

# Catalyst Project Report

## Grower Information

<b>Grower Name:</b>	Adam Keilbach
<b>Entity Name:</b>	KDAMN PTY LTD
<b>Trial Farm No/Name:</b>	MKY-04258A
<b>Mill Area:</b>	Mackay Sugar
<b>Total Farm Area ha:</b>	527
<b>No. Years Farming:</b>	3 <sup>rd</sup> generation
<b>Trial Subdistrict:</b>	Dawlish
<b>Area under Cane ha:</b>	461

## **Background Information**

### **Aim:**

To investigate the impact of intercropping soybean with sugarcane ratoons on sugar cane yield and nitrogen stores.

### **Background:**

Soy bean are commonly utilised in fallow paddocks in the sugar cane system due to their ability to fix nitrogen into the soil, which can then be used for the following plant cane crop.

With pressure on growers to reduce their use of nitrogen fertiliser, alternative sources of nitrogen have been considered.

This trial will investigate whether a soy bean plant grown alongside a cane plant will contribute nitrogen without compromising yield.

Aside from benefits to nitrogen management, it is possible that having plant diversity will improve the health of the soil and in turn the cane crop.

### **Potential Water Quality Benefit:**

Reduced application of synthetic nitrogen fertiliser

### **Expected Outcome of Trial:**

No change in yield where synthetic fertiliser is replaced by nitrogen fixed by soybean

### **Service provider contact: Farmacist**

### **Where did this idea come from: Grower/Farmacist**

<b><u>Plan - Project Activities</u></b>	<b>Date : (mth/year to be undertaken)</b>	<b>Activities :(breakdown of each activity for each stage)</b>
<b>Stage 1</b>	<b>October 2018</b>	Plant soybean into cane crop
<b>Stage 2</b>	<b>November 2018</b>	Apply fertiliser
<b>Stage 3</b>	<b>January 2019</b>	Take Solvita tests to compare biological activity
<b>Stage 4</b>	<b>March 2019</b>	Spray out soybean Leaf sample sugar cane
<b>Stage 5</b>	<b>September 2019</b>	Harvest Cane crop

## Project Trial site details

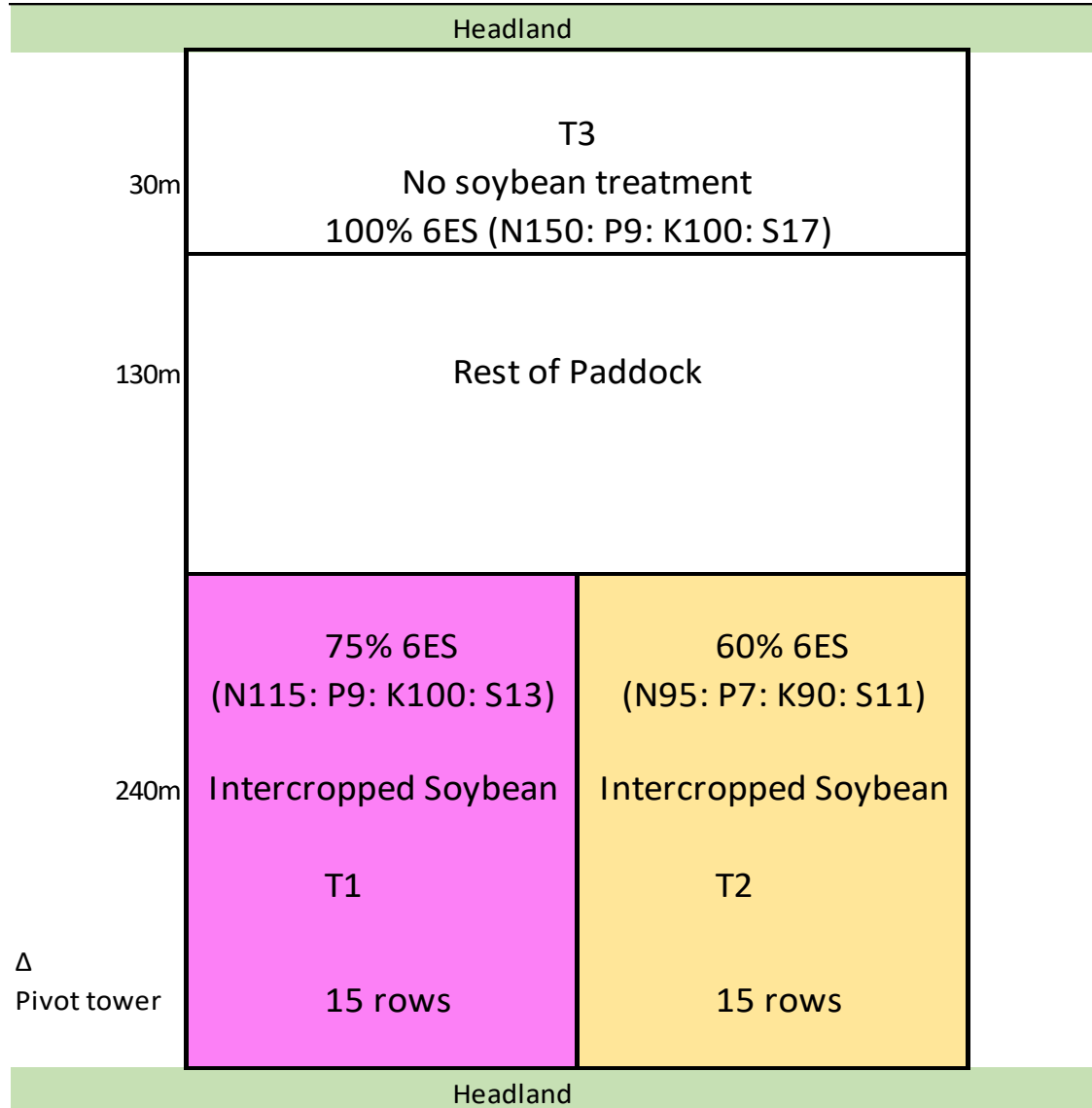
<b>Trial Crop:</b>	Sugarcane
<b>Variety:</b>	Q240
<b>Rat/Pit:</b>	1R
<b>Trial Block No/Name:</b>	2-2
<b>Trial Block Size Ha:</b>	15
<b>Trial Block Position (GPS):</b>	-21.375786, 149.125808
<b>Soil Type:</b>	Sunnyside, a grey-olive duplex soil

**Block History, Trial Design:**

**Intercropping Trial**

Adam Keilbach

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**Treatments:**

- T1. Intercropped soybean with 75% of 6ES fertiliser applied.**
- T2. Intercropped soybean with 60% of 6ES fertiliser applied.**
- T3. No soybean with 100% 6ES fertiliser applied.**

## Results:

### Leaf Samples 2019

Leaf samples taken in March 2019 showed minimal differences between treatments. All treatments were well above the critical value for nitrogen content as shown in Figure 1.

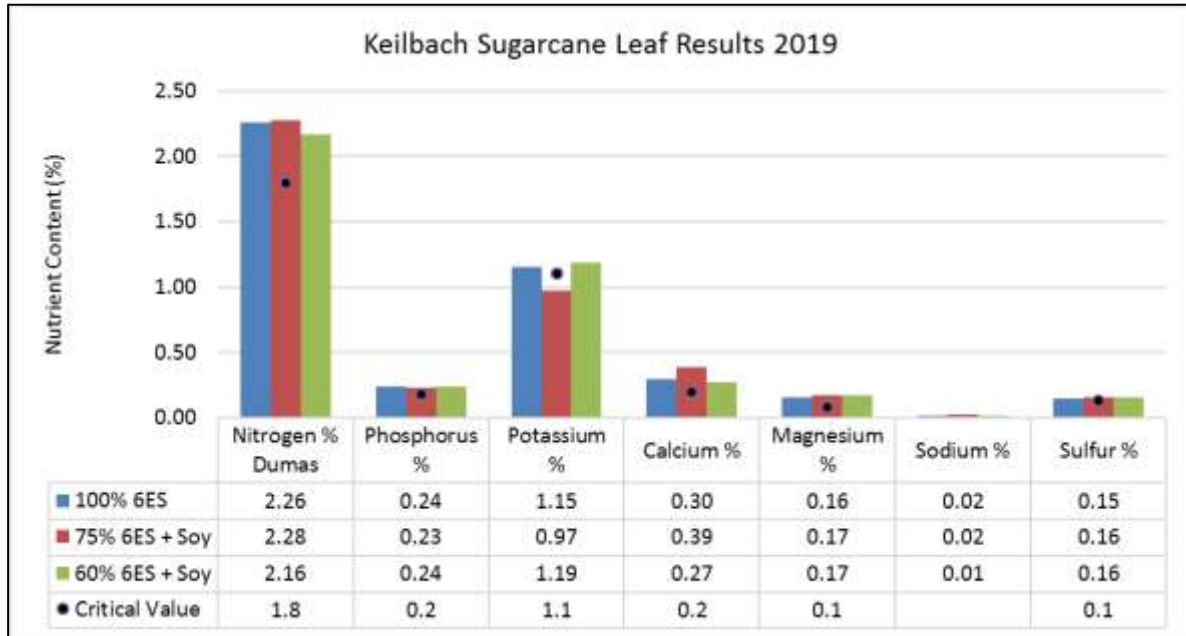


Figure 1 Leaf results 2019

## Conclusions and comments

New in 2018

Advantages of this Practice Change:

Disadvantages of this Practice Change:

Will you be using this practice in the future:

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

