

Project Catalyst Final Report

Microbial products trial

Grower Information

Grower Name:	Tom Gilbert
Entity Name:	GILBERT TJ & MRS B
Trial Farm No/Name:	Microbial products trial F# 5045A
Mill Area:	Victoria
Total Farm Area ha:	130 ha
No. Years Farming:	50 years
Trial Subdistrict:	Tara/Seymore
Area under Cane ha:	128.84 ha

Background Information

Aim: To compare which microbial product will produce more yield, healthier cane and longer ratoon life.

Background: (Rationale for why this might work)

The microbial products are said to promote root growth and soil health. We are comparing products to see which one is most economical, produces better yield & sugar per hectare and maybe reduce the severity of Yellow Canopy Syndrome over the life of the trial.

Such products claim to promote microbial activity which help mineralise nutrients making them more available to the plant ,with these we are hoping to see a rise in yield and longevity in ratoon life.

Potential Water Quality Benefit:

These products promote soil health which in turns improves water holding capacity to the field. Other benefits from microbial activity is a better uptake of nutrient by the plant, this has the potential to reduce nutrient losses from the block.

Expected Outcome of Trial:

That one of the product will produce better yield and therefore work out to be economically ahead of a simply conventional practice. By improving soil health, the cane will hopefully have a longer ratoon life.

Service provider contact: Megan Zahmel 0447 317 102

Where did this idea come from: Tom Gilbert

Plan - Project Activities	Date : (mth/year to be undertaken)	Activities : (breakdown of each activity for each stage)
Stage 1	Establish trial 2017	Baseline soil and pachymetra samples taken – 26/6/2017 Planted trial with SRA3 variety - 10/08/2017 Applied side dress with treatments – 17/11/2017
Stage 2	Sampling 2018	Microbial soil samples 15 wks. after product had 2 nd application – 13/2/2017 Co2 burst test – 13/02/2018 3 rd leaf testing – 13/02/2018 Microbial soil samples @ 25 wks. after product had 2 nd application – 30/04/2018 Co2 burst test – 30/04/2018 Harvest results – 27/09/2018 Re-apply products – 4/12/2018
Stage 3	Sampling 2019	3 rd leaf sampling – 4 th April 2019 Harvest and CCS results – 2019 season
Stage 4		
Stage 5		
Stage 6		

Project Trial site details

Trial Crop:	Sugarcane
Variety:	SRA 3
Rat/Plt:	Plant cane 2017
Trial Block No/Name:	#2-1
Trial Block Size Ha:	4.5ha
Trial Block Position (GPS):	Refer to google earth map
Soil Type:	Terrace loam

Block History, Trial Design:

- Had a mungbean fallow for 2016/2017

Tom Gilbert														Trt 1	Control
Microbe trial design														Trt 2	Serenade
Farm # 5045A Block # 2-1														Trt 3	NU edge HE Plus microbes
														Trt 4	Seasol Plus
SIDING															
	Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	Plot 9	Plot 10	Plot 11	Plot 12			
Block 2-2	trt 1 rep 1 6 rows	trt 2 rep 3 6 rows	trt 1 rep 3 6 rows	trt 3 rep 2 6 rows	trt 2 rep 1 6 rows	trt 4 rep 1 6 rows	trt 3 rep 1 6 rows	trt 2 rep 2 6 rows	trt 4 rep 2 6 rows	trt 3 rep 3 6 rows	trt 1 rep 2 6 rows	trt 4 rep 3 6 rows	Block 3-2		
Herbert River															

Treatments:

- Trt 1 – Control
- Trt 2 – Serenade Prime
- Trt 3 – HE Plus microbes
- Trt 4 – Seasol Plus

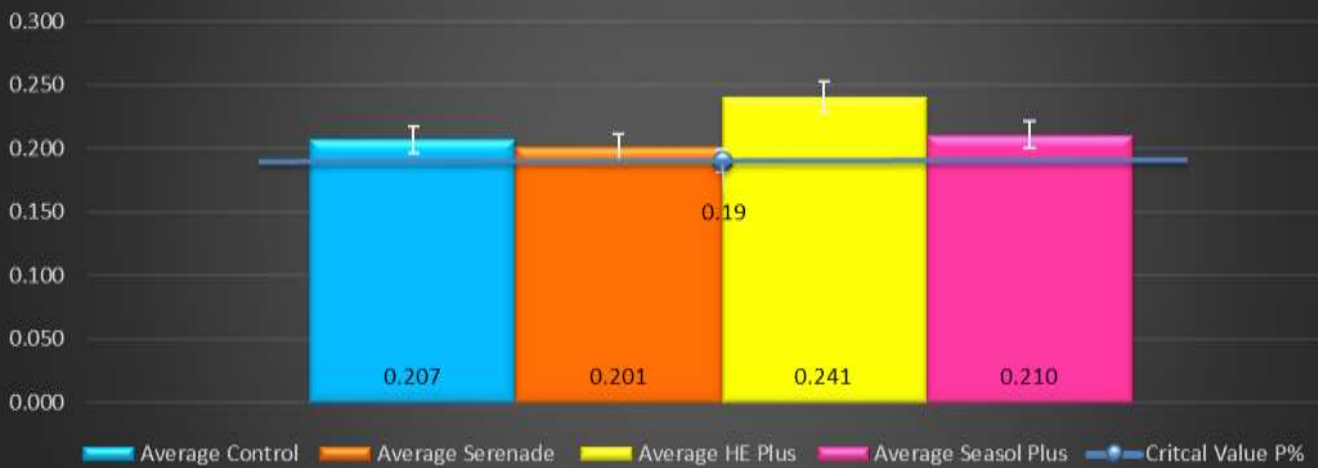
Results:

2018 3rd leaf nutrient results.

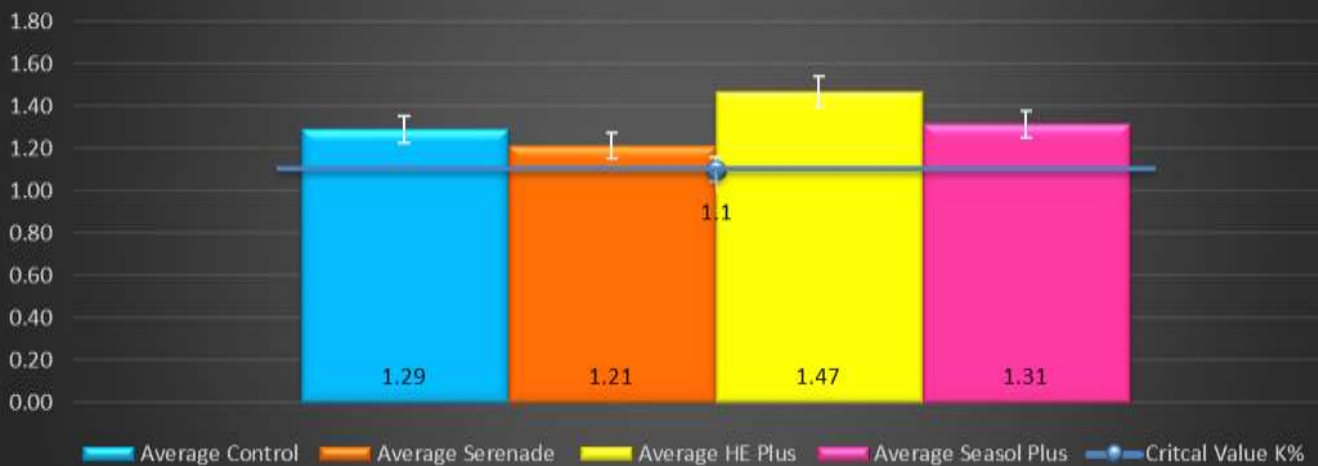
3rd leaf results averaged for N% 30th April 2018



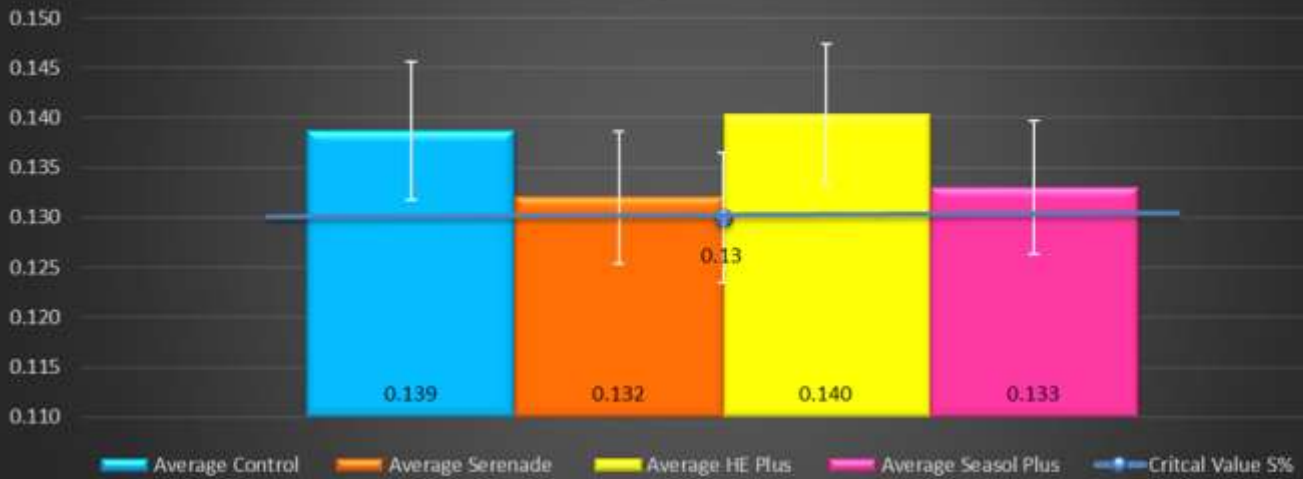
3rd leaf results averaged for P% 30th April 2018



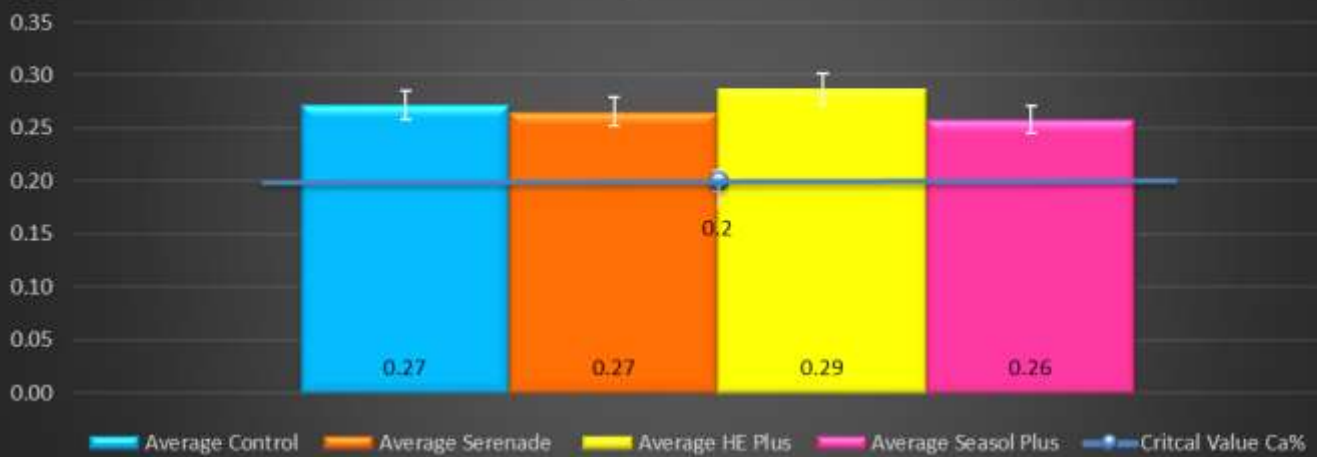
3rd leaf results averaged for K% 30th April 2018



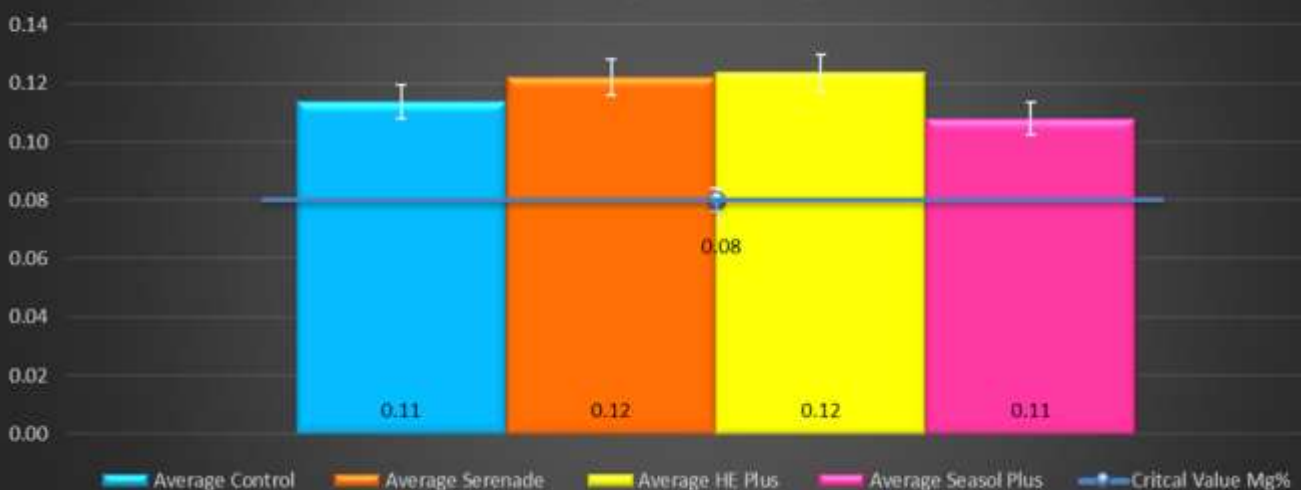
3rd leaf results averaged for S% 30th April 2018



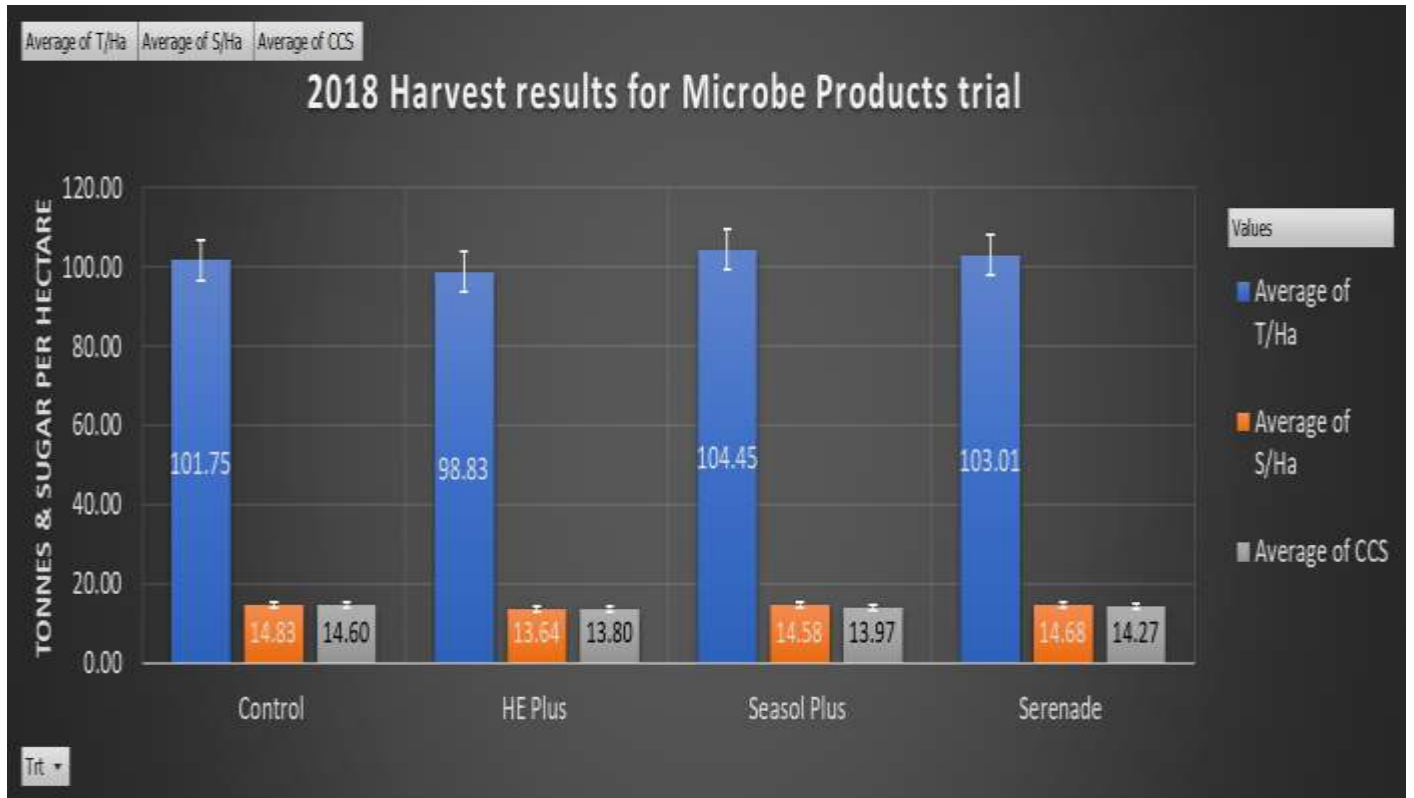
3rd leaf results averaged for Ca% 30th April 2018



3rd leaf results averaged for Mg% 30th April 2018



2018 Harvest results

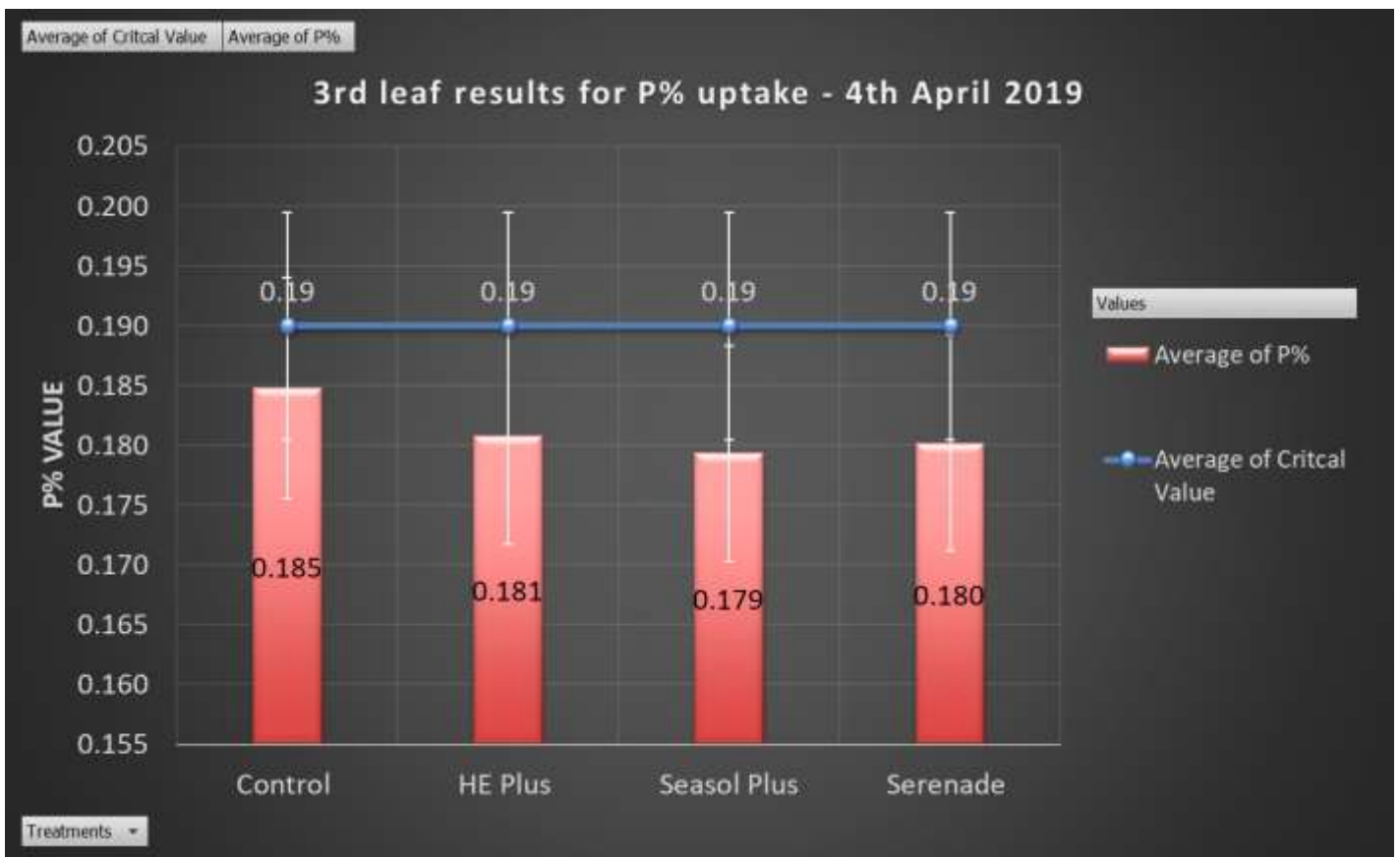
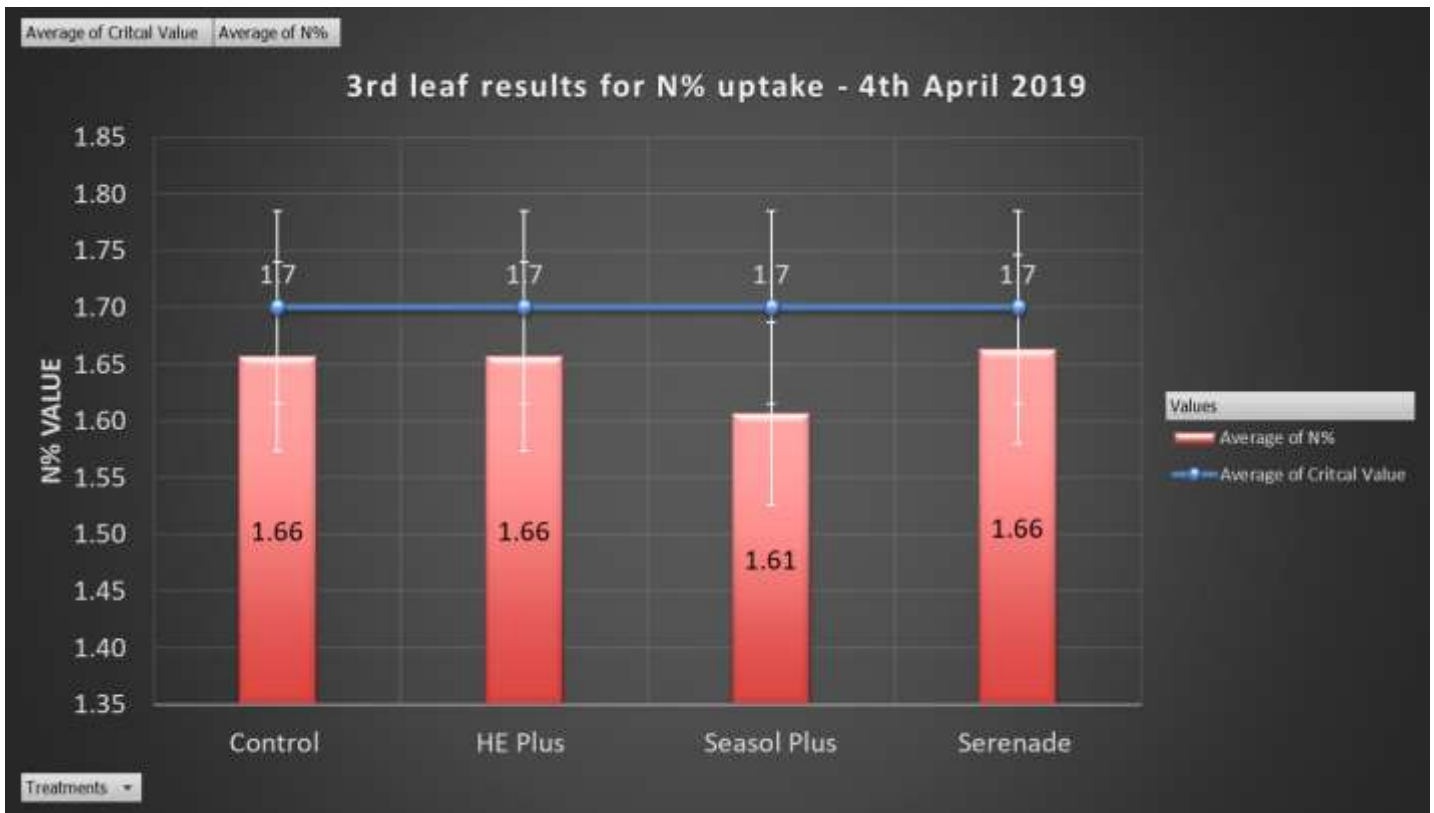


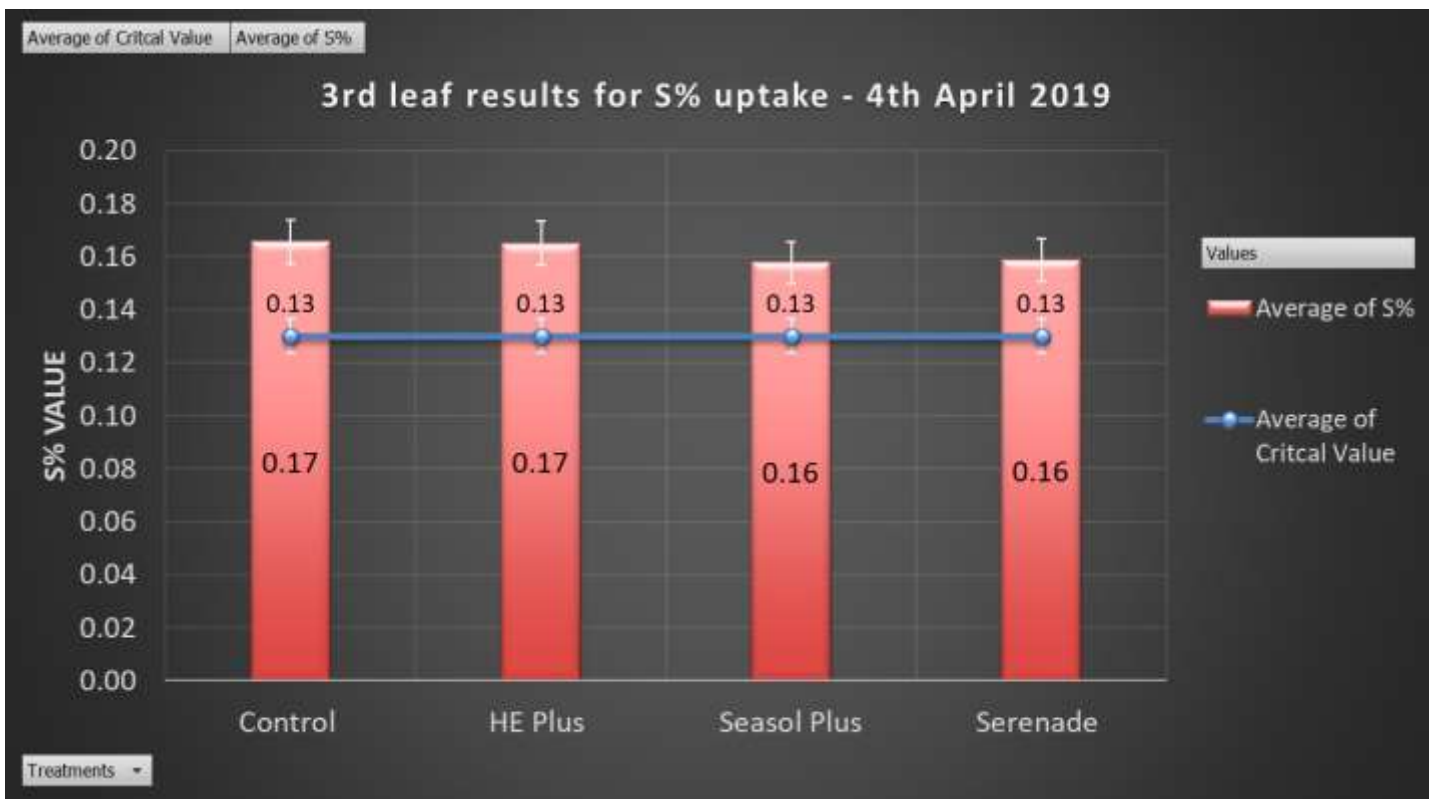
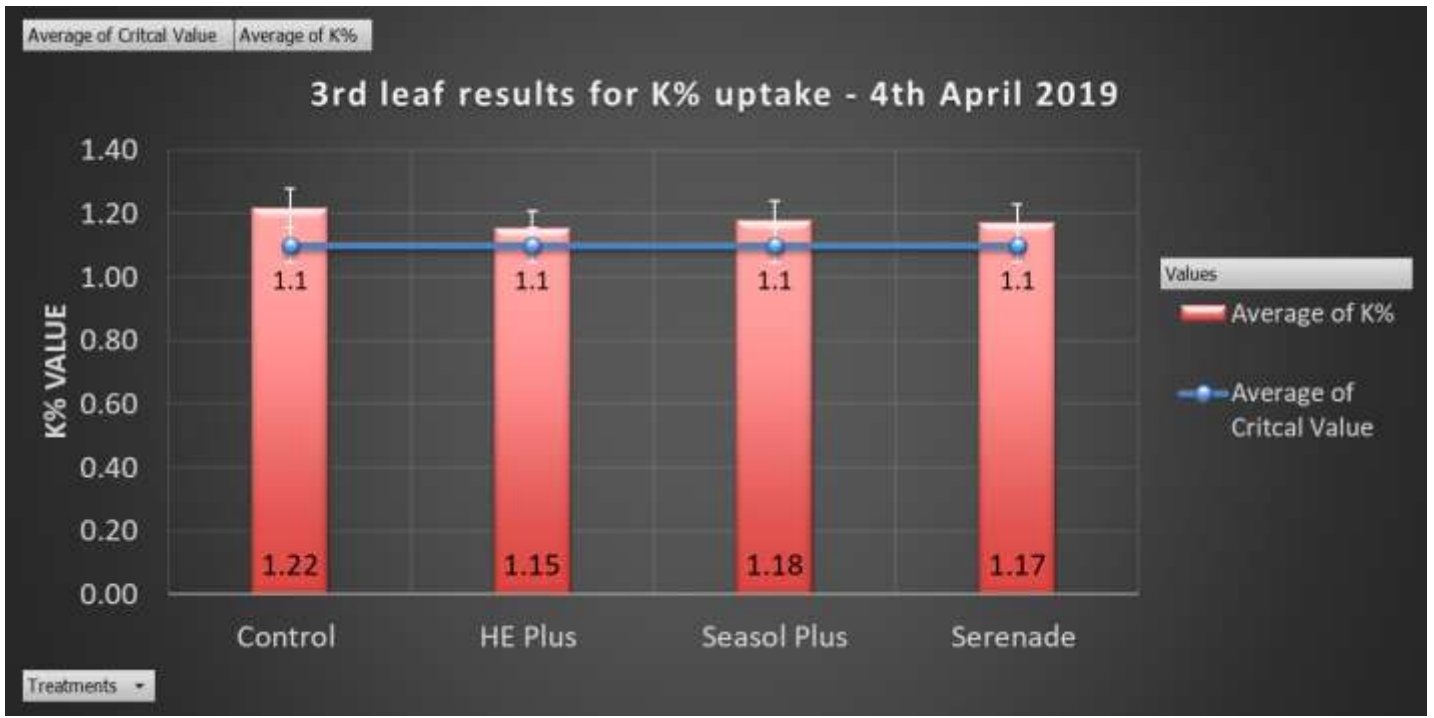
Plot areas.

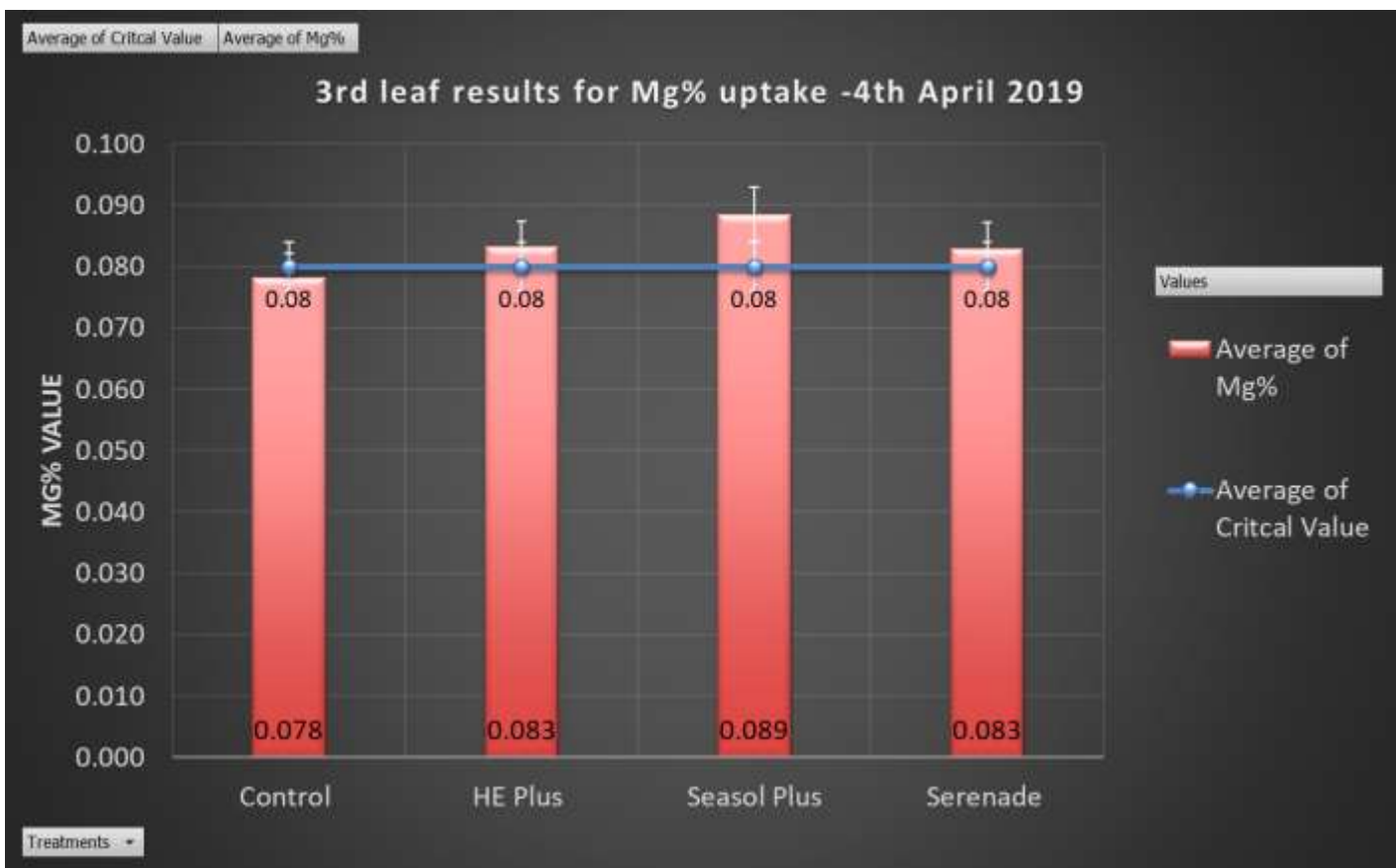
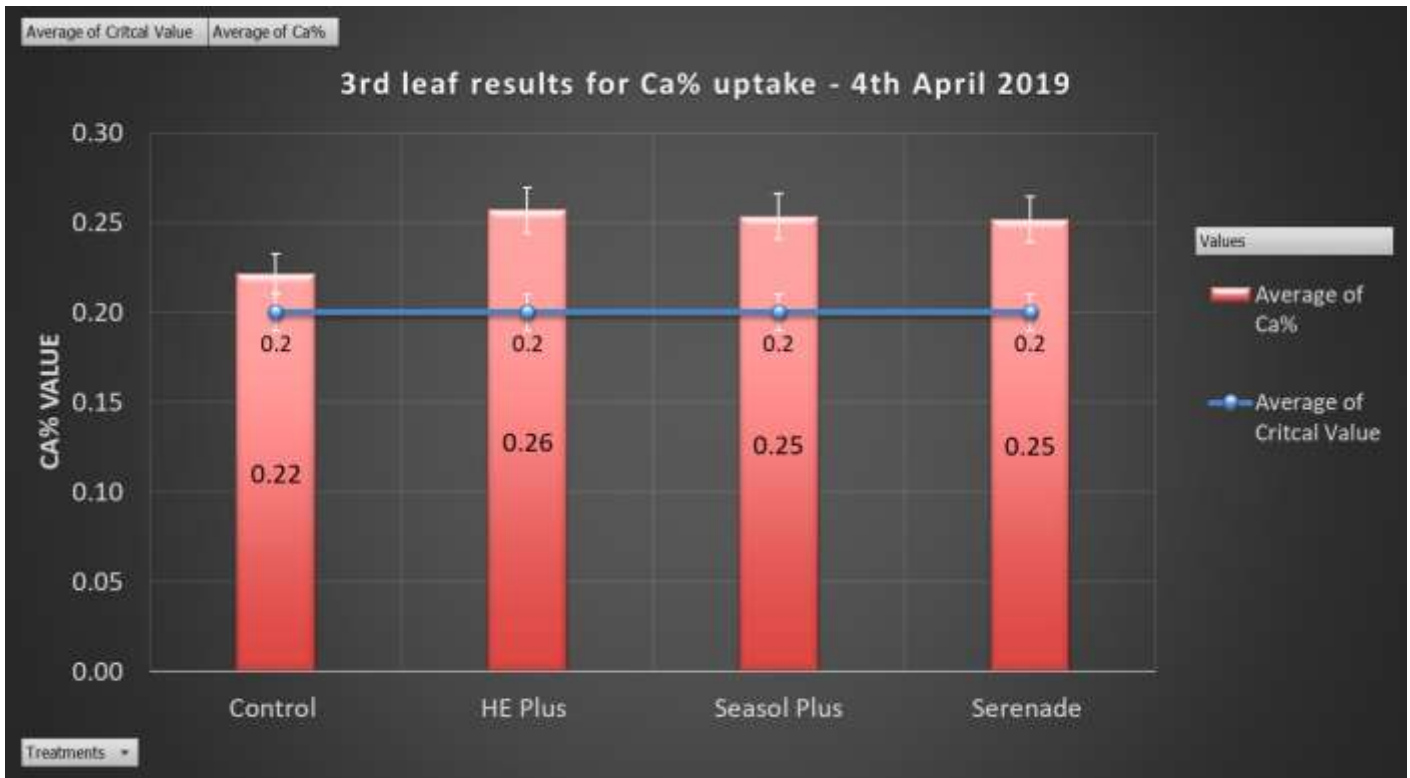


2019 Season Results

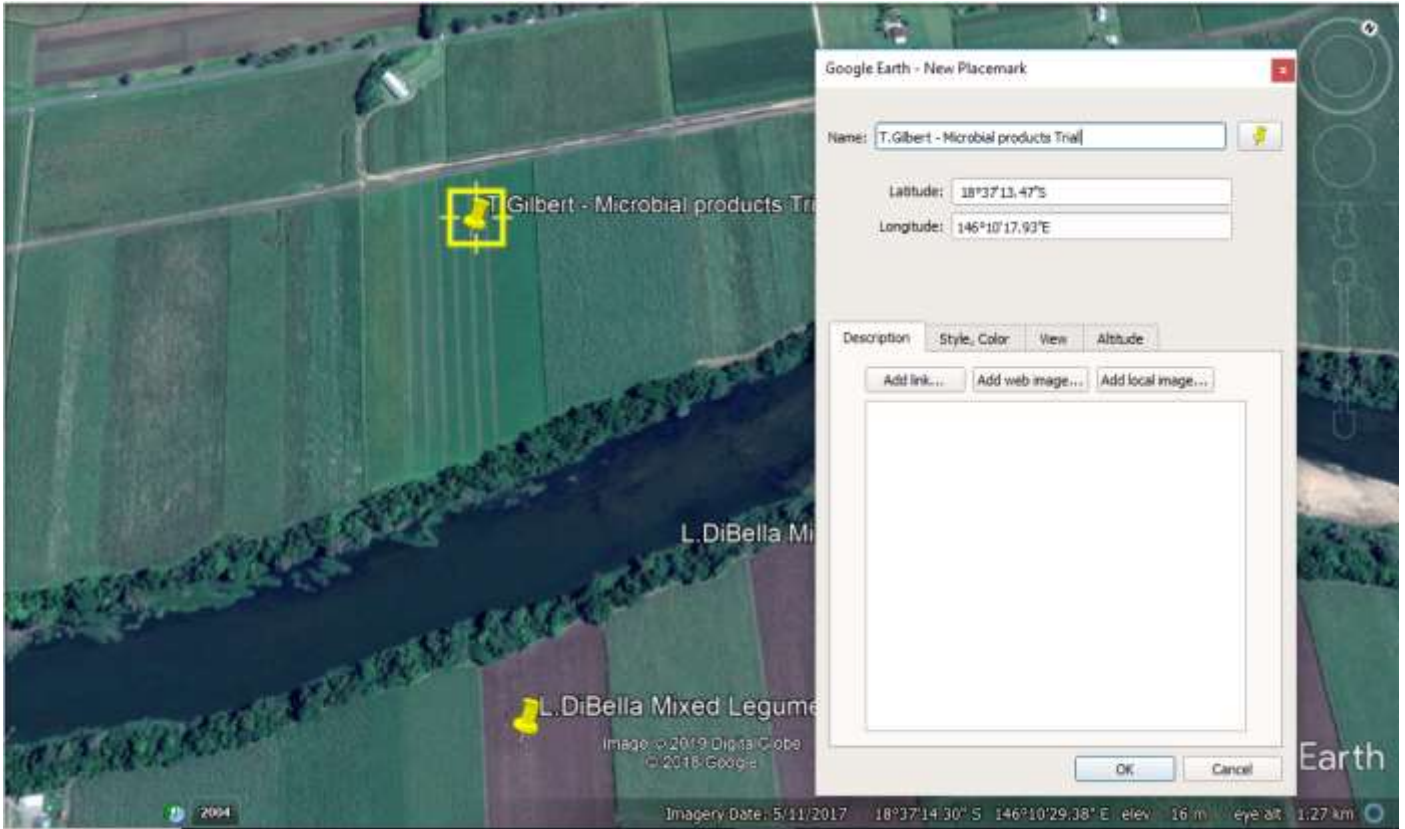
3rd leaf results for April 2019







Google Earth reference map



Conclusions and comments

Still waiting on harvest and CCS results from the 2019 season. So far there is no statistical difference between treatments. The trial would have to run a full crop cycle to see if there were any differences between treatments. All of the microbial products used in the trial seem to help the plant take up calcium and magnesium better than the control. The Seasol treatments also make the leaves wider as a field observation.

Advantages of this Practice Change:

Hopefully we will see an increase in yield and ratoon life by using these products

Disadvantages of this Practice Change:

Extra cost for product if no results are achieved.

Will you be using this practice in the future:

Yes, especially the Seasol Plus on plant blocks

% of farm you would be confident to use this practice :

On plant blocks and problem blocks