

March 2019

## MAPS/SRA FIELD DAY FRIDAY 10TH MAY 2019 MAPS FARM 7:00AM START

Change of plans this year. The MAPS/SRA Field Day is usually held on a Thursday, however this year the field day will be held in conjunction with the Canegrowers Mackay Ag Trade Expo.

You can start your day at the MAPS farm for a hot breakfast and then check out the current SRA varieties, future varieties and a range of static displays.

The field day will finish up around 11:00am and with a quick drive down the road to West League Club, continue your day at the Ag Trade Expo.



**2019 CANEGROWERS MACKAY AG TRADE EXPO  
AT WESTS LEAGUES CLUB**



# SAVE THE DATE



**FRIDAY 10TH &  
SATURDAY 11TH MAY,**

# 2019

 CANEGROWERS  
MACKAY

### New MAPS Staff

MAPS would like to welcome Brendan Rae to the team.

Born and bred in Mackay, Brendan has a young family and enjoys fishing and playing soccer in his spare time. For the past 11 ½ years, Brendan has worked for SRA in the Plant Breeding Program as a Variety Officer.

Brendan will be the Productivity Officer for the North Coast Area and is looking forward to furthering his skills and working in the field with growers.

To contact Brendan please phone: 0417 326 393

PS: If anyone up the North Coast has got any secret fishing spots feel free to share them with Brendan as you see him around.





Greg Plath accredited March 2017 with Steve Garrad

## “LET’S SET THE RECORD STRAIGHT”

### MAPS Farm Manager has obtained Smartcane BMP Accreditation



With the assistance of BMP Facilitator Audra Allan, MAPS farm manager Andrew Dougan gained BMP Accreditation for the Victoria Plains Clean Seed Plot. Congratulations Andrew!

With Audra’s assistance the process was seamless and will help simplify the record keeping process for ongoing compliance. Growers are encouraged to take on the BMP challenge.

### Upcoming Events

#### CHEMICAL ACCREDITATION COURSES

Date: Thursday April 11<sup>th</sup> and Friday 12<sup>th</sup>  
Register your interest by calling Canegrowers reception on PH: 4944 2600

### Smartcane BMP Progress for Mackay

Mackay District has 441 growers bench marked with 60,356.60 ha under cane and 42 accredited with total area of 70,079.60ha.

53 Mackay growers are actively progressing with Smartcane BMP; six were accredited in February and another three are ready to be audited for accreditation mid-April. 8 growers were recently self-accessed.

Congratulations to the growers recently accredited and those who are actively working on obtaining their accreditation.

Your participation in BMP is essential to reduce the risk of ongoing interventions in how we farm. It’s all about you, your farm practices and ‘setting the record straight’ by showing our farming practices and records are at or above industry level.

### Upcoming Events

#### RECORDKEEPING FOR CANEFARMING BUSINESSES

##### Venues:

28<sup>th</sup> March -CWA Hall North Eton – RSVP 23<sup>rd</sup> March  
4<sup>th</sup> April- St Helens Bowl Club – RSVP 30<sup>th</sup> March  
11<sup>th</sup> April – Finch Hatton RSL – RSVP 6<sup>th</sup> April

Times: 9:30am – 12pm

For more information please call Robyn Bell

RSVP: Robyn Bell call PH: 0439 557 839  
Morning Tea/Lunch provided

## RSD – The Invisible Disease

It's that time of the year again, when the topic of Ratoon Stunting Disease (RSD) comes up and needs to be discussed. It's an awkward discussion, but one all growers need to have with their MAPS Productivity Officer, so that we keep the disease in check.

You could be losing anywhere up to 60% yield due to a disease which often shows no visible symptoms.

RSD restricts the plant's ability to use water and grow. It is spread by using either infected plants or by harvesters, planters or any other farm gear that contacts the infected sugarcane juice or soil.

There is NO cure, nor is any variety truly resistant to RSD but certain steps can be taken on farm to maintain good productivity and to prevent the spread of the disease between blocks and farms.

### Protecting your farm:

- 1) Start with a fresh source of plants from MAPS Approved Seed plots.
- 2) Make sure any on-farm plant material is checked for RSD and other pests or diseases before planting by your Productivity Officer.
- 3) Sterilize any machinery moving between farms using a mixture of 70% methylated spirits and 30% water.



### Dirty trend

With everyone busy and pushed for time these days, often the simple and basic jobs are forgotten about. We have noticed that some harvesters and planting contractors gear is not being cleaned or sterilized between farms. This is a dangerous trend, which could end badly. Time is money but in this case spending 30 minutes to sterilize the major cutting points of harvesters and planters is a cheap investment.

Prevention is better than cure, as the only way to remove RSD from an infected field is to plough out and fallow, ensuring that no volunteers survive.

MAPS recommends each grower or contractor to have a batch of sterilizing solution at hand to disinfect machinery as it comes onto their farm(s).

Farm machinery that is being moved between regions (across biosecurity zones) also needs to be inspected and given a Plant Health Assurance Certificate beforehand. This can be issued by an accredited Productivity Officer.

If you have further questions about RSD or machinery inspections please give your Productivity Officer a call.



## MAPS Clean Seed Plots

- MAPS Victoria Plains Plot is planned to be opened from mid-May, weather permitting, and will be closing for whole stick collection at the end of August. Billets will be available in September.
- North Coast and Finch Hatton plots will be open again this year. Contact your Productivity Officer for further information.
- Potentially one new variety is to be released this year (QC05-316), pending the Regional Variety meeting in April.
- All remaining varieties are available at one stick per hectare.
- As per previous years, certain varieties can be ordered to be cut into trailers for collection (contact your Productivity Officer to order).
- This year growers can also bring their own trailers to be filled under certain conditions (see below).

### Conditions in which growers trailer/s can be used:

- Growers need to contact Andrew Dougan mob: 0417 326 674 prior to delivery of trailer/s.
- All equipment must be free of all plant material, weeds and soil matter.
- Trailer/s must be transported on a registered vehicle (they must not be towed unless vehicle is registered, safety chain is used and functioning lights are attached to the trailer).
- The grower is responsible for taking the trailer/s off and putting them back on their transport. This may include safe use of the MAPS loading/unloading ramp. A designated area for low-loaders is provided.
- Planter trailer/s must be in sound condition and not pose a safety risk to those cutting the plants. MAPS reserves the rights to refuse to fill any trailer that is deemed unsafe.
- Once trailer/s are loaded with cane stalks by MAPS, the cane is to be secured on the trailer/s.

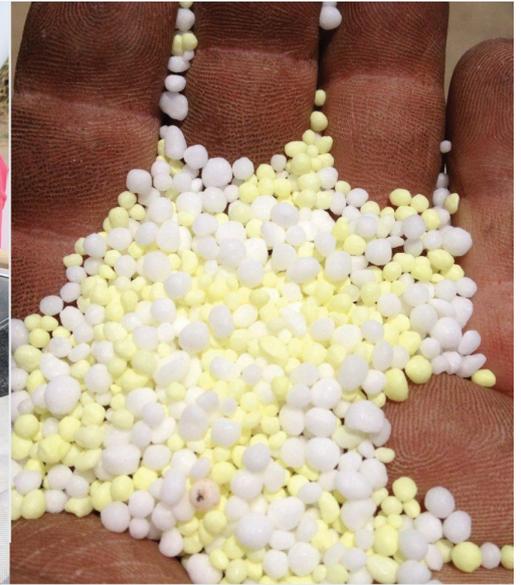
- Loaded trailer/s must be secured on registered vehicles so they do not become unstable during transport.
- Loads must not exceed vehicle mass or dimension limits.
- Note: Only one variety is allowed per trailer and trailers are capped per grower.

### Future MAPS Clean Seed Plots

- There are two new plots coming online in 2020 for billet distribution.
- One in Calen and the other in Gargett, both approximately 2ha in size.
- Three varieties will be available each year from these plots and will be rotated with other varieties each year.



MAPS VEHICLE FOR SALE BY TENDER. 2012 MITSUBISHI TRITON GLX DUAL CAB TURBO DIESEL 4X4 UTE. REGISTRATION 359-SPS KM 193605. CONTACT MAPS 07 4963 6830



# EEF60 – 60 FIELD TRIALS, REPEATED OVER THREE YEARS

**The EEF60 project is designed to identify when and where enhanced efficiency fertilisers (EEFs) can provide a significant increase in nitrogen use efficiency (NUE) and reduction in nitrogen losses, resulting in a more profitable and sustainable farming business.**

The project is running replicated field trials over three seasons at sites in Queensland from Mossman to Childers. The objective is to capture 180 "years" worth of trial data.

These trials will provide information on the effect of EEFs in terms of cane and sugar yield, CCS, and nitrogen use efficiency. This will be put into context with an economic analysis.

Environmental losses (run-off and deep drainage) are also being assessed at six of the 60 sites.

The project team has completed its first full year of trials across 2018, and has re-established sites for 2019. This will allow the assessment of EEF products over a new set of environmental conditions.

The range of weather conditions in early 2019 – from floods to droughts – will provide important opportunity to assess the EEF treatments. It will improve our ability to identify conditions where EEF's offer a benefit to growers and industry.

Grower participants have received preliminary data from their harvest results.

With one year of data collected, the project is not able to provide definitive results and conclusions for the industry. There have been a range of results at different sites, which is a demonstration of the complexity of factors influencing these products.

As data builds over the next two years, and is then combined with an economic analysis, this project will be in a solid position to communicate and extend meaningful results for the industry. These results will also be put into the context of other EEF activities happening across projects and among other organisations.

*(Above left) Trials going in the ground in the Burdekin region as part of EEF60. (Above right) A range of different enhanced efficiency fertilisers are being assessed in trials as part of the EEF60 project.*  
**Photo: Lawrence Di Bella.**

## CONTACT DETAILS

Dr Barry Salter **SRA Key Focus Area Leader** E [bsalter@sugarresearch.com.au](mailto:bsalter@sugarresearch.com.au) T 07 4963 6802

Mr Burn Ashburner **CANEGROWERS Project Manager** E [burn\\_ashburner@canegrowers.com.au](mailto:burn_ashburner@canegrowers.com.au) T 07 3864 6474

*The EEF60 project is funded by the Australian Government Reef Trust and Queensland Government Great Barrier Reef Innovation Fund.*



## ENHANCED EFFICIENCY FERTILISERS – WHAT ARE THEY AND WHAT DO THEY DO?

There are two main types of enhanced efficiency fertilisers (EEFs): controlled release fertilisers and nitrification inhibitors.

Controlled release fertilisers (CRFs) release nitrogen slowly through a protective coating. Currently, polymers are used but, in the future, coatings are likely to be made from biodegradable products.

Nitrification inhibitors (NIs) are applied alongside or added to the urea to temporarily stabilise the nitrogen in the ammonium form, which makes it less susceptible to losses.

In both cases, the aim is to keep the amount of soil nitrate low to reduce the risk of nitrogen loss and therefore optimise efficiency and yield.

EEFs may allow “trickle feeding” of nitrogen to the crop over time to better match crop nitrogen (N) demand with N supply. Matching demand and supply reduces risk associated with having large amounts of available N in the soil when the crop does not require it.

### WHEN TO USE THEM

Multiple research and extension projects are underway across the Australian sugarcane industry, helping to build our knowledge on when and where EEFs may provide the most benefit.

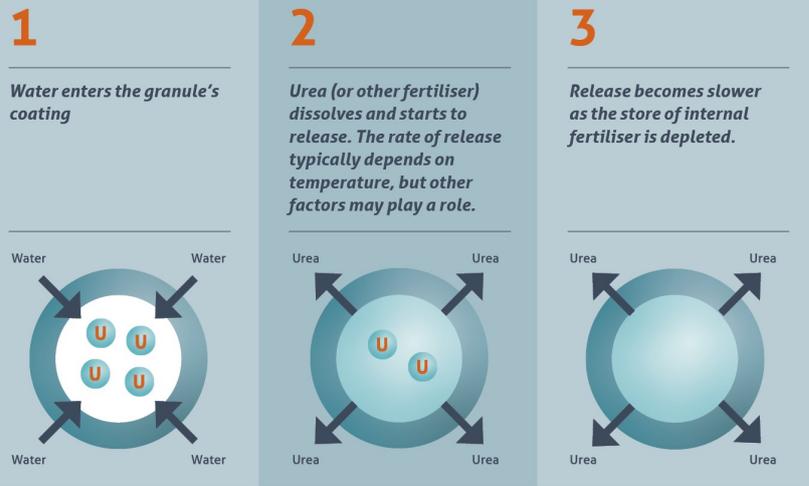
The efficacy of EEFs is complex and site-specific and we strongly recommend seeking advice before using them.

Researchers and productivity services are working on tools and information to help growers define the specific conditions where these products show a benefit. From results to date it appears unlikely that their general use across a whole farm in all seasons will be beneficial.

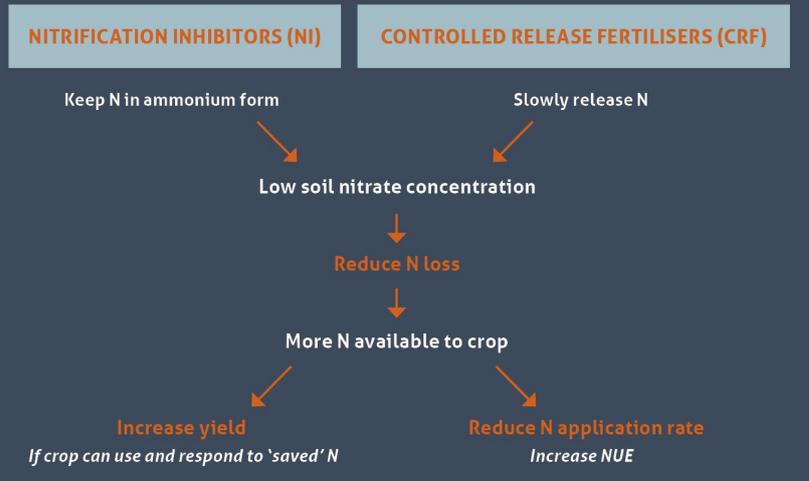
Given these products can also be more expensive than conventional fertiliser, the EEF60 project is also considering economics, with the help of the Queensland Department of Agriculture and Fisheries.

## How controlled release fertilisers work

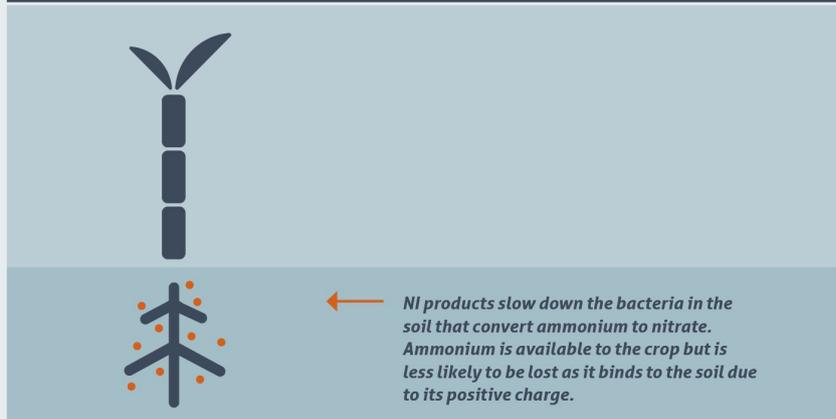
There are a range of commercially available controlled release fertilisers, most of which rely on a coating to slow release. While the composition of fertiliser coatings varies, many follow a similar process for releasing nutrients.



## How EEFs can help



## Nitrification Inhibitors



# ABOUT YELLOW CANOPY SYNDROME

Yellow canopy syndrome (YCS) was first observed in Far North Queensland in 2012, and since then it has been confirmed in all growing regions from Bundaberg to Far North Queensland.

YCS can impact cane in a number of ways. This can range from yellowing in one or two leaves to yellowing right through the canopy. Depending on the degree of symptoms, crop growth can be compromised with potential impacts on final yields. YCS symptoms may 'come and go' in waves through the season.

Given its significance to the industry, the syndrome has been the focus of a major research investment at SRA, via projects led by SRA and University of Queensland, with support from Western Sydney University and CSIRO.

This integrated research program is now narrowing in on important discoveries associated with YCS, including the assessment of a small number of possible causes and potential management options.



## CURRENT RESEARCH

Experimental work does not support a single cause for YCS. There are a range of activities underway looking at a several possible options.

### Entomology

- Insects are an important focus via field trials in multiple regions, insect exclusion tests, and chemical treatment trials.
- It is still unknown if – or in what way – an insect could be linked to YCS, but from work so far researchers have been able to prevent YCS symptom development and the yield losses associated with YCS by controlling insects.
- Researchers have also identified several different types of insects that the industry is generally not familiar with. It is not yet known if any of these insects are associated with YCS.

- SRA is also seeking to understand if phytoplasmas – which are a type of bacteria that affect plants and can be spread by insects – are part of the YCS question.

### Varieties

- Growers have observed a range of variety responses to YCS.
- To validate and understand these observations, SRA is using drones equipped with hyperspectral cameras to look more closely at YCS response within more than 30 different varieties.
- This could lead to information on different varieties' yield response to YCS, and the severity of impact for different varieties.

### Management

- For a management solution to be useful, this requires a good understanding of whether a field is

going to develop YCS well before it turns yellow so that any treatment has time to be effective. Like many crop problems, treating the issue once you can see it usually means it is too late.

- SRA has developed a prototype in-field test for diagnosing YCS. It is hoped that this test will be a useful tool for researchers and productivity services organisations to better understand YCS, and understand if a paddock has YCS *before* it turns yellow.
- Researchers are working to ensure the prototype test is effective and user-friendly and then determine how it could complement a management strategy for YCS.
- This prototype diagnostic is possible thanks to years of research that has improved the understanding of the internal workings of the sugarcane plant.

**"Early detection is one of the holy grails of our research. It could help industry with potential cost savings, and would be vital to making an assessment on potential control options, once they are understood."**

**GERARD SCALIA, PRINCIPAL TECHNICIAN, MOLECULAR GENETICS, SRA**



## YELLOW CANOPY SYNDROME: KEY POINTS

### **1. YCS can now be diagnosed with a high level of certainty.**

There are many causes of leaf yellowing in sugarcane. YCS is a specific pattern of leaf yellowing accompanied by abnormal and lethal accumulation of sucrose and starch in leaves.

### **2. Additional magnesium application above levels recommended for good crop management has no effect on YCS expression.**

Magnesium deficiency in sugarcane can lead to yellowing of leaves. Experiments now confirm that addition of magnesium does not prevent or alleviate YCS symptoms. Plants with YCS usually have adequate levels of magnesium so magnesium deficiency is not a cause of YCS.

### **3. The role of insects, phytoplasmas, other bacteria in combination with environmental triggers are being investigated.**

Experimental work does not support a single cause of YCS. A number of factors need to be present for YCS to be expressed. Experimental work is focused on identifying the key factors so that management options can be progressed.

### **4. An indicator tool kit for SRA, productivity service organisations and industry advisors for identifying YCS is at an advanced stage of development.**

This is a significant step as any approach, experimental or commercial, needs to correctly identify the problem so that researchers and industry can respond appropriately.

### **5. A chemical option is under investigation which in most cases prevents YCS symptoms expression under experimental conditions.**

This is a vital step if researchers are to develop management options for industry. These trials have used a broad-spectrum insecticide at high doses as an experimental tool to confirm or eliminate the role of an insect in YCS. This is not a test of the suitability of these chemicals as a management option.

### **6. This option is enabling us to quantify the impact of YCS on yield and identify potential causes.**

This means that researchers now have the capacity to manipulate YCS symptoms.

## **If you have questions in relation to the above, contact:**

Dr Frikkie Botha **SRA YCS Strategic Initiative Program Leader** E [FBotha@sugarresearch.com.au](mailto:FBotha@sugarresearch.com.au).

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**SRA acknowledges the funding contribution from the Queensland Department of Agriculture and Fisheries towards this research activity.**



**MEDIA RELEASE**  
**For immediate release: Thursday, March 14, 2019**

**Plant breeding, variety research and development under the microscope as part of landmark Nordzucker proposal**

MACKAY Sugar cane growers would have access to world-leading research and development teams under the proposed Nordzucker-Mackay Sugar deal.

The deal was discussed at a series of shed meetings throughout the Mackay Sugar district this week, where Nordzucker AG executives, CEO Lars Gorisson, COO Axel Aumuller, and Business Development Manager Michael Gerloff, met with growers and answered questions.

Mr Gorisson – who as well as being CEO, is leading the organisation's Agriculture Division - said there were more than 100 people in the Nordzucker Agricultural department and about 80 of those were in direct contact with growers.

He said the organisation had, up until now, been focused on beet production and there was "much to learn" about the varieties and intricacies of growing cane.

However, he said, there would be a couple of people from the Nordzucker agriculture division working with growers in Australia to ensure an acute focus on the development of varieties, new technologies, plant breeding, pest control, fertiliser, what was best for the paddock, soil type, crop rotation and farm planning.

"We have a very close relationship with our beet growers that is important to the competitiveness of the business on the world market," Mr Gorisson said.

"Of course, we want to see that same type of relationship built and strengthened with the cane growers here in Mackay."

The deal, which will see The German grower-owned company take a 70% share of Mackay Sugar, is expected to be voted on by Mackay Sugar growers in early May.



*L-R Lars Gorisson, Mark Day, Axel Aumuller,  
Michael Gerloff.*