

sra

Sugar Research
Australia™



Variety Guide 2015/16

Southern and NSW regions



How to use this guide

This guide is designed to help growers in the Southern and NSW canegrowing regions with their agronomic considerations when selecting new 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:

1 Which new varieties are available and how they performed in SRA trials
Pages 4-5

2 The disease resistance ratings of each variety
Pages 6-7

3 Which varieties will better suit certain soil types
Page 8

4 When you should harvest a particular variety
Pages 9-10

5 Which varieties are most suited to the environment on your farm
Pages 11-13

6 Planting and managing your tissue-cultured plantlets in the field
Pages 14-15

Managing the varieties on your farm is vital. By making informed choices this season 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

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SRA Variety Development Officer: Rod Fletcher on 0459 847 445.

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

Propagating new varieties

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 sells 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 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 minimum 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 in harvesting when planting new varieties to limit the spread of disease and weeds.

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. 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 2015	1 July 2016
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 2016.	Delivery on agreed date between grower, productivity services group and nursery. Available in March 2017.

Need to calculate how much tissue culture to order?

We've made it easier with our new 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).

Year 1	Number of seedlings ordered Year 1	100	250	500	1 000
	Approximate cost Year 1	\$150	\$375	\$750	\$1 500
	Metres of row planted in Year 1 at 0.8m plant spacing	80	200	400	800
Year 2	Metres of row able to be planted in Year 2	2 400	6 000	12 000	24 000
	Hectares able to be planted in Year 2 at 1.8m row spacing	0.4	1.1	2.2	4.3



New varieties available in the Southern region in 2015

Presented below are the latest results of trials conducted in the Southern region. The mean yield and CCS of each variety is compared to the average yield and CCS of the standard varieties in the trials (shown in the brackets).

SRA 1

Parentage: QN86-2139 x QC90-289 | High tonnes, high CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2011	Plant	74 (67)	16.2 (15.6)	4
2012	1 st Ratoon	123 (116)	17.4 (16.7)	4
2013	2 nd Ratoon	101 (89)	17.5 (16.9)	4
2014	3 rd Ratoon	109 (100)	15.5 (15.0)	2
2013	Plant	82 (71)	16.4 (16.0)	4
2014	1 st Ratoon	95 (88)	15.9 (15.2)	4
Average of all harvests		96 (87)	16.6 (16.0)	22

The standard varieties used in these trials were Q151 Q155 Q208[Ⓟ] KQ228[Ⓟ] Q232[Ⓟ] Q240[Ⓟ] Q242[Ⓟ]

SRA 2

Parentage: QS92-206 x QS87-7430 | Moderate-high tonnes, high CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2010	Plant	95 (95)	13.8 (13.5)	4
2011	1 st Ratoon	103 (96)	16.1 (15.8)	4
2012	2 nd Ratoon	127 (112)	16.9 (16.5)	4
2013	Plant	71 (71)	16.9 (16.0)	4
2014	1 st Ratoon	85 (88)	16.4 (15.2)	4
Average of all harvests		96 (92)	16.0 (15.4)	20

The standard varieties used in these trials were Q151 Q155 Q208[Ⓟ] KQ228[Ⓟ] Q232[Ⓟ] Q240[Ⓟ] Q242[Ⓟ]



SRA2, Q252[Ⓟ], SRA1



New varieties available in the NSW region in 2015

Presented below are the latest results of trials conducted in the NSW region. The mean yield and CCS of each variety is compared to the average yield and CCS of the standard varieties in the trials (shown in the brackets).

SRA 1

Parentage: QN86-2139 x QC90-289 | High tonnes, high CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2011	Plant	57 (46)	13.0 (12.6)	2
2012	1 st Ratoon	68 (62)	15.6 (15.4)	2
2013	2 nd Ratoon	78 (65)	16.8 (16.3)	2
2013	Plant	62 (45)	16.4 (15.8)	2
2014	1 st Ratoon	125 (106)	15.3 (14.9)	2
Average of all harvests		78 (65)	16.8 (16.3)	10

The standard varieties used in these trials were BN81-1394 EMPIRE Q151 Q188[♠] Q200[♠] Q203[♠] Q208[♠] Q210[♠] Q211[♠] Q212[♠] KQ228[♠]

Release in all mills as 1yr old, no Plant 2yr data yet

SRA 2

Parentage: QS92-206 x QS87-7430 | High tonnes, high CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2010	Plant	103 (91)	12.9 (12.4)	2
2011	1 st Ratoon	48 (40)	11.0 (10.6)	1
2012	2 nd Ratoon	97 (76)	15.4 (15.0)	1
2013	Plant	51 (45)	16.9 (15.8)	2
2014	1 st Ratoon	110 (106)	16.0 (14.9)	2
2014	Plant	90 (82)	11.7 (11.7)	2
Average of all harvests		85 (77)	14.1 (13.5)	10

The standard varieties used in these trials were BN81-1394 Q188[♠] Q193[♠] Q200[♠] Q203[♠] Q205[♠] Q208[♠] Q210[♠] Q211[♠] KQ228[♠]

Only released in Condong as a 1yr old variety

Q252[♠]

Parentage: Parentage: Q208[♠] x Q96 | High tonnes, high CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2011	Plant	50 (46)	12.5 (12.6)	2
2012	1 st Ratoon	66 (62)	14.8 (15.4)	2
2013	2 nd Ratoon	71 (65)	15.9 (16.3)	2
2013	Plant	47 (45)	16.4 (15.8)	2
2014	1 st Ratoon	107 (106)	15.4 (14.9)	2
2014	Plant	100 (82)	11.7 (11.7)	2
Average of all harvests		73 (68)	14.5 (14.4)	12

The standard varieties used in these trials were BN81-1394 EMPIRE Q151 Q188[♠] Q200[♠] Q203[♠] Q208[♠] Q210[♠] Q211[♠] Q212[♠] KQ228[♠]

Release all mills heavy cane, P 2yr trial results 2015

































































































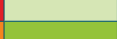




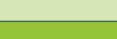





































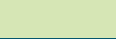




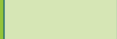



























Disease resistance

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.

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

	Susceptible		Intermediate/Susceptible		Intermediate
	Resistant		Intermediate/Resistant		

Variety	Brown rust	Chlorotic streak	Fiji leaf gall	Leaf scald	Mosaic	Orange rust	Pachymetra root rot	Red rot	Ratoon stunting disease	Smut
SRA2										
SRA1										
Q255 [Ⓛ]										
Q254 [Ⓛ]										
Q252 [Ⓛ]										
Q249 [Ⓛ]										
Q248 [Ⓛ]										
Q245 [Ⓛ]										
Q242 [Ⓛ]										
Q240 [Ⓛ]										
Q238 [Ⓛ]										
Q235 [Ⓛ]										
Q234 [Ⓛ]										
Q232 [Ⓛ]										
Q213 [Ⓛ]										
Q212 [Ⓛ]										
Q211 [Ⓛ]										
Q210 [Ⓛ]										
Q208 [Ⓛ]										



Variety	Brown rust	Chlorotic streak	Fiji leaf gall	Leaf scald	Mosaic	Orange rust	Pachymetra root rot	Red rot	Ratoon stunting disease	Smut
Q203 [♠]	Green	Red	Green	Green	Green	Green	Red	Green	Yellow	Orange
Q200 [♠]	Green	Green	Yellow	Green	Green	Green	Yellow	Green	Green	Green
Q193 [♠]	White	White	Green	Green	Light Green	Green	Yellow	Green	Yellow	Red
Q190 [♠]	Light Green	White	Green	Green	Green	Green	Green	Green	Green	Yellow
Q188 [♠]	Green	White	Green	Green	Green	Green	Green	Yellow	Green	Red
Q183 [♠]	Green	White	Green	Yellow	Green	Green	Green	Yellow	Yellow	Light Green
Q177 [♠]	Green	White	Light Green	Green	Light Green	Yellow	Red	Light Green	Yellow	Green
Q155	Green	Yellow	Green	Green	Orange	Green	Red	Red	Red	Yellow
Q151	Green	White	Green	Green	Green	Green	Orange	Light Green	Red	Green
Q138	Green	Light Green	Green	Green	Orange	Green	Green	Orange	Red	Red
KQ228 [♠]	Green	White	Yellow	Green	Green	Green	Yellow	Green	Red	Green
EMPIRE	Green	Red	Green	Green	Green	Green	Yellow	White	Green	Red
BN83-3120	White	Green	Green	Green	White	Green	Red	Yellow	White	Red
BN81-1394	White	Green	Green	Orange	Green	White	Red	Yellow	Red	Green



Soil recommendations

The varieties are listed in order of recommendation for each soil type. The first variety listed is the highest recommendation. Please refer to your farm soil map, available from your local productivity services group. Soil-specific nutrient management guideline booklets are available for the Isis, Bundaberg and NSW districts on the SRA website sugarresearch.com.au

Bundaberg and Isis

Black clay	SRA1 Q208 [Ⓟ] SRA2 Q240 [Ⓟ] Q252 [Ⓟ] Q242 [Ⓟ] Q238 [Ⓟ] Q249 [Ⓟ]
Grey forest	SRA1 Q232 [Ⓟ] SRA2 Q242 [Ⓟ] Q238 [Ⓟ] Q240 [Ⓟ] Q252 [Ⓟ] Q183 [Ⓟ]
Heavy alluvials	SRA1 Q238 [Ⓟ] SRA2 Q240 [Ⓟ] KQ228 [Ⓟ] Q208 [Ⓟ] Q252 [Ⓟ] Q242 [Ⓟ]
Light alluvials	SRA1 Q240 [Ⓟ] KQ228 [Ⓟ] SRA2 Q245 [Ⓟ] Q238 [Ⓟ] Q232 [Ⓟ] Q208 [Ⓟ]
Poor grey forest and sands	SRA1 Q240 [Ⓟ] SRA2 Q245 [Ⓟ] Q238 [Ⓟ] Q252 [Ⓟ] Q242 [Ⓟ] Q232 [Ⓟ]
Red forest	SRA1 Q238 [Ⓟ] Q232 [Ⓟ] Q208 [Ⓟ] SRA2 Q240 [Ⓟ] KQ228 [Ⓟ] Q252 [Ⓟ]
Red volcanic	SRA1 Q240 [Ⓟ] SRA2 KQ228 [Ⓟ] Q208 [Ⓟ] Q252 [Ⓟ] Q238 [Ⓟ] Q183 [Ⓟ]

Maryborough

Black clay	SRA1 SRA2 Q252 [Ⓟ] Q240 [Ⓟ] Q208 [Ⓟ] Q249 [Ⓟ] Q238 [Ⓟ] Q232 [Ⓟ]
Grey forest	SRA1 SRA2 Q252 [Ⓟ] Q249 [Ⓟ] Q238 [Ⓟ] Q208 [Ⓟ] Q138
Hard-setting scrub soil	SRA1 SRA2 Q252 [Ⓟ] Q249 [Ⓟ] Q232 [Ⓟ] Q208 [Ⓟ]
Heavy alluvials	SRA1 SRA2 Q252 [Ⓟ] Q238 [Ⓟ] Q240 [Ⓟ] Q232 [Ⓟ] Q208 [Ⓟ]
Light alluvials	SRA1 SRA2 Q252 [Ⓟ] Q238 [Ⓟ] Q240 [Ⓟ] Q208 [Ⓟ]
Red clay	SRA1 SRA2 Q252 [Ⓟ] Q232 [Ⓟ] Q238 [Ⓟ] Q240 [Ⓟ] Q208 [Ⓟ]
Red forest	SRA1 SRA2 Q252 [Ⓟ] Q238 [Ⓟ] Q240 [Ⓟ] Q208 [Ⓟ]
Scrub soil	SRA1 SRA2 Q252 [Ⓟ] Q208 [Ⓟ]
Wallum	SRA1 SRA2 Q252 [Ⓟ] Q249 [Ⓟ] Q242 [Ⓟ] Q208 [Ⓟ]

Rocky Point

Clay	SRA1 KQ228 [Ⓟ] SRA2 Q232 [Ⓟ] Q238 [Ⓟ] Q240 [Ⓟ] Q252 [Ⓟ] Q249 [Ⓟ]
Peat/loam	SRA1 Q232 [Ⓟ] Q208 [Ⓟ] SRA2 Q240 [Ⓟ] Q183 [Ⓟ] KQ228 [Ⓟ] Q242 [Ⓟ]
Sand	SRA1 Q242 [Ⓟ] Q232 [Ⓟ] Q138 SRA2 Q248 [Ⓟ] Q235 [Ⓟ] Q177 [Ⓟ]

Condong

Clay loam	Q208 [Ⓟ] KQ228 [Ⓟ] Q211 [Ⓟ] Q155 Q183 [Ⓟ] Q240 [Ⓟ] Q188 [Ⓟ] BN81-1394
Peat loam	Q208 [Ⓟ] Q211 [Ⓟ] Q242 [Ⓟ] KQ228 [Ⓟ] Q183 [Ⓟ] Q188 [Ⓟ] Q255 Q254 [Ⓟ]
Sandy soils	Q208 [Ⓟ] Q190 [Ⓟ] Q211 [Ⓟ] Q242 [Ⓟ] Q235 [Ⓟ] ROGAN Q255 Q254 [Ⓟ]

Broadwater

High-quality soils	Q208 [Ⓟ] Q240 [Ⓟ] Q200 [Ⓟ] EMPIRE Q255 Q254 [Ⓟ] Q244 [Ⓟ] Q235 [Ⓟ]
Medium-quality clays	Q208 [Ⓟ] Q255 Q254 [Ⓟ] Q242 [Ⓟ] Q235 [Ⓟ] Q232 [Ⓟ] Q203 [Ⓟ] Q183 [Ⓟ]
Sandy soils	BN83-3120 Q242 [Ⓟ] Q235 [Ⓟ] Q190 [Ⓟ] ARRIS Q183 [Ⓟ] Q208 [Ⓟ] Q193 [Ⓟ]

Harwood

High-quality soils	Q208 [Ⓟ] EMPIRE Q244 [Ⓟ] Q240 [Ⓟ] Q235 [Ⓟ] Q232 [Ⓟ] KQ228 [Ⓟ] Q200 [Ⓟ]
Medium-quality soils	Q208 [Ⓟ] Q235 [Ⓟ] Q232 [Ⓟ] KQ228 [Ⓟ] Q203 [Ⓟ] Q183 [Ⓟ] QC75-326 BN83-3120
Poor soils	BN83-3120 Q242 [Ⓟ] ARRIS Q203 [Ⓟ] Q183 [Ⓟ] Q254 [Ⓟ] Q208 [Ⓟ]



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
SRA2	Good	Good	Good
SRA1	Good	Good	Good
Q252 [Ⓛ]	Good	Good	Good
Q249 [Ⓛ]	Average	Average	Good
Q245 [Ⓛ]	Poor	Average	Average
Q242 [Ⓛ]	Average	Average	Average
Q240 [Ⓛ]	Good	Good	Good
Q238 [Ⓛ]	Average	Average	Average
Q235 [Ⓛ]	Good	Good	Average
Q232 [Ⓛ]	Poor	Average	Average
KQ228 [Ⓛ]	Good	Good	Average
Q208 [Ⓛ]	Average	Good	Good
Q200 [Ⓛ]	Average	Average	Good
Q183 [Ⓛ]	Average	Average	Good
Q151	Good	Average	Poor
Q138	Poor	Poor	Poor

Maryborough

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



Harvest management (continued)

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.

NSW

Variety	Early sugar	Mid sugar	Late sugar
Q255	Good	Average	Average
Q254 [Ⓛ]	Average	Average	Average
Q244 [Ⓛ]	Good	Average	Average
Q243 [Ⓛ]	Average	Good	Good
Q242 [Ⓛ]	Good	Average	Average
Q240 [Ⓛ]	Good	Good	Good
Q235 [Ⓛ]	Good	Good	Average
Q234 [Ⓛ]	Good	Good	Good
Q232 [Ⓛ]	Poor	Average	Good
Q213 [Ⓛ]	Poor	Average	Average
Q212 [Ⓛ]	Poor	Average	Average
Q211 [Ⓛ]	Good	Good	Average
Q210 [Ⓛ]	Good	Average	Average
Q208 [Ⓛ]	Average	Good	Good
Q203 [Ⓛ]	Average	Average	Average
Q200 [Ⓛ]	Good	Good	Average
Q193 [Ⓛ]	Good	Good	Average
Q190 [Ⓛ]	Poor	Average	Average
Q188 [Ⓛ]	Average	Average	Average
Q183 [Ⓛ]	Average	Average	Average
Q155	Good	Good	Good
KQ228 [Ⓛ]	Good	Average	Poor
EMPIRE	Average	Good	Good
BN83-3120	Poor	Poor	Poor
BN81-1394	Average	Good	Good

Rocky Point

Variety	Early sugar	Mid sugar	Late sugar
SRA2	Good	Good	Average
SRA1	Good	Good	Good
Q252 [Ⓛ]	Good	Good	Good
Q249 [Ⓛ]	Average	Average	Average
Q248 [Ⓛ]	Average	Average	Average
Q245 [Ⓛ]	Poor	Average	Average
Q242 [Ⓛ]	Good	Good	Good
Q240 [Ⓛ]	Good	Good	Good
Q238 [Ⓛ]	Average	Good	Good
Q235 [Ⓛ]	Good	Good	Average
Q232 [Ⓛ]	Poor	Average	Good
KQ228 [Ⓛ]	Good	Good	Average
Q212 [Ⓛ]	Poor	Poor	Poor
Q208 [Ⓛ]	Good	Good	Good
Q200 [Ⓛ]	Average	Average	Average
Q190 [Ⓛ]	Poor	Average	Average
Q183 [Ⓛ]	Average	Good	Good
Q177 [Ⓛ]	Poor	Average	Average
Q155	Good	Good	Good
Q151	Good	Good	Average
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	Flowering	Fast germination	Fast and reliable ratooning	Drought tolerance	Tolerance to waterlogging	Frost tolerance	Reliability of germination
SRA2	Heavy	Unknown	NA	Unknown	Unknown	Unknown	Average
SRA1	Moderate	Unknown	NA	Average	Average	Unknown	Good
Q252 [Ⓞ]	Moderate	Average	Unknown	Unknown	Unknown	Unknown	Average
Q249 [Ⓞ]	Sparse	Average	Average	Unknown	Unknown	Unknown	Good
Q245 [Ⓞ]	Moderate	Average	Good	Good	Unknown	Poor	Average
Q242 [Ⓞ]	Moderate	Rapid	Good	Poor	Unknown	Average	Good
Q240 [Ⓞ]	Sparse	Rapid	Good	Average	Average	Good	Good
Q238 [Ⓞ]	Moderate	Rapid	Good	Average	Poor	Poor	Good
Q235 [Ⓞ]	Heavy	Average	Average	Average	Unknown	Unknown	Good
Q232 [Ⓞ]	Heavy	Average	Good	Average	Average	Poor	Average
KQ228 [Ⓞ]	Sparse	Rapid	Average	Poor	Average	Average	Good
Q208 [Ⓞ]	Moderate	Slow	Average	Average	Average	Average	Good
Q200 [Ⓞ]	Sparse	Average	Average	Poor	Average	Poor	Good
Q183 [Ⓞ]	Sparse	Rapid	Good	Poor	Average	Average	Good
Q151	Moderate	Rapid	Good	Poor	Average	Average	Good
Q138	Moderate	Average	Good	Good	Good	Poor	Good

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

Rocky Point

Variety	Stand-over	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	Trash yield
SRA2	Unknown	Unknown	Unknown	Average	Unknown	Unknown	Unknown	Heavy	Medium
SRA1	Unknown	Unknown	Unknown	Average	Unknown	Unknown	Unknown	Moderate	Medium
Q252 ^φ	Unknown	Average	Average	Unknown	Unknown	Unknown	Unknown	Moderate	Low
Q249 ^φ	Unknown	Average	Average	Unknown	Unknown	Unknown	Unknown	Sparse	Medium
Q248 ^φ	Average	Average	Average	Average	Average	Poor	Poor	Heavy	Low-Medium
Q245 ^φ	Average	Average	Average	Average	Average	Average	Unknown	Moderate	Medium
Q242 ^φ	Average	Average	Average	Average	Average	Good	Average	Moderate	Medium-High
Q240 ^φ	Good	Average	Average	Good	Average	Good	Good	Sparse	Low-Medium
Q238 ^φ	Good	Average	Average	Average	Average	Average	Poor	Moderate	Medium
Q235 ^φ	Average	Good	Good	Good	Average	Average	Poor	Heavy	Low-Medium
Q232 ^φ	Good	Average	Average	Good	Average	Average	Average	Heavy	High
KQ228 ^φ	Average	Good	Good	Average	Average	Average	Average	Moderate	Medium-High
Q212 ^φ	Average	Average	Average	Average	Average	Average	Poor	Moderate	Low
Q208 ^φ	Good	Average	Average	Average	Average	Good	Average	Moderate	Low
Q200 ^φ	Good	Good	Good	Average	Poor	Average	Poor	Sparse	Medium
Q190 ^φ	Good	Average	Average	Poor	Poor	Poor	Poor	Sparse	Low
Q183 ^φ	Good	Good	Good	Average	Poor	Poor	Average	Sparse	Low-Medium
Q177 ^φ	Good	Good	Good	Average	Average	Average	Average	Moderate	Medium-High
Q155	Good	Good	Good	Average	Average	Average	Average	Sparse	Medium-High
Q151	Poor	Good	Good	Poor	Poor	Average	Poor	Moderate	High
Q138	Good	Good	Good	Good	Good	Good	Average	Moderate	High

Variety	Fast and reliable germination	Drought tolerance	Tolerance to waterlogging	Frost tolerance	Flowering	Crop Age	Ratooning after early harvest	Ratooning under wet conditions
Q255	Average	Average	Good	Average	Sparse	1 or 2 Years	Average	Unknown
Q254 [Ⓞ]	Good	Average	Unknown	Unknown	Sparse	1 or 2 Years	Unknown	Unknown
Q244 [Ⓞ]	Average	Average	Poor	Average	Sparse	1 or 2 Years	Average	Average
Q243 [Ⓞ]	Good	Average	Average	Average	Sparse	1 or 2 Years	Average	Average
Q242 [Ⓞ]	Good	Average	Average	Average	Moderate	1 or 2 Years	Average	Average
Q240 [Ⓞ]	Good	Average	Poor	Good	Sparse	1 or 2 Years	Average	Average
Q235 [Ⓞ]	Average	Good	Average	Average	Moderate	1 or 2 Years	Average	Average
Q234 [Ⓞ]	Good	Poor	Average	Poor	Sparse	1 or 2 Years	Average	Average
Q232 [Ⓞ]	Average	Average	Good	Good	Heavy	1 or 2 Years	Good	Good
Q213 [Ⓞ]	Average	Average	Average	Average	Heavy	1 or 2 Years	Average	Average
Q212 [Ⓞ]	Good	Average	Average	Poor	Sparse	1 or 2 Years	Average	Average
Q211 [Ⓞ]	Average	Average	Average	Average	Sparse	1 or 2 Years	Good	Average
Q210 [Ⓞ]	Good	Average	Average	Average	Sparse	1 or 2 Years	Good	Poor
Q208 [Ⓞ]	Average	Good	Good	Average	Sparse	1 or 2 Years	Good	Good
Q203 [Ⓞ]	Good	Average	Poor	Good	Moderate	1 or 2 Years	Good	Poor
Q200 [Ⓞ]	Good	Poor	Average	Poor	Sparse	1 or 2 Years	Average	Average
Q193 [Ⓞ]	Good	Average	Average	Average	Heavy	1 or 2 Years	Good	Good
Q190 [Ⓞ]	Good	Average	Poor	Poor	Sparse	1 or 2 Years	Average	Poor
Q188 [Ⓞ]	Average	Average	Poor	Average	Heavy	1 or 2 Years	Poor	Poor
Q183 [Ⓞ]	Good	Poor	Average	Average	Sparse	1 or 2 Years	Average	Average
Q155	Average	Average	Poor	Average	Sparse	1 or 2 Years	Good	Average
KQ228 [Ⓞ]	Good	Average	Average	Average	Moderate	1 or 2 Years	Good	Good
EMPIRE	Average	Average	Average	Average	Moderate	1 or 2 Years	Average	Poor
BN83-3120	Good	Average	Good	Good	Heavy	2 Year	Good	Good
BN81-1394	Average	Average	Poor	Good	Sparse	1 or 2 Years	Good	Average



Planting and managing your 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 stooling out 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.

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. Pre-emergent herbicides can be used. Do not use diuron as young plantlets are sensitive to this product.

Do not use paraquat unless you have no other option and only on established plantings. Established plantlets can be treated with the same chemicals as the ratoons on your farm. Label rates of S-metolachlor plus atrazine have been applied successfully over the top after planting. For example, in SRA field trials we used Atradex® @ 2.5 kg/ha plus Dual Gold® @ 1.5 L/ha for grasses and broadleaf weeds and also Sempra® @ 100 g/ha plus Activator @ 200 mL/100 L for nutgrass. Both applications were sprayed over the top after planting.

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.



Using sugarcane varieties that are best-suited to your crop 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.



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.

To access QCANESelect™ and the tissue culture calculator visit the SRA website www.sugarresearch.com.au

Calculator

Input YOUR information in the shaded cells below.

Whole stick option

Choose up front cost - order less plantlets - whole stick planting year 2.

Year 1 - Tissue culture

Input the price charged for each plantlet: 1.50

Input the number of plantlets ordered: 90

Total cost of order \$ 135.00

Input the plant spacing between plantlets in metres: 3.8

Length of row required for planting in metres 72

Year 2 - Whole stick planting

Input an estimate of the number of stalks per stool: 12

Estimated metres of row planted using whole stick planter 2160

Input row width in metres: 1.8

Estimated hectares planted using whole stick planter 0.39

Year 3 - Billet planting

Input estimate of cane yield on nursery plot in tonnes/ha: 88

Estimated tonnes available for planting 31.20

Input the planting rate of your billet planter in tonnes of billets/ha: 7

Estimated hectares planted 4.46

Billet-Planting option

Labour saving - order more plantlets - billet planting year 2.

Year 1 - Tissue culture

Input the price charged for each plantlet: 1.50

Input the number of plantlets ordered: 900

Total cost of order \$ 1350.00

Input the plant spacing between plantlets in metres: 0.8

Length of row required for planting in metres 720

Year 2 - Billet planting

Input your estimate of the cane yield from nursery plot in tonnes/ha: 80

Estimated tonnes available for planting 10.37

Input the planting rate of your billet planter in tonnes of billets/ha: 7

Input row width in metres: 1.8

Estimated hectares planted using billet planter 1.48

Year 3 - Billet planting

Input estimate of cane yield on nursery plot in tonnes/ha: 88

Estimated tonnes available for planting 118.40

Input the planting rate of your billet planter in tonnes of billets/ha: 2

Estimated hectares planted 16.91

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