



ISSUE 25 – MARCH 2017

Welcome to the March issue of our BPS newsletter. We hope you find the articles contained in this issue informative.

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BPS Services to Members



Date Claimer: BPS/SRA Grower Update Friday 12th May 9:30am -12pm, Mio College, lunch provided.

Traditionally this grower update day has been held at the Ayr Showgrounds, however this year, BPS and SRA are running it in partnership with Claredale Pastures Grow & Show, being held at Mio College. Topics presented will include variety information, new technologies in the sugar industry, grub control update and more. Final speaker list will be published soon.



BPS ACTIVITIES

By mid-January, all staff were back on deck after the Christmas break. The main focus of field staff has been to complete the annual crop data collection and recording process for each block on every farm throughout the district. That's over 5000 blocks of cane! It is essential that BPS maintains these records for future reference, reporting and pest and disease management.

Other activities have included general crop & machinery inspections, RSD sampling, maintaining the integrity of the plots and providing assistance to the agronomy staff with soil & water quality sampling as well as other trial work.

Agronomy staff have continued with current project work based around trials for nitrogen use efficiency, effective water use including improvement to irrigation management, advancement of the SmartCane BMP program, soil and water quality testing, nutrient recommendations as well as general agronomic advice to members.

UPDATE FROM THE PLOTS

RSD (Ratoon Stunting Disease) sampling has been completed on all seed cane plots. Test results have been received back from the SRA laboratory in Brisbane with all samples proving to be clear of the disease. This is a very pleasing result. RSD sampling has also commenced on commercial cane and again this year, every farm in the district will have at least one block of cane sampled for the disease. Field staff will target the older ratoons for sampling.

All plots were due to open mid-March this year, but this has been delayed due to the arrival of several rainfall events including the remnants of Cyclone Debbie. Field staff are hopeful that approved seed cane will be available from the middle of April.

Members are reminded to ensure that they have placed their order for approved seed cane as the time period for pro-rata allocation will expire at the end of May, 2017. After this point, growers can purchase any quantity of the remaining available approved seed cane from the plots. There is no pro-rata allocation of first ratoon/commercial cane from the plots.

All major varieties are available from each plot, however there is only limited availability of the new variety SRA8. Growers interested in propagating SRA8 should contact their respective field officer and ensure they have been allocated some plants.

SEED CANE PRICE LIST - 2017

APPROVED PLANTS PRICES 2017				
Points to Note				
1. BPS is the on-seller of approved seed cane and does not set the prices. Prices are set by plot owners and managers.				
2. BPS has been granted permission by the owners of all plots to advertise the prices they have set.				
3. In addition to the price, BPS sets a management fee of \$2/t to provide and support this service to cover costs incurred due to:				
a Unforeseen Circumstances				
b Transport of planting material to plots				
c Operation of Isolation plot				
d Operation of additional Mother plots due to transition to billet planting				
e Administration of accounts on behalf of plot owners				
	Annual Fee to purchase from plots		Price to Grower (Ex GST)	Price to Grower (Incl GST)
Fee to purchase from plots – Non BPS Member	\$ 600.00		\$600.00	\$660.00
INKERMAN				
	Base Price/T (Ex GST)	BPS Management Fee (Ex GST)	Price to Grower (Ex GST)	Price to Grower (Ex GST)
Approved Seed - Ink Area Grower	\$ 48.00	\$ 2.00	\$ 50.00	\$ 55.00
Commercial Plants - Ink Area Grower	\$ 53.00	\$ 2.00	\$ 55.00	\$ 60.50
All Plants - Non Ink Area Grower - non BPS member	\$ 70.00	\$ 2.00	\$ 72.00	\$ 79.20
Mother Plot Plants	\$ 75.00	\$ 2.00	\$ 77.00	\$ 84.70
Swindleys Distribution Plot	\$ 48.00	\$ 2.00	\$ 50.00	\$ 55.00
Hand Cutter - Full Stick	\$ 36.00		\$ 36.00	\$ 39.60
Machine Strip/Cut/Load - Full Stick (when available)	Pensini to Charge		\$ -	\$ -
Cutter - Billet	\$ 30.00		\$ 30.00	\$ 33.00
Loader - Full Stick (per hour)	\$ 100.00		\$ 100.00	\$ 110.00
Cartage - Full Stick (per hour)	\$ 85.00		\$ 85.00	\$ 93.50
AYR				
Approved Seed (KCGO/PCGO members OR Pion/Kal mill suppliers)	\$ 45.00	\$ 2.00	\$ 47.00	\$ 51.70
Commercial Plants (KCGO/PCGO members OR P/K mill suppliers)	\$ 55.00	\$ 2.00	\$ 57.00	\$ 62.70
All Plants - Non P&K Area Grower - non BPS member	\$ 70.00	\$ 2.00	\$ 72.00	\$ 79.20
Mother Plot Plants - Whitson/Minuzzo/Duncan	\$ 75.00	\$ 2.00	\$ 79.00	\$ 86.90
Isolation Plot Plants - Christensen	\$ 75.00	\$ 2.00	\$ 79.00	\$ 86.90
Cutter - Full Stick	\$ 36.00		\$ 36.00	\$ 39.60
Cutter - Billet	\$ 30.00		\$ 30.00	\$ 33.00
Loader - Full Stick (per hour)	\$ 100.00		\$ 100.00	\$ 110.00
Cartage - Full Stick (per hour)	\$ 85.00		\$ 85.00	\$ 93.50
Cartage - Billet (per hour)	\$ 90.91		\$ 90.91	\$ 100.00
INVICTA				
Approved Seed	\$ 70.00	\$ 2.00	\$ 72.00	\$ 79.20
Commercial Plants	\$ 70.00	\$ 2.00	\$ 72.00	\$ 79.20
All Plants	\$ 70.00	\$ 2.00	\$ 74.00	\$ 81.40
Mother Plot Plants	\$ 75.00	\$ 2.00	\$ 77.00	\$ 84.70
Cutter - Full Stick (Giru/Clare)	\$ 41.00		\$ 41.00	\$ 45.10
Cutter - Full Stick (Millaroo)	\$ 46.00		\$ 46.00	\$ 50.60
Cutter - Billet (Giru)	\$ 27.00		\$ 27.00	\$ 29.70
Cutter - Billet (Brock Rd/Rapisarda)	\$ 30.00		\$ 30.00	\$ 33.00
Cutter - Billet (Millaroo) <i>Limted Availability M.Cervoni</i>	\$ 27.00		\$ 27.00	\$ 29.70
Cartage per hour - Full Stick	\$ 85.00		\$ 85.00	\$ 93.50
Cartage per hour - Billet	\$ 90.91		\$ 90.91	\$ 100.00

AUTOMATION OF FURROW IRRIGATION

A project to look at the automation of furrow irrigation has been running in the Burdekin for the last two years. This is a National Centre for Engineering in Agriculture (NCEA) project that has been funded by SRA, in the Burdekin the local partners are AgriTech Solutions and BPS.

The project is looking at automating furrow irrigation using existing technologies, that is taking hardware and software that is commercially available. It is not developing any new equipment or software. The objectives are: to monitor each of the systems to see what works (and what doesn't); to investigate whether water or energy savings can be made by using automation; and document the potential benefits and costs.

Three project sites have been established and are now fully equipped. These sites were chosen because they represent three different, but common, irrigation systems in the Burdekin. The sites are:

1. Denis Pozzebon (Airville): Delta farm; small blocks; mixture of bores, open water pumping and recycling; interconnected pipelines; recycle pits.
2. Russell Jordan (Upper Haughton): BRIA farm; larger blocks and longer field lengths (1200m); channel water only, all gravity fed; no recycle pits.
3. Aaron Linton (Leichhardt): BRIA farm; river pumping and recycling; recycle pits.

Each farm's layout and existing infrastructure affects the type and amount of equipment required, but there are several things in common. Each site includes: a base station; linear actuators (that open the butterfly valves) and control radios; end of paddock sensors and radios; and a pressure transducer. Sites 2 and 3 also have pump controllers.

All three sites are using WiSA radios and software to transfer information and operate the automation. This is a pc based system, i.e. the software and data storage is on the grower's computer, which each of the growers was already using. One of the benefits of this equipment is that a range of sensors (from multiple manufacturers) can be run by it as long as they use the correct communications protocol. Each radio can control at least 2 actuators and could also host a rain gauge or soil moisture probe. This also allows the system to be built on to over time as each base station is able to control multiple nodes.

Each of the participating growers is managing their system differently. For Denis it means being able to remotely monitor whether the irrigation has completed, and then either changing the sets over or turning the water off. Russell has no recycling and is trying to minimise runoff. With the installation of the advance sensors (and some calibration of how long after the sensor triggers that the water reaches the end) he has now configured the software to automatically switch sets when the water is through. Aaron has some blocks that have poor soakage and is using the automation to irrigate these areas in pulses. They have also all reported time savings from not having to physically go and check or change water. This saving is greatest for Aaron who lives the furthest away from his farm, but it is also a significant saving for Russell and Denis.

Field walks were held at Russell and Denis' in early March and another walk is planned for Aaron's (3300 Kirknie-Home Hill Rd, Leichhardt) on Tuesday April 4 at 8.00 am. All growers are welcome to attend and take the opportunity to see what has been installed and ask any questions they may have. Fact sheets for each site will soon be available on the BPS and SRA websites.

BPS STUDY BURSARY

Agriculture could be described as Australia's most important industry simply because populations worldwide cannot survive without food and nutrition. Demand for foodstuff is such that farmers must develop more efficient practices to produce more from the same amount of land. Agronomists, who have generally completed three years of tertiary study before obtaining a degree, play an ever increasing role in advising farmers on all types of productivity issues.

However, it is well recognised that there is a general skills shortage in agronomic expertise Australia-wide. To address this matter on a local level and to encourage Burdekin based secondary school students to progress into the field of agricultural sciences, the board of Burdekin Productivity Services Ltd has decided to offer financial support in the form of a bursary to one suitable candidate each and every year until further notice. This shall be known as the BPS Study Bursary. The BPS Study Bursary is not a donation to assist with the cost of university, but rather a reward for hard work, so there are conditions that must be met before the funds are distributed.

The following criteria must be met to qualify as a suitable applicant for a BPS Study Bursary:

1. Must be a current Burdekin resident who has resided in the district for the past 2 years at least.
2. Must have completed Year 12 in the last 2 years either at a Burdekin High school or at a boarding college elsewhere.
3. Must have successfully completed, to the required standard, those Year 12 subjects that are required for acceptance into an Australian university course to study an agronomy related Bachelor's degree.
4. Must be willing to undertake full-time study on campus at a selected University and must be prepared to complete the selected course in the designated time period.
5. Must complete a written application and agree to be involved in an interview process with the Bursary Selection Committee if selected to do so.

The following conditions apply to a BPS Study Bursary:

1. A BPS Study Bursary shall activate only when the successful awardee is accepted into an agronomy related Bachelor's degree course at an Australian university.
2. Maximum payment for a BPS Study Bursary shall be \$15000.00 over a 3 year period. These funds shall be dispersed in tranches of \$2500 per semester (\$5000 per annum).
3. In any one semester, full payment of the \$2500.00 tranche shall remain dependent upon successful completion of all required course subjects during that semester.
4. In any one semester, a pro-rata deduction to the \$2500.00 tranche shall apply, but only if 75% or greater of required course subjects are completed successfully in that semester (i.e at least 3 out of 4 subjects are completed successfully). If less than 75% of required course subjects are completed successfully in that semester, the \$2500.00 tranche shall be withheld and deemed not payable.
5. Tranches of a BPS Study Bursary shall be paid half yearly in arrears once written proof of semester results are presented to BPS management and confirmed by the relevant university.
6. If an awardee of a BPS Study Bursary changes or alters their university course at any time, whereby it no longer qualifies as an agronomy related Bachelor's degree course, the BPS Study Bursary shall be cancelled.
7. If an awardee of a BPS Study Bursary converts their university course to part time study whereby the length of time for completion is extended beyond that of fulltime study, the BPS Study Bursary shall be cancelled.

The following selection process shall apply to the BPS Study Bursary:

1. During the year, management shall promote the BPS Study Bursary throughout secondary schools and colleges in the immediate area.
2. At the October board meeting, the board shall nominate a Bursary Selection Committee comprising of at least one member of BPS management and one director of the company. The board shall advise this committee of a selection criteria to follow when ranking applicants.
3. 1st November each year, a BPS Study Bursary shall be released to applicants.
4. Applications shall close 30th November each year.
5. Those applicants deemed suitable shall be interviewed by the Bursary Selection Committee and ranked according to the selection criteria set down by the board.
6. The committee shall present their recommendation at the December board meeting where a final ranking shall be approved by the board of directors. Related parties who preside on the board shall abstain from voting due to conflict of interest implications.
7. The top ranked applicant shall be offered a BPS Study Bursary subject to acceptance into a qualifying university course.
8. If the top ranked applicant refuses the offer or is not accepted into the university course for any reason, the second ranked applicant shall be offered a BPS Study Bursary. This process shall continue until an applicant is accepted or the list of applicants is exhausted, at which point the BPS Study Bursary shall not proceed in that year.
9. A BPS Study Bursary document shall be drawn up that clearly defines all conditions that apply to the granting of a BPS Study Bursary, and such document shall be executed by the BPS Board Chairman and the successful applicant.
10. Unsuccessful applicants shall be notified in writing and encouraged to re-apply in the subsequent year if eligible to do so.
11. Directors have the final say on who shall be offered a BPS Study Bursary and there shall be no grounds for appeal.

In the following months, the BPS management team of Rob Milla and Mark Rickards will attend all Burdekin High Schools to conduct information sessions with students and raise awareness of this important program. Applications for the bursary will open in November and a selection panel will interview applicants before offering the bursary to the student deemed most suitable.

The board, management and members of BPS regard the BPS Study Bursary as an important opportunity for local students to progress into the field of Agricultural Sciences and encourage as many students as possible to consider a career in agriculture.

NEXT GEN BUS TRIP

The Burdekin Next Gen group attended a four day bus trip last month to north west NSW. The group looked at various dryland and irrigated cropping systems including cotton, mungbeans, sorghum, lettuce and broccoli. They also attended an irrigation field day organised by the Gwydir Valley Irrigators Association, looking at irrigation technologies and results of irrigation trial work being conducted in the Moree area. Burdekin cane farmers were also featured at the field day, discussing the successes of automated furrow irrigation work that has been implemented in the Burdekin.

The trip was made possible by funding obtained through National Landcare Programme Sustainable Agriculture Small Grants Round. It was a great chance for everyone on the bus to catch up and to discuss ideas around farming systems management. Burdekin sugar cane farmers who would like to get involved in the Burdekin Next Gen group and receive notification of upcoming events should let Tiffany know on 0447 069 887 so she can add you to the contact list.



Burdekin Next Gen group in front of an enormous turkey's nest dam at Moree

PACHYMETRA ROOT ROT

Pachymetra root rot is a disease that affects the root systems of sugarcane and can cause yield reductions of up to 40%, gappy ratoons and increased stool tipping due to loss of primary anchorage roots. This disease was discovered in the early 1980s and is now in most cane growing regions across the industry. The disease is unique in that it is not found anywhere else in the world, nor in blocks that have never grown sugarcane. The disease is caused by a fungus-like organism called *Pachymetra chaunorhiza*. Fortunately, the Burdekin region has remained largely unaffected by pachymetra.

Symptoms of pachymetra root rot include root systems that have soft, flaccid roots that are much smaller than healthy root systems. The fungus enters the plant at the root tips and breaks down the internal root tissues. These roots are then severely compromised and grow quite poorly, or stop growing altogether.

Pachymetra is controlled through the planting of resistant varieties. Pachymetra spores are long lasting and can survive for more than five years in the soil. Use of fungicides at planting, or planting rotational crops in the fallow does not control pachymetra spore levels. Pachymetra spore levels can be measured in the soil by conducting a soil assay that counts the numbers of spores. This test is available through SRA. If Burdekin growers wish to conduct a test, call your BPS field officer to arrange sampling.

The table below shows the likely spore count thresholds for different levels of disease severity and probable yield loss. The thresholds are different depending on if the samples were taken from a fallow or standing cane block.

Probably Disease Severity	Fallow Block	Standing Cane Block
Low	0 - 30,000 spores / kg	0 - 50,000 spores / kg
Medium	30 - 60,000 spores / kg	50,000 - 100,000 spores / kg
High	> 60,000 spores / kg	> 100,000 spores / kg

Current Burdekin varieties are categorised as follows:

Resistant Q183, Q253

Intermediate SRA8, Q252, Q240, Q232, KQ228, Q208

Susceptible Q133

BPS has just completed a district wide survey of 80 blocks across the region. The highest spore count was 7400 spores/kg, so very low probability of yield loss. Of the 80 blocks surveyed (20 from each mill area) 55 had spore counts of zero. Any growers with spore counts over 0 will be contacted. If spore levels are slightly elevated, planting a resistant variety should be considered as part of your general approach to disease risk management.

RATOON STUNTING DISEASE (RSD)

Before weather intervened, BPS field staff were able to complete sampling for RSD at all seed cane plots in the district and at several commercial farms as well. Similar to last year, at least one RSD sample shall be collected from every farm in the district. This is the second year that this will be done, doubling the coverage of RSD sampling from previous years.

The industry standard for RSD sampling from 2017 will remain the ELISA (Juice/Xylem extraction) method. Leaf Sheath Biopsy (LSB) PCR, a new method of RSD sampling and analysis, was trialled last year in conjunction with the ELISA method, but requires further refinement prior to commercialisation. The ELISA method involves collecting 8 cane sticks from the outermost rows on two corners of the block being sampled (16 sticks/block). Four samples are extracted from these 16 sticks and sent away to the SRA laboratory in Brisbane for testing via a polymerase chain reaction (PCR) test. Results are disseminated and any grower with a positive sample will be notified in person. The harvesting contractor and other members of the harvesting group will also receive notification but the harvesting group will not be told the identity of the RSD affected grower due to privacy constraints.

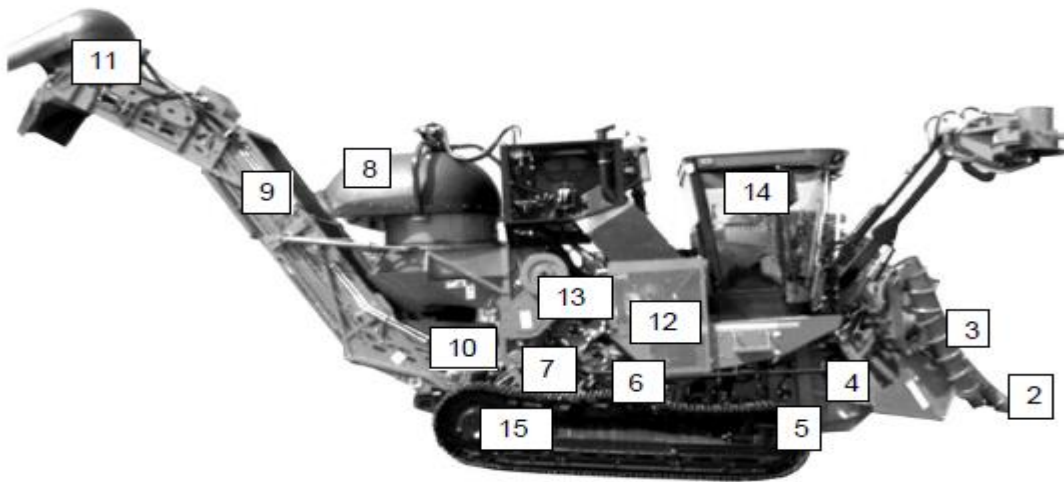
There are three simple steps required to minimise the risk of RSD occurring on your farm. Always be aware that the RSD bacteria is spread via infected juice:

1. Remove cane volunteers from fallow – these can harbour RSD, also do not plough out/replant in RSD blocks without break cropping or fallowing in between.
2. Regularly purchase and plant approved seed cane – the closer to hot water treatment the seed source, the less likelihood of RSD occurrence.
3. Sterilise any equipment that may come in contact with cane juice – planters, stool splitters, harvesters and transporters/haulouts. (See following diagrams)



Extracting juice (xylem) for RSD testing

The diagrams on this page are courtesy of the Queensland Government.

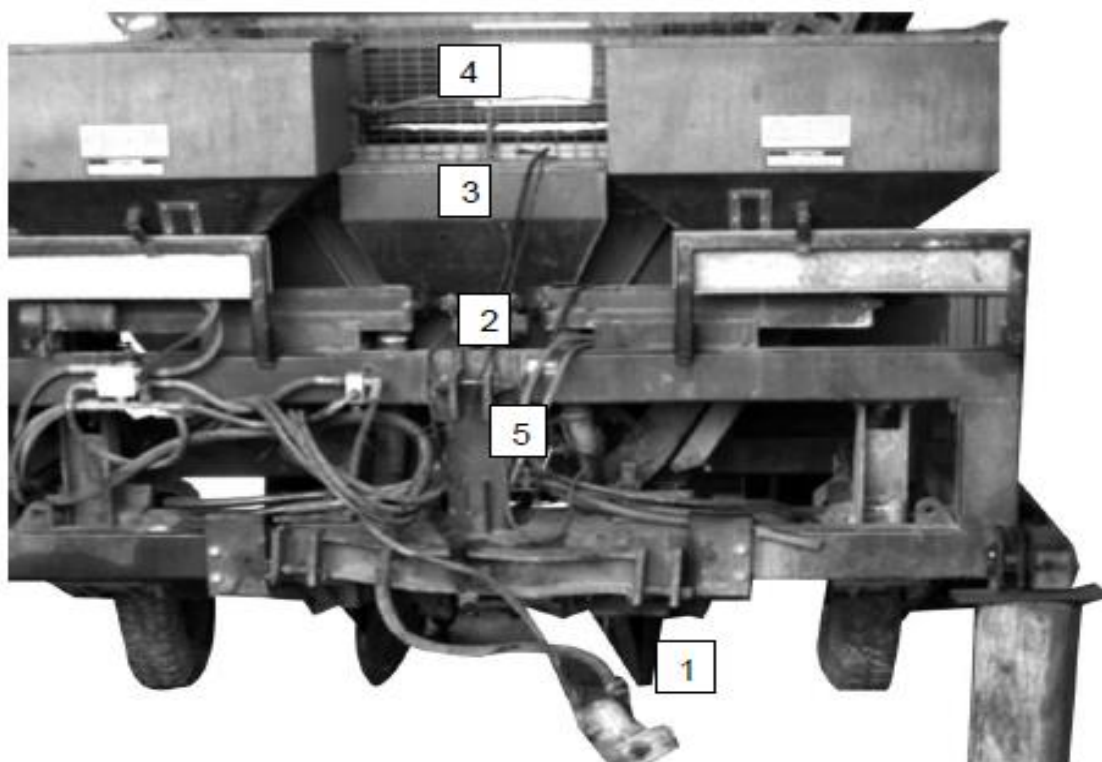


Sugar Cane Harvester Inspection Points:

Inspect all internal & external surfaces where plant material may collect including:

1. Topper arms, drums & blades – Plant material has a tendency to collect inside the base of the drum & a thorough inspection using a torch is required to ensure all material has been removed.
2. Gathering sidewalls & floating shoes – a mixture of soil & plant material accumulates.
3. Crop dividers – inspection of top recess areas.
4. Knockdown & finned rollers – inspection between roller drum & side walls.
5. Base Cutter – inspect shaft on base cutter & around blades.
6. Feed roller train – Compacted soil around rollers.
7. Chopper system – Inspect around the choppers & the areas above the deflector plate.
8. Primary extractor blades & chamber - Inspect corners for compacted soil & plant material.
9. Elevator system – Inspect channels, sprockets & flights.
10. Elevator boot – Inspect for lodged plant billets.
11. Secondary extractor blades & chamber – Inspect corners for compacted soil & plant material.
12. Motor screen & covers – Oil residue can allow smaller pieces of material to adhere to the inside surfaces of this area.
13. Hydraulics & lines – All hydraulic lines, pumps, rams & reservoirs are to be inspected. A build-up of hydraulic oil residue in these areas can trap small pieces of material & leaves. These contaminants can be difficult to remove using air or water pressure & will often require physical removal. Leaves are often trapped under hydraulic lines.
14. Operator's cabin – Contaminants can lodge under foot pedal controls & rubber matting on the platform floor, air vents, air conditioner filters and tool boxes. Inspect under the rubber matting on the floor as well as the tool box.
15. Wheel or tracks – Wheels & tracks need to be inspected for soil & plant material as well as the underside & between harvester frame & wheels or tracks.

The diagrams on this page are courtesy of the Queensland Government.

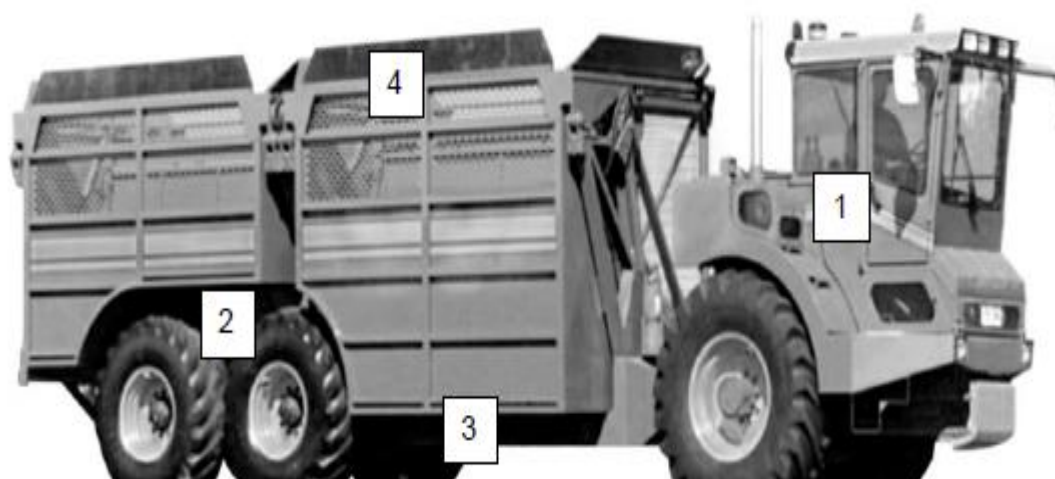


Planter Inspection Points:

Inspect all internal & external surfaces where plant material may collect including:

1. Furrow openers – Compacted soil around discs.
2. Chopper knives (whole stalk planters) – Inspect for plant material & juice residue around blades.
3. Chute – Plant material caught in corners of the chute.
4. Hopper – Plant material caught in corners.
5. Elevator flights, boot, dip tank on billet planters – Billers caught in elevator flights, ensure dip tank is empty & no contaminants are trapped.
6. Rotate elevators at base of hopper (if applicable) – Check for lodged billets.

The diagrams on this page are courtesy of the Queensland Government.



Transporter/Haulout Inspection points:

Inspect all internal & external surfaces where plant material may collect including:

1. Tractor & prime mover – Contaminants can lodge under foot pedal controls & rubber matting on the platform floor, air vents & tool boxes. Inspect under the rubber matting on the floor as well as the tool box.
2. Wheel – Look for soil & plant material on the underside of, and between, tractor frames & wheels, particularly inside of rims.
3. Suspension under bin – Inspect corners for compacted soil & plant material.
4. Flights, boots, hoppers on elevator bins, rotate elevators (if applicable) – remove lodged billets.
5. Inside & outside of bin – check for lodged billets.

SHED MEETING SUMMARY

BPS and Farmacist recently conducted a very successful round of shed meetings across the district which were attended by over 40% of Burdekin growers. A range of topics were presented and discussed including the following.

YCS Research Update

There is still no answer for the cause of YCS, or strategies to eliminate YCS, however recent research has suggested the following:

- YCS appears not to be soil borne
- YCS does not appear to be transmissible via planting material or juice
- Later cut ratoons more likely to suffer yield losses than early harvested ratoons
- Appears to be varietal differences in susceptibility which may lead plant breeding options for management in the future
- Nutrition appears not to be a limiting/causal factor
- Ongoing research will investigate blockages in plant transport pathways, phytoplasmas and potential vectors.

Planting

Growers are reminded to contact your local field officer to obtain a plant source inspection prior to planting. Ensure plants are as young as possible, as close to hot water treatment as possible, have plenty of vigour, do not have piping, damaged eyes or large internodes. Some plant sources of Q240 last year were unsuitable due to eyes that had already moved and/or internodes spaced too far apart. SRA8 will be available from all plots this year, allocated on a pro rata basis.

Fungicides/Phase out of Mercury

The Australian Government is looking at ratifying the Minamata Convention on Mercury. This means that Australia will be required to take measures to control the use of all mercury based products (in all industries, not just Agriculture). Data was presented at shed meetings showing SRA research on plant emergence after applying a range of different fungicides. This data suggests there are alternatives to mercury based products (Shirtan), such as propiconazole (Tilt/Bumper) or Sinker. The alternatives products are also cheaper/Ha than Shirtan. At the time of shed meetings and publication, BPS is unsure if the phase out will occur in the short term (1 year) or medium term (3-5 years).

BPS would like to conduct trials with a range of fungicide products in the upcoming planting season (particularly in heavier soils, planted in cooler conditions) to obtain some local data on the efficacy of these products. Please contact BPS if you would like to participate in a trial.

KQ08-2180

Data was presented on an experimental variety, KQ08-2180. This variety performed on average 6.1 T/Ha better than the standards, and 0.4 units of CCS lower than the standards. At the recent Regional Variety Committee meeting, it was decided to hold this variety until further research into its smut susceptibility has been undertaken.

Herbicides

Data was presented from a Farmacist trial which showed the breakdown of Metribuzin (Mentor or Soccer) in the BRIA when used at a spike rate in Gramoxone mixtures for advanced grass weeds. This information would suggest growers are better off waiting up to 4 days before irrigating post application. The losses of the product in irrigation tailwater were halved by waiting for 4 days versus 2 days after the chemical was applied.

Productivity Reports

The data from last harvest season was presented, with some very impressive results. District average last year was 127 T/Ha, 14.0 CCS and 17.7 tonnes sugar/Ha. If you did not attend a shed meeting and would like your productivity group report, please contact BPS.

BIOSECURITY – YELLOW CRAZY ANTS

BPS recently attended a meeting regarding an outbreak of Yellow Crazy Ants in the Nome area. In discussions with entomologists, it appears that although this Yellow Crazy Ant outbreak does not pose an immediate threat to the Burdekin cane industry, we should remain vigilant and observe relevant biosecurity measures to minimise the risk of infestation.

The current outbreak at Nome covers an area of around 130 Ha, and the Yellow Crazy Ants move at a rate around 100 m per year, so the risk of the affected area increasing significantly due to natural expansion of the ant population is low. However, human activity can obviously increase the chances of spread of the pest. It is a timely reminder for the need to ensure machinery movements between quarantine zones in the sugar industry have appropriate approvals (BPS staff can inspect machinery).

There has been some sugarcane in the Mulgrave area near Cairns that has been affected by Yellow Crazy Ants. It appears the ants colonised some of the area under stools of cane, which meant that plants were much more susceptible to stool tipping and harvester damage. The ants can cause discomfort to humans and animals as they spray formic acid which can cause irritation.

BPS staff will monitor farms, particularly around the Giru area (since it is closest to the current outbreak), please contact your Field Officer if you see anything suspicious. BPS will also continue to liaise with Townsville City Council to ensure risk of movement of the outbreak area is minimised.

Growers are reminded that under the Biosecurity Act 2014 everyone is required to take all reasonable and practical steps to minimise risk of spread or propagation of biosecurity risks. This is called a general biosecurity obligation, and applies to all aspects of biosecurity. If someone does not fulfil their general biosecurity obligation, Biosecurity Queensland can take formal compliance action.

SEED CANE PLANNING CALCULATOR

This is the time of year to start thinking about propagation of clean seed cane for plant source over the coming years. BPS has developed a calculator to help you determine how much clean seed cane you need to order from the plot this year to propagate enough plant source for the areas you intend to plant in the coming years.

The seed cane calculator is available from the BPS website. Go to www.bps.net.au and click on 'Grower Tools' on the left side bar. In there you will find a range of tools. Under the heading 'Other Tools and Calculators' you will find the link to the Seed Cane Planning calculator and a tutorial on how to use it.

When you open the Plot Seed Cane Order Calculator you will see:

Grower Calculators For Planning Plot Seedcane Orders											
Enter numbers into the orange spaces											
Plot Order For Same Year Plant Out											
Variety	Area that you want to plant (ha)	Planting rate (t/ha)	Amount of seed cane you need to order from the plot (t)								
KQ228	0.80	8.00	6.40								
Plot Order To Propagate Out For Next Year's Plant											
Variety	Area that you want to plant next year (ha)	Planting rate (t/ha)	Amount of cane you would need to plant this area (t)	Estimated yield from plant source (t/ha)	Area of plant source needed to plant block next year (ha)	Planting rate when propagating out seed cane from the plot (t/ha)	Amount of seed cane you need to order from the plot (t)				
Q240	11.00	8.00	88.00	80.00	1.10	8.00	8.80				
Plot Order To Propagate Out For Planting In Two Years Time											
The Year After (Year 2)		Next Year (Year 1)			This Year (Plot Seed Cane Propagation)						
Variety	Area that you want to plant in Year 2 (ha)	Planting rate (t/ha)	Amount of cane needed to plant Year 2 area (t)	Estimated yield from Year 1 plant source (t/ha)	Area of Year 1 plant source needed to plant block in Year 2 (ha)	Planting Rate when propagating plant source (t/ha)	Amount of cane needed to plant Year 1 area (t)	Estimated yield from propagated plot seed cane (t/ha)	Area of plot seed cane that needs to be planted to propagated enough plant source for Year 1 area (ha)	Planting Rate when propagating plot seed cane (t/ha)	Amount of seed cane you need to order from the plot (t)
Q183	120.00	8.00	960.00	80.00	12.00	8.00	96.00	80.00	1.20	8.00	

Select which calculator you need to use for your purpose:

1. Use this calculator if you only know what area you want to plant with clean seed cane this year
2. Use this calculator if you know what area you want to plant next year. It will give you the area and tonnes of clean seed cane you will need to propagate this year to have enough plant source for next year.
3. Use this calculator if you know what area you want to plant in two years time. It will give you the area you need to plant next year to have enough plant source and give you the area and tonnes of clean seed cane you need to propagate this year to have enough plant source for the next two years.

For all the calculators you will need to enter the area, estimated planting rate and estimated plant source block yield into the orange cells. The yellow cell will then give you the amount of clean seed cane you will need to order from the plot and propagate this year. The following examples demonstrate how to use each calculator.

Example for Calculator 1: If I want to plant 0.8 hectares this year at an estimated planting rate of 8t/ha, I will need to order 6.4 tonnes of clean seed source from the plot.

Plot Order For Same Year Plant Out			
Variety	Area that you want to plant (ha)	Planting rate (t/ha)	Amount of seed cane you need to order from the plot (t)
KQ228	0.80	8.00	6.40

Example for Calculator 2: I want to plant 11 hectares next year at an estimated planting rate of 8t/ha. I estimate that the plant source block will be yielding 80t/ha by planting time next year. Therefore, I will need to order 8.8 tonnes of clean seed cane from the plot and propagate it out over 1.1 hectares this year to have enough plant source for next year.

Plot Order To Propagate Out For Next Year's Plant							
Variety	Area that you want to plant next year (ha)	Planting rate (t/ha)	Amount of cane you would need to plant this area (t)	Estimated yield from plant source (t/ha)	Area of plant source needed to plant block next year (ha)	Planting rate when propagating out seed cane from the plot (t/ha)	Amount of seed cane you need to order from the plot (t)
Q240	11.00	8.00	88.00	80.00	1.10	8.00	8.80

Example for Calculator 3: I want to plant 120 hectares in two years' time at an estimated planting rate of 8t/ha. I estimate that my plant source block will consistently yield about 80t/ha. Therefore, I will need to order 9.6 tonnes of clean seed cane from the plot this year. I will propagate it out over 1.2 hectares this year to plant 12 hectares next year. This will provide me with enough plant source to plant the 120 hectares the year after.

Plot Order To Propagate Out For Planting In Two Years Time											
Variety	The Year After (Year 2)				Next Year (Year 1)				This Year (Plot Seed Cane Propagation)		
	Area that you want to plant in Year 2 (ha)	Planting rate (t/ha)	Amount of cane needed to plant Year 2 area (t)	Estimated yield from Year 1 plant source (t/ha)	Area of Year 1 plant source needed to plant block in Year 2 (ha)	Planting Rate when propagating plant source (t/ha)	Amount of cane needed to plant Year 1 area (t)	Estimated yield from propagated plot seed cane (t/ha)	Area of plot seed cane that needs to be planted to propagated enough plant source for Year 1 area (ha)	Planting Rate when propagating plot seed cane (t/ha)	Amount of seed cane you need to order from the plot (t)
Q183	120.00	8.00	960.00	80.00	12.00	8.00	96.00	80.00	1.20	8.00	9.60

Area you want to plant in two years

Area you need to plant next year to have enough plant source for year 2

Area you need to plant with clean seed cane this year to propagate enough plant source for the next two years

This is a great tool for determining how much clean seed cane you need to order from the plot this year. A reminder, using good quality plant source is an important factor when managing disease risk on your farm. BPS staff are available to provide plant source inspections, ring the office 4783 1101 or your field officer for more information.

FUNGICIDE MANAGEMENT OPTIONS

When it comes to fungicide management, cane farmers and planting contractors currently have limited options to use against Pineapple Sett Rot disease. In saying that there are products available.

In good conditions all fungicides registered for sugarcane are effective against Pineapple Sett Rot disease (*Ceratocystis paradoxa*). It is only when conditions become less favourable such as abnormally wet or cold conditions, dry soil, poor water quality in application tanks or most importantly, cane setts or billets that have harvester damage. In the coming months the soil temperature will drop and after recent weather events, plant sources will be lodged increasing the risk of damaged billets. If thorough fungicide coverage of billets is not achieved in less than perfect conditions, the results will be similar to this picture below, resulting in poor strikes across the district.

Figure 1. Symptoms of pineapple disease
(Source: BSES Woodford QLD)



It is important to ring your area field officer to get a plant source inspection before planting. Read and understand the fungicide label of the product that you or your contractor intend to use. Some products can be mixed with other insecticides whilst others state on the label that they are not compatible with any other product. Some products have to be applied via spray nozzles while others can use the dip system or both. Some products are registered for both Pineapple Sett Rot disease and Smut. Label requirements differ for these two diseases. Set up of the planter is also critical.

In 2015 the Australian Government indicated the phase out of Shirtan would occur in the year 2020. Shirtan is widely used across the cane industry for Pineapple Sett Rot and its active ingredient consists of 120g/L mercury (Hg) present as methoxy ethyl mercuric chloride. The Australian government has signed the Minamata Convention treaty. This treaty has the objective to protect human health and the environment from emissions and releases of mercury. The Australian government is in the process of phasing out all mercury use in Australia in all industries.

Burdekin Productivity Services will be conducting strip trials with various planting contractors from around the Burdekin to compare fungicide products against Shirtan in difficult plant emergence circumstances – please give the office a call if you would like to participate in these trials.

Below is a list of products registered for pineapple disease in sugarcane.

*Please note that Sportak is now sold under FMC.

*Burdekin Productivity Services plant all approved seed cane plots with Sinker. Sinker has the added benefit of prevention of primary infection of sugarcane smut on planting material.

Trade Name	Active Ingredient	Rate	Remarks	\$/ha
Sinker	500 g/L flutriafol	500mL/ha or 7.5 mL/100 m row	Apply as a spray onto setts in the planting chute with thorough coverage. Apply in a minimum water volume of 350 L / ha.	\$35
Tilt 250ec,Bumper 250ec,Throttle	250 g/L propiconazole	20mL/100L water	Ensure thorough coverage of the cut ends of sugarcane setts	\$3 - \$5
Bayfidan 250ec	250 g/L triadimenol	20 mL/100L water	Apply to setts by dipping or spraying. Ensure thorough wetting of cut ends.	\$14
FMC Sportak	450 g/L prochloraz	40ml/200L water	Apply as a dip or spray to setts at planting. Ensure thorough coverage of all cut ends.	\$26
Shirtan	120 g/L mercury (Hg) present as methoxy ethyl mercuric chloride	250mL/200Lwater	For use in spray or dip planters. Ensure thorough wetting of cut ends or setts. If colour of solution changes from red, or it becomes contaminated with soil, it should be discarded.	\$43



Sinker



Tilt 250ec



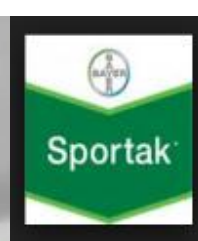
Bumper



Throttle



Bayfidan



Sportak



Shirtan

If you have any concerns about fungicide application on your planter, please ring the office on 47831101 or any of the staff at Burdekin Productivity Services.

STAFF CONTACTS

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BPS SERVICES TO MEMBERS

Burdekin Productivity Services Ltd provides many services to its members throughout the Burdekin Cane growing region. Sometimes, when members are very busy, it is easy to forget what services are available or perhaps members do not realise they can receive more value from their levy deduction.

Below is a chart that itemises some of the most important services provided by BPS to its members, and indicates whether the services are covered by the 7c/tonne levy or if there are any additional costs involved.

Farming System	Service	Included in levy	Additional cost	Subsidy available
Soil health	Soil testing – Sample collection, analysis and recommendation		Yes	
	Soil test interpretation	Yes		
	Fallow management advice	Yes		
Irrigation	Pump flow testing	Yes		
	Water testing – quick EC (salt) and nitrate tests	Yes		
	Water testing – full analysis		Yes	Yes
	Scheduling advice	Yes		
	Irrigation assessments	Yes		
	G-Dots – supply and install		Yes	Yes
	Stalk growth measurements to calibrate scheduling tools	Yes		
Pests and Diseases	Control / eradication – Itch grass rogueing	Yes		
	Pig shooting subsidy			Yes
	Weed identification and control recommendations	Yes		
	Pest inspections	Yes		
	Seed cane sales	Yes	Yes	
	Plant source inspections	Yes		
	Machinery inspections	Yes		
	Machinery sterilisation	Yes		
	Hot water treatment of grower's cane		Yes	
Productivity	Variety advice	Yes		
	Planting advice	Yes		
	Equipment calibrations – fertiliser box and spray rigs	Yes		
BMP Smartcane	Self-assessment	Yes		
	Accreditation	Yes		
	Training	Yes		