

Project Catalyst Trial Report

Zonal Application of Imidacloprid

Grower Information

Grower Name:	Alan and Rebecka Pace
Entity Name:	Pace Farming
Trial Farm No/Name:	F# 708A B# 3-6
Mill Area:	Victoria, Herbert Region
Total Farm Area ha:	2000
No. Years Farming: (Grower Experience)	40 years plus. third generation farmers.
Trial Subdistrict:	Coolbie - Rollingstone
Area under Cane ha:	757.16

Trial Status

Completed Continuing

Background Information

Aim: Making prescription maps for cane grub susceptible soil and applying imidacloprid through GPS rate controller to test if imidacloprid can control cane grubs without the traditional blanket approach

Background: (Rationale for why this might work)

This trial will test the effectiveness of zonal application of imidacloprid; placing the product in zones with sandy loamy soils only, as opposed to simply placing the product to the entire block.

Potential Water Quality Benefit:

Less product used will have a direct correlation with runoff and water quality

Expected Outcome of Trial:

Less imidacloprid.
Improved water quality due to less pesticide runoff.

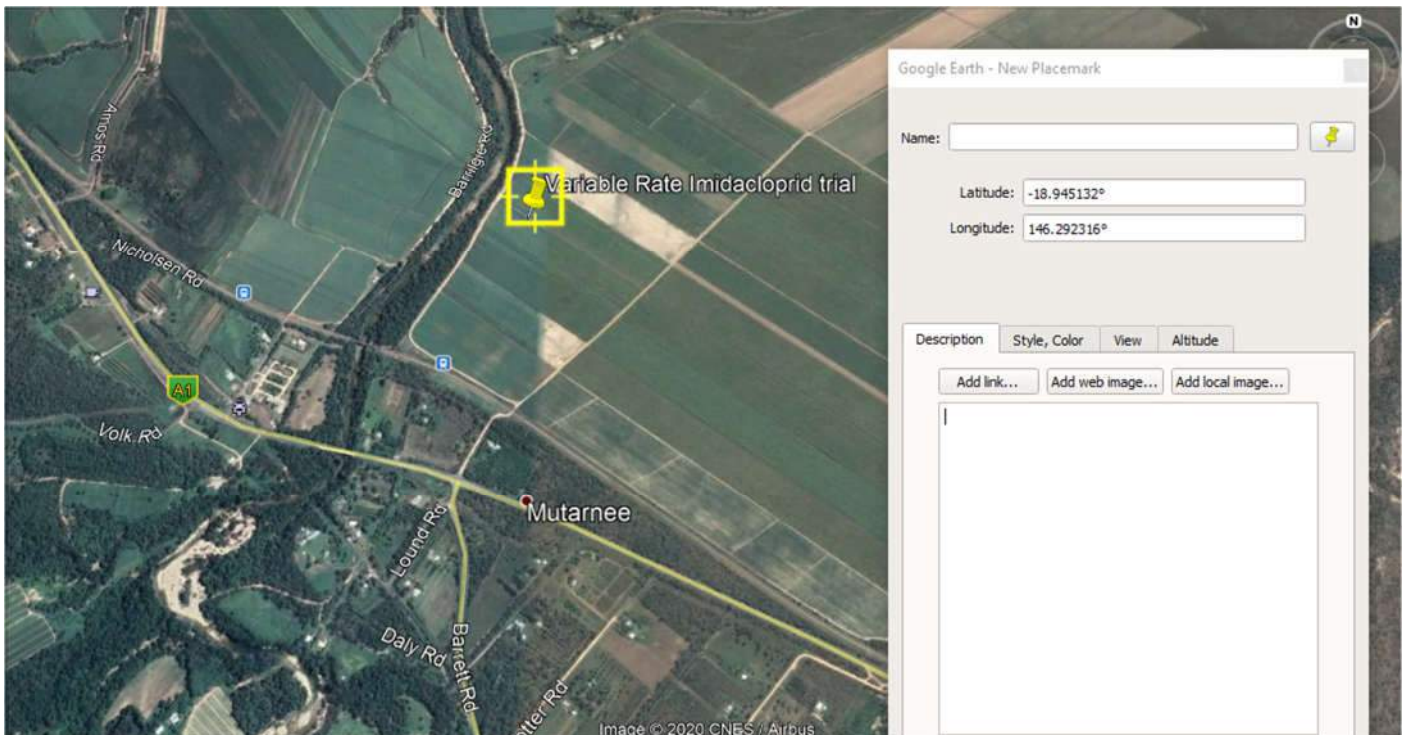
Service provider contact: Megan Zahmel: 0447 317 102

Where did this idea come from: Alan Pace

Plan - Project Activities	Date : (mth/year to be undertaken)	Activities :(breakdown of each activity for each stage)
Stage 1	Establish trial 2019	17/10/2019 – Blocks chosen, and trial design made. Prescription map made for Variable rate imidacloprid to be applied. 22/10/2019 – Applied Imidacloprid to trial as per trial design. 19/12/2019 – KPI water samplers installed
Stage 2	Sampling 2020	24/02/2020 – Trial site flooded and compromised all applied treatments. 31/30/2020 – Discussion with the grower and decided to restart trial in a block that will not be affected by flood waters. 31/03/2020 – KPI water samplers are unreliable, and a decision was made to use SRA water samplers in the next wet season to capture more accurate data. 31/03/2020 – A new block will be chosen to set the trial up on after 2020 harvest.
Stage 3	Sampling 2020	25/08/2020 – New trial site has been harvested 29/09/2020 – EM mapped the new trial site to determine variability. 29/09/2020 – Zonal prescription made for the application of Imidacloprid to the block 6/10/2020 – Confidor applied @ 120L/ha 7/12/2020 – SRA water samplers installed to trial site before the wet season begins. 29/12/2020 – 1 st set of water samples collected and stored. 75ml of rain recorded.
Stage 4	Sampling 2021	12/01/2021 – 2 nd set of water samples collected and stored. 128ml rain recorded. 19/01/2021 – 3 rd set of water samples collected and stored. 26ml recorded. 10/02/2021 – Samples sent to TropWaters lab for analysis. Next lot of sampling will be grub sampling in mid-April 2021.
Stage 5		
Stage 6		
Stage 7		

Project Trial site details

Trial Crop:	Sugarcane
Variety:	Q208 planted 2019
Rat/Plt:	
Trial Block No/Name:	B# 3-6
Trial Block Size Ha:	7.08ha
Trial Block Position (GPS):	Refer to google earth map
Soil Type:	Sandy Loam



Block History, Trial Design:

History: Blocks along the creek system have a history of grub problems.

Trial Design:

Trial Design		B# 3-6								
		Crystal Creek								North East
		Rep 1	Rep 2	Rep 1	Rep 2	Rep 3	Rep 4	Rep 3	Rep 4	
		Plot 1	Plot 2	Plot 3	Plot 4	Plot 5	Plot 6	Plot 7	Plot 8	
Bruce Highway	18 Guard rows Standard Rate	9 rows Standard Rate	9 rows Standard Rate	9 Rows VR Rate	9 Rows VR Rate	9 Rows VR Rate	9 Rows VR Rate	9 Rows Standard Rate	9 Rows Standard Rate	Guard Rows 6 guard rows
			6 inter-row WM#1		6 inter-row WM#2	6 inter-row WM#3		5 inter-row WM#4		
		Headland								

Treatments:

Trt 1 – Variable Rate Imidacloprid

Trt 2 – Standard Rate Imidacloprid

Results:

Cane Grub area map – Pink zone: cane grub susceptible soils



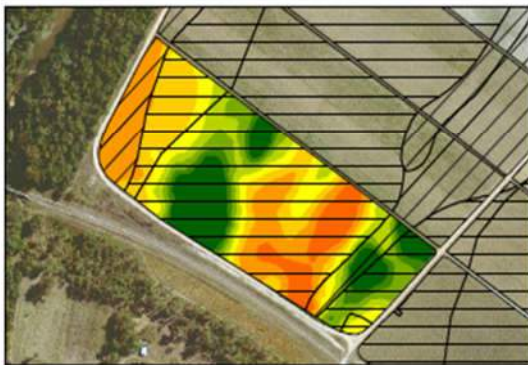
Confidor - LpHa



VR Imidicloprid
0708A-3-6



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Water sampling data captured 2020/2021 wet season.

Sample	Sample	IMIDACLOPR	Rainfall
Description	Date	ID	
		µg/L	ml
Standard Confidor	29/12/2020	0.04	75
Variable Confidor	29/12/2020	0.05	75
Standard Confidor	12/01/2021	0.33	128
Variable Confidor	12/01/2021	0.15	128
Variable Confidor	12/01/2021	0.03	128
Standard Confidor	12/01/2021	1.02	128
Standard Confidor	19/01/2021	0.32	26
Variable Confidor	19/01/2021	0.49	26
Variable Confidor	19/01/2021	1.77	26
Standard Confidor	19/01/2021	0.38	26

Conclusions and comments

Trial would need to continue for another season to capture grub counts, harvest data, and water quality data

Advantages of this Practice Change:

Less pesticide needed for the block by applying it only to problem areas

Disadvantages of this Practice Change:

Growers will need variable rate control boxes on their farming equipment

Will you be using this practice in the future:

Maybe - subject to further trial work

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

N/A