

## **COTTON LANDCARE TECH-INNOVATIONS 2021** Strengthening Australian cotton farm biodiversity and sustainability management.

Stacey Vogel Cotton Research and Development Corporation (CRDC) and CottonInfo







1	Australian Cotton Industry
2	Sustainability and RD&E
3	Cotton Landcare Tech-Innovations
4	Future Action and Opportunities







## Australian Cotton Industry

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#### 2 Sustainability and RD&E

Cotton is committed to sustainability and supporting our growers to manage their natural resources on farm.





**AUSTRALIAN COTTON** SUSTAINABILITY REPORT 2019

SUSTAINABLE AUSTRALIAN COTTON PLANET. PEOPLE. PADDOCK.



*my*BMP

Australian Cotton Sustainability Report









**Better Cotton Initiative** 





RD&E



# 3 Cotton Landcare Tech-Innovations

The Cotton Landcare Tech-Innovations project is delivering outcomes and tools to help improve on-farm biodiversity.



Biodiversity management guidelines for cotton catchments Innovation for cotton landscape revegetation (drones & tractors) Technology for acoustic monitoring on cotton farms (birds & microbats)









Collaboration for a legacy of Australian cotton biodiversity action





# Biodiversity management guidelines for cotton catchments

Aim: To identify priority areas and management practices for threatened and iconic species restoration within cottongrowing environments.







Cities/Towns
 Major rivers
 Major roads
 High priority areas for revegetation
 High priority areas for restoration
Tenure
 State Forest
 TSR
 Wetlands
 Cotton landscape\_5kmBuffer
 Balonne LGA

General management actions Routine weed control Routine feral animal control Targeted revegetation Protection of riparian areas

#### Region-specific management actions

- Appropriate fencing
- Avoid use of fishing nets
- Establish non-fishing zones
- Retain areas of spinifex or porcupine grass
- Protect termite mounds
- Retain large isolated paddock trees
- Retain/augment in-stream woody habitat
- Helping to control wild dogs Defensive driving to avoid road-strike



# Innovation

# Innovation for cotton landscape revegetation (drones & tractors)

**Aim:** University of New England's Dr Rhiannon Smith and UK-based ecosystem restoration specialists Dendra Systems lead research to improve cost- effective methodologies for revegetation on cotton farms.































## Technology

## Technology for acoustic monitoring on cotton farms (birds & microbats)

**Aim:** Queensland University of Technology and the University College London are leading research to enable the cotton industry and famers to collect biodiversity data in a costeffective manner.









### **Acoustic sensors**





































#### Minutes after dusk: 120

Total bat pulses: 5,165

2,000













#### Minutes after dusk: 240

Total bat pulses: 26,482

8,000 10,000























14,000 16,000 12,000

















## **Collaboration for a legacy of** Australian cotton biodiversity action

**Aim:** We are working with cotton growers, regional networks and groups to encourage the use of new biodiversity technologies and best practice to create a legacy of biodiversity action.









#### Future Action and Opportunities 4





Supporting a partnership between Country Road and Landcare Australia to improve biodiversity on cotton farms

Biodiversity management behavioural science research to inform future RD&E









# THANK YOU

#### For more information visit

www.crdc.com.au/cotton-landcare-tech-innovations

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