

Cane railways in the Sugar Industry

Sugar mills that have cane railways are located in a 1530 km coastal strip from Childers in the south to Mossman in the north.



The purpose of the railway systems is to transport freshly harvested cane to the sugar mill for processing as soon as possible, generally within 6 -14 hours and definitely within 24 hours. The operation goes on 24 hours a day and in most cases 7 days a week during the crushing season.

The season normally runs from about June/July to November/December. Two mills also transport raw sugar by private railway to the local port.

The investment by the sugar industry in cane railway networks is significant. There are in excess of 4,000 kilometres of track, of which about 3,000 kilometres is main line, transporting up to 32 million tonnes of sugar cane each season. There are about 250 diesel hydraulic locomotives in use and about 52,000 cane "bins", both four-wheel and bogie, are used to transport the chopped cane during the crushing season of up to 26 weeks. These vary in capacity from 4 tonnes to 14 tonnes. Locomotives of up to 520 kilowatts of power are in use, with numbers of them converted to 610 mm (2 ft) gauge from 1067 mm (3 ft 6 in) and even standard gauge.

The furthest run to a mill is 119 km and the average distance hauled ranges from 13 kms up to 35 kms. Trains can run at 40 km/h and can be up to 2000 tonnes in weight and one kilometre in length.

Where adjoining mills operate under common ownership, the rail systems are connected, not just for ease of locomotive and rolling stock transfer, but more importantly for cane transfer to smooth out supply, particularly in the case of mill or rail breakdowns.

Connected systems are:

- Pleystowe, Marian & Farleigh in the Mackay Sugar Limited network
- Victoria & Macknade in the Sucrogen Herbert network
- In addition, both Kalamia and Invicta Mills are connected by dual gauge track over a lengthy section of Pioneer Mill rail line in the Sucrogen Burdekin network.

The cane railway track network (610 mm gauge) and all rolling stock is owned, operated, upgraded and maintained by sugar mill owners. This substantial infrastructure system operates without public funding support.



In the 2011 crushing season, approximately 25.5 million tonnes or 90 per cent of cane harvested will be transported directly to raw sugar mills on these mill owned cane railways. The balance is transported by road or a combination of road and rail. This compares with 7600 kilometres of 1067mm gauge Queensland Rail mainline and regional track and 1500 kilometres central Queensland coal system hauling 16 million tonnes of general freight and 105 million tonnes of coal respectively each year.

The cane railway network is a dedicated, mill-owned transport system which ensures that considerable tonnages of cane are not transported on Queensland's road systems.

Mill-owned cane railway systems make a significant indirect contribution to state infrastructure by transporting up to 30 million tonnes of cane each year over a five to six month period through corridors other than roads.

Whilst there is substantial variation depending on terrain and other circumstances, it is estimated that the current cost for an additional kilometre of operating rail track is between \$300,000 and \$500,000. This does not include any bridges, road crossings or necessary adjustments to other infrastructure. No other agricultural industry makes a similar contribution (between \$1.5 billion and \$2 billion in replacement value) in reducing road traffic through use of private transport infrastructure, such as cane railways.



The tonnage of cane transported on the cane railway network is equivalent to keeping an estimated 18,000 to 25,000 truck movements per day off the coastal road network during the crushing season.

Sugar millers are also responsible for the transport of the final product (raw sugar) to the various bulk sugar terminals situated at major Queensland ports. In 2010, millers transported approximately 1.5 million tonnes of raw sugar by Queensland Rail, 1.2 million tonnes by road transport and 0.5 million tonnes by mill-owned railway system.