

# NEWSLETTER

**JULY 2020**

## 2020 Planting Season

Planting remains the single most costly activity for growers, hence clean planting material is essential to maintain productivity. The planting season is well underway across the district and Productivity Officers have been busy carrying out plant source inspections for growers. This process helps to identify conditions such as ratoon stunting disease (RSD), chlorotic streak, smut, red rot, borers, environmental or chemical damage, and mixed varieties. No farmer wants to have these issues found but early identification allows growers the time to plan necessary changes and avoid ongoing problems.

Taking a look at RSD in particular, levels across the Central District remain low, but this can easily get out of hand if left unchecked. Throughout 2019, MAPS conducted an RSD survey targeting older blocks of ratoons as RSD is more likely to be found there. Each Productivity Officer surveyed approximately 25% of their farms. It was encouraging to find no new farms detected from the 300 plus farms inspected, as per the 2019 RSD survey results tabled. These results are a testament to vigilant sampling strategies and positive partnerships between growers and MAPS staff. Currently RSD is only found on 1.1% of Mackay Sugar farms. The survey is being conducted again in 2020.

Recent communications with several of the northern milling areas suggests RSD levels are much higher with 20-40% of farms affected. MAPS staff continue to promote a high sampling effort, good uptake of clean seed and emphasis on sterilizing equipment between farms. The importance of these three activities cannot be underestimated. MAPS has set a very high standard on RSD monitoring and the results are reinforced by the survey results below.

### 2019 RSD Survey

| Area         | No. of Farms | New RSD Detections |
|--------------|--------------|--------------------|
| Marian       | 90           | Nil                |
| Farleigh     | 92           | Nil                |
| Racecourse   | 88           | Nil                |
| Pleystowe    | 75           | Nil                |
| <b>Total</b> | <b>345</b>   | <b>Nil</b>         |



Data collected through field trials indicates RSD causes yield losses from 5-60% depending on the susceptibility of the variety and the weather conditions. Higher yield losses occur when the cane is suffering moisture stress. The average yield loss is 15-20% (*'Ratoon stunting disease'*, SRA, Information Sheet IS13007, 2013).

On the other hand, chlorotic streak is more likely to be found in flood prone and water logged areas, causing greater concern during wet years and in high rainfall districts. Affected cane will lack vigour and yield reductions of up to 40% have been record in susceptible areas and

varieties. Poor ratooning is also a characteristic of chlorotic streak (*'Chlorotic streak'*, SRA, Information Sheet IS17007, 2018).

Sourcing clean seed from one of the MAPS plots is an essential practice for growers in the bid to maintain and increase productivity. The year before distribution, clean seed cane is put through a cold-soak, long hot water treatment process (CSLHWT). This treatment rids the plant source of diseases including RSD, chlorotic streak and leaf scald.

## Clean Seed Plots

In an endeavour to support growers in the uptake of new varieties and clean seed, MAPS have both whole stick and billet cane available in the Calen, Victoria Plains and Pioneer Valley districts. The dates for billet cane will be communicated with growers through text messages and the cost will remain at \$66/tonne, with growers providing their own tipper bin transport. If you require more information on billets or whole stick collection, please call your Productivity Officer. **Whole stick distribution at Victoria Plains will cease in late August.**

| Victoria Plains – Open Wednesday,<br>7am – 12pm or call your Prod Advisor |   | Pioneer Valley<br>Ian Marais -<br>0417 326 669 | North Coast<br>Brendan Rae -<br>0417 326 393 |
|---|---|--|--|
| Whole Stick   | KQ228, Q183, Q208, Q208R, Q240, Q250, Q253, SP80, SRA9, SRA12, SRA13, SRA21,<br>SRA22 - 2 sticks/ha | SRA9, SRA21, SRA22                             | SRA22  |
|   | Pre-cut onto trailer - Q208R, Q240, SRA9, SRA21<br>Must be ordered through Prod Advisor             |  |  |
| Billets   | Selected varieties available early September, Andrew Dougan<br>- 0417 326 674                       | Q183, Q208R, Q240<br>(dates to be confirmed)   | Q183, Q208R, Q253<br>(dates to be confirmed) |

Uptake of clean seed cane for the current season will ensure MAPS will continue to increase the availability of varieties in future seasons. Whole stick and billet plots are currently being planted for distribution to growers for the 2021 season. Billet plots run over a 2-year cycle with mother plots planted as seed source for billet supplies the following year. An additional billet plot is being established at Homebush for billet distribution in 2022.



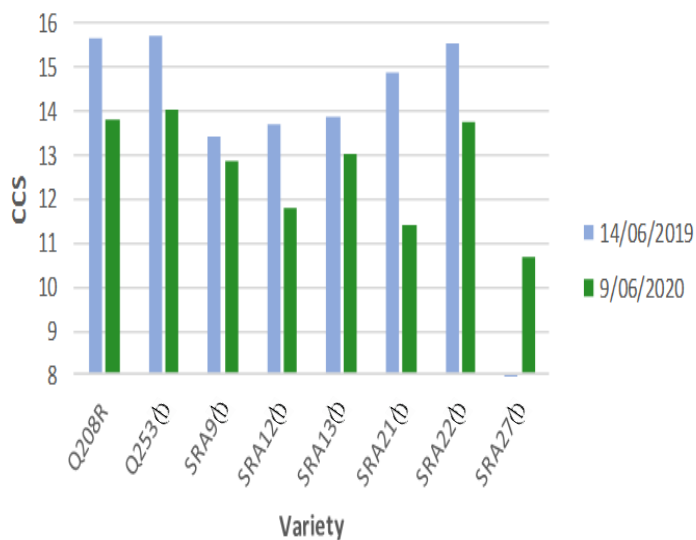
## Maturity Testing

Maturity testing has again been carried out on the MAPS observation plots. As you would be aware, CCS levels are down on 2019 to date. The graphs below show the comparison between June small-mills results for 2019 and 2020. It is hard to find clear variety trends within these figures. This highlights the difficulties faced when trying to offer recommendations for the newer varieties. Soil and weather variation, planting times, water availability and farming practices can all impact these results.

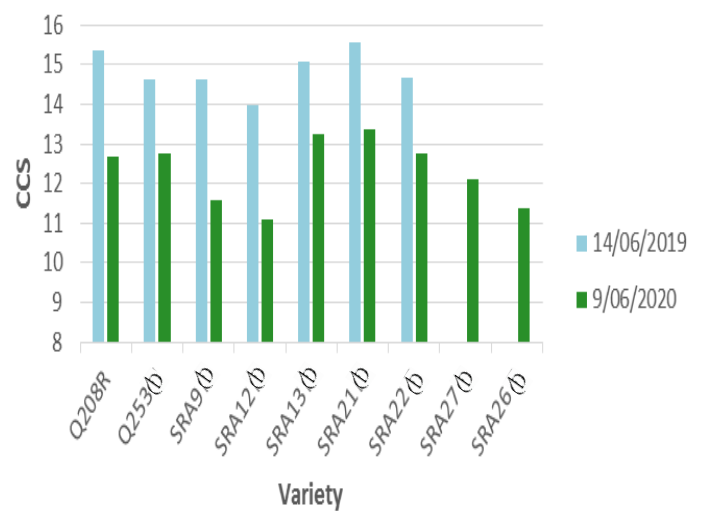
Early indications from the plots suggest Q208R & Q253 are performing at the start of the harvest and SRA9 & SRA12 will give better results when harvested mid to late. SRA22 also performed well early, but there is no commercial data to back this up as yet.

Further samples will be collected from the plots during the season for comparisons to the 2019 data. If there are any questions please contact your Productivity Officer to discuss further.

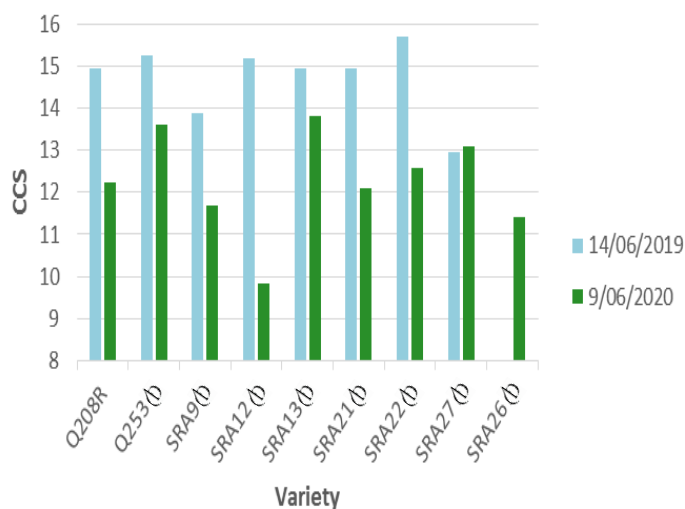
Victoria Plains - Prairie Soil



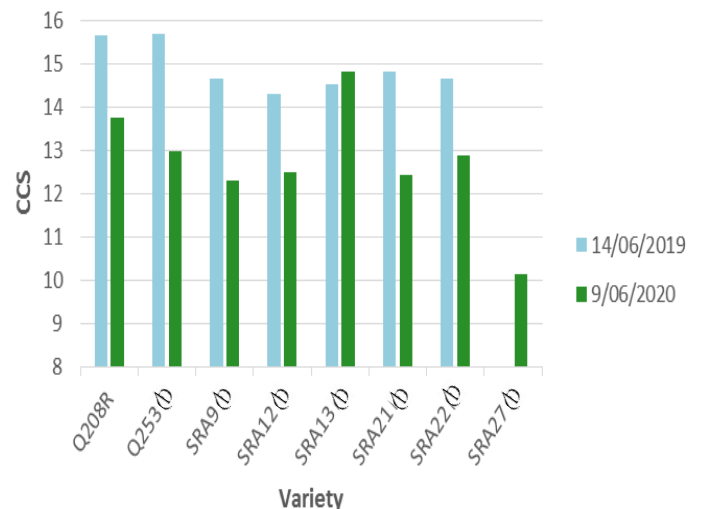
Farleigh - Sandy Soil



Sandy Creek - Solodic Soil



North Eton - Black Earth





## Canegrub outlook for 2021

MAPS Field staff are reporting an increase of canegrub damage this season. Most of this damage will be from the Greyback canegrub and most of these grubs will now be pupating at depth in the soil. They'll start emerging as adult beetles from about November, depending on when our first summer storms occur. The amount of damage showing up in this seasons crop indicates a high level of infestation risk for susceptible blocks in the coming season. This means blocks at risk of infestation need to be treated by the end of November this year.

The insecticide imidacloprid, available under many different product names, is our main registered insecticide treatment. Globally, this insecticide is under intense scrutiny for its potential environmental impacts. It, and other insecticides in the neonicotinoid group, are being reviewed by the Australian Pesticides and Veterinary Medicines Authority (APVMA). This review will continue through to 2023 when the APVMA will deliver their decisions about use of neonicotinoid insecticides in Australia.

### What can we do to ensure continued access to imidacloprid?

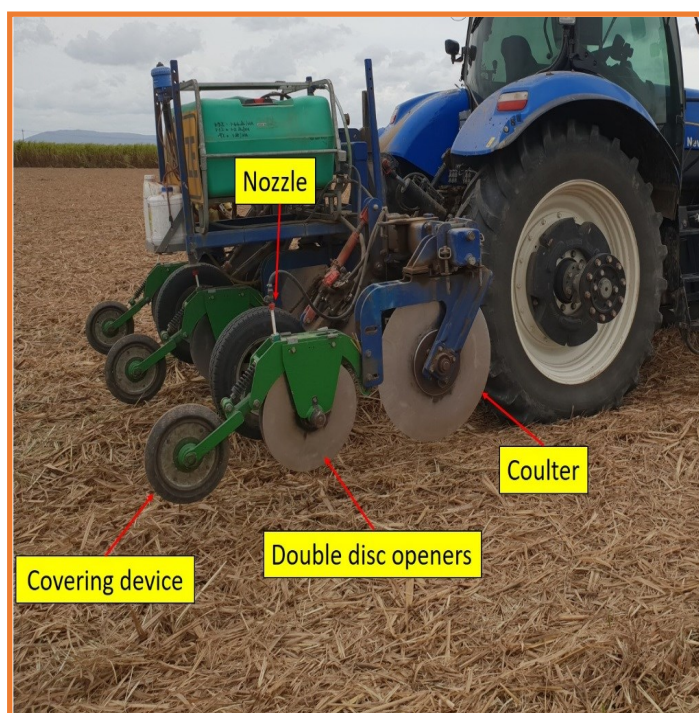
1. Make an informed decision about which blocks are at risk of infestation.
  - a. Risk of infestation increases with:
    - Blocks that were infested this season are likely to be infested again next season
    - Unprotected blocks with lighter soil textures and particularly adjacent to creek vegetation
    - Ridges and upper slopes
    - Infestations on neighbouring farms
    - Early cut cane (adult beetles seem to be attracted to blocks with taller cane)
  - b. Risk of infestation is reduced with:
    - Historical low or nil infestation on particular blocks or parts of blocks

- Blocks with heavy textured soils for example Black Earth
- Blocks that have been treated with the controlled release formulation, suSCon maxi Intel® and are still within 4 seasons since application

### 2. Apply the insecticide correctly

- a. In ratoons, ensure:
  - It is applied at 100mm to 150mm depth- check that your coulters/double discs/tynes are actually penetrating to this depth (with trash removed!)
  - The insecticide is applied to the base of the slot – check the positioning and angle of the delivery tube
  - The slot is fully filled in – check that you have a slot closing mechanism and that it is effective in your soil types
  - If you have a combined imidacloprid/fertiliser applicator, check that the liquid is not making the fertiliser and soil wet resulting in fertiliser and treated soil being brought to the surface on the rotating discs – if necessary fit a scraper
  - Only use it for canegrub control

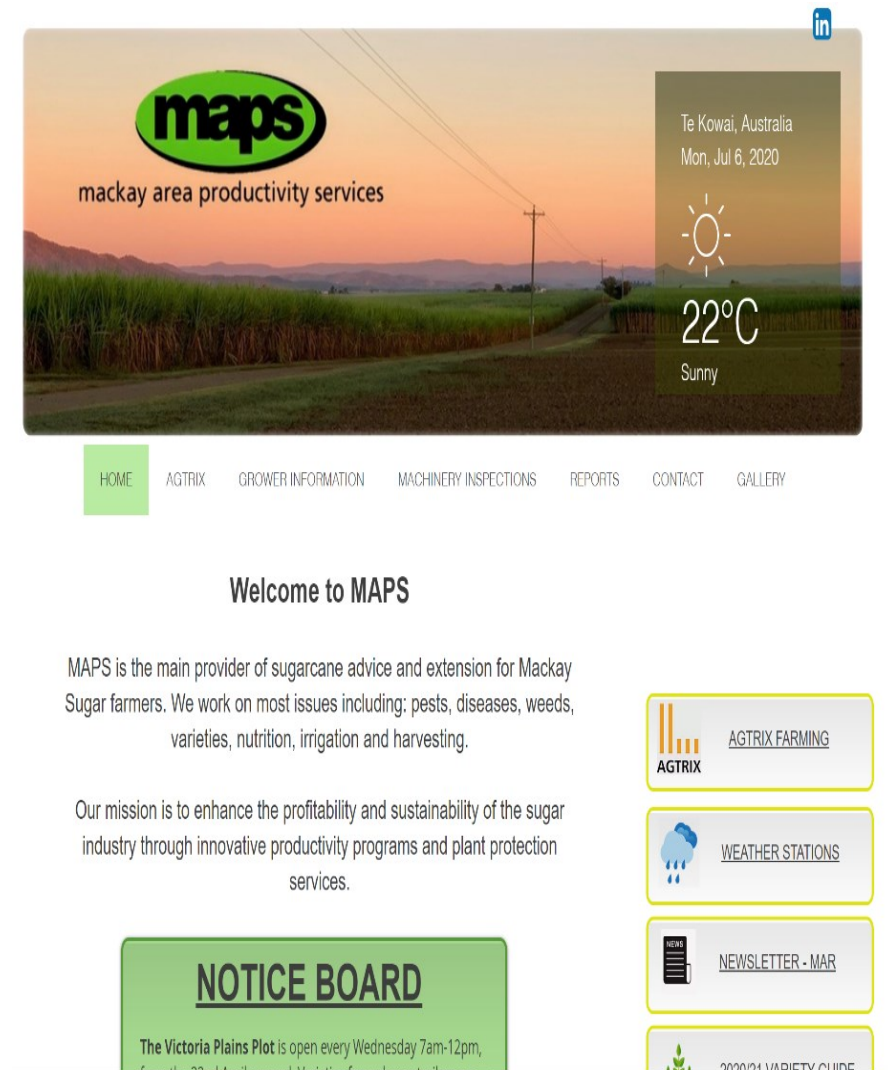
SRA's updated Greyback Canegrub Management Manual is currently being printed and will be distributed to growers in September 2020.



A well set up liquid imidacloprid applicator – coulter to cut to depth, double disc to open the slot, delivery nozzle positioned and angled to place insecticide at the base of the slot, press wheel to close the slot.

## Agtrix Farming Video Guides

The MAPS website hosts a wide variety of useful information for our growers and now includes Video Guides for our new recording program called Agtrix Farming.



Agtrix Farming is a free to use web recording program developed for both advisors and our growers as part of the MAPS Service. You can record nutrient and chemical applications as well as many other farming applications on your own farm and paddocks in a password protected account.

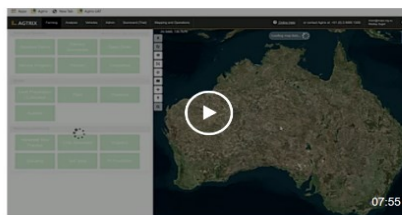
If you want to learn more you can watch these videos at [www.maps.org.au](http://www.maps.org.au) under the tab at the top of the home page called “Agtrix” which currently has 7 Guide Videos that cover the basics of the program, including how to Print Farm Maps and Soil Maps, how to record Nutrient and Chemical Applications and how to generate reports.

We see Agtrix Farming as a useful tool for growers wanting to record their on farm activities in a way that will satisfy both legislative requirements and help them on their way to BMP accreditation.

As more developmental additions are made to the program, we will continue to upload more guide videos to cover irrigation and cultivation records, uploading soil tests to blocks and the mobile phone app version.

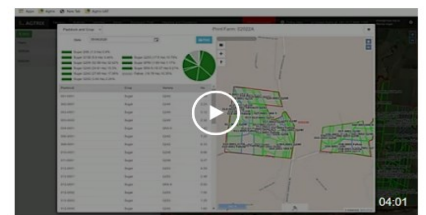
If you want to get started with your own Agtrix Account please contact your MAPS advisor for assistance.

### VIDEO TUTORIALS



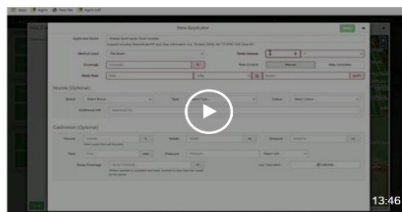
#### The Basics Guide

This video covers the basics to the AGTRIX Farming program and its possible applications.



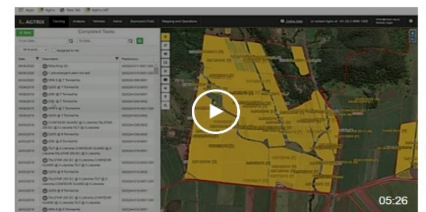
#### Printing Farm or Soil Maps

In this tutorial Shane runs through how to print a basic farm map and soil map.



#### Recording Chemical Applications Part 1

This tutorial is part 1 of 2 explaining how to record chemical applications.



#### Recording Chemical Applications Part 2

This tutorial is part 2 of 2 explaining how to record chemical applications.

# Growing Better Legume Break crops in the Sugarcane Fallow



The 2019/20 fallow season has seen a surge of legumes being planted, especially soybean. Some growers have taken their bean through to harvest, with some big yields being recorded. None of this is by chance, as the better the preparation, the better the result. This applies to either a green manure crop or a grain crop.

1. Early fallow block preparation gives time for trash breakdown, soil testing (a neutral pH above 5.5 is important for legumes), nematode testing if on sandy ground, and weed control, especially vines and nut grass. It is very difficult to get a block ready if it is the last cane block harvested.
2. Think about applying some nutrition to grow the crop; a little Nitrogen at the start makes a difference and doesn't affect nodulation. Banded mill mud at 50t/ha would be easier to obtain earlier and will supply all the nutrients needed. There will also be a carryover of N, P and Calcium for the next cane crop (see table below). The application of liquid fertilizer (Soy Starter @ 3 cu m/ha) would be an alternative.

| MUD                     | 50 t/ha                          | Estimated available nutrients (kg/ha) |                      |                            |
|-------------------------|----------------------------------|---------------------------------------|----------------------|----------------------------|
| Nutrients               | Typical nutrient content (kg/ha) | 1 <sup>st</sup> crop                  | 2 <sup>nd</sup> crop | 3rd & 4 <sup>th</sup> crop |
| Nitrogen                | 140                              | 25                                    | 15                   | 0                          |
| Phosphorus              | 140                              | sufficient                            | sufficient           | sufficient                 |
| Potassium               | 40                               | 15                                    | 0                    | 0                          |
| Sulphur                 | 15                               | 5                                     | 0                    | 0                          |
| Calcium (0.7 t/ha lime) | 280                              | Calcium needs met                     | Calcium needs met    | Calcium needs met          |

3. Decide on the ground you will plant into; flat, beds, or the old cane mound. Legumes don't like wet feet. You can still grow a green manure crop on the old cane mound and then take it through to harvest; this was done successfully last season.
4. It is important to have a seed planter available, whether your own or shared. The planting window can be very narrow. The best time to plant a grain crop is Dec/Jan, while a green manure crop can be earlier. Make sure the planter you are using will match your bed preparation.
5. Don't leave ordering seed to the last minute. There are new varieties available, Kuranda and Mossman, which performed well last season and will be in demand. Ensure you get inoculant for the seed, it's cheap and necessary.
6. The soybean grain price looks good to stay high for another year, so it might be an advantage to talk to a buyer about a contract when you can.

Even if you only want to plant legumes for green manure to improve your soil and grow more cane, the above principles still apply. The better the break crop, the more organic matter that goes back into the soil, the more Nitrogen is available for the following crop, and the less weed carry over. Get hold of your MAPS Productivity Officer for more information on breakcrops and millmud.



# JANES CREEK PROJECT SHOWCASES A SUCCESSFUL INTEGRATED APPROACH TO CATCHMENT MANAGEMENT

The Janes Creek Integrated Catchment management project, co-delivered by Reef Catchments and Mackay Area Productivity Services (MAPS), has shown an integrated approach can deliver water quality improvements.

The three-year project, funded through the Queensland Government's Reef Water Quality Program, sought to work with all agricultural land uses within the Janes Creek catchment from 2017 to 2020.

The project provided landholders with one-on-one extension support and grants to assist them adopt improved practices that would ensure products applied to paddocks were not lost to local waterways. The grants enabled landholders to upgrade equipment including spray rigs and nutrient applicators, and install fencing and off stream watering points to control stock access to local waterways. On one property, a chain-of-ponds treatment system was installed which provided additional water for the landholder.

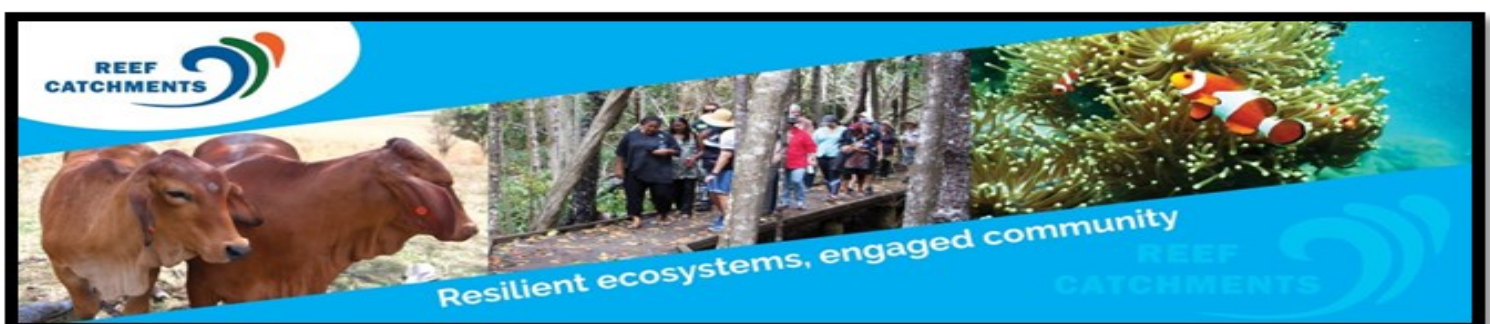
The project was a great example of an integrated catchment approach allowing landholders to be involved in directing the project and seeking answers to their questions. One of the key landholder recommendations was to include the urban environment in the water quality monitoring which was being conducted by Reef Catchments and landholders. For the past 12 months, Reef Catchments staff have



collected runoff after rain events from both agricultural and urban catchments of Janes Creek. The monitoring indicated very little pesticides were coming from the urban catchment; however, at times, there were high concentrations of nutrients and sediments. Reporting this data back to landholders allowed them to see and discuss the differences in runoff from agricultural and urban land uses.

The Janes Creek project highlights what can be achieved through taking an integrated approach, involving all land uses, using feedback to adapt the project, and providing answers to specific questions that will increase the adoption of new practices and reduce runoff.

For more information or to find out other projects underway within the region, please contact Reef Catchments (Phone: 07 4968 4200) or MAPS.





# Munbura Feral Pig Management Group

The Munbura Feral Pig Management Group was formed at the end of 2018 to address the continual population growth of feral pigs and their increasing negative impact on sugarcane farms in the area. Along with support from MAPS and partial funding from the Department of Agriculture and Fisheries (DAF), the growers created an integrated pest management strategy which targeted approximately 4,700 ha of sugarcane land in the Munbura/Alligator Creek area.

The group utilised a combination of control methods including trapping, baiting, dogging and shooting, with trapping and shooting being the most successful quantitative methods. The manufacture of five traps from local company Evolution Engineering and the material for an additional two traps built by the growers was funded through the group to target hotspots and heavily affected areas.



Three trail cameras were also purchased through the group and the remainder of the funding was set aside for the possibility of a helicopter shoot to at the end of the 2020 season depending on conditions. With a pest problem as intense and free ranging as feral pigs the collaborative approach of the landholder group was the key to success of the project and overall control of the pig population. It has allowed the growers to control their feral pig population on a larger scale with fewer boundaries and pooled resources.



**Mackay Sugar**  
Member of Nordzucker Group

## Crush overview

At the finish of last week, Saturday 11 July, approx. 15% of the 2020 Mackay Sugar Crop has been harvested. At this point the crop is cutting slightly above the original estimate. The CCS is looking positive with 12.4% for crush week 5, being +0.25% over the 5-year average. As you can see in the table, Q240 and KQ228 are the highest performing varieties in CCS during this early time of the crush.

The recent wet, drizzly conditions have caused a few challenges to the harvesting sector. Thank you to all who have been able to maintain supply over these times... let's hope the sunny weather continues. With the mills performing well at the moment, we have to crush as much as possible at this early time of the year.

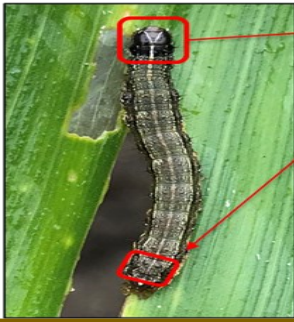
## Mackay Sugar Variety Results (past 2 weeks)

| Variety | Fibre% | CCS%  | Purity% | % of Supply |
|---------|--------|-------|---------|-------------|
| Q240    | 14.53  | 12.62 | 85.83   | 40%         |
| Q208    | 14.50  | 12.35 | 84.52   | 24%         |
| Q183    | 15.00  | 12.04 | 84.67   | 10%         |
| KQ228   | 15.05  | 12.80 | 85.67   | 6%          |
| Q242    | 15.03  | 11.71 | 84.31   | 5%          |
| SP80    | 14.99  | 11.60 | 83.84   | 5%          |



# FALL ARMYWORM (FAW) ID

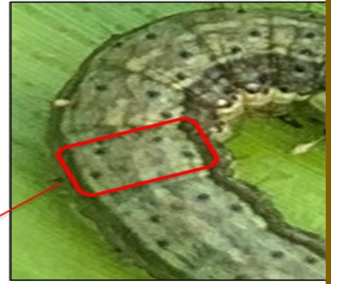
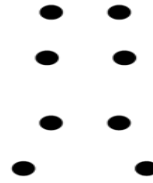
## FALL ARMYWORM



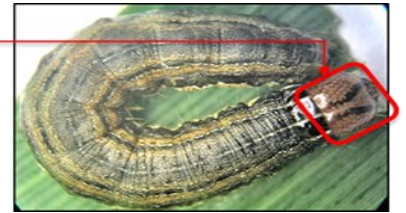
Note the clear **pale inverted "Y"** at the back of its head

The prominent **dark spots in a square pattern** on the second last body segment.

Also, **dark spots in a trapezoid pattern** on its other body segments.



**FALSE ARMYWORM** have a **dark inverted "Y"** with the base Y stalks **not touching**.



## Fall armyworm (FAW) life cycle (approx. 24 days)

**Day 1-3:** Creamy yellow coloured egg masses on undersides of lower leaves (100-200)



**Day 3-6:** Emerging first instar larvae



Windowing by 1<sup>st</sup>-2<sup>nd</sup> instar larvae



Ballooning (silken threads caught by the wind)



**Day 6-14:** Shot holes in leaves



Hidden in the whorl, fresh frass (poo plug)



**Approx. after day 14:** the fully grown caterpillar will drop to the ground



The caterpillar burrows 2-8 cm into the soil before pupating. In heavy top soils, the caterpillar will likely cover in leaf debris and then pupate.



Not real size

**Approx. after 8-9 days:** the adult moth emerges to restart the cycle



Figure 6. Typical adult male fall armyworm, *Spodoptera frugiperda* (J.E. Smith). Photograph by Lyle J. Buss, University of Florida.



Figure 7. Typical adult female fall armyworm, *Spodoptera frugiperda* (J.E. Smith). Photograph by Lyle J. Buss, University of Florida.

## Important facts

- Regular crop scouting is essential
- Important to control at early growth stages before caterpillars “get smarter” and hide into hard-to-reach areas
- FAW will not survive where temperatures drop below 10°C and remain constant
- Favourite food: Maize, then sorghum. Overseas information suggests that it could also feed on legumes, sugarcane and grasses if their favourite food source is removed
- Chemical rotation is key to limit exposure to the same chemical group in consecutive generations
- Permits often change so check the APVMA PUBCRIS web site frequently
- Note the different rates and withholding periods for different crops
- Be aware that pesticides from groups 1 and 3 are very hard on beneficials and very bad for Integrated Pest Management (IPM)

Recently findings of Fall Armyworm have been recorded in some break crops throughout the Mackay district. If you think you have FAW on your farm, please get in contact with your Productivity Officer to discuss what options are available.

**We have organised a shed meeting to discuss Fall Army worm. Daniel Gonzalez (DAF) will be in attendance to talk about identification and possible impacts.**

**Date - Wednesday 29th July**

**Time - 4.30pm**

**Address - Andrew Vassallo's shed, 44 Olletts Road, Brightly**

