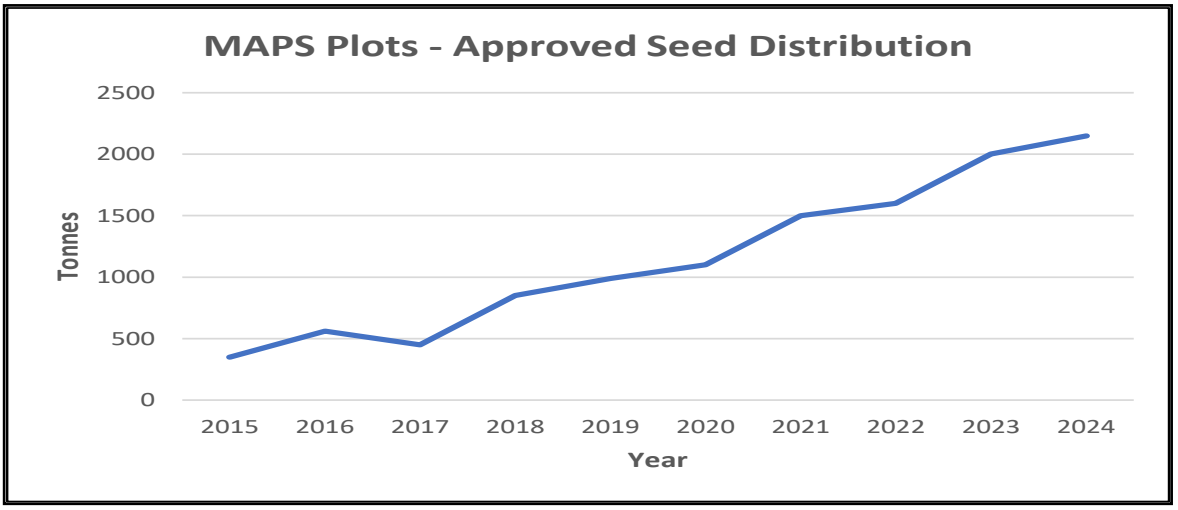
NEWSLETTER

December 2024

MAPS Invest into Clean Seed

Over the years you would have heard your Productivity Officer say, “Planting clean seed is one of the easiest ways to increase productivity on your farm and it builds the foundation of future healthy crops.” Often the best practice for your farm is the most basic one that can get overlooked. Research shows that the average yield of growers who regularly collect clean seed from an Approved Plot is approximately 10t/ha more than growers that don’t. To better manage diseases like RSD, smut and chlorotic streak, the best control measure is to source clean seed annually to establish future crops.

In recent years MAPS has invested in producing more clean seed and providing billets as a more convenient option of collecting clean seed. With five clean seed plots located throughout the Mackay Sugar region at Victoria Plains, Bakers Creek, Calen, Marian and Benholme, growers now have more opportunities to regularly update their clean seed program. It’s a huge effort from the MAPS team to establish all of the clean seed plots and maintain the strict disease protocols and procedures to ensure the cane is disease free and of the highest quality. MAPS disease inspections on the clean seed plots are above industry standards to set a high standard for the Mackay growers.



2024 saw more growers take advantage of the MAPS plots with another increase in the uptake of clean seed cane, with just over 2200 tonnes collected in whole stick or billet form. This is the largest uptake of clean seed the region has seen to date and a big thank you goes out to all plot holders and personnel involved with distribution of the plants.

Whilst Mackay has one of the lowest RSD levels in the state with approximately 1% of the farms recording RSD, it’s no reason to relax. MAPS proactive approach to plant inspections is one step in combatting the disease with over 4000 on-farm inspections conducted to detect a RSD presence. MAPS also conducts an annual RSD survey throughout the region with a small percentage of farms detected with RSD. The RSD survey targets older ratoon blocks that normally do not get inspected and whilst the detections are disappointing, it provides an opportunity to implement control measures to eliminate the disease.

Although no one wants RSD, it is a disease that can be managed with available resources and some effort. The best recommendation to maintaining a clean and disease-free farm is to follow the three R’s:

- ✓ Regular Clean Seed Uptake
- ✓ Regular Plant Source Inspections
- ✓ Regular Sterilisation & Hygiene of Planting & Harvester Equipment

Efficient RSD management is essential for maintaining and improving productivity and that is why MAPS regularly repeat the RSD/Clean Seed message and we strongly encourage growers to follow MAPS advice and utilise our resources and services in this regard.

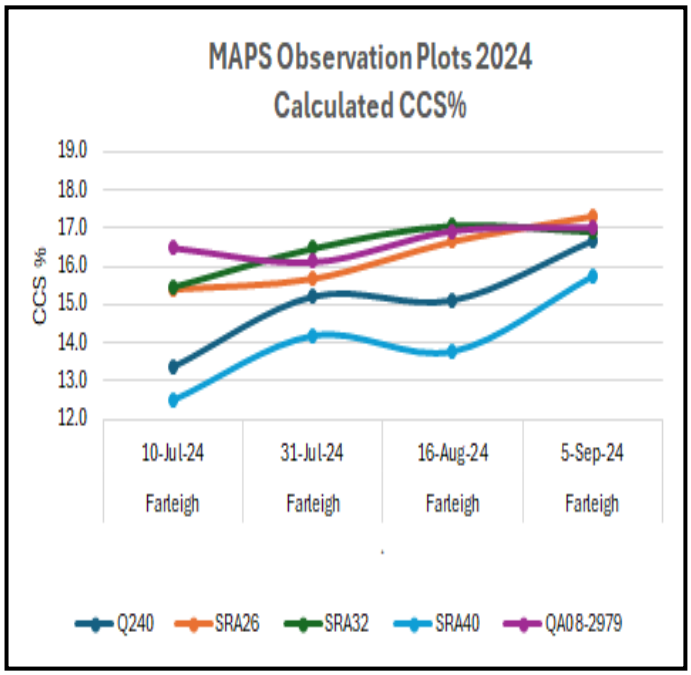
MAPS Observation Plots Maturity Testing

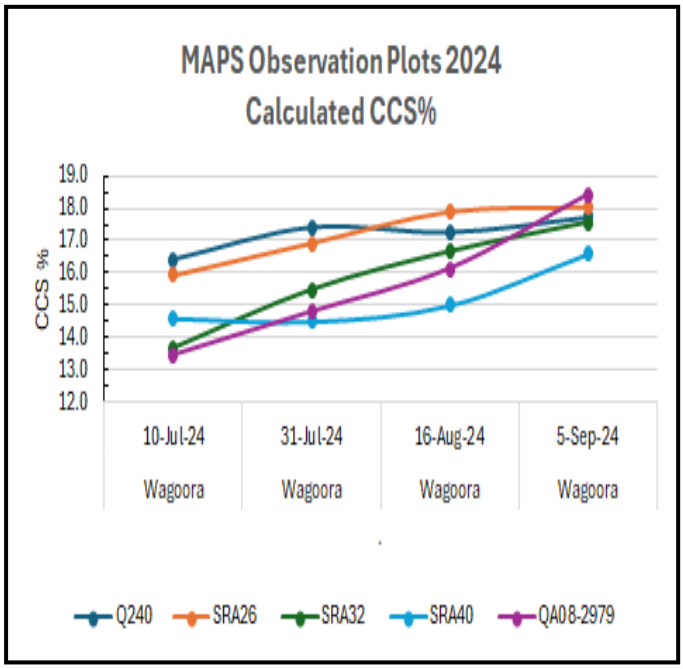
MAPS Observation Plots are planted throughout the Mackay Sugar region on different soil types under different farming practices. Maturity testing of the plots is to help identify seedlings worth releasing and gain more data and insight on the recently released commercial varieties. MAPS Observation Plots were established 10 years ago and have provided valuable information on varieties with regards to diseases such as chlorotic streak, smut and rust, and also has provided commercial data on the newly released varieties.

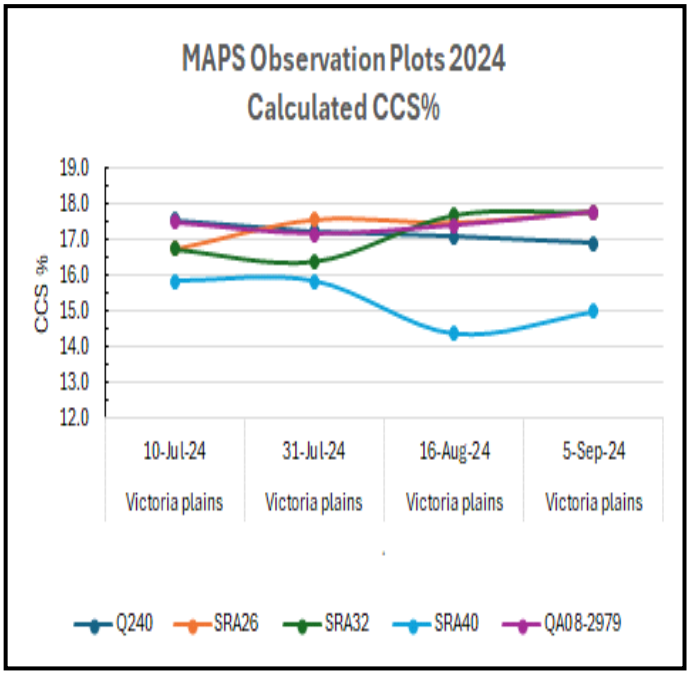
With SRA26 & SRA40 being released last year without any commercial data, testing in the observation plots help to determine when to harvest the two new varieties. Samples were analysed at Mackay Sugar's Marian Mill and SRA Station. The data comparing all the varieties in the plots is below.

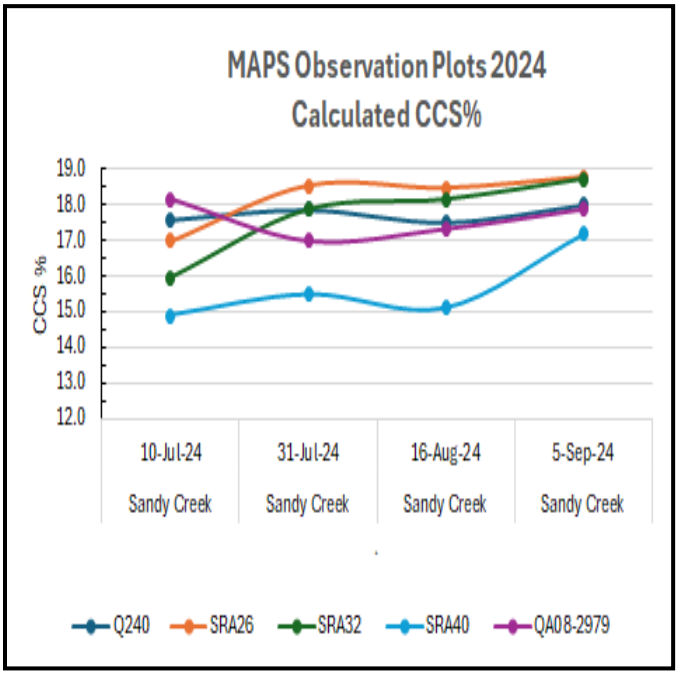
QA08-2979 is a seedling being trialled in the plots. The early indication is that it has a higher CCS content compared to the other varieties in the plots. The seedling is pachymetra resistant and potentially could be released in the next few years based on the SRA trial data. The newly released SRA26 has tested well early in the majority of plots and continued to show good results as the season progressed. It is also a pachymetra resistant variety. SRA40 has recorded a lower CCS compared to the other varieties throughout all of the plots.

The MAPS Observation plots are not replicated trials. However the data collected in the plots provides valuable information for growers. When selecting a variety for your farm, ensure all factors are considered to achieve the best productivity results possible. It is a financial decision which can impact farm productivity and profitability for seasons to come.







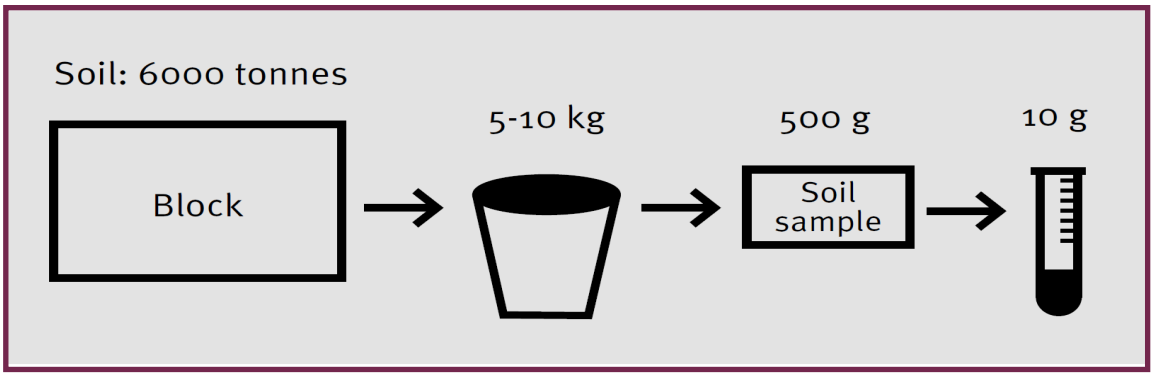


Get Your Soil Sampling Started

The timing of soil sampling is very important and needs to be addressed. Sampling should be conducted early enough that allows for analysis of the sample and interpretation in good time for recommended treatment. If you suspect acidity, salinity (salt) or sodicity (poor soil structure) to be a problem then soil analysis is recommended 3-4 months prior to planting so lime and/or gypsum can be applied and take effect.

Timing is the critical key for an accurate soil test analysis along with ensuring that samples are kept cool once taken. So when is the best time to take soil samples?

- **Avoid working ground and burning off any trash before soil samples are taken, as these can have an effect on the end soil test results (trash in the samples can raise organic carbon levels which could give a false impression that the soil health is much better than it actually is and this will reduce 'N' inputs). Ash could also increase 'K' levels.**
- At the end of your cropping cycle which can be from now on.
- Account for soil types – only one soil test needs to be taken for each soil type and or EC Mapping.
- Identify paddocks/block management practices- mill mud applied, ash applied, water logging etc.
- Select a sampling pattern that provides a representative sample, is repeatable and efficient.
- Avoid areas that could be different from your representative samples, old fertiliser bands, old headlands, fence lines etc.
- Ask your agronomist to rake the trash away from the sampling sight and take the sample between the old fertiliser band and the middle of the row (usually this is just to the side of the cane row).
- Ensure sampling equipment is clean (no soil) from previous sampling and use tools that cannot contaminate the soil sample. Galvanised augers and buckets must not be used.
- Sample depth is crucial for proper representation of the block/soil type being sampled. For Sugarcane the correct depth is from 0-20cm with a 25mm core.
- Ensure enough samples are taken to fully represent the block, soil test methodology says 20-30 with 25mm diameter cores (± 15% error), preferably at least 10 samples. One core is not sufficient nor a true representation.
- Record geo-coordinates of sample patterns, type of sampling pattern, sampling equipment used, depth, date and field conditions.
- Protect collected soil samples from, heat, sun and contamination.
- Store samples briefly in a refrigerator 3^0 – 5^0C prior to dispatch.
- Ensure the Laboratory is certified for particular test analyses if their results meet qualifying criteria, with their annual certification status updated on the ASPAC website. Send to laboratory shortly after collection.
- Correctly fill out all details on the sample submission forms.
- Follow relevant biosecurity requirements with respect to movement of samples within and across borders, and within and between farms.



N&P Budgets

Once you have your soil tests in hand you can begin making your N&P budget plan. This is a fertilizer plan that displays the total amount of nitrogen and phosphorous you aim to apply across your farm area. There are many ways to make one and many third parties are available to help you through the process.

From excel spreadsheets to farm maps and computer programs, there is an option to suit everyone's needs.

In this space, MAPS have been working with software developers at Agtrix to develop our current data recording program to allow growers the ability to load their soil test results, add fertiliser recommendations to paddocks which will then auto calculate the total Nitrogen and Phosphorous across the farm area.

Smut in Q208

The recent dry period during October and early November saw an increase of smut being recorded in Q208. The hot, dry conditions provided an ideal environment for smut to be seen in young ratoons throughout the region. Whilst it's not uncommon for smut to be found in Q208, it is important to monitor the levels of smut to determine any yield losses.

Q208 was released in the central region in 2005 and has performed well across all soil types and is still a variety that is regularly planted out. It's important to remember Q208 is coming up to being a 20-year variety and history tells us that after 20 years of commercial production, all varieties eventually are phased out due to a disease or productivity decline.

To continue growing Q208, MAPS recommends collecting a fresh source of the variety from an Approved Clean Seed plot. Using a plant source from a MAPS plot gives any variety the best chance of combatting diseases whilst maintain productivity. Contact your productivity Officer if you have any blocks of concern and for further advice.

Soldier Fly Damage

Increasing new soldier fly infestations have been recorded by MAPS staff throughout all of the Mackay Sugar region. Growers are urged to keep a look out for weak patches and to determine if soldier fly larvae are present. Soldier fly damage (Figure 3) can often be confused for grub damage and therefore can be mistreated and missed. When soldier fly larvae (Figure 1) are the cause infected stools die or ratoon poorly leaving bare patches ultimately requiring replanting to maintain production. There is no chemical treatment for soldier fly and it can only be treated by the recommended best practice management.

Recommendations for soldier fly management are:

1. Harvest plough out blocks early in the harvest season. This will lengthen the period that the young larvae are starved during the fallow.
2. Have a long fallow (grass & volunteer – free) or a legume fallow.
3. Plant well after the flight period (after June – Figure 2).
4. Grow varieties with strong ratoonability and vigorous root systems. For example, Q240 displays good tolerance to soldier fly damage. Q183 on the other hand has low tolerance to soldier fly.
5. Harvest areas prone to soldier fly when conditions are most favourable for ratooning.

Cultivating the fallow paddock during autumn and light working soon after the flight period have proved to be successful, as pupae, eggs & young larvae are exposed to direct sunlight. In areas where soldier fly are widespread and reinfestation of young ratoons is the biggest problem, the management practices mentioned may not cure the problem, but are the best options available. Measures to control new outbreaks could prevent them from becoming widespread and building into a major problem.

SRA is conducting a review of soldierfly research to determine what has been done, what potential management options are available and recommend priorities for future R&D. To assist with the search for a solution, MAPS will continue monitoring the pest and record the damage and ocurrence in Agtrix Farming to measure the risk of the pest to our industry.

Figure 1: Soldier Fly Larvae

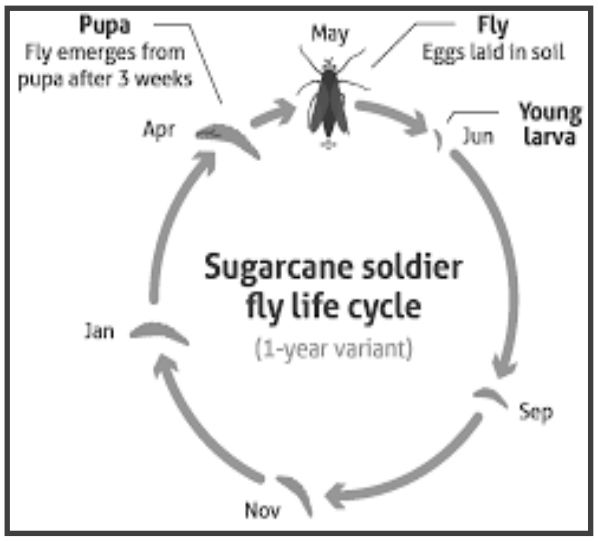


Figure 2: Soldier Fly Life Cycle

Figure 3: Soldier Fly Damage

One of the key components of the Sugar Yield Decline Joint Venture that was developed close to 30 years ago was to include a crop rotation (preferably with a legume species) after the sugarcane crop to break the monoculture cycle.

The introduction of a rotational crop to your fallow provides an effective way to disrupt the build-up of sugarcane specific root pathogens and to provide a range of other soil health benefits that will ultimately provide a good foundation for the next crop of cane.

Over the years there have been a range of options that have been developed in the rotational cropping space such as Cow Pea, Sunn Hemp, Mixed Species and Soybean.

Soybean is a very good option for a legume fallow in the Central Region with a lot of local development in this area meaning that there is reliable advice that can be provided around varieties, soil prep, nutrition, and how to mitigate pest and disease issues. This advice is available from resellers, agronomy service providers, DAF and of course your local Productivity Services group MAPS.

If you are interested in looking at what is involved in planting a crop of Soybean then MAPS is a great place to start as the MAPS soybean planter has recently undergone a refurbishment and is a good starting point for looking at how to get a crop started on your farm.

If you are interested in going down the road of growing a Soybean crop as a cash crop there is a fair amount of information that is available around harvesting for grain from some of the resellers, DAF and others. Local grower Joe Muscat who has been involved in a lot of the development and trial work in the growing and harvesting of the Soybean crop in the Central Region is also a good resource and can be contacted on **0429 377 162** for questions in this area.

Think about planting a legume in your fallow ground

Now that we have had some decent early rain, it's a good time to think about putting a legume break crop into your fallow blocks. Fallow blocks are a great opportunity to improve soil health by planting a breakcrop which will be a huge benefit to your following cane crop. There are a number of breakcrop options available to growers and all can be planted with the MAPS zero tillage legume planter.

The MAPS planter is available to growers to plant a variety of legumes, such as soybean, cowpea and sunn hemp, into either worked or unworked ground. Some plantings have already been successfully done into a trash blanket and into a worked fallow. To find out more about planting a legume crop to start improving your soil health and productivity contact your Productivity Officer.

Planting Sunn Hemp into trash


Sunn Hemp after a few weeks

Smartcane BMP Value Extending

Smartcane BMP value is extending its role from helping secure the industry's social licence to responding to the needs of end-users and Fast-Moving Consumer Goods (FMCG) companies, like Coca-Cola and Nestle, requiring evidence their sourced ingredients meet Environmental, Social, and Governance (ESG) requirements. Demand for investment in ESG is increasing exponentially as companies comply with the pressures of consumers choosing ethically and sustainably sourced products.

Currently, Smartcane BMP meets the environmental component through modules 1 to 3 but is missing the social and governance elements. Module 4, People & Business, focuses on these missing elements.

Module 4 has four key practices focusing on GHG emissions, labour management and workplace risk management. International certification programs like ProTerra and VIVE have these elements included, and Module 4's implementation will strengthen Smartcane BMP's alignment with these.

We are currently working on the certification process and recently road-tested with four growers that covered a wide range in scale and number of employees. These pilots helped us understand if we were requesting the correct evidence and if the module will meet the needs of our industry and other key stakeholders. We are expecting module 4 will be offered to Smartcane BMP certified growers in early 2025.

Smartcane BMP has been instrumental in ensuring the sugarcane industry thrives sustainably and ethically. Our high reaccreditation retention rate highlights the ongoing dedication of growers to responsible farming practices, the addition of Module 4 positions us as a leader in agriculture, setting an example for others to follow. The roll-out of Module 4 will ensure Smartcane BMP fully meets market needs, and we can avoid the use of other less-relevant programs like Proterra, Bonsucro and Vive.

MAPS Observation Plot

Ross Windsor is one of our very first Observation Plot holders. It is a big credit to Ross as he has helped us out for over 10 years; every year without exception Ross is there with a piece of ground ready to be planted for MAPS to help gather vital information on potential new varieties.

He has helped us out in many other ways from plots to holding shed meetings and everything that goes along with them. With Ross's generosity we have evolved over the years to make these plots as useful and valuable as possible for the industry. If it wasn't for people like Ross, these things wouldn't be possible.

So, a big thank you goes out to Ross and all the other plot holders that have helped us over the years for playing an important role in gathering knowledge on the varieties released in the Mackay region.

Rat Baiting MUST be recorded

With rat damage being recorded throughout the region, rat baiting is vital to reducing the impact of the pest and limit the yield losses. If you have already baited for rats or plan to bait, please let your Productivity Officer know the details straight away! If you are going to bait, you can record your baiting on the MAPS website by following the links.

MAPS must have this information, so we can report to government every three months in line with our Permit. MAPS has secured a Damage Mitigation Permit from the Department of Environment and Science till November 2027 on behalf of the growers.

Only use Ratoff, ZP Rat or Racumen for baiting of rats on farm.

Failure to report your baiting and the use of non-registered baits will spell the end of our Mackay Sugar wide Permit. It will then be up to each and every Mackay grower to deal with government when they want to bait for rats.

Good in-crop weed/grass control and keeping non-crop grass/weed patches around the farm mowed or grazed will reduce rat breeding and rat damage. Standover is the perfect harbourage for rats, so baiting now will help in limited further crop losses.

As the year draws to a close, on behalf of staff and the Board, MAPS wishes you a Merry Christmas and a safe and happy New Year.

Our office will be closed from 4pm Tuesday, 24th December and will re-open Thursday 2nd January 2025.