



Variety Guide 2017/18

Southern region 

How to use this guide

This guide is designed to help growers in the Southern canegrowing region with their agronomic considerations when selecting varieties to plant and trial on their farms. The information comes from the best available data of regional variety performance and disease ratings. The information in the tables will help you understand:

Which varieties are available & how they performed in SRA trials

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Which varieties are most suited to the environment on your farm

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Managing the varieties on your farm is vital. By making informed choices at planting, you can make a positive difference to your farm productivity and profitability for the whole crop cycle. To help you make decisions about the best-suited varieties for your farm, use QCANESelect® – our online variety decision-support tool. This tool is available on the SRA website www.sugarresearch.com.au

Want to know what is happening in the other regions?

You can find all the regional variety guides on the SRA website www.sugarresearch.com.au

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Recently released varieties available in the Southern Region

Presented below are the results of trials conducted in the Southern region. Yield (TCH) and CCS for the varieties are compared with the trial results of various standard varieties.

Variety: SRA4[Ⓛ]



Parentage: Q138 x QS87-7427

Summary: Equal tonnes cane; equal CCS

Trial harvest year	Crop class	Yield (tonnes cane/ha)				CCS				# of trials
		SRA4 [Ⓛ]	Q208 [Ⓛ]	Q240 [Ⓛ]	KQ228 [Ⓛ]	SRA4 [Ⓛ]	Q208 [Ⓛ]	Q240 [Ⓛ]	KQ228 [Ⓛ]	
(2010 series FATs): 2011	Plant	80	70	70	89	15.5	15.3	15.8	15.7	5
2012	1R	119	112	119	121	17.0	16.4	16.7	17.2	5
2013	2R	97	87	92	94	16.9	16.7	17.2	17.0	5
2014	3R	92	84	104	98	13.9	13.8	15.2	14.0	3
2015	4R	82	71	88	81	16.0	15.7	15.8	15.5	1
Overall performance		97	88	95	100	16.1	15.7	16.3	16.1	19

Available from 2016

Comments: Disease ratings: resistant to fiji leaf gall, leaf scald, mosaic, orange rust, intermediate smut rating. Good ratooning, high short fibre percentage. FATs = Final Assessment Trials.

Variety: Q247[Ⓛ]



Parentage: Q138 x Q155

Summary: Similar tonnes cane, higher CCS

Trial harvest year	Crop class	Yield (tonnes cane/ha)				CCS				# of trials
		Q247 [Ⓛ]	Q208 [Ⓛ]	Q240 [Ⓛ]	KQ228 [Ⓛ]	Q247 [Ⓛ]	Q208 [Ⓛ]	Q240 [Ⓛ]	KQ228 [Ⓛ]	
(2011 series FATs): 2012	Plant	105	91	109	102	16.1	15.7	15.7	15.8	4
2013	1R	108	101	116	105	17.3	17.1	17.2	17.0	4
2014	2R	109	108	121	111	16.3	16.2	16.1	16.1	4
2015	3R	111	115	125	117	18.2	18.0	17.5	17.7	3
2016	4R	111	115	136	118	18.8	18.7	18.0	18.4	1
(2013 series FATs): 2014	Plant	88	77	78	76	14.5	13.6	13.8	13.9	5
2015	1R	101	94	95	95	16.5	15.8	16.1	16.3	5
2016	2R	104	94	105	99	17.1	16.5	16.5	16.8	5
Overall performance		103	96	106	100	16.5	16.1	16.1	16.2	31

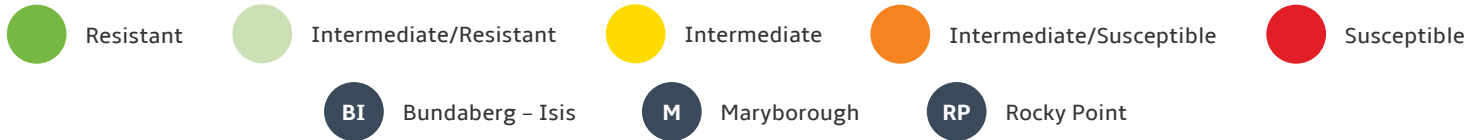
Available from 2016

Comments: 2011 and 2013 series Final Assessment Trials (FATs) returned similar TCH and higher CCS when compared to regional standard varieties. Resistant to fiji leaf gall, leaf scald, mosaic, orange rust, intermediate smut rating. Early harvest, need to manage RSD susceptible rating. Sprawling growth habit.

Disease resistance



Disease has the potential to lower the performance of varieties on your farm. This table will help you select varieties that will perform well given the diseases that may be present on your farm. White indicates unknown.



Clone	Region recommended	Fiji Leaf Gall	Mosaic	Leaf scald	Smut	Chlorotic streak	Orange rust	Brown rust	RSD	Red rot	Yellow spot	Pachymetra
SRA4 [♠]	BI, M, RP	Resistant	Resistant	Resistant	Intermediate	Intermediate/Resistant	Resistant	Intermediate/Resistant	Intermediate/Resistant	Resistant	Intermediate	Intermediate/Resistant
SRA2 [♠]	BI, M, RP	Resistant	Intermediate/Susceptible	Resistant	Intermediate	Intermediate/Resistant	Intermediate/Resistant	Intermediate/Resistant	Susceptible	Resistant	Intermediate/Resistant	Resistant
SRA1 [♠]	RP	Intermediate	Resistant	Resistant	Resistant	Intermediate/Resistant	Resistant	Intermediate/Resistant	Susceptible	Intermediate	Intermediate/Resistant	Intermediate
Q252 [♠]	BI, M, RP	Intermediate	Resistant	Resistant	Intermediate	Intermediate/Resistant	Resistant	Intermediate/Resistant	Resistant	Resistant	Intermediate	Intermediate
Q249 [♠]	M, RP	Resistant	Intermediate/Resistant	Resistant	Resistant	Intermediate/Resistant	Resistant	Intermediate/Resistant	Susceptible	Intermediate/Resistant	Intermediate/Resistant	Intermediate
Q247 [♠]	RP	Resistant	Resistant	Resistant	Intermediate	Intermediate/Resistant	Resistant	Intermediate/Resistant	Susceptible	Resistant	Susceptible	Intermediate
Q245 [♠]	BI, RP	Resistant	Resistant	Resistant	Resistant	Intermediate/Resistant	Resistant	Intermediate/Resistant	Intermediate/Susceptible	Susceptible	Resistant	Resistant
Q242 [♠]	BI, M, RP	Resistant	Resistant	Resistant	Intermediate	Intermediate	Resistant	Intermediate/Resistant	Susceptible	Intermediate/Resistant	Resistant	Resistant
Q240 [♠]	BI, M, RP	Intermediate/Susceptible	Resistant	Resistant	Resistant	Intermediate/Resistant	Resistant	Intermediate/Resistant	Resistant	Resistant	Intermediate	Intermediate
Q238 [♠]	BI, M, RP	Intermediate/Resistant	Resistant	Resistant	Resistant	Susceptible	Resistant	Resistant	Intermediate	Intermediate/Resistant	Susceptible	Resistant
Q235 [♠]	BI, M	Resistant	Resistant	Resistant	Resistant	Intermediate/Susceptible	Intermediate/Resistant	Intermediate/Resistant	Susceptible	Resistant	Resistant	Resistant
Q232 [♠]	BI, M, RP	Intermediate	Resistant	Resistant	Resistant	Resistant	Resistant	Intermediate/Resistant	Intermediate	Intermediate/Resistant	Resistant	Intermediate
KQ228 [♠]	BI, M, RP	Intermediate	Resistant	Resistant	Resistant	Susceptible	Resistant	Resistant	Susceptible	Resistant	Intermediate	Intermediate
Q212 [♠]	RP	Intermediate/Resistant	Resistant	Resistant	Resistant	Intermediate/Resistant	Resistant	Intermediate/Resistant	Intermediate	Resistant	Susceptible	Resistant
Q208 [♠]	BI, M, RP	Intermediate/Susceptible	Resistant	Resistant	Intermediate/Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Resistant	Intermediate
Q200 [♠]	BI	Intermediate	Resistant	Resistant	Resistant	Intermediate	Resistant	Resistant	Resistant	Resistant	Intermediate/Resistant	Intermediate
Q183 [♠]	BI, RP	Resistant	Resistant	Intermediate	Intermediate/Resistant	Susceptible	Resistant	Resistant	Intermediate	Intermediate	Intermediate/Susceptible	Resistant
Q155	RP	Resistant	Intermediate/Susceptible	Resistant	Intermediate	Intermediate	Resistant	Resistant	Susceptible	Susceptible	Intermediate	Susceptible
Q151	BI	Resistant	Resistant	Resistant	Resistant	Intermediate/Resistant	Resistant	Resistant	Susceptible	Intermediate/Resistant	Intermediate/Resistant	Intermediate/Susceptible
Q138	M, RP	Resistant	Intermediate/Susceptible	Resistant	Susceptible	Intermediate/Resistant	Resistant	Resistant	Susceptible	Intermediate/Susceptible	Intermediate/Susceptible	Resistant

Rotation of varieties is important in the management of diseases. Arrange for your local productivity services officer to inspect your farm for disease. The Diseases of Australian Sugarcane Field Guide provides information on diseases including how to identify and manage them. The guide is available on the SRA website www.sugarresearch.com.au

Harvest management

Select varieties for a harvest plan that can be followed to maintain maximum CCS throughout the year. The charts below indicate early, mid or late sugar varieties.

Bundaberg and Isis

Variety	Early sugar	Mid sugar	Late sugar
SRA4 [♢]	Average	Average	Average
SRA2 [♢]	Good	Good	Good
SRA1 [♢]	Good	Good	Good
Q252 [♢]	Good	Good	Good
Q249 [♢]	Average	Average	Good
Q247 [♢]	Poor	Poor	Poor
Q245 [♢]	Poor	Average	Average
Q242 [♢]	Average	Average	Poor
Q240 [♢]	Good	Good	Good
Q238 [♢]	Poor	Average	Average
Q235 [♢]	Good	Good	Average
Q232 [♢]	Poor	Average	Poor
KQ228 [♢]	Good	Good	Average
Q208 [♢]	Average	Good	Good
Q200 [♢]	Poor	Average	Good
Q183 [♢]	Poor	Average	Good
Q151 [♢]	Good	Average	Poor
Q138	Poor	Poor	Poor

Maximise your profit at harvest: Selecting varieties for specific sugar maturity profiles, planting and harvesting them for optimal CCS maturity at time of harvest can make a significant difference in the profit your crop can make for you. Making harvest decisions based on in field maturity maximises profit making decisions.

Rocky Point

Variety	Early sugar	Mid sugar	Late sugar
SRA4 [♠]	Average	Average	Average
SRA2 [♠]	Good	Good	Average
SRA1 [♠]	Good	Good	Good
Q252 [♠]	Good	Good	Good
Q249 [♠]	Average	Average	Average
Q248 [♠]	Average	Average	Average
Q247 [♠]	Poor	Poor	Poor
Q245 [♠]	Poor	Average	Average
Q242 [♠]	Good	Good	Good
Q240 [♠]	Good	Good	Good
Q238 [♠]	Average	Good	Good
Q232 [♠]	Poor	Average	Average
KQ228 [♠]	Good	Good	Average
Q208 [♠]	Good	Good	Good
Q183 [♠]	Average	Good	Good
Q155	Good	Good	Good
Q138	Average	Average	Average

Maryborough

Variety	Early sugar	Mid sugar	Late sugar
SRA4 [♠]	Average	Average	Average
SRA2 [♠]	Good	Good	Good
SRA1 [♠]	Good	Good	Good
Q252 [♠]	Good	Good	Average
Q249 [♠]	Average	Average	Good
Q242 [♠]	Average	Average	Average
Q240 [♠]	Good	Good	Good
Q238 [♠]	Poor	Average	Average
Q235 [♠]	Good	Good	Average
Q232 [♠]	Poor	Average	Average
KQ228 [♠]	Good	Good	Average
Q208 [♠]	Average	Good	Good
Q138	Average	Average	Average

Variety management

This chart is useful for matching a variety to a particular field situation. For example, if a field has a drainage problem, then select a variety with some tolerance to waterlogging.

Bundaberg and Isis

Variety	Fast and reliable ratooning	Drought tolerance	Tolerance to waterlogging	Frost tolerance	Flowering	Speed of germination	Reliability of germination
SRA4 [♢]	Good	Unknown	Unknown	Unknown	Sparse	Rapid	Good
SRA2 [♢]	Good	Unknown	Unknown	Unknown	Heavy	Average	Average
SRA1 [♢]	Good	Average	Average	Unknown	Moderate	Rapid	Good
Q252 [♢]	Average	Unknown	Unknown	Unknown	Moderate	Slow	Good
Q249 [♢]	Average	Unknown	Unknown	Unknown	Sparse	Average	Good
Q247 [♢]	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Q245 [♢]	Good	Good	Unknown	Poor	Moderate	Average	Average
Q242 [♢]	Good	Poor	Average	Average	Moderate	Rapid	Good
Q240 [♢]	Good	Average	Average	Good	Sparse	Rapid	Good
Q238 [♢]	Good	Average	Poor	Poor	Moderate	Rapid	Good
Q235 [♢]	Average	Average	Unknown	Unknown	Heavy	Average	Good
Q232 [♢]	Good	Average	Average	Poor	Heavy	Average	Average
KQ228 [♢]	Average	Poor	Average	Average	Moderate	Rapid	Good
Q208 [♢]	Average	Average	Average	Average	Moderate	Slow	Good
Q200 [♢]	Average	Poor	Average	Poor	Sparse	Average	Good
Q183 [♢]	Good	Poor	Average	Average	Sparse	Rapid	Good
Q151 [♢]	Good	Poor	Average	Average	Moderate	Rapid	Good
Q138	Good	Good	Good	Poor	Moderate	Average	Good



Rocky Point

Variety	Trash yield	Fast and reliable germination	Fast and reliable ratooning in good conditions	Fast and reliable ratooning in harsh conditions	Drought Tolerance	Tolerance to waterlogging	Frost tolerance	Flowering	Standover suitability
SRA4 [♢]	Medium	Average	Good	Unknown	Average	Unknown	Unknown	Unknown	Average
SRA2 [♢]	Low-Medium	Average	Unknown	Good	Unknown	Unknown	Unknown	Heavy	Average
SRA1 [♢]	Medium	Good	Unknown	Good	Average	Average	Unknown	Moderate	Poor
Q252 [♢]	Low	Average	Unknown	Unknown	Average	Poor	Poor	Moderate	Average
Q249 [♢]	Medium	Average	Unknown	Unknown	Average	Average	Unknown	Sparse	Average
Q248 [♢]	Low-Medium	Average	Average	Average	Average	Poor	Poor	Heavy	Average
Q247 [♢]	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Q245 [♢]	Medium	Average	Average	Average	Average	Average	Poor	Moderate	Average
Q242 [♢]	Medium-High	Average	Average	Good	Average	Good	Average	Moderate	Average
Q240 [♢]	Low-Medium	Average	Good	Good	Average	Average	Good	Sparse	Good
Q238 [♢]	Medium	Average	Average	Average	Average	Average	Poor	Moderate	Good
Q232 [♢]	High	Average	Good	Average	Average	Good	Average	Heavy	Good
KQ228 [♢]	Medium-High	Good	Average	Good	Average	Average	Average	Sparse	Average
Q208 [♢]	Low	Average	Average	Good	Average	Good	Average	Moderate	Good
Q183 [♢]	Low-Medium	Good	Average	Average	Average	Poor	Average	Sparse	Good
Q155	Unknown	Good	Average	Average	Unknown	Average	Unknown	Unknown	Unknown
Q138	High	Good	Good	Good	Good	Good	Average	Moderate	Good

Maryborough

Variety	Fast and reliable ratooning	Drought tolerance	Tolerance to waterlogging	Frost tolerance	Flowering	Speed of germination	Reliability of germination
SRA4 [♢]	Good	Unknown	Unknown	Unknown	Sparse	Rapid	Good
SRA2 [♢]	Good	Unknown	Unknown	Unknown	Heavy	Average	Average
SRA1 [♢]	Good	Average	Average	Unknown	Moderate	Rapid	Good
Q252 [♢]	Average	Average	Average	Unknown	Moderate	Slow	Good
Q249 [♢]	Average	Average	Unknown	Unknown	Sparse	Average	Good
Q242 [♢]	Good	Poor	Average	Good	Moderate	Rapid	Good
Q240 [♢]	Good	Average	Average	Good	Sparse	Rapid	Good
Q238 [♢]	Good	Average	Average	Poor	Moderate	Average	Average
Q235 [♢]	Average	Average	Unknown	Unknown	Heavy	Average	Good
Q232 [♢]	Good	Average	Average	Average	Heavy	Average	Average
KQ228 [♢]	Average	Poor	Average	Average	Sparse	Rapid	Good
Q208 [♢]	Average	Good	Average	Average	Moderate	Slow	Average
Q138	Good	Good	Good	Poor	Moderate	Average	Good

Variety performance in each mill area



Data below can be found in QCANESelect® under the regional reporting tab. Use this information to assess yield performance of varieties over a number of years. Caution should be taken when comparing commercial performance of newer varieties (from plant and young ratoons) to older/established varieties (which include older ratoons).

Bundaberg

Bundaberg % tonnes 2016



A harvest of 1.8 million tonnes of cane was recorded from 19,535 hectares with an average CCS 14.09 and TCH 93.4.

KQ228[Ⓛ] remains dominant and steady at 23.9% of the 2016 harvest, whilst Q240[Ⓛ] increased from 3.4% in 2012 to 18.4% in 2016. Q208[Ⓛ] has declined annually since 2012, down to 18.4% in 2016. Q242[Ⓛ] is steadily on the up at 12.6% whilst Q183[Ⓛ] slowly increased to 6.5%.

Q240[Ⓛ], Q238[Ⓛ], Q242[Ⓛ] and KQ228[Ⓛ] all performed above mill average for TCH and TSH. New varieties Q249[Ⓛ] and Q252[Ⓛ] also performed well above mill average remembering this was young cane from a small sample size.

KQ228 [Ⓛ] – 23.9%	Q138 – 1.7%
Q240 [Ⓛ] – 18.4%	Q200 [Ⓛ] – 0.9%
Q208 [Ⓛ] – 18.4%	Q151 – 0.7%
Q242 [Ⓛ] – 12.6%	Q245 [Ⓛ] – 0.6%
Q238 [Ⓛ] – 7.4%	Q235 [Ⓛ] – 0.6%
Q232 [Ⓛ] – 7.2%	Q249 [Ⓛ] – 0.3%
Q183 [Ⓛ] – 6.5%	

Isis

Isis % tonnes 2016



Isis mill crushed 1.3 million tonnes of cane harvested from 14,180 hectares. The average CCS was 14.09 and the average TCH 95.4.

Q240[Ⓛ] has increased annually reaching 22.5% of the total tonnage in 2016. Q238[Ⓛ] slowly increased to 8.1%. KQ228[Ⓛ] reduced slightly to 19.6%, Q208[Ⓛ] declined to 18.3% in 2016 and Q183[Ⓛ] remained stable at 13.7% of the harvest breakdown.

Q240[Ⓛ] and Q238[Ⓛ] both recorded above average TCH and TSH. SRA1[Ⓛ], Q252[Ⓛ] and Q249[Ⓛ] also performed above mill average, however these are young canes with a limited sample size.

Q240 [Ⓛ] – 22.5%	Q245 [Ⓛ] – 3.5%
KQ228 [Ⓛ] – 19.6%	Q232 [Ⓛ] – 3.3%
Q208 [Ⓛ] – 18.3%	Q249 [Ⓛ] – 0.6%
Q183 [Ⓛ] – 13.7%	Q135 – 0.5%
Q242 [Ⓛ] – 8.5%	Q138 – 0.5%
Q238 [Ⓛ] – 8.1%	

Variety performance in each mill area



Data below can be found in QCANESelect® under the regional reporting tab. Use this information to assess yield performance of varieties over a number of years. Caution should be taken when comparing commercial performance of newer varieties (from plant and young ratoons) to older/established varieties (which include older ratoons).

Rocky Point

Rocky Point % tonnes 2016



A total of 110,231 tonnes of cane was harvested from 1,118 hectares and delivered an average CCS of 13.79 and 98.6 TCH.

Q232[Ⓛ] remained the top variety despite declining from 33.6% in 2015 to 25% in 2016. Q208[Ⓛ] remained stable at 17.5%, similar to KQ228[Ⓛ] at 14.9%. Q240[Ⓛ] increased from 3.8% in 2012 to 14.6% in 2016 and Q242[Ⓛ] increased from 2.4% in 2014 to 9.6% in 2016.

Q232[Ⓛ], Q208[Ⓛ], Q240[Ⓛ] and Q242[Ⓛ] all performed above mill average for TCH and TSH. KQ228[Ⓛ] was below mill average for TCH and reached mill average for TSH.

Q232 [Ⓛ] – 25.0%	Q240 [Ⓛ] – 14.6%
Q208 [Ⓛ] – 17.5%	Q242 [Ⓛ] – 9.6%
KQ228 [Ⓛ] – 14.9%	

New Variety Recommendation and Release Process

Regional Variety Committees (RVC) have replaced Variety Approval Committees (VAC) in line with changes to Queensland biosecurity legislation. With membership drawn from growers, millers and productivity service groups specific to the region, the RVCs will continue to be responsible for variety release decisions. SRA supports these groups with secretariat support and the provision of technical information to assist the committee making decision on particular varieties.

RVCs are composed of voting and non-voting members to ensure transparency in the decision making process.

The Southern RVC (Sugarcane Biosecurity Zone 4 includes Rocky Point from Sugarcane Biosecurity Zone 5) voting membership consists of one grower, miller and productivity services representative from each of the following areas Bundaberg, Isis, Maryborough and Rocky Point. The Southern RVC requires a majority vote for progression of a variety through the SRA program and for the release of a variety.

Contact SRA Southern Variety Officer Marija Tromp at mtromp@sugarresearch.com.au or 0467 709 572 for more information.

Variety performance (cont.)

Data below can be found in QCANESelect® under the regional reporting tab. Use this information to assess yield performance of varieties over a number of years. Caution should be taken when comparing commercial performance of newer varieties (from plant and young ratoons) to older/established varieties (which include older ratoons).

Maryborough

Maryborough Mills % tonnes 2016



Maryborough harvested 791,435 tonnes from 10,984 hectares returning an average CCS of 14.01 and TCH 72.1.

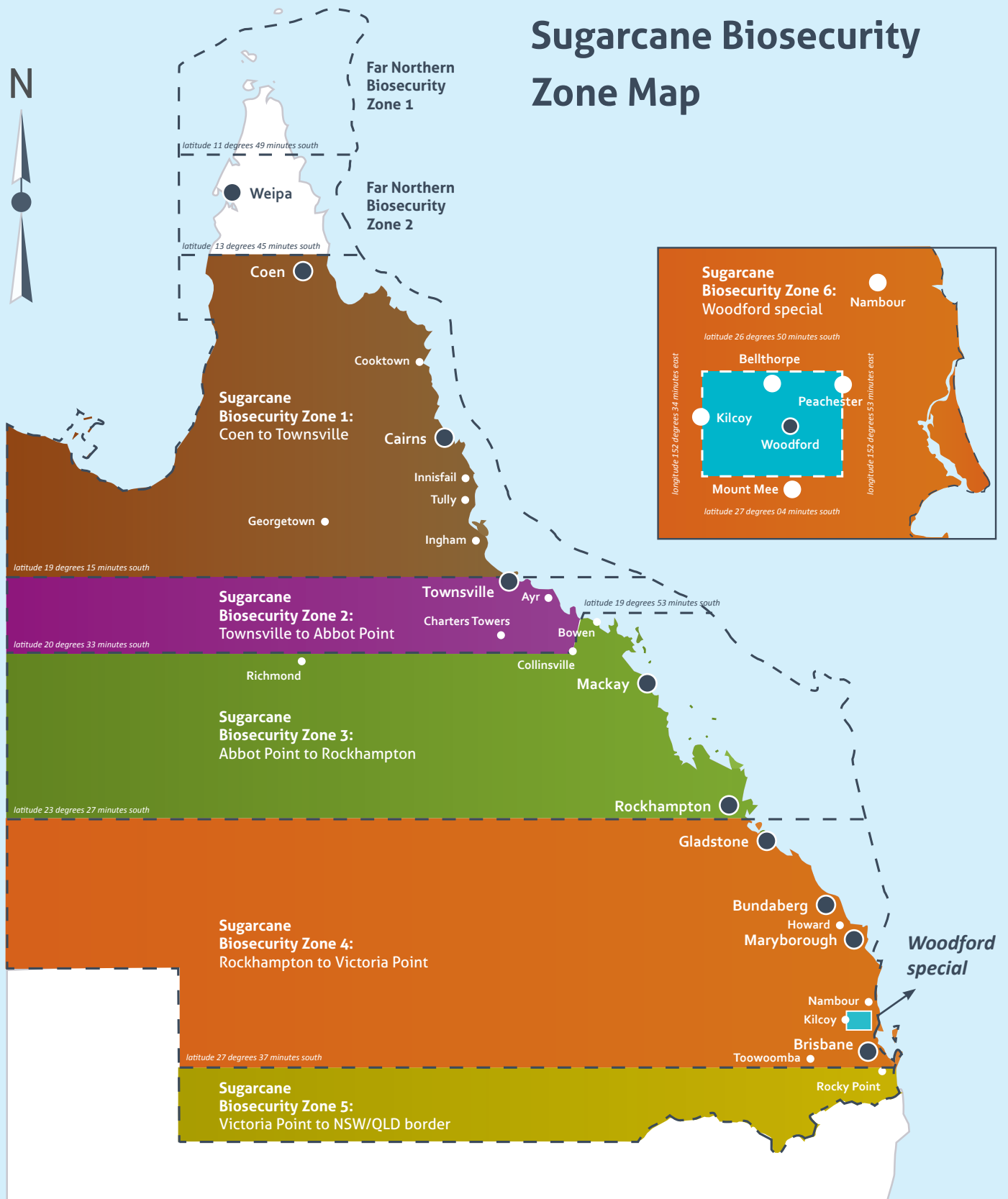
Q208[Ⓛ] continued to dominate the variety breakdown with 48.4% of total tonnes. Q240[Ⓛ] was on the rise reaching 19% in 2016, whilst Q232[Ⓛ] declined to 8.5%. Q242[Ⓛ] demonstrated a slow rise to 6.8%.

Q240[Ⓛ] sits well above mill average for TCH and TSH. Q249[Ⓛ] and Q252[Ⓛ] also returned good above average TCH and TSH from a relatively small sample size.

Q208 [Ⓛ] – 48.4%	KQ228 [Ⓛ] – 3.0%
Q240 [Ⓛ] – 19.0%	Q238 [Ⓛ] – 3.0%
Q232 [Ⓛ] – 8.5%	Q248 [Ⓛ] – 1.7%
Q242 [Ⓛ] – 6.8%	Q235 [Ⓛ] – 1.1%
Q138 – 5.3%	Q249 [Ⓛ] – 0.7%



Sugarcane Biosecurity Zone Map



- All appliances (harvesters and other sugarcane machinery) moving between sugarcane biosecurity zones must:
 - > be free of cane trash and soil
 - > be inspected by an authorised inspection person who will issue a Plant Health Assurance Certificate (PHAC)
 - > be accompanied during transportation by the PHAC.
- Machinery inspections can be arranged by contacting the local Productivity Service organisation.
- To move sugarcane plants (stalks, leaves, potted plants, etc) between biosecurity zones contact Biosecurity Queensland (13 25 23).
- Need more information? Check the Biosecurity manual for Sugarcane Producers at: https://sugarresearch.com.au/wp-content/uploads/2017/02/Biosecurity-Manual-for-Sugarcane-Producers_WEB.pdf

Propagating new varieties



Contact your local productivity services group for regional advice on varieties. They can supply clean planting material of recommended varieties and place orders for tissue culture plantlets.

Billet planting

Plant material from an approved seed source

Approved-seed provides cane growers with disease-free seed of varieties that are true-to-type. Disease-free seed (stalks, billets, setts or tissue culture plantlets used for planting) is a key control measure for systemic diseases of sugarcane, including chlorotic streak, Fiji leaf gall, leaf scald, mosaic, ratoon stunting disease (RSD) and smut. Provision of disease-free or approved-seed in each mill area in the Australian sugar industry is coordinated by SRA, in cooperation with the local productivity services group. SRA provides a disease-free supply of DNA fingerprinted new varieties. The local productivity services group multiplies the new varieties, maintaining the disease-free status and distributes the approved-seed to growers.

Grow sugarcane specifically for planting material

The block selected for growing plant material should be disease-free, weed-free and sugarcane volunteer-free. The cane should be erect with short internodes, so it will have at least two buds per sett when harvested for billets. This can be achieved through reduced fertiliser rates, withholding irrigation or planting late in the season. The cane should be less than one year old when harvesting for good quality billets and also be no more than three years away from long hot water treatment.

Set up the harvester for cutting high quality sound billets

Rubber coating rollers and optimising the roller speeds to chopper speed will produce good quality billets with minimal split or crushed ends and damaged eyes. Reduce the speed of harvesting and maintain sharp basecutter and chopper blades for clean cutting. Disinfect the machinery used to cut and plant new varieties to limit the spread of disease and weeds.

Need more information on varieties?

Contact SRA Adoption Officer Tracy Hay
thay@sugarresearch.com.au or 07 4056 4527

Need more information on tissue culture?

Contact SRA Tissue Culture Manager Clair Bolton
cbolton@sugarresearch.com.au or 07 4783 8619

Tissue culture

Calculate how much tissue culture to order

We've made it easier with our online tissue culture calculator. It demonstrates the speed at which large quantities of planting material can be produced from a set number of plantlets or for a set cost. Below is a look-up table including common results from the calculator (available at sugarresearch.com.au/calculator).

Try tissue culture as an approved clean seed source

Tissue culture is an excellent source of clean seed for all varieties and can help reduce the spread of serious diseases such as ratoon stunting disease, smut and Fiji leaf gall. Tissue-cultured plantings are more uniform and produce more sticks than conventional plantings so larger quantities of planting material are achieved the following year. This means earlier commercial-scale production of more productive new varieties can be achieved when using tissue culture.

Stage	Order deadline for spring planting	Order deadline for autumn planting
Grower finalises order. Productivity services group places order with SRA.	15 November 2017	1 July 2018
Productivity services group receives established plantlets from nursery and distributes to growers.	Delivery on agreed date between grower, productivity services group and nursery. Available in August 2018.	Delivery on agreed date between grower, productivity services group and nursery. Available in March 2019.

Estimated cost and time to scale up new variety production using tissue culture

	No. plantlets ordered	100	250	500	1000
Yr 1	Approximate cost	\$150	\$375	\$750	\$1500
	M row planted @ 0.8m	80	200	400	800
Yr 2	M row available for planting	2400	6000	12000	24000
	Ha avail for planting @ 1.8 m	0.4	1.1	2.2	4.3

Planting & managing tissue-cultured plantlets in the field

Planting

- Prepare soil to a fine tilth to ensure good soil/root contact.
- A seedling planter can be used if one is available, although hand planting small numbers is not a huge job. Plant them deep at the bottom of a drill to prevent stool tipping.
- Fill in after early growth.
- Plant the plantlets 500 mm to 1 m apart. A good distance is 800 mm, which will allow tillering to produce a high number of sticks.

Irrigating

- Provision of water is the most critical factor for the successful establishment of tissue culture plantlets.
- Irrigate plantlets immediately after planting and monitor them to ensure they don't dry out over the first three weeks to get the roots well established.
- If you do not have access to flood or sprinkler irrigation a simple irrigation system can be set up using cheap drip tape and an in-line filter hooked up to your garden tap or water tanker.

Insects

- If you expect problems with insects then an application of an insecticide drench (such as chlorpyrifos or imidacloprid) at planting will protect the young plantlets.
- In canegrub-prone areas use your standard grub control treatment.

Fertiliser

- Fertiliser requirements of the tissue cultured plantlets are the same as for billet plantings.
- If possible, plant with a planter mix to maintain good early growth, and side-dress later to avoid fertiliser burn.

Weeds

Weed control is important for good establishment and growth.

- Ideally pre-irrigate the soil to germinate weeds, then apply a knock-down herbicide or cultivate just prior to planting to reduce the weed pressure on young plantlets.
- Allow at least one week after planting before applying pre-emergent herbicides, longer if planted into cold, wet soils, as the root system needs time to establish:
 - > Atradex® at 2.5 kg/ha plus Dual Gold® at 1.5 L/ha has been successfully applied over the top, for grass and broadleaf weed control
 - > Do not use diuron as young plantlets are sensitive to this product.
- Sempra® at 100 g/ha plus Activator at 200 mL/100 L for nutgrass. Both applications were sprayed over the top for nutgrass control
- Do not use paraquat unless you have no other option and only on established plantings.

QCANESelect®

- Using sugarcane varieties that are best-suited to your farm may help maximise its productivity and profitability.
- QCANESelect® is an online tool that allows you to review, compare and select varieties for use on each block on your farm.
- To access QCANESelect® and the tissue culture calculator visit the SRA website www.sugarresearch.com.au
- The information in QCANESelect® is updated regularly based on our most recent trials and from observations and experiences of varieties that are growing in the field.
- Once you have identified the best varieties for planting on your farm, contact your local productivity services group to place orders for tissue-cultured plantlets.





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