Project Catalyst Final Report

Stool Split V Side Dress

Grower Information	
Grower Name:	Sam Marano
Entity Name:	Myola Farming Co
Trial Farm No/Name:	BKN-01687A
Mill Area:	Inkerman
Total Farm Area ha:	48
No. Years Farming:	
Trial Subdistrict:	Causeway
Area under Cane ha:	48

Trial Status

- Completed

Background Information

Aim: to Compare the water quality runoff of stool split v side dress fertiliser application

Background: (Rationale for why this might work)

The application methods of stool split and side dress are both very common in the Burdekin. The method which is used is tailored to suit the soil type and timings for farm management. However the Nitrate runoff characteristics of each method have no been compared. This trial aims to address this knowledge gap and understand the levels of runoff caused by each method.

Potential Water Quality Benefit:

By understanding which is the best application method in a certain soil type from a water quality point of view can have huge remifications for the area. This can enable growers to change practice based upon what is better suited to their land.

Expected Outcome of Trial:

Until measurements have been taken it is impossible to tell which application method will be better for the environment.

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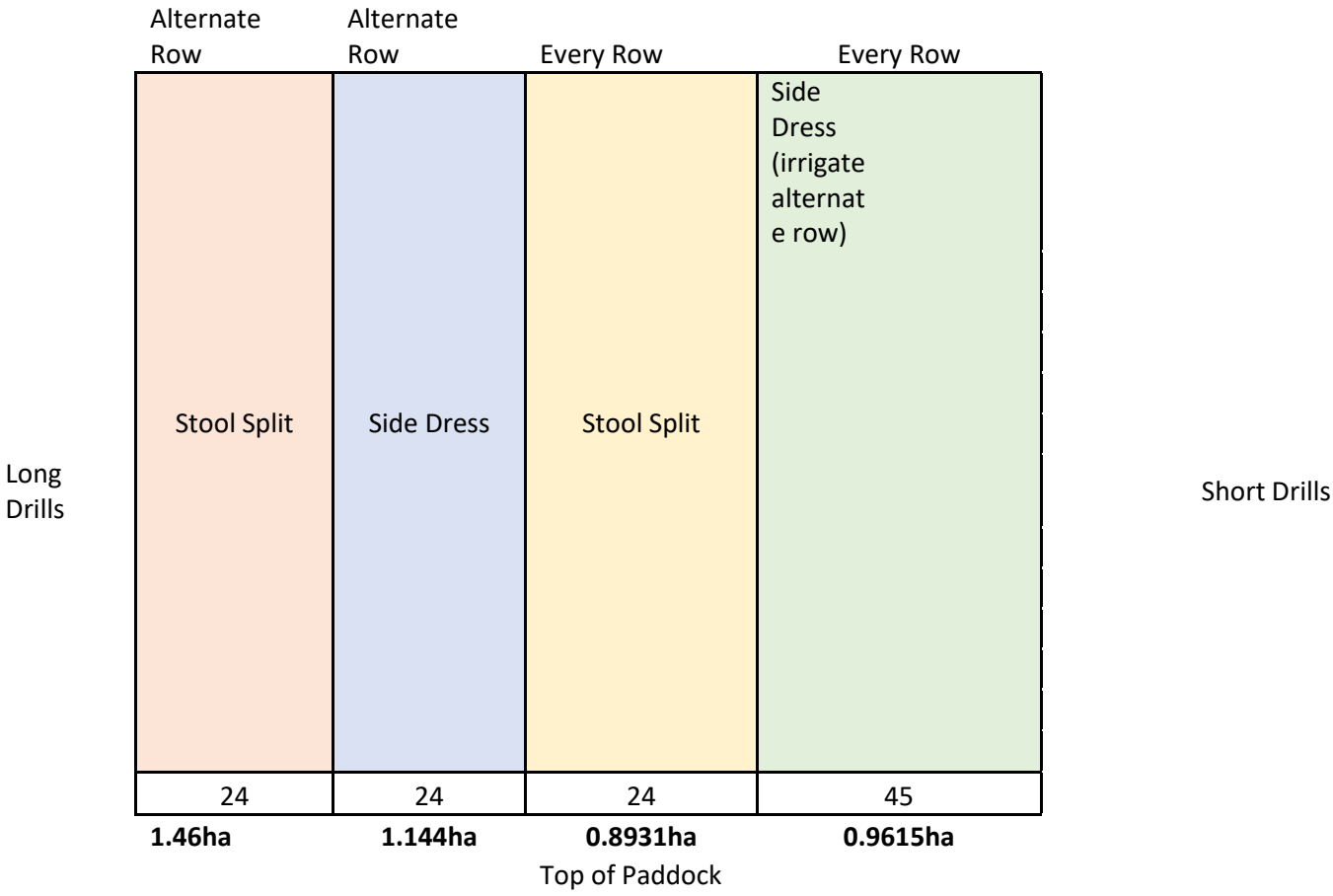
Where did this idea come from: Grower

Plan - Project Activities	**Date : (mth/year to be undertaken)**	
Stage 1	**Dec 2017**	- Apply the trial using the same fertiliser rates in each treatment and only varying the application method.
Stage 2	**Dec 2017**	- Install KP samplers to monitor the water quality during irrigation events. - Monitor first 10 irrigation/rainfall samples
Stage 3	**April 2018**	- Evaluate data
Stage 4	**Septemeber 2018**	- Harvest trial

Project Trial site details

Trial Crop:	Sugarcane
Variety: **Rat/Plt:**	1st ratoon Q240
Trial Block No/Name:	BKN-01687A-05-01
Trial Block Size Ha:	6.99
Trial Block Position (GPS):	-19.720703° 147.346803°
Soil Type:	RUgbS

Block History, Trial Design:



Treatments:

This trial also incorporates an alternate row irrigation trial which explains the extra treatments.

T1- Alternate Row and Stool split.

T2-Alternate row and side dress

T3- Every row and Stool Splitt

T4- Every Row and Side Dress.

Results:

			tc/ha	CCS	Ts/ha
Alternate row	Stool Splitt	Rep 1	95.98	16.2	15.54876
Alternate row	Stool Splitt	Rep 2	108.18	16.4	17.74152
Alternate row	Side Dress	Rep 1	108.17	15.5	16.76635
Alternate row	Side Dress	Rep 2	104	15.9	16.536
Every Row	Stool Splitt	Rep 1	112.03	16	17.9248
Every Row	Stool Splitt	Rep 2	104.2	16.2	16.8804
Every Row	**Side Dress**	**Rep 1**	104.9	16.1	16.8889

The results for the first year are shown above. There was no statistical diference between any of the treatments, including alternate row v every row and stool split v side dress.

Moisture data was also collected throughout the year which showed the replenishing of the profile during irrigation events.

Water quality results were collected from each treatment over 7 irrigations and 5 rainfall events. However this data also showed no statistical difference between the runoff amounts between treatments.

Due to the lack of differences between the treatments the trial was not continued past the first year. This could be due to the relatively low yields for area.

Conclusions and comments

Advantages of this Practice Change:
The advantage of swapping from stool split to side dress and vice versa was not realised in this trial. Ideally there would have been an advantage in water quality however this was not seen within the data.

Disadvantages of this Practice Change:
No disadvantage in swapping practice.

Will you be using this practice in the future:
No, swapping infrastructure is not necessary for when no water quality improvement was found.

% of farm you would be confident to use this practice :
0%