Burdekin Productivity Services

PRODUCTIVITY PROFITABILITY SUSTAINABILITY

Funded by Burdekin Canegrowers and Wilmar Sugar

# Grower Update

ISSUE 37 – MARCH 2020

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

***This issue contains:***

## CORONAVIRUS AND BPS SERVICE DELIVERY

As we are all acutely aware, COVID-19 is having, and will continue to have, a huge impact on all aspects of society for some time. Given the situation is and will continue to change rapidly, nothing is definite, however the following considerations and actions are being implemented at BPS at the time of writing this article. These have been considered decisions, based on official health advice and balance practicality, service delivery and risk to both staff and BPS members – many who are, or have immediate family that are in the high-risk category.

- All face to face contact should be minimised where practical. However when required, ensure that 1.5 m distance is maintained. This **DOES NOT** mean we are discouraging communication between BPS members and staff. If questions, concerns, issues or advice can be offered over the phone, we are always available. If a farm visit or appointment is required, please call to arrange and ensure the social distancing requirements are met.
- We request organising an appointment to visit the BPS office, and following government advice, BPS staff may be working from home – but still contactable and available for services for members.
- No grower group meetings will occur unless absolutely necessary. If required, these will be conducted in an outdoor location where appropriate distances between people can be maintained.
- RSD sampling, plant source inspections, soil tests, crop inspections, machinery inspections will all occur as per normal – while ensuring at least 1.5 m is maintained between people
- We request that growers meet BPS staff in the paddock so travel can occur in separate vehicles
- Sale of approved seed cane will proceed. No contractors, drivers, or growers are to enter the weighbridge office.
- Trial and project activities will proceed. Crop monitoring, sampling and other trial related activities will occur while maintaining 1.5 m between people

While some of these measures may change the way we conduct our services in the short term, we are required to ensure we are taking all practical and necessary steps to minimise risk to our staff, our members and the general community. All of the above may change, depending on government and official health advice.

## RSD TESTING - 2020 APPROVED PLOTS

In preparation for the opening of seed plots, BPS field staff have been busy testing for RSD (ratoon stunting disease). Testing has been completed for the Inkerman, P & K (Whitson's), Giru, Millaroo and Brock Road plots. At this stage not all results have been received back from the laboratory due to delays in sampling because of wet weather and further interruptions with processing caused by coronavirus restrictions on staffing levels at SRA.

RSD is an important disease of sugarcane. It is caused by a bacterium that infects the water carrying vessels of the plant, reducing its ability to carry water and grow. It is transferred from plant to plant via infected juice. Overall, RSD is thought to be present in less than 5% of fields in Australia. However, where it is present losses of 5-60% have been recorded. RSD has no easily visible symptoms other than stunting and diagnosis is via laboratory testing of juice (xylem) samples.

Since 2019, xylem samples have been tested using qPCR (quantitative polymerase chain reaction). This is a more sensitive test than the previous Elisa test, meaning that RSD can now be detected more accurately.

The good news is that RSD is very manageable and preventable.

RSD is controlled by:

- Planting approved seed cane. This is cane that has been hot water treated to kill any bacteria before planting, and tested to ensure it is free of RSD before being sold.
- Sterilising equipment. Anything that comes in contact with contaminated juice (knives, planters, harvesters, stool splitters etc) has the potential to transfer the disease to uninfected plants. Washing down machinery to remove soil and plant material, then treating with disinfectant (Cane Knife Steriliser or SterimaX) will kill the bacteria and prevent infection.
- Controlling volunteers. If clean cane is planted into a field with infected volunteers, there is the potential for those volunteers to reinfect the clean cane.

Following these three steps will minimise the risk of RSD being introduced to your farm or of spreading it if there is any present. Over time eradication of the disease is possible.

RSD sampling on commercial farm blocks will commence in April. BPS have been sampling at least one block per farm over the entire Burdekin district, for several years now. If a positive result to RSD is returned from the laboratory, BPS will inform the grower concerned. Due to laws concerning privacy, it is then the grower's responsibility to inform the remainder of the harvesting group of the RSD positive result, so that they are aware of the risk and have the option to take additional preventative action to avoid the risk of spreading the disease.

The availability of irrigation is something that the Burdekin district is blessed to have. Good irrigation practices can sometimes mask the symptoms of RSD in the paddock. If this is the case, it would not be considered prudent to ignore a positive result and relax any of the abovementioned control measures as RSD can be spread quite easily.

## FALL ARMYWORM

As most growers would be aware, Fall Armyworm has been detected in northern Australia for the first time. In March 2020, it was discovered in a maize crop in the Burdekin region. At the time of writing this article, there have been no officially reported or confirmed cases of Fall Armyworm larvae found in any sugarcane crops in Queensland – however there have been a few false detections that turned out to be other established species of armyworm. This could change, and growers are advised to conduct regular scouting activities, particularly with the upcoming planting season.

Data from overseas (particularly USA and Indonesia) suggests that Fall Armyworm is more attracted to crops like maize rather than sugarcane. And researchers and entomologists from these countries have observed that Fall Armyworm in most cases has a relatively low impact on sugarcane. The times there were higher levels of damage appear to be when other crops such as maize were beside sugarcane crops.

However, this information may be true overseas, but the reality is we do not know if the pest will follow the same habits in the Australian environment and cropping systems.

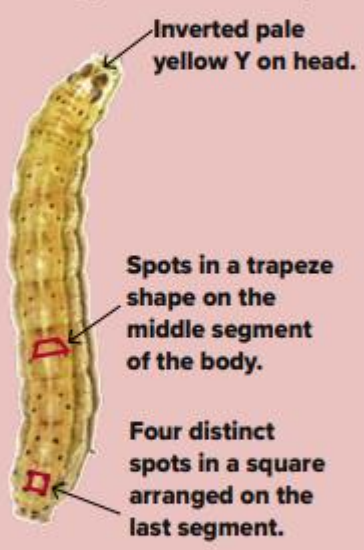
Since the pest is new to our country, we do not know how it will behave and respond to natural predators and/or insecticides. The sugar industry does have an Emergency Use Permit for the insecticide active Permethrin. This permit allows the use of the product on Fall Armyworm. However, it is essential you speak to an agronomist before using this product, as insects have been shown to quickly build up resistance this family of chemicals (synthetic pyrethroids). So while an individual may feel they are doing something to control the pest, if used when unnecessary, it may do more harm than good by building up resistance and causing a huge problem for the industry as a whole. There is currently minimal data on what the economic threshold is for this pest in Australian sugarcane crops, however entomologists have suggested to consider thresholds for other armyworm species. It is also worth noting that application of such an insecticide will also kill many natural beneficial insects, so a considered approach is required. The sugar industry is also pursuing further emergency use permits for other chemicals.

The conditions of the permit allow the application of 100 – 200 mL/ha of products with 500 g/L of Permethrin as the only ingredient. For ground application use 30 – 100 L/ha of water; for aerial application use 20 – 30 L/ha water. Conditions include:

- Regularly scout crops to monitor for eggs and larvae. Treat when pests appear, targeting eggs at hatch or small larvae (prior to third instar stage) before the pest becomes entrenched.
- Use higher rate when larvae larger than 1 cm are present.
- Apply as a foliar spray using a boomspray or aircraft.
- Follow instructions on the product label for the target crop.
- DO NOT make more than five (5) applications per season.
- DO NOT contaminate neighbouring crops or pastures with concentrate, spray or washings.
- Dangerous to bees and fish. Refer to 'Protections' statements on the product label.
- Refer to the Insecticide Resistance Management statement on the product labels to prevent or delay the development of resistance.

**Fall armyworm**

- Up to 40mm in length.
- Mature larvae:
  - White and dark stripes run down the length of the body.
  - Dark spots with hairs occur all over the body.
  - Pale yellow inverted 'Y' on the head.
  - Spots in a trapeze arrangement on middle segments of the body.
  - Four larger distinct spots in square arrangement on the last segment of the body.




(Firake DM, ICAR Research Complex)

(Buss J.L, University of Florida)

From: www.cottoninfo.com.au

Endemics to exotics information sheet

If you find suspect larvae or visible leaf damage, call the DAF hotline on 13 25 23 as a first point, then call your agronomist or a BPS staff member for further assistance.

For identification guides and further information see the SRA website www.sugarresearch.com.au

# SHED MEETING SUMMARY

# FEBRUARY 2020

February 2020 saw BPS, SRA and Farmacist deliver another successful round of shed meetings. Thanks to everyone who participated, we had a good roll up of growers and great discussions around a range of topics.

**TOPICS COVERED AT THE SHED MEETINGS**

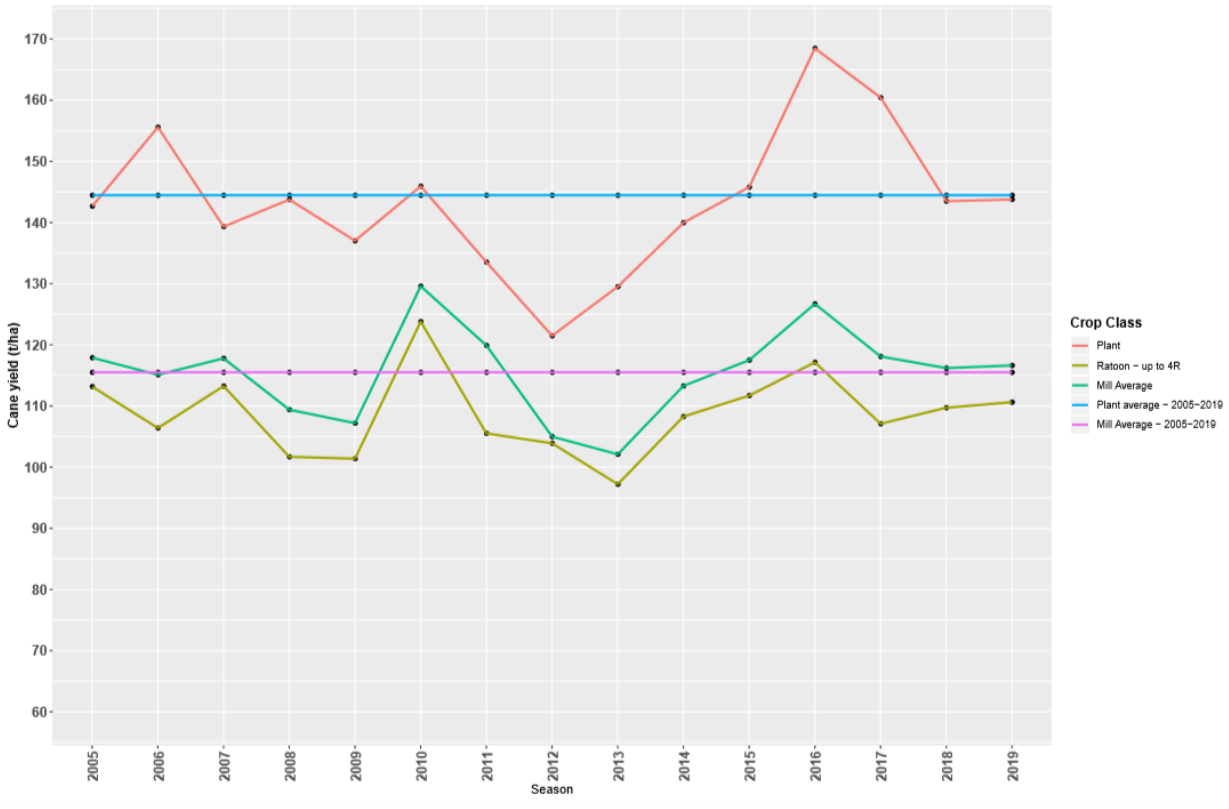
- 2019 Productivity Reports
- New variety available in 2020: WSRA17
- Introduction to the Cane Price Formula
- High performing Burdekin farm practices
- Herbicides and sorghum control
- Reef Regulations update
- YCS update
- SRA Imidacloprid survey
- Gypsum on sodic soils demonstration

**2019 PRODUCTIVITY REPORTS**

If you would like a copy of the productivity report for your group or district (BRIA or Delta), please contact your BPS field officer. The reports are a handy way to match variety performance to soil type.

When reviewing productivity reports its important to account for the fact that climatic differences between seasons can have a big impact on how the industry performs year to year. This graph below shows yearly tonnes/ha cane yield and that the average plant cane yield (blue line) for the last 15 years is around 145 t/ha. It is reassuring that the 2019 crush is keeping up with this average.

From the graph you can see that 2016 was a particularly good year which saw an increase to almost 165 t/ha for plant cane (red line). This is most likely due to sustained solar radiation levels above or close to 24 MJ/m$^2$ between December to January.



**NEW VARIETIES**

**WSRA17:** Available from the BPS plots in 2020. Please let your field officer know now if you are planning on planting WSRA17 this year. Pre-empting the demand will help us distribute the seed available to the whole region more effectively and reduce waste. WSRA17 is a variety that appears to be at the very least matching, and in some cases beating, our current standard varieties in terms of tonnes of sugar/ha. Typically, it is a higher than average tonnes of cane, and slightly below average CCS variety. Preliminary data suggests it is slow to emerge in cool conditions, so is not recommended as a late plant variety. We also recommend that it is planted with a fungicide that has some control of smut (such as Sinker), to minimise smut risk.

Another new variety, **SRA23,** will be available in 2021. While it is showing average yields, it is smut resistant. Planting resistant varieties is an important part of regional smut management.

**CANE PRICE FORMULA**

The cane price formula has been around since 1915 and allocates income from sugar sales between millers and growers. In essence, the cane price formula converts the sugar price ($/t) to the price growers are paid per tonne of cane delivered. Growers are paid for the cane they deliver to the mill based on:

- Quantity – tonnes of cane across the weighbridge
- CCS – relative CCS rather than actual CCS
- Sugar price – this can vary depending on a grower's marketing options

**Cane price ($/t) = Sugar price x 0.009 x (CCS – 4) + 0.662**

**Sugar price** - Net selling price of sugar ($/tonne sugar) driven by markets

**0.009** – Represents mill efficiency, based on industry standard sugar recovery rate of 90% i.e. that 90 t of sugar is recovered from each 100 t of CCS. Encourages the miller to maintain or better the 90% recovery rate standard

**(CCS – 4)** – Based on relative CCS. First 4 units of CCS go to the miller. Based on 2/3 of the revenue going to the grower and 1/3 to the miller (from a base of 12 CCS). Encourages growers to deliver high CCS cane.

**0.662** - A regionally specified amount agreed to in cane supply agreements. It can differ from mill area to mill area.

**How CCS influences the cane price**

Both the following examples are 17.4 tonnes sugar/ha, yet one is more valuable than the other to the grower (using a sugar price of $420/t and harvest and levies of $8/t).

| Cane Yield (t/ha) | CCS | $/t (from cane price formula) | $/ha ($/t x t/ha) | Harvesting & Levies ($/ha) | Net Return ($/ha) |
|---|---|---|---|---|---|
| 136 | 12.8 | $33.93 | $4614 | $1088 | $3526 |
| 110 | 15.8 | $45.26 | $4979 | $880 | $4099 |

It is important to understand how the weighting of tonnes of cane grown vs CCS influences how the cane price formula works. Through this understanding, farm management decisions can be tailored to suit each individual farm's potential to best maximise profitability.

While managing your crop for tonnes of cane is easier to control than CCS, there are some management practices that can influence CCS performance.

For example:

- Variety management – some varieties will always have inferior CCS to others
- Crop age – crops really need to be at least 12 months of age to maximise their CCS levels
- Dry down – needs to be appropriate for the soil type
- Nitrogen rates – one needs to be careful with N rates. Excessive N will tend to reduce CCS.
- The use of ripeners such as Moddus can be a useful tool to boost CCS levels, particularly in the first 6-8 weeks of the start of crushing on varieties such as Q208 and perhaps Q240. Varieties such as Q183 will usually not respond to Moddus applications.
- Cool weather with temperatures below 10$^{o}$ C will invariably boost subsequent CCS levels.

**HIGH PERFORMING BURDEKIN FARM PRACTICES**

At the mid 2019 shed meetings we showed some data of the highest yielding block of each of the top 4 varieties for each productivity group. This generated some interest and members requested further information. BPS staff followed up by interviewing those consistently high yielding growers who represented a range of farming systems and mill areas. While there is no secret recipe for growing high yielding cane, there were some common themes in their management approach.

These were:

- Timing of operations – particularly controlling weeds when they are very small, and irrigating when the crop needs it.
- Growers focused on fallow management, including weed control, rotation of herbicide groups and often broke the monoculture by planting legumes.
- They took an active approach to learning and gathering information. They asked the same questions to multiple people and experts to get a range of opinions, which then allowed the grower to make an informed decision.
- Regular use of clean seed cane to manage varieties and disease control
- Utilisation of levelling where required
- Targeted application of soil conditioners where needed (gypsum, mill mud etc.)
- Took regular soil tests and matched nutrients applied to 6 easy steps rates (all nutrients, not just nitrogen).
- Used a scheduling tool to manage irrigation, such as g-dots, tensiometers, IrrigWeb
- Often belonged to smaller harvesting groups possibly making harvesting practices more controllable (i.e. speed and use of modified chopper box).

**HERBICIDES AND SORGHUM CONTROL**

- In plant cane, consider using Pendimethalin (Stomp Xtra) over Metolachlor (Dual Gold) due to its improved control of sorghum, less likelihood of leaving the field in surface runoff, and lower toxicity to the aquatic environment.
- Isoxaflutole (Balance) and Imazapic (Flame) are both UV stable products for hard to control grasses such as guinea grass. Both products have specific attributes that should be discussed with your local agronomist.
- Flumioxazin (Valor) is a useful UV stable herbicide particularly for broadleaf weed control although at full rates should produce residual grass control. Ensure label conditions are followed as this active ingredient has potential for human health consequences.
- Amicarbazone (Amitron) has similar registration details to Flumioxazin. Both products need to be further tested under Burdekin furrow irrigated conditions.
- Speak to your local agronomist to know more about how these products could be used in your farming situation.

**REGULATIONS UPDATE (BURDEKIN SPECIFIC)**

We understand that growers have a lot of questions to clarify surrounding recent regulation changes. Please get in touch with your concerns so BPS can communicate these to the relevant parties and get the facts directly back to you. Below are some responses provided by Government staff to some of the commonly asked questions.

**1. Do growers in the Burdekin have to have a Green Cane Trash Blanket?**

- **No** the minimum standards do not mandate the implementation of a green cane trash blanket.

**2. Are growers in the Burdekin allowed to have a bare fallow?**

- **No**, all fallow blocks must have either a cover crop (which may include grass) established after harvest, or sugarcane trash in place… **however please read the next few points carefully**
- Bare fallow – the definition of fallow in the regulations is 6 months.
- If the ground is bare for less than 6 months then it is not considered a 'bare fallow' under the regulations.
- Most growers in the region will meet this standard by default. By either having a period of less than 6 months between crops (whether sugarcane, legumes or something else) or, if it is greater than 6 months, at some point there will be a flush of weeds after rain which will likely provide adequate cover.

**3. Has the method for calculation of N rates changed with the 'new regulations?'**

- **No**, the method has only undergone minor changes (for clarification), growers and advisors must still use the regulated method that has been in place for the last few years**.**

**4. Can I use the District Yield Potential of 180 t/ha as long as on any block on the farm has cut over 150 t/ha 3 times in the last 15 years?**

- **Yes.** If verifiable yield records, or other reasonable evidence, from the past 15 years show that blocks on your farm have produced yields higher than 150 tonnes of cane/ha in at least three (3) harvest periods (seasons), you may use the District Yield Potential of 180 t/ha.

**5. Do all growers in the Burdekin require a recycle pit?**

- **No**, the minimum standards do not mandate the implementation of specific measures.
- A recycle pit is just one example of an erosion and sediment control measure a grower may choose to take. Other examples are provided in the minimum standards

**6. Do I need to account for legume crops in my nitrogen budget? What if I harvest my legume crop, how much nitrogen do I put on then?**

- **No.** Nitrogen available from legumes is not regulated, so is not a requirement of the N&P Budget. If you wish to account for the N, perhaps to provide an off-set for higher N rates elsewhere, you should work with an agronomist to calculate any deductions due to the legume crop.

**What if I grow corn or rice and then want to grow cane. Do I have to make any deductions for nitrogen if I have applied nitrogen in those crops?**

- **No,** the intent is to recognise the nitrogen added or mineralised from the fallow period.
- Definition for fallow in the method is: "Fallow: an area of land that is typically used to grow sugarcane, and that is left with either grass/weedy cover, green manure, or a leguminous crop (i.e. crop or ground cover with low or no nitrogen demand) for a period of at least six (6) months". Therefore, crops such as rice and corn are not considered a fallow.

**Do I need to account for nitrates in water in my nitrogen budget?**

- **No.** You can if you wish, however this is not a requirement of the N&P Budget or the regulated method.

**7. Can I broadcast mill mud, or do I have to apply it in a band?**

- You may still use broadcast application methods for soil conditioners (also known as ameliorants or soil additives), including mill mud and mill ash.
- However, mill mud and mill mud/ash mixes can only be broadcast across the entire paddock if it is incorporated into the soil during the fallow period.
- At all other times, mill mud must be banded. NOTE: recent clarification from Qld Govt stated that mill mud can be banded in either the furrow or the row.

**Can I apply less than 100 t of mill mud on any paddock and not deduct any nitrogen or phosphorus from my fertiliser application?**

- That is correct, there are no changes to the existing method.

## YELLOW CANOPY SYNDROME (YSC)

Understanding YCS is an ongoing process and SRA are working hard to get the answers growers want. Surveys are being conducted in the Burdekin with the 2020 wet season expression and soil tests have been taken on blocks displaying symptoms. New pesticide trials have been implemented in the region in partnership with BPS and an update is planned for the next round of shed meetings.
At this stage it looks like YCS expression needs multiple factors:

- Insect vector
- Insect damage
- Environmental stressors (i.e. weather, water logging etc.)

There is a diagnostic field test available for YCS. Please get in touch with BPS if you suspect YSC expression in any of your blocks and would like to check. The test needs to be done before 8 in the morning.

## IMIDACLOPRID SURVEY

The Australian Pesticides and Veterinary Medicines Authority (APVMA) is currently reviewing the use of Imidacloprid. Given that the pesticide is currently the sugar industry's main line of defence against cane grubs, it is important that we take a proactive approach. Making sure that suSCon maxi Intel and Confidor are applied with the correct timing, depth, and placement can improve both the effectiveness and reduce off-site impacts. Industry (lead by SRA with assistance from BPS) have been surveying growers to understand the best way to optimise the use of imidacloprid and work towards safeguarding long term, effective cane grub control.

## DEMONSTRATION: Gypsum on sodic soils

Soil health is more than just the biological activity. Managing the physical properties of the soil is just as important. If you have soils that don't soak and are sodic, using an ameliorant such as gypsum/lime and cultivating strategically can be helpful.

We demonstrated this by comparing soakage of two containers of sodic soil (ESP = 11), one of which was treated with the equivalent of 5t/ha gypsum in the top 10cm and the other left un-ameliorated. The same volume of water was applied to each treatment at the same time and the effect on infiltration was monitored.

This shows that gypsum application can increase a sodic soil's ability to soak and have more water available for plant utilisation and growth. The right side of the container below had the gypsum applied, and the increased soakage is clearly evident after 30 minutes.

## SOIL AMELIORANTS - WHAT ARE THEY AND WHEN AND WHY DO WE USE THEM?

Soil ameliorants (or amendments) are products that we apply to soil to manage physical or chemical constraints like sodicity, soil crusting or poor water infiltration. The most commonly known ameliorants/amendments are: gypsum, lime, mill mud and ash, and composts.

**Definitions**

**Sodicity** – occurs when there is an excess of sodium ions attached to the clay particles. The sodium causes the chemical bonds to be weakened and the soil disperses.

**ESP** (exchangeable sodium percentage) – the measure of sodium ions relative to other positively charged ions in the soil. In sugarcane a soil with an ESP greater than 6% is considered sodic.

**Salinity** – is a measure of the total salts in a soil; not just the sodium salts

**Gypsum and lime**

Gypsum and lime are both calcium-based products. Typically, gypsum (calcium sulphate) is used to manage soil sodicity or to improve water infiltration. In acid soils lime (calcium carbonate) can also be used to manage sodicity. Lime may also be applied to correct a calcium deficiency or to raise soil pH to reduce the effects of aluminium toxicity in acid soils.

**Mill mud, mud-ash mixes, and composts**

Mill mud and mud-ash mixes and composts help to improve soil structure through the addition of organic matter. Mud and ash can contain large amounts of calcium, but because it is held in organic forms it needs to be broken down in the soil before it will be useful for overcoming issues such as sodicity.

Organic matter is a very important component of soil structure. It helps to bind soil particles together which improves structure and allows for better water infiltration. Organic matter also holds water, making more water available to the crop. Adding organic matter to soil has lots of flow on benefits, but these take time to be realised.

**Sodicity**

Gypsum and lime help to overcome soil sodicity by replacing the sodium in the soil with calcium. The sodium is then leached out of the root zone by rainfall or irrigation.

Soil has a net negative charge and acts like a magnet. Positive ions will be attracted and held, just like the negative and positive poles of a magnet will stick together. Negatively charged ions will be pushed away; in the same way that you can't get the negative ends of magnets to connect.

One way to think about sodicity and how calcium works is to imagine that our soil is like a brick wall. The bricks are the clay layers and the ions are between each row of bricks. In a sodic soil there are a lot of sodium ions. Sodium is a large ion, and this pushes the clay layers apart – like putting a basketball between the bricks. It also only has one positive charge; so it can only hold onto one brick. When the soil gets wet, the clay particles (bricks) get pushed apart and because the bonds between them are weak the wall collapses. In the field we see this as slumping and sealing of the soil.

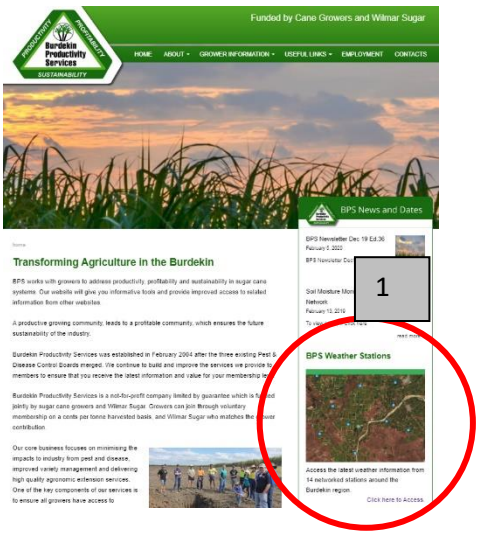
Calcium on the other hand is a small ion with two positive charges. Because it is small – a tennis ball to sodium's basketball – it can get between the layers and push the sodium out of the way, and each calcium ion will replace two sodium ones. Because it has two positive charges it can hold onto a brick from each layer. Now our wall has the bricks closer together and held more tightly so when it gets wet the wall doesn't collapse.

**What to use and when**

| Problem | Product | Reason |
|---|---|---|
| Sodicity | Gypsum | Gypsum is used to treat sodicity in both acid and alkaline soils. It is more soluble in water and therefore reacts and works more quickly to replace the sodium ions in the soil solution than lime does. Adding lime to high pH soils (8+) will have no effect. These soils often already contain lime but the soil chemistry causes it to precipitate i.e. it is not in the soil solution and available. Those small white nodules we often find in alkaline, clay soils are the precipitated lime.<br>Gypsum applications will need to be repeated each crop cycle because the calcium will gradually be leached out of the root zone with irrigation and rainfall. |
| | Lime | In acid soils, pH 6 or less, lime can be used. However, its lower solubility in water means it will be slower acting than gypsum. As with gypsum it will need to be repeated each crop cycle. |
| Poor water infiltration | Gypsum | Some of the light textured soils in the Burdekin are prone to surface crusting and poor water infiltration, especially when watered with river water or very low salinity bore water. Adding salt, in the form of higher EC water or gypsum, stops the soil particles from dispersing and improves infiltration.<br>Lime is not a salt and will have no effect on infiltration. |
| Nutritional problems caused by low soil pH e.g. aluminium toxicity | Lime | Lime increases soil pH in acid soils. Because some nutrients become toxic at low pH adding lime can overcome this toxicity. Lime applications will need to be repeated each crop cycle. As crops grow and are removed the soil will gradually revert and become more acid with time.<br>Gypsum has no effect on soil pH and so is not useful for managing acidity. |
| Calcium deficiency | Lime, gypsum, or other calcium sources | Calcium levels in Burdekin soils are well above the critical value and calcium deficiency isn't a problem. In other regions, especially high rainfall zones like the wet tropics, calcium deficiency can occur and can be treated by applying a calcium source e.g. lime, gypsum, dolomite, Calmag etc. |

## BPS WEATHER STATIONS

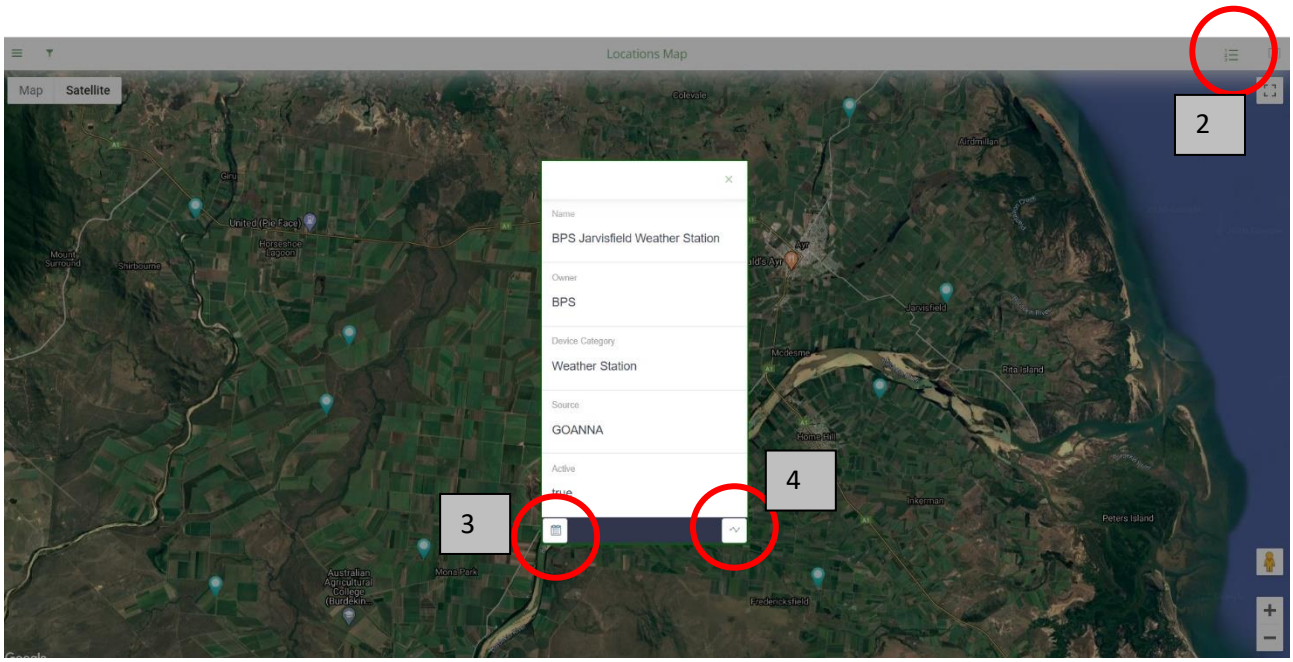
BPS has recently partnered with Goanna Ag to update the BPS weather station network. Fifteen (15) stations are now up and running and can be viewed via the BPS website. Just go to the BPS home page (www.bps.net.au) and click on the Weather Stations link (1) to bring up a map of the sites.

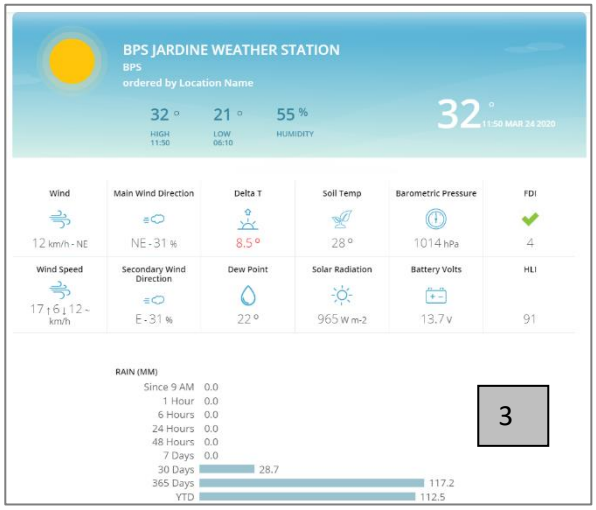



Click on the station that you want to look at, or click on the menu link in the top right-hand corner (2) to bring up a list of the stations. On mobile devices you may have to allow it to access your location to bring up the map successfully.

There are two options to view the station details:

- Click on the calendar on the bottom left to bring up a summary of the current information (3)
- Click on the button on the bottom right to select what you want to report on e.g. rainfall, and the timeframe e.g. the last 30 days (4)



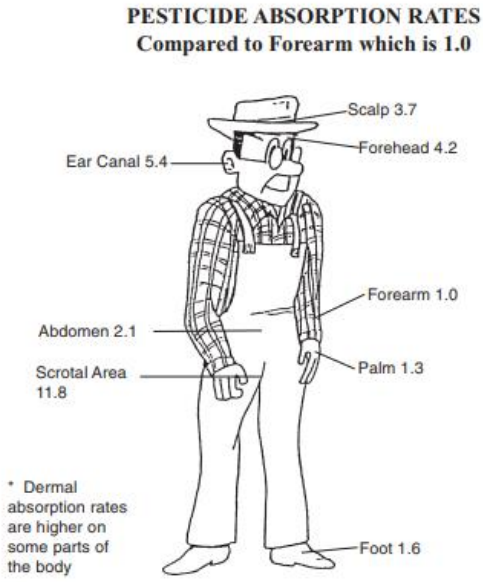

## CHEMICAL SAFETY AND RE-ENTRY PERIODS

This is an important topic which was recently discussed at shed meetings. We have complied a list of commonly used chemicals and their re-entry periods as a reference.

Agricultural chemicals are an important management tool and we need to be aware of the directions for use when using them. These directions are provided on the label. Reading the chemical label is the responsibility of the user, it is important not rely on others to tell you the instructions. Labels change from time to time and different companies sometimes have different comments on their labels. A label is considered a legal document and its directions need to be followed. It's also important to remember that not all products are registered for sugarcane, even if they have the same active constituent. Always read the label and check that sugarcane is a registered crop.

General chemical safety is important. When you are spraying consider the health of yourself, family and visitors who might be coming on the farm. There are some commonly used chemicals like Paraquat (e.g. Gramoxone) which is known for being highly dangerous if swallowed or splashed on skin/eyes. A less commonly talked about risk is that associated with working in the spray mist. Inhalation of spray mist is highly dangerous causing skin irritation and nose bleeds. Another product to be especially aware of is Flumioxazin (Valor), which is growing in popularity and it has a place in the chemical toolbox. However, it is important a from a human health perspective be aware that this chemical has a particular risk for young women and health implications to unborn children. It is critical to read the chemical label and to consider your family and visitors when you are planning to spray Flumioxazin (Valor).

There are many ways to absorb chemical into your body, please see the diagram below for reference. This diagram highlights the importance of wearing appropriate PPE when mixing and spraying.




Source: New South Wales Agriculture and Fisheries

A re-entry period back into a field that has been sprayed is a defined time period in which you are not to go into the field without protective clothing. If you need to enter a recently sprayed paddock check the label and ensure you are wearing the safety equipment that is listed on the label. This is to manage the risk of chemical exposure and keep people safe.

If anyone is coming onto the farm post spraying it is important to let them know what chemical/s you have used and when you applied, it. That way people can decide when it is suitable to enter the sprayed area.

**Re-entry period for common herbicides**

| Active Ingredient | Trade Names | Chemical Group | Re-entry period after spraying |
|---|---|---|---|
| 700 g/L 2,4-D | Amicide Advance 700 | I | Do not enter until the chemical has dried |
| 700 g/kg Amicarbazone | Amitron 700 WG | C | Not stated on label |
| 400 g/L Asulam | Asulox, Asulam, Rattler | R | Not stated on label |
| 900 g/kg Atrazine | Atrazine 900 WG, Nutrazine 900 DF, Atradex WG, Gesaprim | C | Do not enter until the chemical has dried |
| 750 g/Kg Isoxaflutole | Balance 750 WG, Tight-Rope | H | 12 hours |
| 200 g/L Glufosinate-ammonium | Basta | N | Do not enter until the chemical has dried |
| 224 g/L Acifluorfen | Blazer, Ardeo | G | Not stated on label |
| 125 g/L Hexazinone + 25 g/L Imazapic | Bobcat i-maxx | B C | Not stated on label |
| 720 g/L MSMA | Daconate 720 Herbicide | Z | Not stated on label |
| 900 g/Kg Diuron | Diuron 900 WG, Diurex | C | Not stated on label |
| 960 g/L S-Metolachlor | Dual Gold, Left Hook 960 | K | Do not enter until the chemical has dried |
| 250 g/L Paraquat | Gramoxone 250, Nuquat, Paraquat, BOA | L | Not stated on label |
| 750 g/L MCPA | MCPA 750 | I | Not stated on label |
| 750 g/kg Metribuzin | Metribuzin 750 WG | | 72 hours |
| 200 g/L Diquat | Reglone | L | Not stated on label |
| 540 g/L Glyphosate | Roundup PowerMAX | M | Not stated on label |
| 240 g/L Imazapic | Spark, Flame, Blaze | B | 12 hours, when mixed with Pendimethalin |
| 700 g/kg Imazethapyr | Spinnaker 700 WDG Herbicide | B | Not stated on label |
| 135 g/L Paraquat + 115 g/L Diaquat | Spray.Seed 250, Revolver | L | Avoid contacting vegetation wet with spray,but if necessary to do so, wear water proof footwear and waterproof protective clothing. |
| 333 g/L Fluroxypyr, 400 g/L Fluroxypyr | Starane Advanced, Comet 400, Fireball 400 | I | Not stated on label |
| 455 g/L Pendimethalin | STOMP XTRA | D | 12 hours |
| 500 g/kg Flumioxazin | Valor 500 WG | G | 6 days |
| 520 g/L Haloxyfop | Verdict 520, Haloxyfop 520 | A | Not stated on label |

**Re-entry period for common insecticides**

| Active Ingredient | Trade Names | Chemical Group | Re-entry period after spraying |
|---|---|---|---|
| 27.5 g/L Deltamethrin | Decis Options, Ballistic Elite | 3A | Do not enter until the chemical has dried |
| 150 g/L Indoxacarb | Steward EC Insecticide | 22A | Do not enter until the chemical has dried |
| 350 g/kg Chlorantraniliprole | Altacor Insecticide | 28 | |
| 250 g/L Bifenthrin | Talstar 250 EC | 3A | Do not enter until the chemical has dried |
| 225 g/L Methomyl | Lannate-L, Electra 225 | 1A | Do not allow entry into treated areas for at least 24 hours after treatment. |
| 200 g/L Clothianidin | Shield Systemic insecticide | 4A | |

## EXPRESSION OF INTEREST – HARVESTING BROCK RD. PLOT

BPS is calling for any interested parties to submit an application to provide harvesting services at the Brock Rd Plot for the 2020 planting season.

The harvester supplied must be primarily dedicated to the plot activities. It must be of appropriate quality to produce billets suitable for billet planting of sugar cane. An experienced driver must be supplied on an at-call basis from Monday to Friday, with occasional week-end work also expected, during the planting season (April-September) depending on demand.

Remuneration for harvesting at the plot is $30 ex-GST per tonne of cane delivered over the weighbridge. It must be noted the price is such to compensate the operator for considerable down time that may occur between loads of seed cane being harvested. The price should not be compared to commercial sugar cane harvesting.

The successful applicant must provide certificates of currency for Workcover and Public Liability Insurance that extend to 30th September, 2020 or beyond. BPS will provide advice and conduct Workplace Health & Safety instruction to the successful applicant.

For further information, contact Mark Rickards at BPS on 0427 834800 or email mrickards@bps.net.au

## STAFF CONTACTS

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