

Dry Times, Smart Tools: Virtual Fencing in Action

Dr Alice Weaver



Government
of South Australia
Department of Primary
Industries and Regions

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SOUTH AUSTRALIAN
RESEARCH AND
DEVELOPMENT
INSTITUTE

Dry times and the risk to livestock operating systems

Drought is a recurring feature of the Australian landscape.

Key challenges

- Feed scarcity & rising costs
- Loss of ground cover & land degradation
- Water availability, quality and access
- Maintaining animal performance & welfare
- Limited ability to manage grazing precisely
- Decision pressure & timing
- Financial and operational stress



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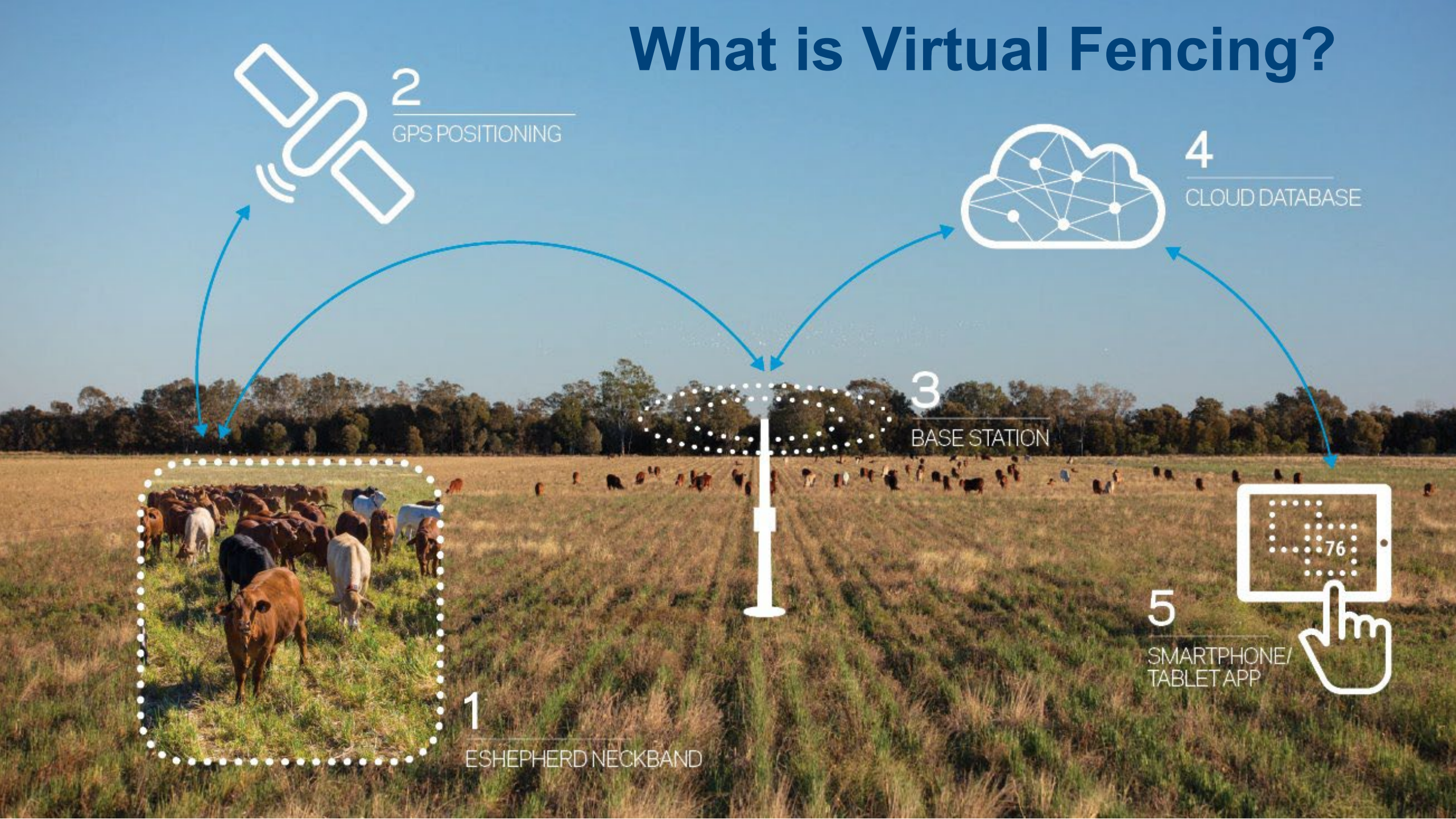
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Virtual Fencing



Opportunity to help manage dry times

What is Virtual Fencing?



2

GPS POSITIONING



4

CLOUD DATABASE



3

BASE STATION



5

SMARTPHONE/
TABLET APP



1

ESHEPHERD NECKBAND

What can we use Virtual Fencing for?

- Physical infrastructure replacement
- Inclusion zones – grazing under utilized areas or keeping animals around a water point
- Exclusion zones – environmentally sensitive areas (riparian zones, revegetation zones, sand hills)
- Rotational/strip/cell grazing without electric fencing
- Intensive management of extensive systems
- GPS tracking – calving difficulties...
- Health and behaviour monitoring – group averages etc.
- Aid with mustering – labour input reduction



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Future Drought Fund Long Term Trials Virtual Fencing project

Research Question: Can the use of virtual fencing help to protect vulnerable land and guide livestock to nutritional feed compared to open grazing paddocks? How can this help graziers manage cattle during drought?

5 producer sites across South Australia:

- Minnipa – exclusion from revegetation zone and sand hill. Strip grazing system.
- Mount Jagged – exclusion from riparian zone and vineyards. Strip grazing system.
- Karoonda – cell grazing in lucerne instead of using electric fencing.
- Kangaroo Island – exclusion from sensitive areas recovering after the KI fires. Rotational grazing system.
- Wintinna – TO BE UNDERTAKEN. Extensive management system in the rangelands. Using VF technology to keep cattle around water points.



Acknowledgements

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- The cattle producers involved in the study

Project partners

- Future Drought Fund Long Term Trials SA Discovery Farms
- SA Growth State Initiative
- SA Sheep Industry Fund
- Gallagher eShepherd

