Offstream watering points for cattle: protecting riparian ecosystems and improving water quality?

Julie-Ann Malan, Dr. Nicole Flint, Dr. Emma Jackson, A/Prof. Andrew Irving, Prof. Dave Swain (2018)
Why should we care about the beef grazing industry?

- 1.4 billion head of cattle
- 22.6 million in Australia
- 11.1 million in Queensland
- 80% increase in demand by 2030
- Consume large amount of resources
- Impacts on land and rivers
Grazing Cattle Impacts

- Altered streambank vegetation
- Change in soil structure
- Increased erosion
- Poorer instream water quality
- Impacts on marine environment
Can we manage the impacts?

Yes!
**Best Management Practices**

**Grazing and Land Management**
- Soil health and biology
- Animal health and welfare
- Animal production
- People and business
- 5 Modules

**FENCING**
- Preferred
- Expensive
- Not always practical

**OFFSTREAM WATERING POINT (OSWP)-(TROUGH)**
- Cost effective
- Accumulative mitigation
- An powerful grazing distribution agent

22nd International River Symposium
CQ University Australia
How effective are OSWP’s in protecting riparian areas?

- Lack of consensus in literature
- Conducted systematic literature review
- Found to be effective but with 63% variability
Location of studies examining OSWP.
Factors Affecting OSWP Use.
Social interactions
Review conclusions

- Paddock slope <10%
- Distance 100m or 1100m from stream
- Paddocks <140ha
- Good grazing management
- Tropical and subtropical climates
- Research gaps
- Next step?
RESEARCH
Water palatability study
Summary

• Cattle grazing impact riparian ecosystem services
• OSWP can mitigating impacts
• 7 main and 5 sub-environmental factors
• Further research in progress
Acknowledgements

• The Australian Government Training Program Scholarship
• Central Queensland University
• Fitzroy Basin Association and a Fitzroy partnership for River Health
• Heart Of the Basin Scholarship
• Graziers
Questions?