

5 February 2021

Mr Charles Millstead
Chief Executive Officer
Queensland Competition Authority
GPO Box 2257
Brisbane QLD 4001
Via email: charles.millstead@gca.org.au

Dear Mr Millstead

Draft Statement of Regulatory Pricing Principles for the Water Sector

Thank you for the opportunity to provide input to the Queensland Competition Authority's Draft Statement of Regulatory Pricing Principles for the Water Sector.

Queensland Cane Growers Organisation Ltd (CANEGROWERS) is a not-for-profit public company with the sole purpose of promoting and protecting the interests of sugarcane growers since inception in 1925.

Representing over 70 per cent of Australia's sugarcane growers, CANEGROWERS is the peak body for the sugarcane industry. With 13 district offices in Queensland, our strong regional presence ensures that services and advocacy are provided in local communities as well as at the highest levels of industry and government decision-making.

The Queensland sugar industry relies on services provided by several monopoly providers. Electricity and water services are provided by statutory monopolies. Because each of these monopolies prices their services on the basis of the regulated pricing model employed by QCA and federal regulators, CANEGROWERS has a vital interest in the Regulatory Pricing Principles applied to Queensland's water sector.

CANEGROWERS represents the interests of cane growers in SunWater's Bundaberg, Burdekin, Eton, Lower Mary, Mareeba-Dimbulah, Pioneer and Proserpine irrigation schemes. CANEGROWERS is also an active member of Queensland Farmers' Federation (QFF) and endorses the concerns raised by QFF in its response to the Queensland Competition Authority's (QCA) draft statement of regulatory pricing principles.

Like QFF and many others, CANEGROWERS is keen to ensure the state's irrigators have access to reliable, affordable water delivered with certainty. This requires the application of principles that ensure water prices do not exceed the prudent and efficient cost of delivery. To encourage the optimal use of water and land, it is essential that prices are determined independently of the crop to which the water is applied.

Good regulatory practice will result in a regulated price path that can be easily understood, planned for and managed by irrigators and other water users. To ensure confidence, the underlying regulatory principles and their application must be transparent and predictable. The supply and delivery of water is an essential community service. It meets the needs of more than one community group and, facilitating economic growth and development across the state,

delivers a wider public good. This is particularly the case in coastal and regional Queensland where intensive irrigated agriculture is embedded into the fabric of the communities it supports¹. The National Water Initiative (NWI) 2004, the intergovernmental agreement between the Australian Government and all State and Territory Governments, including Queensland, recognises the significant public and private benefits that water provides. This is reflected in the NWI pricing principles. A central pillar of which is the requirement to promote the economically efficient and sustainable use of water resources, water infrastructure assets and government resources.

If this objective is to be met, it is important that private water users pay for the prudent and efficient costs of water supply and delivery and that the government pay for the costs associated with the public benefits that flow to the wider community. The importance of taking account of this public-private dichotomy is highlighted in the first two regulatory pricing principles outlined in the QCA draft statement. Those principles link price setting to the recovery of efficient costs in providing and signalling the efficient use of *relevant services* (emphasis added).

Application of these principles will require the regulator to identify and distinguish public costs and benefits when establishing a prudent and efficient cost base and expenditure level that is in the long-term interest of consumers. This approach is consistent with the *Queensland Competition Authority Act 1997*, which requires QCA to have regard to the need to protect customers from the abuse of market power.

Dam safety and the activities of the Inspector General of Emergency Management (IGEM) clearly provide a wide public good. The Queensland Government recognises that dams have multiple public purposes. They are not built solely for supplying water to users. Minister Lynham at the time outlined this in a Queensland government press release (24 September 2019) in relation to the current releases from Paradise Dam, noting that, Building Queensland will assess and report “*on options to ensure water security for the region for future economic growth and to maintain community safety.*”

As reflected in the Minister’s statement, public benefits including, community safety, future economic growth and development and preparedness for future flood events are firmly objectives of government.

Consistent with NWI pricing principles, those outlined in the QCA draft statement of pricing principles and the Queensland Government’s policy position, CANEGROWERS recommends that dam safety and IGEM costs should be viewed by the regulator as public costs and be borne by government, not private water users.

Regulated prices should be reviewed regularly. The Queensland government, Australian Energy Regulator and the Australian Competition and Consumer Commission each use a cyclical model of regulation. As noted by Queensland Treasury², ‘Evidence-informed program decision-making is strengthened by well-planned, timely evaluations.’

An essential element of the cyclical model is a feedback loop which enables an entity’s actual performance to be assessed against its target performance. This cyclical process can be applied to all elements of the cost building blocks³.

In making previous water price recommendations, QCA has adopted the practice of ‘encouraging’ SunWater to undertake particular actions on a range of issues. It would be more

¹ Queensland Economic Advocacy Solutions (QEAS), *The economic contribution of the Sugarcane Industry to Queensland and its regional communities*, 2019 (**attached**).

² Queensland Treasury, *Queensland Government Program Evaluation Guidelines* 2020.

³ CANEGROWERS, *Submission to QCA Rate of Return Review*, 2021.

appropriate for QCA to recommend/require particular outcomes or provide incentives for this purpose – as these are likely to impact on the cost of water delivery and, in turn on the price of irrigation water.

CANEGROWERS recommends:

- ***QCA set deadlines and reporting arrangements for SunWater relevant to recommended initiatives such as labour cost capture improvements and revised longer-term forecasts for bulk water.***
- ***QCA set efficiency targets (other than a general opex efficiency target) that reflect potential efficiency gains associated with more accepted technology/practices evident from other Australia water utilities.***

Within period price reviews:

In a supplementary submission⁴ to the QCA Irrigation price review 2020-24, SunWater proposed that a basic variable electricity charge, although starting at the same level each year of the price period, be adjusted annually by SunWater to offset any over-or under-recovered electricity costs from the previous year.

Although enabling the involvement of some customers and their advocates, SunWater was seeking an ability to make changes to its service plans and energy strategy, *without the active engagement or oversight of the regulator.*

Energy is a significant component of the cost of water delivery. Allowing SunWater to pass through the cost of any under recovered electricity costs, would mask the incentive SunWater has to pursue energy efficiencies. There is presently a question as to how future electricity prices might look. Notwithstanding both market and political pressures for lower rather than higher electricity prices, there may be a step change in prices as SunWater moves from transitional to so-called cost reflective electricity tariffs.

CANEGROWERS supports the electricity cost pass through trial presently underway. As reflected in the structure of the trial, to provide an incentive for SunWater to optimise its energy costs and to ensure prices are in the long-term interests of consumers, the pass through should be asymmetric, with irrigators sharing the benefit from electricity price/cost reductions and SunWater bearing the risk of any increases.

Because consumers have limited capacity to monitor and ensure SunWater is managing its electricity usage within the identified performance targets, there is an active oversight role for the regulator to ensure review and ensure the prudence and efficiency of the final volumetric electricity charges SunWater seeks to pass on to customers.

Requiring SunWater to bear and absorb the cost of any QCA review without passing that cost on to users would provide SunWater with incentive to ensure its energy costs were both prudent and efficient.

To enable active regulatory oversight and to ensure consumers bear no more than the efficient and prudent costs of water delivery, CANEGROWERS recommends that within period price reviews using the cyclical model of regulation that allow prices to move down, but not up, be included as a water pricing principle.

Costs incurred by the regulator represent the *bona fide* cost of regulating a monopoly service provider. Prudent and efficient price setting, ensures efficient resource allocation, protects consumers from the abuses of monopoly power and promotes the economic growth and development of regional communities across the state.

⁴ <https://www.qca.org.au/getattachment/f76ec9ea-8479-401c-9036-febaf314748d/SunWater-supplementary-submission-on-electricity-c.aspx>

In the 2020 review of water prices, QCA note that:

- i. there was a need to allocate more resources to certain schemes has been a result of SunWater not effectively engaging with customers or proposing prices for certain tariff groups that have complex, scheme-specific issues and that the expected cost of the review will amount to \$3.1 million (Part B, section 2.9.3); and
- ii. the investigation has been impacted by the lack of relevant and timely information from SunWater, restricting the extent to which the QCA could assess some information before releasing the draft report. And that, it is intended that further detailed consideration be given to SunWater's costs and stakeholder submissions in response to the draft report (eg Part B, section 2.1).

CANEGROWERS recommends that the efficient costs of QCAs review be absorbed by the Queensland government as a cost of regulating a monopoly service provider and that any excessive costs incurred by QCA arising from the lack of relevant and timely information from SunWater be borne by SunWater as an owner's cost.

Please do not hesitate to contact Warren Males, CANEGROWERS Head-Economics, at Warren_Males@canegrowers.com.au if you require further information.

Regards



Dan Galligan
Chief Executive Officer

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The economic contribution of the Sugarcane Industry to Queensland and its regional communities

*A report analysing the economic importance of the sugarcane value chain
to communities across Queensland*

prepared for:



CANEGROWERS

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REPORT PREPARATION

This report has been prepared by QEAS

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Executive Summary

QEAS has been engaged by CANEGROWERS to analyse the economic contribution of the Sugarcane Industry to Queensland and its regional economies. The key finding of this report is that one dollar in economic activity in cane growing supports an additional \$6.40 elsewhere in the Queensland economy.

A vibrant and competitive sugarcane industry is crucial to the prosperity and growth of Queensland and many of her communities – it generates wealth, drives economic growth and in turn supports jobs, wages and the livelihood of thousands of Queenslanders.

This report does more than just reflect the headline statistics, it tells the whole supply chain story for each community. QEAS through this report, provides a real world understanding of the importance of the sector that underpins communities including Far North Queensland; Ingham, Burdekin and Ayr; Mackay; Bundaberg and broader Wide Bay Burnett.

Sugarcane farming has a significant value-chain both upstream and downstream including sugar mills, transport operators; ports; planting and harvesting contractors; fuel distributors; fertiliser and chemical retailers; farm machinery retailers; irrigation equipment suppliers; and accountants and insurance brokers.

It is the aggregation of all of these individual businesses in the value chain that collectively leads cane growing to be an essential primary industry in Queensland supporting approximately \$4 billion in economic activity, over 22,000 jobs and over 10,000 businesses.

However their contribution is not only the economic importance of cane growing but how it acts as a foundation for prosperity across the townships up and down Queensland's coastline. QEAS in this report has also captured quotes from across the supply chain articulating what cane growing means to not only their business but their community as well.

Cane growing represents a critical element or the viability for many regional communities. For many communities there would be a significant negative impact if cane growing were removed - there would be massive knock on effects for their employees and in turn where their employees spend their wages.

For example in some regions, particularly the Ingham, Burdekin and Ayr region, the sugar industry value chain supports nearly one-in-every-three jobs. It is not only critical to supply chain businesses but critical to surrounding communities. Quite simply the fortunes of cane growing and their regional hubs are forever intertwined.

Finally, the Industry has a substantive social license contributing approximately \$1.1 billion in taxation revenue to federal, state, and local governments that is in turn used to fund frontline services benefiting Queenslanders across the State.

Key statistics include:

- 366,470 hectares of sugarcane harvested valued at in excess of \$1.2 billion;
 - 30.5 million tonnes sugarcane crushed;
 - 4.5 million tonnes of raw sugar produced;
 - 4,305 growers;
 - 21 mills operating in Queensland;
 - Cane farming supports nearly \$1.1 billion in economic activity and over 9,800 jobs providing \$379 million in wages and livelihood to Queenslanders;
 - The total sugar supply value chain supports approximately \$4 billion in economic activity and over 23,650 jobs providing \$1.36 billion in livelihood and wages;
 - The total sugar supply value chain supports over 10,000 businesses;
 - For every Queensland, the sugar value chain contributes around \$450 in direct economic activity and \$800 if flow-on, multiplier effects are considered;
 - One dollar of economic activity in canegrowing brings forth an additional \$6.40 in economic activity elsewhere in the Queensland economy;
 - One in every one hundred jobs in Queensland can be traced to and is courtesy of cane growing;
 - In some regions, particularly the Ingham, Burdekin and Ayr region, the sugar industry value chain supports nearly one-in-every-three jobs; and
- The industry contributes around \$1.1 billion in taxation revenue to federal, state, and local governments.

Contribution to Queensland GSP of sugarcane growing and manufacturing, 2017-18

	<i>Sugarcane growing \$M</i>	<i>Whole sugar value chain \$M</i>	<i>Sugarcane growing % of GSP</i>	<i>Whole sugar value chain % of GSP</i>
Total Sales	1,204.7	3196.8	0.35%	0.92%
<i>Value added</i>				
Direct	544.4	2,243.6	0.16%	0.64%
Indirect–supply chain	317.6	1,174.6	0.09%	0.34%
Indirect–consumption induced	249.5	631.3	0.07%	0.18%
Indirect–total	567.1	1,805.9	0.16%	0.52%
Total value added	1,111.5	4,049.5	0.32%	1.16%

Source: QEAS, 2019

Contribution to Queensland employment of sugarcane growing and manufacturing, 2017-18

	<i>Sugarcane growing FTEs</i>	<i>Whole sugar value chain FTEs</i>	<i>Sugarcane growing % of total FTEs</i>	<i>Whole sugar value chain % of total FTEs</i>
Direct	4,554	9,145	0.22%	0.44%
Indirect–supply chain	3,154	8,174	0.15%	0.39%
Indirect–consumption induced	2,126	5,337	0.10%	0.26%
Indirect–total	5,280	13,511	0.25%	0.65%
Total	9,834	22,657	0.47%	1.09%

Source: QEAS, 2019

Contribution to wages and salaries of sugarcane growing and manufacturing, 2017-18

	<i>Sugarcane growing \$ millions</i>	<i>Whole sugar value chain \$ millions</i>	<i>Sugarcane growing \$ millions</i>	<i>Whole sugar value chain \$ millions</i>
Direct	175.6	352.7	0.11%	0.22%
Indirect–supply chain	121.6	632.4	0.07%	0.39%
Indirect–consumption induced	82.0	375.5	0.05%	0.23%
Indirect–total	203.6	1,007.9	0.12%	0.62%
Total	379.3	1,360.6	0.23%	0.83%

Source: QEAS, 2019

Queensland sugar's contribution to Commonwealth and state taxes and local government rates, 2017-18

<i>Level of government</i>	<i>Sugarcane growing \$M</i>	<i>Whole sugar value chain \$M</i>
Commonwealth	226.0	823.5
State	42.2	153.7
Local	103.7	103.7*
Total	371.9	1,080.9

Source: QEAS, 2019

1. Overview of the Sugarcane Industry

Queensland's sugar industry stretches along a coastal strip from Mossman in north Queensland to Beenleigh, south of Brisbane. Around 30 million tonnes of sugar cane is crushed annually producing 4.5 million tonnes of raw sugar (enough to fill more than 850 Olympic swimming pools) from 366,470 hectares of sugarcane (see figures 2, 3 and 4). Queensland produces 95 percent of all Australian raw sugar.

Sugarcane growing makes a sizeable contribution to the Queensland economy, including via upstream industries supplying goods and services to canegrowers, on over 4,300 cane farms across the state, and via downstream industries that transport, process and market the sugar that is produced.

There are five primary cane growing regions in Queensland: Far North Queensland; Ingham, Burdekin and Ayr; Mackay; Bundaberg and broader Wide Bay Burnett; and SEQ that provide to 21 sugar mills across Queensland. Processed products including 'raw' sugar are exported via seven ports: Brisbane, Bundaberg, Cairns, Mackay, Mourilyan, Lucinda, and Townsville.

Figure 1. Canegrowing across Queensland



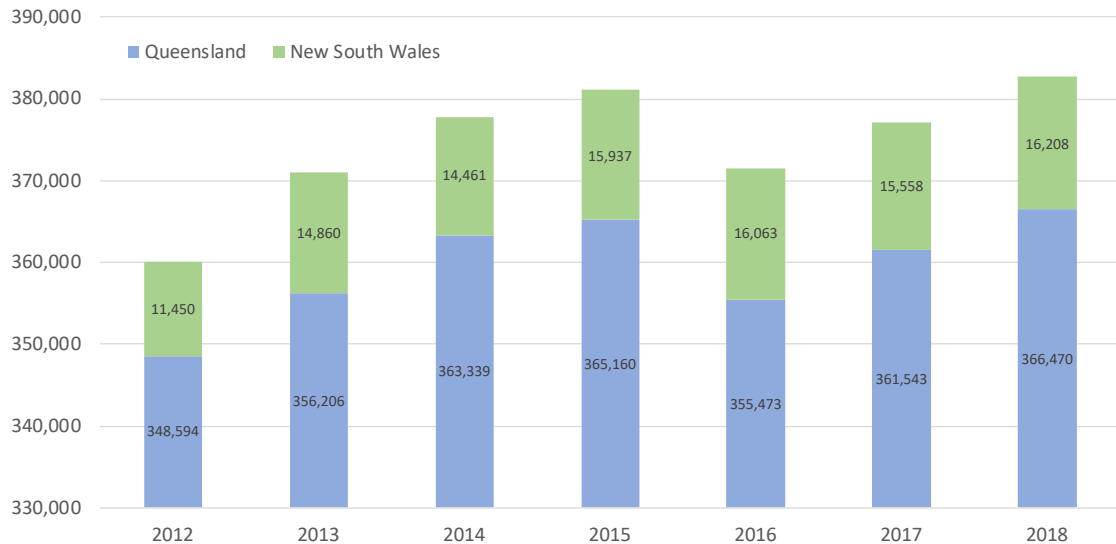
Table 1 Summary Statistics – Queensland

	2012	2013	2014	2015	2016	2017	2018
Hectares Harvested	348,594	356,206	363,339	365,160	355,473	361,543	366,470
Cane Crushed (000's tonnes)	29,086	29,219	30,816	32,655	34,410	31,472	30,489
Sugar Produced (000's tonnes)	4,135	4,206	4,369	4,634	4,515	4,254	4,479
Mills	21	21	21	21	21	21	21
Growers	4,400	4,300	4,200	4,490	4,600	4,100	4,305

Source: The Australian Sugar Year Book recorded historic data

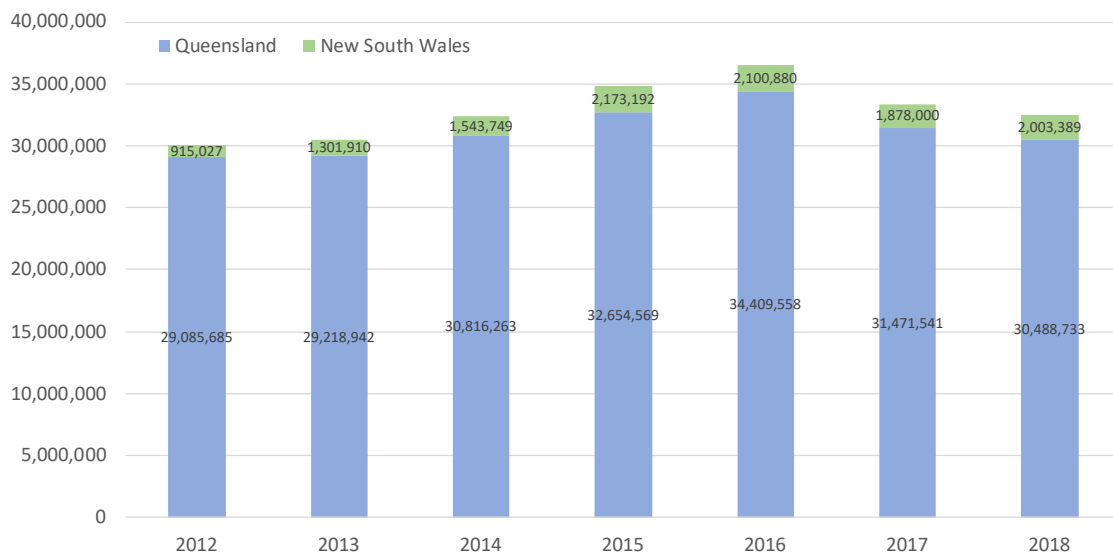
Cane farming businesses range in size from 40 to 250 hectares (ha) with the vast majority of them being family-owned. An average sized 110 ha property harvests approximately 94 ha of sugarcane each year.

Figure 2. Sugarcane Area Harvested (hectares)



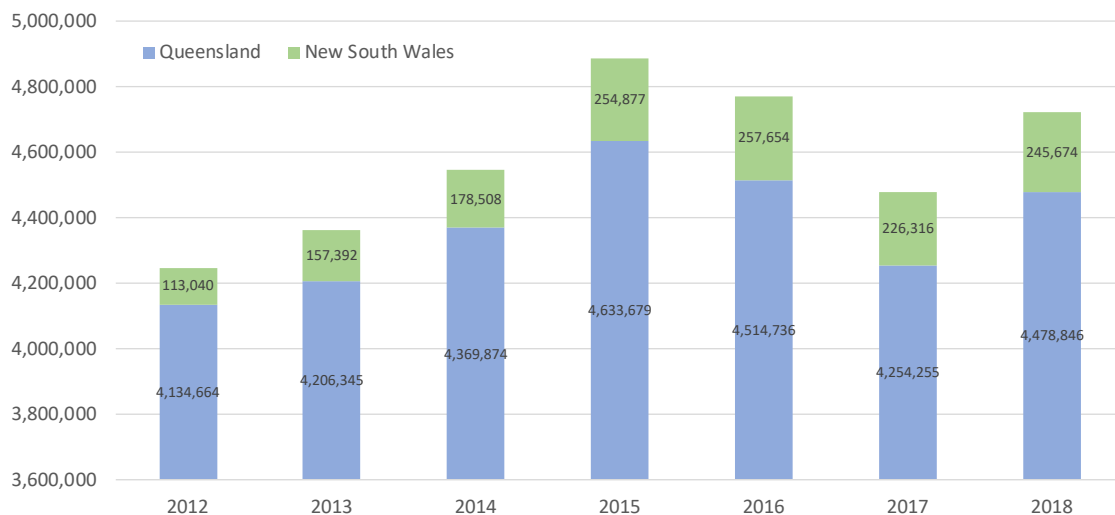
Source: The Australian Sugar Year Book recorded historic data

Figure 3. Sugarcane Crushed (tonnes)



Source: The Australian Sugar Year Book recorded historic data

Figure 4. Sugar Produced (tonnes IPS)



Source: The Australian Sugar Year Book recorded historic data

2. Understanding the Sugar Industry value chain

A key conclusion from this report is that sugarcane growing underpins considerable associated economic activity – for every one dollar of economic activity in canegrowing brings forth an additional \$6.40 in economic activity elsewhere in the economy.

How this activity occurs can be understood by providing an overview of how the sugar supply chain works. Sugarcane farming has a significant value-chain both upstream and downstream including sugar mills, transport operators; ports; planting and harvesting contractors; fuel distributors; fertiliser and chemical retailers; farm machinery retailers; irrigation equipment suppliers; and accountants and insurance etc. All of these businesses to differing extents depend upon canegrowing for sales that in turn supports employment and wages or livelihood to their workers.

Table 2 Examples of businesses benefited by stage of the value chain

Value chain	Examples of how this benefits local non-cane growing businesses
1. Planting <p>Sugarcane is grown by replanting part of a mature cane stalk. Sugar cane is grown from setts or cuttings which are planted by special machines. These machines cut the mature sugar cane stalks into lengths of about 40 centimetres, drop them into furrows, add fertiliser and cover them with soil. Many canegrower businesses provide contracted planting services to other canefarmers with specialised equipment.</p>	<p>Northern AgriServices Pty Ltd Number of employees: 2 Is an agri-business providing mainly Fertiliser and chemical for local sugar industry and has been in operation for 35 years. <i>"The local cane industry has been the backbone of this business since day one. We would definitely not have prospered as we have over the last 30yrs without it. Also the community has benefited from the Sugar industry - employment from Sugar Mill - plus the flow on effect from other business connected - Fuel, Machinery, Harvesting, Trucks the list goes on."</i></p> <p>Landmark Number of employees: 2 Operating in Tully for 20 years providing sales and service of Fertiliser, Chemical, Real Estate, Insurance, as well as Technical Support. <i>"Cane growing is a major part of our entire business. Without this industry our business would not be viable, or at best a smaller business within the area."</i></p>
2. Growing <p>To grow successfully, sugarcane needs strong sunlight; fertile soil; and lots of water (at least 1.5 metres of rain each year or access to irrigation) and fertilisers and some chemicals for weed and pest and control. In warm and sunny Queensland, it takes nine to 16 months to grow a cane crop. Typically, a cropping cycle comprises one plant crop and 3 to 4 ratoon (regrowth) crops. When ripe, the cane is usually about 2 to 4 metres tall. In Queensland more than 366,000 hectares of land is devoted to cane farming. Most farms range in size from 20 to 70 hectares. Each of the 4,305 cane businesses have a considerable supply chain for their operations that is discussed in more detail in section xx.</p>	<p>Chesterfield Number of employees: 18 Chesterfield Australia is a 100% Australian owned family business providing agricultural equipment. It turns 56 this year and is one of Australia's largest John Deere dealers. <i>"Cane growers are significant to Chesterfield Australia's business and offer diversity to its business. Cane growers provide significant investment and employment for their local community."</i></p> <p>Southcoast Fertilisers Number of employees: 2 Family owned business, been operating for approximately 55 -60 years providing farm supplies, fertilizer, Ag-chemicals also providing transport, Sugar Cane bales, Sugar Mill items (rollers etc.). <i>"Our business wouldn't continue if there was no Sugar Cane, so very important."</i></p>

3. Harvesting

Heavy-duty machines called cane harvesters cut the cane stalks off the plant at its base. As they move down each row, the cane is collected and cut into shorter 30 cm length pieces known as 'billets'. A second machine called a cane haul out drives alongside the harvester to collect the billets. The Queensland sugarcane harvest generally begins in May and ends by mid-December. Queensland's sugar cane is harvested by self-propelled harvesting machines. Some growers contract machine owners to harvest their crop, while others own their machines or share ownership with other growers. After harvesting, the stubble left behind grows new shoots, producing a "ratoon" crop. Two or three ratoon crops can be grown before the land is rested (or planted with an alternative crop such as legumes), ploughed and replanted for the cycle to start again.

Gary Stockham Harvesting Company Pty Ltd

Number of employees: 18

Gary Stockham Harvesting Company together with GK and MR Stockham is a family owned business operating for over 40 years and cut in excess of 250,000 tonnes of sugar cane per year. They also have provided the district with contract planting for over 30 years currently using a double row billet planter. Contract land preparation including discing, hoeing, ripping, bed-forming is completed for the majority of the farmers who they plant for.

"Canegrowing to us is our everything. Our livelihood. We are fourth generation farmers; this is our way of life. We know no different. Without Canegrowing, we don't know what we'd be doing. We provide the employment for not only our family but on average another 15 other employees each harvest season. We keep the community alive and running by buying locally for everything including machinery and parts for maintenance. We give the opportunity for young people to come and work on the land including our next generation family members. Without Canegrowers small towns and rural districts would not be thriving and would therefore be non-existent."

Josh Kieth Canefarmer

Number of employees: 80

Family owned sugarcane farming family - 3rd generation farming sugarcane since the 40's. Provides contract harvesting, spraying, fertilising and planting. Also buys green trash left over from the harvest providing more income for the farmer and supplies and spreads compost and other mineral inputs.

"Cane growing is at the heart of our business. The sugarcane must be grown and so that we can sell sugarcane mulch."

4. Getting cane to the mill

To minimise sugarcane deterioration and juice evaporation, sugarcane must be transported to a sugar mill within 16 hours of being harvested. Once full, the cane haul out then drives across the paddock to the road, where it unloads its contents either into a semi truck (for road transport) or mill bins at local sidings on the nearest railway track (for train transport). The sugarcane industry maintains a network of nearly 4000 km of narrow-gauge rail lines to get cane from the paddock to the mill quickly and cost effectively. The cane is then taken to a tramway siding or road haulage delivery point for transport to the mill.

De Gunst Transport

Number of employees: 60 full time , 190 in the crushing season

It is a family owned business established 30 years ago established to carry Sugar cane, Sugar, Bagasse, Filterpress, Distribute Fertilizer, Coal for boilers, Molasses.

"Sugarcane has been a large part of our lives and a major contributor to our city and economy. It provides a lot of employment."

Maryborough Cane Hauliers

Number of employees: 12

Operating for 25 years and carts sugar cane from farms to mill

"Without cane growers we would not have business. Cane growing is are very important to the area."

5. Milling

Queensland's 21 sugar mills are in close proximity to the farms which supply them with cane. The mills operate during the harvesting and crushing season which extends from June to December. Raw sugar produced by these mills is stored at bulk sugar terminals before being sold to Australian and overseas refineries. The exception is the new Tableland mill whose syrup is transported to the company's coastal mills, Babinda, Mourilyan and South Johnstone, where raw sugar is then made. The mills crush an average of 10,000 tonnes of sugarcane per day and employ an average of 150 people each during the season. Together, millers, growers and harvesters determine harvesting and transportation schedules that ensure that the cane is crushed as soon after harvesting as possible.

6. Refining

Most 'raw' sugar requires further processing at refineries in order to meet food manufacturers and consumer's needs. The main products from Australia's refineries are white crystal sugars, brown sugars, liquid sugar, golden syrup and treacle.

Bundaberg Sugar

Number of employees: 460 in slack and 600 in crush
Bundaberg Sugar is a grower, miller, refiner, and marketer of sugar and related products in Australia. The company is one of Australia's largest cane growers and owns and operates sugar mills in Queensland. The company's activities span the full sugar processing cycle including cane growing, milling, refining, packaging and distributing sugar products to retail, industrial and export customers. Bundaberg Sugar's operations include the Millaquin and Bingera sugar mills, the Bundaberg Refinery and packaging plant, Bundaberg Walkers Engineering and Bundaberg Molasses.

"Bundaberg Sugar continues to expand and strengthen its core sugar operations. Its growth strategies have included increasing the capacity of Bundaberg Refinery and the construction and operation of state-of-the-art sugar milling equipment."

7. Bulk Storage and Export

Approximately 80% of Australia's sugar production is exported overseas as 'raw' sugar. Australia is the world's second largest exporter of 'raw' sugar after Brazil. In Australia, all 'raw' sugar has been handled in bulk since 1964. 'Raw' sugar is stored in bulk sugar terminals before it is sent to refineries in Australia or overseas. Large containers of bulk sugar are transported from the mills to the terminals by road and rail. On arrival, the sugar is carried by conveyer into storage sheds. When ready for collection, conveyers quickly move the sugar onto ships. Queensland's bulk sugar terminals can store more than 2 million tonnes of raw sugar, allowing year-round deliveries to refineries in Australia and overseas. Queensland bulk sugar terminals are located at Cairns, Mourilyan, Lucinda, Townsville, Mackay, Bundaberg and Brisbane. 96% of Australia's export sales are to Asian customers, the largest of which have been South Korea, Japan and Indonesia over the past year.

Port of Bundaberg

Number of employees: 18 FTE

Port of Bundaberg is a trade facilitator for the cane growing industry, providing access to international and domestic markets for bulk sugar and molasses. The Port also works closely with Sugar Terminals Ltd (STL) which is 50% owned by the cane growing industry to optimise the use of port infrastructure to facilitate non-sugar trades through the Port of Bundaberg. STL owns the main wharf at the Port of Bundaberg and consequently has a significant role in the facilitation of trade for non-sugar products at the Port of Bundaberg. The key services provided by the Port are the management of the shipping channel and berths and the co-ordinated development of port land and adjacent water leases to facilitate trade for the Wide Bay Burnett region and greater Queensland. Other companies provide tug and lines running services, terminal facility management, dredging services, and maintenance of navigational aids and wharf infrastructure at the Port of Bundaberg, all of which help facilitate sugar exports.

In 2017-18 the port exported 317,310 tpa of raw sugar representing 56.09% of total throughput and another 25,071 tpa of molasses representing 4.43% of total throughput.

"The trade in sugar and molasses is important to the Port of Bundaberg and is expected to continue to be an important part of the future trade of the port."

3. Understanding the Cane farmer supply chain

The value chain for the industry is different to the supply chain of the canefarmer. The value chain is essentially the ‘paddock to plate’ both upstream and downstream. The supply chain for the cane farmer is solely upstream. QEAS has reviewed the inputs of a sugar cane farmer and how the related expenditure can support regional economies. This is essentially a sub-set of the sugar industry value chain discussed in section 2.

ABARES (2015) presents estimates of the financial performance of Queensland sugarcane farm businesses based on surveys of farms from the canegrowing regions. A typical cane farm involves several hundred thousands of dollars of expenditure, much of it supporting local harvesters, contractors and suppliers (see Table 3). These figures should be treated as indicative only as the exact composition of expenditure will depend on the extent to which the farm undertakes irrigated farming and contracts out operations such as harvesting. The estimates are based on averages from ABARES survey data across a wide range of Queensland cane farms, which will differ according to the extent they use irrigation. Accordingly electricity and water represent a considerably higher proportion of expenses for irrigated cane farms such as those in Bundaberg.

Fertiliser, chemicals such as herbicide and insecticide, and fuel are significant input costs and are typically purchased from local suppliers which earn a margin on the products. For instance, QEAS consultations with local suppliers indicate that for herbicide, 80% of the purchase price (excl. GST) is a result of the cost of the product, while 20% is due to transport and retail margins. Margins on top of the cost of imported products in the region are reflected in Input-Output (IO) tables detailing the structure of regional economies. Such tables were used by Lawrence Consulting (2019) and a QEAS regional IO model was used to inform estimates presented in this study.

Table 3. Average cash outlays of cane farms as a % of total costs, data updated to 2019 prices*

	FNQ	Herbert	Burdekin	Mackay	Bundaberg	Queensland	
	%	%	%	%	%	%	\$
Contracts paid for harvesting, planting, spraying	22%	24%	17%	11%	14%	17%	\$ 70,201
Fertiliser	22%	24%	15%	20%	14%	19%	\$ 77,314
Fuel	10%	9%	8%	12%	12%	10%	\$ 42,368
Repairs and maintenance	10%	10%	12%	13%	16%	12%	\$ 50,409
Crop chemicals	6%	2%	5%	4%	5%	5%	\$ 18,865
Wages for hired labour	7%	5%	8%	7%	9%	7%	\$ 27,988
Administration	2%	5%	2%	3%	4%	3%	\$ 11,906
Water	2%	0%	6%	2%	6%	3%	\$ 12,525
Rates	4%	6%	4%	3%	2%	4%	\$ 16,391
Handling and marketing	4%	7%	6%	6%	4%	5%	\$ 21,803
Electricity	2%	1%	7%	3%	8%	4%	\$ 15,927
Interest	6%	5%	8%	14%	3%	9%	\$ 34,946
Land rent	2%	2%	2%	2%	5%	2%	\$ 9,587
	100%	100%	100%	100%	100%	100%	\$ 410,230

Source: QEAS based on ABARES (2015).

*Updated using ABS Producer Price Index data (cat. no. 6427.0) and QCA determinations of regional electricity prices since 2013-14, assuming cane farms are on Tariff 62-transitional. .

Case Study: Lowes Petroleum

Number of employees: 8

Has been in operation for 40 years providing wholesale fuel, lubricants, a retail fuel site of our own, equipment solutions, maintenance and commissioning/decommissioning work for all aspects of fuel systems, services and products.

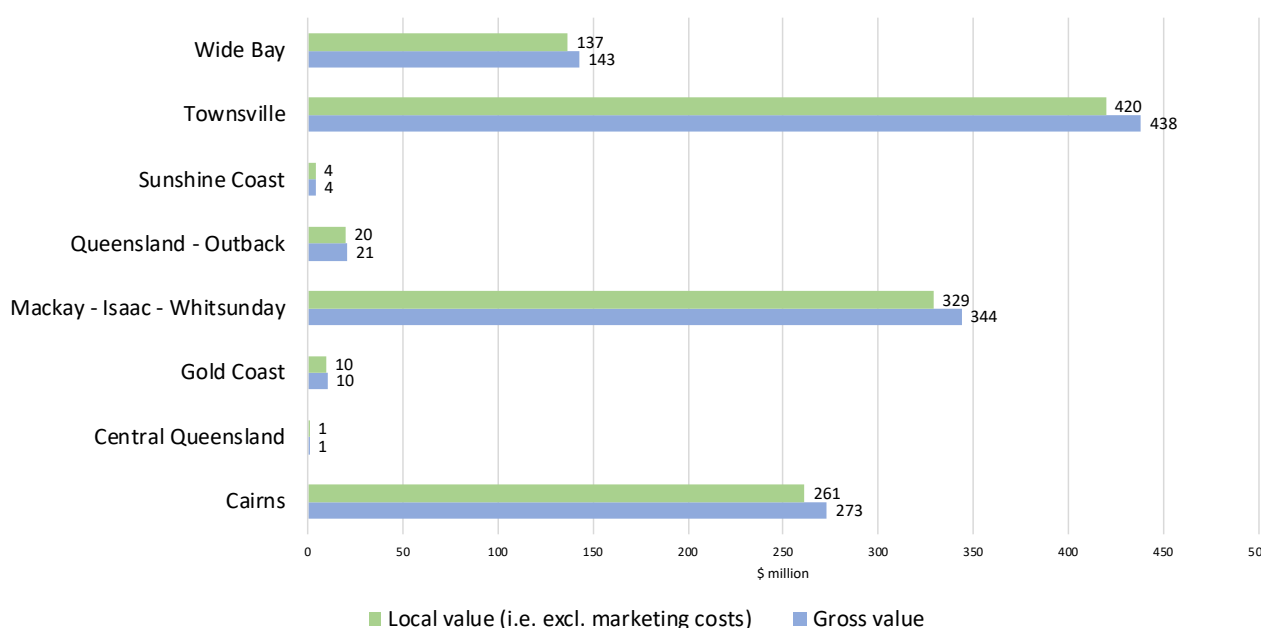
“Sugar is the backbone of our operation in the Burdekin. This includes growers, harvesters, employees in the region and in a minor way the mills. Without the sugar industry our operation would downsize significantly to the point of being non-existent locally with services provided ex Townsville. This is not the preferred model and would have a significant impact on the local Burdekin communities.”

4. State-wide economic impacts of the sugarcane industry

4.1 Agricultural production and Gross State Product

The state sugar crop when it leaves the farm gate was valued at around \$1.2 billion in 2017-18, according to ABS estimates. The bulk of the sugarcane crop is grown in North and Far North Queensland (NQ and FNQ), although the Wide Bay-Burnett makes a substantial contribution (Figure 5). The Townsville ABS Statistical Area Level 4 (SA4) region produces the largest amount of sugarcane, as it includes the highly productive Burdekin and Ingham regions. The Townsville ABS Statistical Area Level 4 (SA4) region produces the largest amount of sugarcane, as it includes the highly productive Burdekin and Ingham regions. The Mackay-Isaac-Whitsunday region includes substantial sugarcane farming around Mackay and Pioneer River, and the Cairns SA4 encompasses the Atherton Tableland and sugarcane regions around Innisfail on the Cassowary Coast.

Figure 5. Gross value of agricultural production by Queensland ABS SA4 region (\$ millions)



Source: ABS, cat. no. 7503.0.

Additional value is added to the sugarcane when it travels to regional mills for crushing, juice extraction, and refining. Also, some value is added from cane juice being used to produce ethanol, the molasses being used to produce rum, and the bagasse (the pulpy residue after the cane juice is extracted) being used for energy co-generation. As noted above, Lawrence Consulting (2019) has estimated the total economic contribution to Queensland of the whole sugar industry value chain, directly and indirectly, from growing to manufacturing, at \$4.0 billion, which is 1.2% of GSP. The Lawrence Consulting (2019) report provides a considerable amount of data relating to canegrowing, including data sourced from mills of payments to growers, but does not split out the economic contributions of canegrowing and sugar manufacturing at mills and refineries.¹

QEAS has estimated the contribution of the sugar cane industry to GSP using a range of sources (Page 23), including IBISWorld estimates and Lawrence Consulting's (2019) study for the Australian Sugar Milling Council (ASMC). Where estimates are directly available from Lawrence Consulting, they have been used for consistency and additional as its methodology is considered sound and the underlying data sourced from sugar mills are superior to what are publicly available. Table 4 reports two types of indirect impacts.

- First, there is the supply chain impact, the indirect stimulus to economic activity that occurs as the sugarcane industry purchases supplies and services from within Queensland.

¹ The Lawrence Consulting data set was based on survey responses from mills and while it covers the vast bulk of the data set there are some omissions. Lawrence Consulting (2019, p. 3) notes: "the data provided was specific to raw sugar manufacturing and limited white sugar manufacturing, including cogeneration activities. It did not include complementary ethanol production in Sarina or white sugar manufacturing in Bundaberg. The economic contribution to these regions would be higher if these activities were added."

- Second, there is the consumption induced impact, the further indirect stimulus that occurs as incomes earned both in the industry itself and in supplying industries are spent on additional goods and services originating in the state.

These indirect impacts can provide just as much economic contribution as direct impacts, and can be critically important in local communities which are dependent on one major employing industry, as discussed below.

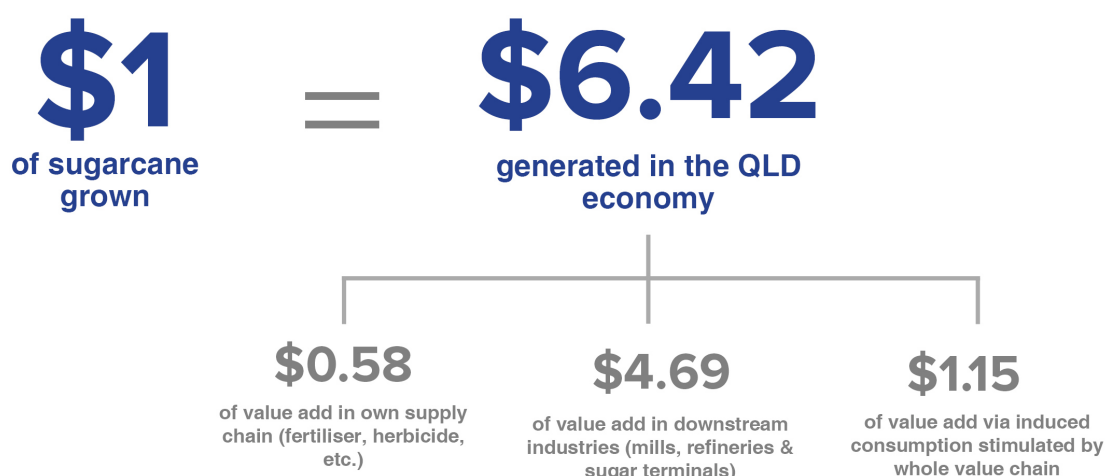
Table 4. Contribution to Queensland GSP of sugarcane growing and manufacturing, 2017-18

	<i>Sugarcane growing \$M</i>	<i>Whole sugar value chain \$M</i>	<i>Sugarcane growing % of GSP</i>	<i>Whole sugar value chain % of GSP</i>
Sales	1,204.7	3196.8	0.35%	0.92%
<i>Value added</i>				
Direct	544.4	2,243.6	0.16%	0.64%
Indirect–supply chain	317.6	1,174.6	0.09%	0.34%
Indirect–consumption induced	249.5	631.3	0.07%	0.18%
Indirect–total	567.1	1,805.9	0.16%	0.52%
Total value added	1,111.5	4,049.5	0.32%	1.16%

Source: QEAS estimates based on IBISWorld estimates, Lawrence Consulting (2019), Queensland Office of the Government Statistician (2002), and ABARES (2015).

As is to be expected with a primary industry, a large part of the value added is associated with downstream processing. That said, canegrowing itself contributes in the order of one-half billion dollars of value added (i.e. the earnings of canegrowers and workers) directly to the Queensland economy and indirectly its total economic contribution is around \$1.1 billion. Considering that sugarcane growing is the primary industry that underpins all the associated economic activity it can legitimately be claimed that one dollar of economic activity in canegrowing brings forth an additional \$6.40 in economic activity elsewhere in the economy (Figure 6)

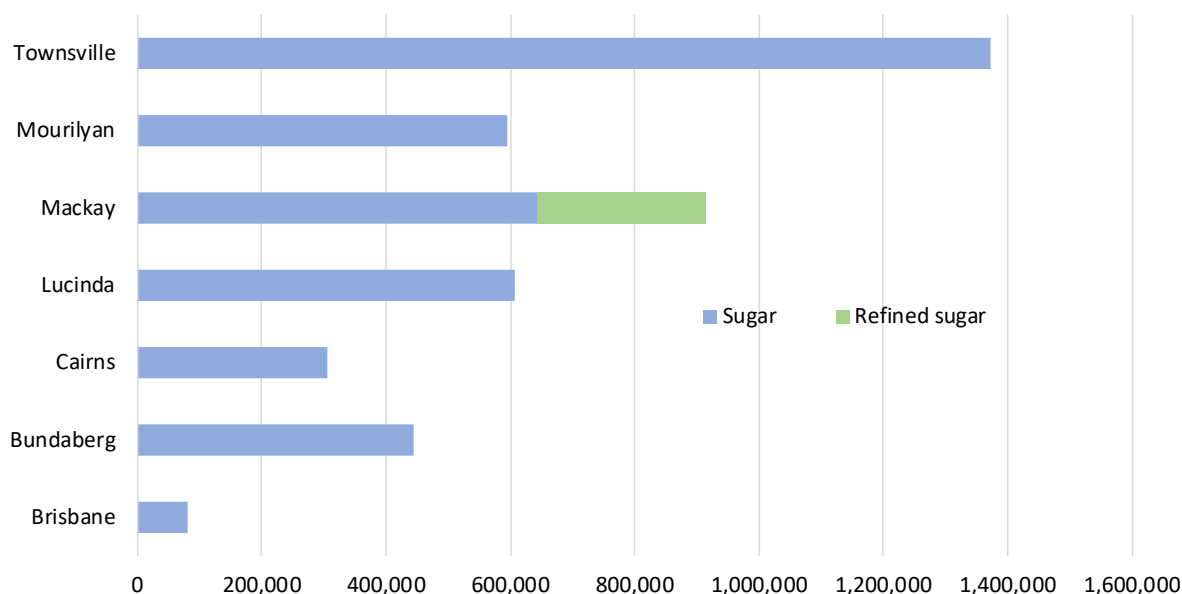
Figure 6. Breakdown of full economic contribution from \$1 sugarcane growing value added



Source: QEAS estimates based on Lawrence Consulting (2019) and other sources.

The large additional economic contribution of sugarcane growing is via its backward linkages to its own suppliers (e.g. of fertiliser, herbicide, etc.) and its forward linkages to mills, refineries and the sugar terminals which export the sugar. Indeed, the vast majority of sugar produced in Queensland is exported, some 4.32 million tonnes, mostly of unrefined sugar, as is a large amount, nearly 659,000 tonnes in 2016-17, of the molasses by-product (Figure 7).

Figure 7. Sugar exports from Queensland ports, 2016-17 (export tonnes)



Source: Department of Transport and Main Roads, 2018, Trade Statistics for Queensland Ports data.

Case Study: Ports North
Number of employees: 69

Ports North is a Government Owned Corporation responsible for developing and managing seaports in Far North Queensland including Cairns and Mourilyan.

"Canegrowing is a critical export industry for the Far North Queensland region and a major contributor to the economy as a whole."

4.2 Jobs and wages

Canegrowing and downstream processing support over 9,100 Queensland jobs directly and nearly 22,700 jobs in total, taking into account indirect impacts. Using Lawrence Consulting's estimates as a starting point, QEAS has separately identified the indirect impacts to employment and wages arising from cane growing alone. Impacts on full-time equivalent (FTE) employment are provided in Table 5. Via its indirect impacts, sugarcane growing on its own supports nearly 10,000 Queensland jobs in total, and together with upstream transport, marketing, and processing, it supports nearly 23,000 jobs or 1% of all Queensland jobs. That is one in every one hundred jobs in Queensland can be traced and is courtesy of cane growing.

Table 5. Contribution to Queensland employment of sugarcane growing and manufacturing, 2017-18

	<i>Sugarcane growing FTEs</i>	<i>Whole sugar value chain FTEs</i>	<i>Sugarcane growing % of total FTEs</i>	<i>Whole sugar value chain % of total FTEs</i>
Direct	4,554	9,145	0.22%	0.44%
Indirect—supply chain	3,154	8,174	0.15%	0.39%
Indirect—consumption induced	2,126	5,337	0.10%	0.26%
Indirect—total	5,280	13,511	0.25%	0.65%
Total	9,834	22,657	0.47%	1.09%

Source: QEAS estimates based on IBISWorld estimates, Lawrence Consulting (2019), Queensland Office of the Government Statistician (2002), and ABARES (2015).

Contributions in terms of total wages are presented in Table 6. Overall, nearly \$1.4 billion of wages and salaries of Queensland employees are supported by the whole sugar industry value chain, and nearly \$380 million just by canegrowing alone.

Table 6. Contribution to wages and salaries of sugarcane growing and manufacturing, 2017-18

	<i>Sugarcane growing \$ millions</i>	<i>Whole sugar value chain \$ millions</i>	<i>Sugarcane growing \$ millions</i>	<i>Whole sugar value chain \$ millions</i>
Direct	175.6	352.7	0.11%	0.22%
Indirect–supply chain	121.6	632.4	0.07%	0.39%
Indirect–consumption induced	82.0	375.5	0.05%	0.23%
Indirect–total	203.6	1,007.9	0.12%	0.62%
Total	379.3	1,360.6	0.23%	0.83%

Source: QEAS estimates based on IBISWorld estimates, Lawrence Consulting (2019), Queensland Office of the Government Statistician (2002), and ABARES (2015).

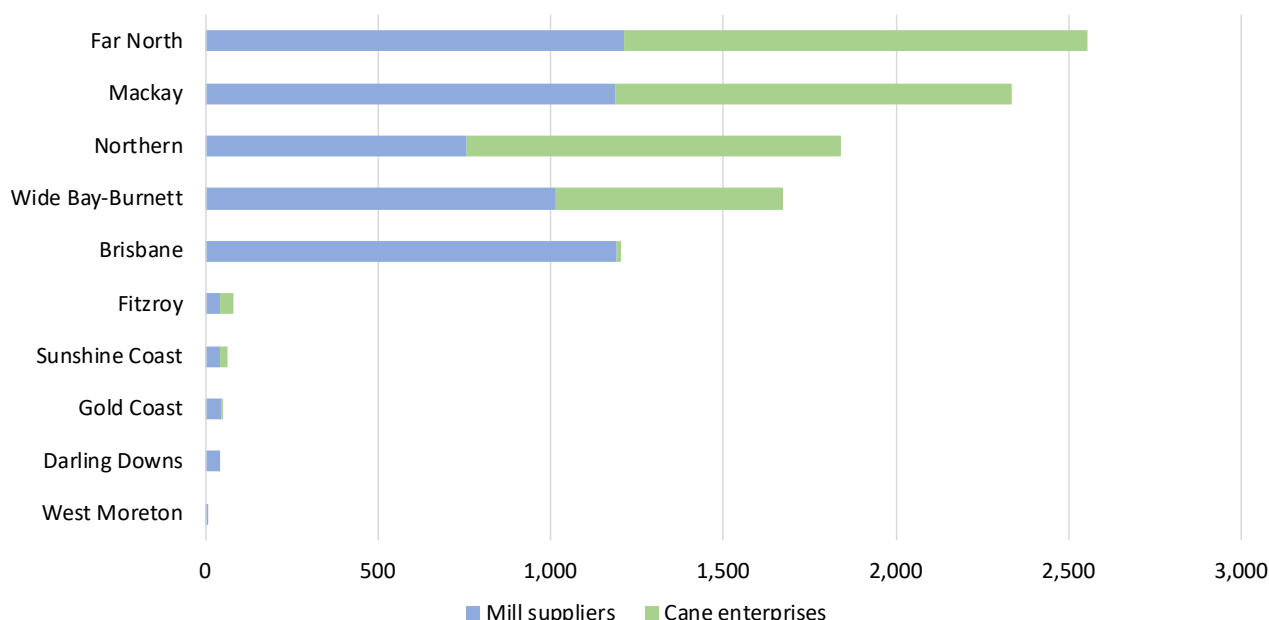
Based on consultation with over 40 supply chain businesses and farmers, cane farming businesses ranged in employment size from single farmers who outsourced planting and harvesting through to those employing up to 80 Queenslanders. Supplying businesses to canegrowers included fertiliser and chemical supply businesses employing between 2 and 14 persons, harvesting and planting businesses employing 4 and 7 persons, farming equipment businesses employing between 6 and 20 persons, transport businesses employing between 12 and 60 persons, ports employing between 69 and 753 persons and sugar mills employing between 210 and 286 persons.

Wages ranged from single operators and family owned businesses who were paid out of profits through to sugar mills who employed hundreds of Queenslanders paying in excess of \$2.9 million in wages. The average salary paid across the whole sugar value chain was \$60,052.

4.3 Businesses supported

At least 10,000 businesses across Queensland depend directly or indirectly on the sugarcane industry. Lawrence Consulting (2019), based on survey data from mills, reported that in 2017-18 there were 5,551 mill suppliers and 4,305 cane enterprises in Queensland, a total of at least 9,856 businesses dependent on sugar cane growing.

Figure 8. Cane enterprises and mill suppliers in Queensland, 2017-18



Source: Lawrence Consulting, 2019, Table 3, p. 5.

To these figures need to be added the number of businesses supported by cane farms (e.g. fertiliser and herbicide suppliers, local accountants and lawyers, etc.) which are not included in the figures for mill suppliers. No survey data exist which would allow QEAS to quantify this number, but QEAS consultations with growers suggest it would easily amount to several hundred businesses across Queensland, if not 1,000 or more, bringing the total businesses supported by cane growing to over 10,000.

4.4 Commonwealth, state and local government taxes paid

Major sources of taxation revenue from canegrowing and sugar manufacturing include:

- Income and company tax paid to the Commonwealth;
- payroll and land taxes (and rents for pastoral leases) paid to the Queensland Government; and
- rates paid to the local government.

QEAS estimates of the indicative value of these revenues are included in Table 7. Overall, the whole sugar value chain in Queensland, taking into account both direct and indirect contributions, contributes over \$1 billion in revenues to the three levels of government Australia.

Table 7. Queensland sugar's contribution to Commonwealth and state taxes and local government rates, 2017-18

<i>Level of government</i>	<i>Sugarcane growing \$M</i>	<i>Whole sugar value chain \$M</i>
Commonwealth	226.0	823.5
State	42.2	153.7
Local	103.7	103.7*
Total	371.9	1,080.9

Source: QEAS estimates based on Table , Commonwealth and State Budget Papers, ABS National Accounts data, and ABARES (2015).

**QEAS was unable to estimate rates revenue for the whole value chain beyond canegrowing owing to a lack of data.*

Without surveying specific businesses it is impossible to be precise in the revenue estimates in Table 7, given different farms will face different marginal tax rates, land taxes, rents, and rates, particularly as rates can vary substantially across LGAs.

the sector is a substantial contributor of tax and rate revenue to the three tiers of Government enabling the delivery of core and essential frontline services.

5. Regional impacts

5.1 Overview

The sugar cane industry is concentrated in a small number of regional areas that are highly dependent on sugarcane growing and milling—indeed it is overwhelmingly the major industry in towns such as Ingham and Ayr-Home Hill. In this study, QEAS focuses on the economic contribution for selected regional economies, specifically the Statistical Area Level 3 (SA3) regions identified in Table 8.

Table 8. Employed persons in sugar cane growing and manufacturing by selected SA3 regions, full-time equivalent (FTE) estimates, August 2016

SA3 Region	<i>Sugarcane growing, FTEs</i>	<i>Sugarcane manufacturing, FTEs</i>	<i>Total employed, FTEs</i>	<i>Sugar FTEs as % of total</i>
Bundaberg	423	495	918	3.5%
Burnett	41	12	53	0.4%
Cairns-South	126	163	289	0.8%
Charters Towers-Ayr-Ingham	1,275	1,050	2,326	15.9%
Innisfail & Cassowary Coast	515	508	1,023	8.9%
Mackay	973	964	1,938	4.3%
Maryborough	100	92	192	1.7%
Tablelands (East)-Kuranda	62	38	100	0.8%
Townsville	66	181	248	0.3%
Other SA3s	510	422	931	0.1%
Queensland	4,091	3,926	8,017	0.5%

Source: ABS 2016 Census of Population and Housing. N.B. Employed persons in “not defined categories” have been proportionally reallocated to related industries.

The major sugarcane growing regions include the Burdekin and Ingham, which are part of the Charters Towers-Ayr-Ingham SA3, Mackay, and Innisfail and the Cassowary Coast. Not just specific towns, but broader regional economies can be highly dependent on the sugarcane growing. There are also hundreds of workers in sugarcane growing and manufacturing who usually reside in Townsville and Cairns and commute to work.

In the following sub-sections, QEAS considers the economic contributions of sugarcane growing to the four major sugarcane growing and milling regions in Queensland, those in which sugarcane growing and manufacturing directly employ at least 2% of the workforce.

Backbone of Regional Communities

In addition to it's a contribution to Queensland's economic growth, the sugar industry has been responsible for the development of many of the State's coastal cities. Considerable feedback from businesses across Queensland indicates that not only does canegrowing itself provide a substantial economic contribution; it can underpin the existence of the community itself.

Canegrowing represents critical mass or viability for many regional communities. For many communities there would be significant negative impact if canegrowing were removed. If the sugar industry is hurt there would be massive knock on effects for their employees and the businesses where their employees spend their wages. The fortunes of cane growing and their regional hubs are intertwined.

“Canegrowing is hugely important to the fabric of the area because of the history and tradition. There are considerable family linkages and generational linkages.” **Allan Cooper, Vanderfield**

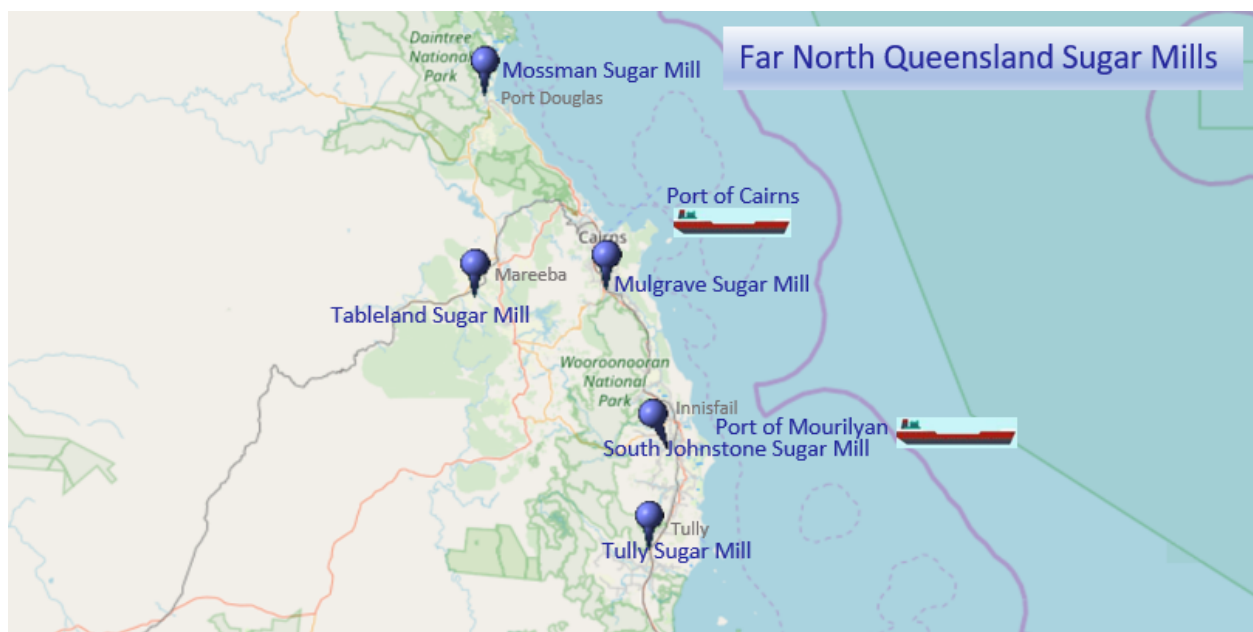
“We know we would not have a viable irrigation scheme if it were not for the canegrowing industry. Canegrowing carries the vast bulk of irrigation and land and supports all of the supply chain and their employees. Water and canegrowing is the thing that brings all of us here together in Bundaberg. The fruit and vegetable industry benefits from the advocacy of canefarmers on issues such as electricity and water pricing.”

Geoff Chivers, Chairman – Board of Directors Suncoast Gold

5.2 Far North Queensland

The Innisfail and Cassowary Coast and the broader FNQ region including the Tableland contains five sugar mills, and sugar is exported from Cairns and Mourilyan (Figure 9).

Figure 9. Map of Far North Queensland sugar mills and ports



Source: QEAS, 2019.

The Innisfail and Cassowary Coast region is highly dependent on canegrowing and downstream processing (Table 9). Over \$460 million of regional value added was supported in the region in 2017-18, as were nearly 2,000 jobs or 17% of regional employment.

Table 9. Regional economic impacts, 2017-18, Far North Queensland

	<i>Canegrowing</i>	<i>Whole sugar value chain</i>
Total sales (\$M)	151.7	402.6
GVA-direct (\$M)	68.6	290.3
GVA-indirect (\$M)	41.1	174.2
GVA-total (\$M)	109.7	464.5
FTE-direct	573.5	1,172.6
FTE-indirect	344.1	823.4
FTE-total	917.5	1,996.0
% of local FTEs supported	7.8%	17.1%

Source: QEAS estimates based on Lawrence Consulting (2018) and assumptions regarding regional multipliers based on Queensland Office of the Government Statistician (2004) a QEAS regional IO model for a sugarcane growing region. N.B. Total sales for the whole value chain is estimated based on total revenues associated with the cane grown in the region. Total sales for the Queensland sugar value chain have been estimated using IBISWorld data. Far North Queensland is used to describe the Innisfail and Cassowary Coast SA3 region.

Case Study: Tully Canegrowers Co-op (Tully)

Number of employees: 25

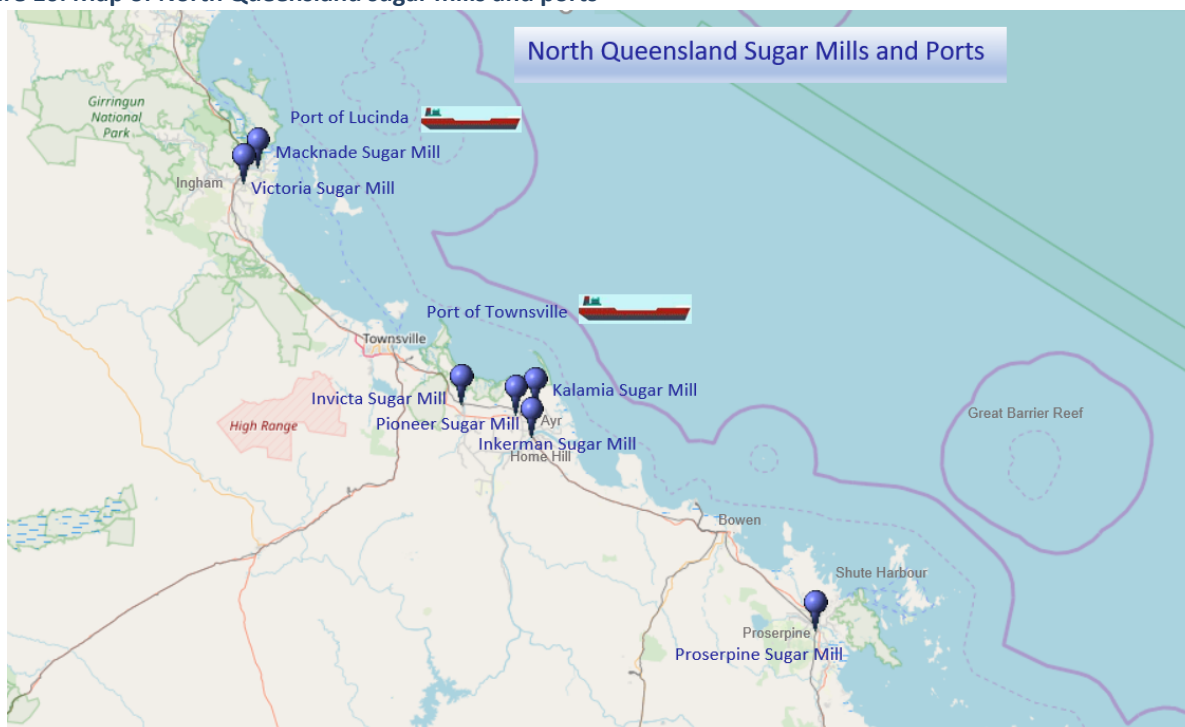
Tully Canegrowers cooperative Ltd have operated for 61 years supplying Hardware, building products, garden and outdoors. We operate 2 sites in Tully and 1 at mission Beach. The business is owned by members of the cooperative, originally mostly canefarmers but now the member base is much more diversified.

“The Tully economy is very much agriculturally based around Cane and Bananas and while tourism is important it tends to be seasonal. The Cane Industry provides a steady stream of income for our business, and maintains a lot of the permanent population.”

5.3 North Queensland

The Charters Towers-Ayr-Ingham SA3 region, in the vicinity of Townsville, encompasses the largest region for growing and milling sugarcane in Queensland. The area from Ingham down to Proserpine contains seven mills and its product is exported out of the ports of Lucinda and Townsville (Figure 10).

Figure 10. Map of North Queensland sugar mills and ports



Source: QEAS, 2019.

Sugarcane is extremely important to this regional economy. It supports around \$1 billion of regional gross value added (GVA) and around 4,500 FTE jobs, 30% of the total in the region (Table 10).

Table 10. Regional economic impacts, 2017-18, North Queensland

	<i>Canegrowing</i>	<i>Whole sugar value chain</i>
Total sales (\$M)	375.5	996.4
GVA-direct (\$M)	169.7	628.0
GVA-indirect (\$M)	101.8	376.8
GVA-total (\$M)	271.5	1,004.9
FTE-direct	1,419.4	2,657.8
FTE-indirect	851.6	1,842.4
FTE-total	2,271.1	4,500.2
% of local FTEs supported	15.2%	30.2%

Source: QEAS estimates based on Lawrence Consulting (2018) and assumptions regarding regional multipliers based on Queensland Office of the Government Statistician (2004) a QEAS regional IO model for a sugarcane growing region. N.B. Total sales for the whole value chain is estimated based on total revenues associated with the cane grown in the region. Total sales for the Queensland sugar value chain have been estimated using IBISWorld data. North Queensland is used to describe the Charters Towers-Ayr-Ingham SA3 region.

Case Study: Agronomy (Ayr)

Number of employees: 14

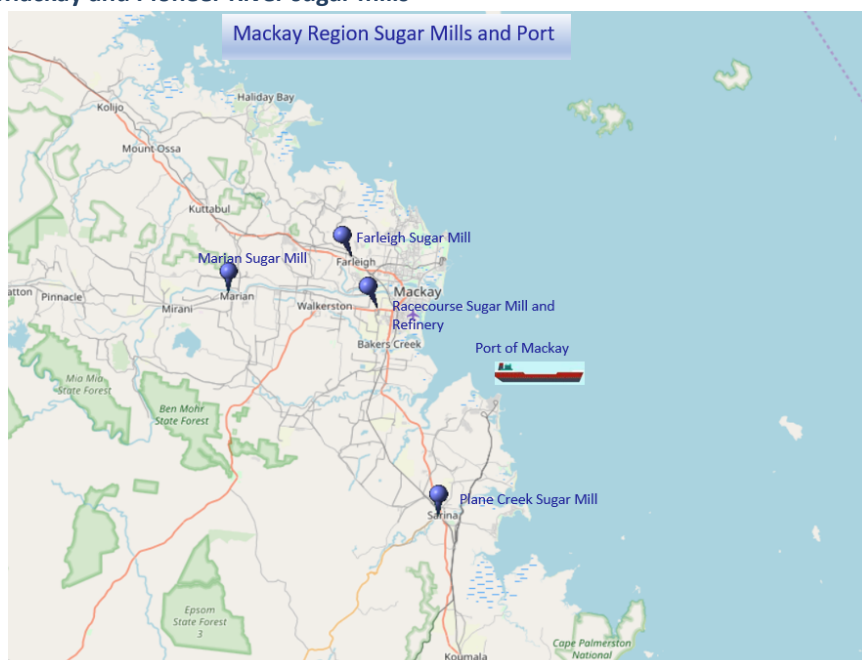
Agronomy provides fertiliser, pesticides & agronomic advice and has been in operation for over 30 years

"The production of sugarcane within the Burdekin region is paramount to the ongoing success of our business - without primary production our business would not exist. This goes for the vast majority of other businesses in town. Even if businesses are not directly involved with the production of sugarcane or servicing sugarcane farmers, they still benefit indirectly. Put simply, "When sugarcane farmers make money, we all make money."

5.4 Mackay

Mackay and the Pioneer River region is another major sugar-producing region in Queensland. There are four sugar mills in the region (Figure 11). The mill in Mackay also comprises a refinery for producing white sugar. Also, there is an ethanol distillery at Sarina which uses molasses, a by-product of sugarcane milling, as a feedstock. Both refined sugar and raw sugar are exported from the port of Mackay.

Figure 11. Map of Mackay and Pioneer River sugar mills



Source: QEAS, 2019.

Sugar makes an important contribution to the local Mackay economy (Table 11). It supports nearly 3,800 FTE jobs, or 8% or around one-in-every-twelve jobs in the region. It contributes nearly \$900 million to the local economy.

Table 11. Regional economic impacts, 2017-18, Mackay

	Canegrowing	Whole sugar value chain
Total sales (\$M)	286.5	760.3
GVA-direct (\$M)	129.5	550.3
GVA-indirect (\$M)	77.7	330.2
GVA-total (\$M)	207.2	880.5
FTE-direct	1,083.1	2,220.2
FTE-indirect	649.9	1,559.6
FTE-total	1,733.0	3,779.8
% of local FTEs supported	3.8%	8.3%

Source: QEAS estimates based on Lawrence Consulting (2018) and assumptions regarding regional multipliers based on Queensland Office of the Government Statistician (2004) a QEAS regional IO model for a sugarcane growing region. N.B. Total sales for the whole value chain is estimated based on total revenues associated with the cane grown in the region. Total sales for the Queensland sugar value chain have been estimated using IBISWorld data. Mackay is used to describe the Mackay SA3 region.

Case study: Hodge Industries (Mackay)

Number of employees: 20

Hodge Industries manufactures sugar cane farming implements and are a fourth generation family owned business that is 105 years old (founded 1914). They have exported since 1974 to almost every sugar cane growing country in the world and are the sole supplier to the sugar farming industry for a whole range of products. They also offer machinery repairs & general engineering services from our factory in Mackay.

"98% of MY sales are to the cane growing industry (70% Australia {50% in Mackay & 20% rest of Australia} & 30% export). Our business has always been totally reliant on the cane growing industry. Our success rises & falls direct as a result of the health of the Australian cane growing industry. We exist for them."

5.5 Bundaberg and Burnett

The state's fourth largest sugarcane growing region is around Bundaberg, with significant activity also occurring in the broader Wide bay Burnett region. There are three sugar mills in the Bundaberg and Burnett region and also one in Maryborough (Figure 12). Sugar is exported via the Port of Bundaberg.

Figure 12. Map of Bundaberg and Burnett sugar mills and port



Source: QEAS, 2019.

The whole sugar value chain supports around 1,800 FTE jobs, or nearly 7% of all jobs in the Bundaberg SA3 region (Table 12). It supports around \$440 million of local economic activity.

Table 12. Regional economic impacts, 2017-18, Bundaberg and Burnett

	Canegrowing	Whole sugar value chain
Total sales (\$M)	124.6	330.8
GVA-direct (\$M)	56.3	272.3
GVA-indirect (\$M)	33.8	163.4
GVA-total (\$M)	90.1	435.7
FTE-direct	471.2	1,054.7
FTE-indirect	282.7	749.5
FTE-total	753.9	1,804.2
% of local FTEs supported	2.8%	6.7%

Source: QEAS estimates based on Lawrence Consulting (2018) and assumptions regarding regional multipliers based on Queensland Office of the Government Statistician (2004) a QEAS regional IO model for a sugarcane growing region. N.B. Total sales for the whole value chain is estimated based on total revenues associated with the cane grown in the region. Total sales for the Queensland sugar value chain have been estimated using IBISWorld data. Bundaberg and Burnett are used to describe the Bundaberg SA3 region.

Case study: E.E. Muir Pty Ltd (Bundaberg)

Number of employees: 9

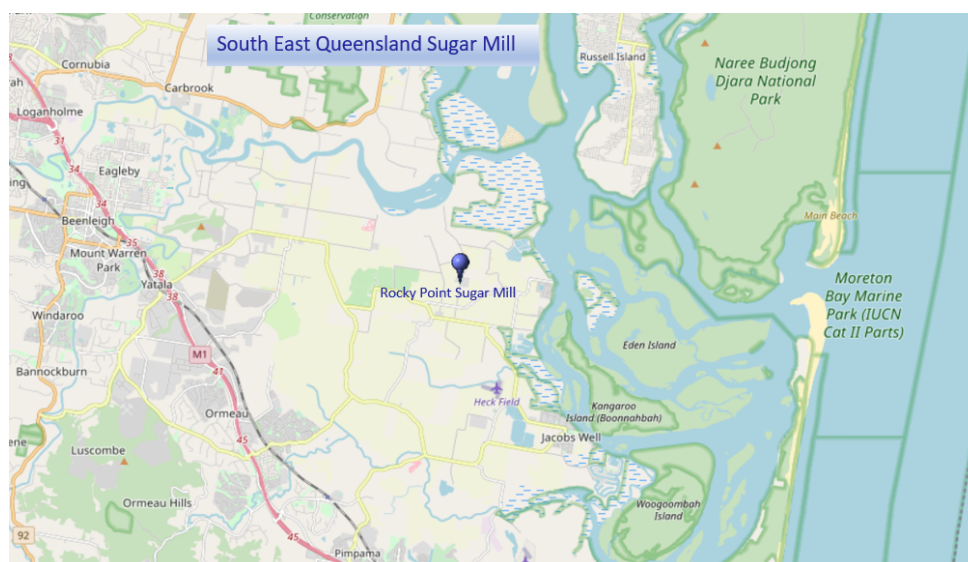
E.E. Muir and Sons is a privately owned family owned business operating since 1927. It provides advisory services and fertiliser, herbicide and insecticide products to a wide range of rural enterprises that concentrate on high value production agriculture including canegrowing.

"For our business canegrowing makes up an essential base and structure as most businesses in Bundaberg have located around cane growing or depend upon canegrowing for critical mass of services."

5.6 South East Queensland

The sugar value chain has a significant presence in Brisbane and the Gold Coast, both directly, via the Rocky Point Sugar Mill on the Gold Coast and via sugar exports from the Port of Brisbane, and indirectly, as substantial volumes of supplies to the industry, including fuel and fertiliser, for example, are purchased from South East Queensland (Figure 13).

Figure 13. Map of Gold Coast sugar mill



Source: QEAS, 2019.

The whole sugar value chain supports around 3,100 FTE jobs, or around 0.2% (1-in-500) of all jobs in the region (Table 13). It supports around \$658 million of local economic activity. Unlike in the regions highly dependent on sugar cane growing discussed above, in Brisbane and Gold Coast, the vast bulk of impacts of sugarcane growing and manufacturing arise via the indirect impacts. There is a substantial leakage of expenditure from regional economies to Brisbane and the Gold Coast as a result of cane farms and sugar mills purchasing supplies originating from SEQ, and also because of goods and services originating from SEQ being purchased by households in the regional economies.

Table 13. Regional economic impacts, 2017-18, South East Queensland

	<i>Canegrowing</i>	<i>Whole sugar value chain</i>
Total sales (\$M)	31.2	82.8
GVA-direct (\$M)	14.1	19.3
GVA-indirect (\$M)	140.6	638.4
GVA-total (\$M)	154.7	657.7
FTE-direct	118	132
FTE-indirect	1,177	2,969
FTE-total	1,295	3,101
% of local FTEs supported	0.1%	0.2%

Source: QEAS estimates based on Lawrence Consulting (2018) and assumptions regarding regional multipliers based on Queensland Office of the Government Statistician (2004) a QEAS regional IO model for a sugarcane growing region. N.B. Total sales for the whole value chain is estimated based on total revenues associated with the cane grown in the region. Total sales for the Queensland sugar value chain have been estimated using IBISWorld data.

Case study: Full Supply Company in Hemmant, (Brisbane)

Number of employees: 18

Family owned provider of refuelling solutions across South East Queensland and Northern NSW, including tank and supply options as well as bulk fuel delivery. The business has been in operation for 5years.

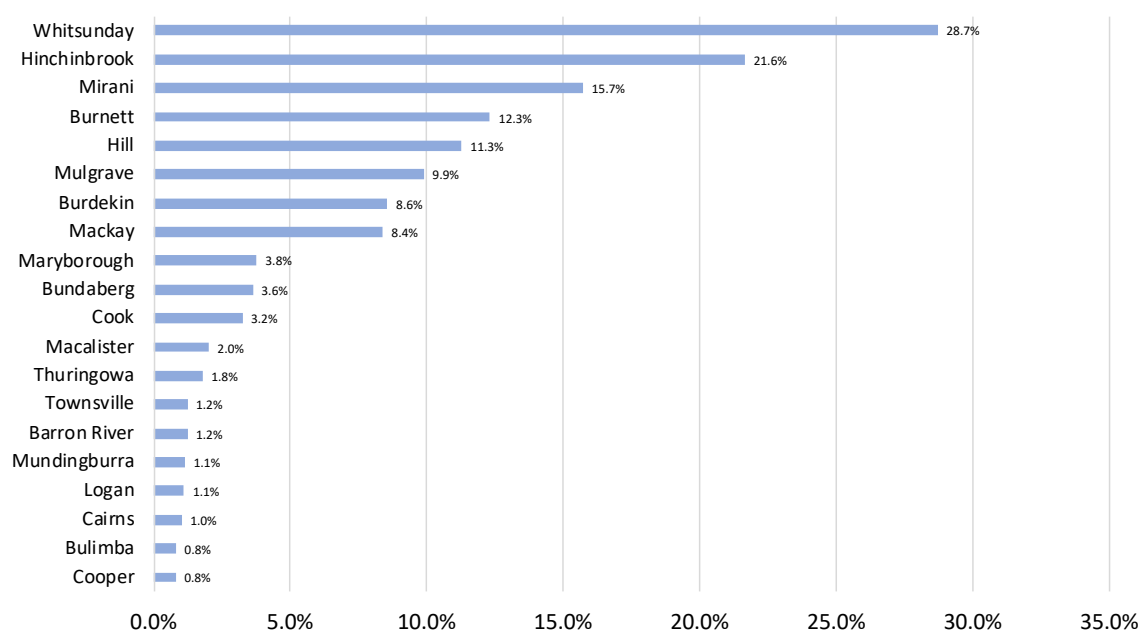
"Canegrowing is a consistent seasonal farming operation which provides regular opportunities for us to fill loads and keep prices low for the rural communities."

6. Economic dependence on sugarcane by state electorate

The large economic dependence of many regions on sugarcane is illustrated by estimates of the contribution to total FTE employment of the whole sugar manufacturing and cane growing supply chain across Queensland state electorates, taking into account both supply chain and induced consumption (from additional household income) multiplier impacts.

The economic dependence is extremely high in the North Queensland electorates of Whitsunday, Hinchinbrook where around one-in-three and one-in-five workers respectively owe their employment directly or indirectly to sugarcane growing and manufacturing. Overall there are 18 state electorates in which sugar is responsible for 1% or more of total employment.

Figure 13. Proportion of FTEs in state electorate depending on sugarcane growing and sugar manufacturing, 2017-18



Source: QEAS estimates based on Lawrence Consulting, 2019, ABS 2016 Census of Population and Housing estimates of employment by state electorate, and ABS Demographic Statistics data to adjust FTE estimates for 2016 to 2017-18 estimates.

Lawrence Consulting (2019, p. 14) also highlights the economic dependence of northern LGAs on sugarcane growing and manufacturing, reporting that nearly 54% of gross regional product (GRP) in Hinchinbrook LGA and 30% of employment are related to the sector. Burdekin LGA has similar levels of economic contributions by the sector.

Methodology

In order to assist in CANEGROWERS advocating effectively on behalf of the sector QEAS was commissioned to analyse the importance of cane growing to the Queensland community

QEAS has calculated using industry and economy wide metrics listed below the following information:

- The contribution that the sugarcane industry and its supply chain makes to the economy;
- The number of direct and indirect jobs created by canegrowing;
- The value of Government taxes contributed by the industry;
- An overview of the sugarcane industry supply chain and how this benefits local communities; and
- Case studies on individual businesses and the outputs, jobs and local spend they provide.

These outputs are calculated for:

- Queensland
- Innisfail and Cassowary Coast (Far North Queensland)
- Ingham, Burdekin and Ayr (North Queensland)
- Mackay
- Bundaberg and broader Wide Bay Burnett
- South East Queensland

Analysis was underpinned by data from the ABS and ABARES, as well as information from IBISWorld and CANEGROWERS. Most importantly the report was underpinned by stakeholder consultations with cane farmers across Queensland on typical expenses by growers such as fertiliser, fuel, electricity, water, etc) with a view to estimating supply chain impacts.

QEAS met with and surveyed parts of the value-chain both upstream and downstream including sugar mills, transport operators; ports; planting and harvesting contractors; fuel distributors; fertiliser and chemical retailers; farm machinery retailers; irrigation equipment suppliers and accountants.

Three key questions were asked of supply chain businesses:

- A brief overview of their business eg years in operation and how many employees;
- The nature of the business's relationship with the canegrowing industry;
- What canegrowing means to their business and region.

This report merges the economic headline statistics with the real life stories of how cane growing benefits businesses and communities across Queensland.

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About QEAS

Queensland Economic Advocacy Solutions delivers solutions in economic, political and social advocacy in Queensland for small and medium sized businesses, corporate Queensland, industry associations and the three tiers of government. QEAS provides:

- [Economic Analysis and Market Research](#)
- [Lobbying, Government Relations and Submissions](#)
- [Media Relations](#)
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QEAS delivers services nationally to exemplary organisations including Suncorp, Brisbane Airport Corporation, the Property Council of Australia, the Queensland Resources Council, Master Builders Australia, Waste Recycling Industry Queensland, RACQ, VTA, HPC Urban, the Commonwealth and State Governments and many others.

Choose QEAS for our expertise, professionalism and ability to work with our valued clients to achieve outstanding outcomes.

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