Burdekin Productivity Services

PRODUCTIVITY PROFITABILITY SUSTAINABILITY

Funded by Burdekin Canegrowers and Wilmar Sugar

Grower Update

ISSUE 15 – SEPTEMBER 2014

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

<u>This issue contains</u>:

STAFF CHANGES

Marian Davis – We are pleased to welcome our new extension agronomist, Marian Davis, who joined the team in July of this year. She brings a wealth of experience to BPS, having worked in the cane industry with SRA for eight years. Previous to that, Marian practiced agronomy in the cotton industry.

Joe Savorgnan – BPS has lost a dedicated employee in Joe, who has decided to move on after more than 2 years of service. Joe will be missed as he brought a wealth of farming experience with him.

Ashley Wheeler – Ashley is the replacement for Joe's position. Her role will include being trained for field officer duties, coupled with assisting in field trials and other project work. She is passionate about agriculture, has a great deal of enthusiasm and is a very good communicator. Ashley has been working in the sugar cane industry and is enrolled in an agricultural course at present. We will be encouraging her to undertake a diploma in agriculture.

BPS ACTIVITIES

Since the May edition, staff have been heavily involved in seed cane distribution as well as hot water treatment of plant cane for the 2015 mother plots and distribution plots in all mill areas.

Many of our members have taken advantage of our plant source inspection service, with over 150 individual PSI's conducted during this period. Plant source inspections are conducted by BPS as a free service for members. It is imperative to source and propagate disease free cane.

UPATE FROM THE PLOTS

As the planting season wraps up for the year, we would like to thank all growers who have opted to source clean seed cane and commercial cane (1st ratoon) from the various plots. There have been record sales this year, which should exceed 6000 tonnes in total by the end of the season. Last year we sold just over 4600 tonnes. This is more than a 30% increase!! Well done to the staff and a big thank you to the plot owners and managers who have done a fantastic job. Our appreciation also goes to the many contractors who have cut, delivered and planted this season.

Seed Cane Sales (tonnes) to 31st August, 2014

	Inkerman	P & K	Invicta
Plant	1281	1851	1695
1 Ratoon	363	544	5
Total	**1644**	**2395**	**1700**

The best selling varieties so far have been Q240Φ, Q252Φ, KQ228Φ, Q183Φ & Q208Φ. We expect to continue selling cane through to the end of September. If members have any last minute orders, please contact your mill area field officer.

Field officers:

Invicta	–	**Wayne Squires**	0427 372 124
Pioneer	–	**Kristine Patti**	0407 167 159
Kalamia	–	**Dave Paine**	0427 167 159
Inkerman	–	**Ray Hildebrandt**	0409 831 863

AGM

The BPS Annual General Meeting was held at the Burdekin Delta Cinemas on Tuesday night of the 26th August, 2014. The evening commenced with an informative address by Chairman Chris Hesp, during which he outlined the newly adopted strategic plan for the company going forward from 2015 to 2017 inclusive. This was followed by reports from Manager Rob Milla and Commercial Manager Mark Rickards. The evening concluded with an extensive update by SRA research agronomist Davey Olsen, on the progress to date and future plans for the YCS project. The evening's presentation can be viewed on the BPS website by clicking the '**BPS News**' tab and going to '**BPS Presentation AGM 2013-2014**'. There is a lot of important information included in this presentation and members are encouraged to log on and read it.

Soldier Fly

Soldier flies were recently found in the Jarvisfield area. This is a new site though small areas were already known to exist in Jarvisfield and Rita Island.

Soldier flies are a native species that normally live in grasslands. In cane they can cause severe damage in localised areas. The larvae feed on the roots which affects the crop's ability to access water and nutrients. The adult flies do not cause crop damage.

Ratoon cane is most often affected, and poor ratooning is one of the symptoms of a soldier fly infestation.

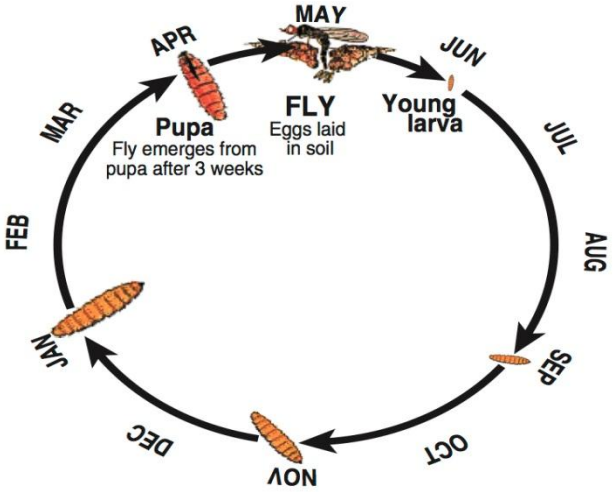
The adult flies emerge from June to July, mate, and lay eggs that hatch within 1-3 weeks. The larvae are white to brown in colour with a tough segmented body that tapers at each end and a row of small black hairs on each segment. They are about 1 mm long at hatching and 12 mm when fully grown. Larvae live under the stool, usually within 150mm of the surface, and are present all year but are easiest to find from September onwards when they are bigger.

No insecticide is registered for control of soldier fly and management relies greatly on maintaining natural predators and fungal diseases. This is best achieved by:

- minimising cultivation which has limited impact on the soldier flies but badly disrupts natural predators, and
- not ploughing out and replanting – a grass free break will eventually starve out the larvae

Other management options include planting cane after the flies have emerged – the females are less likely to lay their eggs if there is no cane or grass nearby - growing varieties with strong root systems that will ratoon quickly, and harvesting plant and early ratoon crops early when conditions are better for rapid ratooning.

Soldier fly larvae



Lifecycle of the soldier fly

For more information see the SRA Information Sheet IS13075 – Soldier fly which is available through the BPS or SRA websites

Poor ratooning caused by soldier fly

RWUE - RURAL WATER USE EFFICIENCY INITIATIVE - IRRIGATION FUTURES

The latest rural water use efficiency (RWUE) project Irrigation Futures commenced earlier this year. Canegrowers were successful in securing funding for irrigation improvements in the sugar industry.

The Burdekin has been allocated the largest proportion of this funding. This is a recognition of the size of the local industry and of the issues facing us with respect to rising groundwater. The RWUE-IF project will build on the progress that was made in reducing deep drainage losses under the last RWUE program that finished in May 2013.

RWUE-IF is focussed on minimising the effects of rising groundwater through improved irrigation management and strategic dewatering. The project is specifically targeting the BRIA because this is where the greatest rises in groundwater have been seen.

The RWUE-IF project has three activity areas:

- Incentives to assist growers in the BRIA to implement improved irrigation practices that will reduce deep drainage losses
- Installation of dewatering bores in strategically located areas of the BRIA
- Provision of extension advice to all Burdekin growers.

Progress so far:

- Five dewatering bores have been commissioned in the Mulgrave district in conjunction with the MAFIA group. Each of these bores has three observation bores located close by; a meter to record water use; and data loggers measuring changes in conductivity (salt levels) and water levels in the observation bores.
- Four growers have received funding to make changes to their irrigation systems and management. A number of other growers are in the process of completing applications.

For more information on the RWUE program or for an application form please contact Marian Davis on 0428 927 079 or drop into the BPS office on Old Clare Road.

HARVESTING SPEED PROJECT

At shed meetings in late 2013, growers identified harvesting speed as one of the main constraints to production. Previous harvesting research has identified that stool damage from the basecutters increases once harvesters are travelling at more than about 7km/h. Therefore harvesting best practice suggests that harvester forward speed should be less than 8 km/h.

In June BPS successfully applied to SRA for funding to run a series of harvester speed trials. These trials will assess the impact of harvester forward speed on ratooning and subsequent yield over a three year period.

Each trial is a replicated strip trial comparing three different speeds – one slower than best practice (5-6 km/h), one at best practice (7-8 km/h) and one above best practice (9+ km/h) - on two different soil types, a BRIA clay and Delta loam, and for two varieties, Q183 and Q208. In this way we hope to be able to assess the effect not only of harvester speed on subsequent ratooning, but also see if there are any soil type or variety effects.

All of the trials are commencing in either plant or first ratoon cane. This lets us run the trial across a number of years and also ensures that we are starting with no or minimal levels of damage. In each trial counts of stools and gaps will be done. So that we can compare the effect of different harvester speeds these counts will be done on the same 10m sections over the life of the trials.

At each site we will be collecting:

- Stool and gap counts pre-harvest
- Mill yield and CCS
- Shoot, stool and gap counts at 4 and 12 weeks post-harvest
- Economic data

The collection of data for economic analysis is an important part of the project. This analysis will let us quantify the costs and benefits of different harvester speeds and provide growers and contractors with real numbers.

Counting stools and gaps prior to harvest

STERILISATION OF EQUIPMENT

Members are reminded to sterilise equipment when moving between farms. Planting is nearing completion but harvesters are still on the move. Please make sure the machinery is sterilised prior to movement to another area.

Contractors or farmers should have sterilisation equipment and chemical on hand. If you are not sure, please contact your field officer for details.

***To ensure you do not get RSD, best practice is for you to insist equipment is sterilised before using* it.**

FERAL PIG ERADICATION

As the crushing draws to a close, it is a perfect time to consider a feral pig eradication program. Dry weather causes a scarcity of food. When this is combined with less cane cover (to seek refuge in), an ideal scenario for seeking out and destroying feral pigs evolves. Feral pigs are a major pest to our industry, damaging hundreds of hectares of cane each year. This translates into thousands of dollars in lost revenue to the industry and the community. Data collected from the 2013 crop survey showed around 4200 Ha of cane area affected by pigs with an estimated 13 400 tonnes of cane lost.

We want to surpass last year's count of over 350 pigs killed through a series of professional aerial shoots. Once again this year we will be conducting shoots after the end of the crush, aimed at targeting areas of high infestation. Burdekin Shire Council is also providing a baiting program and Wetland Care Australia will fund a concentrated trapping program in the Barratta region. The primary aim of this coordinated approach to the feral pig problem is to reduce the population in the longer term.

BPS has funding available to assist groups of 3 or more landholders with coordinated aerial pig shooting in high pressure areas. Up to $750 in the form of a 50% subsidy can be accessed by forming a small grower group amongst your neighbouring farm owners and organising an aerial pig shoot. Please contact Mark Rickards on 0427 834 800 or your field officer if you want to benefit from this pig shooting subsidy. The application form can be viewed on the following page.

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Feral Pig Reimbursement Application

In order to be considered for partial re-imbursement for feral pig control via aerial shooting you must;
1. Be part of a group of growers (minimum 3) who are combining resources to shoot pigs in a co-ordinated manner
2. Complete this form prior to the aerial shoot
3. Pay the invoice and send copies to BPS for reimbursement
4. Report back the number of pigs shot

Conditions;

- BPS will reimburse grower groups 50% of costs up to a maximum of $750 per year
- If the BPS allocated budget is exceeded, BPS may withdraw this opportunity
- The group must complete this form and report on the total pigs shot
- All growers must sign this form

Nominated grower to receive reimbursement on behalf of the group _____

Bank Ac Details BSB_____ Ac._____ ABN._____

Grower Group Details

Grower Name	Grower Signature
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Region where shoot will occur (eg: Giru) _____

Number of pigs shot (complete after shoot) _____

SUMMER FALLOW (extracted from SRA Cane Connection – spring edition 2014)

Fallowing should be an integral part of the cane production cycle as it provides a break from the cane production monoculture and provides important soil health benefits. Early spring is the perfect time to plan for the 2015 planting season, so it is important to consider the type of fallow you will implement.

There are 4 main options available to growers, those being *a* ***bare cultivated*** *fallow, a* ***bare sprayed*** *fallow, a* ***weedy*** *fallow or a* ***managed legume*** *fallow*. Unless you are considering extensive earth works, it is recommended to consider either a bare sprayed fallow or a managed legume fallow.

The bare sprayed fallow allows an opportunity to control difficult weeds such as nutgrass and beds can be formed with minimal cultivation prior to the wet season which will give you a head start when planting commences. Erosion can occur, but is less of a problem than it would be after full cultivation, as the soil has not been disturbed as much.

A managed legume fallow, although requiring more inputs, is also recommended as it benefits soil health by adding nitrogen, which in turn lessens the requirement for physical applications of fertiliser on the subsequent plant cane crop. Also, if managed correctly, legume grains can be harvested, providing additional farm income on top of the savings derived from using less fertiliser. Timing is important if planning a legume crop, as certain types of legume have a longer growing cycle than others, especially when taken to harvest. This can result in a delay to planting the next sugar cane crop and disruption to the farm crop cycle. Legume crops can be grown and ploughed in prior to maturity and soil benefits will still occur.

RURAL WATER USE EFFICIENCY IRRIGATION FUTURES
Improving irrigation management for a profitable and sustainable future

Minipans – a simple irrigation scheduling tool

Early plant crops are now reaching full canopy and starting to make cane. As the weather warms up they will enter their peak water use phase when irrigation scheduling becomes critical. Minipans are one of the simplest irrigation scheduling tools available to furrow irrigators and now is the ideal time to start calibrating them.

A minipan is simply a container from which water evaporates. After it has been calibrated to crop growth measurements (see SRA Information sheet IS13022) it provides an easy method of irrigation scheduling. Minipans are particularly suited to furrow irrigation because the soil profile is refilled with each irrigation and all of the soil moisture used by the crop is replaced. With other irrigation systems the amount of moisture that has been removed by the crop may be greater than the amount replaced by irrigation.

The minipan can be calibrated using crop growth measurements once the crop reaches full canopy. Following an irrigation the crop will grow rapidly and then gradually the daily growth rate will decrease. The irrigation trigger point occurs when the daily growth drops to 50% of the maximum growth.

The minipan is refilled when irrigation occurs. When the irrigation trigger point is reached a note is made of the minipan deficit. For subsequent irrigations the minipan is monitored and when it reaches the trigger point the crop should be irrigated.

The minipan deficit is not the same as the soil moisture deficit. So, unfortunately, a minipan cannot tell you how much soil moisture your crop has used or how much irrigation you need to apply.

All that a minipan measures is the evaporation of water from that pan's surface. The irrigation trigger point for one pan will not be the same as another pan because of different surface areas and pan designs. It is also very important to remember that minipan evaporation is not the same as the evaporation from an A-class pan, or calculated evapotranspiration figures.

The confusion over what a minipan measures has occurred because a ruler is used to record the irrigation trigger point. A ruler is used simply because it is the easiest way to record the irrigation trigger point. Because the number on the ruler has no relationship to soil moisture it could just as easily be recorded as a, b, c, d, e.

Minipan calibration sheets and instructions on making and calibrating a minipan (SRA Information Sheet IS13022 - Irrigation scheduling with minipans) are available on the BPS website.

For assistance with calibrating a minipan please contact Marian Davis (RWUE extension officer) on 0428 927 079.

MINIPAN CALIBRATION SHEET

Grower _____ Block _____

Farm no. _____ Variety _____

Date														
Time														
Stalk no.	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
1														
2														
3														
4														
5														
6														
7														
8														
9														
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11														
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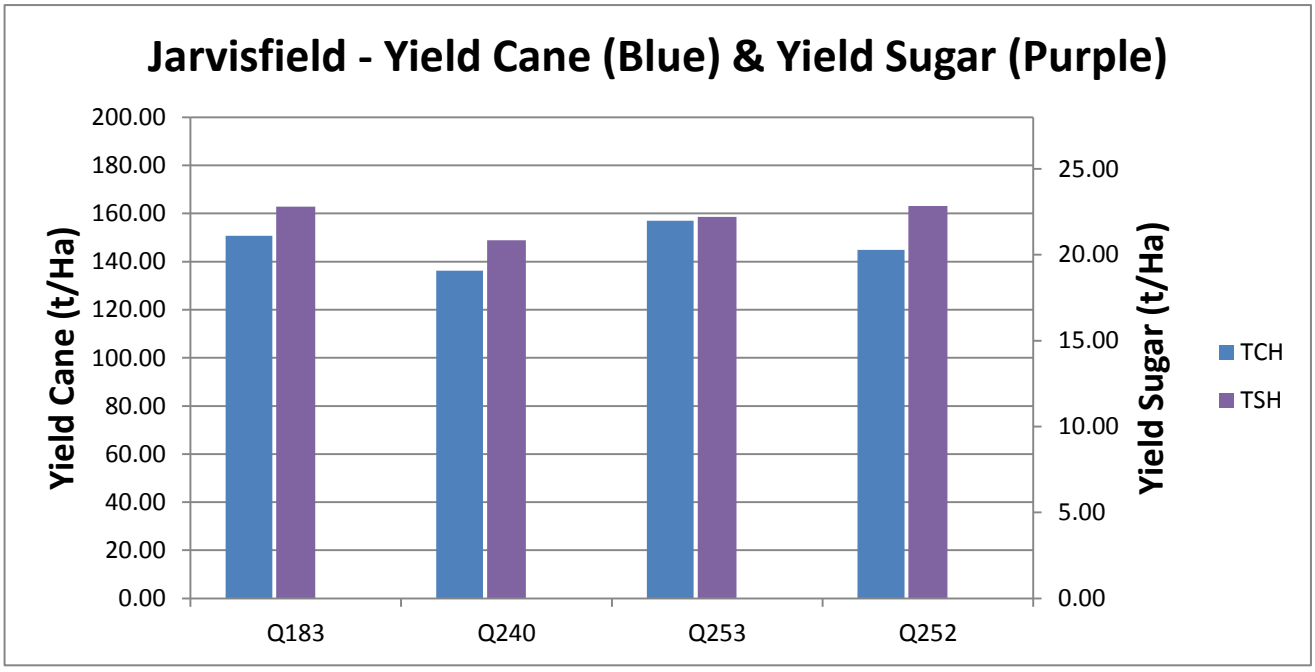
18														
19														
20														
21														
22														
23														
24														
25														

Total														
Average														
Daily growth														

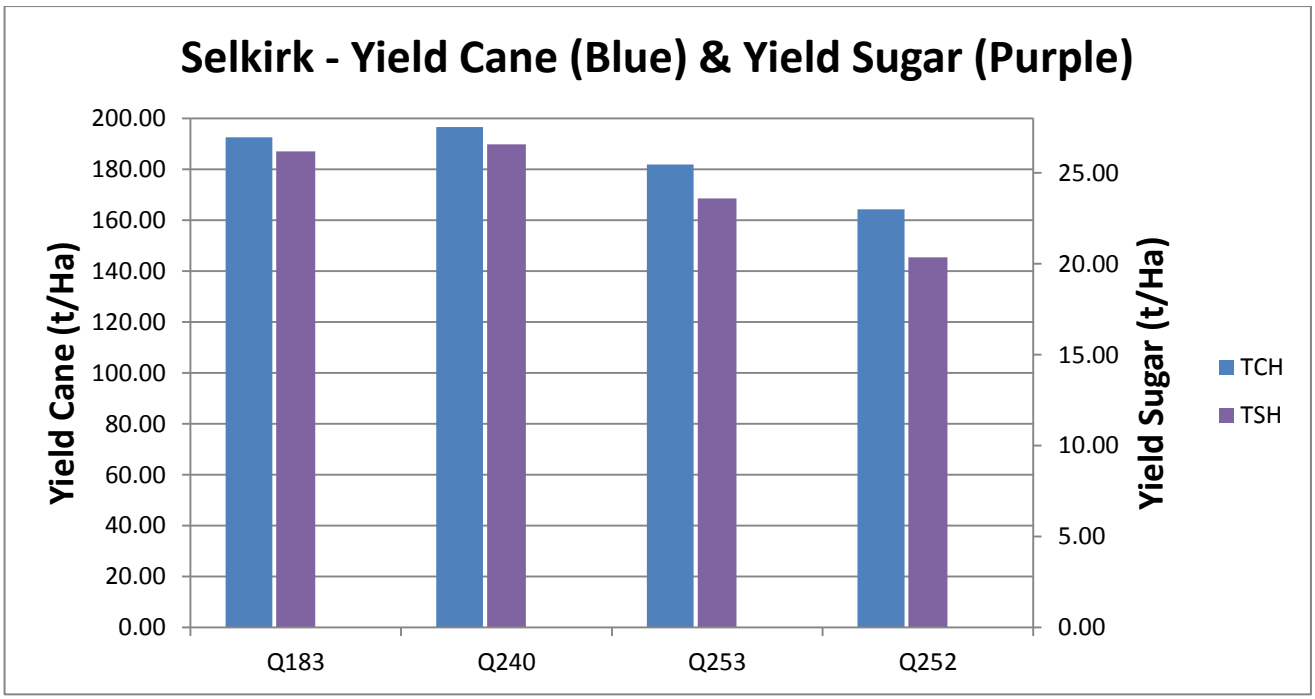
Variety Trial Results – Plant Cane

Three variety strip trials were established across the district in 2013 by BPS and Farmacist. These are replicated, commercial sized strips managed by growers. Each trial comprised the 3 newer varieties (Q240$^{\Phi}$, Q252$^{\Phi}$, Q253$^{\Phi}$) with a grower standard. Results are summarised below, although it should be noted that these are plant cane results only, and the trial will be continued for the crop cycle. Note that Q183$^{\Phi}$ is the standard for Jarvisfield and Selkirk, with Q208$^{\Phi}$ the standard for Jardine – this site also had Q247$^{\Phi}$ for comparison.

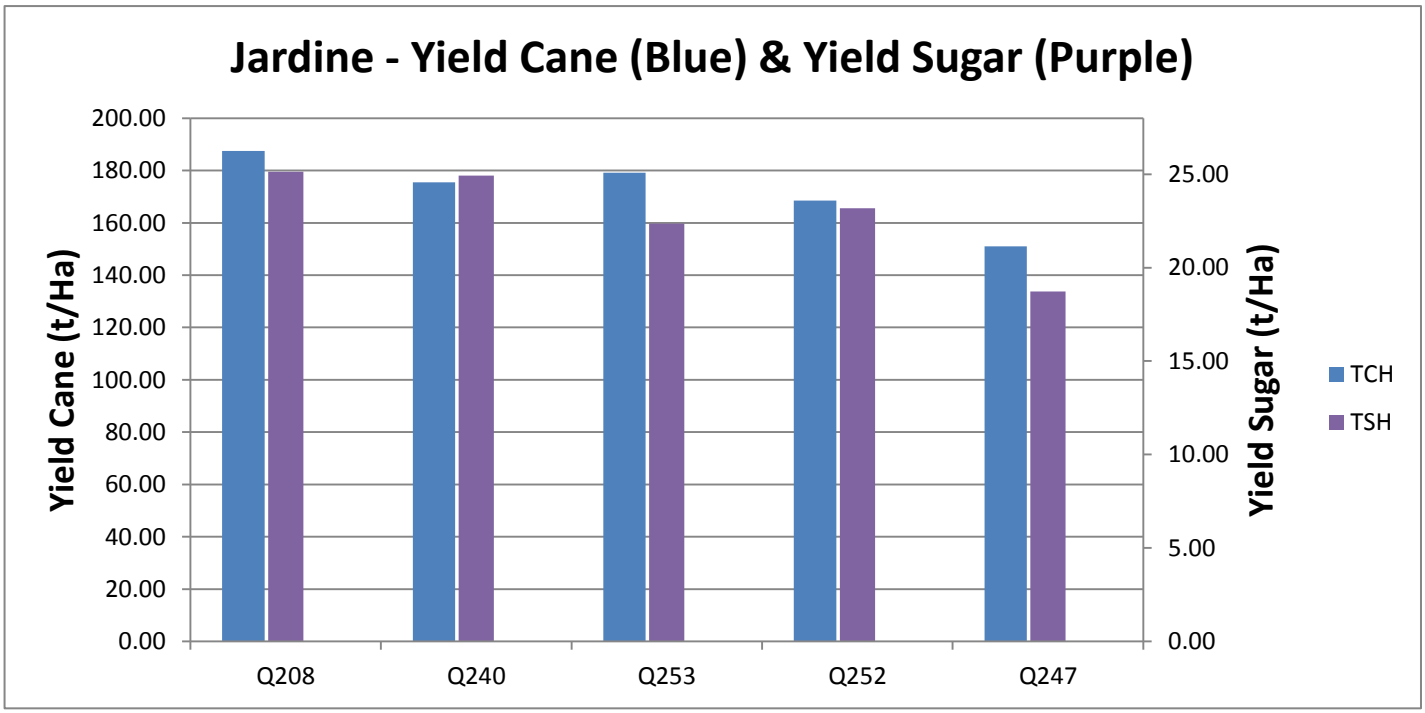
Jarvisfield - Planted late April 2013



Selkirk – Mill Mud applied in fallow, planted late March 2013



Jardine – Planted Early May 2013



Of the newer varieties, Q240Φ is performing well on the heavier soils, with Q253Φ performing well on the lighter soil. The Jarvisfield yield results are lower than expected due to irrigation soakage issues. It is still too early to draw any major conclusions until we obtain data over a few years.

Give one of the BPS staff members a call to discuss these results or variety selection on your farm in more detail. BPS has also established another 3 variety strip trial sites this year in the Mulgrave, Osbourne and Airville areas for harvest in 2015.

BPS encourages all members to become involved in Smartcane BMP. This program is an opportunity for the industry to demonstrate to government and community it is continually striving to produce cane in a productive, profitable and sustainable manner. Growers can be involved through a variety of ways, from on line self assessments at home, through to one on one support or group workshops. Group workshops are the preferred method of involvement as BPS extension staff are present and you can discuss any productivity issues at these workshops.

The Burdekin region had a target set to have 100 growers involved in the program by December 2014, currently we are a little over half way to the target. Gary Halliday is the local Smartcane facilitator, so give him a call on 0438 747 596 to register for a workshop. Or for more information, give Marian Davis or Rob Milla a call.

Clare growers at a recent BMP workshop

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