



tia

TASMANIAN INSTITUTE
OF AGRICULTURE

Rural Research and Development for Profit Programme

Smarter Irrigation for Profit

Rural Research and
Development for Profit
Keeping Australian farmers
at the cutting edge



Australian Government
Department of Agriculture
and Water Resources



TIA is a joint venture of the University of Tasmania and the Tasmanian Government



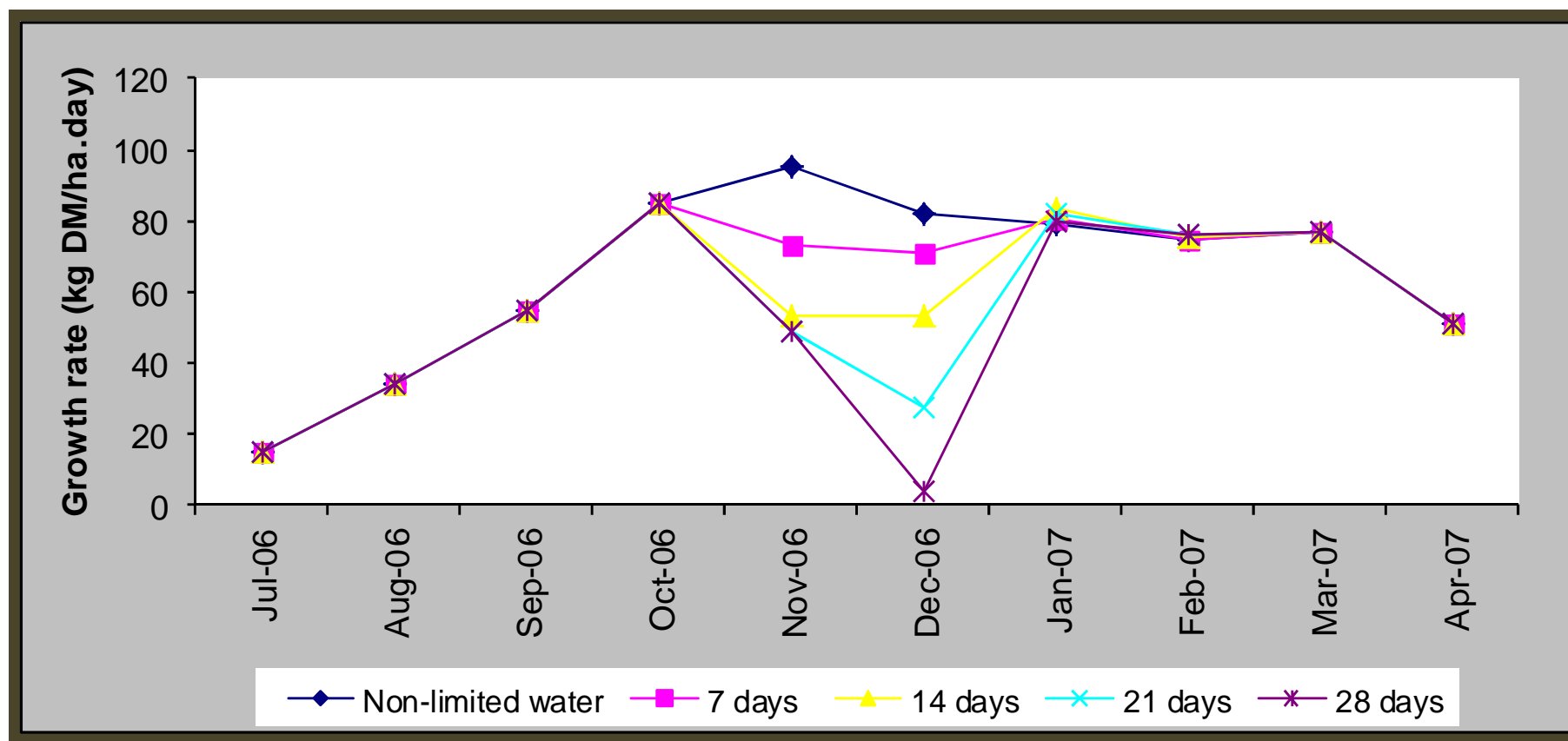
Irrigation startup timing



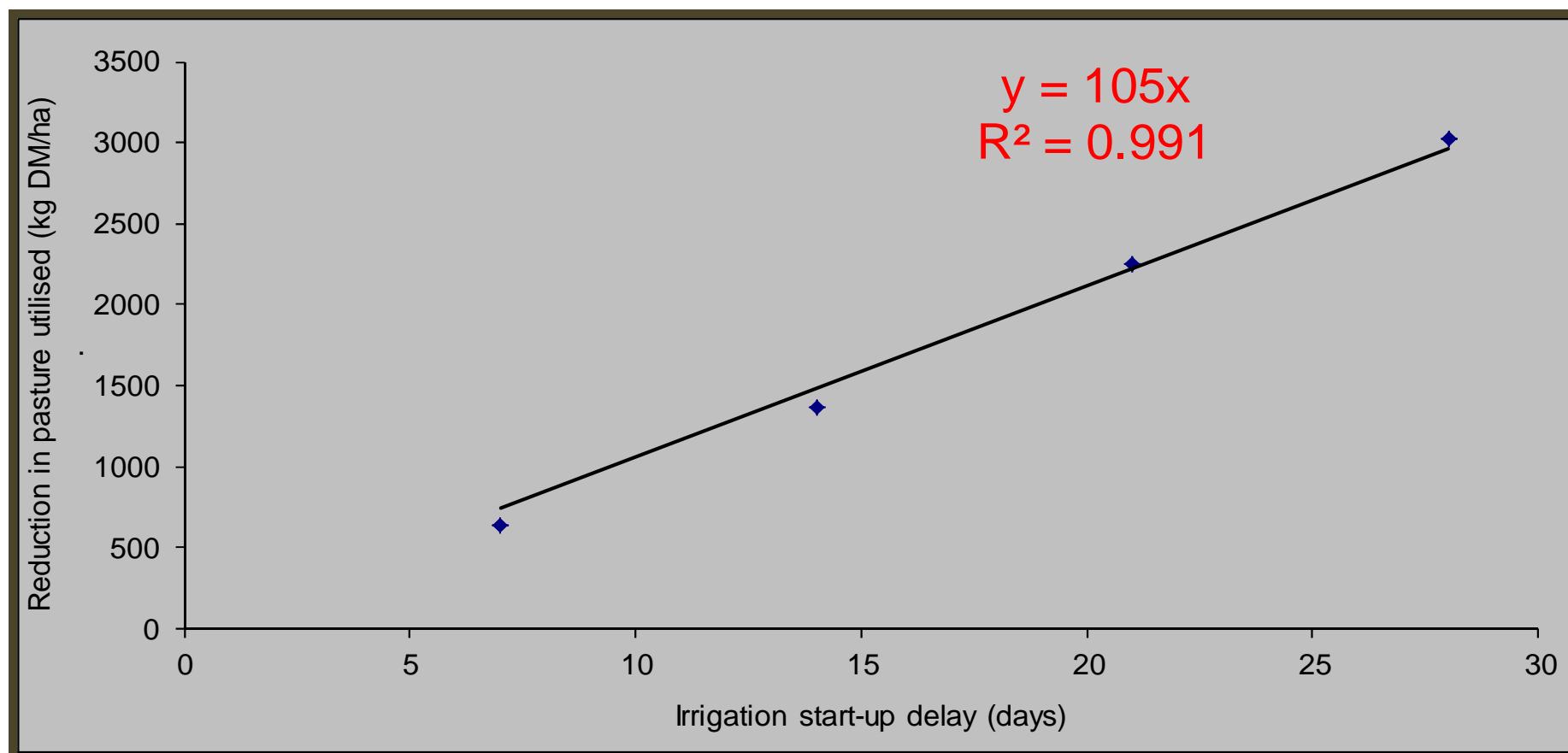
Getting start-up time right!

- Modelling the effect of delaying irrigation start
 - Delaying irrigation start-up by 7, 14, 21 and 28 days
 - Effect on pasture growth rates and pasture utilisation
 - Repeated for a number of seasons
 - Determined the relationship between start-up delay and loss in pasture utilisation

Getting start-up time right!



Getting start-up time right !



Getting start-up time right!

- For everyday delay in irrigation start-up results in a potential 105kg DM/ha reduction in pasture utilisation.
 - Assuming an irrigated area of 50ha.
 - 1 day delay in start-up results in a reduction of >5t DM utilisation across the farm.
 - 5t DM equals 5000 Litre milk= \$1,700
- For a five day delay in irrigation start-up = \$8,500

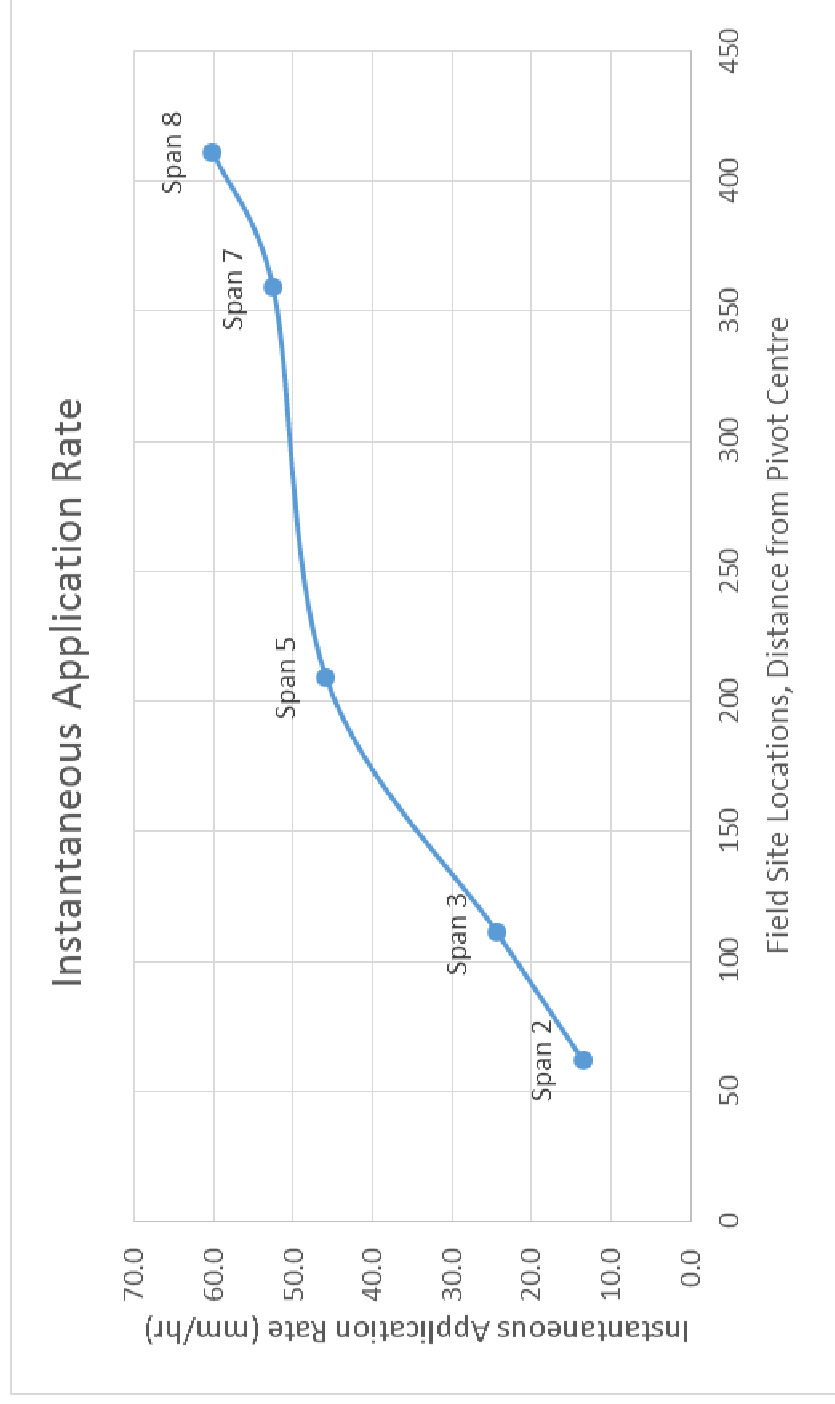
Tunbridge site



Pivot details


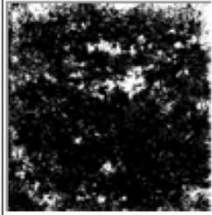


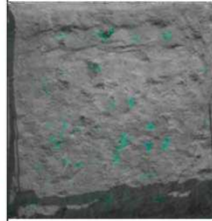

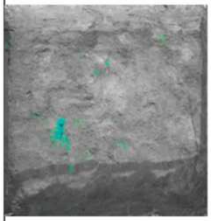
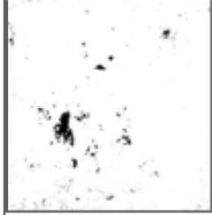
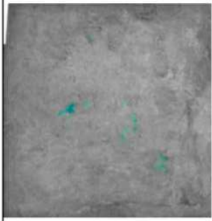

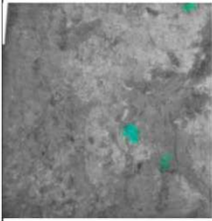
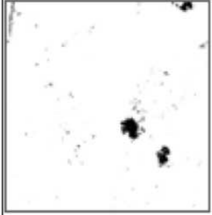
- Pivot length 453 meters
- Area irrigated – 64.4 Ha
- Application rate 59.66 L/s
- Sprinkler package 8mm
- Average application 14.02 mm



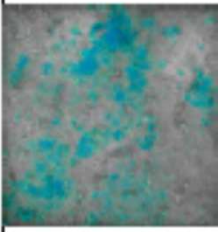

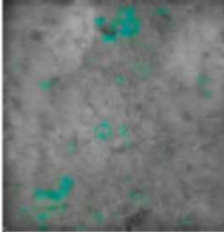
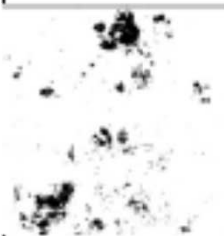
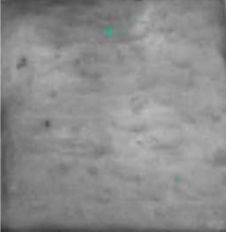







Field Sites	Runoff %
Span 2	23.1%
Span 3	35.8%
Span 5	24.9%
Span 7	41.5%
Span 8	40.3%

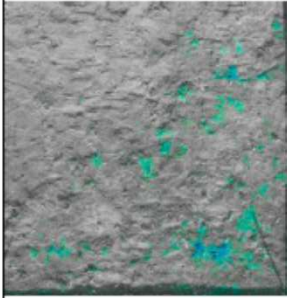
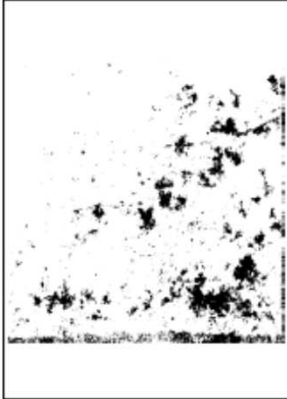

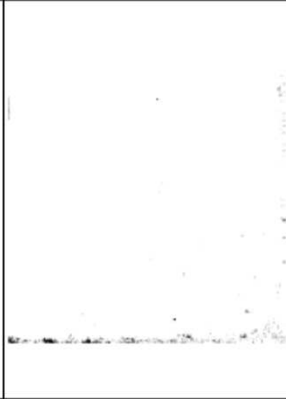
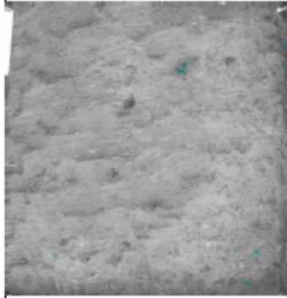
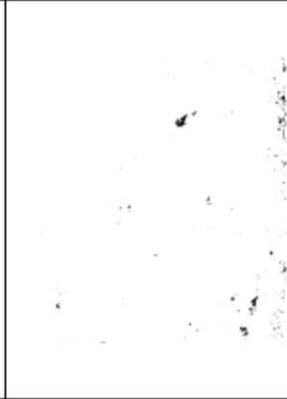
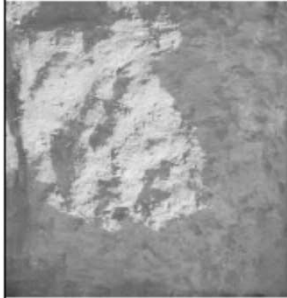
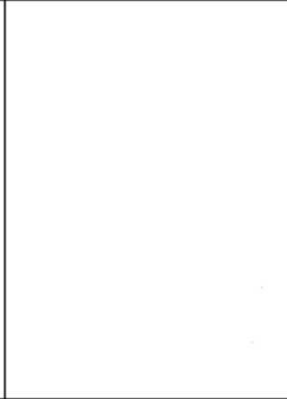


Site 1 span 2 ground level			Total no of Pixels: 4267131 Black Pixels: 3630671 85.08 % Black
Site 1 span 2 depth 2.5 cm			27.35 %
Site 1 span 2 depth 5 cm			6.06 %
Site 1 span 2 depth 10 cm			1.82 %
Site 1 span 2_e depth 15 cm			1.00%
Site 1 span 2 depth 25 cm			1.5%

Site 2 Span 5

Site 2 span 5 ground level			46.03 % Black
Site 2 span 5 depth 2.5 cm			6.04 %
Site 2 span 5 depth 5 cm			0.20 %
Site 2 span 5 depth 10 cm			0.00 %
Site 2 span 5 depth 15 cm			0.00 %

Site 3 Span 8

Site 3 span 8 ground level			9.71 % Black
Site 3 span 8 2.5cm depth			0.56 %
Site 3 span 8 5cm depth			0.53 %
Site 3 span 8 10cm depth			0.00 %

Thank You!!

