

10. Farms and Central Mills



Plate 10.1: Modern Racecourse mill, 2020.

Source: Courtesy of Mackay Sugar, Nordzucker Group.

Characteristics of the Modern Sugar Industry

The industry was transformed when its free enterprise beginnings were replaced by government funding of milling, and government regulation in all aspects of the industry, including control of prices and labour. The change was carried out piecemeal as necessity demanded, between 1885 and the years during and directly following World War I. In 1885, there were 30 plantation mills operating at Mackay: 28 grew most of their own cane but also accepted cane from surrounding small farm cultivators. Two grew very little cane of their own, operating primarily as central mills supplied by the surrounding farmers. That year, the district produced 21,604 tons of raw sugar. The first farmer-controlled but government-funded central mills in Queensland were built at Mackay, beginning crushing in 1888 and 1889. By 1900, five farmers' mills had been built in the district, and in that year for the first time the farmer-controlled central mills out-produced the remaining seven plantation mills.

Table 10.1: Sugar Production in the Mackay District, 1900

Plantation Mills	Tons	Farmers' Mills	Tons
Farleigh	1,000	Racecourse	2,000
Habana	1,000	North Eton	1,700
Homebush	4,300	Marian	2,250
Meadowlands	550	Pleystowe	1,800
Nindaroo	800	Plane Creek	2,350
Palms	1,650		
Palymra	400		
TOTAL	9,700		10,100

By 1905 there were only 10 mills crushing cane, equally divided between plantation mills and farmer-supplied central mills, together manufacturing 32,380 tons of sugar. Another 20 years on, seven mills remained: six were farmers' central mills, and one, Farleigh, the sole survivor on the Northside of the river, was grower-supplied but privately owned. In 1925, the seven mills produced three times as much sugar as had been produced by 30 mills in 1885.

The industry was transformed from a plantation regime to the pattern which remains today—large central mills supplied by small farm operators. The cane is grown almost entirely on family-owned-and-operated farms; in effect medium-sized rural businesses. The industry is now the domain almost exclusively of landowners of European origin. The few Islander and Asian farmers in the first decades of the twentieth century were forced out of the industry by legislation, trade union pressure, and lack of access to finances as the industry became mechanised. There is government control, almost complete over cane-growing 'assignments', markets, and pricing, and substantial control over wages and working conditions.

There have been other more recent structural changes: multinational milling companies have taken over the milling and refining of sugar; and farming units have grown larger—bigger than many of the original plantations. The early central factories have been amalgamated and become ever larger companies. The five remaining central milling co-operatives (Marian, Racecourse, Cattle Creek, North Eton, and Farleigh) merged in 1988, and after acquiring Pleystowe from CSR Ltd were grouped within Mackay Sugar Ltd. To achieve efficiency, North Eton, Cattle Creek, and Pleystowe mills were closed in 1988, 1990 and 2009 respectively, their share of the crop sent to the remaining mills (Farleigh, Marian, and Racecourse). The milling co-operative became an unlisted public company in 2008. In 2019, the shareholders approved the proposal for a German company, Nordzucker AG, to acquire a 70 percent controlling interest in the share capital. As of 2020, the Mackay Sugar company had 822 growers, a fall in number over recent years. The revenue base came from raw and refined sugar, molasses, and electricity generated from megasse, a milled sugar-cane by-product. Mill mud (filter-press) and ash is another by-product, distributed to growers as fertiliser. During the 2019 crushing season, the company milled 5,101,001 tonnes of cane, producing 712,017 tonnes of sugar, and 167,008 tonnes of molasses. Plane Creek mill, owned by Wilmar Sugar, is nearby at Sarina, crushing an average of 1.2 million tonnes of cane a year to manufacture 180,000 tonnes of raw sugar. Wilmar Sugar's Sarina BioEthanol Distillery uses molasses to produce 60 million litres of BioEthanol a year, and Biodunder, a liquid fertiliser.

Proserpine mill, 125 kilometres north of Mackay, is also owned by Wilmar. The Proserpine district is beyond the definitions of the Pioneer district used in this book, although some sugar statistics group it with Mackay.



Plate 10.2: Wilmar's Sarina BioEthanol distillery, 2020.

Source: Courtesy of Wilmar Sugar Australia.

While the change from small plantation mills to large central mills was part of a world-wide trend, the development of small farming units and a 'White' sugar industry was consequent on a unique combination of economic, political, and racial circumstances present in late nineteenth and early twentieth century Australia. Government funding for mills and government control of markets and prices marked a change from free enterprise to regulation in all aspects of the industry.

Advances in farming and milling technology was in part forced on the industry by rising labour costs, but it was also the product of cane farming in a technologically advanced industry. By comparison, in some areas of the Indian sugar industry the cut cane still arrives at the mills in bullock-drawn wagons. In Queensland, use of tramways and locomotives began in the 1870s and 1880s. Farmers began large-scale use of tractors in the mid-1920s, which reduced labour and livestock costs and left harvesting as the only part of the production cycle that required a large labour force. Labour for harvesting was provided by itinerant European cane-cutters—along with some Islanders, descendants of the original Kanaka generation, and a few Javanese and Malays, until mechanical harvesting was introduced in the 1960s. Australia was in the vanguard in developing mechanical cane harvesters, today exporting harvesting equipment to several overseas sugar-growing countries.

European Labourers and Small Farm Cultivators

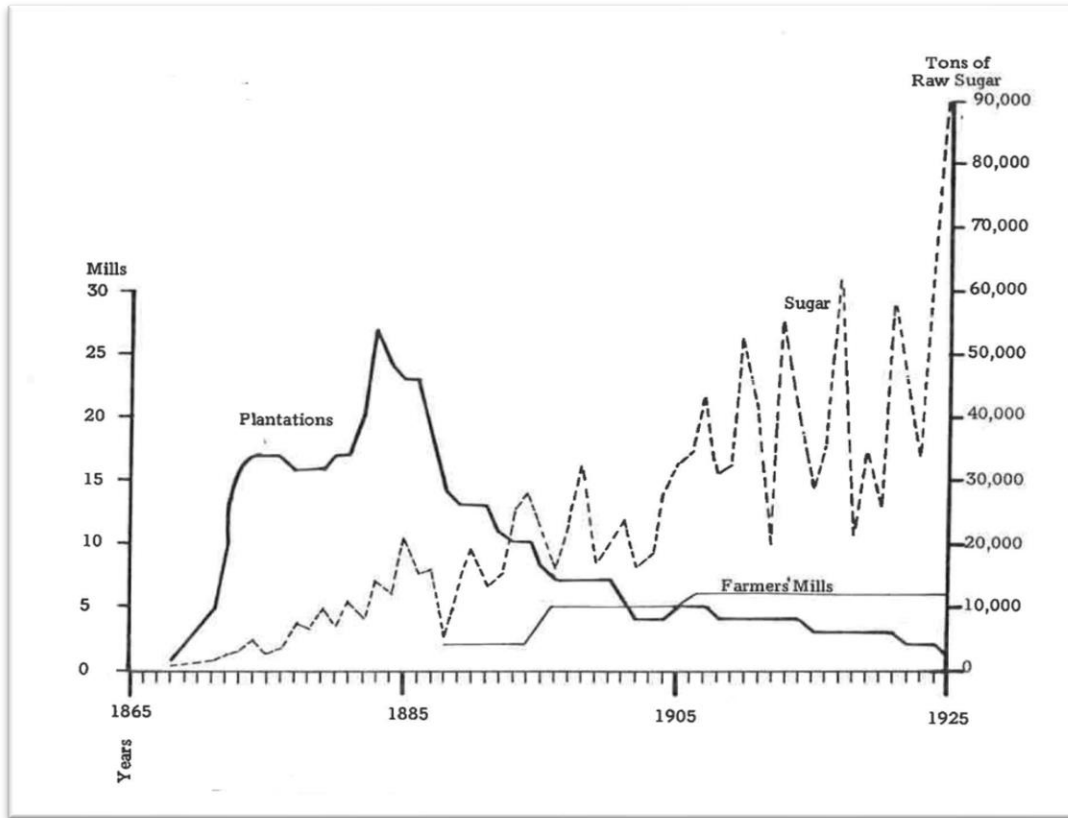
Chapters 7 and 8 focused on Mackay's plantation economy and society, with emphasis on the business interests which operated during the first two decades of the sugar industry.

However, it would be wrong to view the 1860s to 1880s as solely the domain of a small number of planters and their families, served only by Melanesian labourers. Other Europeans settled in the region at the same time as the planters: labourers on plantations, in auxiliary

rural enterprises, in the towns, and as small land holders (Map 10.1). Graph 9.3 illustrates the steady increase in the number of Europeans in the Mackay district during the nineteenth century: just over 500 at the end of the 1860s; around 2,000 in the 1870s; rising to between 3,600 and 7,500 in the 1880s; and 9,000 by 1901. While the Melanesian portion of the population remained relatively constant in size, until a forced decline in the 1900s, the European sector increased dramatically, particularly onwards from the 1880s.

In the 1860s, virtually the entire White population was from the British Isles, or Australian-born, along with a few Germans. Diversification of the White population occurred in the 1870s and 1880s because of government-sponsored migration direct from Europe to North Queensland. Several hundred migrants from continental Europe arrived at Mackay during the 1870s and 1880s—mainly from the states which became Germany, and Austria, Denmark, and Sweden. Right from the 1860s, migrants who paid their own passages could avail themselves of a land-grant system. On arrival in Queensland, they were given an £18 land-order, which could be used as part-payment for any land taken up. After continuous residence in Queensland for two years, another redeemable order worth £12 was provided. The £18 land order was given to steerage and cabin passengers, and as the steerage fare was around £17 it was considered the equivalent of a free passage. If they brought a servant with them, the £12 payment went to the servant. A later immigration scheme provided an £8 10s. payment and the Government guaranteed a free passage, then after two years in the colony they received a £12 land order. Even though the systems did not work smoothly—immigrants often sold their land orders to agents—it was a successful way of encouraging immigration to the new colony.

Initially, they worked in towns or as plantation labourers. Within a decade most had selected small farms, married within the community, and begun to plant small areas of cane. Initially, the women often worked as domestic servants, then raised families of five to 10 children, which brought them back to the farms. Usually starting with 25-to-150-acre patches of scrub or lightly timbered country, these settlers built ‘bush houses’—bark-walled huts with grass thatched roofs and dirt floors, with lean-to kitchens initially consisting of two iron bars supported on stones to boil water in cans. If they could afford one, they used an iron ‘camp oven’ for baking bread and roasting meat. They began clearing the land, in the meantime grazing a few beef or dairy cattle and planting vegetable gardens. Their first agricultural ventures were cash crops such as corn and other vegetables which were easy to sell locally. If a mill was operating in their vicinity they would put in a small area of plant cane, which they used to cultivate a few acres of saleable cane the following year, working up their cane acreages over several years. At the same time, the men continued to work as labourers on plantations and already-established farms. Tens of thousands of acres were taken up by small cultivators in this way over five distinct major periods: the 1860s through to the end of the 1870s; 1879 until 1884; 1885 until 1890; 1891 until 1906; and 1907 on into the 1920s.



Graph 10.1: Mackay district sugar production compared with plantation and central mills, 1868–1925.
Source: Clive Moore Collection.

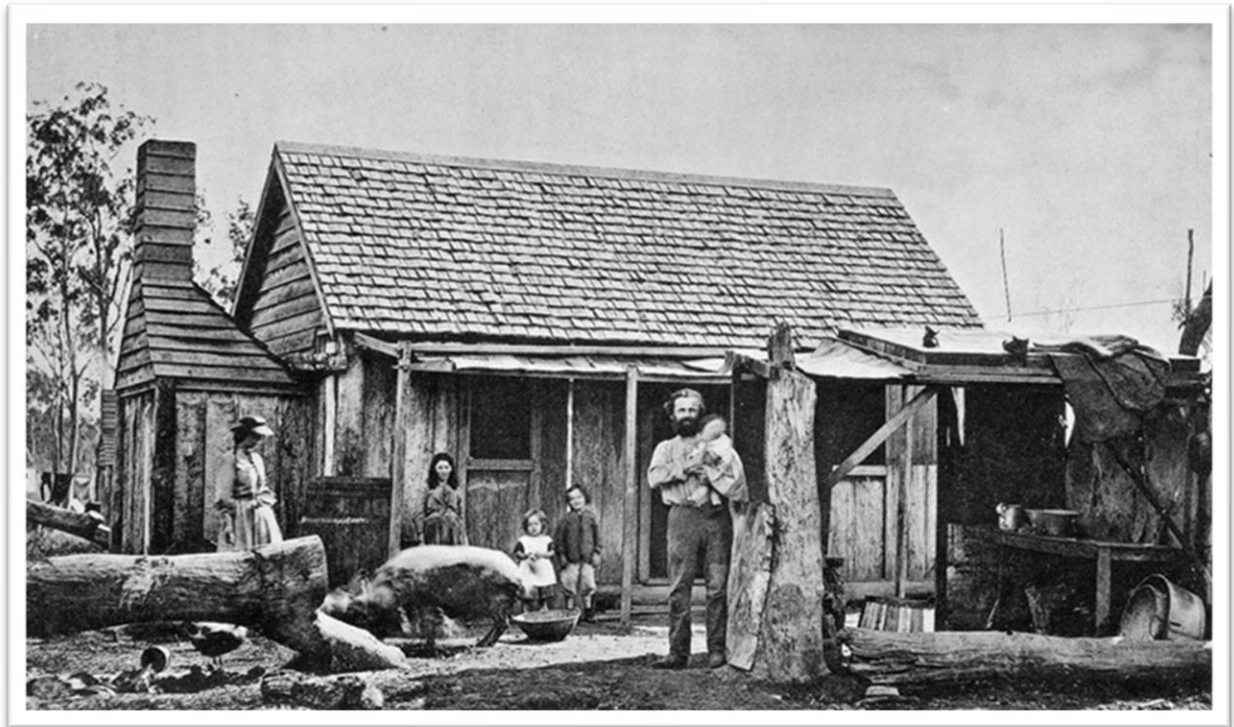
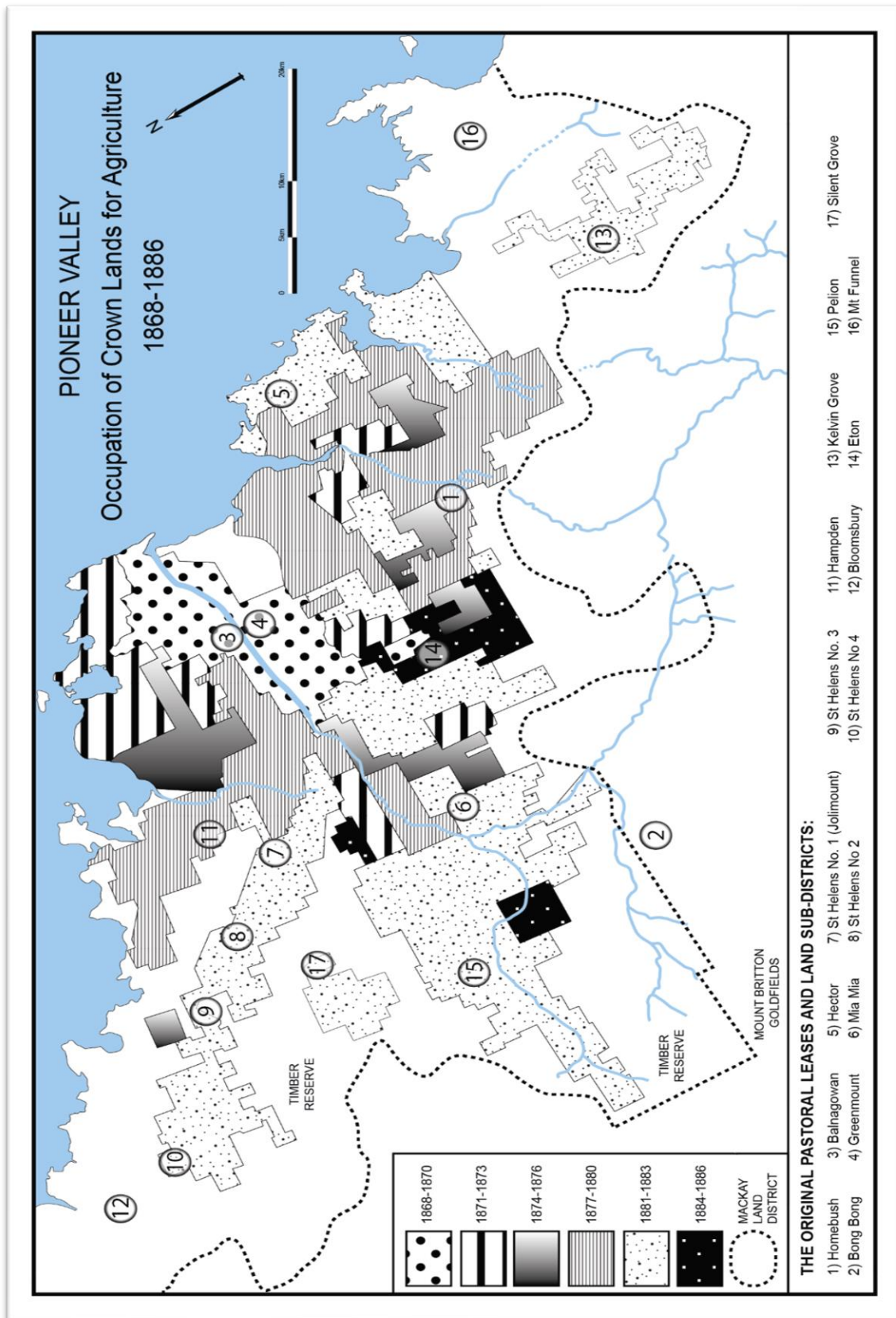


Plate 10.3: A Queensland selector and family with their shingle-roofed slab hut, detached chimney and separate outside kitchen. This was the next stage after building a 'bush' house.
Source: Daintree 1872, 42, Fig. 12.



Map 10.1: Occupation of Crown lands for agriculture in the Pioneer Valley and surrounds, 1868–86.
Source: Cone 1964, Map 1, with new cartography by Vincent Verheyen. Clive Moore Collection.

Their children were a substantial proportion of the first generation of Europeans born in the Pioneer Valley, and the second generation of farmers on small land holdings. The major demographic change to the European sector of the population was an ever-increasing percentage of Australian-born residents: 28 percent in 1881; 36 percent in 1891; and 52 percent in 1901. The majority were born in Queensland, mostly around Mackay. During the first half of the twentieth century, migration continued from the British Isles, other Australian states, and from Malta (a peculiarity of migration to Mackay), and to a lesser extent, Italy. As a result, the farming community in the Pioneer Valley today is ethnically diverse. Present-day surnames, while predominantly from the British Isles, show evidence of migration from the Continent in the 1870s and 1880s, and Maltese and Italians onwards from the 1880s and 1890s. Sadly, this farmer ethnic diversity includes no South Sea Islanders, the descendants of the original labour force.

1864–1878: The Early Years

As outlined in Chapter 7, the first sugar-cane land at Mackay was selected in 1865 under the 1860 *Lands Acts* and the 1864 Sugar and Coffee Regulations. The 1860 Acts were assembled in 1858 and ratified when Queensland became a separate colony from New South Wales. They assisted pastoralism but were also designed to give access to agricultural land for use as small farms, and to encourage migration to rural areas and away from urban areas. Conditions were set to discourage speculation, to stop individuals obtaining large areas, and to ensure that there was *bona fide* residence on the land. Previously, it was possible to use ‘dummy’ selectors—an employee, a relative, or a friend—to increase the amount of land controlled by one person or company. Thomas Fitzgerald did this with great aplomb, amassing a swathe of prime plantation land along the south side of the river. The 1864 regulations were intended to encourage agricultural land selection and were incorporated into the 1868 *Crown Land Alienation Act*, all of which encouraged the selection of blocks of sugar land between 320 and 1,280 acres (129 and 518 ha). The plantations developed from these blocks, and initial farming land was available in small acreage blocks on the outer edge of suburban Mackay. These small blocks disappeared during the 1870s, absorbed into the plantations. Meadowlands and Balmoral plantations were established on land in West Mackay intended for small farms.

During the same years, the owners of other farms and estates were endeavouring to establish mills of their own. It is a common but erroneous belief that the movement away from integration of the farming and milling process began during the 1880s. At Mackay, the first moves away from the plantation system came in late 1868 when there was still only one steam-powered plantation mill in the district—Alexandra. Nearby, the Peri land was first selected by several small-scale cultivators under the 1868 Act, who wanted to build a mill. Then the land was obtained by T.H. Fitzgerald, who went broke and left the district in 1876. R.J. Jeffray from William Sloan & Co., and J.E. Davidson from neighbouring Alexandra plantation, purchased the land and erected a small mill in 1888, possibly cannibalised from closed mills. It never crushed.

Several attempts were made to build other farmers' mills in the district before the Griffith Government allocated funds for that purpose in 1885. The first public sugar milling company, the Mackay Sugar Crushing Co. Ltd, was floated in February 1869 with £5,000 of capital. The mill was to have been sited between The Lagoons on Nebo Road and the racecourse at Ooralea, in the middle of small farms. Two of the company's directors were connected to later milling ventures. William McBryde was a partner in Inverness and Richmond plantations, and Thomas Pearce was a recently arrived farmer and later town businessman. In the 1880s, Pearce was the first chairman of the Racecourse Central Sugar Co. Ltd. Other Mackay businessmen were also involved. The local paper's comment on the 1869 company's failure was that it was under-capitalised, wanted too large a share of the milling profits, and that many of the small farm cultivators involved had ambitions to erect their own mills and would not guarantee their support.

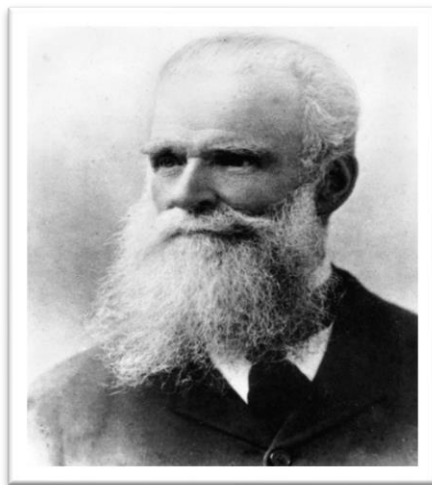


Plate 10.4: Thomas Pearce was born in 1825 in Cornwall, England. Pearce migrated to Australia with his wife and child in 1853, first working in, managing and part-owning drapery stores in Bathurst and Rockhampton, before he arrived in Mackay in 1869. He was involved in the attempt to establish the 1869 Mackay Sugar Crushing Co. Ltd. He established an arrowroot and tobacco farm—too close to the river, as it flooded. Next, he began a drapery in 1880, that became Palace Stores. In 1881, he registered Jarvis Mackay Distillery Co. which never began operations, and at about this time went into local politics as an alderman (1881–85) and mayor (1883–84). In 1885, he helped draft the central mill petition to the Queensland Government.

Source: State Library of Queensland.

The 1869 central milling company was one of at least 35 failed attempts to found mills in the district: 14 were plantations; seven were privately owned mills intending to crush farmers' cane; and 14 were central mills. Some of these mills were built, but were either primitive horse-drawn contraptions, or for one reason or another failed to last for more than a year or two. Three of them, those of William Russell on Broadsound Road (1871), James Robb at The Lagoons (1871–72), and Robert Fleming (1872) on land now the site of Racecourse mill, were built to process the owners' cane together with that of their neighbours.

After this, nine successful plantation mills were established in quick succession, and four plantation companies failed, three of which had erected primitive mills. When T.H. Fitzgerald teamed up with Charles J. King and Edward B. Kennedy to begin Meadowlands, between The Lagoons and the river, the need evaporated. Its initial machinery was obtained cheaply from J.E. Davidson as he had purchased it for, but never installed it, at his Bellenden Plains mill (near Cardwell). After Hyne and Bridgeman purchased Meadowlands in 1878,

they installed a vacuum pan the next year, then an ejector vacuum pan in 1880 and a second set of crushing rollers in 1883, followed by a tramway. After William Hyne died in 1902, the plantation was floated as a private company. In its modernised expanded form Meadowlands continued to crush until 1912, supplied by the plantation's own and farmers' cane. Increasingly outdated, and with Racecourse central mill close by, Meadowlands was taken over by Racecourse.

In January and February 1873, the *Mackay Mercury* mentioned the failure of an attempt to float the district's second central sugar company, commenting that its failure: '...has been a source of great discouragement to our smaller sugar growers, and has, we believe, operated more adversely to the sugar industry here than any other event'.¹ Two years later, another central mill was mooted, similar to the 1869 plan, by farmers on small blocks close to the west side of Mackay township. Several individuals involved in these attempts to set up new mills lost heavily when they failed to eventuate. Another failed milling speculation was by George Smith, who began the Bowen Sugar Co. in 1868–69 to the north, then shifted to Mackay in the latter year, where he became a commission agent, and foundation partner in Marian plantation in 1883. The Bowen company was sold to J.W. Wilson for £950 in 1870 and never heard of again. Even today, Bowen is considered too dry to grow sugarcane, which should also have been clear in the 1860s, although there had been some years of exceptionally high rainfall.

Growing sugarcane differs from other agricultural pursuits because of the large scale of the operation and the degree of processing necessary to transform the raw product. The plantation system established in Queensland in the 1860s was already outmoded by several decades. In Mauritius and Réunion, the Caribbean, and Louisiana in the USA, much earlier in the century smaller plantations had been amalgamated and the remaining mills enlarged and made more technically sophisticated. In Louisiana, the Civil War and the end of slavery was the breaking point; it took until the 1890s for sugar production to recover to early 1860s levels. This was accomplished by developing central factories that supplemented their own crop with cane purchased from small farms, followed by separation of the milling and growing processes. Other trends were refining the crop into granulated sugar, rather than just raw brown sugar, and reducing wastage in the form of molasses. Rising labour costs after slave manumission and the expense involved in upgrading mill technology caused Louisiana and Caribbean mill owners to opt for larger outputs to keep their operations profitable. Steam-powered mills were first introduced in the 1820s and 1830s, and by 1860 in Louisiana accounted for 85 percent of US production. Similarly, by the 1870s in the British Caribbean the central milling system was well advanced.

It was natural that Queensland's cane growers should look to the Americas for a model for their proposed central mills. In 1876, the Logan Cane Growers' Association (near Brisbane) asked Angus Mackay, the author of *The Semi-Tropical Agriculturalist and Colonist's Guide* (1875), to report to them on a visit he made to inspect central mills in the French West Indies. The *Mackay Mercury* commented favourably on his visit as part of its long-held advocacy of the need for farmer-supplied central mills at Mackay. In 1878, another central milling company was floated, the Mackay Central Sugar Manufacturing Co. with £10,000 in capital divided into 1,000 shares. Amongst the company's directors were many small farm cultivators, town businessmen Charles R. Dutailis (mayor in 1879), and an experienced plantation manager, James W. Cran. The Cran brothers were better known through their later companies Tooth & Cran Co., and Robert Cran & Co. James was born in 1850 on the Albert River in southern Queensland, then joined his father at Yengarie, was with J.E. Davidson during his Bellenden plantation failure in the 1860s, then managed several Mackay plantations in the 1870s and 1880s, before moving to plantations around Maryborough and Bundaberg. The 1878 Mackay company collapsed early in 1879 through

opposition from Spiller at Pioneer, and Hyne and Bridgman at Balmoral-Meadowlands, who enticed growers away with promises of more lucrative profits from their cane.

It comes as no real surprise to find that only a few cane farms established in the 1864–78 years survived until the end of the century. All were large freehold properties, more properly called estates than farms. Two were on the Northside of the river: Denman's Etowrie, a 597-acre (242 ha) property just north of The Cedars; and Janes' Glendaragh, 410 acres (166 ha) adjoining The Cedar's southern boundary. Four others were on the south side of the river near Eton and Homebush: Antoney's 856-acre (346 ha) Etonvale estate; Rick's 480-acre (194 ha) Louis farm; Pogson's 465-acre (188 ha) Red and White Rose farm; and the Donaldson brothers 1,000-acres (405 ha) at Sandiford.



Plate 10.5: Charles R. Dutailis (1849–1910), proprietor of Wills Hotel, 1874 to 1879, was one of the founders of the 1878 Mackay Central Sugar Manufacturing Co. He was also a director of the Mount Orange Copper Mining Co. which smelted ore for only one year, 1879, then was closed as unprofitable. He went into business with Fred Black in Mackay and then set up by himself as an auctioneer and general commission agent. Dutailis was a prominent member of the Mackay Oddfellow's Lodge, and later a Freemason.

Source: State Library of Queensland.

Etowrie was established by Edward Denman, who remained there for 58 years, from 1872 until 1930. Denman's story shows clearly that cane-growing, even on a substantial scale, was no automatic guarantee of wealth, even for a man with substantial experience and valuable family connections. He never concentrated exclusively on cane. Thwarted by the recession of the late 1880s, and the lack of cheap labour during the 1890s, Denman diversified his interests away from cane, although he never really made a successful transition to other forms of farming.

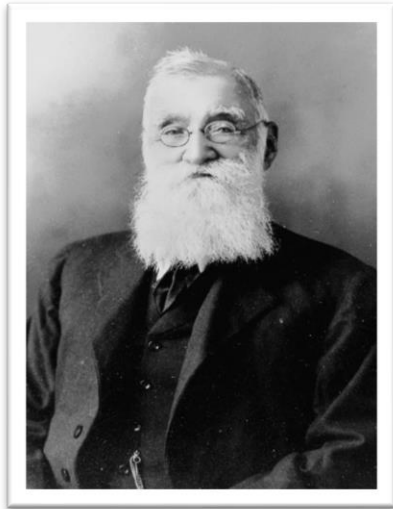


Plate 10.6: Edward Denman of Etowrie estate. Denman was born in England, in 1844. He arrived at Mackay in 1872 and remained at Etowrie until his death in 1930.

Source: State Library of Queensland.

Denman was born in Nottinghamshire, England, in 1844, the son of a grain miller. In his youth he served in the British Army with the 2nd Buffs (East Kent) Regiment in Gibraltar and Malta. Later, he moved to Canada and worked for a wine and spirits merchant, then moved to Demerara, British Guiana, where he became an overseer and acting manager on a sugar plantation. At 28-years old, he migrated to Australia in 1872, joined in a goldrush to Clermont, and in 1873 made his way north to Mackay, where he worked as manager for John E. Paine on Dulverton, before purchasing Etowrie estate in the hills on the Northside of the river where several plantations were being formed. For the first few years, he concentrated on clearing his land, working concurrently as manager of Inverness and Miclere plantations. As Denman wrote, ‘I brought little or no capital in the shape of cash, but I brought some in the shape of experience in tropical agriculture and it has given me a very fair return’.² In 1878, he borrowed money from E.M. Long, ex-partner in Branscombe and River plantations, at that time in the process of establishing Habana plantation near Etowrie. Denman’s first crop was maize. No cane was planted on Etowrie until 1879. In the same year he married Helen James Cumming, daughter of a partner in nearby Richmond plantation.

Etowrie, with 597 acres (241 ha), was as large in area as many of the early plantations and differed only in not possessing a mill. Denman grew up to 4,000 tons of cane a year, choosing to send his cane to neighbouring mills. He seems never to have seriously considered erecting his own mill. Entering the sugar industry in a peak period, he did well during the early 1880s. Denman attempted to sell Etowrie in 1884, however the boom had passed, and with it his chance of a good price. Etowrie went into decline later in the decade when sugar prices were low, and Denman suffered mishaps—such as having 3,000 tons of cane burnt by accident in 1885, with only 1,800 tons saved and milled. The next year he crushed no cane as the price offered by millers was too low. In 1889, he had cane but could not afford the labour to cut it, his only option to sell it as plant cane. He left off growing cane to concentrate on maize and 15 acres of fruit trees—mangoes, bananas, custard apples, limes, and oranges. By 1894, 225-acres (91 ha) were leased to farmers: three Europeans, one with 30 acres, and two with 50 acres each; and one Chinese leasing 95 acres. Denman himself grew only a few acres of cane, concentrating instead on his fruit trees, producing Dahru rum liqueur (the recipe for which arrived with him from the West Indies, and included fruit), running 350 head of cattle, and operating a small store for the neighbouring settlers and their Melanesian employees.

During the 1890s and 1900s, as he approached 60 years of age, he concentrated on rearing dairy cattle and pigs, and was involved in the Pioneer River Farmers' Association. He was also a member of the Harbour Board and the Pioneer Shire Council, chairman of the latter during 1917–18. Edward Denman always strongly advocated retaining Melanesian labour, which he saw as essential to the future prosperity of the sugar industry. Ironically, in the early twentieth century after most Melanesians had been deported, and those who remained were banned from working in the sugar industry (unless on their own farms), Denman encouraged some of the elderly Islander men to make their homes on Etowrie. By the time of his death in 1930, he had gathered a group of about 20 Islanders and gave them use of a section of Etowrie on which to spend their declining years. The Islander descendants have fond memories of 'Poppa' Denman.



Plate 10.7: The Denman family's second house at Etowrie in the 1880s.

Source: Denman Collection, Heritage Collection, Mackay Regional Library.

1879–1884: The Boom Years

The nemesis of the squatters were the selectors, called 'cockatoos' or 'cockies'—meaning that they came in flocks and ravished the land. They were a new class of colonist, many of whom were genuine farmers of the 'yeoman' types that Premier Griffith aspired to encourage. There were also those among them that had taken up leases purely to on-sell, or had limited capital reserves, which meant they could not develop their selections, and were forced to sell-out. The 1868 *Lands Act*, amended in 1872 and 1875, was replaced in 1876 by a new Act which increased the upper limit of the size of land selected for cane growing to 5,120-acres (2,072 ha). Once more it was large-scale agriculture—at Mackay, the sugar plantations—which was encouraged. By the late 1870s, the best land surrounding Mackay and along the lower reaches of the river had become one interlocking block of plantations,

estates and farms (Maps 7.2, 10.1). New selectors in search of small farms— mainly plantation labourers and townspeople—had to look to areas beyond the plantation belt. After the short rust-induced recession from 1875 to 1876, the industry recovered and began to move toward the boom of the early 1880s. For example, onwards from 1873, Robert Bridgeman, brother of Frank Bridgeman at Balmoral plantation, grew cane and tobacco on a small farm, then became a selector in 1881, with 1,743 acres (705 ha). The world price of sugar was riding high, and additional mills were planned and under construction. While the boom brought a large influx of capital, most of it was invested in the purchase of existing plantations, not in new land, except for CSR's Homebush.

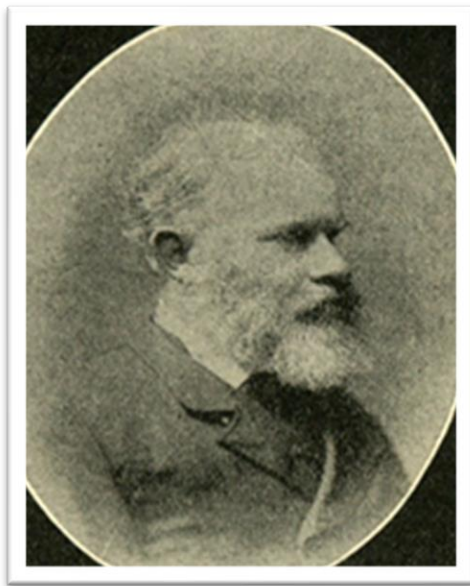


Plate 10.8: Captain William Robert Goodall, Magistrate at Mackay. He served in the British Army, then migrated to Queensland in 1864. He was employed as a government surveyor, became Sub-collector of Customs and Harbour Master at Mackay in 1868, and Magistrate (1870–84). He also served as acting Commissioner of Lands.

Source: *Mackay Mercury Jubilee Edition*, 1912.

Over the next few years, applications for new agricultural land selections soared: from 8,399 acres (3,399 ha) newly selected during 1878, to 125,836 acres (50,924 ha) selected during 1882. By 1885, the boom was over, with 300,000 acres (121,406 ha) of new selections approved since 1879. Much of this land was selected purely in expectation of quick resales and large profits, which never came. Within a year or two, most of the new land had been forfeited: selectors defaulted on their payments, and the land reverted to the Crown. In 1882, during the unprecedented optimism for the future of the district, W.R. Goodall, Mackay's Magistrate and acting Commissioner of Lands, could see the problems emerging:

On the smaller conditional selections most are thoroughly *bonâ fide* [*sic.*] many being made by residents of long standing in the district, and townspeople who have moved on to the land. Of course many conditional selections are taken up on speculation, and the difficulty at present experienced—getting a sufficient supply of coloured labour—will probably put a check to this ... There is still plenty of good land to be had in the district, now lying principally to the north of St Helens...³

A year later, as Goodall expected, many selectors had forfeited their leases:

There is at present some depression in the sugar industry, owing partly to a short crop and a long drought (now thoroughly broken up), but mainly owing to the uncertainty as to the future supply of coloured labour. Planters are contracting their operations and paying off numerous men... . I anticipate a considerable falling-off in the payment of the March rents, and forfeiture of small selections, as very many of the smaller selectors are employees on the plantations.⁴

Of the hundreds of small agricultural selections taken up between 1879 and 1884, ten years later only about 50 were being used for growing cane. Two-thirds of these were in the Eton-Brightly-Homebush area, the other third scattered along the Northside of the river from Balnagowan to opposite Mirani, with three or four between Habana and The Leap (Map 10.1). Most of these farms were initially leased from the Crown and converted to freehold within a few years. In size they ranged from 15 to 2,700 acres (1,093 ha), with the majority between 160 and 300 acres (121 ha). The pattern was that cane farms were developed progressively. The natural scrub and forest were cleared over many years, using mainly family labour. Immediate income came from sowing cash crops and grazing cattle to supplement income derived from slowly expanding the cane acreage, with the adult males working as labourers away from their own land. In 1894, many of the settlers who took up land in the boom years were each growing on average only 25 acres of cane. Alongside them were others who had selected land at the same time, although they continued to rely wholly or principally on cattle and cash crops. Whether or not they grew cane, virtually all farmers supplemented their incomes by working as labourers. One of the major complaints received by the 1897 Royal Commission on Land Settlement when it sat at Mackay was over the continuous residence clause in the key Lands Act. Particularly at crushing time, many farmers worked away from their selections for up to three months, which meant that single men could not comply with the residence conditions of their leases. It was often women who were left to establish the new selections.

The life of Margaret Coalter is a good example of what must have been typical for many. Born in Scotland in 1874, she arrived at Mackay in 1882 with her father, William Coalter, stepmother, and family. Her father worked on Homebush, then in 1886 took up a selection on newly opened land at Kelvin Grove (Koumala), where his family settled while he continued to work 50 kilometres away at Homebush. For two years, his wife, sister-in-law, Margaret, and her two sisters, cleared the land, established gardens, and ran cattle and sheep. Then, in 1888, Mrs Coalter and the younger children moved to Homebush. Margaret was left to run the isolated farm almost single-handed for five years in the late 1880s and early 1890s, assisted only by her elderly step-aunt. In about 1895, Margaret met and married Samuel Arbuthnot. Together they started Ardrea farm at Sandiford, where she lived until her death in 1959.

All the plantation mills crushed some cane supplied by farmers in order to supplement their own production. Two of them, Victoria, and Marian, drew the greater part of their cane from farmers, functioning virtually as privately-owned central mills. All farmers were in a weak position, not able to ensure that their cane was crushed when its sugar content was at its highest—or indeed was crushed at all—and in no position to bargain for a more satisfactory price. Those even a few kilometres from the nearest mill had in addition serious transport issues. The solution—a group of farmers banding together to establish their own mill—was obvious, and there was a long history of attempts to do so. It is surprising that only one proposal is known to have been made between 1879 and 1884. Part of the explanation for this lack of initiative probably lies in the boom conditions prevailing. The future for small farms

would have looked bright, as the plantation owners were then affluent and did not feel the need to drive hard bargains when crushing farmers' cane.

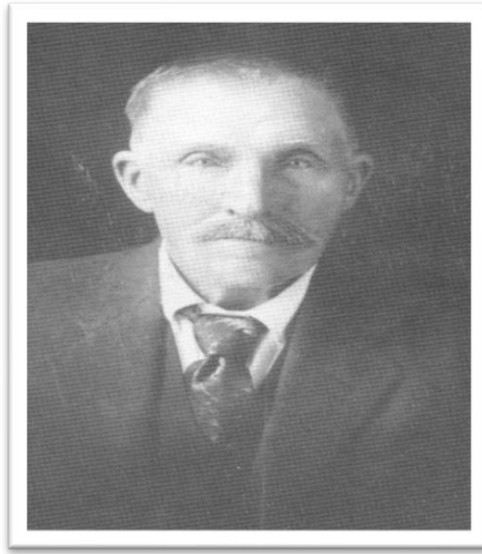


Plate 10.9: Ole Matsen, plantation labourer (1872–75, 1876–82), estate manager (1882–85), farmer (1887–1926).

Source: Courtesy of the Matsen Family Collection.

Despite these inherent conflicts of interest, a number of farmers maintained good relations with plantation millers. This is clear from the life of Ole Matsen (1850–1926), whose career illustrates a great deal about the farmers at Mackay. He took up his own farm late in 1887, after wider experience in the sugar industry than most others in this group. In the 1970s, I met his daughter Violet Seivers, who loaned me his diaries. He kept a daily diary all his life at Mackay and twice attempted to write an autobiography. They are the most substantial diaries known to survive from the early decades of the Mackay district.

Matsen was born in Indslev, Guguen Island, Denmark, in March 1850. His father, Mads Larsen, was a clerk to the parish minister of their village, and his mother was Gertrud Olufsdatter. Ole received a good education. At nine, he was sent to work on a small farm near his village. For the next few years, he combined work with study, going to school three days a week, resuming full-time study each winter when farm work was impossible. When he was 20, he read a Queensland Government prospectus calling for migrants and decided to emigrate. Matsen boarded the *Humbolt* in Hamburg in April 1872 for a 17-week voyage to Bowen. With him were 500 Germans and Scandinavians, 200 of whom continued to Mackay. Over the next 50 years he was associated with four plantation mills (Nebia, Pioneer, Cassada, and Homebush), as well as Farleigh (while it was a private central mill), as labourer, overseer, estate manager, and farmer.

Matsen's first job was on Nebia plantation, where he and four of his shipmates were engaged on 12-month contracts. Their journey to Nebia was by punt up-river from Mackay:

...about a dozen of us had to go in a punt, to get to our destinations, and we started with the tide about eight O'clock in the evening... [A] few of them got off the punt, at what is called the 'Devils Elbow', and they had to walk several miles to the Inverness plantation, a boy had been sent there to show them the road.

...the rest of us kept on the punt, past River Estate, Foulden and Pioneer, and when we reached Dumbleton we made it fast to a tree, and went to sleep, waiting for Daylight. It

was a splendid view of the river on both sides, the banks were covered with heavy scrub which in places nearly met overhead, forming a beautiful avenue over the river...small islands were dotted here and there (*sic*).⁵

Matsen tasted his first sugar cane at Dumbleton. Never having seen cane before, he cut it into slices and put them into a pannikin of water, hoping for a sweet drink. Perplexed, next he tried chewing it, with more success.

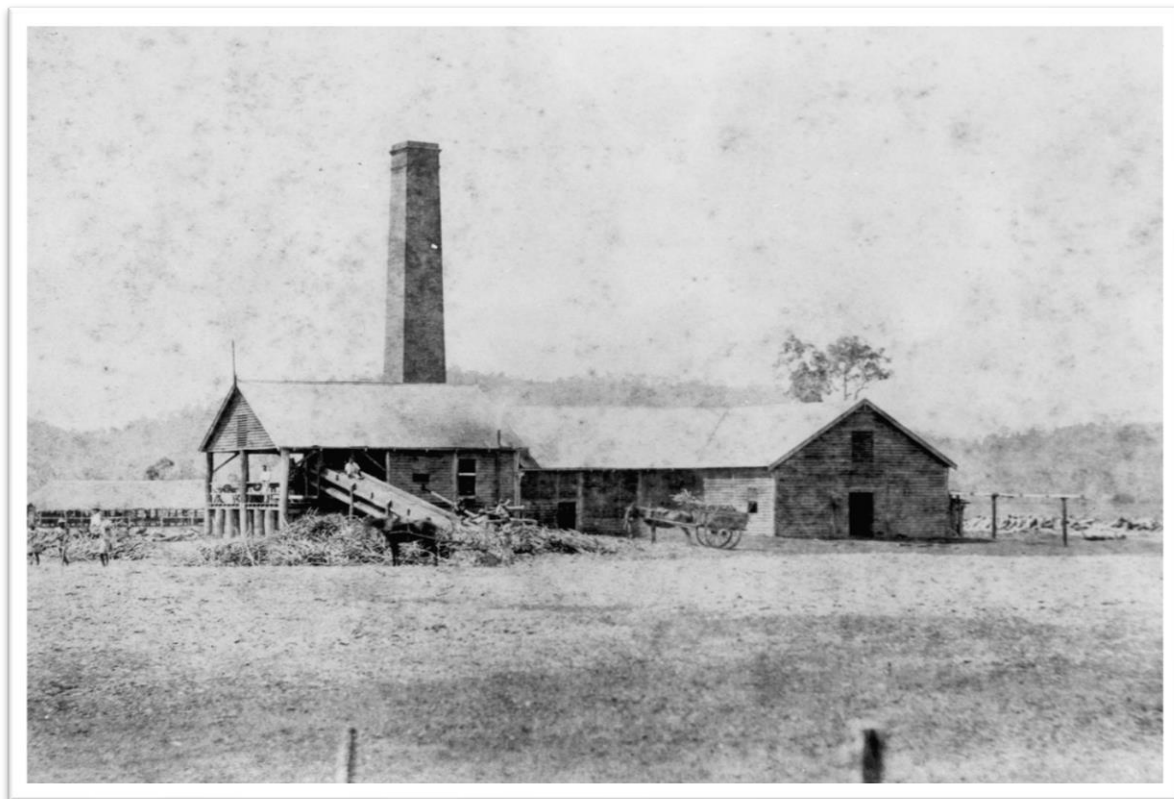


Plate 10.10: Nebia plantation mill began crushing in 1872, the year that Ole Matsen began working there. The conveyor belt which carried the cane to the rollers is on the left.

Source: State Library of Queensland.

His first employer was Charles Fitzsimmons, who had just begun to operate his Nebia mill. Fitzsimmons employed 30 Europeans and 50 Islanders. Matsen worked there from August 1872 until the end of the 1873 crushing season, gaining his first experience in tropical cultivation and mill work. He had intended to try his luck on the Ravenswood goldfield and was about to join a friend there from the *Humbolt* voyage, when he received news that the man had died. Remaining at Mackay, Matsen engaged on John Spiller's Pioneer plantation, where he worked through the 1874 sugar season. Spiller put him in charge of the conveyor belt carrying cane to the rollers. Matsen then left Mackay, spending the next two years travelling, visiting his sister in America, and working in California and southern Australia. In early 1876, he was in Sydney working in the grounds of the Wentworth family's Vaucluse House. He considered returning to Mackay, until he learnt of the depressed conditions after the outbreak of rust in the cane. This led him to delay for a few months, returning later in the year. Most of the passengers on the ship on which he came north were on their way to Cooktown and the Palmer River goldfield. Despite their urgings to join them, he left the ship at Mackay. Looking back from 1923, aged 72, Matsen described Mackay in 1876:

The effect of the rust in the sugar cane, had nearly depopulated the town, so on my second arrival in Mackay, things were none too lovely; also, the district in general had suffered a setback. Some of the former planters had gone to the wall, and there was a general depression all over...⁶

On arrival, he went out to Pioneer where Spiller immediately reemployed him. Matsen stayed at Pioneer until 1879, then moved to Cassada, a small plantation on the other side of the river, managed by James Donaldson in partnership with P.F. Smith. The mill, erected in 1872, was small and usually produced only 200 or 300 tons of sugar in a season. Matsen was appointed as field overseer. In 1882, he married Emma Bentley, and left Cassada to manage Sandiford, the Donaldson brothers' new estate a few kilometres to the south. Matsen and six Islander labourers arrived there in October 1882. Twenty acres had already been planted with cane, and the remaining 980-acres (396 ha) were still virgin forest.

The cane from Sandiford went to CSR's newly established Homebush mill. At the end of 1885 when the sugar boom had run its course, inefficient Cassada was in financial difficulties and the following year the Donaldsons' bankers foreclosed. James Donaldson attempted to re-establish the mill as a farmers' central mill. Failing, he decided to shift to Sandiford, which led Matsen to leave. A comment in his diary made clear why: 'I was not satisfied to play second fiddle to Mr. James Donaldson as I knew what sort of a manager he was'.⁷ In April 1887, Matsen and his wife moved to Springfield, a farm still owned by their descendants. For the next five years, he leased the land from Andrew Diehm, mentioned in Chapter 2 for his 1860s exploits as an explorer and pastoralist. In the 1870s, Diehm set up a store in Mackay and had selected Springfield in the early 1880s. In 1891, CSR advanced Matsen the £881 he needed to purchase the 898-acre (363 ha) farm.

A naturalised British subject, with a wife and young family, Matsen worked hard building up his farm. For most of the 1890s he made slow progress, clearing the heavily timbered land, his cane crops retarded by poor seasons. During its first decade of operations, Homebush functioned primarily as a plantation mill, with only about a dozen farmers like Matsen supplying extra cane. During the 1890s, Homebush progressively subdivided its land which was sold on easy terms to farmers, many of whom had been CSR ploughmen. In 1894, Matsen had 90 acres under cane, another 20 acres broken-up but unused, and 20 acres being cleared. About half of Springfield was suitable for cane. Eighty-five acres were sublet, half to Jans Petersen and half to two Chinese, Ah Foo and Ah Shoo. That year he harvested 66 acres of cane, which returned 1,517 tons of stick cane averaging 23 tons to the acre. The Matsens and their 10 children lived in a comfortable double-storied weather-board house with an iron roof and a detached kitchen (Plate 10.11). Fruit trees and vegetable gardens surrounded the house, and there were stables, a blacksmith's shop, and quarters for the Islander employees. Two kilometres of the Homebush tramway ran through the property. There were 25 head of cattle and 16 horses. Ole Matsen operated the farm assisted by his wife and sons, two Europeans, and two Islanders who were time-expired (on second or subsequent indenture contracts).

Ole Matsen's farm, purchased from the first selector, was relatively large. Most of the surrounding farms, subdivided from Homebush plantation, were smaller, ranging from 50 to 150 acres (20 to 61 ha). Even Matsen's acres under cane was large for a farm in that period. In 1898, his crop was damaged by Cyclone Eline, and in July 1899 severe frost nearly ruined the entire crop. Because of repeated setbacks like these, Matsen made little progress before the early years of the new century. It was 1913 before he was able to clear his debt with CSR and make a few hundred pounds profit. It took Matsen 22 years of hard work to make the transition from plantation labourer to indebted landowner and on to independence as a prosperous farmer. His steady progress is typical of many other early plantation labourers

who through perseverance became established farmers, without any large financial backing. While many small farm cultivators spoke harshly of the treatment they received from the millers, Matsen never complained about CSR, and credited his success to the company and its managers at Homebush.



Plate 10.11: The Matsen family at home at Springfield, 1915.

Source: Courtesy of the Matsen Family Collection.

1885–1890: Government-sponsored Central Mills

The 1884 *Lands Act*, effective from April 1885, was by far the most radical of the nineteenth century Queensland land legislation. In place of the multiple categories of land selection available under the 1876 Act, the 1884 Act divided selections into two classes: agricultural farms and grazing farms. Agricultural selections could be leased for 50 years, with the right to convert to freehold after 10 years. Agricultural farms of less than 160 acres (65 ha) could be converted to freehold for 2s. 6d. an acre after continuous residence for five years. The upper limit of the area allowed as an agricultural farm was 1,280 acres (518 ha). The Griffith Liberal Government's 1884 Act was part of a wider package of legislation aimed at redirecting the development of the sugar industry and ultimately Queensland. In 1885 legislation, the Melanesian labour trade, previously progressively controlled and restricted, was ordered to cease after 1890. In the same year, Griffith allocated funds to establish farmer-supplied central mills owned by small farm cultivators. The agricultural clauses of the 1884 *Lands Act* were aimed at encouraging small-scale cultivators to enter the sugar industry. It was part of Premier Griffith's policy to encourage 'yeoman' farmers to replace the plantation style of development.

Progress towards this ideal was slow. By 1894, only 63 new farms had been taken up in the Mackay district over the previous decade. The best cane land—that close to existing mills—had all been selected many years earlier. Low prices for sugar on the world market and uncertainty about future labour supplies did not attract new cane growers into the industry. The only improvement in prospects for small farming at Mackay came from the Government's decision to erect two farmer-supplied central mills in the colony, offering

small landholders a means of processing their cane, independent of plantations. Over half of the new cane farmers in the Mackay district during 1885–90 were based in the Eton–Sunnyside–Homebush area, adjacent to the Government-sponsored farmer-owned North Eton central mill, and CSR’s Homebush mill. Most of these farms were on Crown land selected in 160-acre blocks under the terms of the 1884 *Lands Act*.

The same conditions which retarded the growth of small-scale farms were affecting the plantations: 10 of the district’s 30 plantations closed during the last half of the 1880s. A drought in 1888–89, together with low sugar prices and the threatened closure of the Melanesian labour trade, sent the entire industry into depression. Despite improvements in late 1888 and early 1889 (the drought ended, and world sugar prices rose slightly), the plantation boom vanished and Australia with the rest of the Western world was suffering from a much wider economic recession. Previously prosperous large landowners in the district (pastoralists, and owners of plantations and estates) were all suffering the effects of the recession. Many disposed of sections of their largest but now less productive asset—their land. Ex-planters and ex-estate operators who had entered the industry in the 1870s and early 1880s began selling or leasing their land: for instance, A.H. Lloyd at Dumbleton; the Kable brothers at Brightly; the Donaldson brothers at Sandiford; and Diehm at Springfield. Well-established pastoralists also leased and sold freehold blocks already alienated from their pastoral stations. John Cook on Balnagowan, and David Dalrymple on Hamilton and The Pinnacle, both did this. As well, current plantations had begun to subdivide their land. For example, Long and Robertson at Habana leased over 1,220 acres (494 ha) to tenant farmers between 1884 and 1893. This sudden availability of good land provided a second chance to small farm operations.

One partial offset to the decline in the district’s prosperity was an improvement in transport facilities using steam locomotives during the second half of the 1880s, both on Government railways and private tramways. In the late 1870s, plantation mills began to build their own narrow-gauge tramways, linking the extremities of their land and that of surrounding estates and farms to ever-larger central sugar factories. One major change began in the first half of the 1880s. Mackay and the Pioneer Valley gained a government railway system. Maurice Hume Black, elected to the Mackay parliamentary seat in 1881, was part of the McIlwraith Government and campaigned for a railway for the Pioneer Valley, to be linked to the southern line which then terminated at Rockhampton. The final decision was for a stand-alone system to serve the valley, for which the surveying began in 1883. The first line opened in 1885, from Mackay to Newbury Junction and Drapers Siding, with a branch line to Hamilton (now Mirani). McIlwraith had allocated only enough money for 48 kilometres of line and had to be persuaded to extend the railway to include Eton. Only Victoria plantation mill was directly on the line; Te Kowai, Palms Estate and Pleystowe were not linked to the line until 1887. The Mackay railway station was in Alfred Street, and there were no connections to southern and northern lines until the early 1920s.

The first two government-sponsored central mills in Queensland were both established in the Pioneer Valley: North Eton and Racecourse mills were on the new government rail line, as were some of the plantation mills. Initially, there were no sidings into the mills, which was rectified late in the 1880s. The spread of sugar fields away from the mills was constrained by the speed at which cane could be carried to a factory. Steam locomotives and tramways meant that small farm cultivators at some distance from mills had a means of quickly ferrying their crops to the rollers. The line was also useful for transporting bagged sugar to the wharves, and supplies from the port to the plantations, central mills, and farms.



Plate 10.12: Racecourse central mill which first crushed in 1889.

Source: State Library of Queensland.

Although small farm cultivators at Mackay and in other Queensland regions had always been dissatisfied with their dependence upon plantation mills, moves to control their own milling processes came to nothing, until June 1885 when a small group of farmers from around Eton presented a petition, drafted by Mackay's Town Clerk W.G. Hodges and Thomas Pearce, to Premier Griffith. Their argument for his government to sponsor the establishment of farmer-supplied central mills contained six points. They said that the mill owners had large areas of their own cane to be crushed. Consequently, farmers wishing to use plantation mills had to wait until the end of each crushing season, with detrimental results on their cane. The farmers feared that because of the enormous increase over the previous few years in the amount of land under crop on plantations, many of them faced the prospect of not having their cane crushed at all. Next, they argued that the planters had a monopoly over milling, and paid farmers whatever price they chose, making a larger profit on cane bought from suppliers than they did on their own cane. The farmers suggested that if there were more mills in the district, away from the core plantation area along the river and in the hills on the Northside, farmers further away would cultivate cane. They also argued that it was unlikely that more plantation mills would be built. And a final selling factor to Griffith was that the farmer-supplied central mills would foster European colonists, and aid establishment of a White-dominated cane industry. Central milling co-operatives were the logical corollary to Griffith's desire to further small-scale agricultural settlement in the colony and his government's resolve to end dependence on 'coloured' labour.

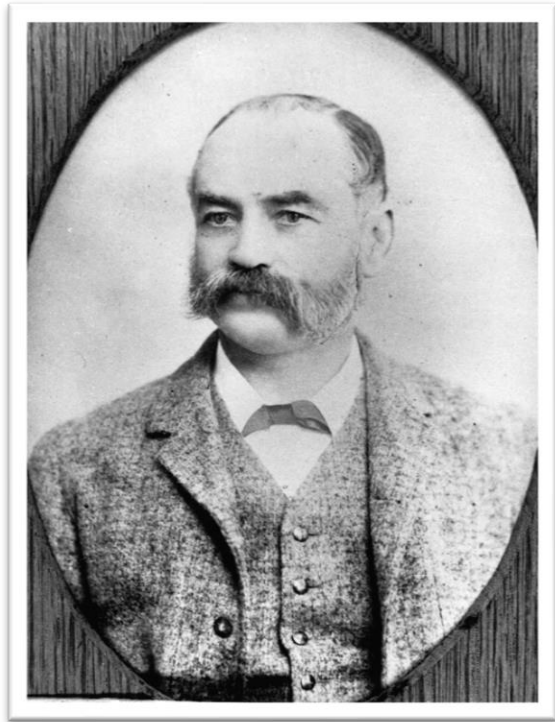
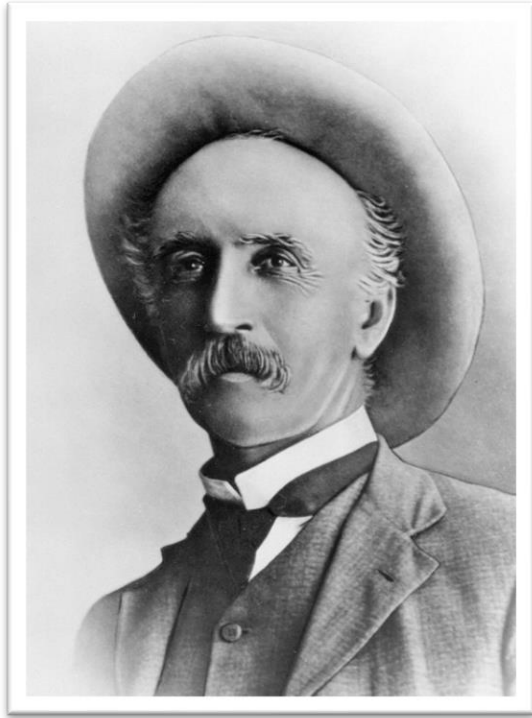


Plate 10.13: William George Hodges, co-proprietor of the *Mackay Mercury*, and Mackay's town clerk and alderman for several terms 1888–1913, and mayor, 1890, 1896, and 1901.

Plate 10.14: William Oswald Hodgkinson, the first editor of the *Mackay Mercury* in the 1860s, a Magistrate, and later a Member of Parliament and Minister in the 1890s. He chose the North Eton and Racecourse applications to be the first government-sponsored central mills.

Source: State Library of Queensland.

The growers wanted the Government to lend money to joint stock limited liability companies with farmer shareholders who would erect their own mills. Growers offered to surrender the title deeds of their land to the Government as security until the loans were repaid. The experiences of overseas sugar producers testified to the probable success of central milling co-operatives. With Angus Mackay's 1876 report on the French West Indies sugar industry's central mill system already in its files, the Government reacted positively. Griffith approved the application and had £50,000 (today \$6,900,000) placed on the Estimates. Against the opposition of all Conservatives in the Parliament, except M.H. Black, Griffith forced the vote through the Parliament. Asked to report on applications from all over the colony, William O. Hodgkinson, an experienced public servant and founding editor of the *Mackay Mercury* in 1866, then acting Magistrate for the Etheridge and Palmer River goldfields, recommended dividing the money between two groups of farmers at Mackay, utilising the new railway. The result was North Eton and Racecourse mills, which first crushed in 1888 and 1889. One of the specifications was that only European labourers could be employed in cultivation, carting and cutting of cane supplied to these mills.



Plate 10.15: North Eton central mill, 'The Defiance', first crushed in 1888. This photograph is from 1895.

Source: State Library of Queensland.

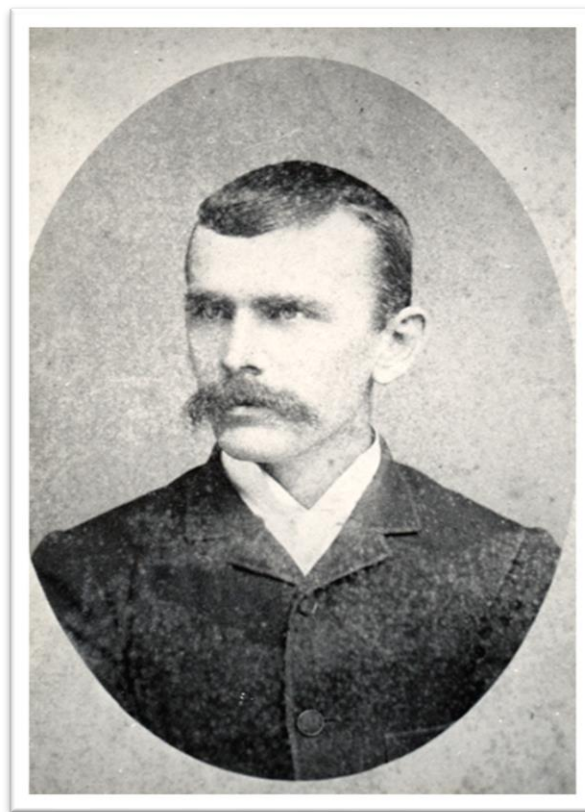


Plate 10.16: Frederick Keen, first secretary of the North Eton central mill.

Source: Mackay City Council Archives, 1976.

Government-sponsored central mills were to have been the answer to all the farmers' problems, but for every problem solved another arose. Initially, drought limited the crops: Racecourse did not crush in 1888, due to lack of cane from its suppliers, and in 1889 crushed by purchasing cane from outside farms as a supplement. The company was unable to repay interest due to the Government on the loan. The report from 1888–89 Royal Commission into the depressed state of the sugar industry criticised North Eton for the lack of business acumen amongst its farmer-directors. Both new milling companies spent too much on mill machinery, leaving nothing to create mill tramways. Even when sidings were constructed in 1889, the Government railway was only useful to transport milled sugar to the port, not for bringing the cane from the fields to the mills. Duncan McInnis, then secretary of the North Eton company, explained the problem to the Commission. North Eton had to operate at full capacity if it were to be profitable and repay the loan. This required permanent tram-tracks and rolling-stock for use from the farms to the mill, and portable tracks for use in the fields. The company had no money to install the necessary tramway system and rolling-stock. As well, remarkably, several shareholders in the company had escaped having their properties encumbered to the Government, including Joseph Antoney, who held nearly one-third of the shares. Moreover, both companies, eager to make a profit and clear their debts, had used a legal loophole to purchase cane grown with the aid of 'coloured' labour, contrary to one of the Government's main aims in allocating the money.

In 1890, mismanagement and the growers' discontent came to a head. Some of the North Eton growers refused to supply cane to the mill at 10s. a ton for the next 20 years, even though they had (perhaps foolishly) signed agreements to do so. Although Racecourse fared better than North Eton, it too had troubles. In 1890, an inquiry into the affairs of both mills concluded that the companies were formed too hastily, erected their mills before there was cane to crush and spent too much on machinery, and had not held back money for sidings, tram-tracks, and rolling-stock.

The 1888–89 Royal Commission made four main recommendations. The quality of the cane needed to be improved by importing new varieties and breeding improved strains in experimental nurseries. The Government also needed to negotiate with the other Australian colonies to remove tariffs against Queensland sugar. Another recommendation was to investigate the use of irrigation. Finally, and contentiously, the commissioners (with one exemption) recommended that the Pacific labour trade be resumed, or the industry would face extinction. Nevertheless, persistence with the farmers' central mill concept and resumption of the labour trade sustained the sugar industry all through the 1890s and led finally to the domination of small-scale farmers over the planters.

John Rolleston was one of the farmers who instigated the central mill petition. His progress from plantation labourer, to teamster, small-scale grazier and cane farmer is typical of many others in this era. He was born in England in 1838, arriving at Rockhampton in 1864. By 1869, he was working south-west of Mackay on Grosvenor Downs station, then managed by Andrew Florence, who had previously lived at Mackay and owned an urban block of land there. He sold the land to Rolleston, who moved to Mackay with his wife and family in June 1872. Almost immediately, he obtained work as a field overseer on Spiller's Pioneer plantation where he stayed until the end of the 1872 crushing season. For the next decade and a half, while his family lived in Mackay, Rolleston operated bullock teams and wagons carting supplies to and from Mackay and its hinterland. He operated as far south as Grosvenor Downs, supplied the Mt Orange and Mt Flora copper fields near Nebo, and brought loads of wool and copper to Mackay.

In 1881, he selected 500 acres (202 ha) of land at Brightly, near Eton, continuing to work as a teamster until the late 1880s. With the help of his wife and sons, he fenced the property, built a four-room slab and weatherboard house, and planted a few acres of cane

which were milled at nearby Victoria plantation. In 1885, the owners of Victoria reduced their price for cane supplied by Rolleston and his neighbours, forcing them to seek another outlet. North Eton mill was the result. During the drought and economic depression at the end of the 1880s and into the early 1890s, Rolleston grew no cane, concentrating instead on raising cattle. By the end of the 1890s, he was again planting cane: 20 acres were harvested in 1894 and another 40 acres planned. During 1900, after 36 years in Queensland, Rolleston returned to England for a holiday. Early in the twentieth century the running of the farm passed to his sons. He died in January 1920 at the age of 82.

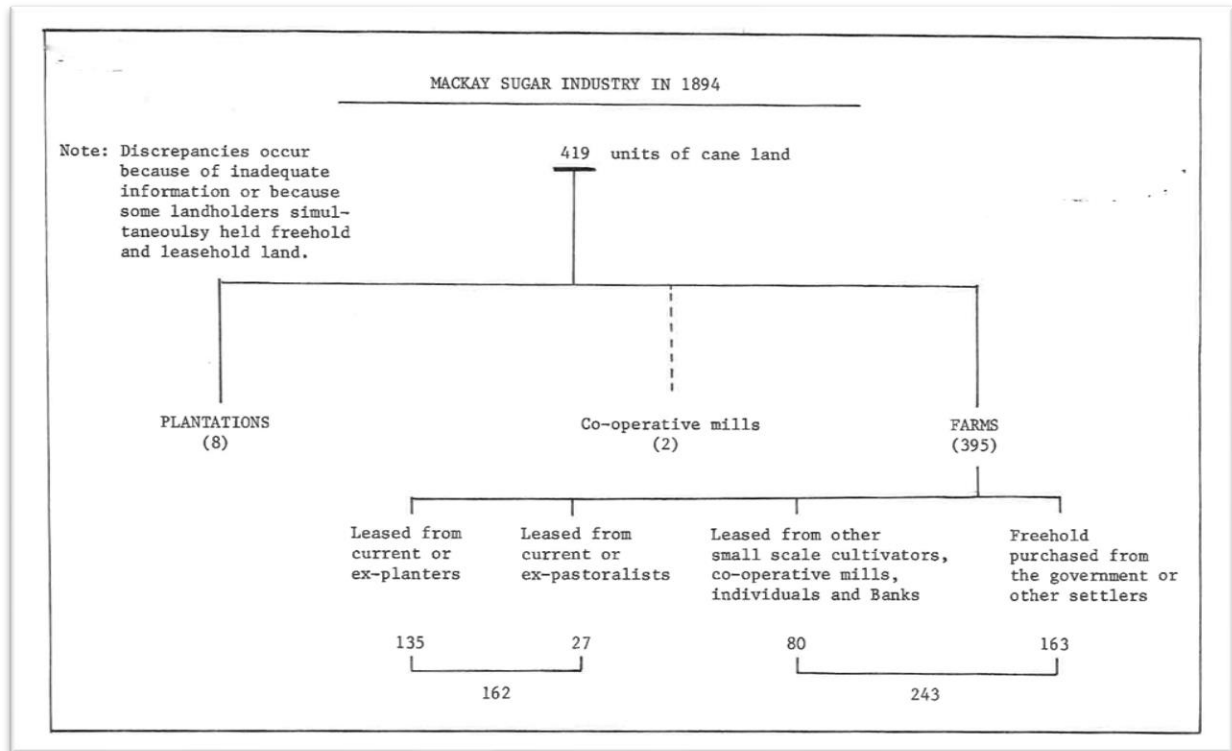
Establishment of North Eton central mill forced the closure of Victoria, Barrie, and Marian plantation mills. Racecourse central mill had less impact as it was close by the large Melbourne–Mackay Sugar Co. plantations and mills, and the well-established Meadowlands plantation and mill. If anything, the railway strengthened the hold of the Melbourne–Mackay Sugar Co., as the railway was useful to move processed sugar to Mackay and to bring in supplies.

1891–1906: Central Mills, Federation, and the White Australia Policy

Premier Sir Samuel W. Griffith's 1885 concept to swing the industry away from plantations to central mills was reinforced during the 1890s. The Liberals, headed by Griffith, governed Queensland from 1883 to 1888 and again from 1890 to 1893. In between were two Conservative Governments: Sir Thomas McIlwraith's short-lived ministry from June to November 1888; and B.D. Morehead's ministry which resigned in 1890 when faced with lack of support for its financial policies. Griffith resumed control, taking the unusual step of including McIlwraith as Treasurer in his ministry. Until 1893, the two previous political adversaries combined forces through the most difficult economic period Queensland had faced since 1867. Two pieces of legislation, enacted in 1892 and 1893, successfully boosted the flagging sugar industry and moulded the pattern for its development over the remainder of the century. The 'Griffithwraith' Government enacted the 1892 *Pacific Island Labourers (Extension) Act*, which authorised the resumption of the Melanesian labour trade for another decade. In 1893, McIlwraith, again Premier in his own right, passed the 1893 *Sugar Works Guarantee Act* to enable an increase in the number of farmer-owned mills. They were structured in a similar manner to North Eton and Racecourse, which despite their early problems had become successful milling companies, although the later mills had no requirement that all cane supplied be grown by White labour.

The control, size and ownership of the Mackay mills altered radically during the decade and a half after 1890. Most of the mills which had survived the slump at the end of the 1880s either closed, amalgamated, or were taken over by farmer-supplied central mills. Marian, River Estate, Richmond, and Beaconsfield closed between 1891 and 1895. Sir John Lawes purchased Ashburton (including the old Pioneer plantation) in 1893 and amalgamated it with Farleigh during 1894–95. In 1895, the Melbourne–Mackay Sugar Co., amalgamated Te Kowai with Palms Estate. Mount Pleasant, Nindaroo, and Habana closed during 1900–02, and Palmyra in 1907. Due to depletion in soil fertility and the uncertain labour situation, Lawes, now elderly, had decided to close Farleigh after the 1900 crushing. He died in August that year, and Farleigh ceased operations for five years, emerging again in 1904–05 with new owners. Pleystowe (closed since 1888) and Marian (closed since 1891) were re-structured, and Plane Creek mill was opened in 1896, all as government-sponsored mills under the 1893 *Sugar Works Guarantee Act*. Like its plantation predecessor, Marion central mill serviced land on both sides of the river. Pleystowe also competed for cane from the Northside. Cattle Creek mill was built by growers in the Finch Hatton area in 1906, independent of government finances. Onwards from the 1890s, the area suitable for cane-growing had expanded to

include around Plane Creek (called Sarina onwards from 1907), as far south as Flaggy Rock, and right up the Pioneer Valley. One of the final areas to be opened to cane-farming was the north coast in what had been the St Helens and Bloomsbury pastoral area.



Plan 10.1: A Snapshot of the Mackay Sugar Industry in 1894.

Source: Clive Moore Collection, based on Munro 1895.

During 1891–92, land selection was slow, then renewed confidence after the 1892–93 legislation brought many new farmers into the industry. Approximately 25 percent of the cane farmers in the Pioneer Valley at the end of 1894 planted their first cane in that year. As no suitable new land was available within reasonable proximity of the mills, the new farms were located close to Mackay on land previously part of plantations. In the late 1880s, Habana had been the first plantation to subdivide its land for lease to tenant farmers. CSR followed suit at Homebush in 1891, and most of the other plantations did the same throughout the 1890s. No farmer would settle at the periphery of the valley when prime cane land was available close to mills and established tramways. The planters reduced the size of their landholdings but tried to keep their mills operating.

Even though farmers now had better access to land and to mills than ever before, there were other problems to contend with, not least of which was the weather at the turn of the century. As Ole Matsen recalled in later life:

We happened to have several poor years during the last decade of the last century. I had to go in for clearing a lot of new land, which was very expensive as all the forest land here was very heavily timbered and as we had several very dry years to contend with, the crops were not very heavy for several years. In 1898 we had a terrible Cyclone which caused a lot of damage, and in 1899 a severe frost in the month of July which nearly ruined all the sugar cane, so that we had a lot of trouble to get any sugar cane fit for plants, and in the year 1900 I had the smallest amount of sugar cane of all, only a little over 100 tons. I was at that time heavily indebted to the Company [CSR],

but still I never lost heart but kept on. In 1901 I had a fair crop and pulled up a bit but the great drought of 1902 put things back again.⁸

Matsen was not alone. In 1899, the sugar tonnage dropped by half from the previous year, and likewise in 1902 by almost one-third.

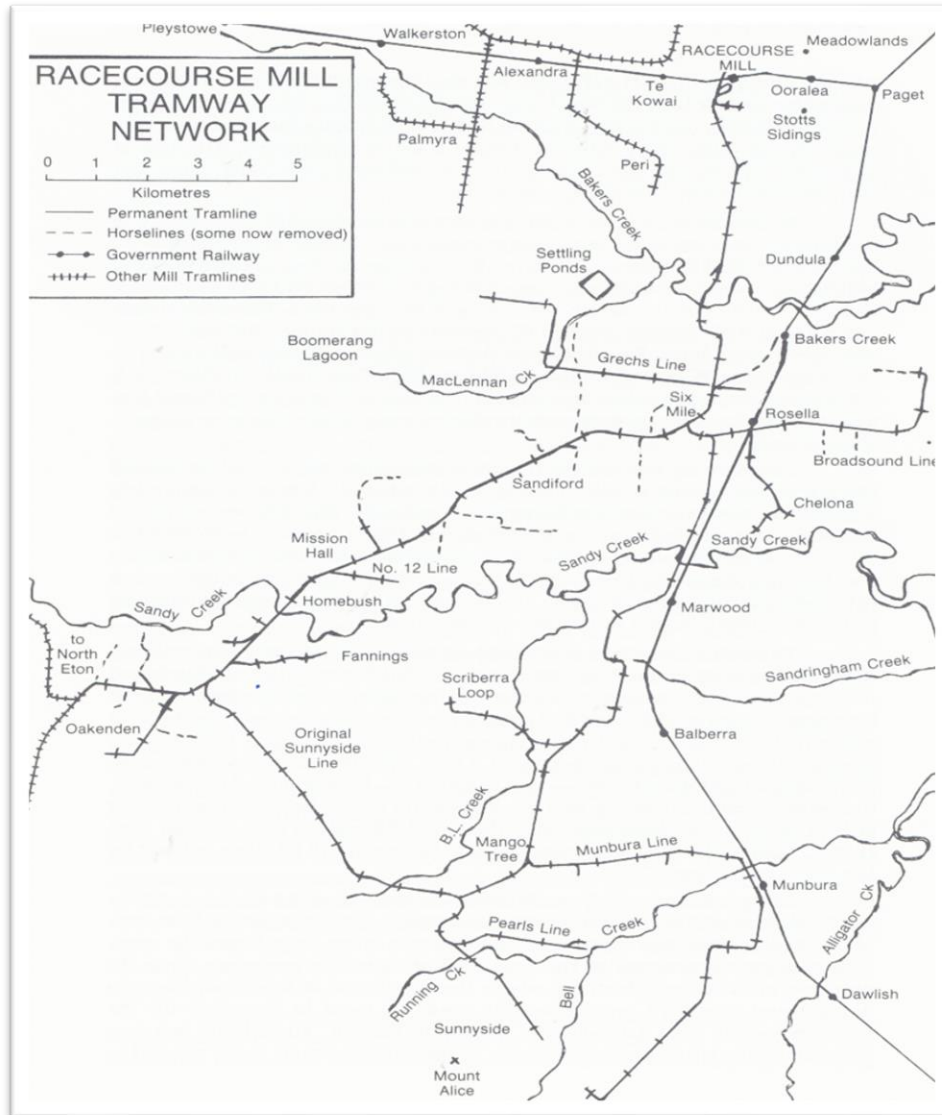
In the 1890s, the final extensions of sugar land occurred in the valley, into the Hamilton and The Pinnacle area at the base of Eungella Range. Hamilton and The Pinnacle pastoral stations were run as one unit and contained large areas of freehold land ready to be sold to settlers. For several years, farmers there had been cultivating corn, English and sweet potatoes, and fruit. Their success was limited by transport restrictions, and none were able to turn to growing sugarcane, as the existing mills were too far away, and there was no rail transport. Registered in 1893, in 1894 arrangements were being made to begin Hamilton central mill in the locality. Plans for its erection, and a first crushing in 1896, came to naught. Some of the farmers began to cultivate small plant cane crops, with plans to expand. The holdings were 160-acre homestead selections, along with numerous larger blocks up to 1,280-acres (518 ha), principally with absentee owners. On David Dalrymple's The Pinnacle station there were 20,000-acres (8,094 ha) of freehold land which he proposed to divide for selection. Nothing further happened until the railway line was extended west between 1902 and 1911.

A new *Lands Act* in 1897 further assisted small-scale settlement in the valley. By the end of the nineteenth century, the greater part of the vacant land in the district had been selected or was open for selection. But as long as the railway only went as far west as Eton and Mirani, cane growers were bound within that area, extended slightly by mill tramways. North Eton formed the Double Peak Tramway Company in the 1890s, which ran at a loss for several years, and Racecourse had no tramways of its own until 1927 (Map 10.2). The North Eton and Double Peak companies were united in 1905 and the tramway extended to Septimus, further up the Pioneer Valley. Further geographic extension of the sugar industry in the valley was not possible until after 1897 when a long-awaited high-level rail-bridge was built across the Pioneer River at Mirani, and the line was extended to Pinnacle in 1902.

There were three more rail extensions during the 1900s: to Cattle Creek in 1902; across the creek to Finch Hatton (also called Hatton) in 1904; and to the final terminus at Netherdale in 1911, at the foot of Eungella Range. Farmers at the far end of the valley began planting cane. The road up Eungella Range was completed in 1913, allowing access to timber on the plateau. Maps 10.2–3 show the main line, its branches, and some of the 1920s mill tramways. Over the previous 40 years, rail transport had opened the entire valley to cane cultivation. Early in the twentieth century cane was being transported by rail over 60 kilometres from Finch Hatton to Racecourse and Pleystowe. In 1914, Racecourse purchased nearby Meadowlands plantation, allowing the mill to expand its number of suppliers. When Homebush closed in 1921, its growers were able to send their cane to Racecourse, and to Farleigh on the Northside. Such arrangements were not ideal, but they enabled mobility never possible with horse-drawn transport. Like Racecourse, Farleigh also developed an extensive set of tramways.

The 1893 *Sugar Works Guarantee Act* enabled construction of several new farmer-supplied central mills throughout the colony, three of them at Mackay. Marian, a plantation mill which worked mainly as a private central mill, had closed in 1891. Under the terms of the 1893 Act, its growers purchased 50 acres for their mill, and the rest of the land (2,000 acres, or 809 ha) was subdivided into small farms. Surrounding Crown land was also thrown open for selection. A new mill was erected, which first crushed in 1895. With farmers on both sides of the river supplying the mill, the old Marian plantation tramways were extended into the surrounding district. Marian paid off its indebtedness to the Government in

1909. By 1913, Marian’s tramways had been extended as far as Mt Jukes, giving new Northside farmers access to the mill, and cutting into Farleigh’s area.



Map 10. 2: When Racecourse central mill began in the 1880s it had no tramways of its own. By the mid-1920s, once CSR’s Homebush mill had closed and its growers attempted unsuccessfully to combine with Farleigh, the Homebush rail network and cane was absorbed into the Racecourse network.

Source: Kerr 1988, 71.

Pleystowe operated as a plantation mill from 1869 until 1888, then closed until 1895; meanwhile the plantation’s cane was milled at Racecourse. In 1893, the Pleystowe Land Syndicate Ltd purchased the mill and surrounds, which they used to form a company under the 1893 Act. The new mill commenced crushing in September 1895. Pleystowe, like Marian and Racecourse, sought to increase its production by extending its tramways and utilising the Government railways. During the 1890s, Pleystowe extended its tramways to Habana, The Leap, and from Gargett towards Owens Creek. The Owens Creek line was horse-drawn and never efficient. It was pulled up in the 1910s, leaving Owens Creek growers with the long haul by road to Gargett. The Government railway was extended to Gargett in 1902, near Cattle Creek, midway between Finch Hatton and Mirani, with a 10 kilometres railway branch line to Owens Creek opened in 1922.

In 1902, Pleystowe was the subject of a government inquiry into allegations of mismanagement. Then, in 1904, using powers available to it under the 1893 Act, the Queensland Government foreclosed on the mill because it had fallen behind in its loan repayments. Two years later, the Queensland National Bank paid off all the mill's arrears and having accepted liability for the rest of the loan, took over the mill. Pleystowe was not clear of debt until 1915, when control reverted to the growers. Nearby Palms Estate mill, owned by Australian Estates Co. Ltd, closed in 1924. The following year, the Pleystowe company was joined to Australian Estates within a new company, Amalgamated Sugar Mills Ltd.

Another mill began in 1896. Edmund and Richard Atherton and Henry Bell had settled on Plane Creek in the 1860s. Parts of their pastoral leases were resumed for agricultural selections during the 1870s, the original pastoralists keeping control of large areas of freehold land. In the 1880s, although nothing eventuated, there were plans to erect a plantation mill in the area. Plane Creek central mill was registered late in 1893, brought under the *Sugar Works Guarantee Act* in 1894 and first crushed in 1896. By 1897, the mill was subject to an official inquiry. The original pastoralists were the major shareholders, and as at Pleystowe, there was a great deal of friction between large and small shareholders. In the early twentieth century, particularly after the Government railway was extended south to Koumala in 1915, Plane Creek expanded its production. Disputes arose between 'dry' (non-cane-growing) and 'wet' (cane-growing) shareholders over the management of the company and the profit margin. Legal action in 1914 led to the Articles of the company being rewritten so that the board consisted of six 'wet' and three 'dry' shareholders. The last repayment to the Queensland Government was made in 1920.

The Plane Creek milling company played a prominent part in establishing the Australian National Power Alcohol Company at Sarina in 1926. The original shareholders were the Plane Creek Central Mill Co. Ltd, the Distillers' Company Ltd, and Australian Estates. CSR purchased a 40 percent holding in the Power Alcohol Company in 1952, acquiring complete ownership in 1972. The next year, Plane Creek amalgamated with Pioneer Sugar Mills Ltd, the owners of Pioneer and Inkerman mills on the Burdekin.

Cane from around Finch Hatton continued to be milled at Racecourse and Pleystowe until 1906. In 1904–05, local cane farmers met to discuss building a mill. Because several of the 1893 Act milling companies had fallen behind with their loan repayments, the Queensland Government was adamant that it would not finance other farmers' central milling companies. The growers refused to be discouraged, and after several of the district's mills closed, their machinery was cannibalised to create Cattle Creek central mill, which first crushed in 1906. Cattle Creek mill was built at the end of one era and the beginning of another. It was the last mill constructed in the Pioneer Valley and the first central mill financed entirely by its growers without government or private aid.

The year is doubly significant, because in that year Melanesian indentured labourers, the main labour force of the sugar industry since the 1860s and 1870s, were scheduled for deportation. In the fervour for a 'White Australia', one of the first Bills presented to the new Commonwealth Parliament late in 1901 became the *Pacific Island Labourers Act*, ordering an end to all labour recruiting in December 1903 and the deportation of as many Melanesians as possible by 1907. The companion legislation was the *Immigration Restriction Act*, which encapsulated the White Australia Policy.



Plate 10.17: Farms between Finch Hatton and Netherdale, 2020. This was one of the final extensions of cane land in the Pioneer Valley.

Source: (c.) Queensland Museum, Gary Cranitch.

1907–1927: The New Era

Although it has never shied away from wider explanations, this book is largely about the nineteenth century. However, with a first chapter that goes back tens of thousands of years, another two decades to round out the sugar industry picture is acceptable. The same occurs with discussion of Islander society in Chapter 12.

During the 1880s and 1890s, there were enormous changes to the milling and farming process, then the labour force was transformed in the early twentieth century. These changes were not inevitable and the base of them rests in government policy. The forces which dictated the construction of the large mills were technological and had international origins, although they affected Australia decades later than in old-established cane-sugar producing areas overseas. Government assistance was provided to hasten a process already underway, and new legislation brought about the changes. Reconstruction of the labour force was imposed from outside the industry, in the face of opposition from many within it, and the reasons were overwhelmingly political.

The Commonwealth Government was not content to wait for the departure of the Islanders to bring about an all-White industry. In 1902, while imposing a tariff of £6 a ton on

imported sugar (which amounted to a total embargo), the Government offered a large bonus to Australian growers who employed only White labour. After less than a decade, the sought-after change had been accomplished. In 1910, 92.7 percent of the Mackay cane crop was grown using exclusively White labour.

Until the end of the nineteenth century, small farmers had been tied to the proximity of existing mills by the exigencies of river, road, and rail transport. Onwards from early in the twentieth century, the extension of tramways linked to the central mills freed settler families to take up land throughout the valley and on the adjacent coastal plains. Many of them were the children of pioneer farmers. Plantation land was no longer the focus of the industry, and almost all the resident plantation owners had died or left the district. When J.E. Davidson left for England in January 1901 the plantation era, in economic decline since the mid-1880s, was truly over. Yet, a visitor would have noticed little difference between the field scene of the 1900s and that of earlier years. Farming methods continued without great changes for two decades after Federation, except that the land was worked increasingly by White labour—in the great majority of cases the farmers and their families, along with itinerant canecutters in the crushing season.

Farmers continued to use horse-drawn ploughs and wagons. In the mid-1920s, iron-wheeled tractors (mainly Fordsons, McCormick-Deerings and Austins) came into general use, to be replaced by rubber-tyred models a decade later. A few farmers continued to use horse-drawn farm equipment until the 1950s, although most made the transition to tractors before World War II. Tractors were expensive (£180 to £600 in 1925), and the problems involved went further than their price. These useful early machines had to be hand-cranked, started on petrol, then changed over to power kerosene when the engine was hot, without mixing the two fuels. The older generation of farmers never really made the transition to tractors, although by the 1920s and 1930s they had handed their farms on to their technologically more competent children and grandchildren.

Early twentieth century farmers taking up new land cleared the virgin scrub and forest themselves. Just as on the first plantations, trees had to be felled, stacked, and burnt, and stumps and surface roots had to be grubbed out. Until their land was clear enough to plough, farmers just dug separate holes for each cane plant. Farmers and labourers experimented with, negotiated over, and came to agreements on the optimum labour system, wages, working and living conditions. Planting and cultivating the cane was done mainly by the farmers and their families, with the occasional assistance of hired labour. Cane-cutting was different; it required a concentration of labour over and above what the normal family could provide, and the work required contract labour spread over several months each year.

The final plantation years stretched through to 1926. The 1920s were an unstable period for the sugar industry in the district. The best account is given by Ken Manning in his history of Farleigh mill, *In their own hands*. Meadowlands had closed in 1914. CSR closed their Homebush mill in 1921 and its growers began to negotiate with other mills. Palms Estate mill closed in 1924, redundant with Pleystowe and Racecourse close by. One 1920s proposal was for 'one big mill' that could crush the Racecourse, Homebush, and Farleigh crops, with the possible addition of Pleystowe and Marian. Farleigh closed between the 1900 crushing season and that of 1905. The plantation was purchased in late 1904 by a Bundaberg–Maryborough syndicate consisting of Frederic Buss, John Cran, Thomas Penny, and W.H. Williams, with the aim of subdividing and leasing the land to farmers and upgrading the mill. The large 1918 cyclone caused devastation to the mill, then the sugar price dropped in 1923. There were issues relating to mineralised water used in the boilers and the locos, and with crushing new harder varieties of cane. Farleigh mill, in financial trouble, closed in 1926, when a liquidator was appointed.

Establishing a Farleigh farmers' co-operative company, through the *1914 Co-operative Sugar Works Act*, or other legislation, seemed to be the only solution. In May 1926, the Farleigh Co-operative Sugar Milling Association Ltd was registered under the *Primary Producers' Co-operative Associations Act* of 1923. The Homebush growers chose to join with those at Farleigh, although the distance proved to be too great, leading to the sale of the Homebush assets to Racecourse, and Oakenden to North Eton. Farleigh then took on land to the north around Calen and Wagoora in 1927, previously serviced by the Racecourse, Pleystowe, and Proserpine mills. The plantation era was finally over and the milling pattern of today had appeared, not altered until North Eton, Cattle Creek, and Pleystowe closed in 1988, 1990, and 2009.

Organisations and Associations in the Industry

The plantations had been autonomous, and some tried harder to be efficient than others, both in the fields and the mills. Sugar boilers, relying on luck more than science, were eventually replaced by chemists. Using the most suitable cane varieties was soon seen as essential. The 1875–76 rust outbreak was a salutary lesson for all canegrowers. In 1889, the Queensland Government opened its first State Nursery at The Lagoons. A laboratory was added to the nursery in 1898 and the next year the site was allocated fully to experimental work on sugarcane. During 1900 the first of a series of Bureau of Sugar Experiment Stations in the colony opened at Te Kowai outside Mackay.

A variety of labour systems were tried, then by general agreement the butty gang system was adopted. This was a team of five to 20 canecutters, usually including a full-time cook, each member of which shared equally in their joint earnings, according to the number of days each man worked during the season. Gangs were paid monthly, but as a crop might be cut in several stages, the farmers retained 10 to 25 percent of the group's earnings to give some incentive for the men to stay together for the season, the withheld money paid at the end of the contract. The adoption of the butty gang by European labourers was an important element of the overall transformation of the industry in the 1890s and 1900s. These gangs of itinerant canecutters were among the most characteristic features of the industry until mechanisation of the harvesting process in the 1960s. Many young men in the district tried their hand at cane-cutting, my father included.

Over several decades, farmers' associations and trade unions became a permanent feature of the industry. Formal associations began with the powerful Planters' Association in the 1870s and 1880s. An early association had been formed by selectors in the district, but its members were chiefly maize growers and dairy farmers. The Mackay Agricultural, Pastoral and Mining Association began in 1872, organising the first Mackay Shows in 1878 and 1879. This lapsed and restarted as the Pioneer River Farmers' Association (PRFA) in 1888.

The first associations for small-scale cultivators were the Government-sponsored central milling companies begun in the 1880s, which united farmers around Eton, and around the racecourse at Ooralea. At the same time, other growers felt the need for a district-wide organisation to give them a united voice. The PRFA was formed for this purpose by cane growers on CSR's 'Six-Mile' (Rosella) estate near Homebush, the first association exclusively for cane growers. Branches were formed amongst small farm cultivators around Nindaroo, Conningsby and in other areas of the valley. The PRFA lapsed in the early 1890s, then was reformed in 1892, concerning itself with a wide range of problems confronting farmers in relation to the mills and the labour supply. One aim was to bring together all members at least once a year, first accomplished when a district ploughing match was organized in 1894, the forerunner of the modern annual Mackay Agricultural Show. In 1914, a separate Show Association was formed.

Most significantly, the PRFA backed the election of two farmers' representatives to Queensland Parliament. James V. Chataway, born in Aston, Warwickshire in 1852, and educated at Winchester College, he joined the Indian Civil Service, then migrated to Victoria in 1873. He settled at Mackay and became an auctioneer and livery-stable owner, turning to journalism in 1883 when he became editor of the *Mackay Mercury*, along with W.G. Hodges, purchasing the paper in 1886. He also established the locally produced but internationally distributed *Sugar Journal and Tropical Cultivator* in 1892, which was edited by his brother Thomas Drinkwater Chataway. J.V. Chataway became the farmers' watchdog in Parliament between 1893 and 1901. When Chataway died, the PRFA (by then the Pioneer River Farmers' and Graziers' Association (PRF&GA)) nominated their president Edward B. Swayne to stand for the seat. Swayne was born in Erith, Kent in 1857 and was a Mackay cane farmer. After a few attempts, Swayne was elected to represent the Mackay (1907–12) and Mirani (1912–35) electors over the next 28 years. Growers' associations had formed in other sugar districts at about the same time. In 1905, sugar producers met in Townsville, the first time the widely scattered growers and millers had gathered together to discuss the future of the industry. At a second conference in 1906, every sugar district in the state was represented, and a resolution adopted in 1907 formed the Australian Sugar Producers' Association (ASPA).



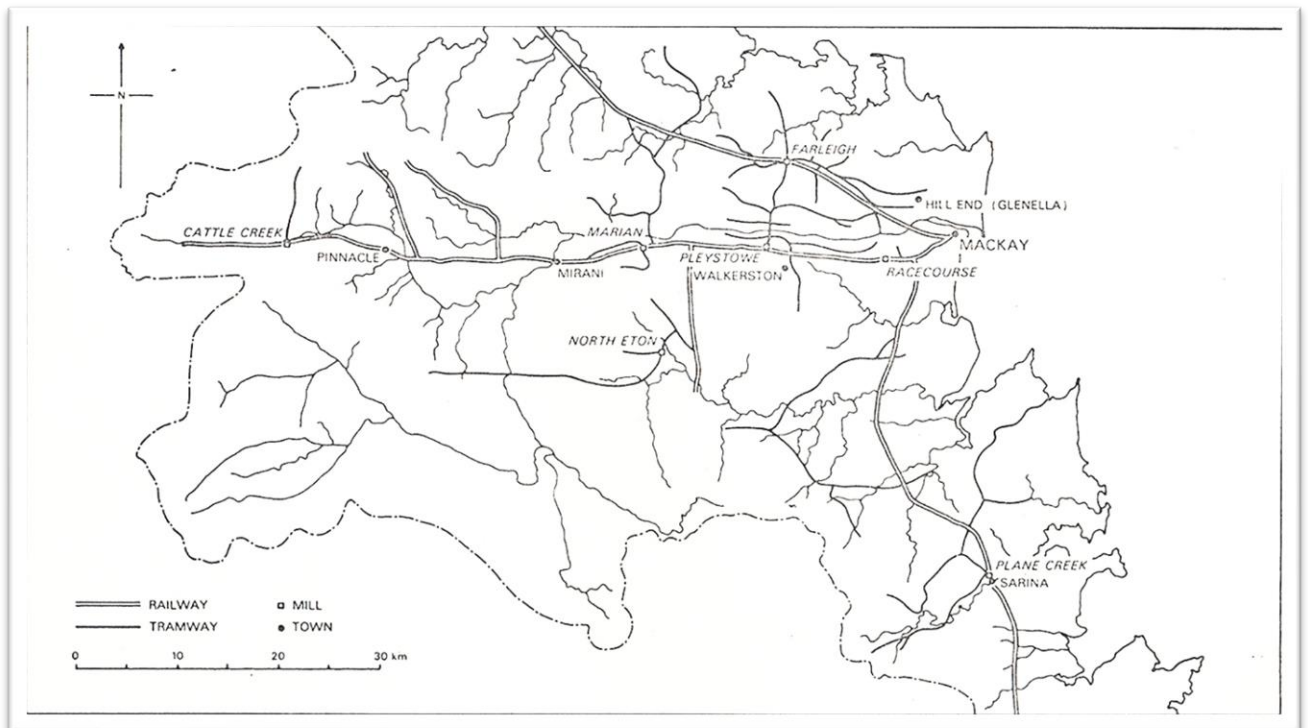
Plate 10.18: James Vincent Chataway, co-owner of the *Mackay Mercury*, MLA for Mackay (1893–1901), and Minister for Agriculture (1898–99).

Source: State Library of Queensland.

Because the ASPA included both farmers and millers, conflicting interests eventually led to a split in the organisation. The PRF&GA was a branch of the ASPA, although increasingly its farmer-members felt their interests to be different from the graziers and millers. The growers remained within the PRF&GA, then in 1906 formed themselves into a limited liability company. Dissatisfied by the miller dominated ASPA, in 1912 the PRF&GA withdrew and between 1915 and 1919 the farmers established their own state-wide Cane Growers' Association, which remained separate. The millers split off to form the Australian Sugar Milling Council, while the farming half was renamed the Australian Cane Farmers Association.

On the side of labour, along with butty gangs came trade unionism. Indentured labourers had been forbidden to negotiate as a group or to strike. The formation of sugar

workers' unions was part of the general movement towards unionisation and the formation of the Labour (Labor, since 1912) Party during the 1890s. Their bargaining power increased as the industry became the preserve of White labour. Farmers complained about the standard of work done by European labourers, and in turn the labourers complained about the standard of accommodation offered by farmers, and about wages and the type of work they were expected to complete. Living conditions improved with the passing of the *Shearers' and Sugar Workers' Accommodation Act, 1905* which prescribed minimum standards of food and accommodation for White workers. Paralleling government moves to improve conditions for labourers was the growth of trade unions in the industry. The first sugar workers' unions were formed in Mackay and Cairns during the 1904 crushing season. From the initial 162 members in 1905, the Mackay Sugar Workers' Union increased in size to 460 members in 1908. It also needs to be said that the unions were no friends of the South Sea Islanders, and over decades attempted to keep those who remained after the 1900s, and their Australian-born children, out of the sugar industry.



Map 10.3: Pioneer Valley in 1925, showing the Government railway and mill tramway system

Source: Clive Moore Collection.

Environmental Change

Finally, we need to consider environmental changes. Today, the Great Barrier Reef is under threat both from climate change and runoff from fertilizers used along the coast, much of these emanating from the sugar fields. However, the changes are much larger than this and go back to early land clearing and pollution of the local waterways.

The milling process has altered over time from primitive crushing machinery, open pan boiling and the basic centrifuges of the 1860s and 1870s, to the increasingly sophisticated larger mills in the last two decades of the nineteenth century, and now today's immensely technical huge factories. Regardless of the level of sophistication, the basic products have remained the same. Raw sugar crystals are manufactured, along with golden syrup, and excess molasses, the latter processed into alcohol, and fertilisers, used as fuel in the mill

furnaces, or sold as drought food for cattle. In the early years, molasses was mostly sent to the local rum distilleries, which had all closed by the 1890s. After this, molasses became a waste product, surreptitiously dumped in the river, creek, and lagoons. The remaining cane fibre, called megasse or bagasse, was either re-cycled into the furnaces or used as fertiliser. The other by-products were filter-press, the smelly filtered mud removed from the canes during milling, and ash from the furnaces.

The milling process is lubricated by large amounts of water. In early decades water was drawn from the creeks, rivers, and lagoons. Effluent and heated water was allowed to escape into the same watercourses. Mills also used bores to obtain underground water, although in recent decades they have concentrated on recycling the water from the cane (70 per cent of cane content) and using steam produced by the boilers. Mill chimney smoke once belched into the skies and each harvest season for several decades the sunsets turned red, reflecting the cane fires lit to burn the leaf trash from around the canes, ready for the next day's cutting. Firing the cane began in the 1930s to combat rat-carried Weil's disease which was affecting the health of canecutters. The disease caused a severe form of leptospirosis, spread by rat's urine which infected cuts on the canecutters, caused internal bleeding and led to deaths. The practice of burning lasted solidly until the 1980s. While clearing out vermin it also lowered the sugar content and destroyed much of the remaining natural fauna which had found a new home amongst the cane.

There is little evidence in nineteenth century sources of any consciousness of environmental damage caused by growing and milling cane, or through increasing the population of the district, only self-congratulatory pride as the industry grew. Today, we are inclined to accept the pattern of cane fields as natural, forgetting the clear-felling of trees needed to establish cane fields on the floor of the Pioneer Valley. A century of artificial fertilizer use has left the valley's soils just as much a product of science as nature. There has also been drainage of underground water supplies for irrigation, and continuous problems over the disposal of mill wastes, which for decades were pumped straight into the nearest lagoon, creek, or the river, making waterways foul and smelly. When mill wastes were stored in artificial ponds, they became breeding places for flies and mosquitoes.

Occasionally, there are mentions that indiscriminate shooting of wildlife, particularly birds, took away natural predators for various grubs. Henry Roth, an amateur naturalist, and keen observer, lived on Foulden plantation in the 1870s and 1880s. He blamed the Islanders, who, particularly before the mid-1880s, were well-equipped with Sniders and other guns. However, in his 1908 book Roth seems not to notice that he describes the vast numbers of birds destroyed by colonists out for a day's recreational shooting. Roth's sentiment is correct but not his conclusion.

In the case of many square miles of richly-timbered country being brought into cultivation, the larger fauna and the avi-fauna very soon disappear, while the smaller animals may still take refuge in the vegetation left on the outskirts of the cultivated area. This disappearance has been specially emphasized in Mackay by the destructiveness of the Kanakas, who, since 1866, have been in the habit of making Sunday hunting expeditions, and never spared young or breeding individuals. But with regard to the narrow strips of dense semi-tropical growth, which were almost invariably to be found on the banks of some of the sluggish streams and on a good deal of the backwaters, their inhabitants, if at all specialised, must all have been swept away, for the white man sees no beauty in their homes, the luxuriant scrub, requiring the rich soil for his cultivation.⁹

Not only the Islanders, and Asians, hunted birds and animals. The European elite did so in the

name of sport, and small landholders and European labourers supplemented their meagre supplies of store-purchased foods with birds, wallabies, possums and other animals. As the immigrant population increased, there was an equal decrease in the amount of wildlife in the valley.

Another change was the huge amount of timber cleared in the nineteenth century to establish the agricultural and pastoral lands of today. All over the colony and state, trees on millions of acres of land were ringbarked, causing them to die, leaving them easier to fell. Land was also totally cleared for agriculture. Planting and milling of sugarcane necessitated cutting immense amounts of timber. In the nineteenth century, this was carried out using manual labour to eliminate stumps and most rocks from the fields, but once tractors began to be used in the 1920s and 1930s, and mechanical harvesters since the 1960s, no solid obstacles to production could be allowed to remain in the fields. Today, if one ventures into the Northside hill land there are piles of rocks gathered from the fields and hills still in large mounds, and fences made from rocks cleared from the fields.

While other colonial societies were constructed in stone, brick and cement, Queensland was made from wood and galvanized ripple iron. The first rural houses from the 1820s until the 1870s were built from rough-cut wooden slabs or weatherboards, roofed with bark, or wooden shingles. Galvanized ripple iron became a common building material onwards from the 1870s, and house frames and walls began to be made from milled timber. Rail-and-post fences surrounding fields were made from hardwood. Most significantly, until the mills converted to coal- and oil-based fuels in the 1940s, they needed substantial amounts of wood to operate the steam boilers which drove the machinery. Wood for fuel came from constant clearing of land for cane. John Spiller's labourers during the 1870s slowly cleared the scrub and used portable tramways to transport the timber on adjacent Ashburton estate, which was used to power his Pioneer mill. Over sixteen years, his labour force cleared the timber from his land. Ole Matsen, the Homebush farmer mentioned earlier, described a similar process when CSR set up their Homebush mill in the 1880s:

The grubbing and clearing was very expensive, all the land being heavily timbered, all the timber suitable for the saw-mill was brought to the mill and made use for the numerous buildings erected round the factory. Many acres of ground round the mill was covered with firewood, stacked up eight feet high, the permanent and portable tramlines making it easier to transport the many thousands of tons from long distances.¹⁰

There was less commercial exploitation of timber in the Pioneer Valley than in many other areas. Rainforest timbers were cut in the valley in the nineteenth century and in the high country to the west onwards from the 1920s. Once serviceable bullock tracks were constructed down the precipitous Eungella Range, the timber industry had a significant impact on the rainforest areas of Eungella Plateau and Clarke Range. Within the valley good stands of hoop pines once grew between the Pioneer River and Eton. There were also forests of native hardwoods, such as ironbark and bloodwood, growing along Stockyard Creek west to Clarke Range, which were harvested.

Onwards from the 1860s, the flora and fauna of the Pioneer Valley was changed drastically by settlement, cleared away to make space for sugarcane. When canes were grown in virgin soil the results were spectacular: an early etching from a photograph shows Bourbon canes double the height of a horse and rider (Plate 7.22). The original growing process involved ratooning—allowing the cane to regrow from the old root stocks, which produced a ragged crop but saved replanting. However, the fields soon became infertile; the cane removed substantial amounts of nitrogen, phosphates, and potash from the soil. Adequate

nutrients needed to be returned to the soil by allowing the ground to rest, by green manuring, adding filter-press and ash, or using artificial fertilizers. The use of fertilizers such as sulphate of ammonia and nitrates had begun by the 1890s and became quite ubiquitous in the twentieth century as cane was planted year-after-year in the same fields with little crop rotation. Modern fertilizers are compounds of nitrogen, potassium and phosphorus, along with lime and other trace elements, depending on the needs of the locality.

Limited experiments in raising underground water for cane irrigation were under way at the end of the nineteenth century, pioneered in the Burdekin district around Ayr and Homehill, becoming widespread in the second half of the twentieth century. This allowed cane to be grown in previously marginal areas all along the Queensland coast. Quite early on, Sir John Lawes introduced irrigation on his Farleigh plantation. Today, aluminum pipes snake through the fields, huge sprays watering the cane. The consequence, as has occurred all over Australia, where large amounts of underground water have been tapped, is a lowering of the natural basins.

Another aspect of environmental change was drainage and reclamation of land, particularly between 1920 and 1990 to improve the productivity of previously waterlogged land. Sugarcane requires a good supply of water to grow but will not tolerate sustained waterlogging of the root systems. The Pioneer Valley had less need of drainage than many other sugar-growing areas, but there was modification which altered the environment. Before 1920, drainage only occurred when large-scale financial backing was available, such as with the Melbourne–Mackay Sugar Co., which spent £15,000 draining a swamp on its property in the 1880s. Drainage usually involved building canals and ditches and creating channels to link to existing water courses. Farmers with lesser finances dealt with the problem by not using swampy areas.

From the 1860s until the 1960s, all cane was cut in whole sticks, by hand, which introduced far more rock and soil into the mill machinery than does mechanically cut cane, which is in small dissected uniform lengths. Mills had to contend with separating these impurities from the cane. As mentioned earlier, once the cane has been processed to remove its sugar content, three by-products must be disposed of: small amounts of golden syrup; large amounts of molasses; filter-press, ash and cane-fibre. Molasses, the main by-product of sugar manufacture, is both a problem and an asset. Unlike megasse (the dried cane fibre), molasses never rated highly as boiler fuel and was not popular as fertilizer, although the mills delivered it free to farms via their tramways. Several of the early plantation mills ran their own distilleries manufacturing molasses into rum. By 1894, low prices for rum, excise taxes and stricter regulations had forced them all to close. Most of the time molasses was allowed to run off down the river or creeks.

As early as the 1870s, the mills near The Lagoons on the outskirts of West Mackay were causing enough pollution to force the municipal authorities to act against the discharges. Meadowlands mill was the main offender, solving part of its problem by using spare molasses as horse feed. In 1876, Te Kowai mill was also discharging its waste into nearby lagoons, and in 1883 two more—presumably Alexandra, Cassada, or Palmyra—were reported for discharging refuse from their vacuum pans into Bakers Creek, spoiling its water for use further downstream. In 1886, the Pioneer Divisional Board enacted a by-law which prohibited pollution of any creek, river, or watercourse, on penalty of a £20 fine. The next year, Victoria mill was reported for polluting Lagoon Creek and duly fined. Scathingly, its manager asked when the other mills in the district were going to stop polluting their surrounding waterways.

Accusations of water pollution continued sporadically over several decades. In 1894, Homebush mill was accused of turning the stretch of Sandy Creek between the mill and the sea into ‘a seething mass of corruption with thousands of fish floating dead upon its surface

or stretched out on its banks'.¹¹ Eighteen years later, Homebush had still not taken any action to remedy the situation. When Farleigh mill was chastised for polluting Amhurst and Reliance creeks, the company tried to remedy the situation by building a dam to stop the discharge going down the creeks. This worked except when rain caused it to overflow—and given the Pioneer Valley's rainfall, this occurred regularly. North Eton mill had similar problems but seems to have done nothing to alleviate its pollution between the late 1880s and 1910s. Pleystowe mill, built on the banks of the Pioneer River in 1869, was still releasing its effluent straight into the river in 1925, although the company was cautious enough of fines to do this at 2.00 am.

When Racecourse mill was built in the late 1880s, the engineer in charge was instructed to make provision for removal of refuse and drainage of water. This was done at such a basic level that by 1901 the Pioneer Divisional Board asked the company 'to remove all refuse and filter press cake from the mill, and brick and grade the drains so that they would flush clean.'¹² The mill had nowhere to dispose of its refuse, eventually buying extra land for this purpose. Excess molasses was allowed to run off into near-by swamps, until an extra storage tank was erected. Even so, ten years later the mill had a writ served on it for running polluted wastewater into the same wetlands area which the Meadowlands had polluted in the 1870s. A reticulated water supply was introduced to Mackay in 1899, drawn from The Lagoons, which gave impetus to ensuring that no further pollution occurred.

Racecourse began to pump its liquid refuse and excess molasses into two storage trenches, using one while the other dried out, allowing the contents to be removed for use as fertilizer. Complaints continued into the 1930s when the mill built a drain all the way to the coast at Dundula, which was replaced in 1936 by a pipeline discharging into Bakers Creek. Although the pipeline solved the fly and mosquito problem which plagued the trenches and drains, it polluted the creek. In 1965, the Department of Harbours and Marine gave the mill one year to improve its waste disposal system. The answer was an 18-acre aerobic lagoon introduced in 1968.

The problem of what to do with molasses was partly solved in 1925 with the formation of an alcohol distillery company at Sarina, which, onwards from 1926 took surplus molasses from the mills to convert into alcohol and other products. The new distillery was named the Australian National Power Alcohol Co. Pty Ltd. In 1935, the Queensland Government legislated to force oil companies to include 15 percent alcohol content in motor fuel sold between Gladstone and Townsville, creating the necessary market to process the molasses as alcohol. This lasted until 1957, when use as fuel was suspended and the entire production was turned to manufacturing plastics and other chemicals. It is now Wilmar BioEthanol Sarina Distillery, the largest alcohol distillery in Australia. Today around 50 percent of the district's molasses is used in the Sarina distillery.

As sugar production rose, the waste problem became ever more important. The construction of a giant refinery at Racecourse mill in 1994 has once again led to more efficient use of the industry's by-products. Other problems associated with the mills were the smoke emitted from chimneys and how to dispose of filter-press, which makes a pungent but extremely good fertilizer, particularly if mixed with the ash residue. Eventually, mills had to let contracts to dispose of their filter-press mud, and ash from the furnaces, having it carted away by drays and later by trucks, taken to farms for use as organic fertilizer. Mill smoke was a constant annoyance to West Mackay's residents, particularly that emanating from Racecourse after the expansion in cane acres and milling which took place in the 1960s. Local municipal authorities demanded action, as did the Government which legislated to introduce controls, in 1963 passing a *Clear Air Act*, which came into force at Mackay in 1970. Mackay's Sugar Research Institute, opened in 1953, experimented with control methods, perfecting dry smoke-arresters in the early 1970s, with wet smoke-arresters

introduced later. Other mills followed suit, alleviating an annoyance and visual pollutant common since the 1860s.

Another feature of the industry was burning off the cane, which, as mentioned above, began in the 1930s to combat Weil's disease. A cancutters' strike for nine weeks in 1935 eventually led to most of the crop being burnt before cutting. The practice also reduced the volume of the residual leaf matter. Burning the cane trash remained necessary once mechanical harvesters were introduced. There were unforeseen consequences. The burning killed all animals and insects in the cane crop which also reduced the numbers of indigenous animals and insects. Households complained about the black ash generated by the fires which coated everything in its path, including the family washing out on the lines.

The cycle has turned again and since about 1980 an increasing proportion of the crop (in some areas 100 percent) is once more cut green. The harvesting machines have been adapted to cope. It is a more environmentally friendly choice, as leaves and tops are left in the fields as 'trash blankets', which reduces the use of herbicides. However, green cane harvesting can be an impediment to ratooning, particularly in cool wet areas, and in areas using irrigation the 'trash blankets' can reduce yields. While cane burning still occurs, it is subject to stringent controls and is now more a tourist attraction than a general practice.

Today, Australia's sugar mills rate with the best in the world, their aim now being to create zero effluent factories. The mills are now self-sufficient in energy, burning megasse to generate electricity and steam for factory operations. It was not always so, and however welcome, taken along with the clearing of the natural flora, the use of chemicals and the pollution of the waterways, and coastal pollution which is affecting the Great Barrier Reef, cane-growing, and processing, came with considerable cost.

While the economy of the Pioneer Valley has now diversified, and some farmers have introduced other crops, such as fruit trees and vegetables, the sugar industry still dominates, and will continue to do so into the near future.

The next two chapters, companion pieces to Chapter 9, deal with the pan-Melanesian society which developed in the valley. The city that developed on the banks of the river is the subject of the final two chapters.

Bibliography

The bibliographies for all chapters are in a separate file. Detailed referencing for much of this chapter can be found in Moore 1981, Chapter 5.

Endnotes

¹ *Mackay Mercury*, 15 February 1873.

² *Mackay Mercury*, 14 March 1893.

³ *QVP* 1883 Session, 487.

⁴ Report by Land Commissioner Thomas Mowbray, *QVP* 1884, vol. 2, 1,170.

⁵ Ole Matsen Diary 14, 2 Apr 1923, in the author's possession.

⁶ Matsen Diary 14, 2 April 1923.

⁷ Matsen Diary 1,

⁸ Matsen Diary 10.

⁹ Roth, 1908, 81.

¹⁰ Matsen Diary 10, 41.

¹¹ Kerr 1980, 171.

¹² Kerr 1988, 179.