

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

## 2018/2019 WET SEASON - SITE 1

### SITE DETAILS

**BLOCK SIZE:** 1.68ha

**SAMPLED AREA:** 2,416.5m<sup>2</sup>

**ROW SPACING:** 1.8m

**VARIETY:** Q208<sup>®</sup>

**CROP CLASS:** 6R

**HISTORICAL ANNUAL YIELD:** 80tph

**SOIL TYPE:**

**Benholme (Grey Vertosol)**

**LOCATION IN SUB-CATCHMENT:**

**Up River**

*(Below left) Figure 1 Fertiliser slot remained uncovered following application; (Below right) Figure 2 Fertiliser slot remained uncovered following application.*



### NUTRIENT AND PESTICIDE APPLICATION DETAILS

*Fertiliser application date: 15 October 2018*

#### Sampler 1-1

- 500 kg/ha of Prosi Ratooner fertiliser
- Total N & P applied to site: 115.7 kg/ha N and 14.4 kg/ha P

#### Sampler 1-2

- 700 kg/ha of Prosi Ratooner fertiliser
- Total N & P applied to site: 162 kg/ha N and 20.2 kg/ha P
- Prosi Ratooner analysis: 23.14 % N, 2.88 % P, 17.35 % K, 2.89 % S.
- 30mm of rainfall was received on 17/10/2018 therefore no irrigation was used to water fertiliser in. There was no run-off from this rain.
- Fertiliser applied with three-row fertiliser box:
  - Sub-surface fertiliser application.
  - Some sections of where the product was placed remained uncovered post-application which may have contributed to nitrogen loss via volatilisation (Figure 1 and 2).
- Imidacloprid has never been applied to this block.

#### Tested for:

- Dissolved Inorganic Nitrogen (DIN)
- Filterable Reactive Phosphorous (FRP)

#### Herbicide Applications:

- 2018:
  - None applied

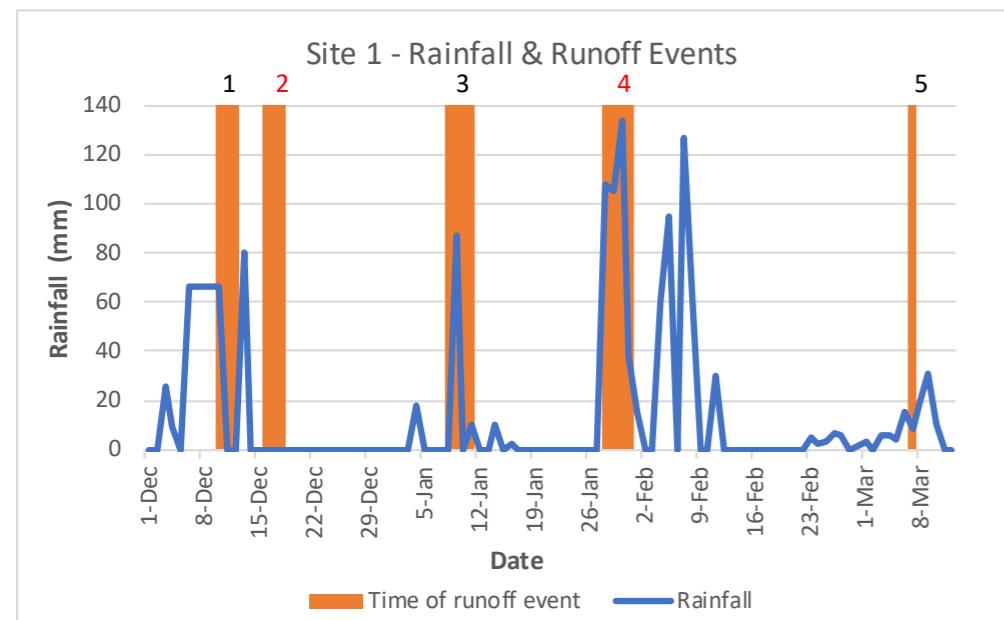
## RUNOFF EVENT DATA

EVENT	DATES	DAYS FROM APPLICATION
1	10 to 12 December 2018	56
2	16 to 18 December 2018	62
3	8 to 11 January 2019	85
4	28 to 31 January 2019	105
5	7 March 2019	143

- Grower's rainfall data was used to calculate runoff.
- Two run-off events were missed due to localised flooding (Figure 3 and 4) resulting in the site being inaccessible. These were:
  - 16 to 18 December 2018 (runoff event 2), and
  - 28 to 31 January 2019 (runoff event 4).



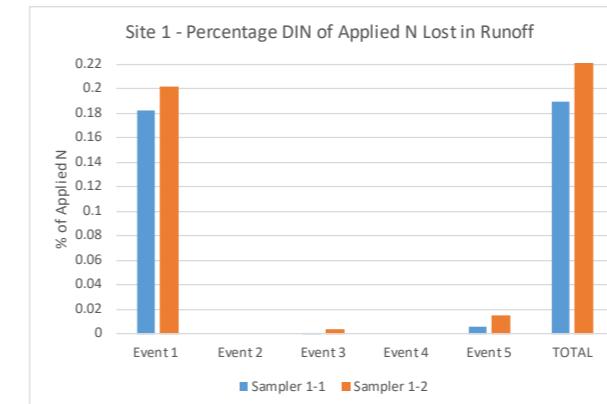
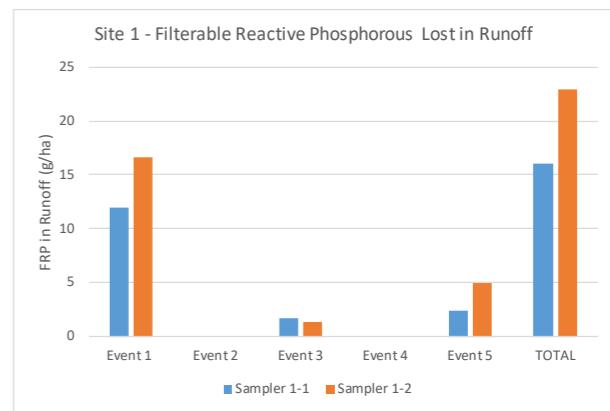
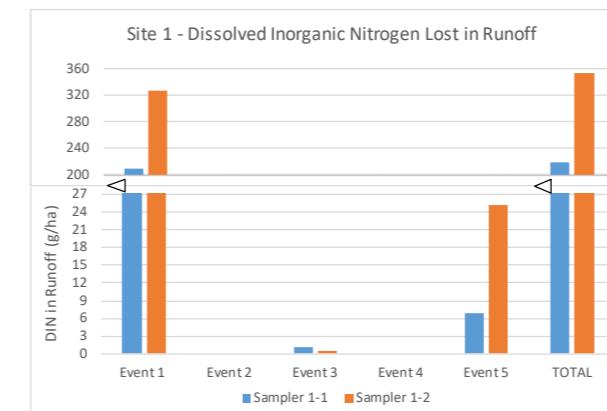
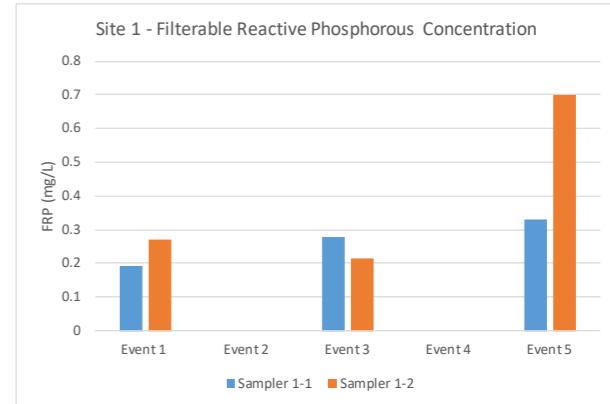
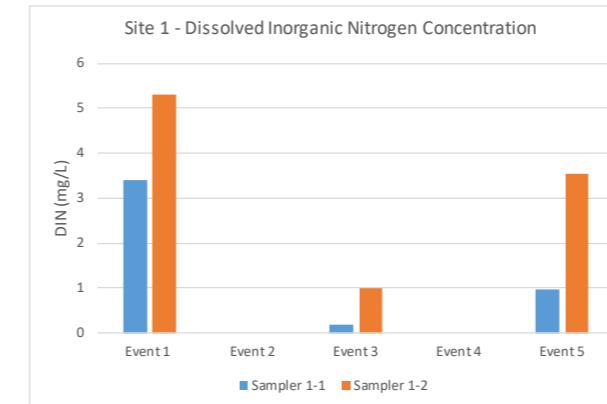
(Top) Figure 3 Localised flooding of access track;  
(Above) Figure 4 Localised flooding of main road to Site 1.



(Above) Figure 5 Rainfall data and corresponding runoff events

## RESULTS

**NOTE: Nutrient loads are estimates.**



## FOR FURTHER INFORMATION PLEASE CONTACT

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