

Catalyst Project Report – Final Report

Reduced N with crop age

Grower Information	
Grower Name:	Greg & Merv Keating
Entity Name:	Keating, Mervyn Edward & Valerie Joyce
Trial Farm No/Name:	PCK-00715B
Mill Area:	Plane Creek
Total Farm Area ha:	314
No. Years Farming:	
Trial Subdistrict:	Koumala
Area under Cane ha:	274

Background Information

Aim:

To evaluate the application of reduced nutrients on old ratoons, with a low yield potential, that will be ploughed out.

Background:

Older cane ratoons have lower expected yields compared to younger ratoons. Each time the crop is harvested, crop vigour is lost due to age and harvester damage. Having a lower yield potential provides the opportunity to lower the amount of nutrients applied.

This trial will determine whether applying lower nutrient rates will result in improved nutrient use efficiency, reduced risk of nutrient run off, while still maintaining yields.

Potential Water Quality Benefit:

Lower levels of nutrient in runoff

Expected Outcome of Trial:

Consistent yields across the paddock, where full and reduced fertiliser rates are applied.

Service provider contact: Farmacist

Where did this idea come from: Grower/Farmacist

<u>Plan - Project Activities</u>	Date : (mth/year to be undertaken)	Activities :(breakdown of each activity for each stage)
Stage 1	October/November 2016	Harvest second last crop
Stage 2	November 2016	Apply fertiliser according to trial plan
Stage 3	October 2017	Harvest last crop
Stage 4	November 2017	ID new site, apply treatments
Stage 6	October 2018	Harvest trial

Project Trial site details

Trial Crop:	Sugarcane
Variety: Rat/Pit:	Q208 4R
Trial Block No/Name:	5-5
Trial Block Size Ha:	3.6
Trial Block Position (GPS):	149.417744, -21.691892)
Soil Type:	Tedlands - grey-yellow duplex soils

Block History, Trial Design:

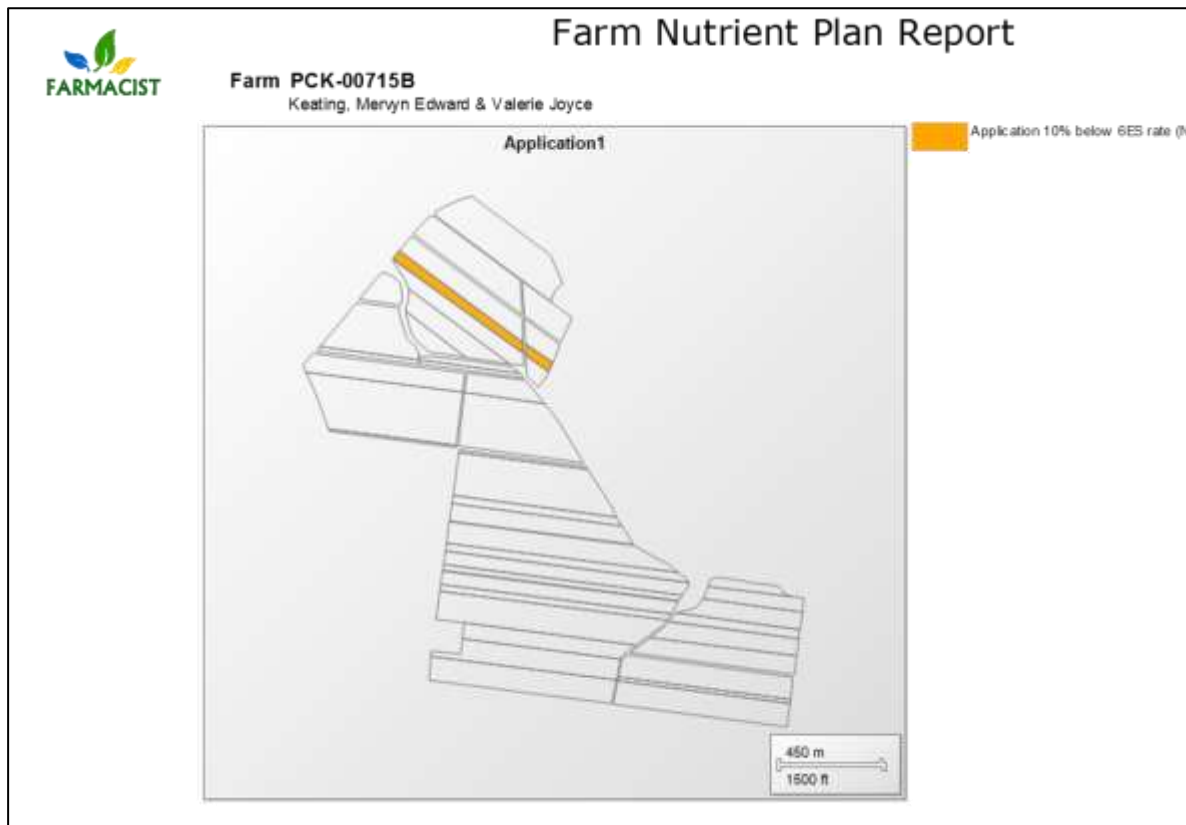


Figure 1 - Farm map indicating paddock that was applied at lower than 6ES rate

In order to gain the grower's confidence in reducing fertiliser rates, one small paddock was applied at a lower than 6ES rate, as shown in Figure 10 above.

Treatments:

1. At 6ES rates – N:152 P:15 K: 109 S: 26
2. At 10% below 6ES rates – N:135, P:0, K: 95 S: 14

Results:



Farm Nutrient Plan Report

Farm PCK-00715B

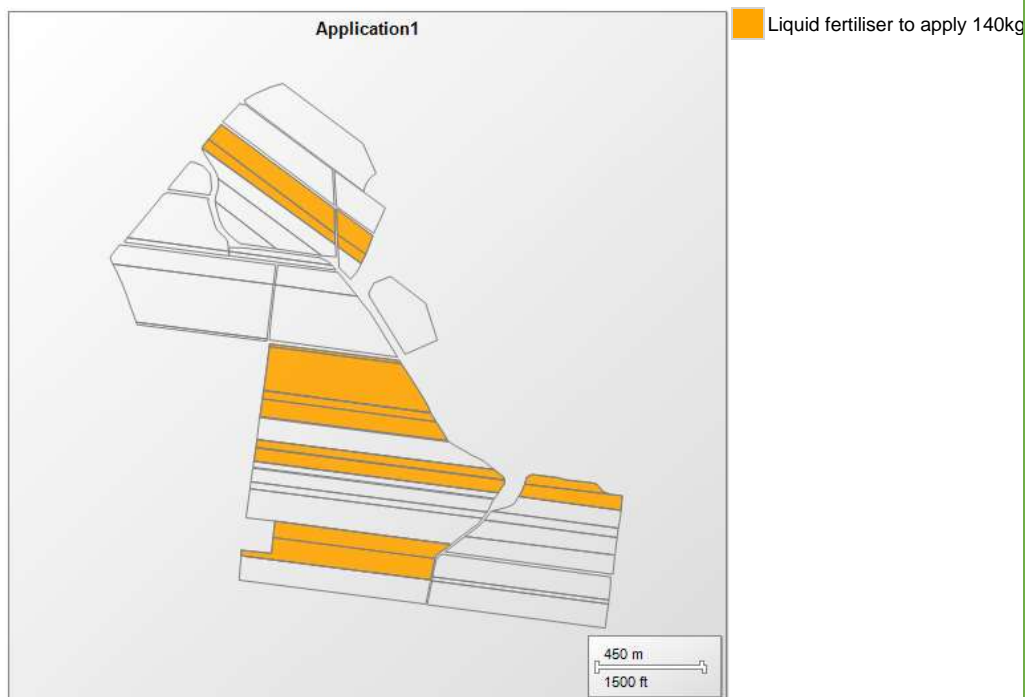


Figure 2 - Farm map indicating paddocks that were applied at a reduced rate in the second year of the trial

Due to being older ratoons, the paddocks shaded in the figure above (Figure 11), received a lower rate than the younger ratoons on the farm. A larger area was applied at lower rates after the success of the trial in the initial year. A total of 27% of the farm has been applied at this reduced rate saving approximately 12 cubic meters of product or 450 kg of nitrogen per year.

Conclusions and comments

From the positive outcome of the initial trial, the grower was able to confidently reduce his nitrogen rates across a larger area of the farm. No yield penalties were observed, and a cost saving was made.

Advantages of this Practice Change:

Reduced amount of fertiliser applied, lowering environmental risk and increasing profitability

Disadvantages of this Practice Change: None to think of apart from more planning requirements

Will you be using this practice in the future:

Yes

% of farm you would be confident to use this practice : Hopefully on all older ratoons but this will be dependent on circumstances for each location

Site complete

