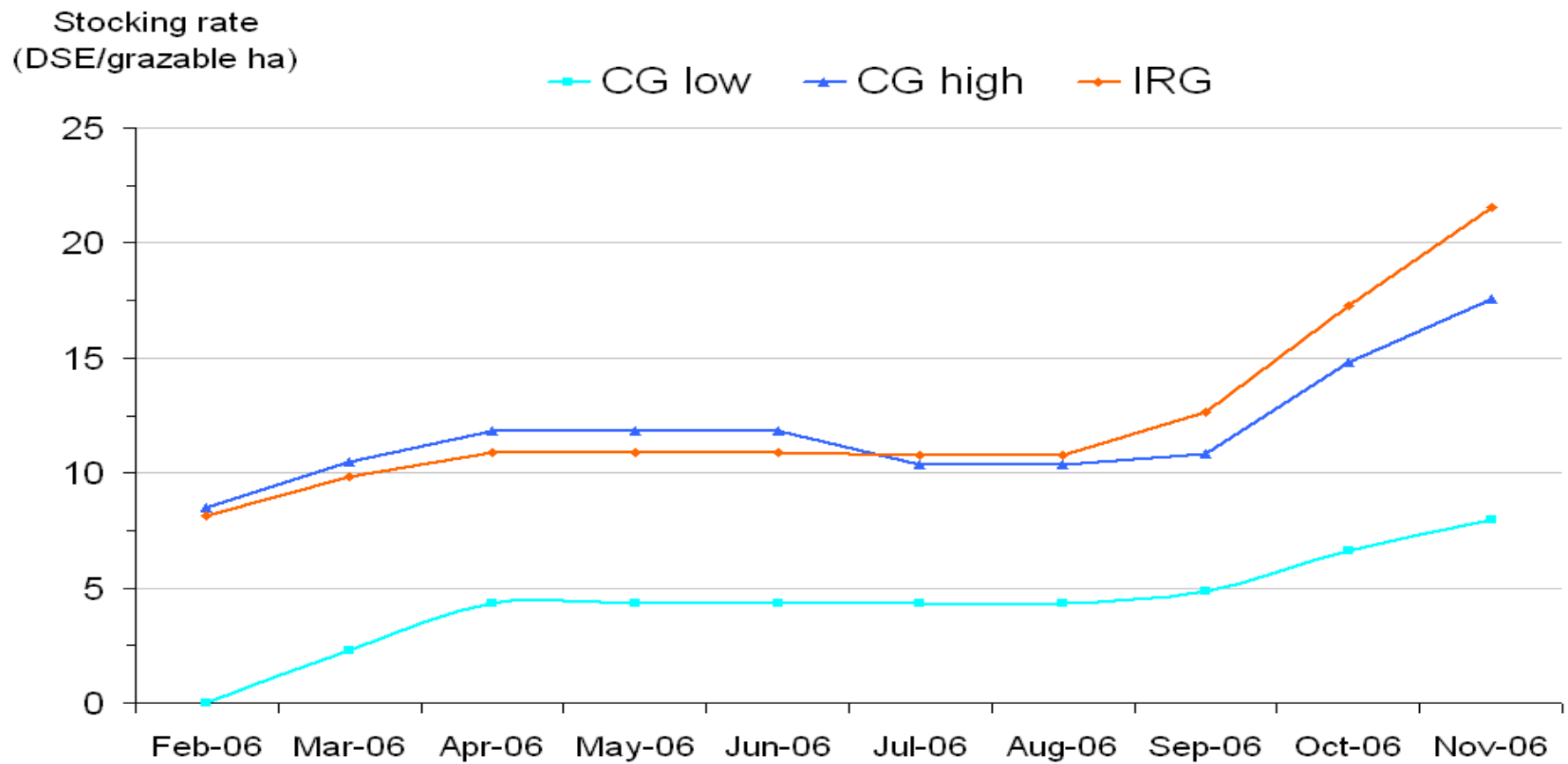
IRG: intensive rotational grazing as a result of planning

Northern Tablelands NSW



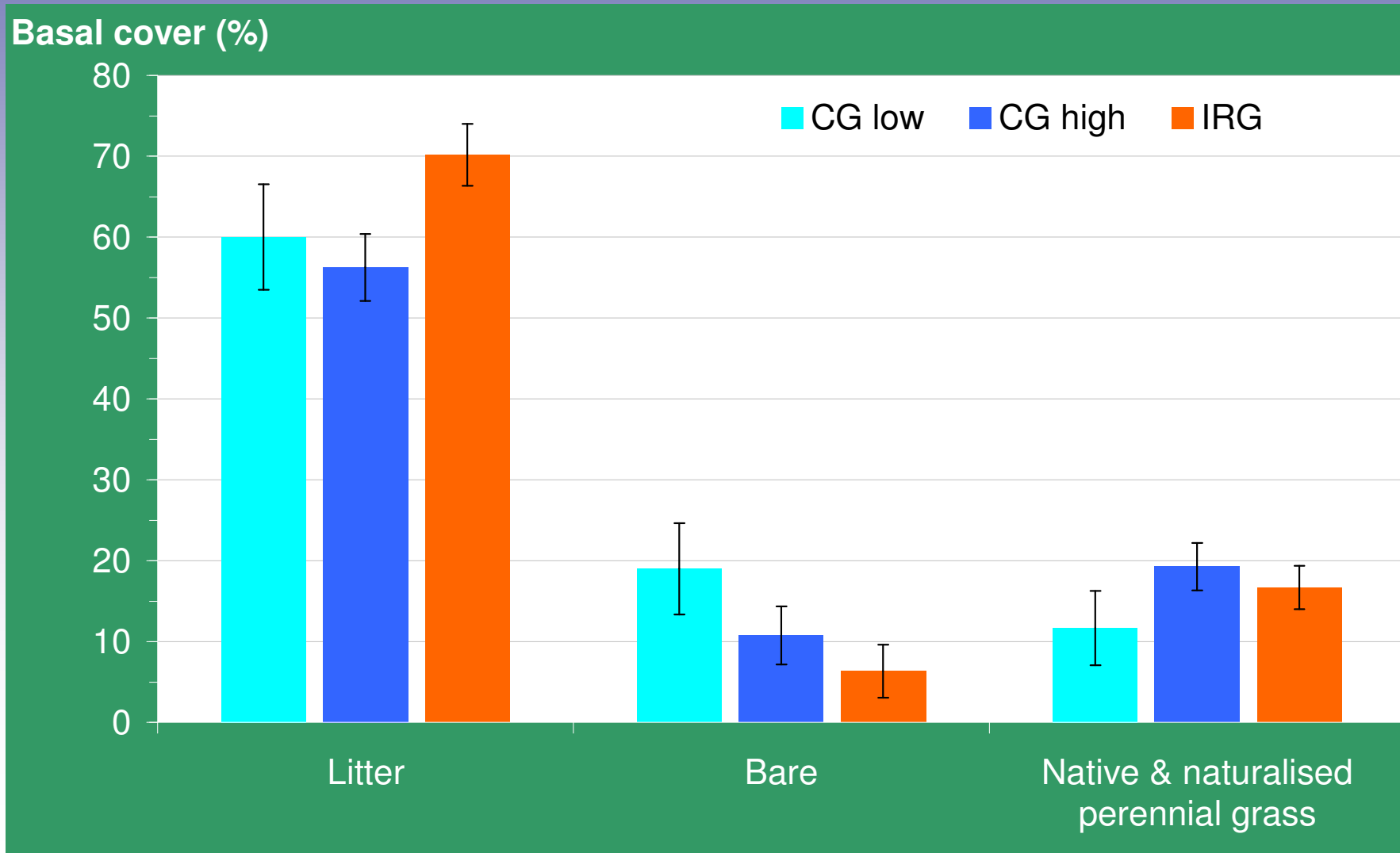
Planning led to an increased stocking rate

Northern Tablelands 2003-2006



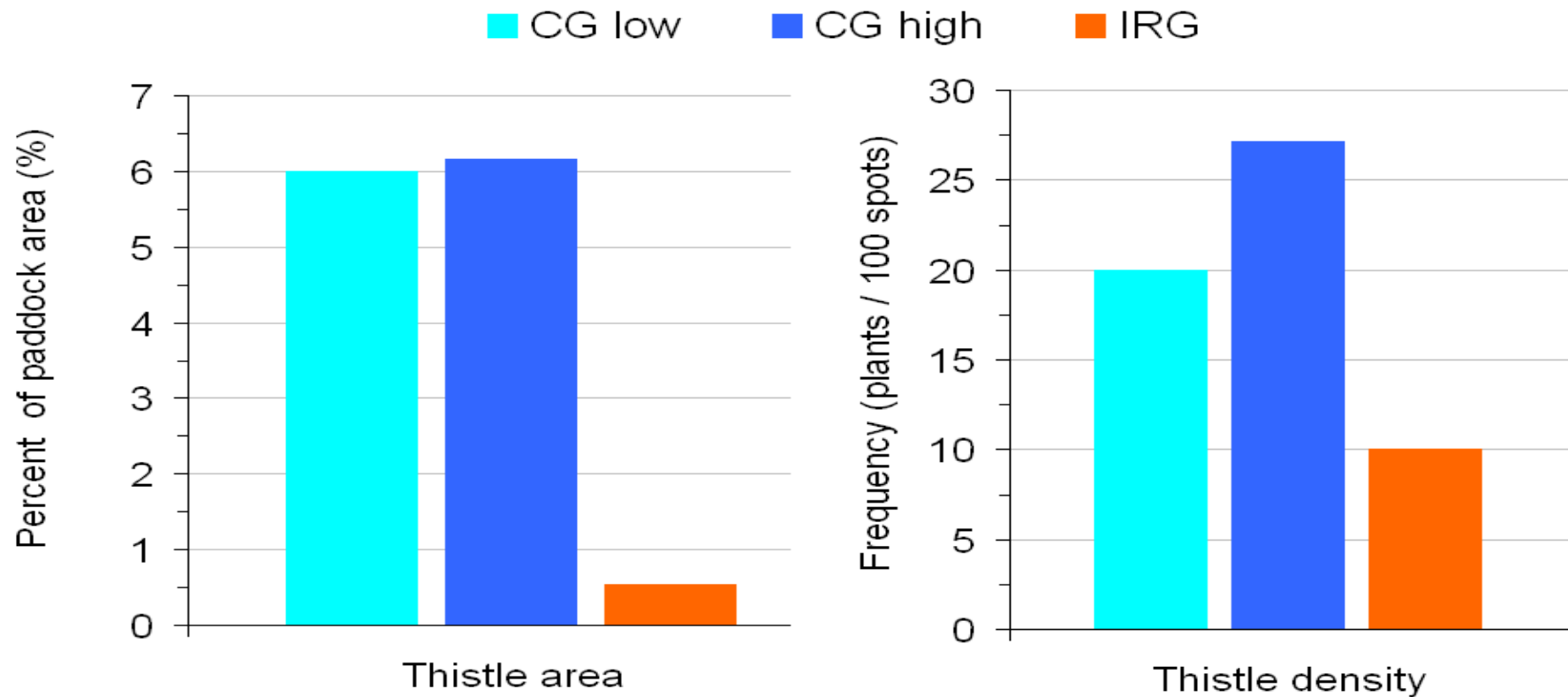
Planned grazing led to more litter and less bare ground

Northern Tablelands 2003-2006



Planned grazing led to fewer thistles

Northern Tablelands 2003-2006

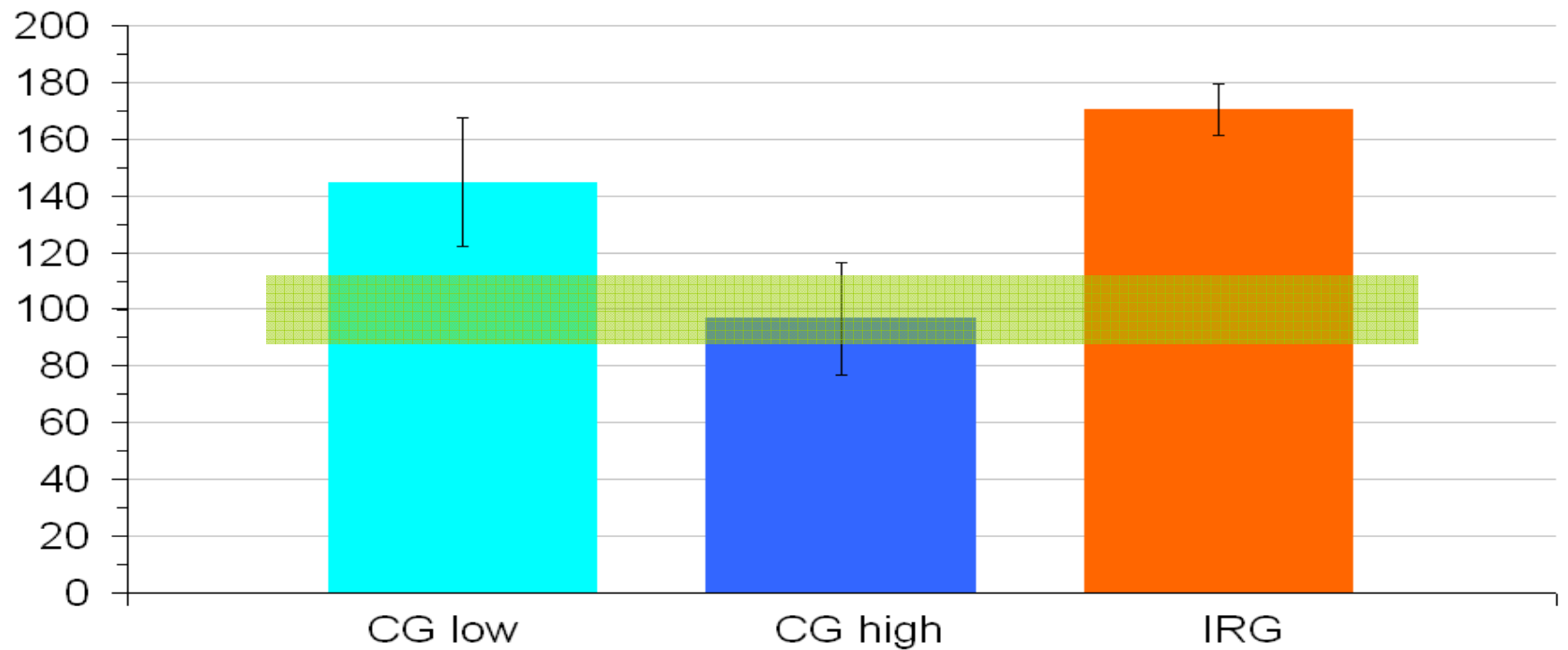




Planned grazing led to increased water infiltration

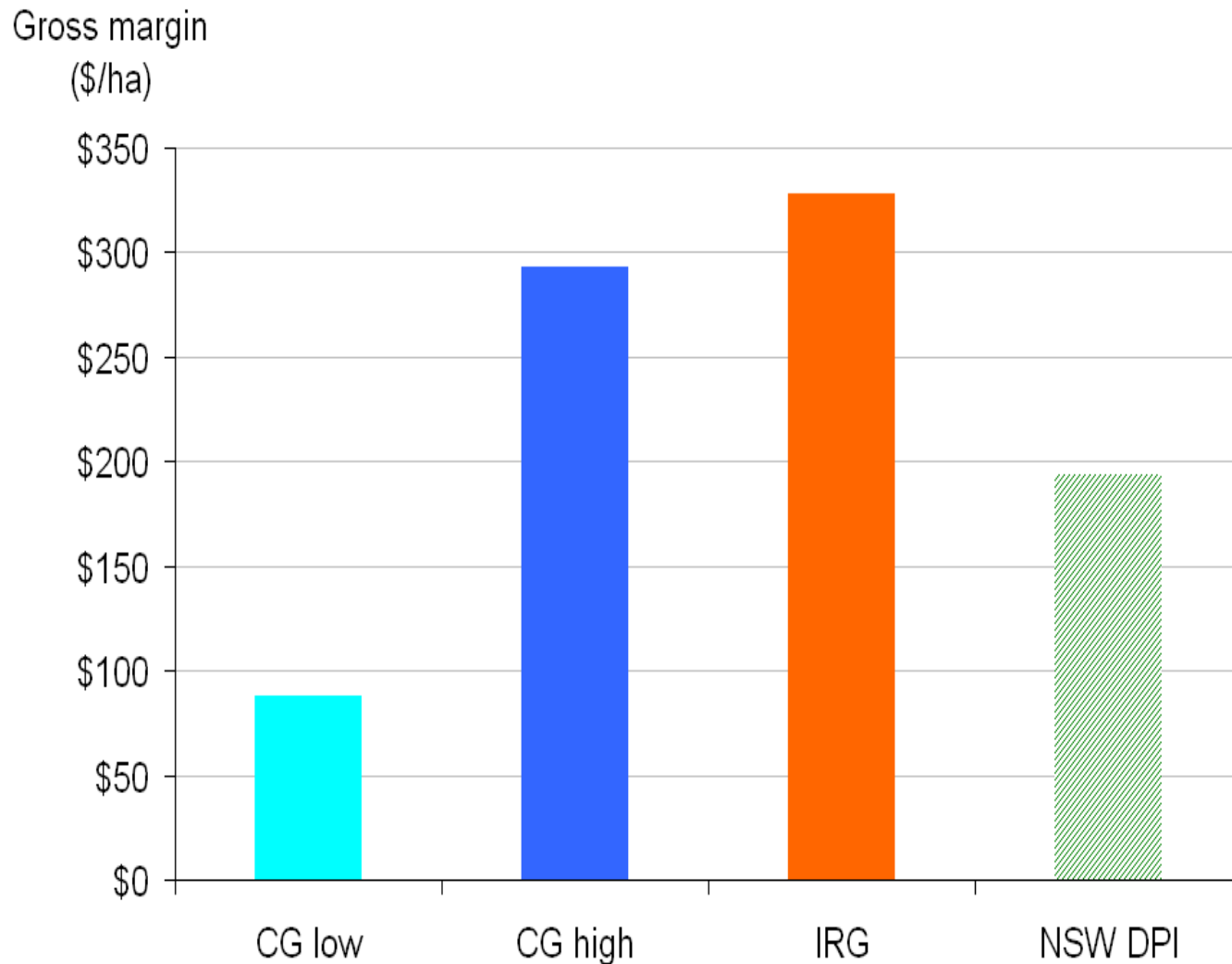
Northern Tablelands 2003-2006

Infiltration rate
(mm/hour)



Planned grazing led to a higher gross margin

Northern Tablelands 2003-2006



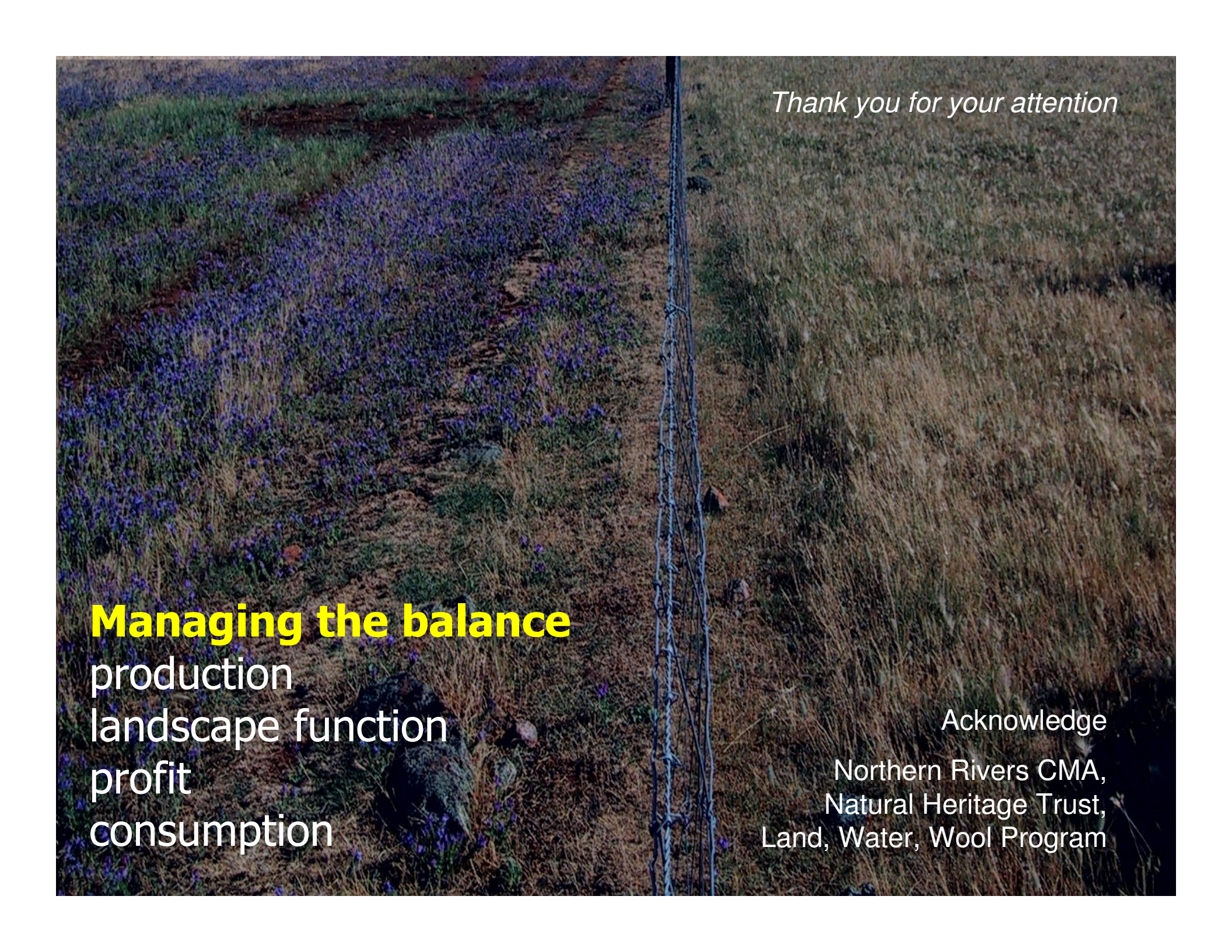
Managing the balance led to ...

- Production
 - increased stocking rates and pasture growth rates while limiting risk
- Landscape function
 - increased contribution from native perennial grasses
 - increased litter
 - less bare ground
 - fewer thistles
 - greater rainfall infiltration (drier profiles)
- Profit
 - increased gross margin

Produced through the best efforts of interested people

What about the terms of trade?

- Productivity growth offsets the decline in terms of trade but not all businesses have growth
 - further erosion of capital and natural assets?
- Not so if prices for commodities kept pace with inputs
- Consumer preparedness to pay for land and water management
 - not subsidies, not grants, not welfare
 - commercial market-driven prices
- Requires empowering consumers to realise the extent of their influence
 - parallels with climate change, market signals



Thank you for your attention

Managing the balance

production

landscape function

profit

consumption

Acknowledge

Northern Rivers CMA,
Natural Heritage Trust,
Land, Water, Wool Program

Productivity growth

1974-75 to 2003-2004

| <i>Sector/industry</i> | <i>Labour productivity</i> | <i>Capital productivity</i> | <i>Multifactor productivity</i> |
|--------------------------------------|----------------------------|-----------------------------|---------------------------------|
| Agriculture | 3.3 | 2.7 | 2.8 |
| Mining | 2.6 | -0.8 | 0.2 |
| Manufacturing | 3.2 | -1.2 | 1.6 |
| Services | | | |
| Electricity, gas and water | 4.1 | 0.4 | 1.8 |
| Construction | 1.6 | -1.6 | 1.0 |
| Wholesale trade | 2.1 | -1.0 | 1.2 |
| Retail trade | 1.5 | -2.5 | 0.8 |
| Accommodation, cafes and restaurants | 0.0 | -2.5 | -0.6 |
| Transport and storage | 2.8 | 1.1 | 2.3 |
| Communications | 6.5 | 1.0 | 4.2 |
| Finance and insurance | 2.2 | -3.2 | -0.1 |
| Cultural and recreational services | -0.5 | -3.1 | -1.6 |
| Market sector | 2.2 | -0.7 | 1.1 |

Source: *Productivity Commission, 2004*