



Sugar Research  
Australia



---

# Variety Guide 2014/15

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 3-4

**2** The disease resistance ratings of each variety  
Pages 5-6

**3** Which varieties will better suit certain soil types  
Page 7

**4** When you should harvest a particular variety  
Pages 8-9

**5** Which varieties are most suited to the environment on your farm  
Pages 9-11

**6** Which varieties have performed well over the last few seasons  
Pages 12-14

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](http://www.sugarresearch.com.au)

**SRA Variety Development Officers:** Rod Fletcher on 0459 847 445 and Gae Plunkett on 0477 316 503.

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 autumn planting	Order deadline for spring planting
Grower finalises order. Productivity services group places order with SRA.	<b>1 July 2014</b>	<b>15 November 2014</b>
Productivity services group receives established plantlets from nursery and distributes to growers.	Delivery on agreed date between grower, productivity services group and nursery. <b>Available in March 2015.</b>	Delivery on agreed date between grower, productivity services group and nursery. <b>Available in August 2015.</b>

### 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](http://sugarresearch.com.au)).

<b>Year 1</b>	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	1 200
<b>Year 2</b>	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 2014

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).

### Q252<sup>Ⓛ</sup>

Parentage: Q208<sup>Ⓛ</sup> x Q96 | High tonnes, high CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2011	Plant	76 (66)	16.0 (15.8)	4
2012	1 <sup>st</sup> Ratoon	126 (115)	17.2 (16.8)	4
2013	2 <sup>nd</sup> Ratoon	90 (85)	17.1 (17.0)	4
2013	Plant	78 (76)	15.8 (15.7)	5
<b>Average of all harvests</b>		<b>92 (85)</b>	<b>16.5 (16.3)</b>	<b>17</b>

The standard varieties used in these trials were Q242<sup>Ⓛ</sup> Q240<sup>Ⓛ</sup> Q232<sup>Ⓛ</sup> KQ228<sup>Ⓛ</sup> Q208<sup>Ⓛ</sup> Q155 Q151

This variety is resistant to leaf scald, mosaic and red rot. It has intermediate resistance to Fiji leaf gall, pachymetra root rot and smut.

### Q249<sup>Ⓛ</sup>

Parentage: QC83-625 x QC90-289 | High tonnes, moderate CCS

Trial harvest date	Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
2011	Plant	89 (66)	15.9 (15.8)	4
2012	1 <sup>st</sup> Ratoon	131 (115)	16.8 (16.8)	4
2013	2 <sup>nd</sup> Ratoon	91 (85)	16.9 (17.0)	4
2013	Plant	79 (76)	15.3 (15.7)	5
<b>Average of all harvests</b>		<b>96 (85)</b>	<b>16.2 (16.3)</b>	<b>17</b>

The standard varieties used in these trials were Q242<sup>Ⓛ</sup> Q240<sup>Ⓛ</sup> Q232<sup>Ⓛ</sup> KQ228<sup>Ⓛ</sup> Q208<sup>Ⓛ</sup> Q155 Q151

This variety is resistant to Fiji leaf gall, leaf scald and smut. It has intermediate resistance to mosaic, pachymetra root rot and red rot.



Q252<sup>Ⓛ</sup>



Q249<sup>Ⓛ</sup>



Q248<sup>Ⓛ</sup>



Q254<sup>Ⓛ</sup>



Q255



## New varieties available in the NSW region in 2014

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).

### Q248<sup>db</sup>

**Parentage: QN85-1271 x Q170<sup>db</sup> | High tonnes, moderate sugar, recommended for a one-year harvest, late season sugar, many suckers, few flowers**

Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
Plant	82 (83)	15.4 (15.4)	5
Plant two-year	184 (178)	13.3 (13.7)	3
1 <sup>st</sup> Ratoon	72 (72)	13.9 (13.9)	4
2 <sup>nd</sup> Ratoon	76 (59)	15.5 (15.2)	1
<b>Average of all harvests one-year</b>	<b>77 (76)</b>	<b>14.8 (14.8)</b>	<b>10</b>
<b>Average of all harvests two-year</b>	<b>184 (178)</b>	<b>13.3 (13.7)</b>	<b>3</b>

These trials were planted in 2006, 2010 and 2011 at Condong, Broadwater and Harwood. The standard varieties used in these trials were EMPIRE Q151 Q155 Q188<sup>db</sup> Q200<sup>db</sup> Q203<sup>db</sup> Q205<sup>db</sup> Q208<sup>db</sup> Q210<sup>db</sup> Q211<sup>db</sup> Q212<sup>db</sup> KQ228<sup>db</sup> Q232<sup>db</sup> Q234<sup>db</sup> BN81-1394

This variety is resistant to Fiji leaf gall and leaf scald. It has intermediate resistance to mosaic. It is susceptible to smut so monitor the levels of smut in the field. It has intermediate resistance to chlorotic streak and pachymetra root rot.

### Q254<sup>db</sup>

**Parentage: QN80-3425 x Q162<sup>db</sup> | High tonnes, moderate sugar, recommended for a one-year or two-year variety, thick stalks, sharp leaves**

Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
Plant	108 (97)	14.8 (15.0)	2
Plant two-year	234 (207)	13.1 (12.9)	4
1 <sup>st</sup> Ratoon	106 (98)	13.2 (13.2)	3
1 <sup>st</sup> Ratoon two-year	138 (123)	13.5 (13.4)	3
2 <sup>nd</sup> Ratoon	93 (81)	14.3 (14.2)	2
<b>Average of all harvests one-year</b>	<b>103 (93)</b>	<b>14.0 (14.0)</b>	<b>7</b>
<b>Average of all harvests two-year</b>	<b>193 (155)</b>	<b>13.3 (13.1)</b>	<b>7</b>

These trials were planted in 2003, 2004 and 2008 at Condong, Broadwater and Harwood. The standard varieties used in these trials were Q203<sup>db</sup> Q155 Q151 Q124 BN81-1394 BN88-3347 CONCORD EMPIRE ESK

This variety is resistant to Fiji leaf gall, leaf scald and mosaic. It has intermediate resistance to pachymetra root rot, red rot and smut.

### Q255

**Parentage: Q224<sup>db</sup> x Q184<sup>db</sup> | High tonnes, good sugar, recommended for a one-year or two-year variety, purple stalk, large stool, large number of stalks per stool, sprawling habit**

Crop class	Yield (tonnes cane/ha)	CCS	Number of trials
Plant	85 (89)	14.2 (13.3)	3
Plant two-year	150 (146)	14.2 (13.8)	4
1 <sup>st</sup> Ratoon	134 (133)	14.9 (14.8)	2
1 <sup>st</sup> Ratoon two-year	171 (169)	11.5 (11.2)	4
2 <sup>nd</sup> Ratoon	160 (146)	12.2 (12.7)	1
<b>Average of all harvests one-year</b>	<b>114 (113)</b>	<b>14.1 (13.7)</b>	<b>6</b>
<b>Average of all harvests two-year</b>	<b>161 (158)</b>	<b>12.9 (12.5)</b>	<b>8</b>

These trials were planted in 2002, 2007 and 2011 at Condong, Broadwater and Harwood. The standard varieties used in these trials were KQ228<sup>db</sup> Q211<sup>db</sup> Q208<sup>db</sup> Q205<sup>db</sup> Q203<sup>db</sup> Q200<sup>db</sup> Q193<sup>db</sup> Q190<sup>db</sup> Q151 Q136 Q124 BN81-1394 BN83-3120 CP65-357 EMPIRE ESK RB72-454 ARRIS

This variety is resistant to mosaic and orange rust. It has intermediate resistance to Fiji leaf gall, leaf scald, pachymetra root rot, red rot and smut.








## 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](http://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
Q255			Intermediate	Intermediate	Resistant	Resistant	Intermediate/Susceptible	Intermediate/Susceptible		Intermediate
Q254 <sup>Ⓛ</sup>			Resistant		Resistant		Intermediate	Intermediate		Intermediate
Q252 <sup>Ⓛ</sup>			Intermediate	Resistant	Resistant		Intermediate	Resistant		Intermediate
Q249 <sup>Ⓛ</sup>			Resistant		Intermediate/Resistant		Intermediate	Intermediate/Resistant		Resistant
Q248 <sup>Ⓛ</sup>			Resistant		Intermediate/Resistant		Intermediate/Resistant	Intermediate		Susceptible
Q245 <sup>Ⓛ</sup>			Resistant		Resistant	Resistant	Resistant	Susceptible		Resistant
Q244 <sup>Ⓛ</sup>		Susceptible	Resistant		Intermediate/Susceptible		Intermediate/Susceptible	Intermediate		Intermediate
Q243 <sup>Ⓛ</sup>		Intermediate	Intermediate/Resistant		Resistant	Resistant	Susceptible	Resistant	Resistant	Intermediate/Resistant
Q242 <sup>Ⓛ</sup>		Intermediate	Resistant		Resistant	Resistant	Resistant	Intermediate/Resistant	Susceptible	Intermediate
Q240 <sup>Ⓛ</sup>		Intermediate/Resistant	Intermediate/Susceptible		Resistant	Resistant	Intermediate	Resistant	Resistant	Resistant
Q238 <sup>Ⓛ</sup>	Resistant	Susceptible	Intermediate/Resistant		Resistant	Resistant	Resistant	Intermediate/Resistant	Intermediate	Resistant
Q235 <sup>Ⓛ</sup>		Intermediate/Susceptible	Resistant		Resistant		Resistant	Resistant	Susceptible	Resistant
Q234 <sup>Ⓛ</sup>	Susceptible	Intermediate/Susceptible	Resistant		Resistant	Resistant	Intermediate/Susceptible	Intermediate/Resistant	Susceptible	Intermediate/Susceptible
Q232 <sup>Ⓛ</sup>		Resistant	Intermediate		Resistant	Resistant	Intermediate	Intermediate/Resistant	Intermediate	Resistant
KQ228 <sup>Ⓛ</sup>	Resistant		Intermediate		Resistant		Intermediate	Resistant	Susceptible	Resistant
Rogan	Intermediate/Susceptible	Resistant	Intermediate/Resistant		Resistant	Resistant	Resistant	Resistant	Intermediate	Resistant
Q212 <sup>Ⓛ</sup>		Susceptible	Resistant		Intermediate/Resistant			Susceptible		Susceptible
Q211 <sup>Ⓛ</sup>	Resistant		Susceptible		Resistant	Resistant	Resistant	Resistant	Susceptible	Susceptible



Variety	Brown rust	Chlorotic streak	Fiji leaf gall	Leaf scald	Mosaic	Orange rust	Pachymetra root rot	Red rot	Ratoon stunting disease	Smut
Q210 <sup>db</sup>	Green	Green	Yellow	Green	Green	Green	Orange	Green	Yellow	Red
Q208 <sup>db</sup>	Green	Green	Orange	Green	Green	Green	Yellow	Green	Green	Light Green
Q203 <sup>db</sup>	Green	Red	Green	Green	Green	Green	Red	Green	Yellow	Orange
Q200 <sup>db</sup>	Green	Green	Yellow	Green	Green	Green	Yellow	Green	Green	Green
Q193 <sup>db</sup>	White	White	Green	Green	Light Green	Green	Yellow	Green	Yellow	Red
Q190 <sup>db</sup>	Light Green	White	Green	Green	Green	Green	Green	Green	Green	Yellow
Q188 <sup>db</sup>	Green	White	Green	Green	Green	Green	Green	Yellow	Green	Red
Q183 <sup>db</sup>	Green	White	Green	Yellow	Green	Green	Green	Red	Yellow	Light Green
Q177 <sup>db</sup>	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
Q135	Green	Red	Green	Green	Red	Green	Yellow	Red	Green	Yellow
Q124	Green	Yellow	Orange	Green	Red	Red	Orange	Orange	Red	Orange
ARRIS	White	Red	Yellow	Green	White	Green	Orange	Green	White	Orange
BN81-1394	White	Green	Green	Orange	Green	White	Red	Yellow	Red	Green
BN83-3120	White	Green	Green	Green	White	Green	Red	Yellow	White	Red
EMPIRE	Green	Red	Green	Green	Green	Green	Yellow	White	Green	Red
RB72-454	White	White	Orange	Light Green	White	Red	Red	White	White	Red





## 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](http://sugarresearch.com.au)

### Bundaberg and Isis

Black clay	Q232 <sup>fb</sup> Q240 <sup>fb</sup> Q208 <sup>fb</sup> KQ228 <sup>fb</sup> Q135 Q183 <sup>fb</sup> Q242 <sup>fb</sup> Q238 <sup>fb</sup> Q235 <sup>fb</sup> Q249 <sup>fb</sup>
Grey forest	Q232 <sup>fb</sup> Q242 <sup>fb</sup> Q240 <sup>fb</sup> Q208 <sup>fb</sup> Q183 <sup>fb</sup> Q238 <sup>fb</sup> KQ228 <sup>fb</sup> Q200 <sup>fb</sup> Q245 <sup>fb</sup> Q235 <sup>fb</sup>
Heavy alluvials	Q240 <sup>fb</sup> Q183 <sup>fb</sup> KQ228 <sup>fb</sup> Q208 <sup>fb</sup> Q135 Q232 <sup>fb</sup> Q242 <sup>fb</sup> Q238 <sup>fb</sup> Q200 <sup>fb</sup> Q245 <sup>fb</sup>
Light alluvials	Q238 <sup>fb</sup> Q232 <sup>fb</sup> Q208 <sup>fb</sup> Q245 <sup>fb</sup> Q242 <sup>fb</sup> KQ228 <sup>fb</sup> Q240 <sup>fb</sup> Q183 <sup>fb</sup> Q249 <sup>fb</sup>
Poor grey forest and sands	Q240 <sup>fb</sup> Q242 <sup>fb</sup> Q245 <sup>fb</sup> Q232 <sup>fb</sup> KQ228 <sup>fb</sup> Q208 <sup>fb</sup> Q238 <sup>fb</sup> Q183 <sup>fb</sup> Q249 <sup>fb</sup> Q235 <sup>fb</sup>
Red forest	Q240 <sup>fb</sup> Q208 <sup>fb</sup> Q238 <sup>fb</sup> Q232 <sup>fb</sup> KQ228 <sup>fb</sup> Q242 <sup>fb</sup> Q183 <sup>fb</sup> Q245 <sup>fb</sup> Q235 <sup>fb</sup> Q249 <sup>fb</sup>
Red volcanic	Q240 <sup>fb</sup> Q183 <sup>fb</sup> KQ228 <sup>fb</sup> Q208 <sup>fb</sup> Q232 <sup>fb</sup> Q238 <sup>fb</sup> Q200 <sup>fb</sup> Q135 Q242 <sup>fb</sup> Q245 <sup>fb</sup>

### Maryborough

Black clay	Q240 <sup>fb</sup> Q138 Q208 <sup>fb</sup> Q249 <sup>fb</sup> Q252 <sup>fb</sup>
Grey forest	Q238 <sup>fb</sup> Q208 <sup>fb</sup> Q232 <sup>fb</sup> Q242 <sup>fb</sup> Q138 Q249 <sup>fb</sup> Q252 <sup>fb</sup>
Hard-setting scrub soil	Q232 <sup>fb</sup> Q238 <sup>fb</sup> Q240 <sup>fb</sup> Q242 <sup>fb</sup> Q252 <sup>fb</sup> Q249 <sup>fb</sup>
Heavy alluvials	Q240 <sup>fb</sup> Q232 <sup>fb</sup> Q238 <sup>fb</sup> Q208 <sup>fb</sup> Q249 <sup>fb</sup> Q252 <sup>fb</sup>
Light alluvials	Q240 <sup>fb</sup> Q208 <sup>fb</sup> Q238 <sup>fb</sup> Q252 <sup>fb</sup> Q249 <sup>fb</sup>
Red clay	Q238 <sup>fb</sup> Q240 <sup>fb</sup> Q232 <sup>fb</sup> Q252 <sup>fb</sup> Q249 <sup>fb</sup>
Red forest	Q208 <sup>fb</sup> Q238 <sup>fb</sup> Q240 <sup>fb</sup> Q249 <sup>fb</sup> Q252 <sup>fb</sup>
Scrub soil	Q232 <sup>fb</sup> Q208 <sup>fb</sup> KQ228 <sup>fb</sup> Q252 <sup>fb</sup> Q249 <sup>fb</sup>
Wallum	Q238 <sup>fb</sup> Q232 <sup>fb</sup> Q249 <sup>fb</sup> Q252 <sup>fb</sup>

### Rocky Point

Clay soil (clay peat, acid clay)	KQ228 <sup>fb</sup> Q232 <sup>fb</sup> Q240 <sup>fb</sup> Q238 <sup>fb</sup> Q208 <sup>fb</sup> Q242 <sup>fb</sup> Q249 <sup>fb</sup> Q245 <sup>fb</sup> Q235 <sup>fb</sup> Q252 <sup>fb</sup>
Peat/loam soil (peat, sandy peat, alluvial)	Q208 <sup>fb</sup> Q232 <sup>fb</sup> Q242 <sup>fb</sup> Q240 <sup>fb</sup> KQ228 <sup>fb</sup> Q183 <sup>fb</sup> Q238 <sup>fb</sup> Q245 <sup>fb</sup> Q249 <sup>fb</sup> Q252 <sup>fb</sup> Q155
Sandy soil (sand, salty areas, forest)	Q232 <sup>fb</sup> Q242 <sup>fb</sup> Q138 Q208 <sup>fb</sup> Q235 <sup>fb</sup> Q212 <sup>fb</sup> Q248 <sup>fb</sup> Q177 <sup>fb</sup> Q238 <sup>fb</sup> KQ228 <sup>fb</sup> Q240 <sup>fb</sup> Q183 <sup>fb</sup> Q249 <sup>fb</sup> Q245 <sup>fb</sup> Q252 <sup>fb</sup>

Trash production has been accounted for in these ratings. The trash income is more important on poorer soils.

### Condong

Clay loam	Q208 <sup>fb</sup> Q155 Q235 <sup>fb</sup> Q183 <sup>fb</sup> KQ228 <sup>fb</sup> EMPIRE Q211 <sup>fb</sup> Q200 <sup>fb</sup> Q240 <sup>fb</sup> BN81-1394
Peat loam	Q208 <sup>fb</sup> Q211 <sup>fb</sup> Q242 <sup>fb</sup> KQ228 <sup>fb</sup> Q235 <sup>fb</sup> Q240 <sup>fb</sup> ROGAN Q254 <sup>fb</sup> Q255 Q248 <sup>fb</sup>
Sandy soils	Q208 <sup>fb</sup> Q235 <sup>fb</sup> Q190 <sup>fb</sup> Q211 <sup>fb</sup> ROGAN Q255 Q248 <sup>fb</sup> Q244 <sup>fb</sup>

### Broadwater

High-quality soils	Q208 <sup>fb</sup> Q240 <sup>fb</sup> Q200 <sup>fb</sup> EMPIRE Q155 Q183 <sup>fb</sup> Q193 <sup>fb</sup> Q232 <sup>fb</sup> Q235 <sup>fb</sup> Q244 <sup>fb</sup> BN73-3416
Medium-quality clays	Q208 <sup>fb</sup> Q232 <sup>fb</sup> Q183 <sup>fb</sup> Q235 <sup>fb</sup> Q203 <sup>fb</sup> Q242 <sup>fb</sup> Q240 <sup>fb</sup>
Sandy soils	BN83-3120 Q235 <sup>fb</sup> Q242 <sup>fb</sup> ARRIS Q190 <sup>fb</sup> Q183 <sup>fb</sup> Q208 <sup>fb</sup> Q193 <sup>fb</sup> Q254 <sup>fb</sup>

### Harwood

High-quality soils	EMPIRE Q244 <sup>fb</sup> Q240 <sup>fb</sup> Q235 <sup>fb</sup> Q232 <sup>fb</sup> KQ228 <sup>fb</sup> Q208 <sup>fb</sup> Q183 <sup>fb</sup> Q200 <sup>fb</sup> Q210 <sup>fb</sup>
Medium-quality soils	Q208 <sup>fb</sup> Q243 <sup>fb</sup> Q235 <sup>fb</sup> Q232 <sup>fb</sup> Q234 <sup>fb</sup> KQ228 <sup>fb</sup> Q203 <sup>fb</sup> Q183 <sup>fb</sup>
Poor soils	BN83-3120 Q242 <sup>fb</sup> ARRIS Q203 <sup>fb</sup> Q183 <sup>fb</sup> Q208 <sup>fb</sup> Q243 <sup>fb</sup> 75C-326





## 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
Q252 <sup>Ⓛ</sup>	Good	Good	Good
Q249 <sup>Ⓛ</sup>	Average	Average	Average
Q245 <sup>Ⓛ</sup>	Poor	Average	Average
Q242 <sup>Ⓛ</sup>	Average	Good	Good
Q240 <sup>Ⓛ</sup>	Average	Good	Good
Q238 <sup>Ⓛ</sup>	Average	Good	Good
Q235 <sup>Ⓛ</sup>	Good	Good	Average
Q232 <sup>Ⓛ</sup>	Average	Good	Good
KQ228 <sup>Ⓛ</sup>	Good	Average	Average
Q212 <sup>Ⓛ</sup>	Poor	Poor	Average
Q208 <sup>Ⓛ</sup>	Good	Good	Good
Q200 <sup>Ⓛ</sup>	Average	Average	Good
Q183 <sup>Ⓛ</sup>	Average	Good	Good
Q151	Good	Average	Poor
Q138	Poor	Poor	Poor
Q135	Poor	Average	Good

### Maryborough

Variety	Early sugar	Mid sugar	Late sugar
Q252 <sup>Ⓛ</sup>	Good	Good	Good
Q249 <sup>Ⓛ</sup>	Average	Average	Average
Q240 <sup>Ⓛ</sup>	Good	Good	Good
Q238 <sup>Ⓛ</sup>	Average	Good	Good
Q235 <sup>Ⓛ</sup>	Good	Average	Average
Q232 <sup>Ⓛ</sup>	Average	Good	Good
KQ228 <sup>Ⓛ</sup>	Good	Average	Poor
Q208 <sup>Ⓛ</sup>	Average	Average	Good
Q200 <sup>Ⓛ</sup>	Poor	Average	Good
Q155	Good	Average	Average
Q138	Average	Average	Average

### NSW

Variety	Early sugar	Mid sugar	Late sugar
Q248 <sup>Ⓛ</sup>	Average	Good	Good
Q248 <sup>Ⓛ</sup> CND	Average	Average	Average
Q244 <sup>Ⓛ</sup>	Good	Average	Average
Q244 <sup>Ⓛ</sup> BRW	Good	Good	Good
Q243 <sup>Ⓛ</sup>	Good	Good	Good
Q242 <sup>Ⓛ</sup>	Good	Average	Average
Q240 <sup>Ⓛ</sup>	Good	Good	Good
Q240 <sup>Ⓛ</sup> BRW	Average	Good	Good
Q235 <sup>Ⓛ</sup> CND	Good	Good	Good
Q235 <sup>Ⓛ</sup> BRW	Good	Average	Average
Q235 <sup>Ⓛ</sup> HWD	Good	Good	Average
Q234 <sup>Ⓛ</sup>	Poor	Average	Average
Q234 <sup>Ⓛ</sup> CND	Poor	Good	Good
Q232 <sup>Ⓛ</sup> CND	Poor	Good	Good
Q232 <sup>Ⓛ</sup> BRW	Average	Good	Good
Q232 <sup>Ⓛ</sup> HWD	Poor	Average	Good
KQ228 <sup>Ⓛ</sup> CND	Good	Average	Poor
KQ228 <sup>Ⓛ</sup> BRW	Average	Good	Poor

Variety	Early sugar	Mid sugar	Late sugar
KQ228 <sup>Ⓛ</sup> HWD	Average	Average	Average
Q211 <sup>Ⓛ</sup>	Good	Good	Average
Q208 <sup>Ⓛ</sup> CND	Average	Average	Average
Q208 <sup>Ⓛ</sup> BRW	Good	Good	Good
Q208 <sup>Ⓛ</sup> HWD	Average	Good	Good
Q203 <sup>Ⓛ</sup> CND	Poor	Average	Average
Q203 <sup>Ⓛ</sup> BRW	Average	Average	Average
Q203 <sup>Ⓛ</sup> HWD	Average	Good	Good
Q200 <sup>Ⓛ</sup> CND	Good	Good	Average
Q200 <sup>Ⓛ</sup> BRW	Good	Good	Good
Q200 <sup>Ⓛ</sup> HWD	Average	Good	Good
Q190 <sup>Ⓛ</sup>	Poor	Average	Average
Q193 <sup>Ⓛ</sup> BRW	Good	Good	Good
Q193 <sup>Ⓛ</sup> HWD	Good	Good	Average
Q183 <sup>Ⓛ</sup> CND	Average	Good	Good
Q183 <sup>Ⓛ</sup>	Average	Average	Average
EMPIRE	Good	Good	Good
BN81-1394	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.

### Rocky Point

Variety	Early sugar	Mid sugar	Late sugar
Q252 <sup>Ⓛ</sup>	Good	Good	Good
Q249 <sup>Ⓛ</sup>	Average	Average	Average
Q248 <sup>Ⓛ</sup>	Average	Average	Average
Q245 <sup>Ⓛ</sup>	Poor	Average	Average
Q242 <sup>Ⓛ</sup>	Good	Good	Good
Q240 <sup>Ⓛ</sup>	Good	Good	Good
Q238 <sup>Ⓛ</sup>	Average	Good	Good
Q235 <sup>Ⓛ</sup>	Good	Good	Average
Q232 <sup>Ⓛ</sup>	Poor	Average	Good
KQ228 <sup>Ⓛ</sup>	Good	Good	Average

Variety	Early sugar	Mid sugar	Late sugar
Q212 <sup>Ⓛ</sup>	Poor	Poor	Average
Q208 <sup>Ⓛ</sup>	Good	Good	Good
Q200 <sup>Ⓛ</sup>	Average	Average	Average
Q190 <sup>Ⓛ</sup>	Poor	Average	Average
Q183 <sup>Ⓛ</sup>	Average	Good	Good
Q177 <sup>Ⓛ</sup>	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
Q252 <sup>Ⓛ</sup>	Average	Average	Unknown	Unknown	Unknown	Unknown
Q249 <sup>Ⓛ</sup>	Sparse	Average	Good	Unknown	Unknown	Unknown
Q245 <sup>Ⓛ</sup>	Heavy	Average	Good	Good	Unknown	Unknown
Q242 <sup>Ⓛ</sup>	Heavy	Good	Good	Average	Unknown	Unknown
Q240 <sup>Ⓛ</sup>	Sparse	Good	Good	Good	Unknown	Average
Q238 <sup>Ⓛ</sup>	Average	Average	Good	Good	Poor	Unknown
Q235 <sup>Ⓛ</sup>	Heavy	Average	Average	Average	Unknown	Unknown
Q232 <sup>Ⓛ</sup>	Heavy	Average	Average	Average	Average	Average
KQ228 <sup>Ⓛ</sup>	Sparse	Good	Good	Average	Average	Average
Q212 <sup>Ⓛ</sup>	Average	Average	Average	Average	Average	Poor
Q208 <sup>Ⓛ</sup>	Average	Slow	Average	Good	Average	Average
Q200 <sup>Ⓛ</sup>	Sparse	Average	Average	Poor	Average	Poor
Q183 <sup>Ⓛ</sup>	Sparse	Good	Good	Poor	Average	Unknown
Q151	Average	Good	Good	Poor	Average	Average
Q138	Average	Average	Good	Good	Good	Poor
Q135	Sparse	Average	Average	Poor	Poor	Good



Variety	Fast and reliable germination	Drought tolerance	Tolerance to waterlogging	Frost tolerance	Flowering	Crop Age	Ratooning after early harvest	Ratooning under wet conditions
Q248 <sup>Ⓟ</sup>	Average	Average	Good	Unknown	Sparse	1 Year	Unknown	Unknown
Q244 <sup>Ⓟ</sup>	Average	Average	Good	Average	Sparse	1 or 2 Years	Average	Average
Q244 <sup>Ⓟ</sup> BRW	Good	Average			Sparse	1 or 2 Years	Average	Average
Q243 <sup>Ⓟ</sup>	Good	Average	Average	Average	Sparse	1 or 2 Years	Average	Average
Q242 <sup>Ⓟ</sup>	Good	Average	Average	Unknown	Moderate	1 or 2 Years	Average	Average
Q240 <sup>Ⓟ</sup>	Average	Average	Average	Average	Sparse	1 or 2 Years	Average	Average
Q235 <sup>Ⓟ</sup> CND	Good	Average	Average	Average	Heavy	1 or 2 Years	Average	Average
Q235 <sup>Ⓟ</sup> BRW	Average	Average	Average	Average	Moderate	1 or 2 Years	Average	Average
Q235 <sup>Ⓟ</sup> HWD	Average	Average	Average	Average	Heavy	1 or 2 Years	Average	Average
Q234 <sup>Ⓟ</sup>	Good	Average	Average	Average	Moderate	1 or 2 Years	Good	Average
Q232 <sup>Ⓟ</sup> CND	Average	Good	Average	Unknown	Heavy	1 or 2 Years	Average	Average
Q232 <sup>Ⓟ</sup> BRW	Average	Average	Average	Unknown	Heavy	1 or 2 Years	Average	Average
Q232 <sup>Ⓟ</sup> HWD	Poor	Average	Average	Unknown	Heavy	1 or 2 Years	Average	Average
KQ228 <sup>Ⓟ</sup> CND	Good	Average	Average	Average	Moderate	1 or 2 Years	Good	Good
KQ228 <sup>Ⓟ</sup> BRW	Good	Average	Average	Average	Sparse	1 Year	Good	Average
KQ228 <sup>Ⓟ</sup> HWD	Good	Average	Average	Average	Heavy	1 Year	Average	Average
Q211 <sup>Ⓟ</sup>	Average	Average	Average	Average	Sparse	1 or 2 Years	Good	Average
Q208 <sup>Ⓟ</sup> CND	Poor	Good	Good	Average	Moderate	1 or 2 Years	Average	Average
Q208 <sup>Ⓟ</sup> BRW	Good	Average	Good	Average	Sparse	1 or 2 Years	Good	Average
Q208 <sup>Ⓟ</sup> HWD	Good	Good	Average	Average	Sparse	1 or 2 Years	Good	Good
Q203 <sup>Ⓟ</sup>	Good	Average	Average	Good	Moderate	1 or 2 Years	Good	Average
Q200 <sup>Ⓟ</sup> CND	Good	Poor	Poor	Poor	Sparse	1 or 2 Years	Average	Average
Q200 <sup>Ⓟ</sup> BRW	Good	Poor	Good	Average	Sparse	1 or 2 Years	Good	Average
Q200 <sup>Ⓟ</sup> HWD	Good	Poor	Average	Poor	Sparse	1 Year	Average	Average
Q190 <sup>Ⓟ</sup>	Good	Average	Poor	Poor	Sparse	1 or 2 Years	Good	Poor
Q193 <sup>Ⓟ</sup> BRW	Good	Average	Average	Average	Heavy	1 or 2 Years	Good	Good
Q193 <sup>Ⓟ</sup> HWD	Good	Average	Poor	Poor	Heavy	1 or 2 Years	Good	Average
Q183 <sup>Ⓟ</sup>	Good	Poor	Average	Average	Sparse	1 or 2 Years	Average	Average
EMPIRE	Average	Average	Average	Average	Moderate	1 or 2 Years	Average	Poor
BN81-1394	Average	Average	Poor	Good	Sparse	1 or 2 Years	Good	Average

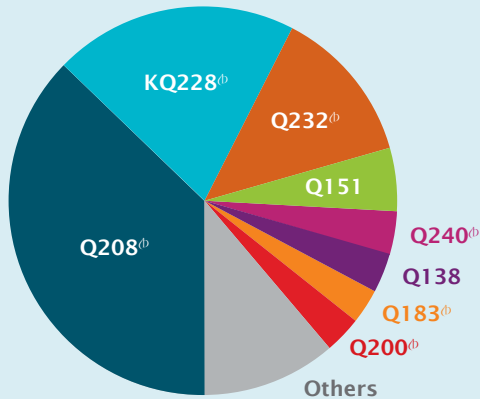




## Variety performance in each mill area

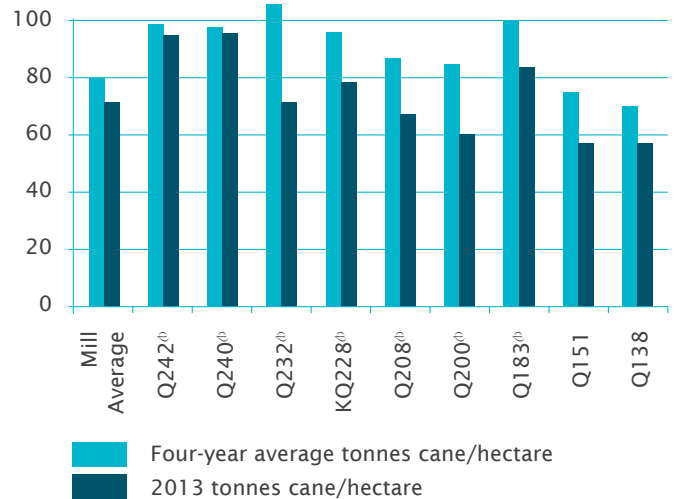
Information collected from each mill area is presented. If using QCANESelect™ choose the Regional Reporting tab which provides variety performance information from each mill area since 1980. Use this information to assess the yield performance of varieties over a number of years. The new variety data should be viewed with care as the yields are from young ratoons only, which will perform better than older ratoons.

Bundaberg % hectares harvested 2013

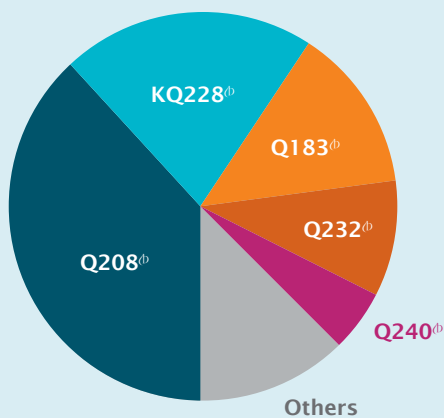


Q208 <sup>Ⓟ</sup>	32.5%	Q242 <sup>Ⓟ</sup>	3.0%
KQ228 <sup>Ⓟ</sup>	21.9%	Q155	1.5%
Q232 <sup>Ⓟ</sup>	13.5%	Q235 <sup>Ⓟ</sup>	1.0%
Q151	5.8%	Q177 <sup>Ⓟ</sup>	1.0%
Q240 <sup>Ⓟ</sup>	5.2%	Q238 <sup>Ⓟ</sup>	0.8%
Q138	3.6%	Q188 <sup>Ⓟ</sup>	0.7%
Q183 <sup>Ⓟ</sup>	3.4%	Q135	0.5%
Q200 <sup>Ⓟ</sup>	3.2%		

The Bundaberg region harvested 1.503 million tonnes of cane from 20,927 hectares. The average CCS was a five-year high at 15, and mill average tonnes cane/hectare was 72. The area harvested of the newer varieties is increasing each year, with the area of Q208<sup>Ⓟ</sup> and other older varieties decreasing. Q183<sup>Ⓟ</sup> and KQ228<sup>Ⓟ</sup> achieved yields better than the mill average as well as the new varieties Q242<sup>Ⓟ</sup> and Q240<sup>Ⓟ</sup>.

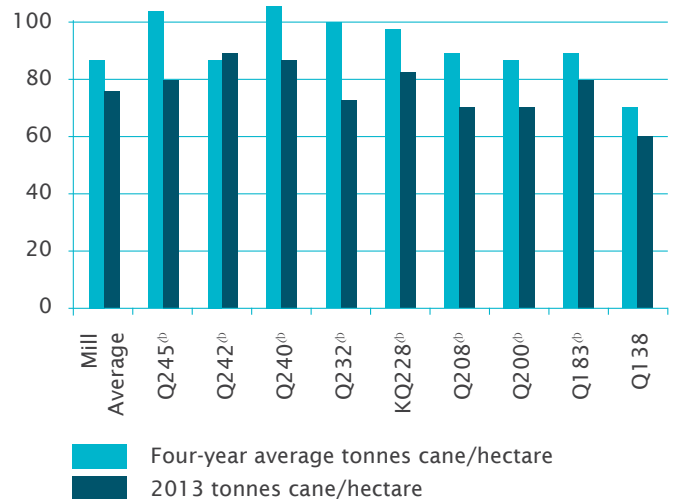


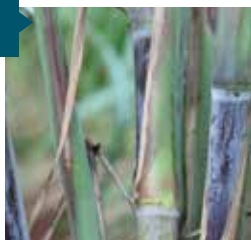
Isis % hectares harvested 2013



Q208 <sup>Ⓟ</sup>	33.3%	Q135	1.7%
KQ228 <sup>Ⓟ</sup>	23.9%	Q242 <sup>Ⓟ</sup>	1.7%
Q183 <sup>Ⓟ</sup>	12.0%	Q138	1.1%
Q232 <sup>Ⓟ</sup>	11.9%	Q155	1.0%
Q240 <sup>Ⓟ</sup>	5.7%	Q151	0.9%
Q200 <sup>Ⓟ</sup>	2.4%	Q177 <sup>Ⓟ</sup>	0.9%
Q245 <sup>Ⓟ</sup>	1.8%	Q238 <sup>Ⓟ</sup>	0.6%

Isis produced 1.164 million tonnes of cane from 15,239 hectares in 2013. The average CCS was high at 14.2 and mill average tonnes cane/hectare was 76.4. The drier than average 2013 season produced lower yields across all varieties. Yields of Q245<sup>Ⓟ</sup>, Q242<sup>Ⓟ</sup>, Q240<sup>Ⓟ</sup>, KQ228<sup>Ⓟ</sup> and Q183<sup>Ⓟ</sup> were all better than the mill average.

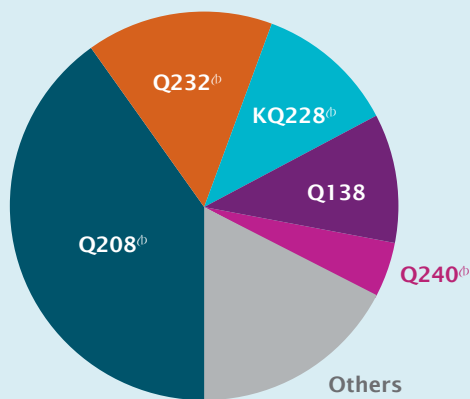




## Variety performance in each mill area (continued)

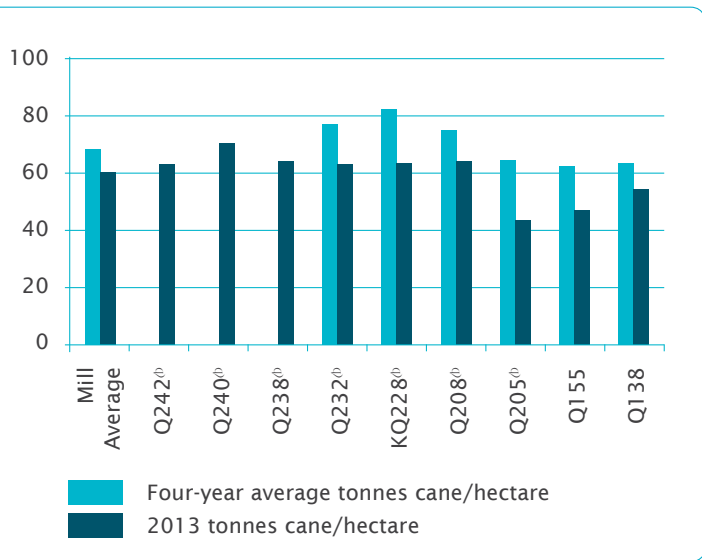


Maryborough % hectares harvested 2013

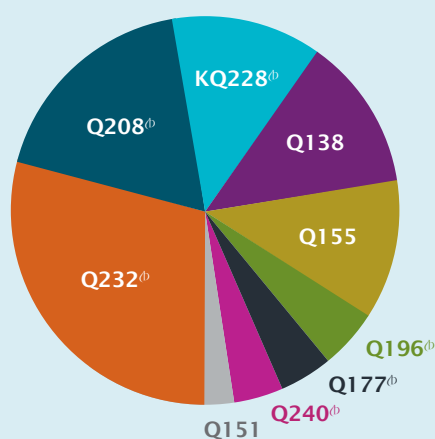


Q208 <sup>Ⓟ</sup>	42.6%	Q205 <sup>Ⓟ</sup>	2.0%
Q232 <sup>Ⓟ</sup>	14.7%	Q188 <sup>Ⓟ</sup>	2.0%
KQ228 <sup>Ⓟ</sup>	11.0%	Q242 <sup>Ⓟ</sup>	1.5%
Q138	8.9%	Q200 <sup>Ⓟ</sup>	1.4%
Q240 <sup>Ⓟ</sup>	3.3%	Q235 <sup>Ⓟ</sup>	1.3%
Q238 <sup>Ⓟ</sup>	2.7%	Q177 <sup>Ⓟ</sup>	1.1%
Q155	2.3%		

The Maryborough region harvested 0.608 million tonnes from 10,070 hectares in 2013 with a high average CCS of 14.7. The mill average yield was 60 tonnes cane/hectare in 2013 which is below the four-year average yields achieved in 2009 to 2012. New varieties are performing well in Maryborough with all achieving above mill average yields. The new varieties are replacing the older varieties Q138, Q155 and Q205<sup>Ⓟ</sup> which had lower hectares harvested in 2013 than in previous years. Q242<sup>Ⓟ</sup> and Q248<sup>Ⓟ</sup> have been removed from the recommended for planting list due to high smut levels in Maryborough.

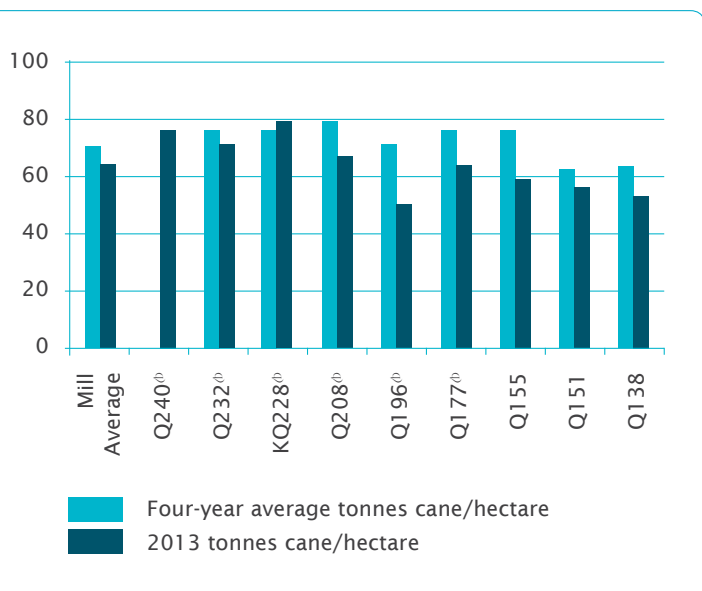


Rocky Point % hectares harvested 2013



Q232 <sup>Ⓟ</sup>	27.7%	Q196 <sup>Ⓟ</sup>	5.0%
Q208 <sup>Ⓟ</sup>	16.2%	Q177 <sup>Ⓟ</sup>	3.9%
KQ228 <sup>Ⓟ</sup>	11.4%	Q240 <sup>Ⓟ</sup>	3.3%
Q138	10.2%	Q151	2.8%
Q155	9.8%		

Rocky Point harvested 0.232 million tonnes of cane from 3,568 hectares. The dry season brought the mill average yields down from a 73 tonnes cane/hectare average over the last four years to 65 tonnes cane/hectare in 2013. A high average CCS of 14.8 was welcome. Q232<sup>Ⓟ</sup> and KQ228<sup>Ⓟ</sup> once again performed well in Rocky Point. Replacing the older varieties with new released varieties has helped improved yields.

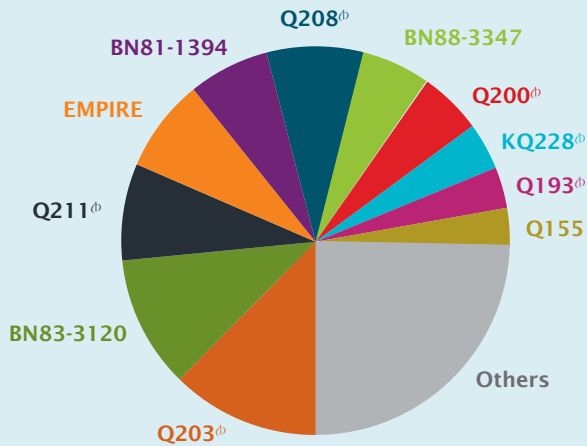




Variety performance in each mill area (continued)



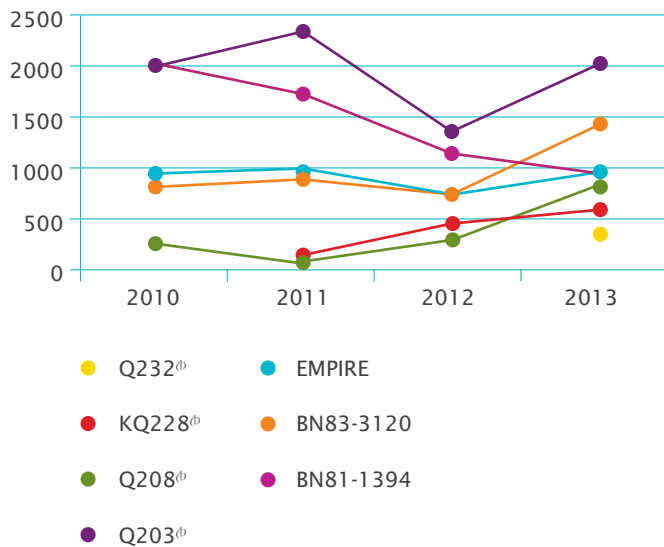
NSW % hectares harvested 2013



Q203 <sup>Ⓟ</sup>	13.9%	Q212 <sup>Ⓟ</sup>	1.9%
BN83-3120	9.7%	Q210 <sup>Ⓟ</sup>	1.6%
Q211 <sup>Ⓟ</sup>	7.4%	Q188 <sup>Ⓟ</sup>	1.6%
EMPIRE	6.7%	RB72-454	1.5%
BN81-1394	6.4%	ARRIS	1.5%
Q208 <sup>Ⓟ</sup>	5.8%	Q167 <sup>Ⓟ</sup>	1.0%
BN88-3347	5.6%	Co740	0.9%
Q200 <sup>Ⓟ</sup>	5.4%	Q205 <sup>Ⓟ</sup>	0.8%
KQ228 <sup>Ⓟ</sup>	4.1%	BN88-3108	0.7%
Q193 <sup>Ⓟ</sup>	3.7%	Q124	0.6%
Q155	3.4%	SP79-2313	0.6%
Q136	2.7%	Q235 <sup>Ⓟ</sup>	0.6%
Q232 <sup>Ⓟ</sup>	2.4%	Q157	0.5%
Q234 <sup>Ⓟ</sup>	2.4%	Q213 <sup>Ⓟ</sup>	0.5%
ESK	2.3%	BN73-3416	0.5%

The total of the three NSW regions harvested 14,860 hectares and produced 1.302 million tonnes in 2013, at an average yield of 88 tonnes cane/hectare (an average of one and two-year old crops). The average CCS was 11.9 in 2013. The older smut susceptible varieties are being replaced and newer varieties such as Q208<sup>Ⓟ</sup> and Q232<sup>Ⓟ</sup> are looking promising.

Change in hectares harvested from 2010 to 2013 of each major variety



**Sugar Research Australia Ltd**  
ABN 16 163 670 068

**Head Office**  
50 Meiers Road  
Indooroopilly QLD 4068  
Australia

**Postal Address**  
PO Box 86  
Indooroopilly QLD 4068  
Australia

**Tel** 07 3331 3333  
**Fax** 07 3871 0383  
**Email** [sra@sugarresearch.com.au](mailto:sra@sugarresearch.com.au)  
**Web** [sugarresearch.com.au](http://sugarresearch.com.au)