



PATHWAYS TO WATER QUALITY IMPROVEMENTS IN THE MYRTLE CREEK SUB-CATCHMENT

2018/2019 WET SEASON - SITE 3

SITE DETAILS

BLOCK SIZE: 16.71ha

SAMPLED AREA: 1,485m²

ROW SPACING: 1.65m

VARIETY: Q183[®]

CROP CLASS: 2R

HISTORICAL ANNUAL YIELD:

80tph

SOIL TYPE: Wagoora
(Brown Dermosol)

LOCATION IN SUB-CATCHMENT:

The Gregory

NUTRIENT AND PESTICIDE APPLICATION DETAILS

Fertiliser application date: 1 September 2018

Sampler 3-1

- Vizura Econo Liquid One Shot (nitrification inhibitor) + P applied at 3.5m³/ha.
- Product analysis at 3.5 m³/ha: 156.5 kg/ha N, 12.8 kg/ha P, 99.3 kg/ha K, 23.6 kg/ha S, 19.4 kg/ha Ca, 12.9 kg/ha Mg, 322.5 kg/ha OC.
- Total N and P applied: 156.5 kg/ha N and 12.8 kg/ha P.

Sampler 3-2

- Econo Liquid One Shot (no nitrification inhibitor) + P applied at 3.5m³/ha.
- Product analysis at 3.5 m³/ha: 156.5 kg/ha N, 12.8 kg/ha P, 99.3 kg/ha K, 23.6 kg/ha S, 19.4 kg/ha Ca, 12.9 kg/ha Mg, 322.5 kg/ha OC.
- Total N and P applied: 156.5 kg/ha N and 12.8 kg/ha P.

- Fertiliser products applied via seven-row applicator.
- 40mm of irrigation (high pressure overhead) applied on 8/09/2018. No run-off occurred from this irrigation.
- Block irrigated on 16/11/2018 p.m. (high pressure overhead). No run-off generated from irrigation.

Herbicide Applications:

- 2018:
 - no herbicides applied.
- 2017:
 - Paraquat (Gramoxone) applied at 1L/ha
 - 2,4-D amine 625 applied at 1L/ha

- Diuron applied at $\frac{1}{2}$ kg/ha
 - 900g/kg of active ingredient
- Picloram + 2,4-D (Tordon) applied at 200g/L in patches

Insecticide Application:

- 2016:
 - Imidacloprid (Confidor) applied at planting only (September 2016) at a rate of 1L/ha
 - 350g/L of active ingredient
 - Confidor applied in the drill and covered with soil.

Tested for:

- Dissolved Inorganic Nitrogen (DIN)
- Filterable Reactive Phosphorus (FRP)
- Diuron
- Imidacloprid

RUNOFF EVENT DATA

EVENT	DATES	DAYS FROM FERTILISER APPLICATION	DAYS FROM PESTICIDE APPLICATION
1	10 December 2018	38	61
2	16 to 17 December 2018	44	67
3	23 December 2018	51	74
4	8 to 9 January 2019	67	90

- Grower's rainfall data was used to calculate runoff.

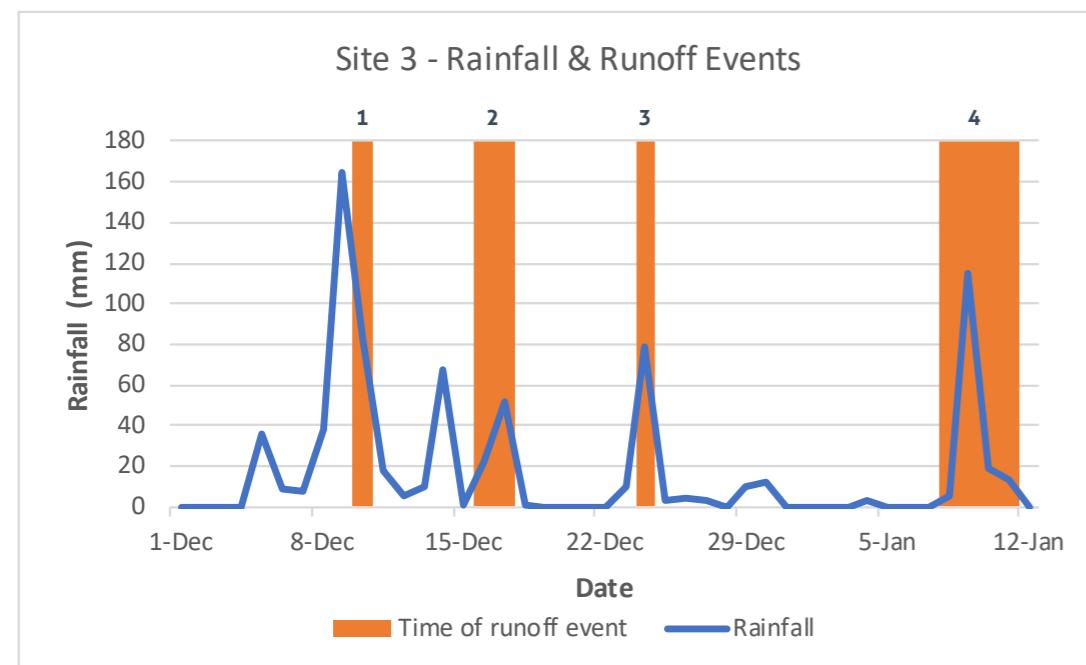
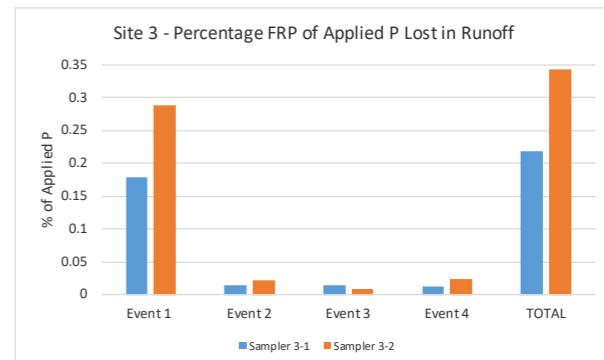
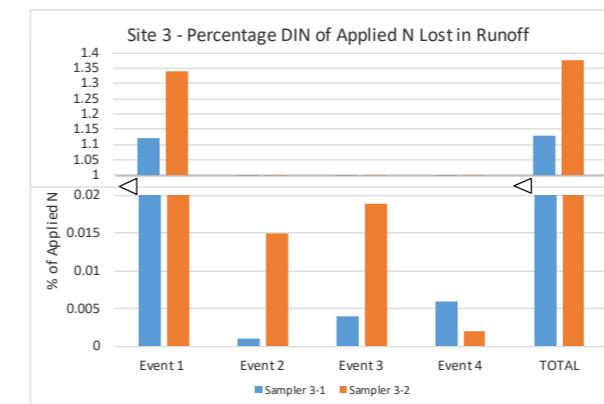
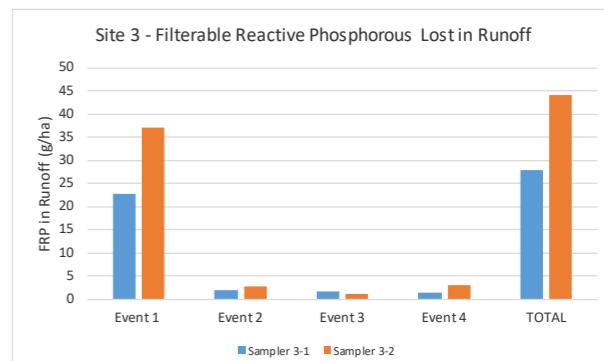
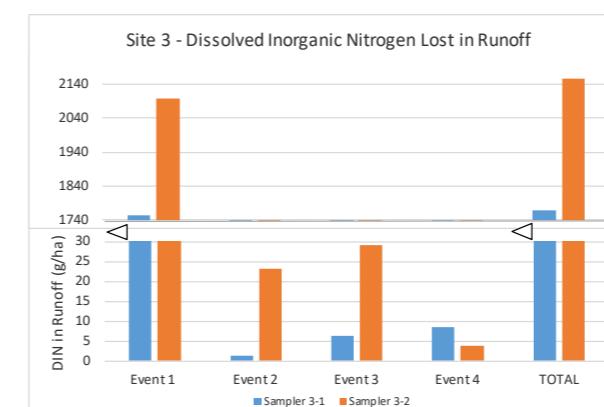
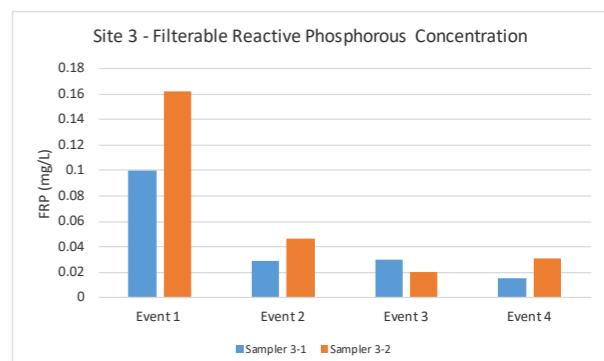
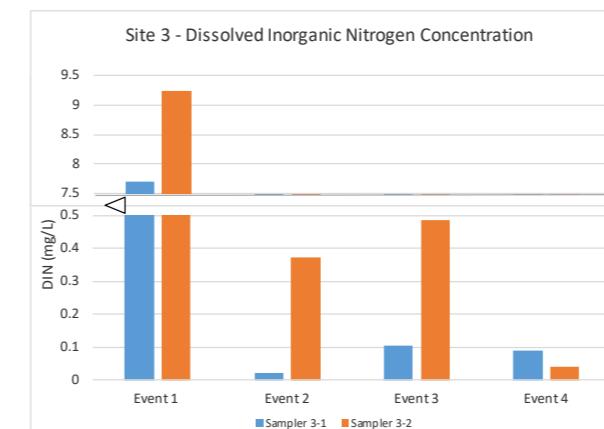


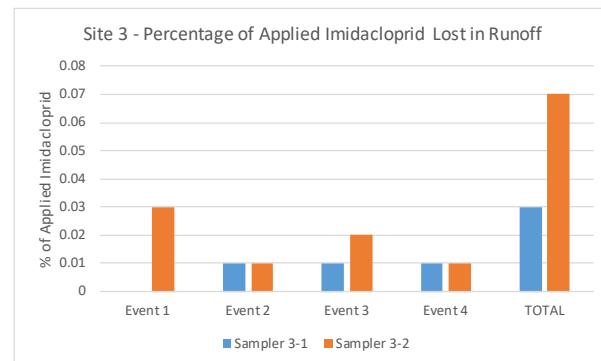
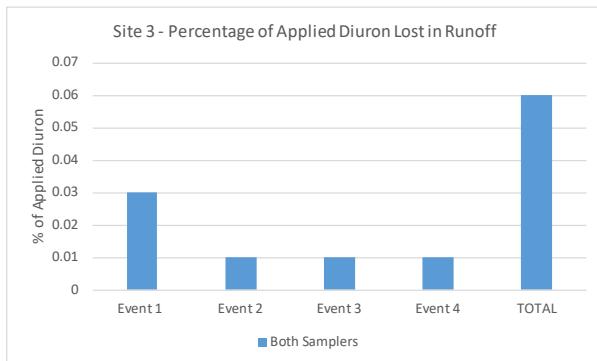
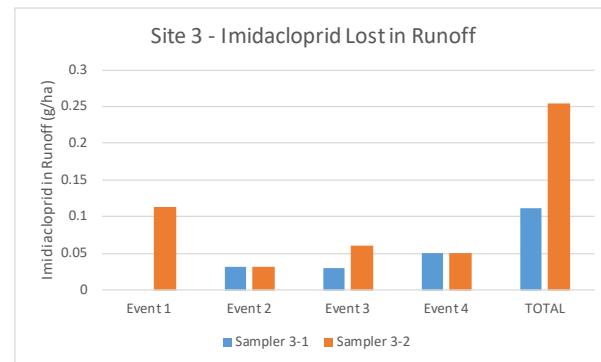
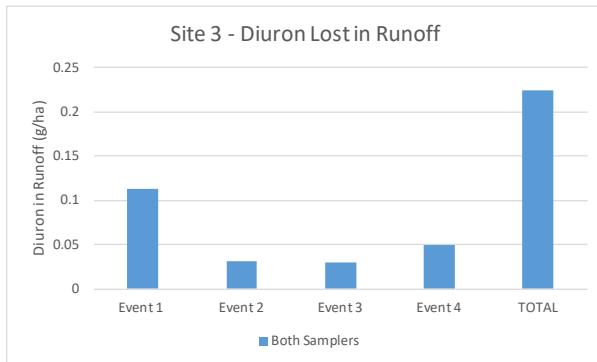
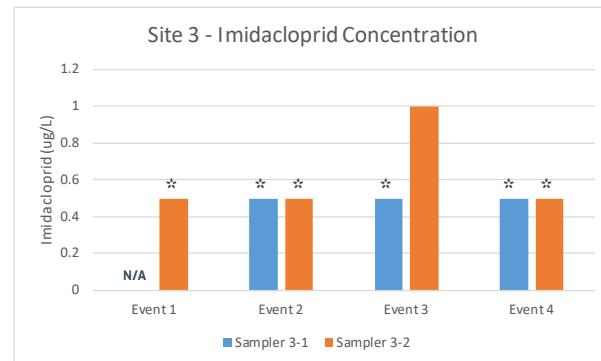
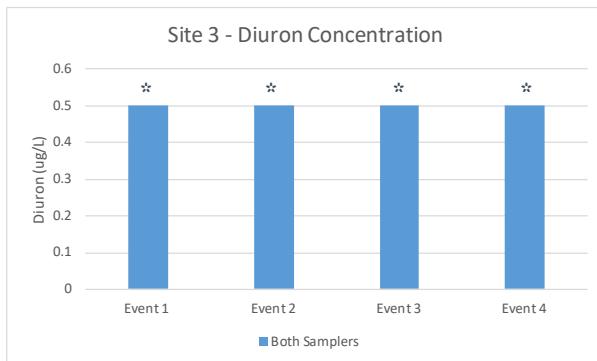
Figure 1 Rainfall data and corresponding runoff events

RESULTS

NOTE: Nutrient and pesticide loads are estimates only. Freshwater ecotoxicity thresholds cannot be applied to paddock scale monitoring. Freshwater PC95 values are referenced only for discussion.



NOTE: P concentrations are indicative and actual concentrations are likely to be slightly higher.



For reference, the PC95 freshwater pesticide ecotoxicity threshold value for diuron is 0.23µg/L

For reference, the PC95 freshwater pesticide ecotoxicity threshold value for imidacloprid is 0.11µg/L

Note:

* chemical concentrations were below the analysis instruments level of reporting (LOR). In these cases, concentrations are presented as half the LOR to provide an estimate.

N/A – no sample available.

FOR FURTHER INFORMATION PLEASE CONTACT

Molly O'Dea **E** mo'dea@sugarresearch.com.au **M** 0439 619 082

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