ISSUE 23 – SEPTEMBER 2016

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

This issue contains:

VARIETY TRIAL FIELD WALK

Come and have a look at SRA8 and the experimental variety KQ08-2180 (cross between Tellus and Q208 and find out how SRA8 has performed in recent trials.

Where: Michael Marson's farm, end of Cadio Road (off Barratta Rd)
When: Friday October 7 @ 8.30 am

Everyone welcome

STAFF UPDATE

JULIAN MITCHELL

The management, board and staff of BPS welcome Julian Mitchell as the latest recruit to the business. Julian has accepted the role of Trainee Field Officer for the Inkerman mill area.

Julian fits the role very well after growing up and completing his schooling in Home Hill, prior to completing a trade as a fitter/welder at NQ Hard Facing. He then progressed to owning his own mobile boiler making business before becoming a harvesting contractor in 2008. During the last 3 years, he has operated his own sugar cane farm in Jarvisfield as well as managing an adjacent rice growing facility.

Being self-employed for many years has enabled Julian to develop excellent organisational skills such as time management, communication, and prioritisation of tasks. His familiarity with the Inkerman area and many of its growers is also an advantage. Prior harvesting and cane growing experience will also prove very beneficial to his field officer duties.

As Ray Hildebrandt is currently on 6 months long service leave, Julian can be contacted on mobile phone number 0427 630 086. Inkerman growers are encouraged to call Julian for any advice on any farm related productivity matter. As a trainee, he will ensure that another experienced field officer or agronomist on staff, assists with the enquiry if he is unable to finalise the matter himself.

ASHLEY WHEELER

Ashley Wheeler is the new Pioneer Field Officer, taking over from Kristine Patti. Ashley will already be a familiar face to many Pioneer growers as she has spent the last two years assisting Dave Paine, and the other field officers. Ashley has gained a lot of experience in variety management over the last two years, and has almost completed her Diploma of Agriculture.

Pioneer growers are encouraged to contact Ashley on 0407 960 057.

CROP DATA COLLECTION

Crop data collection is an important activity for BPS field officers as they record details such as rows planted, varietal mix, crop classes, fertiliser rates, pest/disease damage, fallow management and more, on every block of approximately 98% of farms throughout the Burdekin district. This equates to information held on over 10 000 blocks of cane and fallow. Once the data is collected, it has to be recorded on our central computer storage system for future reference.

Our officers will be making contact with BPS members in the coming months to arrange a time to visit your property to discuss operational matters, verify farm map information and gather crop data. This is an ideal time for members to ask questions about how BPS can assist them with any part of their farming operation. There are many services that BPS offer members and most of them are included in the levy paid so there is no extra charge to members. A list of these services can be found on page 11 of this edition.

UPDATE FROM THE PLOTS

All Mother plots, distribution plots and isolation plots for the 2017 season have now been planted. It has been a busy 2 months for staff as cane has been cut, stripped, loaded onto crates, hot/cold water treated, transported and planted.

There are now 13 plots in the Burdekin district under the control of BPS. Below is a chart depicting plot locations and varietal mix. Please note that KQ08-2180 has not been released for distribution to growers yet, but has been planted in Mother plots in anticipation of release for distribution in 2018.

New variety SRA8 will be available to growers from next season onwards. For performance qualities of variety SRA8, please refer to the information sheet on the next page and other trial data in this publication.

All 2016 distribution plots are now closed for the year.

Plot Plantings for 2017 Season

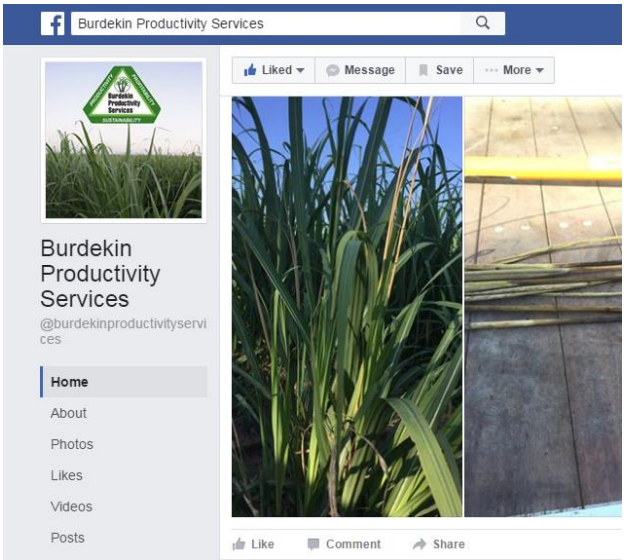
Mill Area	Plot	Variety								
		KQ08-2180	KQ228	Q183	Q208	Q232	Q240	Q252	Q253	SRA8
Inkerman	Klaka Rd DP		X	X	X	X	X	X	X	
	Klaka Rd MP	X	X	X	X	X	X	X	X	X
	Swindley DP									X
Invicta	Giru DP			X	X	X	X			X
	Brock Rd DP			X	X	X	X			X
	Brock Rd MP	X	X	X	X	X	X			X
	Rapisarda DP		X	X	X	X	X		X	X
	Rapisarda MP	X	X	X	X	X	X			X
	Millaroo DP		X	X	X	X	X			X
Pioneer & Kalamia	Whitson DP		X	X	X	X	X			X
	Whitson MP	X	X	X			X			X
	Duncan MP	X		X	X	X		X	X	
	Christensen IP	X								

DP – Distribution plot; MP – Mother plot; IP – Isolation plot

WE'RE ON FACEBOOK

BPS now has a social media presence with our own Facebook page.

Just search for Burdekin Productivity Services and "like" the page to be kept up to date with BPS activities, industry events and other relevant information.



QCANESelect™ variety selection made easy

SRA8

Burdekin

Variety	SRA8
PARENTAGE	QA93-2768 x QA94-6003
SEEDLING CODE	QA01-5267
SMUT INFORMATION	INTERMEDIATE
APPEARANCE	Green stalk, turning yellow when exposed to the sun. Heavy wax on the stalks. Turns more yellow when exposed to the sun. Narrow leaves. Stool has erect nature.
FEATURES/COMMENTS	SRA8 has high CCS with average tonnes in both FAT and BPS strip trials. During the 2015/2016 season, smut was observed. SRA8 appears to be quite brittle.
HARVESTING TIME	Early, Mid, Late
SUITED SOILS	
SEASONAL SUGAR -	
EARLY	Good
MID	Good
LATE	Good
PRODUCTIVITY -	
YIELD	Moderate
CCS	High
FAST AND RELIABLE GERMINATION	Average
HARSH CONDITIONS	Unknown
LODGING TOLERANCE	Unknown
TRASH YIELD	Unknown
REACTION TO STRESS -	
WATERLOGGING	Unknown
FLOOD	Unknown
WIND	Average
DISEASE REACTION -	
RESISTANT	Brown Rust, Fiji Leaf Gall, Leaf Scald, Red Rot
INTERMEDIATE	Smut
INTERMEDIATE - SUSCEPTIBLE	Pachymetra
SUSCEPTIBLE	RSD
UNKNOWN	Chlorotic Streak, Lesion Nematode, Orange Rust, Root Knot Nematode, Striate Mosaic, Yellow Leaf Virus
CANE GRUB TOLERANCE	Unknown
HERBICIDE REACTION	There have been early reports that yellowing has occurred when ametryn was applied.
CROP MANAGEMENT PRACTICES	SRA8 appears to be brittle-take care when cultivating and hilling-up.

This information has been compiled using limited data for SRA8

VARIETY TRIAL RESULTS

All of the variety trials that were planted in 2014 have now been harvested, providing us with plant and first ratoon data on the performance of the new variety SRA8. So far only one of the sites established in 2013 has been harvested. The results from all the trials planted in 2013 will be published in the December newsletter.

2016 First ratoon results

SRA8 is a new variety that will be available from BPS plots in 2017. It is described as having high CCS with average tonnes. In both the plant and ratoon crops it had the highest CCS at both the Mulgrave and Airville sites and was the second highest CCS at Osborne behind KQ228. This year it also had the highest tonnes of sugar/hectare at Mulgrave and Airville. At the Osborne site it was the lowest yielding variety in the trial, and despite the good CCS it had the second lowest tonnes of sugar.

QA04-1448 is also in this series of trials. This variety has been shown to have high tonnes with average to low CCS. A decision on whether to continue with QA04-1448 will be made in 2017.

Table 1 First ratoon harvest results all sites

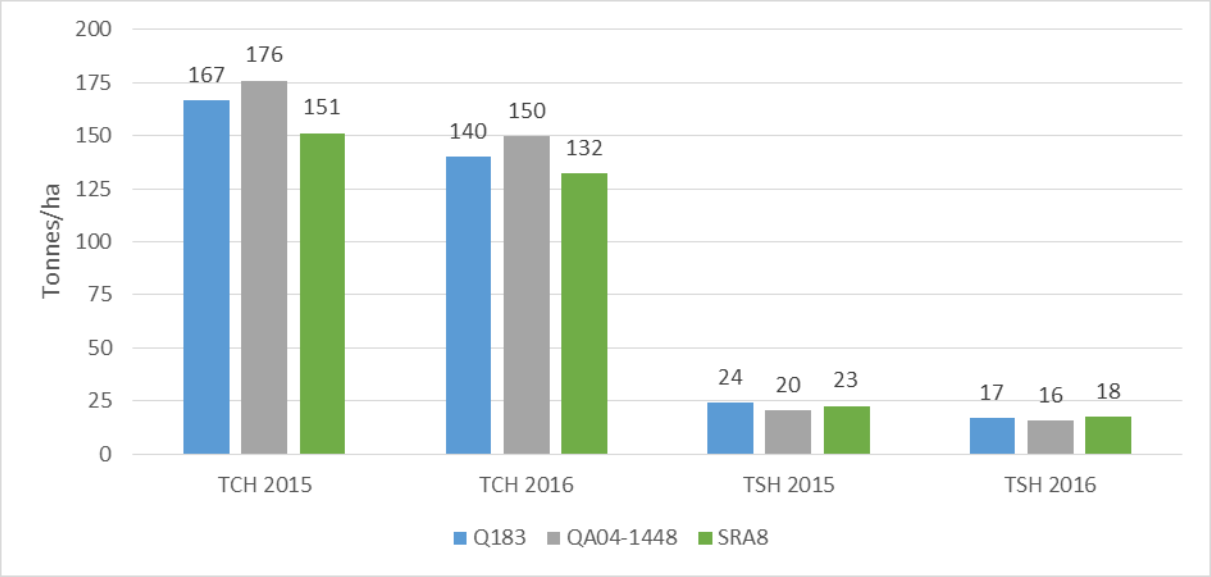
Variety	Tonnes cane/ha			CCS			Tonnes sugar/ha		
	Mulgrave	Osborne	Airville	Mulgrave	Osborne	Airville	Mulgrave	Osborne	Airville
KQ228		208			12.9			27	
Q183	140		137	12.1		15.5	17		21
Q208		145			10.9			16	
Q240		162			11.3			18	
QA04-1448	150	169	146	10.6	10.6	13.2	16	18	19
SRA8	132	136	149	13.3	12.4	15.6	18	17	23

Mulgrave

Planted: 13/5/2014
Plant cane harvest: 2/8/2015
1st Ratoon harvest: 11/6/2016

Variety	Tonnes cane/ha		CCS		Tonnes sugar/ha	
	2015	2016	2015	2016	2015	2016
Q183	167	140	14.6	12.1	24	17
QA04-1448	176	150	11.5	10.6	20	16
SRA8	151	132	14.9	13.3	23	18

At this site QA04-1448 has been the highest yielding variety in both years, but due to its low CCS it has also had the lowest tonnes of sugar in both years. SRA8 has had the lowest cane yield but the best CCS both years.

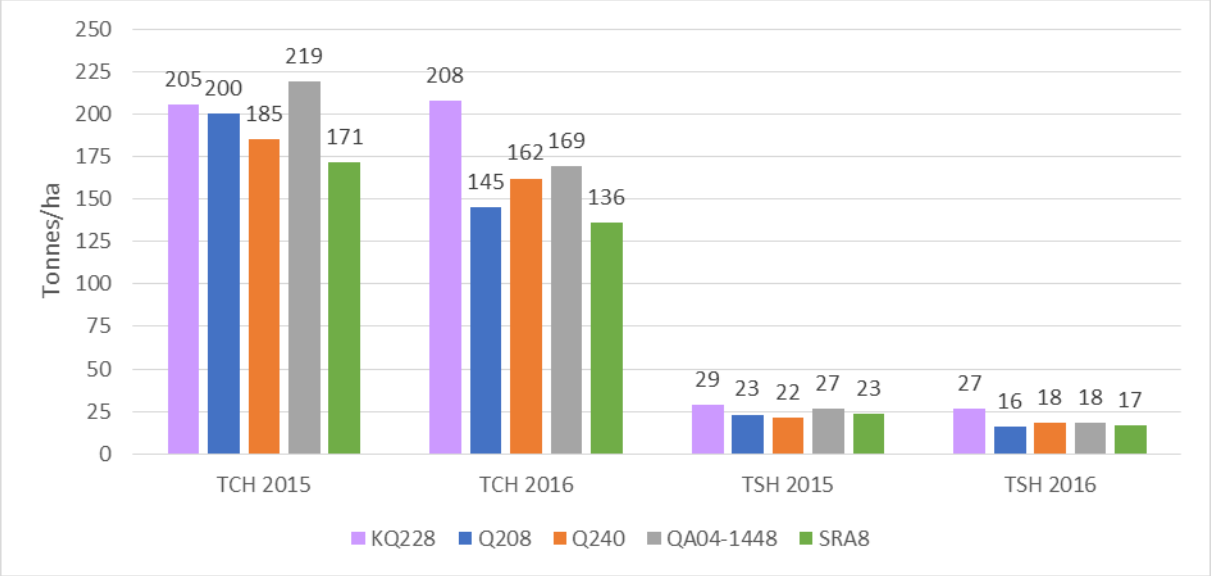


Osborne

Planted: 5/5/2014
Plant cane harvest: 6/8/2015
1st Ratoon harvest: 8/8/2016

Variety	Tonnes cane/ha		CCS		Tonnes sugar/ha	
	2015	2016	2015	2016	2015	2016
KQ228	205	208	14.0	12.9	29	27
Q208	200	145	11.6	10.9	23	16
Q240	185	162	11.6	11.3	22	18
QA04-1448	219	169	12.1	10.6	27	18
SRA8	171	136	13.6	12.4	23	17

At this site KQ228 has been the best performer in both years with excellent tonnes and CCS. Both years were harvested early in the season and this is reflected in the CCS for Q208. SRA8 has not done as well on this site as it has at the other two sites.

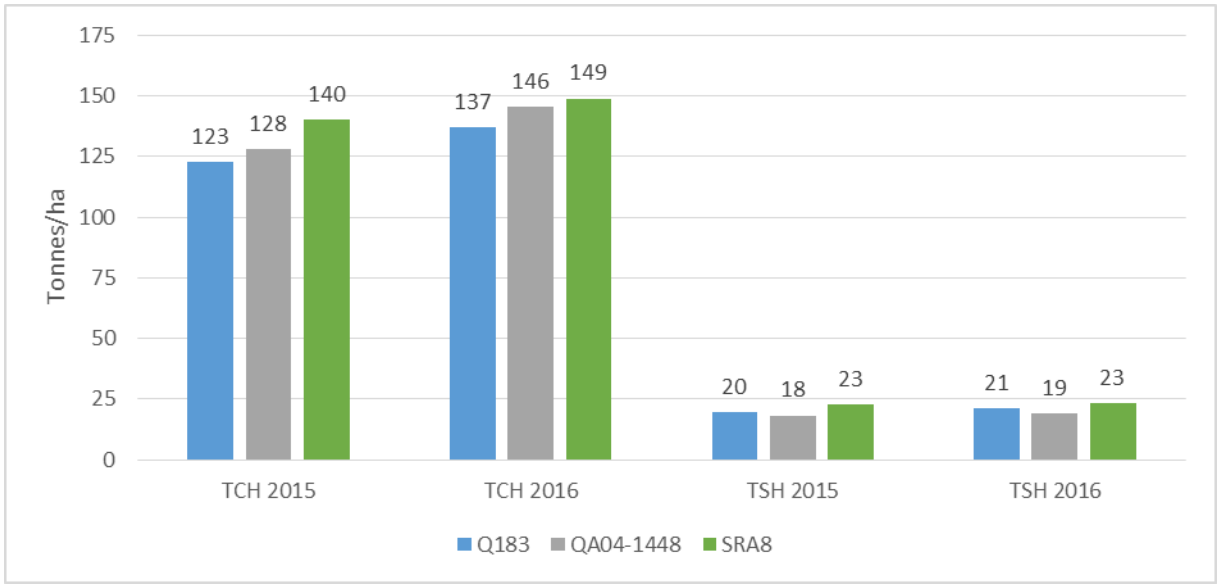


Airville

Planted: September 2014
Plant cane harvest: 3/10/2015
1st Ratoon harvest: 17/9/2016

Variety	Tonnes cane/ha		CCS		Tonnes sugar/ha	
	2015	2016	2015	2016	2015	2016
Q183	123	137	16.1	15.5	20	21
QA04-1448	128	146	14.3	13.2	18	19
SRA8	140	149	16.4	15.6	23	23

SRA8 has been the best performing variety at this site in both the plant and ratoon crops. When the trial was planted there was a limited amount of QA04-1448 available and the plant stand for this variety is patchy and this has probably affected yields. The Q183 yield is probably not representative. In both seasons the overall result has been depressed by one replicate being much lower yielding than the other. The overall block average for Q183 in 2016 was 143 t/ha.



SMARTCANE BMP ACCREDITATION GOES ON-FARM

As of last week the Burdekin has its very first farm accredited via an on-farm audit. Burdekin BMP facilitator Terry Granshaw was approached by local sugarcane grower Tom Pontarelli to help gather his records together so that the property could become BMP accredited. Over a time period of three months, Terry and Tom gathered all the information that was needed for an independent auditor to come onto Tom's farm and complete the accreditation. The auditor had a good understanding of how the Burdekin sugar industry worked and completed the audit in three hours; including a farm tour and scrupulously looking over Tom's records. The auditor had a great attitude and listened as Tom explained his unique rotation of horticulture and sugarcane, and how the farm was evolving over time.

Previously, Smartcane BMP registration, self-assessment and accreditation were all processed on-line via the Smartcane BMP webpage. To gain accreditation, the facilitator and the grower gathered the required documents together and the facilitator uploaded the appropriate documents to the questions that the grower had answered in the self-assessment. This was then audited remotely by an independent auditor from an area outside the Burdekin. The Smartcane BMP team and the auditors recognised that this system was very time consuming and at times it was hard for an auditor to interpret a particular grower's farming system.

Registration and self-assessment are now completed either one on one or in a small group of up to ten growers at the BPS office. This not only streamlines the process but creates excellent interaction between the growers. For growers who want to continue through to accreditation, the new system involves an independent on farm audit. This means an auditor who is employed by industry spends 2 - 3 hours on farm with the facilitator and the grower; understanding how the farm operates and being able to correlate the relevant documents to the actual farm. This also gives the grower the opportunity to explain his or her system to the auditor and show them actual practice on farm. Prior to the audit the Smartcane BMP facilitator will make sure that the grower has all the records that are needed on hand so that the auditor can efficiently check the appropriate documents.

WHAT YOU NEED FOR ACCREDITATION

- Current (this crop) soil tests and recommendations for plant cane and the previous year (ratoon).
- 12 months of fertiliser application records and dates applied.
- 12 months of irrigation records, dates and amounts applied.
- 12 months or more of herbicide and insecticide application records.
- There are several other records required to gain accreditation in the three core modules that your local BMP facilitator will help you to acquire.

For more information please don't hesitate to call Terry Granshaw on 0437 553 149.

Above: Recently BMP accredited local grower Tom Pontarelli with Burdekin BMP facilitator Terry Granshaw

CALIBRATING FERTILISER APPLICATION EQUIPMENT

It is extremely important to ensure that your fertiliser application equipment is regularly calibrated, regardless of whether it uses a mechanical drive or an electronic rate controller. Calibrating equipment ensures that the correct rate is being applied and it should be the first step before beginning fertiliser application for the year, and at any change in fertiliser blend during the year. Different blends flow at different rates depending on their constituents which is why a calibration should be done for each blend used.

The calibration process will also identify any problems with the evenness of application from the fertiliser box. It is not uncommon to find that some chutes will be applying more fertiliser than others. If there is a large difference in the amounts being applied between chutes, the box will need to be repaired.

Calibrating a fertiliser box is a relatively quick and simple procedure, but the process is different for mechanically driven boxes (using sprockets and chains or a simple hydraulic lever) and those using an electronic rate controller.

Mechanical drive

Mechanically driven boxes require the machine to be calibrated in the field, simply turning the wheel on the headland will not give an accurate result. With the box operating, fertiliser is collected from each chute over a measured distance which will vary depending on row spacing (see table). The fertiliser is then weighed (in kilograms); also weigh each chute separately to identify any large differences. If the application is reasonably consistent add all the weights together and divide by the number of rows being fertilised. This will give an application rate in bags per acre. Multiply the kg weight by 125 to get kg/ha and compare the actual application rate to the desired rate. If the amount being applied is too high or too low, one or both sprockets will need to be changed. After the sprockets have been changed the calibration needs to be repeated. For more information see the 'Calibrating your fertiliser box' fact sheet on the BPS website under Grower Tools.

Distance to travel for calibration

Row spacing (m)	Imperial spacing (ft, in)	Metres to travel
1.52	5' 0"	53
1.57	5' 2"	51
1.60	5' 3"	51
1.63	5' 4"	50
1.83	6' 0"	45

Electronic rate controller

Just like mechanically driven boxes, those with rate controllers also need to be calibrated. The most common mistake that is encountered is not entering the densities of different products. Using the wrong product density can result in application rates that are 20-30% different to that being displayed on the screen in the cab.

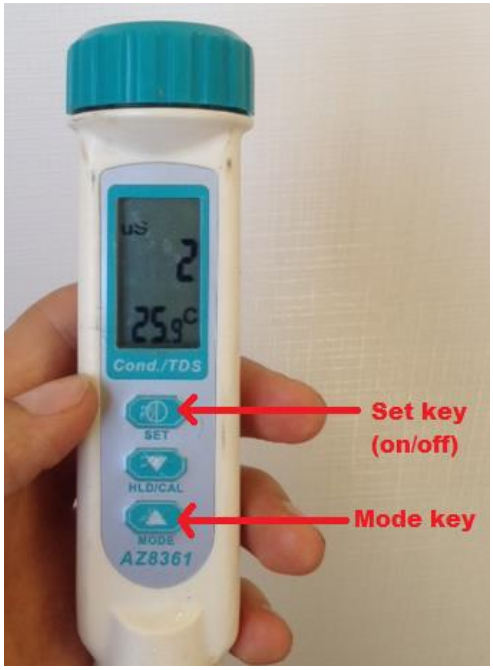
Unlike mechanical drives, rate controllers can be calibrated while the machine is stationary. The first step is determining the product density. This is simply weighing a known volume (e.g. 5L) to get kg/L. Then place some buckets under the chutes and find the calibrate screen in your controller. Enter the product (for ease of future applications) and product density, a weight of fertiliser to catch (this tells the controller how long to run for the calibration; e.g. for a 3 row stool splitter enter 9 kg) the swath width and the normal fertilising speed. Press the calibrate button; collect the fertiliser from each chute and weigh it; again this gives you the opportunity to assess the evenness of application across the box. Enter the total weight collected into the weight caught box in the controller, the controller can now compare the nominated amount (e.g. 9 kg) with the actual amount. Finally rerun the calibration and the amount being caught should be exactly the nominated amount.

GPS units that are connected to a rate controller are an excellent way of keeping fertiliser application records to meet your obligations under the Reef Protection legislation and for your own benefit, however the records will only be accurate if equipment is correctly calibrated.

Members who are unsure of how to correctly calibrate their fertiliser application equipment should contact their field officer for assistance. This service is provided from levies paid.

HOW TO USE YOUR EC METER

There is value in routinely checking the quality of your irrigation water, particularly if you use an underground source. Complete water tests are still available at a subsidised cost of $30+GST per sample, capped at two per grower. If you are interested in checking the salt content, BPS staff are able to do this for you. If you have an EC meter of your own, the instructions below are a reminder of how to use your EC meter to check the conductivity of your water.



Each model of meter may vary slightly but generally to use your EC meter:

1. Press the set key or on/off button to turn on
2. Remove the cap from the bottom of the meter by pulling it downwards
3. Press the mode key to select the conductivity setting which will be displaying either µS/cm or mS/cm
4. Once the display has settled, place the probe (bottom of the uncapped meter) into your water sample
5. Once the display settles, the reading on the screen is the measure of electrical conductivity – note what units the meter is reading in, some meters will change the units from µS/cm to mS/cm in salty water
6. Rinse the probe with clean water, push the cap back on and press the set key to turn the meter off
7. Refer to the table for unit conversions and irrigation suitability

Suitability for Irrigation	mS/cm	dS/m	µS/cm	ppm	Grains/gallon
Good to fair	0.2	0.2	200	134	8
	0.6	0.6	600	402	24
	0.8	0.8	800	536	32
	1.0	1.0	1000	670	40
	1.2	1.2	1200	804	48
Fair to poor	1.4	1.4	1400	938	56
***If using for irrigation, consider**	1.6	1.6	1600	1072	64
mixing or alternating irrigations	1.8	1.8	1800	1206	72
with a lower EC water source	2.0	2.0	2000	1340	80
	2.2	2.2	2200	1474	88
Very poor to extremely poor	> 2.4	2.4	2400	1608	96

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 through the 7c/tonne levy or from external funding, and indicates whether there are any additional costs involved or subsidies available.

	Service	No additional cost	Additional cost	Subsidy available
Pests and Diseases	Seed cane sales		Yes	
	Plant source inspections	Yes		
	Crop inspections	Yes		
	Itch grass rogueing	Yes		
	Pig shooting subsidy			Yes
	Weed and pest inspections and identification	Yes		
	Herbicide and insecticide recommendations	Yes		
	RSD testing	Yes		
	Nematode and Pachymetra testing		Yes	
	Cane grub management and planning	Yes		
	Machinery inspections	Yes		
	Machinery sterilisation	Yes		
	Hot water treatment of grower's cane		Yes	
Productivity	Agronomic advice	Yes		
	Variety advice and planning assistance	Yes		
	Planting advice	Yes		
	Equipment calibrations – fertiliser box and spray rigs	Yes		
	One-on-one advice	Yes		
Nutrition	Soil testing: Sample collection, analysis and recommendation		Yes	
	Soil test interpretation	Yes		
	Nutrient management plans	Yes		
	Leaf testing: sample collection and recommendations		Yes	
Irrigation	Pump flow testing	Yes		
	Water testing: quick EC (salt) and nitrate tests	Yes		
	Water testing: full analysis		Yes	Yes
	Scheduling advice	Yes		
	IrrigWeb (online scheduling tool) access	Yes		
	Irrigation assessments and planning	Yes		
	G-Dots – supply and install		Yes	Yes
	Assistance with stalk growth measurements to calibrate scheduling tools	Yes		
	Access to online soil moisture monitoring probes and weather data	Yes		
Soil Health	Whole of farm system planning	Yes		
	Fallow management advice	Yes		
	Legume cropping support	Yes		
	Mill mud, gypsum and lime application advice	Yes		
BMP Smartcane	Self-assessment	Yes		
	On farm support to achieve Accreditation	Yes		
	Training	Yes		
	Record keeping advice	Yes		

STALK GROWTH MEASUREMENTS

Stalk growth measurements are used to calibrate irrigation scheduling tools, such as G-dots and minipans. Growth measurements document the decline in crop growth as the soil dries out to determine when the crop needs irrigating. Stalk growth measurements can begin once the crop reaches full canopy and starts making cane.

Following an irrigation the crop will grow rapidly, then, gradually, the daily growth rate will decline as water becomes less available. The crop needs irrigating (irrigation trigger point occurs) when the daily growth drops to 50% of the maximum growth for two days in a row under normal weather conditions. The trigger point for irrigation is then linked to the reading given by your chosen irrigation scheduling tool at that time (for example, 'x' lights on a G-Dot, 'x' level in a minipan or 'x' kPa on a tensiometer). Once this is known, growth measurements can be discontinued and the tool can be used to determine when to irrigate.

The BPS website has more information on how to set up and take growth measurements as well as an excel spreadsheet for recording the measurements. Go to www.bps.net.au, click on Grower Tools on the left hand side and look under the Irrigation Tools and Calculators heading.

BPS staff can also help with setting up growth measurements and provide assistance with determining the irrigation trigger point. Contact the extension team for more information or assistance.

STAFF CONTACTS

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