Index

A Key to the Field Identification of Sugar Cane Diseases, 571
Abbotsford Mill, 93
Abergowrie, 292, 297
Abergowrie Scheme, 299, 300, 659
Aborigines:
as canecutters, 630, 631, 633, 635, 637; as field labourers, 84, 88, 341; attacks on sugar plantations, 1, 49; employed by Fairymead Sugar Co. Ltd., 630; gather seed from legume crops on Palm Island, 354
Acclimatisation Society, Queensland, 147, 148, 474; see also Q. 813 cane variety
A.C.F. and Shirleys Fertilisers Ltd., 357, 371, 372, 373
acid sulphate soils, 440–441, 836
Acts of Parliament:
Australia:
Australian Industries Preservation Act (1906), 257
Commercial Activities Act (1919), 773
Custom Tariff (Sugar Duties) Act (1922), 775
Excise Tariff Act (1902), 58
Excise Tariff Act (1905), 59
National Water Resources Assistance Act (1978), 436
Pacific Islanders Act (1901), 58, 91
Sugar Bounty Act (1903), 59
Sugar Bounty Act (1905), 59
Sugar Bounty Act (1910), 60–61
Sugar Bounty Act (1912), 62
Sugar Agreement Act (1935), 785
Sugar Rebate Abolition Act (1903), 59
War Precautions Act (1914), 773
New South Wales:
Clean Air Act (1961), 740
Clean Waters Act (1970), 740
New South Wales Grant (Flood Mitigation) Act (1974), 436
Plant Diseases Act (1924), 574
Water and Drainage Act (1902), 400
Water Act (1912), 400
Queensland:
Bonded Distilleries and Bonded Sugar Houses Act (1872), 232
Clean Air Act (1963), 738
Clean Waters Act (1971), 735
Crown Lands Alienation Act (1868), 44
Discharged Soldiers’ Settlement Act (1917), 274
Diseases in Plants Act (1929), 575, 586
Imported Sugar Refiners Act (1874), 232–233
Leasing Act (1866), 44
Local Government Act (1936), 408, 425
Plant Protection Act (1989), 602
Primary Producers’ Organisation and Marketing Act (1926), 279
Queensland Harbours Act (1955), 794
Regulation of Sugar Cane Prices Act (1915) (and subsequent amendments to), 272, 279, 281, 284, 289, 321, 575, 664, 689–690, 693, 695, 697
River Improvement Trust Act (1940), 409
Sugar Acquisition Act (1915), 770, 776
Sugar and Shearers’ Workers Accommodation Act (1905), 60, 614
Sugar Cultivation Act (1913), 63, 108
Sugar Experiment Stations Act (1900) (and subsequent amendments to), 138, 202, 527, 586, 591, 601
Sugar Growers’ Act (1913), 63
Sugar Milling Rationalisation Act (1991), 327
Sugar Works Act (1922), 276
Sugar Works Guarantee Act (1893), 101
Sugar Works Guarantee Act (1911), 111
War Service (Sugar Industry) Land Settlement Act (1946), 293, 299
The South Johnstone, Gin Gin, North Eton and Mount Bauple Sugar Works Act (1927), 699
The Workers’ Accommodation Act (1915), 614
Water Act (1926), 404, 425
South Australia:
Northern Territory Sugar Cultivation Act (1880), 50, 75
Adam, Eleonard, 27
Adams, Walter, 94, 700
Adelaide:
companies based in invest in Northern Territory sugar plantations, 50; Charles
Jacobs & Son propose sugar refinery in, 238; CSR builds sugar refinery in, 238

Adelaide River Land and Sugar Co., 83
Adelaide Steamship Co., 215

aerial baiting (for rat control), 549–550, 557
aerial fertilising, 372
aerial spraying (of herbicides), 366, 368, 379
affiliation and affiliation stations, 16, 241, 781, 792, 808, 814

African black beetles, 512, 534, 544, 555, 556
Ageston Mill and plantation, 87, 182

‘Agreed Sugar Industry Package of 1993’, 329

Agricultural Bank, Queensland, 106
agricultural conferences, 129
Agricultural Society of Southern Queensland, 129
Ahern, Hon. Michael J. (politician), 316

air pollution (from Australian sugar mills), 738–740
Air Pollution Committee of the Queensland Sugar Industry, 738
Air Pollution Council of Queensland, 738, 739
Airdmillan Mill, 186, 193, 213
Airdmillan plantation, 63, 82, 88, 134
Albert River, 46, 204, 205
Albert River Milling & Distilling Co., 205
Albert Shire Council, 425
Alberton Mill, 96, 272, 691, 701, 703
alexandra Mill, 182
Alexandra plantation, 83, 143
Alford Mill, 231
Allen, Dr John, 736, 739
Allied Works Council, 359
Allman, Captain Francis, 23; see also Port Macquarie

Alpha Mill, 212
Alstonville, 81, 123, 208, 317, 432
Alstonville plantation, 82
Alstonville Sugar Co., 82
Amalgamated Sugar Mills Ltd, 698; see also Pleystowe & Palms Mills
Amalgamated Sugar Workers’ Union, 60
Amalgamated Workers’ Association, 60, 107; see also Australian Workers’ Union
Amhurst, Francis (sugar planter), 81
analytical chemists; see chemists, analytical
Antigua Mill, 182
anti-monopoly and anti-trust measures, 257
Aplin, Brown & Co. (merchants), 245, 248, 250
Approved Seed Plots, 602, 604

apron feeders, 724
aquatic ammonia, 371, 372, 376, 383

area under sugar cane:

Australia, 48, 55, 56, 291; Beenleigh district, 46, 51, 53, 56, 57, 65, 271–272, 274; Brisbane district, 28, 45, 52, 53; Bundaberg district, 46, 51, 53, 57, 64, 272; Cairns district, 50, 53, 56, 64; Clarence River district, 27, 48, 49, 52; Gin Gin district, 56, 57; Haughton River district, 63; Herbert River district, 46, 51, 56, 64; Innisfail district, 56, 64; Isis district, 55, 56, 57; Ipswich district, 45, 52, 65, 271; Lower Burdekin, 51, 53, 56, 63, 271; Mackay district, 46, 51, 53, 56, 63; Maroochy district, 56, 57, 65; Maryborough district, 27, 46, 52, 53, 56, 58, 64–65, 272; Mossman district, 50, 56, 64; Mt Bauple district, 274; New South Wales, 48, 55, 58, 274, 275, 291, 306, 332; Northern Territory, 50, 53; Proserpine district, 51, 56; Queensland, 45, 47, 55, 63–64, 271, 272, 273, 291, 310, 322, 325, 329; Richmond River district, 48, 51; Rockhampton district, 49, 53, 57; Tweed River district, 48, 51, 55

Aretan fungicide, 365, 582
army worm caterpillars, 548–549

arrestors; see fly-ash arrestors

arrows or arrowing of sugar cane, 468, 490, 497, 502, 508
arrow fuzz, 468, 477, 479, 495
arrowroot, 53, 272, 274
arsenic (use against cane grubs), 523, 524, 526
Artemisia SS (ship), 792, 793

artificial recharge of underground water supplies, 406–407, 417, 419
artificial sweeteners, 811–812
artificial wetlands, 455
Ashburton plantation, 88
Ashdown, Archibald (sugar refinery manager), 34–35
Ashfield Mill, 218, 250
Askin government (New South Wales), 436

assignments (in Queensland):

area harvested on, 381; criticised for encouraging use of marginal land for cropping, 327; new guidelines for in 1990s, 329; increased number of, 284, 293, 299, 309, 314, 316, 324, 325, 327; introduction of (1915), 272; loss of to competing uses,
322; promote soil erosion, 411; review of, 1927–1929, 279; rezoning of, 659–660, 752; ‘roaming’, 321–322, 327; used to limit production, 272, 381
Association of Italians in the Sugar Producing Industry, 622
Atherton district, 271, 276
Atherton, Phillip (mill technologist), 720
Atherton Tableland, 296, 308, 316, 330, 514, 678, 832
ATV subsid., 744, 757
Austoft Industries Ltd., 647
Austoft mechanical cane harvesters, 378, 673, 676
Australia:
amount of sugar imported, 254, 769, 771; area under cane in, 48, 54, 55, 56, 63, 291; complaints about price of sugar in, 783, 784, 786; concerns about overproduction of sugar in, 276–277; contraction in cane growing in, 52; exports of sugar from, 212, 276–277, 780–781, 801–803, 820–821, 823; Great Depression in, 783, 784, 786; imposes sugar imports embargo, 276, 318, 324, 770, 776, 784; tariff on sugar imports, 58, 324, 329, 775, 815; percentage of sugar exported, 276, 278, 284; prohibits recruitment of Pacific Islanders, 58; quota under British Commonwealth Sugar Agreement, 294–295, 301; quota under the International Sugar Agreement, 285, 289, 300, 313, 315; role of sugar industry in defence of, 112, 834; sugar consumption in, 231, 293, 298, 777, 786, 788, 806, 811, 813; sugar production in, 243, 244, 291, 298, 304, 310, 311, 314, 317, 323, 332; sugar rationing in, 786, 788; White Australia Policy in, 58, 834
Australia, Government; see Commonwealth Government
Australia-Japan Trade Agreement, 801
Australasia Sugar Refining Co., 237, 246, 247
Australasian Steam Navigation Co., 214
Australasian Sugar Co., 33–36
Australasian United Steam Navigation Co., 215
Australian Bureau of Agricultural and Resource Economics, 322, 675–676
Australian Cane Farmers Association, 754
Australian Conservation Foundation, 316, 330, 455
Australian Cooperative Fertilisers Ltd., 345, 347
Australian Department of Labour and National Service, 654
Australian Estates & Mortgage Co. Ltd.: acquires Kalamia, Seaforth & Palms plantations, 88; appeal to pay for cane at a lesser price than other Lower Burdekin sugar mills refused by Central Board, 696; attitude to land disposal, 105–106; closes Palms Mill (1924), 698; cost of growing cane, 89; credit to farmers, 106–107; decides to cease plantation agriculture, 91; extends irrigation at Palms Estate, 136, 405; machinery upgrades to Kalamia Mill, 701, 703, 705; opposes erection of new sugar mills in Queensland during 1950s, 296; pays same price for sugar cane as Drysdale Bros., 218, 219; recruits Japanese workers, 90; resumes plantation agriculture, 92; see also Kalamia & Palms Mills
Australian Estates Co. Ltd., 741, 749
Australian Institute of Agricultural Science, 573, 579
Australian Molasses Pool, 371; see also molasses
Australian National Power Alcohol Co., 732
Australasian Steam Navigation Co. (shipping agents), 214
Australasian United Steam Navigation Co. (shipping agents), 215
Australian Society of Sugar Cane Technologists, 707; see also Queensland Society of Sugar Cane Technologists
Australian Sugar Agreements; see Sugar Agreements, Australia
Australian Sugar Co., 33
Australian Sugar Co. Pty. Ltd., 195, 699, 721; see also Mourilyan Mill
Australian Sugar Consumers’ Association, 782, 785
Australian Sugar Journal, 260, 341, 618
Australian Sugar Milling Council Pty. Ltd., 325, 754
Australian Sugar Planter, 128
Australian Sugar Producers’ Association (ASPA): annual conferences of, 283, 302, 626, 791; applies to extend night harvesting throughout Queensland, 665; attitude to cane burning, 628; calls for a new sugar refinery in Queensland, 791; campaigns to improve sugar industry's
image, 785; complains about level of farmer-cut cane during World War II, 633; concerned about overproduction, 285; considers forming a ‘technological department’ in 1928, 706; disbanded (1987), 753–754; expresses disappointment with the BSES, 719; expresses disappointment at proposal to alter the Sugar Agreement of 1930, 784; founded in Queensland (1907), 60, 753; lobbied to change mill peaks, 281; lobbies Interstate Commission 1914, 261; lobbies Queensland government for more funds to control pests of sugar cane, 526; invests in Queensland Cane Harvester Corporation Ltd., 624; opposes cane price fixing legislation, 693; opposes the Dickson Award, 618–619; rejects calls to abolish sugar import embargo, 774; supports Equalisation Scheme, 286

Australian Year Book, 720, 816
Australian Trades Practices Commission, 819, 820
Australian Workers’ Union:

and mechanical harvesting, 638, 655; application for burning orders, 628, 629; application for wage increase (1916), 617, 618, 619; express concern about labour shortages, 630; negotiations by avoid strike action (1935), 629; oppose use of non-European workers in the sugar industry, 107, 620; police working hours, 617; support for ‘Gentlemen’s Agreement’, 622

Avoca Mill, 189
Ayr district; see Lower Burdekin district
Ayr Divisional Board, 209
Ayr Shire Council, 405–406, 417
Ayr Tramway, 209, 210, 215
Aytton, 50, 56, 213

B. 208 cane variety, 152, 153, 470, 570, 578, 587
Baber, Esmond (cane breeder), 585
Babinda Central Mill:

acquired by Bundaberg Sugar Co. (1989), 753; adopts relative percentage scheme at, 697; amount of weevil borer damaged cane supplied to, 556; assignments from Goondi Mill transferred to (1987), 752; boiler station upgrade at,
Bakers Creek, 734
Balazategui, Bianka (historian), 615, 636
ballast, ballasting and ballast tampers, 669–670
Ballina, 95, 207, 317, 331, 437
Balmoral Mill and plantation, 81, 82, 189
Balts, 635; see also canecutters
banana farms, 274, 275
Bancroft, Dr Joseph, 142, 143
Bank of Australasia, 88
Banks, Sir Joseph, 21
Barbados, 146
Barke, E.J. (cane breeder), 476, 477
barracks; see cane barracks
Barratta Creek, 213
Barrier Reef; see Great Barrier Reef
Barton, Prime Minister Edmund, 58
Basilisk Range, 536
Basque immigrants (to Australia), 275
Bathurst, Earl, 22–23
batteries of open pans; see evaporation (of cane juice)
beagle hounds, 540, 544
Beenleigh district:
  acid sulphate soil risk in, 441; area under cane, 51, 53, 56, 57, 65, 271, 274; cane first cultivated in, 46; CSR tries to convince mill-owners in to manufacture only refining sugars, 252; canegrowers in slow to acquire tractors, 351; central mills in, 99; contraction of cane growing in, 53, 271–272; dairying in, 65; drainage improvements in, 127, 425, 427; Fiji disease outbreaks in, 570; frost-prone, 53; German immigrants and cane growing in, 94, 99; important cane varieties in, 154; punting of cane in, 204–205; small millers in, 94; soldier fly infestations in, 547; use of German wagons in, 203; see also Rocky Point, Alberton, Carbrook Junction & Beenleigh Mills
Beenleigh Mill and plantation, 81, 126, 191, 205
beetle borer; see weevil borer
Behne, E.R. (Roly) (mill technologist), 638, 707, 708, 714
Bell, Arthur (plant pathologist & BSES Director): announces post-World War II research program in plant pathology, 580; assessment of the impact of World War II on cultivation methods of Queensland’s canegrowers; 360; assumes control of the Division of Pathology, BSES, 571; involvement with BSES cane variety improvement program, 477; 479, 480; awarded BSES Travelling Research Scholarship in plant pathology, 570; comments on the weevil borer problem, 532; comments on difficulty of understanding the etiology of leaf scald disease, 572; co-discoverer of the transmission agent for Fiji disease, 573; faces a staff shortage, 579; legislation drafted by, 586; reflects upon efforts to control cane diseases in Queensland, 578; publications of, 354, 571; representative at meeting of International Society of Sugar Cane Technologists, 1932, 535
Bell, Frederick, 128
Bellenden Plains plantation, 49, 81
Bemerside plantation, 83, 89
Bennett, Norman (mill technologist), 703, 705–706, 707, 733
Benowa Mill, 177
Benowa plantation, 81, 87, 127; see also Muir, Robert
benzene hexachloride; see BHC
Berding, Dr Nils (cane breeder), 507, 512
BHC (benzene hexachloride), 364, 487, 541–544, 546, 547, 548, 552, 553; see also cane grubs
‘Big Scrub’, 51, 65
billet; see cane billets
billet planters, 380
Bingera Mill:
  boiler station upgrade at, 711, 747; disposal of fly-ash at, 739; erection of (1885), 186; fractional liming first used at, 715; loss of assigned land to competing crops, 322; machinery upgrades to, 192, 202, 701, 723; mill whites manufactured at, 237, 243, 250, 253, 254; rezoning of assigned land to, 661; staffed with an analytical chemist, 200; tramlines at, 208; treatment of waste waters at, 734; unloading cane at, 210; see also Gibson & Howes Ltd.
Bingera plantation:
  area under cane on, 80; cultivation methods at, 134; drainage improvements at, 134; irrigation at, 136, 347; molasses used as a fertiliser at, 347; subdivision of, 90; see also Gibson & Howes Ltd.
Bingera Weir, 405
Bingil Bay, 292
bins; see cane bins
biochemical oxygen demand (BOD), 734, 735, 736, 737, 809
biological control (of cane grubs), 161, 535
Birribi Mill, 177
Bjelke-Petersen government (Queensland), 321, 420, 427, 432, 434, 441, 447, 448, 602, 751, 752
Black, Maurice Hume, 104, 126
Blackall Range, 65
Bloomfield River, 50, 56, 88, 213
Bloomfield River Sugar Co, 82, 213; see also Vilele plantation
Blundell, Ellis (inventor and canegrower), 364
Blundell knapsack fumigant injector, 537; see also soil fumigation
Blundell machine injector, 537; see also soil fumigation
Blymyer Manufactory Co., 188
Blyth, Ken (author), 638
boilers, sugar; see sugar boilers
boilers, sugar mills:
  improved efficiency of, 710–711; stack emissions from, 739, 740; upgrades to, 703, 710–711, 719, 729, 740
boilers, sugar refineries, 779, 806
boiling down works, 33, 81, 231
Bolton, Professor Emeritus Geoffrey (historian), 54, 55
Bonanno, Harry, 329
Bonen Brothers Pty. Ltd. (agricultural machinery makers), 380, 645
bone char, 232, 239, 241, 242, 806, 808, 809, 811, 814
bone char decolourisation plant (in sugar refineries), 240–241, 814
bone char kilns, 239, 806, 807, 809, 814, 818
bone char making plants (at sugar refineries), 234, 239, 809
bone char paste, 240, 241, 786
bone char revivification, 806, 807, 808
bonded sugar houses, 38
Bonna Mill and plantation, 92, 252
borers; see weevil borers
Botany Bay, 21
Bour pans, 181, 187, 188
Bourbon (cane variety), 142, 143
Bourke, Governor Richard, 25
Bowden, Thomas (sugar refiner), 27, 34, 35
Bowen:
  as port for sugar exports, 215, 798, 799; overlooked as site for bulk sugar terminal, 799; sale of sugar in, 243
Bowen district:
  attempts to secure a central mill in, 308; cane ceases to be cultivated in, 53; cane cultivated in, 49, 51, 53
Bowen Sugar Co., 49, 82
Boyd, Major A. (sugar planter), 161, 177, 179; see also Ormeau plantation
Boyd, Robert Mitchell (sugar planter), 91, 144, 236, 243, 252; see also Ripple Creek plantation
Braby, Henry (mill engineer), 135, 190, 193, 833
Brandes, Dr E.W., 472
Brandon, 488
Brancombe plantation, 83
Brazil, 1, 73, 831
breeding cane varieties (New South Wales); see cane variety improvement programs
breeding cane varieties (Queensland); see cane variety improvement programs
Brennan, Dr Lisa, 676
Bridgman, George (pastoralist & sugar planter), 81
Brisbane:
  as a port for sugar exports, 331, 821; auctions of sugar at, 43; bulk sugar handling terminal at, 821; commission agents at (for sugar), 244, 250, 254; CSR erects New Farm Refinery in (1893), 238–239; sugar machinery makers in, 184–185; sugar refinery at Bulimba, 237
Brisbane Botanic Gardens, 28, 43
Brisbane Bulk Sugar Terminal, 821
Brisbane district:
  area under cane, 45, 52, 53; decline in cane growing 1880s, 52, 53; floating central sugar mill in, 99; frost-prone, 52; potential as a sugar-producing locality, 26, 27; punting cane in, 204–205; ‘rust’ disease outbreaks in, 52; small millers in, 93; see also Mt Cotton, Ormiston & Redland Bay plantations
Brisbane House Sugar Refinery (Sydney), 35, 36, 235
Brisbane River, 204, 205, 821
Brisbane River Sugar Refinery, 237
Britain; see Great Britain
British Commonwealth Sugar Agreement, 294–295, 301
British Empire, 282, 285
British Empire Producers’ Organisation, 280
British Guiana (Demerara), 81, 148, 202
British immigrant labourers (for Australian sugar industry), 60, 88
British Ministry of Food, 289, 293, 294, 295, 801
British New Guinea; see New Guinea
British Preference League, 621
British Preferential Tariff (on sugar imports from the Dominions), 780
Broadwater Experiment Station:
appointment of David North to, 565; breeding new cane varieties at, 471, 493, 495; cane disease investigations at, 568–569, 570, 584–585; facilities upgraded at, 493; Fiji disease eradication investigations at, 593–594; Fiji disease resistant cane variety trials at, 584–585, 593
Broadwater Mill:
acquired by New South Wales Sugar Milling Cooperative (1978), 751; erection of (1881), 51, 97; machinery upgrades to, 713; road transport of cane to, 672; tramlines for, 205; treatment of waste waters at, 740; see also Richmond River district
Brown, A. & A.H. (sugar planters), 182, 184; see also Antigua Mill
Brown, Professor W. Jethro, 62, 260
Bruce, Prime Minister Stanley, 776, 777
Brünnich, Johannes (chemist), 161, 162, 198
Brunswick Heads, 51, 275
Brunswick River district, 125, 332
Brussels Convention (1902), 63
BSES; see Bureau of Sugar Experiment Stations, Queensland
Buchanan, David, 146, 149; see also Mackay State Nursery
Buderim, 52
Buhôt, John (plantation manager), 43
Bulcock, Frank, (politician) 586
Bulimba Sugar Refinery; see Brisbane River Sugar Refinery
bulk handling of fertiliser, 372
bulk handling of raw sugar:
Brisbane Terminal, 331, 821; Bundaberg Terminal, 796, 799, 821; Cairns Terminal, 821; causes loss of jobs for waterside workers, 796–797; CSR’s investigations into, 792; first Australian plant for at Harwood Mill (1954), 793; Lucinda Terminal, 799; Mackay Terminal, 795, 799, 819, 821; Mourilyan Terminal, 795, 799, 821; opposed by waterside workers, 793; reports into, 793; Townsville Terminal, 795, 799, 821; trial shipments of (1951–1953), 792–793
bulk storage (in sugar mills), 796
bulk storage (in sugar refineries), 793–794
bulk sugar terminals; see bulk handling of raw sugar
bulldozers, 360, 361, 414, 417
bunch planting, 490, 493, 497, 507; see also cane variety improvement programs (Queensland)
Bundaberg:
as port for sugar exports, 798, 799; commission agents (for sugar), 244; machinery manufacturers (agricultural) in, 380, 645
R. Cran & Co. erect sugar refinery at, 54, 189, 233–234
Bundaberg Approved Plant Sources Scheme, 593, 597
Bundaberg Bulk Sugar Terminal, 799, 821
Bundaberg cane beetle; see cane beetles
Bundaberg Cane Pest and Disease Control Board, 592, 593
Bundaberg district:
area of irrigated cane, 399, 405, 414; area under cane, 46, 51, 54, 57, 64, 272; cane first cultivated in, 46; cane grub attacks in, 522, 547, 548, 552; cane varieties in, 154, 470; contraction in area under cane in, 272; downy mildew outbreaks and their control in, 587, 589; drought-prone, 150, 405; exports of sugar from, 215, 798, 799; Fiji disease outbreaks and their control in, 570, 591, 592, 594–595; frost-prone, 13; German immigrants to, 105, 109; gumming disease outbreaks and their control in, 144, 470, 570; irrigation in, 136, 399, 405, 414, 445, 449; isolation plot established in, 576; juice mills in, 178, 189, 191, 193; leaf scald disease outbreaks in, 595; losses from nematodes in, 551; mechanical cane harvesting in, 625, 646; Millaquin Refinery erected in, 54, 189, 233–234; mill-owners in compete for cane in, 217; mill-owners in meet to discuss establishing a cooperative sugar...
refinery, 258; night harvesting in, 655; plantations in, 64, 75, 83, 92; rezoning of assignments in, 661; road transport of cane in, 658; 'root rot' outbreaks in, 598; salt water intrusion in, 419; small millers in, 93; sodic soils in, 385; soil conservation measures in, 452; soldier fly prevalent in, 545, 546; sugar exports from, 798, 799; swarms of grasshoppers in, 155; trickle irrigation in, 449; wireworm attacks in, 555; see also Bingera, Fairymead, Goodwood, Millaquin, Mon Repos, Qunaba & Pemberton Mills & Millaquin Refinery

Bundaberg Foundry Ltd., 700, 701
Bundaberg Groundwater Area, 450
Bundaberg Irrigation Scheme, 419–420, 441
Bundaberg Planters' and Farmers' Association, 138
Bundaberg Sugar Co. Ltd.:
- acquires Babinda Mill (1989), 753; acquires Hardings Manufactures Pty. Ltd., 818; acquires Moreton Mill (1988), 752; acquires Mourilyan Mill (1988), 752; attempts unsuccessfully to acquire; South Johnstone Mill (1994), 753; closes Qunaba Mill (1985), 752; expands its share of the domestic Australian sugar market, 818; formation of (1972), 749; history of, 3; operates sugar plantations, 92; take-over by Tate & Lyle (1991), 753; uses road transport to move harvested cane, 678–679

Bundaberg Sugar Experiment Station, 467, 476, 477, 496, 594
Bundall plantation, 87
Burdekin Delta Artificial Recharge Scheme, 417, 419
Burdekin Delta Sugar Co., 82, 213; see also Airdmillan plantation
Burdekin Falls Dam, 419, 448
Burdekin River:
- Blue Valley Weir, 448; Clare Weir, 448; dam on, 419; erosion of river banks, 409; flooding of, 409, 433; Gorge Weir, 448; waters from diverted into Plantation Creek, 407
Burdekin River Improvement Trust, 409
Burdekin River Irrigation Area, 325, 330, 448, 449, 514

Burdekin Sugar Experiment Station, 488, 496
Bureau of Central Sugar Mills, Queensland, 110, 111, 698, 699
Bureau of Sugar Experiment Stations, Queensland (BSES):
- advice to canegrowers, 139, 400; advice to Cane Pest and Disease Control Boards, 601; advise canecutters to sterilise cane knives, 577; Advisory Board of, 586; appoints cadet assistant plant pathologists, 569; assumes control of cane variety improvement in New South Wales, 504; Atherton, Phillip (engineer), 720; Barke, E.J. (cane breeder), 476, 477; Behne, E.R. (Roly) (technologist), 638, 701, 708, 714; Bell, Arthur (plant pathologist & Director), 354, 360, 477, 479, 480, 532, 533, 535, 570, 571, 572, 573, 578, 579, 580, 586; Bennett, Norman (technologist), 703, 705, 706, 707, 733; Berding, Dr Nils (cane breeder), 507, 512; BHC trials, 541, 542; Buzacott, James (cane breeder), 487, 488, 489, 490, 498, 531, 534, 541; calculates fertiliser ratios during World War II, 358; Cane Improvement Group, 507; cane variety breeding programs, 468–469, 474–481, 486–491, 495–498, 506, 507, 508; cane toads imported by (1935), 535; cane variety distribution program 1900s, 152; Committee on Seedling Raising, 477, 487; Cottrell-Dormer, W. (plant pathologist), 468, 569, 570, 572; criticised for slowness in breeding new cane varieties, 481; criticism of advice to canegrowers, 139; criticism of canegrowers' irrigation methods, 400, 445; Croft, Barry (plant pathologist), 599; develops fertiliser mixtures, 353–354; disease trials at the Government Domain, 582; Division of Entomology and Pathology, 477, 531, 571; Division of Mill Technology, 707, 720; Division of Plant Breeding, 487; Division of Plant Pathology, 571, 578, 580; Division of Soils and Agriculture, 353; Division of Sugar Mill Technology, 705–708; Egan, Brian (plant pathologist), 580, 597, 602, 653; Easterby, Harry (Director), 150, 203, 276, 343, 347, 349, 467, 468, 569, 702, 703, 773; Eigenhus,
Ir. J. (technologist), 707, 708; erection of quarantine house in inner Brisbane, 477; establishment of (1900), 138; establishment of a station at Bundaberg, 138; establishment of a station at Meringa, 477; establishment of station at South Johnstone (1918), 468; experiments with DDT, 541; experiments with bagasse as a soil enhancement agent, 375; experiments with BHC, 541–542; fertiliser advisory service, 368; Ferguson Wood, E.J. (plant pathologist), 404, 569, 576; fertiliser trials, 353; Fiji disease eradication program, 594–595; Garside, Dr Alan, 514, 515; Girault, Alexandre (entomologist), 164, 523; Gordonvale entomological facilities, 523; herbicide trials, 366, 368; outlines effects of ratoon stunting disease, 596; Hogarth, Dr Douglas (cane breeder), 496, 503, 507, 513; Hughes, Cecil Graham (plant pathologist), 477, 482, 487, 489, 545, 579, 587; Illingworth, Dr James (entomologist), 523, 524, 526; importing new cane varieties, 148, 467, 468; investigations into cane grub control measures, 523–524, 534–535, 541–542, 552–555; initiates soil conservation experiments, 430–431; investigates insectary technique, 594; investigations into nematodes and nematocides, 551; investigations into rat control measures; 557; investigations into wireworm control measures, 533; Jarvis, Edmund (entomologist), 156, 521, 522, 523, 525, 526, 531, 534, 554; Kerr, Dr H.W. (soils scientist and Director), 353, 354, 357, 358, 400, 410–411, 715, 724; King, Norman (Director), 307, 309, 354, 368, 373, 430, 477, 481, 545, 594, 646; lease farm at The University of Queensland, 582; Magarey, Dr Robert (plant pathologist), 599; Maxwell, Dr Walter (founding Director), 102, 138–139, 201, 202; McWalters, Peter (cane breeder), 468, 476; metrology service of, 707, 720; moves plant pathology investigations to Woodford, 583; Mungomery, Reginald (entomologist), 531, 534, 535, 536, 543, 545, 573; Nicklin, Don (engineer), 720; Pathology Farm, 372, 583, 594; legume breeding program, 374; organises field days, 576; organophosphate insecticide trials, 552; produces soil maps, 354; promotes soil conservation measures, 411, 430–431, 451; publishes The Cane Growers’ Quarterly Bulletin, 354; relationship with CSR, 138, 570, 575; releases cane toads, 535; research interrupted during World War II, 580; ‘root rot’ investigations, 597, 598; Scriven, Ernest (Director), 139, 164, 272, 467; Skinner, Dr James (cane breeder), 487, 490, 507, 512; Steindl, David (plant pathologist), 579; Sturgess, Owen (plant pathologist), 580; soil analysis service, 368, 370; soil fertility investigations, 368, 382; Sugar Yield Decline Joint Venture, 513, 514; suspends farm-based fertiliser and cultivation trials during World War I, 347; trash conservation trials, 374, 378; Vallance, L. (soils scientist), 430, 654; warns canegrowers against use of arsenic to control cane grubs, 526; Wilson, George (entomologist), 542, 569 see also Bundaberg, Burdekin, Mackay, Meringa & South Johnstone Sugar Experiment Stations
Burnett River, 46, 79, 136, 233, 405, 419–420, 544, 661, 796, 798
burning (crops of cane); see cane burning
Burns, Philp and Co. (merchants), 215, 245, 250, 253, 255
burnt cane, 625, 626, 627, 628, 664
Burrows, Geoffrey (author), 636, 641, 642
Buss, Frederick, Charles & George (sugar planters), 83, 92, 218
buttery gang system, 613
Buzacott, James (cane breeder), 487, 488, 489, 490, 498, 531, 534, 541
by-products; see mill by-products
Byron Bay, 55
Caboolture River, 28, 45
cadet assistant plant pathologists (BSES), 569–570, 579
Cairns:
as a port, 208, 215, 371, 793, 796, 797, 798, 799, 821; bulk handling of sugar at, 793, 799, 821; linked to Babinda by rail, 64, 208
Cairns Bulk Sugar Terminal, 821
Cairns district:
area of irrigated cane in, 449; area under cane in, 50, 52, 56, 64; cane grub attacks in, 158, 526, 541, 543; cane toads released in, 535; Chinese canegrowers in, 105; collecting cane beetles in, 526, 543; common rust outbreaks in, 599; drainage improvements in, 414; exports of sugar from, 215, 793, 796, 798, 799; feral pigs damage cane crops in, 540; gumming disease outbreaks in, 469, 578, 587; important cane varieties in, 153; irrigation in, 414–415, 449; isolation plots established in, 577; land suitability study for, 749; 'root rot' outbreaks in, 598; soil conservation measures in, 431–432; swarms of grasshoppers in, 155; see also Hambledon & Mulgrave Mills & Green Hill Estate

Cairns Divisional Board, 208
Cairns-Mulgrave Tramway, 64, 208, 209, 215
calandria vacuum pans, 705, 713, 721, 727, 745, 779
calcium, 345, 385
Calcutta, 31, 32
Caldwell, Arthur, 635
Campbell, Clarke & Co. (merchants), 31
Campbell, Walter (politician), 123, 124
Canada (as a sugar market), 289, 294, 295, 296, 780, 801, 803, 821
cane arrows; see arrows or arrowing of sugar cane
cane barracks, 613, 614, 615, 655
cane beetles:
Bundaberg, 156, 548; Childers, 156, 547, 548, 552, 553, 554; clearing vegetation to reduce impact of, 161, 536; control methods for, 159–163, 523, 526, 535–536, 537, 541–544, 552–554; Frenchi, 156, 536, 542, 548, 552; greyback, 156, 541, 543, 553, 554; hand collection of, 159–160, 163, 523, 526, 536, 537, 541; life-cycle of described, 156–157, 164
cane billets, 11, 365, 662, 666
cane bins, 662–664, 665–667, 748
cane breeding; see cane variety improvement programs
cane burning, 11, 126, 133, 355, 374, 376, 529, 617, 625–629, 664
cane carrier; see carriers
cane, chopped, 647, 653, 663–664
cane collecting expeditions; see collecting expeditions for cane
cane cutters; see canecutters
cane cutting; see cane harvesting
cane derricks, 210, 657, 658
Cane Disease Control Boards, 586
cane diseases:
cane farmers; see canegrowers
Cane Farmers' Association of North Queensland, 60
cane fires; see cane burning
cane growing areas and climate, 12–13, 832
cane growing areas and drainage, 13, 400–404, 407–408, 412–414, 420–427, 433–440, 832
cane growing areas and frost, 12–13, 131–132, 832
cane growing areas and irrigation, 12, 397–399, 405–407, 414–420, 441–445, 447–450
cane growing areas and soils, 14, 450
Cane Growers' Union; see United Cane Growers' Union
cane grubs:
biological control of, 161, 535; clearing vegetation to reduce impact of, 161, 536;
damage to sugar cane plants, 157–158; eaten by birds, 160; financial losses from, 159; hand collection of, 150, 164, 523, 536; killed by fungal pathogen, 161, 554; larvae of cane beetles, 156–157; soil fumigation with carbon bisulphide and/or paradichlorobenzene against, 162–163, 523, 525, 536, 537, 541, 542, 543; tonnage of cane lost to, 159, 522, 540, 552; use of BHC against, 541, 542, 543, 546, 548, 552; use of lime against, 160; use of salt against, 160, 162
cane harvester groups, 674–676
cane harvesters:
Austoft, 378, 673, 676; Cannavan, 663; capacity of, 673, 675; chopper, 647, 653, 663; Claas, 377; cost of, 646, 675, 676; Creber, 377; Crichton, 647, 651; CSR, 646; Don Mizzi, 649; Fairyemead, 625, 646, 647, 649; Falkiner, 624, 638; Howard, 625; Hurrey, 623; Kinnear, 645; Massey Ferguson, 377, 649, 650, 651; Miller & Owen, 625; Moloney, 644; nineteenth century designs of, 140; number of, 673–674; ownership patterns of, 654, 676–677; Rasmussen, 646–647; Scott, 645; Shear blade, 645, 649; slower than a manual cane cutter, 624; Tierney, 638; Tomlinson, 140; Toft, 638, 652; Venton, 647, 649; whole stalk, 647, 652
cane harvesting:
cane harvesting styles, 634
Cane Improvement Group, BSES
cane inspectors, 350, 351, 359, 363, 412, 414, 614, 626, 627, 628, 661
cane invert, 803
cane juice, 15, 182, 183, 186, 715, 726
cane knives, 576–577, 581, 634
cane leaves, 11
cane loaders (mechanical):
front-end, 641, 642, 643; hydraulic grab-type, 642–643; jib-type grab, 625, 631, 645; Nuffield, 642; Quaid's, 639–640; Toft Brothers', 422, 623–623, 638, 639, 642, 643; use in New South Wales, 305, 643; use in Queensland, 422, 638
cane loading:
onto punts, 97, 205–206, 657; onto rail trucks, 210, 642, 658–659; time of during the day, 615, 617; with derricks, 210, 657, 658; with lifts, 658; with mechanical loaders, 305, 638–644
cane mulch; see trash blanketing
cane nurseries, 144, 146, 468
cane payment formula:
by weight, 153, 155, 691; CSR's system, 697; individual analysis, 155, 488, 691, 697; relative percentage scheme, 697; sugar in the bag, 697
cane penalties, 691, 695
Cane Pest and Disease Control Boards, 527, 542, 544, 557, 586, 589, 596, 597, 601–602
Cane Pest Control Boards, 527, 536, 537
cane planters, 140–141, 164, 343, 349, 350, 352, 359, 364–366, 380
cane planting:
by teams of workers, 124, 343; CSR's experiments on, 124; late in the season, 533; mechanised, 140–141, 164, 343, 349, 350, 352, 364–365; methods of, 11, 124, 128, 131, 140–141, 343; over-planting, 124, 125; see also cane planters
cane prices, 97, 217, 218, 219, 220, 689-697, 754–755
Cane Prices Boards; see Central Sugar Cane Prices Board
Cane Protection and Productivity Boards, 557, 602
cane punting, 97, 204, 205, 206, 656, 657, 671–672
cane seedlings, 146, 468; see also cane variety improvement programs
cane slip and cane slipping, 206, 657
cane toad (Bufo marinus), 535–536, 835
cane transport; see transport (of cane to sugar mills); see also cane punting, tramlines, Queensland Railways & motor lorries
cane unloaders (at sugar mills), 210–211, 717

cane unloading (at sugar mills), 209–211, 743

cane varieties:
annual types, 473, 504; B. 208, 152, 153, 470,
570, 578, 587; Badila, 9, 141, 150, 151,
152, 153, 154, 155, 467, 469, 470, 472,
474, 481, 484, 487, 521, 530, 531, 532,
568, 569, 570, 571, 584, 587, 705; Black
Fiji, 160; Black Java, 144; Bourbon, 9,
144, 153, 160; biennial types, 473–474; B.W.
series, 481; Chenoma, 152; Cheribon,
144, 153, 160, 691; China, 9, 142, 152,
154; collecting expeditions for, 146–147,
467, 470, 471, 489; Co. series, 481, 486,
493, 504, 571, 578; common rust resis-
tant, 50, 600; C.P. series, 479, 486, 499,
504, 546, 587, 594; Creole, 144; D. 1135,
150, 154, 470, 570, 578, 580, 587; Du-
point, 160–161, 691; E.K. 28, 470, 481,
487; Fiji disease resistant, 472, 594, 595;
frost-resistant, 478, 486, 495, 503, 832;
Goru, 9, 141, 150, 151, 152, 153, 154,
470, 521, 571; gumming disease resistant,
150, 472, 569, 572, 484, 486; H.Q. 409,
470, 472; H.Q. 426, 146, 153, 468, 481,
486, 470, 521, 566, 570, 580, 587, 833;
imports of, 146–148, 467, 470, 471, 489;
Indian, 481, 486, 493, 504, 571, 578;
Javanese, 470, 481, 487; Kewensis, 146,
150; Korpi, 470, 471, 472, 474,
484, 578; M. 1900, 141, 147, 152, 154,
470, 481, 487, 578, 587; Mahona, 150,
152, 154, 474, 578, 584; Malabar, 154,
474, 578, 691; Malagache, 151, 152, 154,
470, 580; Mauritius, 147, 470, 481, 487;
Meera, 142, 144; New Guinea 148, 150,
151, 152, 153, 154, 470, 471, 472, 474,
489; NCo. 310, 502, 504, 510, 512, 546,
591, 592, 593, 594, 595, 603, 604; N.G.
14 and N.G. 16, 152, 154; Oramboo,
470, 472, 474, 482, 578; Otamite, 153,
691; Pindar, 305, 370, 482, 484, 485,
487, 499, 502, 512, 584, 587, 596; P.O.J.
series, 9, 472, 474, 479, 481, 482, 484,
486, 571, 572, 573, 578, 587, 591, 708,
715; Q. 813, 470, 472, 474, 481, 482,
484, 487, 569, 571, 573, 578, 587, 584;
Q. series, 381, 481–482, 486, 491, 493,
498–499, 504, 509; Rappoe, 144, 150,
151, 152, 154, 160; Ribbon, 142; ‘root
rot’ resistant, 504, 599; S.J. series, 469,
486, 531, 571, 587; S.N. series, 471, 482,
495; South African, 502, 504, 510, 512,
546, 591, 592, 593, 594, 595, 603, 604;
Striped Singapore, 144, 151, 152, 154,
160; Tanna, 9, 152, 691; Trojan, 471,
482, 484, 485, 487, 499, 512, 582, 584,
585, 587; Triton, 305, 495, 502, 509,
512, 587, 596; Uba, 470, 571, 578, 580;
weevil borer-resistant, 556; Vesta, 471,
482, 495, 584; United States of America,
143, 486, 503

cane variety improvement (methods of):
BSES, 468–469, 474, 476–480, 489–491,
496–498, 506–507; CSR, 468, 471–474,
493, 495; Hawaiian, 468–469, 473, 489,
496 Javanese, 473, 496

cane variety improvement programs (New South
Wales):
BSES, 504; CSR, 471–474, 493, 501, 503;
Department of Agriculture, New South
Wales, 147, 149, 472; Grafton Experiment
Station, 472; New South Wales Sug-
ar Milling Cooperative, 504; Wollongbar
Experiment Farm, 147, 149

cane variety improvement programs (Queensland):
at Kamerunga State Nursery, 149; at Mackay
State Nursery, 149; benefits of, 512; BSES,
150, 468–469, 474, 476–480, 487–491,
495–498, 506–510, 556, 594; CSR, 146,
147, 149, 150, 472–473, 493, 500, 504,
505; Hambledon Cane Nursery, 150, 500;
Queensland Acclimatisation Society, 147,
148, 474, 481, 486, 487; Young Brothers,
148; see also Clark, James

cane washing unit, 717

cane weighing (during cane variety improvement
programs), 497–498

cane cutters:
Aborigines, 630, 635, 637; accommodation
for, 614–615; Austrians, 60; Balts, 635,
636; British, 60, 619, 620, 621, 622,
630; daily routine of, 615–616, 642; die
from Weil’s disease, 627, 629; displaced
persons (DPs), 635–636; Finns, 637;
gangs of, 613–614; Greek, 275; Indian,
90–91; Italians, 88, 109, 275, 636, 637;
last of, 650; Maltese, 109; numbers of in
Australia, 617, 655; prefer to cut burnt
cane, 626; Polish, 636; Scandinavians, 60;
shortages of, 629–631, 633, 635; Spanish, 60, 275, 637; Torres Strait Islanders, 630, 635; Yugoslavs, 637

canegrowers (New South Wales):
abandon hot-water treatment of setts, 596;
acquire tractors, 350, 362; adopt control methods against African black beetles, 534, 544; adopt mechanical cane loaders, 643; adopt soil conservation measures, 432; advice about acid sulphate soils, 440–441; area cultivated, 97, 109, 376; assist CSR in field trials, 149; assisted by CSR, 131, 354; awarded prizes by CSR to improve cultivation methods, 130, 348, 350; background of, 128; burning of cane, 126; credit to, 97, 130; cultivation methods criticised, 123, 350; decline in number of, 303; drainage improvements of, 402–404, 428–429, 437–438, 439; employ Pacific Islanders, 620; encouraged to expand production, 305, 331; engage in over-planting, 124, 125; fail to fertilise, 127; fail to improve drainage, 127; favourite cane varieties of, 142, 474, 493, 495; fertiliser use of, 373; financial difficulties of, 330; issued with booklet on cultivation methods (1895), 131; petition New South Wales government to fund the erection of a cooperative sugar mill, 219; practice aerial fertilising, 372; practice green manuring, 372; practice trashing, 126; relations with CSR, 131, 354; relations with sugar planters, 100; rely on family labour, 105; restrictions on cane varieties cultivated, 153–154; suffer field worker shortages during World War II, 630–631; struggle to control cane diseases, 576; suffer shortages of canecutters during World War II, 291; suffer Fiji disease outbreaks, 591, 592, 603, 604; troubled by post-World War II labour shortages, 303; troubled by ratoat stuntining disease, 603, 604; use rotary hoes, 632

caneowners (Queensland):
abandon hot-water treatment of setts, 596;
acquire tractors, 342, 351–352, 362–364; adopt irrigation, 136, 397–399, 405–407; adopt soil conservation measures, 431–432, 451–453; agitate for formation of Sugar Experiment Stations, 137; apply herbicides, 366–368, 379; area cultivated, 109, 273, 297, 349, 376; assist BSES investigations, 139, 508–509; assist Department of Agriculture & Stock investigations, 149; assisted by millowners, 130, 136; background of, 128; burning cane, 355, 374, 377, 625–628; burning trash, 139, 347, 355, 374, 377; credit to, 106; conserving trash, 348, 355, 378; cultivation methods of criticised, 123, 347; debt levels of, 313, 319–320; diversify into other crops, 319, 322; drainage improvements of, 404, 408, 422–425; favourite cane varieties of, 142, 491–493, 499, 509–510; failure to use BSES fertiliser advisory service, 368; fertiliser use, 347, 356, 359, 368–370, 373, 383–385; lack of financial records, 141, 694; implement rat control measures, 528–530; numbers of, 107–109, 273, 308, 322, 325, 330; nationality of, 105, 133, 275; petition the Queensland government to build central mills, 92, 100, 110; practice green manuring, 354, 374; practice trashing, 126; receive BSES advice, 139, 368; relations with CSR, 106; relations with sugar planters, 100; rely on family labour, 105; restrictions on cane varieties cultivated, 153–154; suffer canecutter attacks, 289; suffer cane grub attacks, 158–159, 526, 540; unsuccessful attempts to erect central sugar mills in 1870s and 1880s, 98–99
canetainers, 665–668
Cannavan, Arthur, 663
Canterbury Refinery, Sydney, 33–38
Cape Town, 21, 31
capital:
for farm machinery, 676; for milling machinery, 94–95; for establishing sugar plantations, 82; supplied by banks, 82, 106; supplied by Queensland government, 101–102, 111, 276
carbon bisulphide, 162, 523, 525, 534, 537, 541, 542, 543; see also cane grub
carbonation process (in sugar refineries), 242, 786, 808, 814
Carbrook Mill, 691
Cardwell, 49
Cardwell Shire Council, 408, 425, 436
Carmila, 274, 330, 543, 593

carriers:
automatic speed control equipment installed at, 724, 743; early mechanical, 179–180, 184, 186; intermediate, 722; maceration bath, 722; revolving knives on, 705, 743; unloading cane at, 210–211, 743

Casey, Hon. Ed (politician), 326, 329
caster sugar, 16, 809
Castle, Vince (canegrower), 678
Cattle Creek, 429
Cattle Creek Mill:
cane for moved over Mackay Railway, 209; closure of (1991), 752; effluent treatment plant at, 737; erection of (1906), 63; joins the Mackay Sugar Manufacturers’ Association, 218; machinery upgrades to, 709, 710, 712, 713, 719, 722; receives cane by government-owned railways, 657, 661, 671; receives emergency government funding to operate, 751
Cattle Creek Sugar Co. Ltd., 218
cattle penning, 126; see also fertilising (of cane)
ccs: see commercial cane sugar
Cedars Mill and plantation, 79, 82, 123, 179
central-colono system; see central milling system
central milling system:
adopted in West Indies, 100; attempts at in Queensland before 1885, 98–99, 101–102; explanation of, 73; encouraged by Queensland government, 100, 101, 110–111, 275–276; pioneered in New South Wales by CSR, 97–98; see also central sugar mills, farmer cooperatives, & central sugar mills, proprietary
Central Sugar Cane Prices Board:
abolished (1991), 327, 754; allocates assignments, 272, 277; composition of, 272; assesses minimum standard of mill efficiency, 699; criticised by Sugar Industry Working Party (1985), 320; decision on cane bin rentals and supply, 663, 664; decision on penalties for stale cane, 663–664; determines allocation of crop proceeds, 696, 755; fixes price for sugar cane, 689, 691, 694; formation of (1915), 272; functions of, 272, 696; functions transferred to the Queensland Sugar Corporation, 754; halts expansion in 1966, 312; implements program of rezoning assigned land, 659–660; increases number of assignments, 284, 293, 299, 309, 314, 316, 324, 325; increases mill peaks, 293–294, 297, 299, 301, 309, 313–314, 315; introduces uniform cane prices state-wide, 696; permits harvest of 85% of gross assigned area, 309; permits use of 100% of an assignment, 314; reduction in some functions of during the 1980s, 321–322; rejects requests for increased mill peaks, 281, 290, 303, 317; review of assignments, 1927–1929, 279; suggests some Queensland central sugar mills were poorly located, 698; see also Queensland Sugar Corporation
central sugar mills, farmer cooperatives:
depts to Queensland Treasury, 101, 110, 699; erected in Queensland with government funding, 102, 111, 276; erection opposed by CSR 1893, 101; financial difficulties of, 110, 699, 788; inquiries into location of, 100–102, 110–111, 275–276; operate in Queensland during 1870s and 1880s, 98–99; parliamentary opposition to funding of, 101; performance of investigated by Dr Walter Maxwell 1904, 102; poorly located with regards to frost, 102; promote better cultivation methods to their suppliers, 136–137; proposed in New South Wales, 219; see also Bureau of Central Sugar Mills, Queensland
central sugar mills, proprietary:
emerge in Queensland, 102–104; pioneered in New South Wales by CSR, 2, 97–98
centrifugals:
continuous, 727–728, 756–757, 808; driven by electricity, 712; horse-driven, 177; NQEA Superfugal, 757; role in manufacture of sugar, 16; part of machinery upgrades in sugar mills, 699, 703, 755; steam washing in, 714
charcoal filters, 182, 232
charcoal kilns; see bone char kilns
Charley, Walter (engineer), 623, 625
Chataway, James (politician), 137, 256
Chatsworth Mill, 97, 181, 183
check chemists, 689, 692, 693, 718
chemical analysis (of the sucrose content of sugar cane), 155, 697; see also cane payment formula
chemical control (in Australian sugar mills), 195–201, 702
chemists, analytical:
 appointed in Queensland sugar mills, 110, 200–201, 702; considered necessary by Dr Walter Maxwell, 110; considered optional by some Australian sugar mill-owners, 201; hired by CSR, 197–200; not employed in Australian sugar mills before 1880, 195; in dispute with CSR’s mill managers, 199
Cherbourg, 630, 635
Chifley, Prime Minister Ben, 804
Child, William Knox (sugar refiner), 33
Childers cane beetle; see cane beetles
Childers district; see Isis district
Childers Mill:
closure of (1932), 698; erection of (1895), 56; high levels of burnt cane supplied to, 627; machinery upgrade at, 705; stock food supplement manufactured at, 732
Chillagoe, 109, 345
chimneys (at Australian sugar mills), 738, 739
Chinderah Swamp Drainage Scheme, 402
Chinderah Swamp Drainage Trust, 400, 402
Chinderah Wharf, 659
China:
as a sugar market, 803, 820, 821; imports of sugar from, 235, 254, 255
Chinese immigrants (to Australia):
as plantation labourers, 1, 85; as canegrowers in Northern Territory, 50; as canegrowers in Queensland, 89, 105; discrimination against, 107; hired by canegrowers, 105; teams of collecting grasshoppers, 155; teams of collecting cane grubs, 160; unloading cane at sugar mills, 210
chlorotic streak disease:
control methods for, 588–589; discovery of, 572; investigations into, 580, 582, 585; outbreaks of, 600–601, 602, 604
chlorpyrifos (insecticide), 554, 555, 556
chopped cane, 653, 663–665
cicadas, 549
Cilento, Sir Raphael, 529, 628
Cingalese immigrants (to Australia), 85
Circulation (in vacuum pans), 714
Civil Construction Corps, 359, 360
Clare, 311, 448, 660, 678
Clarence & Richmond River Steam Navigation Co., 213
Clarence River, 216, 437, 474, 821
Clarence River County Council, 427, 437
Clarence River district:
area under cane, 48, 52; cane growing in during 1850s, 27; contraction in area under cane, 53; cultivation methods of canegrowers, 124, 129, 130; CSR erects and closes sugar mills in, 97–98; drainage improvements in, 413, 427–428, 437; drainage unions in, 413; Fiji disease outbreaks in, 568; flood mitigation works in, 427, 437; frost-prone, 13, 48, 52 mechanical loading of cane in, 428, 643; mill-owners compete for cane in, 217; outbreaks of gumming disease in, 144–145; quarantine zone in, 574–575; severity of frosts in, 48, 52; small mills in, 93, 95, 96; soil conservation measures in, 432; soldier fly infestations in, 547; tramlines in, 205; see also Harwood, Southgate & Chatsworth Mills
clarification (of cane juice):
chemicals used in, 182, 183, 186; historical methods of, 15; monosulphite of lime process, 182, 184; nineteenth century innovations in, 182, 192; objects of, 15; research into, 726, 744; types of vessels used, 15, 192, 720, 726; twentieth century innovations in, 715, 726, 744; use of flocculants, 726, 744
clarifiers:
ATV, 744, 757; Bach, 720, 726, 744; conical or CSR, 192, 702, 720, 726, 833, 835; Dorr, 726, 744; open, 15, 181; RapiDorr, 744; SRI, 720, 744, 757, 833
clarifying agents:
lime, 182, 183, 715; magnesia, 184, 186; magnesium oxide, 720; soda ash, 720; sulfuric acid, 182, 186
Clark, James (CSR cultivation overseer and cane breeder), 146, 150, 348, 468
Clark’s Seedling (H.Q. 426), 146, 468, 481, 486, 470, 521, 566, 570, 580, 587, 833
Clean Air Regulations, Queensland (1968), 738, 739
clean cane scheme, 644
clean seed programs, 592, 593, 594, 601
Clement, William (small miller), 95, 212
Cleveland, 28, 45, 53
climate and cane, 12–13; see also frost
Clydesdale Mill and plantation, 126, 181
Co. cane varieties (from Coimbatore Experiment Station, India), 481, 486, 493, 504, 571, 578
coal, 195, 213, 214, 234, 656, 661, 719, 789, 806, 807
Coca-Cola Amatil, 818
cockatoos, 550
coefficient of work, 699, 702, 703
Coffs Harbour, 54, 93
Coimbatore Experiment Station (India), 571
collecting expeditions for new cane varieties:
  Brandes, E.W., 472; BSES (1912), 467; BSES (1950), 488–489; Carne, A. & Baker, C. (1914), 470; Chinnery, E., 471; CSR (1914), 470; CSR (1921), 471 Queensland Department of Agriculture & Stock (1893 & 1896), 146; Warner, Dr John & Grassl, Carl (1957), 489; Wells, Thomas (1912), 467
Colonial Sugar Refining Company (CSR):
  accusations of being a monopoly, 256–259, 261, 782, 787
  accused of fraudulently measuring the weight of harvested cane in punts, 93
  acquires Australian Estates Co. Ltd. (1975), 749
  acquires a fleet of ships, 214
  acquires Inkerman Mill (1987), 504, 752
  acquires Invicta Mill (1975), 504, 751
  acquires Kalamia Mill (1975), 504, 751
  acquires Pioneer Mill (1987), 504, 752
  acquires Pioneer Sugar Mills Ltd. (1987), 752
  acquires Plane Creek Mill (1987), 752
  acquires Pleystowe Mill (1975), 751
  adopts computerised process control in its sugar mills, 748–749
  agrees that its sugar produced in New South Wales will be marketed by the Queensland Sugar Board, 276
  agrees that its New South Wales sugar mills will operate under the Peak Year Scheme, 280
  amalgamation with Australasia Sugar Refining Co., 247
  amalgamation with Victoria Sugar Co., 238
  announces erection of central sugar mills in New South Wales, 96
  appointed as the refiner for the Queensland Sugar Board, 776–777
  appoints a plant pathologist, 565
  appoints analytical chemists, 197–199
  appoints Robert Harper & Co. as agent, 245
  archival records of, 6
  as agent of Queensland Sugar Board, 815
  assists BSES with cane disease identification, 570
  attacks on in Commonwealth Parliament, 256, 259, 261, 785, 787
  attempts to limit the amount of chopped cane at its sugar mills, 664–665
  attempts to limit the amount of mill whites produced in Australia, 250–251
  attempts to monopolise Australian refined sugar market, 35, 36, 246, 255–256
  attitudes to cane burning, 126, 626, 627, 628, 629
  attitudes to land disposal, 104, 105, 106
  awarded National Energy Management Award (1981), 748
  becomes only mill-owner in New South Wales, 202, 217
  builds bridge across the Johnstone River (1908), 64
  cane variety collecting expeditions for, 470, 471
  cane payments by, 55, 219, 220, 697
  cane variety breeding program of, 149, 150, 471–474, 493, 495, 500–502, 504, 506, 593
  challenges validity of patent for Davids mechanical cane unloaders, 211
  closes Chatsworth Mill (1887), 98
  closes Childers Mill (1932), 698
  closes Darkwater Mill (1872), 97
  closes Goondi Mill (1987), 504, 752
  closes Hambledon Mill (1991), 504, 752
  closes Homebush Mill (1921), 698
  closes Southgate Mill (1885), 98
  collusion with Queensland National Bank, 251–252
  complaints about CSR’s profits, 219, 785, 787
  considers closing its Queensland sugar plantations late 1880s, 55
constructs hot-water treatment units at its New South Wales sugar mills, 589
templates building a sugar refinery in Western Australia, 239
contracts with New South Wales farmers, 97
contracts with sugar mill-owners, 248–249, 695
cost of growing cane, 88
credit for farmers, 44, 97, 106, 130, 132–133
criticisms of, 37, 93, 219, 256–258, 261
decides to cease plantation agriculture, 91
decides to purchase Fairymead plantation, 251
develops conical subsiders, 192
develops continuous pressure feeders, 710
develops entrainment devices, 744
develops insectary technique, 593
develops Pender levellers, 710
develops toothed pressure feeders, 726
discrimination against non-European cane-growers, 1895–1915, 107
dispatches tachinid flies to Goondi Mill, 521
disposal of fly-ash, 739
dividends of, 36, 260
early financial difficulties of, 36–37
employs gangs of canecutters in New South Wales, 97
employs teams of men to maintain drains in New South Wales, 407
encourages cane growing in New South Wales during the 1970s, 317
encourages employees to become tenant farmers, 105
encourages New South Wales dairy farmers to grow disease-resistant cane varieties, 574
encourages sugar mill-owners to employ analytical chemists, 201
erects Broadwater Mill (1881), 51
erects Chatsworth Mill (1870), 97
erects Childers Mill (1895), 56
erects Condong Mill (1880), 51, 98
erects Cottesloe Refinery (1929–1930), 779–780
erects Darkwater Mill (1870), 97
erects Glanville Refinery (1891), 238
erects Harwood Mill (1873), 97
erects Homebush Mill (1882), 186
erects New Farm Refinery (1893), 239
erects Ord River Mill (1995), 276, 333, 756
erects phytotron at Brisbane (1960), 500
erects Pyrmont Refinery (1877), 235
erects Southgate Mill (1869), 97
erects Sydney quarantine house (1925), 472
erects Victoria Mill (1884), 186
estimates of losses from gumming disease, 145
evidence on, 1911–1912 Royal Commission, 260
expansion to Queensland, 82
expenditure on mill upgrades, 701, 722, 756–757
experiments with bagasse drying, 190, 748
experiments with bagasse storage, 748
experiments with BHC, 541, 542
experiments with chemicals to control cane beetles and cane grubs, 161–162, 524–525
experiments with clarification methods, 182–183, 726
experiments with planting methods, 124
experiments with DDT, 541
experiments with trash conservation, 348
fertiliser trials, 131, 354
Fiji disease eradication program, 593–594
finances an advertising campaign to reduce declining sugar consumption in Australia, 812
finances Australian sugar exports, 277
formation of, 35–36
forms Queensland plantations, 83
frost reduction experiments, 131–132
hires agricultural implements to its suppliers, 348
implements restrictive practices clause in contracts with customers who were manufacturers, 253
imports cane varieties, 147, 149, 470, 472
imports Indian myna birds into Queensland, 160
imports parasitic fungus into Queensland, 161
imports raw sugar for its refineries, 238, 245, 769
innovations in milling procedures and machinery, 182, 183–184, 192, 705, 710, 726, 727, 744, 757, 835
innovations in refining procedures, 240–242, 786, 807–808, 809, 818
interest in mechanical cane harvesters, 140, 646
interest in mechanical cane planters, 140
introduces chemical control in its sugar mills, 198–199
introduces clean cane scheme during late 1950s, 644
introduces foliar analyses, 370
introduces front-end loaders into New South Wales, 640
introduces land assignment system in New South Wales, 281
introduces measures to reduce water pollution at its sugar mills, 734, 736, 740
introduces night time harvesting, 665
investigates bulk handling of sugar, 792
investigates methods to reduce air and water pollution at its sugar mills, 736, 738
investigates purchasing Pioneer Sugar Mills Ltd., 400
investigates establishing sugar mills in the Richmond and Tweed River districts, 98
investigations into cane bin design, 662
invests in Queensland Cane Harvester Co., 624
invests in Victoria Sugar Co., 36
irrigation at its plantations, 130
loans to drainage unions, 402, 413
loans to farmers, 44
loans to Australian sugar mill-owners, 248
machinery upgrades at its sugar mills, 182, 183, 186, 192, 705, 710, 713, 722, 756, 757
machinery upgrades at its sugar refineries, 239–242
maintains plantation agriculture during 1890s, 90
offers bonuses to New South Wales canegrowers who renew their supply contracts, 216–217
offers prizes for improved cultivation methods, 129
offers to import concretors 1870s, 97
operates central sugar mills in New South Wales, 2, 97–98
operates sugar plantations in New South Wales, 76–77
opposition to bulk purchases of sugar after 1945, 294
opposition to cane burning, 126, 626, 627, 628, 629
opposition to Queensland government funding erection of central sugar mills, 101
opposition to paying BSES levy, 138
opposition to cane price-fixing legislation in Queensland, 690, 692, 693
pays higher price for trashed cane, 126
pays too little for sugar cane, 219, 220
profits of, 219, 260, 785
promotes better cultivation methods, 129–130, 354
promotes better drainage, 130, 401–402, 407, 413
promotes control methods against African black beetles, 534
promotes green manuring, 354
promotes trash conservation, 348, 354
promotes rat control methods in Far North Queensland, 528, 529, 530
proposal to import moles to combat cane grub attacks, 161
public opinion about, 37, 219
publishes agricultural booklets and circulars about cultivation methods and drainage for suppliers, 131, 348, 354, 370, 413
purchases Cudgen plantation (1911), 92
purchases Hambledon Mill and plantation (1897), 193
purchases Keith Hall Estate (1891), 78
purchases Isaac Peck’s sugar refinery (1887), 246
purchases land in the Tweed River district (1877), 98
purchases Macknade plantation (1896), 250–251
purchases Poolman Brothers’ sugar refineries (1907), 247
purchases Ripple Creek Mill (1906), 252
purchases raw sugar from Australian sugar mill-owners, 82, 201, 246, 248–249, 252
recruits Javanese workers, 87
refinery upgrades, 237–242, 779–780, 792, 793–794, 806–810, 817–818
relations with cane suppliers, 93, 627, 695, 698
relations with Commonwealth government in Australia, 770–771
relations with manufacturers who use sugar, 253, 255
relations with Queensland Bureau of Sugar Experiment Stations, 138, 570, 572
relations with Queensland Sugar Board, 276, 277
relations with other Australian sugar mill-owners, 200, 201, 248–249
relations with trade unions, 60
relies on punting cane in New South Wales, 204
relies on sugar imports from Java and Philippines for its sugar refineries, 245
requires its New South Wales suppliers to trash cane, 216
responds to competition from other sugar refiners, 34–35, 37, 246–247, 259–250, 819
restricts types of cane varieties grown by suppliers, 93, 152–153, 154
sells its New South Wales sugar mills (1978), 751
size of its land holdings, 83
soil erosion reduction trials of, 431
stump removal on its plantations, 128, 160
subdivides its plantations, 90, 91, 104
sugar produced by transported by Adelaide Steamship Co., 215
supplies disease-free sets to canegrowers, 577
supplies seed for legume crops, 354
supplies seedlings to the New South Wales Sugar Milling Cooperative, 503
supports Peak Year Scheme, 287
threatens to close Condong Mill, 304
trains men in the art of sugar boiling, 197
trash blanketing trials of, 378
under-selling strategy of, 37, 246, 247, 819
urges mill-owners to produce better refining sugars, 249
warns of sugar shortage 1915; see also Knox, Sir Edward, Knox, Edward W. & Goldfinch, Sir Philip
Commercial Banking Co. of Sydney, 34, 36, 94
commercial cane sugar (ccs), 199, 653, 695, 696, 697; see also pure obtainable sugar (p.o.c.s) formula
commission agents (for sugar), 243–245, 250
Commissariat (in New South Wales), 25, 31
Committee on Seedling Propagation, 477, 487
common rust (disease of sugar cane), 142, 500, 507, 512, 515, 599, 600, 602
Commonwealth Bank of Australia, 771
Commonwealth Government:
appoints CSR and the Millaquin Sugar Co. Ltd. as its refining agents, 770; assumes control of Northern Territory (1911), 56, 831; control over Australian sugar industry, 58–59, 770–776, 782–786, 787–788, 804–806, 814–815; control over sugar prices, 272, 701, 769–770, 772–776, 782–785, 787–788, 804–806, 814–815; criticised for slowness in delivering financial assistance to canegrowers during mid-1980s, 323; funding for irrigation and drainage schemes in sugar-producing districts, 420, 428, 441, 448; funding for flood mitigation in sugar-producing districts, 428, 433; excise and bounty system, 58–59, 60–61, 341; fails to end CSR's control over the Australian sugar market, 257; financial assistance to the Australian sugar industry, 318, 321, 329, 331; imports sugar to meet shortages, 1915–1922, 771; imposes import tariff on sugar imports, 2, 58; imposes sugar import embargo, 276, 318, 324, 770, 784; introduces fertiliser subsidy, 357; loan to Queensland Sugar Board, 1966, 312; lobbied to increase the duty on imported sugar, 774; prohibits recruitment of Pacific Islanders to Australia, 2, 58, 91, 341; prohibits further release of cane toads, 535; prohibits sugar exports from Australia after outbreak of World War I, 769; rescinds decision to prohibit the release of cane toads, 535; removal of sugar import embargo, 814, 815, 834; repatriation of Pacific Islanders, 59, 341
Commonwealth Parliament, 256, 257, 259, 771, 775, 785, 787
Commonwealth Scientific and Research Organisation; see CSIRO
Commonwealth Sugar Agreements; see Sugar Agreements, Australia
communal drainage schemes & syndicates, 413–414
Communist Party of Queensland, 622; see also Weil's disease
competition (for cane), 216–220
Compulsory Plant Source Inspection Schemes, 597
computerised process control:
in Australian sugar mills, 748–749; in Australian sugar refineries, 816, 818
‘concrete’, 97, 181, 188
‘concretors’, 97, 181, 187
Condong Drainage Union, 413
Condong Mill:
acquired by New South Wales Sugar Milling Cooperative (1978), 751; erection of
(1880), 51, 98; machinery upgrades to, 709, 710; receives cane by government-owned railways, 55, 657; receives cane from Byron Bay locality, 55; road transport of cane to, 670, 672; short of cane, 303; tramlines for, 205, 659; see also Tweed River district
Condong Plains locality, 402, 413
Condong plantation, 77, 79, 83, 89, 90, 98, 130, 131
conductivity instruments, 714
conical subser, 192, 702, 720, 726, 833, 835
Conomos, Denis (author), 613
Consolidated Fertilisers Ltd., 553
continuous crushing: 24-hour, 186, 192, 193; seasonal, 754
continuous pressure feeder, 710, 720, 724, 833
contour banks, 430–432, 451, 453, 454
contour tillage, 410, 411; see also soil erosion
controlled traffic zones (on paddocks), 386
convicts:
at Moreton Bay, 26; at Norfolk Island, 21–22; growing sugar cane at Port Macquarie 1820s, 23; sent to Botany Bay, 21; sugar rations of, 32
‘Cooksland’, 27
Cooktown, 49, 296
coolers, 16
cooling ponds, 710
cooling towers, 737, 756, 757
Coomera River, 46, 99
Coongoon Mill and plantation, 94, 126, 243
Cooper, Sir Daniel, 37, 255
Cooper, Premier Frank, 631
Cooper government (Queensland), 292, 718
Cooper, Robert (sugar refiner), 35
cooperative central sugar mills; see central sugar mills, farmer cooperatives
Cooperative Sugar Millers’ Association, 753
coots; see swamp hens
copper deficiency (in sugar cane), 375, 514
Coraki, 78, 177, 305
coral mining, 345, 375; see also lime
Costanzo, Frank and Tony (canegrowers & inventors), 379
Cottesloe Refinery (Perth):
boiler and machinery upgrades at, 807, 808; bulk handling of raw sugar at, 794; carbonation plant installed at, 808; erected (1929–1930), 779–780; output of, 780; receives sugar from Ord River district, 333; see also Colonial Sugar Refining Company
cotton industry, Queensland, 44
Cottrell-Dormer, W. (plant pathologist), 468, 569, 570, 572
Council for Scientific and Industrial Research; see CSIRO
Courtice, Brian (politician), 328
Cowley, Alfred (plantation manager), 54, 155
Cowley, Ebenezer, 146, 149
Crabbes Creek, 275, 305, 657
C.P. cane varieties, 479, 486, 587, 594
Craig, George, 123, 126
Cran Brothers & Co., 250
Cran, James (sugar planter), 163
Cran, John, 233
Cran, Robert & Co. (sugar refiners), 55, 86, 189, 233
Cran, Robert Jnr, 233
Cran, Robert Snr (sugar refiner), 81, 175, 231, 233; see also Millaquin Refinery & Yengarie Refinery
Crawford, Senator Thomas, 62, 406, 619, 784
crawler tractors, 351, 359, 362–363
Crea, Hon. Simon (politician), 328, 820
Creber, Ron and Dick (canegrowers & inventors), 377; see also green cane harvesting
Creole cane variety, 144
Crespin, Godwin (sugar broker), 243
Crichton, William (canegrower & inventor), 647
Croft, Barry (plant pathologist), 599
Croker, James (commission agent), 244
crop rotation, 131, 134, 164
cross-pollinations:
locations of, 468, 471, 476, 477, 478, 489, 493, 503; number of, 469, 493, 495, 496, 500, 502, 506; methods of, 468, 469, 473, 478–479, 489, 496, 497, 501, 508
crossing lanterns, 478, 489–490, 496, 497, 501, 506
crushing rates, 709, 715, 731, 749
crushing rollers:
double crushing, 15, 183, 186, 191, 192; feeding of cane into, 15, 179, 709–710, 724–726; horse-driven, 94, 177, 188; hydraulic pressure attachments for, 15, 192, 193, 833; powered by turbines, 723–724, 741; quadruple sets of, 709, 722, 741; quintuple sets of, 709, 722–723, 741; seven sets of, 723; sextuple sets, 723; size
of, 703, 719, 723, 741; treble crushing, 15, 192, 193, 202, 702 vertical, 14, 188; see also bagasse & cane carriers
Crystal Brook Sugar Co., 51
crystal size (of raw sugar), 728–729, 746, 782
CSIRO, 412, 501, 503, 504, 506, 513, 554
CSR, see Colonial Sugar Refining Co.
Cuba, 1, 3, 306, 318, 703, 771, 803, 823, 831
Cudgen locality, 659
Cudgen Mill, 200, 202, 237
Cudgen plantation:
area under cane on, 80, 90, 92; established, 51; land reclamation on, 275, 402; location of, 79; Pacific Islanders employed on, 51, 85, 90; Sikhs employed on, 90; sold to CSR, 92; subdivided into small farms, 92
Cullen, Rod (Sugar Research Institute researcher), 739
cultivation costs, 376, 379
cultivation implements (of sugar cane):
disc ploughs, 137, 343, 364, 379; drill weeders, 343; harrows, 164, 349; hoes, 124, 125, 140, 343; horse-drawn, 124, 130, 133, 349, 360; ploughs, 124, 140, 379; rippers, 379; rotary hoes, 302, 343, 355, 360, 362, 386, 535, 555, 833; stubble-shaver, 352, 378; trash ploughs, 348, 354, 355; see also tractors & steam ploughs
cultivation methods (of sugar cane):
Cunningham, Peter, 25
Curlewis, Frederick, 287, 288, 782
Curtin, Prime Minister John, 411, 787, 788
cutter planters, 352, 359, 364–365, 576, 581, 588
cutting, cane; see canecutters & cane harvesters
Czarnikow Ltd., 780
D. 1135 cane variety, 150, 154, 470, 570, 578, 580, 587
Daintree, Richard, 126
Daintree River, 50, 316
dairying:
cane growers switch to, 53, 58, 65, 87, 271–272, 303; combined with cane growing, 58, 65, 350; decline in New South Wales, 305; provides quicker financial returns than cane growing in New South Wales, 65
Dalbeg, 311, 660, 678
Dalrymple, George (explorer & public servant), 44, 49
Daniels, Joe (cane breeder), 501
Dank's injector, 537
Daradgee locality, 64, 111, 432, 521
Dare, Robert (historian), 32
Darwater Mill, 97, 130, 179, 181
Darling, Governor Sir Ralph, 25, 32
Darwin Botanic Gardens, 50
David North Plant Research Centre, 500, 501, 502, 565
Davids mechanical cane unloaders, 211, 833
Davids, Smith William (mill manager & inventor), 211, 833
Davidson, John Ewen (sugar planter), 49, 81, 83, 143, 182
DDT, 541, 544, 549, 553
Deakin, Alfred, 58, 219
Deakin government (Commonwealth), 60, 219, 257
Dean, Horace, 96
Decauville rail, 207
dee, 404, 440
defence, national; role of Australian sugar industry in, 112, 785, 834
deforestation, 65–66, 361, 835; for firewood, 189–190, 194
de Keating, Thomas (author), 128
DeLissa, Benjamin (sugar planter), 99; see also Delissaville plantation & Riverside Mill
Delissa Pioneer Sugar Co., 50
Delissaville plantation, 75, 85
delivery of sugar (to consumers):
as liquid sugar, 809, 818; in hessian or jute
bags, 810; in bulk, 810; in retail packages,
810, 811
Demerara, 81, 148, 202
Denham, Premier Digby, 61, 62, 111, 220
Department of Agriculture, New South Wales:
assists in cane variety improvement, 149,
472; assists in controlling cane diseases,
592; formation of (1890), 129; imports
cane varieties during 1890s, 147; pro-
motes green manuring and trash conserv-
ation amongst canegrowers, 353; see also
Wollongbar Experiment Station
Department of Agriculture and Stock, Queensland:
appoints soil conservation officers, 431;
Arthur Bell becomes Under-Secretary of,
571, assists in cane variety improvement,
148-149; formation of (1887), 129, 159;
imports cane varieties 1890s, 146–147;
prohibits importation of moles to combat
cane grub attacks, 161; see also Kamer-
unga & Mackay State Nurseries
Department of Harbours and Marine, Queensland,
734
Department of Health, Queensland, 629
Department of Local Government, Queensland,
734
Department of Primary Industries, Queensland,
419, 431, 450–451, 452, 453, 454, 507,
513, 602; see also Kairi State Farm &
Walkamin Research Station
Department of Public Health, Queensland, 529
Department of Public Lands, Queensland, 45,
293, 557
Department of Public Works, New South Wales,
400
Department of Railways, Queensland, 207, 215,
345
deregulation (of the Australian sugar industry),
318–319, 321, 323–324, 328–329, 815,
834
Derham, Frank, 80, 213 (sugar planter); see also
Hambledon plantation
derricks; see cane derricks
Despeissis, Jean (field advisory officer), 123
diatomite pressure filtration, 242, 786
Dickson, Acting Judge, 617, 618, 619
Dickson Award, 617, 618, 697
dieldrin, 546, 548, 555
diesel locomotives, 661
diffuser or diffusion unit:
at Broadwater Mill, 200; at Cudgen Mill,
200; at Fairymead Mill, 723; at Invicta Mill,
741; at Invicta Mill, 756
diffusion, 15, 200, 723, 741, 756
Directorate of Manpower, 633
diseases (of sugar cane); see cane diseases
placed persons (DPs), 635–636; see also
cane cutters
Dixon, James (CSR employee), 294
Doherty, William, 287, 288
domestic sugar rebate, 783, 785, 804
Don Gough trash planter, 365, 380
Donnan, Robert (CSR employee), 402
Donnelly, Bert (engineer), 724
Donnelly shute, 724–725, 726, 833
Doolbi Mill:
competing for cane, 217, 218; converted from
a juice mill to a factory manufacturing
sugar, 194; closure of (1924), 698; erected
(1890), 55, 193; machinery upgrades to,
194, 705
Dorr clarifier, 726
double crushing in Australian sugar mills, 183,
186, 191, 192, 702
double crushing trains (in Australian sugar mills):
at Invicta Mill, 741; at Kalamia Mill, 705;
at Marian Mill, 755; at Victoria Mill,
297, 722; proposed at Macknade Mill,
296–297
double pushers, 710
Douglass, William (author), 629
downy mildew (cane disease):
contributes to pre-World War II yield plateau,
512; control methods for, 578, 587, 589,
590, 591; investigations into, 565, 579;
present in Queensland, 570; susceptible
cane varieties, 573; trials to breed cane
varieties resistant to, 572; see also B. 208
cane variety
DPs; see displaced persons
drainage (of cane):
Beenleigh district, 127, 425, 427; Bingeria
plantation, 134; Cairns district, 414;
Clarence River district, 407, 413, 427,
428, 437, CSR’s plantations, 130, 132;
cost of, 128; Herbert River district, 407–
408, 414, 425, 433–434, 436, 439; im-
pact of lack of on sugar cane, 13; lack of,

Drainage process (for making sugar crystals), 16, 177

Drainage schemes:
Chinderah, 402; Condong Plains, 402; East Wardell, 402; Garradunga, 310; Keith Hall, 402; Mundoo, 424–425; Ripple Creek, 425; Robb Swamp, 402

Draper, Alex, 626

Droopy top (cane disorder), 375; see also trace elements

Drop planters, 140–141, 343, 349, 352; see also cane planters

Drynie plantation, 87

Drysdale Brothers & Co.:
advised not to irrigate so much, 139; attitude to land disposal, 105; becomes Pioneer Sugar Mills Ltd. in 1914, 107; builds Inkerman Mill 1914, 63, 111–112; builds tramlines, 208; credit for farmers, 106; farmer debts to, 106; encourages employees to become tenant farmers, 105; leases land to farmers, 91, 105; number of workers allocated by to bagasse drying, 190; pays same price for sugar cane as Australian Estates & Mortgage Co. Ltd., 218; supplies fertilisers to farmers, 136; employs analytical chemist at Pioneer Mill, 200; relations with suppliers, 219; trials plantation agriculture using only Europeans, 91–92; upgrades Pioneer Mill 1890s, 193; see also Pioneer Sugar Mills Ltd. & Pioneer plantation (Lower Burdekin)

Drysdale, George (sugar planter), 59, 133

Drysdale, John (sugar planter & mill manager):
and Inkerman Estate irrigation, 397; attitude to Chinese canegrowers, 107; credit for farmers, 106; develops spear principle, 135–136; faces firewood shortages at Pioneer Mill, 195

Duggan, John (politician), 312

Dulverton plantation, 85

Dumbleton plantation, 87, 90
‘dummying’, 80

Duncan Stewart & Co. (sugar mill machinery maker), 184, 192, 701

Duncraggan plantation, 83, 86, 163

Dungeness, 215

Dupont cane variety, 160, 161

Dupont, Daniel (sugar boiler), 197

Duval, Louis (sugar boiler), 197

dwarf disease, 572, 587, 580

Eagleby Mill, 272, 351

East Moreton Farmers’ Association, 92

Easterby, Harry (chemist and BSES Director):
acknowledges the need for BSES assistance to mill-owners, 703; comments upon extent of machine planting in Queensland, 343; comments upon Piddington Royal Commission, 773; concludes that the BSES needs a plant pathologist, 569; criticises performance of Queensland’s sugar mills, 203, 702; evidence to Gunn Royal Commission, 1930, 349; evidence to Piddington Royal Commission, 1919, 702; initiates cane variety improvement program, 467, 468; member of Harris Royal Commission, 276; supports the practice of trash burning, 347–348; testing cane varieties, 149, 150

Eatonvale plantation, 79

economisers, 195

EEC; see European Economic Community

effects:

- evaporating surface of, 727, 744, 757; manufactured by Walkers Ltd., 185; use of quadruple effets, 192, 202, 699, 703, 711, 721, 727; use of quintuple effets, 192, 202, 711, 721, 727, 757; use of sextuple effets, 757; use of triple effets, 183, 186, 192, 193, 699, 701, 703, 711, 719; use of effets pioneered in Australia by CSR, 183–184

- effluent ponds (at Australian sugar mills), 733

- effluent treatment plants (at Australian sugar mills), 734, 735, 736, 737, 740
Egan, Brian (plant pathologist), 580, 597, 602, 653
Eigenhus, Ir. J. (mill technologist), 707, 708
Eight Mile Plains, 583
Eimcobelt vacuum filters, 727
El Arish, 274, 379, 440
electric motors (in Australian sugar mills), 712, 717
electricity-generating plants (in Australian sugar mills), 712
Elliott River, 405
electrification and steam economy in Australian sugar mills, 712
electrification of Australian sugar mills, 202, 712, 717, 719, 729
embargo on sugar exports from Australia, 769, 770
embargo on sugar imports into Australia, 276, 318, 324, 621, 770, 774, 784, 814, 815, 834
English immigrant labourers; see British immigrant labourers
entrainment arrestors, 727, 744
entrainment prevention, 727, 744
environmental protection (legislation for in Queensland), 735–736, 738–739
environmental protection (legislation for in New South Wales), 740
Equalisation Scheme, 285–287
erosion: see soil erosion
euthanol, 732
Eton, 101, 207
Eton Irrigation Area, 325, 448
Etwell, Cecil (inventor), 365
Etwell billet planter, 365
European Economic Community (EEC), 318, 803
European labour (in Australian sugar industry):
use of encouraged by excise and rebate system, 58–59; used on sugar plantations, 84–85, 130, 133; wages for, 60–62
European ploughmen, 130, 133
Europeans (capacity to live and farm in the tropics), 89
Evans Deakin Industries Ltd., 701
evaporation (of cane juice):
batteries of open pans, 15, 181, 183; historical, 15–16; multiple effects, 183, 711–712, 727, 744–745; see also entrainment prevention
evaporators; see effects
excess sugar, 280, 289, 301, 302, 303, 310, 313
excise and rebate system, 58–59, 63, 341
expansion of Australian sugar industry:
export markets (for Australian raw and refined sugar)
Asia, 803, 820, 821, 823; British Malaya (Malaysia), 801, 803, 821; Canada, 296, 780, 801, 803, 821; China, 803, 820, 821; Great Britain, 277, 280, 284, 285, 292, 780, 801, 803; New Zealand, 801, 821; Japan, 796, 801, 803, 821; Papua New Guinea, 823; Russia, 803, 821, 823; Singapore, 803, 821; South Korea, 803, 821; Taiwan, 823; USA, 803, 823
export quotas; see International Sugar Agreement
export sugar rebate (Commonwealth of Australia), 773, 776, 777, 785, 804
extraction (of cane juice):
by crushing rollers, 14–15; by diffusion, 15, 200, 723, 741, 756; historical methods of, 14–15
extraneous matter, 643–644, 662
factories, see sugar mills
Fairgrieve, Andrew (analytical chemist & CSR employee), 189, 197, 198
Fairydale and Moore Park Settlement Scheme, 299–300
Fairymead mechanical cane harvester, 625, 646, 647, 649
Fairymead Mill:
cane cleaner installed (1940), 717; computerised process control adopted in, 749; CSR considers purchase of, 251; difficulties in selling its mill whites, 253; diffuser installed, 723; disposal of fly-ash at, 739; erection of, 186; experiments with apron feeders at, 724; filterability of sugar from criticised by CSR, 781; loss of assigned land to competing crops, 322; machinery upgrades to, 192, 713, 719, 723, 744; mill whites manufactured at, 237, 250, 253, 254; rezoning of assigned land to, 661; staffed with an analytical chemist, 200; stock feed supplement manufactured at, 732; supplied with sugar cane from
Kolan River and Isis districts, 217; tramlines at, 207; see also Young, A., H. & E. (Bundaberg)
Fairymead plantation:
area under cane on, 80; crop rotation practiced on, 134; CSR considers purchase of, 251;
Gilbert and Ellice Islanders employed on, 90; irrigation at, 136; mechanical cane stripper employed on, 365; mechanical harvesting of cane on, 625, 631, 645–646, 717; night harvesting at, 665; operates beyond 1904 using only European workers, 92; steam ploughs on, 349; see also Young, A., H. & E. (Bundaberg)
Fairymead Sugar Co. Ltd.:
combats Fiji disease outbreaks on its plantations, 592, 593; employs Aboriginal canecutters during World War II, 630; extends irrigation on its plantation, 405; introduces mechanical harvesting on its plantation, 646; invests in Howard Cane Harvesters Ltd., 625; organises Fairydale and Moore Park Settlement Scheme, 299–300; part of company merger to form Bundaberg Sugar Co., 749; patented its mechanical cane harvester, 646; see also Bundaberg Sugar Co.
Falkiner cane harvester, 624, 638; see also cane harvesters
Falkiner, Ralph (grazer & inventor), 623
Fanning, Edward (merchant), 83
Fanning, Nankivel & Co. (merchants & sugar brokers), 243, 245, 254
Farleigh Cooperative Sugar Milling Association, 281
Farleigh Estate Sugar Co. Ltd., 91
Farleigh Mill:
adopts relative percentage scheme, 697; boiler station upgrade at, 747; ceases manufacturing mill whites, 248; crushing rate at, 731; loss of assigned land to urban expansion, 322; machinery upgrades at, 705, 709, 712, 741, 755; manufactures mill whites, 236; mill peak of, 281; receives cane by government-owned railways, 657; tramlines at, 208, 659; treatment of waste waters at, 732, 736, 737; waste water from, 734
Farleigh plantation, 88, 90, 91, 134
farmers; see canegrowers
Fairquhar, Walter (CSR's Inspector of Mills), 132, 154, 194
Fairquhar, William (sugar planter), 160
Federation of Australia, 58
Federation of Chambers of Commerce Far North Queensland, 733
feed chutes; see Donnelly chutes
feeding devices (of cane into crushing rollers):
apron, 724; continuous pressure, 710, 720, 724
fecal pigs (in sugar cane), 540, 550, 556, 557
Ferguson Wood, E.J. (plant pathologist), 404, 569, 576
Ferney plantation, 126
Ferrick, Miles (politician), 258, 259
fertiliser distributors, 343, 364, 379, 380, 384, 542, 543
fertilisers:
fertilising (of cane):
amount applied per ha, 357, 359, 369, 373, 383; cost of, 376; cattle penning, 126; extent of reduced during World War II, 359; green manuring, 131, 132, 134, 164, 354–355, 359, 374; guided by foliar analysis, 370; improved application rates after 1920, 347; limited use of before 1900, 126; recommended rates for, 370, 373,
fields; see paddocks

Fiji:

- CSR's plant breeding facility in, 471; sugar industry in devastated by Fiji disease, 565; sugar imports from, 771

Fiji disease:

- breeding Fiji disease resistant cane varieties, 498, 501, 507, 594–595; BSES investigations into, 571, 573, 594–595; cane varieties susceptible to, 509–510, 571, 572, 592, 593, 604; control methods for, 577, 589, 592–595, 603, 604; discovery of insect vector of, 573; identification of, 566, 568; outbreaks of in Australia, 472, 503, 570, 575, 584, 591–592, 600, 603; outbreaks of in Fiji, 565

filter cake or press, 712

filter muds, 357, 700, 712–713, 726, 732

filter presses, 700, 712, 721, 726

filterability (of Australian refining sugars):

- causes of poor, 726; complaints about, 726, 781, 801; good filterability preferred by refiners, 714

filters; see rotary vacuum filters

Finch Hatton, 63, 209, 218, 410, 429

Finnish immigrants (to Australia), 109, 637

*Fliona* (ship), 214

fires; see cane fires

firewood (for sugar mills), 84, 189–190, 194, 209, 710

fish kills (in watercourses near Australian sugar mills), 733, 734

Fisher, Prime Minister Andrew, 60, 261

Fisher government (Commonwealth), 220, 259, 261

Fisherfield Mill and plantation, 126, 127, 212

First Fleet, 21

Fitzgerald, Dr Ross (historian), 797

Fitzgerald, Thomas (sugar planter), 184; see also Te Kowaii Mill & Innisfail plantation

Fives Lille & Co. (sugar mill machinery maker, Paris), 184, 197, 200

*Flaminia* (ship), 636, 637

Flat Top Island, 213

Fletcher, George & Co., (sugar mill machinery maker, Derby), 184, 701

Fletcher, Stewart Ltd., (sugar mill machinery maker) 744; see also SRI clarifier

floculants, 726, 744

flood or furrow irrigation, 400, 442–443

flood mitigation (in sugar-producing districts), 408–409, 427–430, 433–434

floods, 49, 79, 81, 409, 427, 429–430

Florida (as a source of cane varieties), 499, 503

fly-ash:

- disposal of, 450, 739, 740; methods to reduce amount of, 739, 740; troubles residents near sugar mills, 731–732, 738; used as soil amelioration agent, 450

fly-ash arrestors, 738, 739, 740

fly-ash dewatering plants, 739

fodder cane plots, 574, 592

Foley, Ben, 302

foliar analysis, 370

Food and Agriculture Organisation (FAO), 806

Food Prices Boards, 261

Foresthame locality, 407

Formiatti, Denis, 615

Forrest, Edward, 256

forty-hour week (in Australia), 719

Foulden Mill and plantation, 81, 182, 237, 244

Foveaux, Lt. Col. Joseph, 22

Fowler, John & Co. (railway equipment manufacturer), 207

fractional liming, 707, 708, 715, 833

Francis, Grosvenor, 705; see also Doolbi Mill

Fraser government (Commonwealth), 318, 448

Freeman, Hunter (CSR employee), 292, 524, 525

Fred Haig Dam, 420

Freighter Multi-Lift system, 667–668, 672

Frenchi cane beetle; see cane beetles

Freshwater, 271, 476, 477

Froggatt, Walter (entomologist), 163

front-end cane loaders, 639, 640, 641, 642, 643

frost:

- damages crops of sugar cane in New South Wales, 48–49, 131–132; damage crops of sugar cane in southern Queensland, 52, 57, 132; damage crops of sugar cane at
Rockhampton, 49; forced abandonment of cane growing in parts of New South Wales, 48; impact of on cane plants, 12–13
frost-resistant cane varieties, 503
frost reduction trials, 131–132
fruit; see tropical fruits
fruit industry, Australian, 782, 783, 784
Fruit Industry Sugar Concession Committee, 783, 785, 804
fuel (for sugar mills):
   bagasse, 189–190, 194, 711, 747; coal, 195, 711; firewood, 189–190, 194, 209, 711;
   furnace oil, 747; molasses, 732; sawdust, 747
fugal, see centrifugals
fungicides, 365, 582, 588, 599
funnel ants, 555
furnace oil, 747, 748
Fusion Ministry, 219
Gair government (Queensland), 793
Gair, Premier Vincent, 793
Gairloch Mill and plantation, 81, 83, 84, 89, 243
'Gammexane'; see BHC
ganger, 613, 614
Gard, Kenneth (CSR field technical officer and cane breeder), 471, 500, 529
Garradunga locality, 310, 432, 654
Garside, Dr Alan, 514, 515
Gatton Agricultural College, 129
Gaunt, J.K. (Ken) (engineer), 649
Gentlemen's Agreement, 621–622; see also British Preference League
German immigrants (to Australia), 85, 89, 105, 109, 252
German wagons, 203–204
Ghidella, Remo and Guido (canegrowers), 377
Gibbs Committee of Inquiry (1963), 307–308
Gibbs, Mr. Justice Harry, 307
Gibson, Angus (sugar planter), 218, 254; see also
   Bingera plantation & Bingera Mill
Gibson, Dr Arthur J., 110; see also Ranking Royal Commission 1911
Gibson & Howes Ltd.:
   attitude to land disposal, 105; builds a dam to impound effluent, 734; builds railways, 208; builds weir on Burnett River, 405; decides to maintain plantation agriculture, 92; experiment with molasses as a fertiliser, 347; extends irrigation to canegrowers, 405; manufacture of mill whites, 236, 253; mechanises cultivation methods, 351; part of company merger to form Bundaberg Sugar Co., 749; see also
   Bingera Mill & Bingera plantation
Gibbs, Bright & Co. (merchants & sugar brokers), 95, 244, 245, 250, 254
Gilbert and Ellice Islands, 90
Gillies, William (politician), 569, 774
Gilpin, Dr Alan, 738
Gin Gin Central Mill:
   bagged sugar at, 796; erection of, 56; fails to operate from 1901–1903, 110; financial difficulties of, 303; machinery upgrades to, 723, 729; mill peak at increased, 303, 306; SRI clarifier installed at, 744
Gin Gin district, 56, 57, 432
Gipps, Governor George, 26
Girault, Alexandre (entomologist), 164, 523
Giru, 209, 274, 447
Giru Weir, 447
Givens, Thomas (politician), 256
Glanville Refinery (Adelaide):
   bulk handling of raw sugar at, 794; carbonation plant installed at, 808; closure of (1991), 817; destroyed by fire (1926), 779; erection of (1891), 238; ion-excluding resin used at, 808; machinery upgrades to, 807; see also Colonial Sugar Refining Company
Glasgow, 2, 184
Glasziou, Dr Kenneth, 501; see also David North Plant Research Centre
gold discoveries, 45, 83, 185
Golden Circle Cannery, Brisbane, 818–819
golden syrup, 238, 786, 809
Goldfinch, Sir Philip, 280, 282
Gooburrum locality, 420, 591, 661
Goodwood Island, 96
Goodwood locality, 399, 661
Goodwood Mill, 201, 202, 250, 251, 698
Goodwood plantation, 83, 92, 134
Goondi Mill:
   assignments transferred to Babinda and Mourilyan Mills (1987), 752; closure of (1987), 504, 527, 752; cooling tower erected at, 737; effluent treatment plant at, 737; historical records of, 6; loss of assigned land to, 322; machinery upgrades to, 710, 719; sugar exports from, 798,
799; weevil borer damage to cane supplied to, 532

**Goondi plantation:**
- area under cane on, 90; Chinese tenants on, 107; control measures against cane beetles and grubs, 160; founded by CSR, 83; stump removal on, 128, 160; trashling of cane on, 130

**Goondi Voluntary Pest Control Board,** 527, 529

**Gordon, Sir John,** 62, 259

**Gordonvale,** 274

**Goru cane varieties,** 150, 151, 152, 153, 470, 521, 571

**Goss government (Queensland),** 326

**Gough, Peter (canegrower & inventor),** 365

**Goulburn, Frederick,** 23, 24

**Government Domain, Brisbane,** 477, 582

**grasshoppers,** 155, 538, 540, 549

**Grafton, 93, 142, 816, 821**

**Grafton Experiment Station,** 472

**granulated activated carbon,** 818, 819

**Great Barrier Reef,** 345, 836

**Great Britain:**
- conference on forming Commonwealth Sugar Agreement in, 294; conference on regulating international sugar production in, 282; exports of refined sugar to Australia, 32; imports of raw sugar from Australia, 277, 284, 292, 294–295, 780, 781, 801, 803; immigrant farmers sought from, 104; joins EEC, 780; refiners in demand lower strength sugars, 780; sugar consumption in, 32, 786; workers from recruited for sugar plantations, 88, 105

**Great Depression (in Australia),** 783, 784, 786

**Greeks (in Australia),** 275, 806

**Gunn Royal Commission (1889),** 54, 73, 80, 99, 107, 528

**Groom, William Henry,** 54

**guano,** 126, 134

**Gumlu,** 271, 308

**gumming disease:**
- cane varieties resistant to, 150, 152, 154, 470, 578; cause of, 568; control measures for, 146, 575, 576–577, 590; description of, 144, 568; investigations into, 568, 571, 576, 579; losses from, 145; outbreaks of between 1893 and 1903, 57–58, 144–146, 153, 154; outbreaks of post–1910, 467, 470, 471, 474, 568, 570, 587; susceptible cane varieties, 469, 470, 568

**Gunn, Hon. John,** 782

**Gunn Royal Commission (1931),** 349, 350, 782–783, 787

**Gutteridge Haskins and Davey Pty. Ltd.,** 425, 433, 434; see also flood mitigation

**Gyles, John,** 22–23

**Gympie:**
- cane growing near, 330, 749; gold at, 45, 83, 185

**gypsum,** 450

**Habana Mill,** 200

**Habana plantation,** 89, 90, 160, 208

**Hale, David (Sugar Research Institute researcher),** 744

**Halifax,** 213, 409

**Hall, Melmoth,** 128

**Halpin vacuum pan,** 721

**Hambledon Cane Nursery,** 146, 150, 468, 500

**Hambledon Mill:**
- acquired by CSR (1897), 193; assignments transferred to Mulgrave Mill (1991), 752; bagged sugar exported from, 796; ceases to manufacture mill whites, 248; closure of (1991), 752; connected to Trinity Inlet wharf by a tramline, 213, 215; erection of, 186; experiments at with mechanical cane unloaders, 211; historical records of, 6; landlocked, 325; loss of assigned land to, 322; machinery upgrades to, 193, 709, 710, 711, 713; manufactures mill whites, 236; sugar exports from, 213, 215; suppliers of refuse to harvest cane, 665
Hambledon Mill Suppliers’ Committee, 638, 644

Hambledon plantation:
acquired by CSR (1897), 193; Chinese tenants on, 107; subdivided into small farms, 90; tropical fruit cultivation on, 80; see also Swallow, Thomas

Hamleigh plantation, 54, 83, 88, 155; see also Cowley, Alfred

Hanlon government (Queensland), 295, 300, 414, 789

Hanlon, Premier Edward (‘Ned’), 294, 295, 788

Harbour Boards (Queensland), 794–795

Hardings Manufactures Pty. Ltd., 818

Harman, Roy (CSR chemist), 626

Harper, Hon. Neville, 324, 325, 816

Harper, Robert & Co. (importer), 245

Harris Royal Commission (1922), 275–276

Harris, William, 275

harvester groups; see cane harvester groups

harvesting, cane; see cane harvesting

harvesting, night, 655, 665

Harwood Island, 48

Harwood Mill:
acquired by New South Wales Sugar Milling Cooperative (1978), 751; boiler station upgrade at, 747; distillery attached to, 214; erection of (1873), 97; fly-ash arrestors installed at, 740; machinery upgrades to, 183, 192, 710, 711; receives last load of manually cut cane in New South Wales, 652; road transport of cane to, 672; sextuple effort at, 757; sugar refinery erected beside, 331, 815–816

Hastings River district, 23, 93, 181

Haughton River:
flooding of, 433; flood mitigation along, 433; Giru Weir built on, 447; pollution of, 734; Val Bird Weir built on, 447

Haughton River district:
area of irrigated cane in, 399; bacterial mottle disease discovered in, 583; cane first cultivated in, 63; cane sent to Pioneer Mill, 63, 209; connected to Townsville by railway, 209; irrigation in, 399, 447; sugar mill erected in (1918), 209, 698

Haughton Sugar Co. Ltd., 282, 653, 722; see also Invicta Mill

Hawaii:
as a source of cultivation implements, 352; as a source of cane varieties, 143, 489; as a source of milling innovations, 709; cane toads imported into, 535; damage to sugar cane in from weevil borer, 522; plant breeding techniques in, 468, 496; sugar experiment station established in (1895), 137; sugar millers troubled by extraneous matter following adoption of mechanical cane loaders, 644; visited by John Inverarity, 706; visited by Norman Bennett, 703

Hawaiian Sugar Planters’ Association:
disseminates standardised milling results, 706; entomologist of, 521; Experiment Station of, 137, 473, 489, 495; forms Technological Department, 706

Hawke government (Commonwealth), 323, 448, 815

Hawke, Prime Minister Robert (Bob), 319, 320

headlands, 366, 367, 455, 654

heavy duty shredders, 743–744

Heck, Frank (mill-owner), 715; see also Rocky Point Mill

Heck, W.H. & Sons Pty. Ltd., 427, 718

Heck, William (mill-owner), 96, 701

Helensvale plantation, 127

Heinemann, Henry (mill-owner), 250

heptachlor, 548, 555

Herbert Cane Protection and Productivity Board, 527

Herbert, Premier Robert, 43

Herbert River:
discharge of waste water into from sugar mills, 736; erosion of river banks, 408–409; flood mitigation along, 409, 430; flooding of, 79, 409, 430, 433, 434; proposed dam on, 434

Herbert River Canegrowers’ Executive, 637, 638

Herbert River district:
Aborigines employed as field labourers and cane cutters in, 341, 631, 635; area under cane in, 46, 51, 56, 64; cane burning in, 627, 628, 629; cane first cultivated in, 46; cane grub attacks in, 158, 547; cane varieties in, 152–153, 470, 506, 509; collecting cane beetles in, 526; common rust disease outbreaks in, 599; drainage improvements throughout, 127, 407–408, 414 439; exports of sugar from, 213; flood mitigation in, 409, 430; growth in number of cane growers in during the 1960s, 310; gumming disease outbreaks in, 144, 467, 471,
566, 568, 577, 578; hand collection of cane beetles in, 160; Italian cane growers in, 133, 275; land suitability study for, 749; mosaic disease outbreaks in, 565; new assignments in, 310, 325, 330; night harvesting in, 655, 665; number of tractors in, 351; rat damage to crops in, 529; rat poisoning campaigns in, 528, 529, 530; rezoning of assignments in, 660; ‘root rot’ outbreaks in, 598; ‘rust’ disease outbreaks, 143; strikes of cane cutters in, 627–628; swarms of grasshoppers in, 155; use of arsenic against cane grubs in, 526; weed control in, 368; wireworms prevalent in, 533; see also Victoria, Ripple Creek & Macknade Mills

Herbert River Improvement Trust, 409, 430

herbicides, 366–368, 376, 379, 386, 429

hessian bags, 780, 787, 807, 810

Heussler, Johann, 85; see also Pimpama plantation

High Court of Australia, 257, 259, 693, 783

Higman, Professor Barry (historian), 74

Hill, Walter, 28

Hindus; see cane cutters, Indian

Hinchcliffe, John (sugar planter), 128, 141

Hinchinbrook Channel, 215

Hinchinbrook Island, 345

Hinchinbrook Shire, 530, 629

Hinchinbrook Shire Council, 209, 409, 436

Hirst, John B. (historian), 32

Hitchcock, Brian (entomologist), 552, 555

Hodge cane planter, 352

Hodge, Charles (implement manufacturer), 352

Hodgkinson, William, 100; see also central sugar mills, Queensland

Hogarth, Dr Douglas (‘Mac’) (cane breeder), 496, 503, 507, 513

Houlbourne Island, 347

Homebush Mill:

closure of, 698; erection of, 186; restrictions on cane varieties grown for, 153–154; suppliers of agitate for Local Cane Prices Board, 698; suppliers prefer Malagache, 154; storage pond for waste waters at, 732; waste waters from pollute Sandy Creek, 732

Homebush plantation, 83, 84, 130, 131, 132

Home Hill, 63, 397, 409

Home Hill district:
cane first cultivated in, 63; Inkerman Irrigation Scheme in, 397, 398, 406; irrigation of cane in, 397; pineapple disease control trials in, 581; settled in 1910s, 63, 397; South Burdekin Water Board in, 417, 419; see also Inkerman Estate & Inkerman Mill

Hong Kong, 254, 255

Hope, Captain Louis (sugar planter), 28, 43

horizontal pushers or pusher feeders, 705, 709, 724, 833

horses:
replaced by tractors, 342–343; used in ploughing, 124, 130, 341

hot water treatment (of setts), 579, 584, 589, 596, 601, 602, 604

hot water treatment tanks, 589, 601, 602, 604; see also raton stunting disease & chlorotic streak disease

Howard, Arthur Clifford (inventor), 625; see also rotary hoe

Howard Cane Harvesters Ltd., 625

Howard, John (sugar planter), 99

Howard Smith and Co. (shipping agents), 214, 215

Howard Smith Industries Pty. Ltd., 749, 753

Howes Brothers (merchants), 243; see also Bingera plantation

Hughes, Cecil Graham (plant pathologist), 477, 482, 487, 489, 545, 579, 587

Hughes, William Morris (‘Billy’):
attacks on CSR, 258, 261, 771; increases price of sugar in Australia, 273, 618, 619, 774; investigates sugar shortage (195), 769; ignores recommendations of Piddington Royal Commission, 774; makes agreement with CSR, 770

Hughes Nationalist government (Commonwealth), 774, 775

Hummock locality, 414

Hummock plantation, 160

Hungerford, Linda (historian), 311

Hunter River, 48

Hurrey, Charles (machinery inventor), 623

Hurrey, James (machinery inventor), 623

Hutcheon, John, 292

hydraulic pressure attachments and mill feeding, 15, 192–193, 833

Hyne, William (sugar planter), 81

Icery’s monosulphite of lime process, 182, 186, 197

icing sugar, 16, 787, 809

Illingworth, Dr James (entomologist), 523, 524, 526
import embargo on sugar to Australia, 276, 318, 324, 621, 775, 776, 784, 814, 815, 834
imbibition, 15, 710; see also maceration
implement sheds, 654–655
imports (of cane varieties); see collecting expeditions for new cane varieties
imports of sugar into Australia:
duties on, 38; from Bengal, 31; from Fiji, 771; from Great Britain, 32; from Hong Kong, 254; from India, 31, 32; from Java, 235, 237, 238, 254, 769, 771; from Mauritius, 32, 36, 255; from the Philippines, 31, 36, 235; from Taiwan, 233, 771
Incitec Fertilisers Ltd., 383, 554
indentured workers, 53, 83–85, 91, 834
India:
as a source of sugar imports into Australia, 31, 32; as a source of cane varieties, 481, 504
Indian cane varieties; see Co. cane varieties
Indian myna birds, 155, 160, 835
Indians (immigrants to Australia), 90–91, 105
individual analysis (of the sucrose content of sugar cane), 155, 488, 691, 697; see also cane payment formula
industrial troubles, sugar industry; see strikes
Industries Assistance Commission, 318–319, 775
Industry Commission, 327–328
Ingham Line locality:
cane first cultivated in, 274; rezoning of assignments in, 660; voluntary pest board in, 527
Inkerman Estate, 63, 111, 361, 397
Inkerman Irrigation Scheme, 397, 398, 406
Inkerman Mill:
acquired by CSR (1987), 752; boiler station upgrade at, 747; continuous centrifugals at, 757; continuous vacuum pan installed in, 756; crushing rate at, 731; diffuser at, 741; erection of (1913), 63, 111–112; fails to operate in 1915, 397; Japanese workers at, 620; machinery upgrades to, 709, 723, 727, 729, 744; mill peak of, 281, 282, 286; second milling train at (1975), 741
Innes, Alexander, 776
Innisfail, 64, 276
Innisfail district:
Aborigines employed as field labourers in, 341; area under cane, 50, 56, 64; banana farms in, 275, 411; canegrowers diversify into other crops in, 322; cane grub attacks in, 158, 522, 553; cane toads released in, 535; central mill erected at South Johnstone, 111; Chinese canegrowers in, 105; drainage improvements throughout, 407, 423–425; exports of sugar from, 799; German immigrants to, 89; hand collection of cane beetles in, 159; night harvesting in, 665; rat damage to cane in, 529; rat poisoning campaigns in, 528, 529; ‘root rot’ outbreaks in, 598; soil conservation measures in, 432; soil erosion in, 451; soil fumigation against cane grubs in, 525; strikes of canecutters in, 628; sugar exports from, 798, 799; weevil borer damage to crops, 521, 532; see also Goon-di, Mourilyan & South Johnstone Mills, Innishowen Mill & plantation & Innisfail & Mourilyan plantations
Innisfail plantation, 88, 407
Innishowen Mill and plantation, 89, 197, 207
insecticides:
aldrin, 548, 555; BHC, 487, 541–544, 546, 547, 548, 552, 553; chlorpyrifos, 552, 553, 554, 555, 556; dieldrin, 546, 548, 555; DDT, 541, 544, 549, 553; ethopropos, 551, 552, 553; fensulfothion, 552, 553; heptachlor, 548, 555; lindane, 546, 548; subCon®Blue, 552, 553, 554, 555, 556; terbufos, 552, 555, 556
insects; see pests (of sugar cane)
intermediate carriers, 722
International Society Sugar Cane Technologists, 535, 626
International Sugar Agreement:
Interstate Commission, 261, 773
introgression breeding (of cane varieties), 501, 502
Inveragah plantation, 126
Inverarity, John (mill manager), 296, 706
Inverness Mill and plantation, 79, 81, 190
Invicta Mill (Haughton River district):
acquired by CSR (1975), 751; boiler station upgrade at, 747, 756; continuous vacuum pan installed in, 756; diffuser at, 756; extensions of tramlines for, 678; machinery upgrades to, 720, 722, 741, 756
mill peak of, 281, 282; pollutes Haughton River, 734; road transport of cane to, 670; re-erected at Giru, 209, 698; receives cane from Clare, Dalbeg & Millaroo, 660, 678; receives cane from the Ingham Line locality, 274, 660; receives cane by government-owned railways, 657; rezoning of assignments to, 660; see also Haughton Sugar Co. Ltd.

Invicta Mill and plantation (Kolan River district), 90, 92, 205, 209, 698

Ipswich district:
area under sugar cane, 52, 65; cane first cultivated in, 45; cane growing combined with dairying, 65; contraction in cane growing, 271; cotton growing in, 44; cultivation methods of canegrowers, 125; frost-prone, 45, 79; important cane varieties in, 154; small millers in, 94–95; see also Woodlands Mill and plantation

Irrawarra plantation, 175

irrigation (of sugar cane):
Airdmillan plantation, 134; area irrigated, 399, 414, 441, 448; Bingera plantation, 136, 399; BSES critical of methods of, 400, 445; Bundaberg district, 136, 405, 414, 419–420, 441; Cairns district, 414, 449; causes soil salinity, 450; cost of, 136, 398; CSR’s plantations, 130; Fairymead plantation, 136; flood or furrow, 442, 449, 450; Haughton River district, 447; Homebush plantation, 130; Home Hill district, 397–398; Isis district, 420; Kalmia plantation, 134; Lower Burdekin district, 51, 133–135, 397–399, 406–407, 415, 417–418, 448, 449; Mackay district, 405, 414, 441–442, 448; Maryborough district, 441, 447, 449; number of irrigators, Queensland 136, 398; overhead, 443, 449; Palms plantation, 136, 405; Pioneer plantation (Lower Burdekin), 133–135; Proserpine district, 414, 441, 448; Qunaba plantation, 136; Seaforth plantation, 134; spear system, 135–136, 397, 399, 414, 441; spray or sprinkler, 406, 414–415, 443–444; travelling irrigators, 444; trickle, 449; Victoria plantation, 130


irrigation methods; see irrigation (of sugar cane)

irrigation scheduling, 450
Irvin, John (inventor), 379
Isis Central Mill:
boiler upgrades at, 711, 756; machinery at time of erection, 193; machinery upgrades to, 701, 709, 712, 719; supplies New Farm refinery with raw sugar, 240; tramline network for, 656, 659; treatment of waste waters at, 734
Isis Central Sugar Mill Co. Ltd., 659, 698, 756
Isis district:
area under cane, 56, 57; cane burning in, 627; cane from sent to Fairymead Mill, 217; cane grub attacks in, 158, 522, 553; cane first cultivated in, 55; CSR erects sugar mill in, 56; exports of sugar from, 215; Fiji disease outbreaks in, 591; frost-prone, 13, 132; frost reduction experiments in, 132; gumming disease outbreaks in, 57, 144, 568, 570; important cane varieties in, 154; irrigation of sugar cane in, 420; juice mills in, 55, 193–194; land suitability study for, 749; mill-owners compete for cane in, 217; Pacific Islander canegrowers in, 105; R. Cran & Co. erects sugar mill in, 55; soil conservation experiments in, 430; soil conservation measures in, 431, 452; soil erosion in, 410, 411, 412, 432; soil fumigation against cane grubs in, 525; soldier fly infestations in, 547; swarms of grasshoppers in, 155; see also Isis Central, Doombi & Childers Mills & Cran, Robert Snr

Isis Junction, 194
Isis Land Use Committee, 432
Island plantation, 87
Italian immigrants (to Australia), 88, 636–637, 806
Italians (and the Australian sugar industry):
as canecutters, 88, 109, 275, 630, 636–637; as farmers, 105, 109, 132, 275, 568; cultivation methods of, 132; discrimination against, 622; internment of during World War II, 630; purchase farms, 275; support for the Communist Party of Queensland, 622
Italy, 637
JA brand of sugar, 801, 803
Jacobs, Charles & Sons (sugar importer), 238, 245, 254, 255
jam manufacturers (Australian), 254, 773, 774, 782, 785
Jamaica, 147
Jamaica train, 15; see also clarification
Japan (as a sugar market), 796, 801, 803, 821
Japanese immigrants (to Australia):
as canegrowers in Queensland, 105; as planta-
tion and mill workers, 1, 90, 107, 210, 620; hired by canegrowers, 105
Jarra Creek locality, 292, 300
Jarvis, Edmund (entomologist), 156, 162, 521, 522, 523, 525, 526, 531, 534, 554; see also cane beetles & cane grubs
Java:
centre for cane breeding, 467; Queensland
sugar planters gained experience in,
81; milling technology discoveries in, 708, 714; source of cane varieties, 470, 481, 487; sugar experiment station established in (1888), 137; sugar imports into Australia from, 235, 237, 238, 254, 769, 771; visited by Dr Kottmann, 130–131; visited by Norman Bennett, 703
Javanese immigrants (to Australia), 1, 87
Johnston, Joseph, 249, 252
Johnstone River, 50, 433
Johnstone River district; see Innisfail district
Johnstone Shire, 629
Johnstone Shire Council, 436, 734
Jones, Henry (jam manufacturer), 254, 255
Joshua Brothers (sugar refiners), 235
Junction Mill, 691
juice; see cane juice
juice clarification; see clarification (of cane juice)
juice mill system:
Bundaberg district, 54, 178, 189, 191, 193; criticised, 189; Isis district, 55, 193–194; Maryborough district, 175, 178, 189, 193; pioneered by Tooth & Cran, 1870s, 175–176
Julatten, 316, 451
Julius, William (sugar planter), 51; see also Cud-gen plantation
jute sacks, 719, 787, 792, 807, 810
Kairi State Farm, 468
Kalamia Mill:
acquired by CSR (1975), 751; adoption of Petree-Thomas process at, 700; cane price award at, 696; continuous centrif-
ugals in, 757; double crushing train in,
705; firewood shortage at, 194; machinery upgrades to, 701, 703–704, 709, 719; refining process trialed at, 818; trial of continuous boiling at, 746; see also Australian Estates & Mortgage Co. Ltd.
Kalamia plantation:
acquired by Australian Estates & Mortgage Co. Ltd., 88; controlled by mortgagee, 88; establishment of, 82; irrigation of cane on, 134; Japanese workers on, 90; resumption of plantation agriculture on, 92; subdivided into small farms, 90, 91
Kalkie Mill, 191
Kamerunga State Nursery, 137, 149
kanakas; see Pacific Islanders
Kater, Henry, 259
Keating, Hon. Paul (politician), 323
Keith Hall Estate, 78, 83, 131, 146
Kelly, Joseph (sugar planter), 49
Kemble, Francis (sugar refiner), 33
Kerin, John (politician), 321, 324
Kerr, Bill (author), 638
Kerr, Dr H.W. (Bill):
assists in the development of Donnelly shutes,
724; appointed BSES scholar in soils,
353; assumes Directorship of BSES, 357; conducts fertiliser and soil tests, 353; criticises irrigation methods on the Lower Burdekin, 400; evidence before Royal Commission into Sugar Peaks, 1939, 357, 715; promotes soil conservation measures,
410–411
Kerr, John (historian), 3, 233, 660, 725
Keyline planting method, 430; see also Yeomans, Percival & soil erosion
Kiama, 48
Kidston, Premier William, 59, 110, 111
Killer, John (engineer), 712
Killer process for muds, 712, 719, 721, 726, 733
Kilner Brothers (machinery makers), 646
Kimberley district, 52
Kinchant Dam, 441
King, George, 83
King, Henry Edward, 54
King, Norman (BSES Director), 307, 309, 354, 368, 373, 430, 477, 481, 545, 594, 646
King, Lt Philip Gidley, 21
Kingsford, Richard, 193; see also Hambledon plantation
Kinnear, Jack (inventor), 645
knives; *see* preparatory devices

Knobel, Alfred and Frederick (sugar boilers), 197

Knox, Sir Edward (1819–1901):
- advises shareholders on capacities of CSR’s refineries, 239; appointed manager of the Australasian Sugar Co., 34; early career in Australia, 34; fortune in jeopardy, 37; involved in establishment of CSR, 36; managerial style, 34, 37; offers prizes to encourage better cultivation methods, 129–130; plans Pyrmont Refinery, 235; rescues CSR 1858–59, 37; urged to plan for the eventual production of mill whites in Australia, 236; *see also* Colonial Sugar Refining Company

Knox, Sir Edward Ritchie, 644, 791, 792

Knox, Edward William (1847–1933):
- acknowledges that producers of mill whites damages CSR’s trade in sugar, 248; admires triple effects, 183–184; as CSR’s General Manager, 183; as CSR’s Superintendent of Sugar Mills, 183; bans Walter Maxwell from accessing operating figures about CSR, 138; comments on advantages of having sugar refineries in four Australian state capital cities, 239; comments on level of milling technology in Australian sugar mills, 202; comments on unsuitability of Southgate locality for cane growing, 98; criticises horse–driven sugar mills, 177; dispatches CSR officers overseas, 130, 183; expresses disappointment about the cultivation methods of canegrowers, 98, 130; evidence before 1911–1912 Royal Commission, 259–260; expresses concern about soil erosion in the Isis district, 410; instigates investigations into better cultivation methods, 131; observes Herbert River district could benefit from drainage schemes, 404; opposes cane price-fixing legislation in Queensland, 690, 692; orders undergrowth cleared on Goondi plantation to reduce threat from cane beetles, 161; predicts failure of small millers in New South Wales, 95; promotes employment of analytical chemists by CSR, 197, 199; promotes trash conservation, 348; rejects juice mill idea for New South Wales, 189; tolerates activities of Poolman family, 247; upset by criticisms of CSR, 259; vets plans for Marian & Nerang Central Mills, 102; visits West Indies, 183; warns of a sugar shortage (1915), 769; *see also* Colonial Sugar Refining Company

Knox, James, 94, 128

Kolan River and district, 193, 205, 217, 272, 419, 420, 544

Koppa plantation, 81

Koorooroo plantation, 126

Kottmann, Dr Gustav (chemist):
- compiles agricultural circulars, 131; developed P.O.C.S. formula, 199; experiments with bagasse exhaustion and diffusion, 198, 200; expressed concern about effectiveness of hand collection of cane beetles, 161; observed lack of drainage in cane growing areas in New South Wales, 127; recruited by CSR, 198; reports upon cultivation methods in Java, 130; reports upon methods to control cane beetles and cane grubs, 161

Koumala, 330, 659, 679

Krajewski crusher, 701

Kununurra, 332, 333

Labor Party (Australia), 258, 261

laboratory (in sugar mills), 692, 693

Laboratory Manual for Queensland Sugar Mills, 707, 720

labour shortages (of field workers and canecutters)
- during late 1860s, 45, 83; during the 1880s, 80, 85, 128; during the 1890s, 90; during 1940s, 291, 359, 361, 412, 629–633, 635–636; during 1950s, 303, 636–637

labour trade (indentured workers), 52–53, 58–59, 83–85, 91, 834

land assignment system; *see* assignments

land clearance for cane growing, 66, 123, 361; *see also* bulldozers

land graders, 423

land legislation:
- Queensland, 44, 50, 100; New South Wales, 74

land levellers, 423, 437

land planes, 423, 437, 446

land prices (in Queensland), 43–44, 50

Land Protection Branch, Queensland, 557

land suitability studies (for sugar cane), 749

Lang, Rev. John Dunmore, 27

Lawes, Sir John (plantation owner), 88, 236; *see also* Farleigh plantation
League of Nations, 284
leafhoppers, 573, 591, 592, 593, 594; see also Fiji
disease
leaf scald disease:
  breeding cane varieties resistant to, 498, 572,
808–581; control methods for, 577, 578,
587, 589, 595, 597; investigations into,
565, 572, 579; present in Queensland,
570, 602; susceptible cane varieties, 509,
517, 587, 595
legislation; see Acts of Parliament; Australia; Acts
of Parliament, New South Wales; Acts of
Parliament, Queensland; & Acts of Parlia-
ment, South Australia.
Legislative Assembly, Queensland, 220, 527, 690
Legislative Council, Queensland, 527, 690, 693,
694
legumes, 348, 354, 371, 374, 381
Lennon, William (politician), 690, 693
leptospirosis (Weil’s disease), 355, 411, 529, 627,
628, 629
Leuconostoc bacterium, 653, 663
levellers (in sugar mills), 701
levellers (land), 423
lighterage system (of bagged sugar), 215, 798–
799
lighters (sugar), 798
Lilley, Premier Charles, 45
lime:
  BSES advocates its addition to cane growing
soils in North Queensland, 345; created
from coral & shells, 345, 375; obtained
from limestone mines, 345, 374–375; ex-
periments with against wireworms, 533;
used against cane grubs, 160; used as a soil
enhancement agent, 126, 134, 136, 139,
143, 343, 345, 374; used in sugar mills,
15, 182, 183, 708, 715; used in sugar re-
fineries, 240
limestone mines, 345, 374–375
liming (of cane juice), 707, 708, 715
lindane, 546, 548
Linnaean Society of New South Wales, 565
liquid sugar, 16, 809, 818, 819
Lismore, 48, 51, 55, 79, 137, 191, 317, 352, 427
Liverpool Creek, 64
Liversidge, Professor Archibald, 124, 127
Lloyd, Alfred (sugar planter), 87
loaders (of cane); see cane loaders
loading cane; see cane loading and cane loaders
loading sugar:
  bulk, 792–800; 821; by bags, 212–214, 216,
791, 796, 799; by mechanical conveyors,
791
Local Awards, 689, 691, 692, 693, 694
Local Sugar Cane Prices Boards, 329, 575, 663,
689, 690, 691, 692, 693, 696 754–755
locomotives, 207, 634, 656, 661, 662, 668, 669
locusts; see grasshoppers
Logan, Captain Patrick, 26
Logan River, 46, 100, 142, 205, 732
Loganholme Mill and plantation, 85, 89, 129, 182
London Chartered Bank, 88
Long, Edward (sugar planter), 160, 162, 200,
208; see also Habana plantation
Long Pocket locality, 271, 276
Lord Howe Island, 147
Lord, Simeon (merchant), 32
lorries, 623, 634
Louisiana:
  source of cane varieties, 148, 503; sugar ex-
periment station established (1885), 137;
sugar millers in troubled by extraneous
matter following adoption of mechani-
cal cane loaders, 644; visited by Norman
Bennett, 703
Lower Burdekin district:
  area of irrigated cane in, 136, 399; area un-
der cane in, 50–51, 53, 56, 63; artificial
recharge of underground water supplies
in, 415–418; BHC use in, 543; BSES
establishes Sugar Experiment Station in,
488; cane grub attacks in, 553; cane first
cultivated in, 50; cane varieties in, 153,
470, 484, 499, 504, 509; collecting cane
beetles in, 526, 543; common rust disease
outbreaks in, 599; discovery of abundant
underground water supplies in, 134–136;
downy mildew outbreaks in and their
control, 587; drought-prone, 133–135,
417; feral pig damage to cane in, 550;
firewood shortages 1890s, 195; irriga-
tion in, 139, 397–400, 406–407, 415,
417–419, 442, 445, 448, 449–450; leaf
scald disease outbreaks in, 595; linked to
Townsville by railway, 209; Malay work-
ers on sugar plantations in, 85; mill-own-
ers compete for cane in, 217; new assign-
ments in, 310–311, 325, 330; number of
irrigators in, 136; number of tractors in,
342; potash-rich soils in, 358; rat damage to cane in, 530; rezoning of assignments in, 660; road transport of cane in, 658; saltwater intrusion in, 415–416; sodic soils in, 385; soil damage from over-use of irrigation water in, 139, 400; soldier fly prevalent in, 556; striate mosaic outbreaks in, 601; sugar exports from, 213, 215; trash blanketing in, 455; use of arsentic against cane grubs in, 526; wallabies damage cane in, 540, 544, 550; see also Drysdale Brothers & Co., Airdmillan, Inkerman, Kalamia and Pioneer Mills

Lower Mary River Irrigation Scheme, 447, 449
Lucinda (as a port), 215, 792, 793, 798, 800
Lucinda Bulk Sugar Terminal, 799, 800
Lucinda Harbour, 794
Lyne, Charles (author), 95
Lyne, Sir William (politician), 257
Lyons, Prime Minister Joseph, 284, 285, 783, 784, 785

M. 1900 cane variety, 470, 481, 487, 578, 587
Mabbro Mill, 94, 189
McAlepp, William, 706
McAvoy, Sir Francis (Joe), 736
McCawley Award (1919), 618, 619
McCawley, Mr Justice Thomas, 618, 619
McCormack government (Queensland), 406, 575
McCready, Hugh (sugar planter), 81; see also Palmyra plantation
Macdesme Cooperative Mill Association, 219
MacDonald’s Mill, 95, 96
McDougall, W. (entomologist), 533
maceration:

adoption in Australian sugar mills, 183, 186, 192; definition of, 15; effectiveness of tested by CSR, 200; increases wetness of bagasse, 190, 705; ‘Nobel’ system of, 722; phased out in Australian sugar mills, 722; use of criticised by Dr Walter Maxwell, 202; use of criticised by William McAlepp, 706
Macgregor, Peter (engineer), 211
Mcllwraith, Sir Thomas, 50, 54, 55, 101
machinery manufacturers (agricultural):

Bonen Brothers, 380, 645; Nuttall’s Farm Supplies, 365; Populin Enterprises, 380; Toft Brothers, 642, 647; Wyper Brothers, 364, 640, 649
machinery manufacturers (sugar mills):

Atlas Engineering Co., 184; Bundaberg Foundry Ltd., 700, 701; Cameron’s Foundry, 709, 718; Chapman & Co., 184; Duncan Stewart & Co., 184, 192, 701; Evans Deakin, 701; Fives Lille Co., 184, 197, 200; Fletcher, Stewart Ltd., 184, 701; Glasgow, as centre for, 184; Manlove, Alliot, Fryer & Co., 184, 187; McOnie, W. & A., 184, 187; Mirlees, Tait & Watson, 184, 187, 188, 192, 193, 234, 723; Queensland Foundry, 185; Raff, Alexander, 184; Smith, A. & W. & Co., 184, 187, 193, 212; Smellie, Robert & Co., 184; Sutton, J.W. & Co., 185, 188; Victoria Foundry, 185, 207; Vulcan Foundry, 185, 189; Walkers Ltd., 185, 188, 189, 192, 193, 701, 718, 756
Mackay, Angus (author), 100, 128, 143
Mackay:

as a port, 213, 215, 371, 792, 793, 798, 799, 800; bulk handling of sugar at, 792, 799, 819, 821; commission agents (for sugar) in, 244–245, 246, 253; machinery manufacturers (sugar mill) in, 185, 207; Victoria Foundry, 185, 207
Mackay Bulk Sugar Terminal, 795, 799, 819, 821
Mackay district:

Aborigines employed as field workers in, 84, 341; area of irrigated cane in, 405; area under cane in, 46, 51, 53, 56, 63; bacterial mottle disease discovered in, 583; BHC use in, 543; cane first cultivated in, 46; cane grub attacks in, 158, 537, 522, 547; cane varieties in, 153–154, 470, 486, 499, 509, 691; central mills erected in, 101; collecting cane beetles in, 159, 163, 526, 536, 537; common rust disease outbreaks in, 599; downy mildew outbreaks brought under control in, 589; drainage improvements, 133, 414; dwarf disease discovered in, 572; dwarf disease brought under control in, 587; feral pig damage to cane in, 550; Fiji disease outbreaks in and their control, 510, 591, 595; firewood shortage in, 195; gumming disease outbreaks in, 144; irrigation in, 405, 441–442, 445, 448; Japanese canegrowers in, 105; land suitability study for, 749; leaf scald disease
outbreaks in, 595; machinery manufacturers (agricultural) in, 365; mechanical cane harvesting in, 642; mechanical cane loading in, 642; mill-owners compete for cane in, 217–218; mill-owners in pay for cane on basis of weight, 153; mill-owners propose erecting a cooperative sugar refinery in, 256, 258; new assignments in, 325; Pacific Islander canegrowers in, 105, 108; pineapple disease control trials in, 581; ratoon stunting disease in, 486, 581; restrictions upon types of cane varieties grown in, 691; rezoning of assignments in, 660; road transport of cane in, 658; ‘root rot’ outbreaks in, 598; ‘rust’ disease outbreaks in, 143; small millers in, 93; sodic soils in, 385; soil erosion in, 410, 412, 432, 455; soil conservation measures in, 432, 451; soldier fly prevalent in, 545, 546, 547, 556; Sugar Experiment Station in, 143, 149; sugar exports from, 213, 215, 792, 793, 800; swarms of grasshoppers in, 155, 538, 540; trace element deficiency in cane growing soils in, 375, 385; weed control in, 368; wallabies damage cane in, 544, 550; weevil borer damage to sugar cane in, 530; wireworms prevalent in, 532, 533; see also Homebush, Plane Creek, Cattle Creek, Racecourse, North Eton, Farleigh, Marian, Pleystowe, Meadowlands, Palms & Habana Mills
Mackay Harbour Board, 794, 795
Mackay, John (pastoralist), 44
Mackay, Robert (pastoralist), 44
Mackay, John (pastoralist), 44
Mackay, John (pastoralist), 44
Mackay Outer Harbour, 215
Mackay Railway, 101, 207–208, 209
Mackay Refined Sugars Pty. Ltd., 819, 820
Mackay State Nursery, 137, 146
Mackay Sugar Co., 82, 133
Mackay Sugar Cooperative Association Ltd.: closes North Eton and Cattle Creek Mills, 752; considers closing Pleystowe Mill, 752; formation of, 752; funds substantial upgrade to its mills (1990–1991), 755; investments in Racecourse Refinery, 819; Mill Closure Committee of, 752; joint venture with ED & F Man Holdings Ltd., 819, 820; purchases Pleystowe Mill from CSR (1988), 752
Mackay Sugar Crushing Co. Ltd., 98
Mackay Sugar Experiment Station, 137, 143, 149, 370, 467, 468, 476, 477, 486, 496
Mackay Sugar Manufacturers’ Association, 218, 219, 286
Mackenzie, Premier Robert, 45, 92
Macknade Experiment Station, 471, 472, 473, 482, 484, 493, 495, 500, 503, 522, 561, 585, 600; see also Colonial Sugar Refining Company
Macknade Mill:
amount of rat damaged cane supplied to, 530; boiler station upgrade at, 747; computerised process control adopted in, 748; crushing rate at, 731; machinery upgrades to, 192, 709, 710, 713, 727; manufacture of mill whites at, 243, 245; possible duplication of, 297; sold to CSR (1896), 250–251; treatment of waste waters at, 737
Macknade plantation:
damaged by flooding, 79; founder of, 81; land leased to small farmers, 89, 90; size of, 80; sold to CSR (1896), 250–251; sold to Fanning, Nankivel & Co., 83; subdivision of, 104
Macknade Voluntary Pest Control Board, 527, 549
Maclean, 96, 274, 604
McLean, Peter (public servant), 147, 148, 149
McLeay, Alexander, 26
Macleay River, 27, 48, 74, 93, 97, 129
Macnaughton Award, 617, 618
Macnaughton, Justice Allan, 619
McOnie, W. & A. (sugar mill machinery maker, Glasgow), 184
Macquarie, Governor Lachlan, 22, 23
McWalters, Peter (cane breeder), 468, 476
Madsen, Otto (politician), 301, 306
Magarey, Dr Robert (plant pathologist), 599
magnesium deficiency (in soils), 375, 385
Magnetic Island, 489
Magnolia plantation, 80, 90
Mahona cane variety, 474, 578, 584
maize, 44, 80, 87, 354–355, 381, 574, 579, 590
Malagache cane variety, 470, 580
Malay immigrants (to Australia), 85
Maltese immigrants (to Australia), 85, 105, 275
Malungavel plantation, 85, 124
Man Holdings Ltd., ED & F, 819, 820; see also Mackay Sugar Cooperative Association Ltd.
Mandam Creek, 439
Mandam Drainage Board, 439
Manildra Group, 331, 815
Manildra Harwood Sugars, 815, 816
Manildra Harwood Sugars Refinery, 816, 817
Manlove, Alliot, Fryer & Co., (sugar mill machinery manufacturer, Nottingham), 184
Manning, Kenneth (author), 740
Manning River, 25, 48, 74, 93, 96
Mansfield, Justice Alan, 295, 299, 631
Mansfield Royal Commission (1942–43), 351, 360, 362, 631, 632, 633, 718
Mansfield Royal Commission (1950), 295–297
manuring; see fertilisers
Marburg, 52, 65, 271
Marburg district:
area under cane in, 52, 65; cane varieties in, 154; farmers switch to dairying, 271; use of German wagons in, 203; Woodlands Mill and plantation in, 79, 237, 271
Mareeba district, 325, 330, 451
Maria Creek, 64, 296
Marian Mill, 99
Marian Central Mill:
adopts relative percentage scheme, 697; computerised process control adopted in, 749; crushing rate at, 731; duplication of milling train at (1991), 755; erection of, 102; joins Mackay Sugar Manufacturers’ Association, 218; machinery in at time of erection, 193; machinery upgrades to, 202, 701, 712, 723, 743; receives emergency government funding to operate, 751; road transport of cane to, 670; staffed with an analytical chemist, 200–201; suppliers switch to another sugar mill, 217; supplies sugar to Millaquin Refinery, 250; treatment of waste waters at, 734
Marian Central Milling Co., 201
Maroochie River Sugar Co., 188
Maroochy River Sugar Co., 188
Maroochy district:
acid sulphate soils in, 441; area under cane in, 56, 57, 65; cane growing combined with tropical fruit in, 65; central mills erected in, 56, 99; drainage improvements & schemes in, 274, 404, 414, 423, 439; Finnish immigrants to, 109; frost reduction trials in, 132; gumming disease outbreaks in, 570; important cane varieties in, 154; lack of drainage on cane farms in, 404; new cane assignments in, 325; outbreaks of Fiji disease in, 591; stand-over cane in, 302; trace element deficiency in cane growing soils, 375; see also Moreton Central Mill
Maroochy River, 205, 404, 414, 544, 657, 672
Mary River, 46, 52, 56, 58, 79, 99, 144, 177, 194, 205, 215, 217
Maryborough:
as port for sugar exports, 215–216; commission agents (for sugar) in, 244; machinery manufacturers (sugar mill) in, 185, 188, 189, 701, 756
Maryborough Central Mill, 99
Maryborough district:
Aborigines employed as field labourers in, 84; African black beetles in, 556; area under sugar cane in, 52, 53, 56, 58, 64–65; cane growing combined with dairying in, 58; cane growing combined with tropical fruit production in, 271; cane growing in the 1850s, 27–28; competition for cane in, 216; central mill erected at Mt Bauple, 56; central mills in (1870s), 99; contraction in area under cane in, 58, 272; cultivation methods of canegrowers in, 124, 125; Fiji disease outbreaks in and control methods, 570, 587, 591, 592; frost-prone, 13, 53; gumming disease outbreaks in, 58, 144; irrigation in, 447; important cane varieties in, 154; juice mills in, 175, 178, 189, 193; land suitability study for, 749; road transport of cane in, 658; ‘rust’ disease outbreaks in, 143; small millers in, 94; soil conservation measures in, 452; soldier fly infestations in, 547; sugar exports from, 215–216; see also Mt Bauple Central Mill & Maryborough Sugar Factory
Maryborough Sugar Co., 82
Maryborough Sugar Factory:
adopts relative percentage scheme at, 697; bagged sugar at, 796; burns sawdust in mill furnaces, 747; causes air pollution, 738; chemical control slow to be adopted in, 702; chimney upgrades at, 738; competing for sugar cane, 217; continuous high-grade vacuum pan installed at, 756; fly-ash arrestors installed at, 738; machinery upgrades to, 709, 713, 717, 722; mill peak of, 282; mill whites manufactured at, 237,
250; punting of cane to, 205; receives cane by government-owned railways, 657, 661, 671; road transport of cane to, 670, 671; state-wide price of cane finally accepted at, 696; storage of raw sugar at, 212
Maryborough Sugar Factory Prop. Ltd., 738, 749
masseequite, 16, 714, 727, 728, 749, 756
Massey-Ferguson (Australia) Ltd., 649
Massey-Ferguson mechanical cane harvester, 377, 649, 650, 651
Mathews, The Hon. Mr Justice Ronald, 665, 696
Matra, James, 21
Mauritian cane varieties, 141, 147, 152, 154, 470, 481, 487
Mauritius:
cane varieties from, 147, 470, 481, 487; CSR imports cane varieties from, 147; plant breeding techniques in, 496; sugar cane crops in damaged by cyclone, 303; sugar imports into Australia from, 32, 245, 254
Maxwell, Francis (sugar technologist), 112, 695
Maxwell, Dr Walter (Inaugural BSES Director): advice to farmers, 139; appointed Comptroller of Queensland Bureau of Central Sugar Mills, 1904, 110; appointed Director, Bureau of Sugar Experiment Stations, Queensland 1900, 138; critical of the heavy use of maceration in Queensland sugar mills, 202; criticised by farmers, 139; hears of fuel use in Queensland sugar mills, 194; investigation into condition of Queensland sugar industry 1899, 123, 128, 202; investigation into performance of Queensland government-funded central sugar mills, 102; investigation into effectiveness of the bounty in promoting sugar production only by European workers, 257; orders Queensland’s central sugar mills be staffed with analytical chemists, 110, 201; orders Queensland’s central sugar mills to cease providing credit to non-European cane growers, 107; raises issue of CSR and the QN Bank engaging in price-fixing, 257; retires 1909, 139; see also Bureau of Sugar Experiment Stations, Queensland
Meadowlands Mill, 207, 217
Meadowlands plantation, 81, 82
Meares, Richard (mill-owner), 181
meatworks manure, 126, 134, 347, 368
mechanical cane loaders; see cane loaders
mechanical cane planters; see cane planters
mechanical circulation in pans, 745
mechanical cane grabs (wharves), 206
Mechanical Harvesting Committee, 638–639, 642, 645, 649
mechanical pushers; see pushers
megass; see bagasse
Melbourne:
commission agents for sugar in, 243; headquarters of Victoria Sugar Co., 36; investors in sugar production from, 82–83; location of sugar refineries in, 36; shipments of Queensland sugar to, 212; sugar refineries erected in, 36, 235
Melbourne-Mackay Sugar Co., 83; see also Palms plantation
melting tanks (in sugar refineries), 240
Menghetti, Dr Diane (historian), 613, 615, 629
Menzies government (Commonwealth), 312, 428, 804, 805
Menzies, Prime Minister Robert, 804, 805
Meringa Sugar Experiment Station, 477, 478, 496, 498, 506, 507, 508, 509, 522, 524, 534, 555, 579
Meston, Alexander, 49; Archibald, 143; William, 94
Metarhizium anisopliae (fungal pathogen), 163, 554; see also cane grubs
metrology service (of BSES), 707, 720
Miara Mill, 698
mill ash; see fly-ash & mill by-products
mill awards; see local awards
mill by-products:
fly-ash, 130, 450, 731, 732, 739, 740; bagasse, 15, 126, 127, 130, 133, 189, 190, 375, 731, 732, 747, 748; molasses, 16, 130, 357, 359, 371, 732, 737; mud, 357, 712–713, 732
mill chemists; see chemists, analytical
mill machinery; see carriers, crushing rollers, effets, pans, preparatory devices & shredders.
mill machinery manufacturers; see machinery manufacturers (sugar mills)
mill mud:
disposal of, 712; Killer process, 712, 719, 733; pollutes watercourses, 732–733; recovery of sugar from, 712; use as a fertiliser, 357
mill-owners (Australian):
agree to manufacture refining sugars for CSR,
200, 248–249; and 1911 strike, 61–62;
and cane burning, 625–629; and cane price fixing legislation, 689–695; and Productivity/Cane Payment Package 1994,
755; competing for cane, 216–221; complain about CSR being the only buyer of raw sugar in North Queensland, 251;
complaints about mill peaks, 281–282, 286, 288; criticised by CSR for poor quality sugar, 249, 781–782; curtail capital expenditure during late 1910s, 700–701;
curtail capital expenditure during 1980s, 754; employ analytical chemists, 197–201; form Australian Sugar Milling Council Pty. Ltd., 754; financial difficulties of during the 1980s, 751–752; form Sugar Research Institute, 719–720; industry organisations representing their interests, 60, 753–754; invest in extensive mill upgrades 1950s, 718–719, 721–722; invest in new mill machinery 1890s, 191–193; invest in new mill machinery 1900–1914, 202–203; invest in new mill machinery 1990s, 755–757; manufacturing mill whites, 236–237, 248–252; obtain licences to discharge waste waters into watercourses, 735; oppose cane burning, 626–629; oppose deregulation in 1980s, 319; paying the same price for cane, 218–220; prices paid for cane, 217, 218, 220, 689–697; prone to switch refiners in late 1890s and 1900s, 251; providing credit to suppliers, 106–107; purchasing wood from farmers, 106; receive credit from CSR, 248; receive credit from the Queensland National Bank, 250; receive financial assistance from the Queensland government in mid-1960s, 312; responding to concerns about water and air pollution, 734–740; sale of raw sugar to CSR, 82, 245–246, 248–249, 252; suffer firewood shortages, 194–195; suffer cost-price squeeze during the 1930s, 708–709; support formation of Australian Sugar Producers’ Association, 60

mill peaks:
increased after World War 11, 293; increased during the 1950s, 297–299; increased during the 1960s, 303, 307, 309; increased in 1939, 288–289; introduced, 280–281; not reached during World War 11 and immediately afterwards, 291, 292; not reached in New South Wales, 303, 306; see also Peak Year Scheme

Mill Suppliers’ Committees, 279, 284, 288

mill whites:
demand for in Australia, 253–254; Dr Walter Maxwell comments upon the lack of mill white producers in Australia, 258; manufacturers of in Australia, 182, 236–237, 244, 248–251; production of (process), 16; production of discouraged by CSR, 96–97; sales to Australian manufacturers, 254

Millaquin and Yengarie Sugar Co.:
acquired by the Queensland National Bank, 234; avoids competition with Gibson & Howes Ltd., 218; closure of Yengarie Refinery (1900), 194, 234; erects Millaquin Refinery at Bundaberg (1882), 189, 233–234; formation of, 233; irrigation on its sugar plantations, 136; see also Cran, Robert Snr, Millaquin Refinery, Yengarie Refinery & Queensland National Bank

Millaquin juice mill, 194, 772, 777

Millaquin Mill:
adopts relative percentage scheme, 700; boiler station upgrade at, 747; disposal of fly-ash at, 739; exceeds mill peak deliberately, 287; fly-ash arrestors installed at, 738; fractional liming first used at, 715; John Killer Chief Engineer at, 712; machinery upgrades to, 710; receives cane from Mt Larcom district, 64; rezoning of assigned land to, 661; treatment of waste waters at, 737; see also Queensland National Bank

Millaquin plantation, 92

Millaquin Refinery:
converted into a factory that can handle raw sugar, 250; description of, 234; exports of sugar from, 215; machinery upgrades to, 234, 250, 786, 811, 814, 818; opened at Bundaberg (1882), 189, 234; operates only six months a year, 772, 789; output of, 771, 779, 789, 811, 818; partially destroyed by fire (1927), 779; relies on juice from local millers, 189; waste waters from, 136; see also Cran, Robert Snr & Queensland National Bank
Millaroo, 311, 488, 660
Miller, William (storekeeper), 94
Milne, Andy (engineer), 352
minimum tillage, 319, 376–380, 386
Mirani, 207, 209
Mirani Weir, 441
Mirrlees, Tait & Watson and successor companies (sugar mill machinery makers, Glasgow), 184, 187, 188, 192, 193, 234, 723
Mizzi, Laurence and Paul (canegrowers and inventors), 380, 649, 672
Mocatta, George, 664
molasses:
  burnt in sugar mill boilers, 732; carried on CSR ships, 214; export of, 371; pollutes watercourses, 732; product of raw sugar manufacture, 16; trials to determine if useful as a fertiliser, 347, 353; used as a fertiliser, 347, 368, 357, 359, 371; used as a stock food supplement, 732; used to manufacture power alcohol, 732; see also Australian Molasses Pool & Australian National Power Alcohol Co.
mole drains, 407
moles (proposed importation to Australia), 161
Mon Repos Mill and plantation, 92, 250
Monduran Dam, 420
monopoly:
  applied to Colonial Sugar Refining Company, 256–259, 261, 782; Colonial Sugar Refining Company aims to establish one over Australian sugar market, 35, 255; parliamentary opposition to, 256–258; see also anti-monopoly and anti-trust measures
monosulphite of lime process, 182, 184
Mooball Creek and district, 275
Mooloolah River, 45
Moore government (Queensland), 280, 406
Morehead, Premier Boyd, 55
Moreton Bay, 79
Moreton Bay Penal Station, 26
Moreton Bay Sugar Co., 27
Moreton Central Mill:
  acquired by Bundaberg Sugar Co. (1988), 752; acquired by Howard Smith Industries Pty. Ltd. (1976), 749; effluent pond at, 735; efforts to increase its cane supply, 205; erection of, 56; food grade raw sugar manufactured at, 818; fly-ash arrestors installed at, 738; land suitability study for, 749; machinery in at time of erection, 193; machinery upgrades to, 699, 701, 712, 722, 743; mill peak at, 282; punts deliver harvested cane to, 205, 657, 672; road transport of cane to, 672; shortage of cane, 110; supplies New Farm refinery with raw sugar, 240; treatment of waste waters at, 733
Moreton Central Sugar Mill Co. Ltd.:
  accepts cane punted along Maroochy River, 205; defaults on repayments to Queensland Treasury, 110; finances major upgrade to Moreton Mill, 722; owner of cane farms, 733, 749; promotes good cultivation methods amongst its shareholders, 137
Moreton district; see Maroochy district
Morton, Clive (author), 613, 626, 636, 641, 642
mosaic disease, 565, 566, 568, 570, 571, 578, 601, 602
Mossman district:
  Aborigines employed as field labourers in, 341; area under cane in, 50, 56, 64; cane first cultivated in, 50; contraction in area under cane during the 1900s, 64; drainage improvements in, 433, 439; introduction of canetainers in, 665–666; land suitability study for, 749; night harvesting in, 655; rat poisoning campaigns in, 528; road transport of cane in, 658; shortage of European canecutters in during the 1900s, 64; soil fumigation against cane grubs by canegrowers, 162; sugar exports from,
215, 798, 799; sulfur deficiency in cane growing soils in, 385; tachinid flies thrive in, 521; wireworms attack crops in, 533; see also Mossman Central Mill

Mossman Central Mill:
acquires new suppliers on Atherton Tableland, 316, 325; adopts relative percentage scheme, 697; amount of burnt cane supplied to, 626; boiler station upgrade at, 711, 719; computerised process control at, 748; continuous vacuum pan installed at, 746; introduction of canetainers at, 666; machinery in at time of erection, 193; machinery upgrades to, 709, 711, 723, 724; mill whites manufactured at, 251–252; Prince, Lou, 661, 665; road transport of cane to, 666, 670; road transport of sugar from, 799; tramline network of, 666; sugar exports from, 215, 798, 799; uses a computer to calculate cane payments, 748

Mossman Central Sugar Mill Co. Ltd., 139, 251, 528, 678, 703, 748, 752

Mossman River, 733, 734

motor lorries, 623, 634

Mourilyan, 536

Mourilyan Bulk Sugar Terminal, 795, 799, 821

Mourilyan Harbour, 795, 798

Mourilyan Mill:
acquired by Bundaberg Sugar Co. (1988), 752; adopts maceration, 186; adopts relative percentage scheme, 697; analytical chemist at, 197, 200; assignments from Goondi Mill transferred to (1987), 752; boiler station upgrade at, 747; connected to Liverpool district by tramline, 64; continuous crushing at (1987), 754; ceases to manufacture mill whites, 248; continuous vacuum pan installed at, 746; cooling tower erected at, 737; erection of, 186; extent of weevil borer-damaged cane supplied to, 556; fuel supply of, 195; machinery upgrades to, 699, 722, 727; manufactures mill whites, 236, 245; night shift at, 186; receives cane by government-owned railways, 657; trailer network of, 666; tramline network of, 666; sugar exports from, 798, 799; tramlines for, 207; unloading cane at, 210

Mourilyan plantation:
British workers recruited for, 87–88; cultivation methods on criticised, 125; Japanese workers recruited for, 90; soil analysis on, 133; stump removal on, 160; subdivision of, 89, 92; taken over by Union Bank of Australia Ltd., 88; Union Bank of Australia Ltd. threatens closure of (1906), 92

Mourilyan Sugar Co., 200, 236

Mt Bauple, 274

Mt Bauple Central Mill:
cane moved by motor lorries to, 623, 634; closure of (1950), 699; competing for sugar cane, 217, 218; erection of, 56; fails to operate in 1902, 110; financial difficulties of, 788; machinery upgrades to, 719; receives cane by government-owned railways, 657

Mt Bauple Cooperative Milling Association, 137

Mt Cotton plantation, 250

Mt Etna, 347

Mt Larcom, 64

Mt Perry, 208

Mt Tamborine, 51

mud; see mill mud

mud pond, 712

Muir, David (Agent-General for Queensland), 294

Muir, Robert (sugar planter), 81; see also Benowa plantation

Muir, Ronald, 628, 638

Mulgrave Central Mill:
adopts relative percentage scheme, 697; amount of burnt cane supplied to, 626; amount of weevil borer damaged cane supplied to, 556; assignments transferred from Hambledon Mill to (1991), 752; bagged sugar exported from, 796; boiler station upgrade at, 719; disposal of fly-ash at, 739; investigations into sour storage rot of chopped cane at, 653;landlocked, 325; machinery in at time of erection, 193; machinery upgrades to, 202, 701, 703, 709, 741, 744; offers bonus to suppliers for growing the Badila cane variety, 155; opposes expansion in sugar production during mid-1970s, 315; staffed with an analytical chemist, 200; sugar exports from, 215

Mulgrave Central Mill Co. Ltd., 529, 626

Mulgrave River, 50, 433, 733, 737

Mulgrave Shire River Improvement Trust, 433

Multiple effects; see effects

Multiple evaporation; see effects

Mundoo Swamp Drainage Scheme, 424–425
Mungomery, Reginald (entomologist), 531, 534, 535, 536, 543, 545, 573
Munro, Colin (sugar planter), 87, 212
Murphy, Dr Denis (historian), 692
Murwillumbah, 51, 55, 427
Murray, Peter (sugar planter), 49; see also Rockhampton district
Murray River, 49, 296, 433, 434, 514
Murray Upper locality, 330, 678, 679
Murry, Rod (Sugar Research Institute researcher), 668
muscovado sugar, 231
Mutarnee, 330
Mutual Control Scheme, 707, 728
mynas, 155, 835
Myrtle Grove Central Mill, 99
Nambour, 56, 65, 738
Nambour district; see Maroochy district
Nankivell, Thomas (merchant), 83
narrow gauge tramlines; see tramlines
Nashua plantation, 82, 83
National shredder, 701, 708, 709, 720, 722
Nationalisation (of Australian sugar refineries), 256, 261–262
Natural Disaster Relief Arrangements, 433
NCo. 310 cane variety, 591, 592, 593, 594, 595
Neame, Arthur and Frederick (sugar planters), 81, 194, 251; see also Macknade plantation
Nebia plantation, 82
Neilsen, Peter (extension officer), 503
nematodes, 550–551, 586
nematocides, 551
Nerada plantation, 80, 90
Nerang Central Mill: closed (1918), 272, 698; controlled by the Bureau of Central Sugar Mills, Queensland, 110; erection of, 102; idle machinery at sold, 701; mill whites manufactured at, 237, 253, 254; short of cane, 110
Nerang district, 53, 56, 102; see also Benowa, Birribi & Nerang Central Mills
Nerang River, 46, 53, 272
net titre (of sugar), 201, 246, 248, 714
New Farm Refinery (Brisbane): bulk handling of raw sugar at, 794, 808; continuous operation at, 818; erection of (1893), 238–239; liquid sugar manufactured at, 809; machinery upgrades to, 239, 786, 814
output of, 239–240, 817; receives raw sugar from Condong Mill, 794; site enlarged, 239, 779; storage capacity exceeded at, 821; see also Colonial Sugar Refining Company
New Guinea:
as a source of cane varieties, 481, 487, 489, 497; cane variety collecting expeditions to, 146, 467, 470, 471, 489; possible site for a sugar refinery, 258
New Guinea cane varieties, 152, 154, 471, 474, 489, 497, 578; see also Badila, Goru, Korpi, Oramboo & Mahona cane varieties
New South Wales:
African black beetle attacks in, 512, 533–534, 544; area under cane in, 48, 58, 65, 274, 280, 291, 292, 303, 306, 311, 316, 317, 332; amount of fertiliser applied to crops of sugar cane in, 373; average area cultivated on a cane farm in, 386; Bureau of Sugar Experiment Stations, Queensland, assumes control of cane variety breeding for, 504; cane burning in, 634; cane grub attacks in, 548; cane prices in, 97; cane varieties in, 142, 152, 154, 474, 475, 482, 502, 503, 504, 512; continuous crushing in, 754; contraction of cane growing in, 65, 303; CSR becomes only miller in, 202, 217; CSR controls price of sugar in, 255; CSR erects central mills in, 97–98; cultivation methods of canegrowers in, 123, 124, 126, 348, 350, 355, 359; decline of hot-water treatment in, 596; drainage schemes in sugar-producing districts in, 400, 402–403, 414; Fiji disease outbreaks in, 472, 565, 578; flood mitigation in, 408, 427–428, 436–438; gumming disease outbreaks in, 144, 471, 474; identification of disease-free farms in, 577; important cane varieties in, 474, 482, 483, 494–495, 502, 504–505; Italian canecutters for, 637; land legislation in, 74; location of sugar plantations in, 74; mechanical cane harvester ownership in, 676–677; mechanical cane harvesting in, 650–652; mechanical loading of cane in, 640; number of canegrowers in, 108, 109, 303, 306; number of tractors in, 362; number of sugar mills in, 175, 177, 185, 191, 202; mill peaks in, 280–281, 290–291, 303–304; number of mechanical cane harvesters in, 673–674; output of sugar mills
in, 175, 176, 186, 201, 203; proposed aboli-
tion of sugar import tariff in 1895, 58;
punining of cane in, 204–206, 657, 672;
rat damage to cane in, 556; road transport
of harvested cane in, 667–668, 672; small
millers in, 93–96; soldier fly damage to
crops of cane in, 547; size of sugar plan-
tations in, 79; sugar consumption in dur-
ing 1830s, 32; sugar import tariff in, 38,
58, 96; sugar imports to, 31; sugar prices
in, 255; well suited for the production of
sugar, 21; yield data for, 512, 513
New South Wales Cane Growers’ Association,
290, 303, 350, 695
New South Wales government:
establishes Wollongbar Experimental Farm,
137; financial assistance to New South
Wales canegrowers, mid-1980s, 330–331;
funding for flood reduction, 408, 428;
proposed abolition of sugar import tariff
1895, 58; petitioned to fund a coopera-
tive central mill, 219; petitioned to over-
turn production restrictions, 290
New South Wales land legislation, 74
New South Wales Mechanical Harvesting Com-
mittee, 651
New South Wales Soil Conservation Service, 432
New South Wales Sugar Industry Study Group
(1985), 330–331
New South Wales Sugar Milling Cooperative
Ltd.:
adopts continuous crushing (1988), 754; as-
sumes responsibility for hot-water treat-
ment facilities at its sugar mills, 604; de-
velops cane variety breeding program, 504;
encourages cane growing, 331–332; ends
marketing arrangements with the Queens-
land Sugar Board, 331, 815; expenditure
on mill upgrades, 741; financial difficul-
ties of, 751; formation of (1978), 751;
introduces environmental protection mea-
sures, 740; invests in Manildra Harwood
Sugars, 815; opposes building of Brisbane
Bulk Sugar Terminal, 331, 821; prohibits
cultivation of NCo.310 cane variety, 604;
purchases CSR’s New South Wales sugar
mills (1978), 503, 751; requests financial
assistance from New South Wales govern-
ment in 1985, 330–331; trials organo-
phosphate insecticides, 552
New South Wales Sugar Mills Association, 246
New South Wales Sugar Promotion League, 290
New Zealand (as a sugar market), 295, 801, 821
Newrybar Swamp, 317
N.G. cane varieties, 467, 470–471, 474
Nicklin, Don (engineer), 720
Nicklin, Sir Francis, 312
Nicklin government (Queensland), 307, 309,
311, 312, 417
Nielsen, Paul (extension officer), 503
night harvesting, 655, 665
Ndinaroo plantation, 90, 134, 159, 161
nitrogen (for sugar cane), 345, 354, 370, 371,
382, 384–385
Nobel maceration system, 722
‘noble’ cane varieties, 9
Norfolk Island, 21–22
North, David (plant pathologist), 471, 481, 534,
565, 568, 572, 574, 575, 576, 578, 584
North Burdekin Water Board, 417, 419
North Coast Anti-Alien Society, 91
North Coast Railway, 274, 345, 659
North Creek, 207
North Eton Central Mill:
boiler station upgrade at, 747; canegrow-
ers gain control of, 699; closure of, 752;
competes for cane with other Mackay sugar
mill-owners, 217; controlled by the Bureau
of Central Sugar Mills, Queensland, 699;
erected (1888), 101; grasshoppers destroy
cane for, 540; joins the Mackay Sugar Man-
ufacturers’ Association, 218; loss of assigned
land to urban expansion, 322; machinery
upgrades to, 699; short of cane, 101; sup-
pliers of switch mills, 217; supplies sugar to
Millaquin Refinery, 250
North Eton Central Sugar Co. Ltd., 101, 217
North Eton Cooperative Sugar Milling Associa-
tion Ltd., 752
North Isis Solider Settlement Area, 659
North Johnstone River, 64, 111, 734, 736, 737
North Queensland Fertilisers and Chemicals Ltd.,
373
North Shore Refinery Co., 37
Northern District Sugar Industry Productivity
Committee, 434
Northern Territory:
annexed by South Australia, 50; area under
cane 1880s, 50, 53; cane growing encour-
aged in, 50, 75; cessation of cane growing
in 1892, 56; Chinese canegrowers in, 50; control transferred to Commonwealth government (1911), 56; labour force on sugar plantations in, 85; possible site for sugar refinery, 258; sugar from sold in Adelaide, 255; sugar plantations, financed by Victorian and South Australian companies, 50, 83

Noyea plantation, 124, 127
Nuffield mechanical cane loader, 642
Nuttall cutter planter, 364–365
Nuttall's Farm Supplies, 365

Oakenden plantation, 82
Oakenden Sugar Co., 82
Oakwood Mill, 191
O’Brien, Claude (chemist), 697

Oliver-Campbell rotary vacuum filter, 713, 721
orange freckle (cane disorder), 375
Ord River District Cooperative, 333
Ord River Irrigation Area, 332, 832

organochlorine insecticides, 541–543, 552, 555
organophosphate insecticides, 552, 555

Ormeau plantation, 177
Ormiston Mill, 43, 124, 127

overproduction (of sugar):
in Australia, 272, 277, 279, 301, 832;
conferences on, 285–286, 301–302
Owen, Francis (inventor), 625
Oxley, John, 22, 23

Pachymetra root rot, 507, 515, 599, 602

Pacific Islanders:
as small farmers, 89, 105; certificates of authority to cultivate cane for, 108; cost of recruitment, 85; daily routine of, 84; employed on Cadgen plantation, 51, 85; feeding cane into crushing rollers, 179; first used in Queensland, 45; food for, 80; hired to small farmers, 105; housing for on plantations, 85–86; length of working week, 84; living conditions of, 85–86; not used by CSR in New South Wales, 190; number avoiding repatriation, 59; number recruited to Australia, 1; opposition to use of, 85; recruitment of prohibited 1885, 52, 85; recruitment of resumes 1892, 55; repatriation of 1906–1908, 2, 59, 108, 140, 341; Royal Commission reports on probable effects of withdrawal of (1888), 54; teams of collect cane grubs, 160; teams of collect grasshoppers, 155; tenant farmers on plantations, 89, 105; time-expired, 51, 85, 90; unloading cane at sugar mills, 210; use by mill-owners, 179, 190, 210; use by sugar planters, 83–85; use by small farmers, 105

Paddle, John R. (public servant), 110

paddocks:
cleared of stones, 361, 654; creation of, 123, 361, 434; full of stumps, 123; levelling of, 434, 446–447; redesigned to accommodate mechanical harvesters, 434, 453; surrounded by belts of timber, 127; use of bulldozers to create, 361; see also drainage

Page, Earle (politician), 284, 776, 783
Paget, Walter (sugar planter), 159, 161; see also Nindaroo plantation
Palm Island, 354, 631, 633, 635, 637
Palmerston Plantation Co., 50, 83

Palms Mill:

ceases to manufacture mill whites, 248; closure of (1924), 698, 701, 703; description of, 186; erection of, 186; joins the Mackay Sugar Manufacturers’ Association, 218; machinery of transferred to Kalamia Mill, 703; severely damaged by a cyclone (1918), 698; see also Australian Estates & Mortgage Co. Ltd.

Palms plantation:

irrigation on, 136; ownership of, 83, 88; resumption of plantation agriculture on, 92; subdivision of, 91; workforce on, 84

Palmyra plantation, 80

Palmerston plantation, 187
Pans:

Bour, 181, 187, 188; calandria, 705, 721, 727, 745, 757, 779; conductivity in, 714; continuous boiling in, 746, 756, 757; continuous high-grade, 756; Halpin, 721; heating surface of, 727, 745; mechanical circulation in, 745; Moliereux, 192; number of in Australian sugar mills, 721, 727; pH electrodes in, 714; Weble, 713–714, 721; Wetzel, 181, 187, 188; Sutton's Atmospheric Evaporating, 188, 833; vacuum, 16, 182, 187, 188, 699, 703, 705,
Papua New Guinea, 821
Para grass, 367
paradichlorobenzene, 523, 525, 534, 536; see also cane grubs
Parbury, Lamb and Co. (merchants), 244, 256
‘Paris Green’, 160
Paspalum spp., 534
Pathology Farm (BSES), 372, 583, 594
Paxton, W.H. & Co. (merchants), 244, 246, 253
Peak Year Scheme:
introduced in Queensland 1930, 280;
CSR agrees to include its New South Wales mills under, 280; opposition to from Queensland’s sugar mill-owners, 281–282; Royal Commission on (1939), 288–289; supported by sugar industry organisations, 283
Pearlwell Mill and plantation, 143
Peck, Isaac (sugar refiner), 37, 246
Pemberton Mill and plantation, 83, 92, 209, 218, 250, 252
Pender levellers, 710
Peru, 771
pest control; see Cane Pest Control Boards & Cane Pest and Disease Control Boards
pests (of sugar cane):
Peter Faust Dam, 448
Petree, Cuthbert (inventor), 700
Petree-Thomas process, 700, 712, 833
pH (of cane juice), 715, 749
Philippines, 32, 36, 37, 235, 703, 820, 821
Phillip, Captain Arthur, 21
phosphatation process (in sugar refineries), 240, 786, 807, 808, 811
phosphoric acid, 16, 240, 242, 479, 496, 807
phytotron, 500, 501
Pialba district, 52, 217, 218
Piddington, Albert, 773
Piddington Royal Commission, 343, 347, 694, 702, 773, 774
Pimpama plantation, 80, 84–85, 127
Pimpama Sugar Co., 82, 85
Pindar cane variety, 305, 370, 482, 484, 485, 487, 499, 502, 512, 584, 587, 596
pineapple disease, 364, 365, 579, 581, 582, 587, 588, 602
Pioneer Mill, Brandon:
acquired by CSR (1987), 752; bagasse drying at, 190; erection of, 186; experiments with feed chutes at, 724; fuel problem of, 195; machinery upgrades to, 193, 709, 722, 723; price paid for sugar cane, 218, 219; receives cane from the Haughton River district, 63, 209; staffed with an analytical chemist, 200; tramline extensions at, 208; see also Drysdale Bros. & Co.
Pioneer plantation, Brandon:
housing on, 86; irrigation at, 133–135; map of, 86; subdivided into small farms, 90; tramway system on, 208; use of meatworks manure on, 134; see also Drysdale, John & Drysdale, George
Pioneer plantation, Mackay, 81, 88, 207; see also Spiller, John
Pioneer River, 44, 79, 136, 144, 213, 218, 441
Pioneer Shire Council, 209
Pioneer Sugar Mills Ltd., 107, 281, 653, 663, 722
pivot irrigators, 449
Plane Creek Central Mill:
acquired by CSR (1987), 752; connected to Carmila by tramline, 274; crushing rate at, 731; mill peak of, 282; machinery upgrades to, 701; receives cane by government-owned railways, 657, 661, 671, 679; road transport of cane to, 667; supplies sugar to Millaquin Refinery, 250; tramlines for, 659, 679; Very Low Colour sugar manufactured at (1995), 818
Plane Creek Central Mill Co. Ltd., 274
Plane Creek Southern Cane Railway Extension, 679
Plantation Creek, 213, 407, 417
plantation whites; see mill whites plantations; see sugar plantations
planters; see sugar planters
planting (of cane); see cane planting
plate and frame filter presses, 700, 712, 721, 726
Pleystowe Central Mill:
acquired by CSR (1975), 751; boiler station upgrades at, 711, 729, 747; cane invert manufactured at, 803; competing for cane, 217, 218; electrification in, 715, 717; experiments with apron feeders at, 724; joins the Mackay Sugar Manufacturers' Association, 218; machinery upgrades to, 715, 717; mill whites manufactured at, 244; road transport of cane to, 671; sold to Mackay Sugar Cooperative Association Ltd. (1988), 752; treatment of waste waters at, 733; withdraws from Mackay Sugar Manufacturers' Association, 218
Pleystowe Central Mill Co. Ltd., 698
Pleystowe plantation, 82, 88, 90
Pleystowe Sugar Co., 82
plough-out orders, 574, 590, 592
P.O.J. (Proefstation Oost-Java) cane varieties, 472, 474, 479, 481, 482, 484, 486, 487, 571, 572, 573, 578, 587, 591, 708, 715
polarisation (of sugar), 780, 781, 801
polariscope, 197
politics:
alien and coloured labour, 52–53, 55, 58–59, 834; cane price fixing legislation, 689–693; Commonwealth government control over sugar industry, 58–60, 769–771; deregulation and the Australian sugar industry, 318–319, 321, 324, 328–329 834; protectionism, 834
Polish immigrants (to Australia), 636, 806
pollution; see air pollution & water pollution
polyelectrolytes (in clarification), 726
Poolman Brothers (sugar refiners), 247
Poolman, Frederick (sugar refiner), 235, 237, 247
Pools (for sugar), 280, 284, 285, 286, 320, 323, 331; see also Peak Year Scheme
Populin billet planter, 380
Populin Enterprises (Home Hill), 380
Port Denison; see Bowen
Port Douglas, 271, 798, 799
Port Essington, 26
Port Macquarie; 23–25, 28, 48, 95; see also Scott, Thomas
Port Melbourne Sugar Refinery, 237
Port of Cairns, 215, 793, 796, 797, 798, 799
Port of Bowen, 798, 799
Port of Brisbane, 331
Port of Bundaberg, 795, 798, 800
Port of Lucinda, 792, 793, 798, 800
Port of Mackay, 793, 798, 799, 800
Port of Mourilyan, 798, 799
Port of Townsville, 215, 793, 796, 797, 798, 800
Port of Urangan, 796, 798, 799
Port of Yamba, 816, 821
portable rail track, 617, 623, 642, 662, 691
potash, 345, 359, 370
Powell, Thomas (canegrower), 776
power alcohol, 732
preparatory devices (in sugar mills):
  bent tip knives, 705, 720; crushers, 15, 701;
Pender knives, 710; revolving knives, 15, 192, 193, 701, 705, 743, 833; shredders, 15, 191, 192, 701–702, 708, 709, 720, 722, 743; see also carriers
prices of cane; see cane prices
prices of sugar in Australia (for producers):
prices of sugar in Australia (retail):
1900 to 1939, 772, 774, 777, 784, 785; 1940 to 1959, 804, 805; since 1960, 806, 814
Prince, Lou (mill manager), 661, 665
Pritchard, George, 776
Privy Council, 259
Productivity/Cane Payment Package, 755; see also Queensland Sugar Corporation
proprietary central sugar mills; see central sugar mills, proprietary
Proprietary Sugar Millers' Association Pty. Ltd., 315–316, 753, 754
Proserpine Central Mill:
adopts relative percentage scheme, 697; boiler station upgrade at, 756; canegrowers regain control over the mill, 699; controlled by Queensland Bureau of Central Sugar Mills, 110; crushing rate at, 731;
extensions of tramlines for, 678; machinery in at time of erection, 193; machinery upgrades to, 699, 709, 712, 713, 724, 756; mill peak of, 282; machinery upgrades to, 699, 709, 712, 713, 724, 756; receives cane by government-owned railways, 661, 671; receives emergency government funding to operate, 751; road transport of cane to, 671; sugar exports of, 213, 215; treatment of waste waters at, 733

Proserpine Cooperative Sugar Milling Association Ltd., 110, 678, 752

Proserpine district:
area under cane, 51, 53, 56; cane first cultivated in, 51; Crystal Brook Sugar Co., 51; flood mitigation in, 448; important cane varieties in, 153; irrigation in, 405, 441, 448; Japanese canegrowers in, 105; land suitability study for, 749; Pacific Islander canegrowers in, 105; road transport of cane in, 658; sodic soils in, 385; soldier fly present in, 546; sugar exports from, 213, 215; wireworms prevalent in, 532

Proserpine River, 51, 433, 441, 448
Proserpine River Water Supply Scheme, 448

protection (for the Australian sugar industry), 58, 775, 776, 783–785, 834

pumps, 413, 438, 439

punts; see cane punting

pure obtainable sugar (p.o.c.s) formula, 199; see also commercial cane sugar (ccs)

pusher feeders:
double, 710; horizontal, 705, 833; replaced by vertical shutes, 724–725; vertical, 709, 833

Pyramid plantation, 88, 90, 160, 274

Pyrmont Refinery (Sydney):
affiliation station at, 241; bulk handling of raw sugar at, 793–794; bulk raw sugar storage bin erected at, 792, 793; bone char use at, 808; bone char-making plant closed at, 809; closed (1992), 817; description of, 235; erected (1878), 234–235; fertiliser manufactured at, 131; fire in (1918), 771; innovations in manufacturing processes at, 241–242, 809; liquid sugar manufactured at, 809; machinery upgrades to, 239, 779, 806; output of, 235, 239, 771, 777, 814; pollution reduced at, 809; products manufactured at, 809, 810; retail packaging plant established at, 810; site for enlarged, 239; see also Colonial Sugar Refining Company

Q. 28 cane variety, 486, 581, 582
Q. 28 disease; see rattoon stunting disease
Q. 813 cane variety, 470, 472, 474, 481, 482, 484, 487, 569, 571, 573, 578, 587, 584; see also Queensland Acclimatisation Society
Q. series cane varieties, 381, 481–482, 486, 491, 493, 498–499, 504, 509

quadruple effets, 192, 202, 711, 721, 727
Quaid, George Snr (inventor), 639
Quaid’s front end cane loader, 639–640

quarantine or isolation plots (for cane variety importations and introductions), 472, 488, 489

Queensland:
amount of fertiliser applied to crops of sugar cane in; 357, 359, 372–373, 383–384; anti-pollution legislation in, 735; area of irrigated cane in, 399, 406, 415, 441, 442, 448; area harvested by ‘white’ labour, 1900s, 60, 109; area under sugar cane in, 45, 46, 48, 50, 272, 273, 275, 287, 292, 310, 322, 325; average area cultivated on a cane farm in, 386; cane grub attacks in, 158–159, 522–523, 526, 540–541, 543, 547–548, 553–554; cane price-fixing legislation in, 689–697; cane varieties in, 142, 144, 152–154, 469–470, 480–481, 484, 486–487, 491–493, 499, 509–511; central sugar mills in, 98–99, 100–103, 110–111, 276; continuous (weekly) crushing in, 754; CSR erects New Farm Refinery in, 238–239; CSR expansion to, 82; cultivation methods of canegrowers in, 123–127, 341–386; disease control methods in, 142–146, 565–602; establishment of cane sugar quarantine districts in, 575; extent of green cane harvesting in, 454; location of sugar plantations in, 74, 75; feral pigs damage crops of cane in, 550, 556, 557; Italian canecutters for, 636–637; losses to cane crops from nematodes, 551; mechanical loading of cane in, 640–641, 642; mechanical harvesting of cane in, 646, 647, 649, 650; number of canegrowers in, 107, 109, 291, 298, 308, 314, 322, 325, 330; number of canegrowers in irrigating, 398;
number of mechanical cane harvesters in, 673–674; number of sugar mills in, 175, 176, 185, 191, 203, 698, 757; number of sugar plantations in, 74, 75; overall losses to cane crops from pests in, 557–558; ownership patterns of mechanical harvesters in, 654; prohibition on movement of cane into from New South Wales, 575; rat damage to crops of cane in, 528–530, 549–550, 556, 557; size of sugar plantations in, 79–80; small millers in, 92–94; soldier fly infestations in, 546–547; sugar industry in affected by ‘rust’ disease, 142–143; sugar industry contraction in during late 1880s, 53; sugar industry expansions in, 55–57, 63–64, 272–276, 287, 297–301, 308–311, 313–314, 316, 325–326, 329–330; weevil borers damage crops of cane in, 521, 522, 530, 556; waterways in polluted by effluent from sugar mills, 732–736
Queensland Acclimatisation Society, 147, 148, 474, 481, 486, 487; see also Q. 813 cane variety
Queensland Agricultural Bank, 106
Queensland Bureau of Industry, 287
Queensland Bureau of Sugar Experiment Stations; see Bureau of Sugar Experiment Stations, Queensland
Queensland Cane Growers’ Association, 279, 300
Queensland Cane Growers’ Council: annual conferences of, 279, 280, 283; attempts to counteract negative publicity about the Australian sugar industry, 782; calls for the erection of an additional sugar refinery in Queensland, 789; complaints to about overproduction, 301; concerned about overproduction, 285; criticises Commonwealth government, 323; formation of, 279; forms Mechanical Harvesting sub-committee, 637; expresses disappointment at proposal to alter the Sugar Agreement of 1930, 784; levies members to promote mechanised harvests, 638; opposes cane burning, 628; opposes deregulation, 319, 321; opposes night harvesting, 665; rejects findings of Gibbs Royal Commission, 309; supports implementation of Equalisation Scheme, 286
Queensland Cane Harvester Corporation Ltd., 624, 638
Queensland Cement and Lime Co. Ltd., 345
Queensland Central Sugar Factory Co., 99
Queensland Council of Agriculture, 774
Queensland Court of Industrial Arbitration, 618, 619, 620
Queensland government: accused of allowing sugar mills pollute watercourses, 734; acquires licence for the Pet-tree-Thomas process, 699; acts as agent for Commonwealth government in acquisition of Australian-produced raw sugar, 770; approves introduction of Peak Year Scheme, 280; approached for financial rescue package for state’s mill-owners 1965, 312; approves increased mill peaks, 288–289, 293, 297; asks Commonwealth government for sufficient workers to complete the 1943 harvest, 631; builds railways benefitting cane growers, 207–208; establishes BSES 1900, 138; establishes Queensland Sugar Board, 776; establishes State Nurseries at Mackay and Kamerunga, 137; funds erection of central sugar mills, 100–101, 111, 276; funds flood mitigation works in sugar-producing districts, 433; funds irrigation schemes in sugar-producing districts, 420, 441, 448; funds new sugar infrastructure projects during the early 1990s, 329; imports cane varieties from Hawaii in late 1870s, 143; introduces Clean Air legislation, 738; introduces Clean Water legislation, 735; introduces fertiliser rationing during World War 11, 358–359; maintains tariff on sugar imports, 45; investigates central milling system in West Indies, 100; lobbied for more funds to control pests of sugar cane, 526; petitioned by Tooth & Cran about refining sugar in bond, 232; opposes sugar industry deregulation, 321, 328; petitioned to build central mills, 92, 100, 110; permits recruitment of Pacific Islanders 1868, 45; prohibits recruitment of Pacific Islanders 1885, 52, 86; provides emergency funding to the state’s mill-owners (1982), 751; publishes brochure about opportunities to acquire land on sugar plantations, 103–104; rescinds prohibition on recruitment of Pacific Islanders (1892),
Queensland Harvesting Company Pty. Ltd., 652
Queensland Industrial Commission, 754
Queensland Industrial Court, 617, 628, 629, 640, 655, 696
Queensland National Bank:
acquires Millaquin and Yengarie Refineries, 234; closes Doolbi Mill (1924), 698; closes Yengarie Refinery (1900), 194; competes with CSR for sugar from Queensland mill-owners, 250; converts Millaquin Refinery into a factory that can handle raw sugar, 250; decides to maintain plantation agriculture on its Bundaberg properties, 92; financial support for Robert Cran & Co., 233, 234; funds establishment of sugar plantations and small mills, 82, 94; funds machinery upgrades to Millaquin Refinery, 234; loans to Queensland mill-owners, 250; market share agreements with CSR, 251, 252; purchases Mon Repos Mill (1899), 250; resolves to increase Millaquin Refinery's output, 250; undersells CSR in sugar products, 249; see also Millaquin & Yengarie Refineries and Millaquin & Qunaba Mills
Queensland Railways, 207, 208, 215, 659, 661, 667, 669, 671, 679, 793
Queensland Society of Sugar Cane Technologists, 707
Queensland Sugar Board:
accepts CSR's offer to finance sugar exports, 277; acquisition of excess sugar, 289, 301–302; arranges for the manufacture of the JA brand of sugar, 801; approves increased mill peaks for New South Wales, 317–318; authorises upgrades to the state's bulk sugar terminals, 821; borrows funds to augment sales proceeds from 1966 and 1967 crops, 312; builds Brisbane Bulk Sugar Terminal, 821; ceases to exist (1991), 327; controls sugar marketing in Australia, 776; formation of, 276, 776; plans for introduction of mechanised bulk sugar transport system, 792; relations with New South Wales Sugar Milling Cooperative, 331, 815; relations with CSR, 277, 777; retains CSR as its export agent after deregulation in 1989, 815; seeks new markets for sugar, 780–781, 801, 803, 821, 823; sponsors advertising campaign to improve sugar consumption in Australia, 812; stresses need for improved raw sugar quality, 801, 803
Queensland Sugar Corporation:
assumes role once held by Central Sugar Cane Prices Board, 327, 329, 754; develops new sugar markets, 823; formation of (1991), 327; reports on cane price formula, 754–755
Queensland Sugar Industry Defence Committee, 782
Queensland Sugar Industry Infrastructure Package (1993), 329, 436
Queensland Treasury, 101, 102, 110, 111, 397, 698, 795
Queensland University of Technology, 582
Quinlan, Gray & Co., 82
quintuple effets, 192, 202, 711, 721, 727
Qunaba Mill:
closure of (1985), 752; disposal of fly-ash at, 739; machinery upgrades to, 722; rezoning of assigned land to, 661; transport of cane to, 209; sugar from supplies Millaquin Refinery, 798; treatment of waste waters at, 737; see also Queensland National Bank
Qunaba plantation, 136
Racecourse Central Mill:
boiler station upgrade at, 719; burns sawdust in mill furnaces, 747; cane invert manufacture at, 803; continuous vacuum pan installed at, 746; disposal of fly-ash at, 739; electricity installed in, 202; erected (1888), 101; joins the Mackay Sugar Manufacturers' Association, 218; loss of assigned land to urban expansion, 322; machinery upgrades to, 703, 705, 709, 710, 712, 713, 719, 723, 755; pollutes nearby watercourses, 734; receives cane by government-owned railways, 657, 661, 671; shortage of cane late 1880s, 101; treatment of waste waters at, 734; staffed with an analytical chemist, 200–201
Racecourse Central Sugar Co. Ltd.:
- debts to Queensland Treasury, 101; farmer debts to, 106; funds machinery upgrades to Racecourse Mill, 703; purchases large blocks of land for subdivision, 217
- Racecourse Cooperative Sugar Milling Association, 734
- Racecourse Refinery (Mackay), 819, 820
- rail trucks, 642, 656, 658, 662, 668, 669
- railways, 207–209, 656–657
- rakes (of loaded rail trucks), 642
- Ramsay, Alexander (chemist), 149
- Rankin, Lt-Col. Colin (politician), 220, 690
- Ranking, Robert (public servant), 59, 110
- Ranking Royal Commission (1906), 59
- Ranking Royal Commission (1911), 110–111, 271
- RapiDorr subsidiary, 744
- ratoon, ratoon cane, ratooning, 11, 349, 352, 354, 358, 378, 380–381, 382, 386, 484, 486
- ratoon stunting disease:
  - control methods for, 581–582, 589, 596, 601, 602, 603, 604; discovery of, 579; transmission of, 581; susceptibility of Q. 28 to, 486; yield losses from, 585–586
- rats (in sugar cane):
  - BSES investigations into control measures, 557; CSR efforts against, 528, 529, 549; control measures against, 528, 529, 530, 540, 544, 549–550, 557, 627, 628; damage to cane crops from, 528, 529, 530, 540, 544, 549, 556, 557; different species of, 528; see also Weil’s disease
- raw sugar, see sugar, raw (in Australia)
- rebate; see excise and rebate
- red bills; see swamp hens
- Redland Bay plantation, 79, 87
- red rot disease, 142, 570, 595, 602
- red stripe disease, 572, 595
- Reed, Dr John Hastings, 150, 697; see also Hambledon Mill & relative percentage scheme
- refining, sugar; see sugar, refined (in Australia)
- refining qualities of raw sugar, 249
- refractometer, 480
- Rehfelt, Carl, 96; see also Alberton Mill
- Reid, Jane (author), 720
- Reid, Walter & Co. (merchants), 244, 253
- relative percentage scheme, 697
- retention money (for canecutters), 613
- revolving knives, 15, 192, 193, 743, 833
- rezoning (of assignments), 659–661
- Richmond Mill, 99
- Richmond plantation, 79, 88
- Richmond River, 28, 207, 274, 427, 474, 533
- Richmond River County Council, 427, 428, 437
- Richmond River district:
  - African black beetle attacks in, 533; area under cane in, 48, 51, 274; cane first cultivated in, 28; canegrowers in form cane planting cooperatives, 380; cane grub attacks in, 552; changing distribution of cane growing in, 65; cultivation methods of canegrowers in, 123, 124, 350; CSR erects sugar mill in (1881), 98; drainage improvements in, 275, 402–403, 407, 408, 412, 413, 427–428, 437, 438–439; drainage unions in, 402, 412, 413; erection of Bagotville Barrage in, 437; Fiji disease outbreaks in and their control, 503, 595; frost-prone, 13, 48; gumming disease outbreaks in, 144, 471, 568; Indian canegrowers in, 105; Keith Hall Estate in, 78, 83, 131, 146; mechanical loading of cane in, 428, 643; poorly drained, 402; presence of Sikhs in, 90; prone to frost, 13; soil conservation measures in, 432; small millers in, 93; tramlines in, 205; see also Broadwater and Rous Mills & Broadwater Experiment Station
- Richmond River Sugar Co., 99, 191, 204, 208
- Richmond River Valley Flood Mitigation Committee, 427
- Rio de Janeiro, 21, 31
- Ripple Creek, 407, 408, 409, 425, 439
- Ripple Creek Drainage Board, 439
- Ripple Creek Mill, 236, 243, 250, 252
- Ripple Creek plantation:
  - area under cane on, 80; land leased to small farmers, 89; purchased by CSR (1906), 252; subdivision of, 91; see also Boyd, Robert
- river bank erosion, 408–409, 429–430, 433
- River Improvement Trusts, 409, 429–430, 433
- River plantation, 80, 197, 207
- Riverside Mill, 99
- road transport (of cane):
  - cost of, 678; first used in Australia, 623; mill supply areas used in, 656, 658, 665–668, 670, 678
- road transport (of raw sugar), 794, 799, 821
- Roach, Brian (cane breeder), 500, 501
‘roaming’ provisions (of assignments), 321–322, 327
Robb, John A., 92
Robb, John & Co., 90, 105, 200;

see also Cudgen plantation
Robb Swamp Drainage Scheme, 402
Robb Swamp Drainage Trust, 400
Robey, James, 36
Robey, Ralph, 36
Robey & Co. (sugar refiners), 36–37
Robinson, Perry (plant pathologist), 585
Rockhampton district, 49, 51, 53;

see also Yepoon Sugar Co. & Pandora Mill
Rockholme plantation, 126
Rocky Point Mill:

excluded from operating under the cane price-fixing legislation, 691; Fiji disease affects cane supply to, 591, 592; financial difficulties of, 303; land suitability study for, 749; loss of assigned land to urban expansion, 322; machinery upgrades to, 701, 718; mill peak of increased, 303, 307; modernisation program at, 722; Queensland’s only privately-owned sugar mill, 96; road transport of cane to, 667, 670; state-wide price of cane finally accepted at, 696; trial of continuous vacuum pan at, 746; works only two shifts daily, 715; works three shifts daily, 731; see also Heck, W. H. & Sons Pty. Ltd.
rodenticides, 540, 557, 558
Roderick, Colin (historian), 23
roguing, 574, 579, 589, 590, 592, 603, 604 ; see also Fiji disease
‘root rot’; see Pachymetra root rot
rotary tipplers, 743
Roth, Henry (author), 123, 128, 182
Rosewood Scrub, 52
Ross, Joseph Grafton (sugar refinery manager), 37
Ross, Major Robert, 21
Ross, Tom (inventor), 352
Ross, William Murray, 235
Rossi Farming Co., 377, 649
Rosstown Sugar Refinery, 235
rotary vacuum filters, 712–713, 721, 726–727, 757
rotary filter mud; see filter mud
rotary hoes, 302, 362, 386, 555, 625, 833
Rous Mill, 191–192, 200, 204, 237, 248
Rous plantation, 90, 208
Row, John (politician), 664
Royal Botanic Gardens, Kew, 146
Royal Commissions and Inquiries
(Commonwealth):

254 (1906); 62, 106, 201, 203, 220, 239, 242–243, 252, 253, 254, 255, 259–260 (1911–1912); 343, 694, 702, 773, 774 (1919); 349, 350, 782–783, 787 (1930); 805 (1952); 804 (1960)
Royal Commissions and Inquiries (Queensland):

100–101 (1885); 54, 73, 99, 107, 248, 528 (1889); 59 (1906); 110–111, 271 (1911); 271 (1916); 275–276 (1922); 287–288, 357, 715 (1939); 351, 360, 631, 632, 633, 718 (1942–1943); 292–293 (1946); 295–296 (1950–1951); (1963)
Royal Commissions and Inquiries (Victoria), 255 (1896)
Rubyana Mill, 191
Russel, P.N. & Co. (sugar mill machinery manufacturer), 184
Russell River, 110
‘rust’ disease, 45, 49, 52, 142, 143
Ryan government (Queensland), 397, 526, 617–618, 689, 692, 693, 770
Ryan, Premier Thomas J., 220, 271, 618, 619, 639, 689, 770
saccharometer, 196–197
Saccharum officinarum, 9, 489, 501
Saccharum robustum, 9, 478, 489, 493, 497
Saccharum spontaneum, 9, 477, 489, 490, 493, 497, 501
salt water intrusion (of aquifers), 406, 415, 417, 419, 450
Sandridge Refinery (Melbourne), 36, 235
Sandy Creek, 441, 732, 735; see also Eton Irrigation Scheme
Sarina, 330, 645, 732, 749
Saunders, Professor Kay, 620
Saunders, Professor Kay, 620
Savage Report, 320–321, 326, 331, 675
Savage, Russell, 320, 675, 751
sawdust, 747, 748
sawmills, 747
Sawyer, Graham (Sugar Research Institute researcher), 739
Scott, Ray & Dixon (inventors), 645
Scott, Thomas Alison, 23, 25, 78
screw presses, 14
scrub rakes, 361
Scriven, Ernest, 139, 467
Scullin government (Commonwealth), 782, 783
Seaforth plantation, 82, 88, 90, 134
Searby shredder, 709, 719, 720, 744
season, crushing or harvesting:
  commencement of, 614, 719; continuous crushing during, 754; crushing records for, 715, 731; disrupted by strikes, 60–62, 220–221, 617–618, 620, 627–628, 665; lack of canecutters during, 617, 630–631, 633, 635; retention money for canecutters during, 613
Seaview Mill, 191
setts:
  definition of, 10; planting of, 11, 124; 343, 352, 365, 380; soaked in quicklime to combat disease, 143; soaked in a solution of lead arsenate to combat beetles, 534; sprayed with fungicide, 365, 588
Shann, Don (Sugar Research Institute researcher), 725
sharecropping, 73, 87
Sharon plantation, 80, 92
Shaw, Flora (journalist), 89, 189
Shear blade cane harvesters, 645
sheds; see implement sheds
Sheep Station Creek, 134
Sherwood Mill, 94
Shlomowitz, Dr Raph (economic historian), xi, 112, 613
Shoal Bay plantation, 56
shoaling (of rivers), 206–207, 215
Shogren, Dr Diana (political scientist), 62
Short Inquiry (1916), 271
Short, William, 271, 287, 288, 289, 409, 779, 786
Smithfield, 414
S.N. series cane varieties, 471, 482, 495
sodic soils, 385–386
soil analysis, 126, 134, 139, 347
soil compaction, 364, 386, 643
soil conservation measures:
  contour banks, 430–432, 451, 453, 454; lack of in Queensland, 410; promoted by BSES, 411, 431; promoted by CSR, 431; promoted by Department of Primary Industries, Queensland, 431, 451; slow uptake by canegrowers, 432, 451, 452; see also soil erosion
soil enhancement:
  addition of bagasse, 375; addition of gypsum, 450; addition of lime, 126, 134, 136, 139, 143, 343–347, 374, 386; addition of trace elements, 375, 385; green manuring, 131, 132, 134, 164, 348, 374
soil erosion:
  attitude of canegrowers to, 431–432, 452; BSES’s efforts to combat, 410–411, 430–431, 453; CSR efforts to combat, 431; causes of, 410; investigations into extent of, 412, 451; location of, 410, 412, 430;
present in Isis district 1890s, 410; see also soil conservation measures
soil fertility, 126, 127, 129, 139
soil fumigation:
chemicals used in, 162, 523, 525, 534, 536; cost of, 162; disrupted during World War 11, 359, 537; effectiveness of, 162, 536; extent of, 162, 163, 523, 537; disliked by workers, 162; promoted by Cane Pest Control Boards, 536; see also cane grubs, Blundell knapsack fumigant injector, Blundell machine injector & Dank's injector
soil maps, 354
soil salinity, 385–386, 450, 597
soils and cane growing, 14, 126, 139, 450
soldier fly, 545–546, 555, 556
soldier settlement (in Australia), 274, 292–293, 659
Solomon Islands, 83
Soper, Frederick, 326
sour storage rot (of chopped cane), 602, 653; see also Egan, Brian
South Africa, 502, 587
South Australia:
annexation of Northern Territory, 50; anti-sugar imports embargo meetings in, 784; companies based in invest in sugar plantations, 50; Charles Jacobs & Son supplies sugar to, 255; closure of Glanville Refinery in (1991), 817; CSR erects sugar refinery in, 238; CSR controls market for sugar in, 255; government of encourages cultivation of sugar cane in Northern Territory, 50, 75; see also Glanville Refinery
South Burdekin Water Board, 417, 419
South Johnstone Cooperative Sugar Milling Association, 635, 737–738
South Johnstone Mill, 97, 98
Spaniards (in Australia):
as canecutters, 60, 275, 637; as farmers, 275, 637
spear system, 135–136, 397, 414, 441; see also irrigation (of sugar cane)
Spiller, John, 81, 207; see also Pioneer plantation (Mackay)
spray or sprinkler irrigation, 406, 414–415, 443–444
Springhill Mill, 191
SRI clarifier, 744, 833
St Helena Island Penal Establishment, 45
Staiger, Karl (chemist), 143
Staines, Samuel (sugar planter), 81
stand-over cane, 301, 302, 303, 313, 315
steam (in sugar mills), 195, 710–712, 729, 747
steam (in sugar refineries), 807
steam bleeding, 711, 712
steam ploughs, 124, 130, 133, 134, 136, 349
Steindl, David (plant pathologist), 579; see also ratoon stunting disease
Stoddart, James (commission agent), 244
stone pickers, 361, 654
Stone River, 64, 209, 430
stones (in paddocks of cane), 123, 124, 133, 361, 654
stools (of cane), 9–10

920
storage, of raw sugar:
  at sugar mills, 212, 717, 793, 796; at sugar refineries, 235, 792, 793, 794, 779, 780, 808
Stradbroke Island, 577
Strahan, James (engineer), 43
striate mosaic (cane disease), 583–584, 601, 602
strikes:
  canecutters (1934), 529, 627–628; farmers refusing to harvest cane (1914), 220–221;
  over Dickson Award (1916), 618; South Johnstone (1927), 621; sugar workers
  (1909), 60; sugar workers (1911), 61; Weil's disease (1934), 627–628
stump removal, 123, 160, 361
Sturgess, Owen (plant pathologist), 580
subsidies; see clarifiers
subsoiling, 124, 131
sugar, raw (in Australia):
  acquired by the Queensland government, 770;
sugar, refined (in Australia):
Sugar Agreements, Australia:
  after World War II, 804–806, 814, 815; before World War II, 774, 776, 777, 783, 785; cessation of (1989), 815; during World War II, 787–788; introduced (1920), 774; sugar industry requests to alter, 787–788
Sugar and Coffee Regulations (1864), 43, 44, 45, 74
sugar and nutrition, 812, 813
Sugar and Nutrition abstracts, 812
Sugar Australia Pty. Ltd., 820
sugar beet, 235
sugar bins (at sugar mills), 796
sugar boilers, 195–197, 714; see also Knobel, Alfred & Frederick
sugar brokers, 243–244
sugar cane:
  arrowing of, 468, 490, 497, 502, 508; breeding new varieties of in Australia, 146–151, 467–515; climatic requirements for, 12–13; clusters of stalks of, 9, 10; genus Saccharum, 9, 478, 489, 493, 497, 501; diseases of in Australia, 57, 142–143, 144–146, 565–604; introduction to Australia, 21; pests of in Australia, 155–163, 521–558; soil moisture requirements for, 13–14; stools of, 9, 10; transport of to sugar mills, 203–216, 623, 656–672, 678–679; unloading of at sugar mills, 210–211, 743; varieties of, 141–155, 469–470, 474, 480–487, 491–494, 499, 501–502, 504–505, 509–512; see also cane loading, cane harvesting, cane unloading (at sugar mills) & cultivation methods (of sugar cane)
Sugar Cane Growers' Adjustment Scheme, 322
sugar cane leaffoppers; see leaffoppers
sugar cane prices; see cane prices
Sugar Cane Prices Board; see Central Sugar Cane Prices Board
Sugar Committee of Inquiry, Commonwealth (1952), 805
sugar consumption:
in Australia, 231, 777, 786, 788, 806, 811, 813; in New South Wales during the 1830s, 32; in United Kingdom, 786
sugar cubes, 16, 809
Sugar Enquiry Committee, Commonwealth (1960), 804
Sugar Experiment Stations; see Bureau of Sugar Experiment Stations, Queensland
Sugar Experiment Stations Board, 276, 598
sugar imports; see imports of sugar (into Australia)
Sugar Industry Award, 613, 633, 639, 655
Sugar Industry Package of 1993, 329
Sugar Industry Rescue Package, 321
Sugar Industry Task Force (1992), 328, 820
Sugar Industry Tribunal, 755
Sugar Industry Working Party (1985), 320, 675
Sugar Industry Working Party (1989), 326, 675
Sugar Infrastructure Package (1993), 679
Sugar Journal and Tropical Cultivator, 128
sugar loading; see loading sugar
sugar mills (in Australia):
as absence of cleanliness in, 703; adopt multiple crushing, 186, 191, 192, 193; air pollution from, 738–740; animal-powered, 54, 73, 177, 188; annual sugar output, 175, 186, 201, 203, camouflaged during World War II, 717; co-efficient of work in, 699, 702, 703; competing for cane, 216–220; computers in, 748–749; cost to erect, 94, 111, 193, 276; electricity in, 202, 712, 715, 717; crushing rates in restricted during World War II, 718; double crushing trains in, 297, 705, 722, 741, 755; equipped with rotary tipplers, 743; equipped with rotary vacuum filters, 712–713, 726; equipped with vacuum pans, 182, 187, 188, 713–714, 721, 745–746, 756; equipped with weighbridges, 202; evaporating surface of effects in, 727, 744, 757; fuel demand of, 194–195, 747–748; horse-driven, 54, 73, 177, 188; hourly crushing rates in, 715, 731, 749, 755, 756; juice, 175–176, 189, 191; level of technology in compared to overseas sugar mills, 183, 202, 706; machinery upgrades to, 177, 182–184, 188–189, 191, 192, 193, 202, 699–701, 703, 705, 709–714, 718–729, 741–746, 755–757; miss-match between crushing and evaporating capacities, 702–703; night shifts at, 186, 192; nineteenth century innovations in, 183–184, 186, 191–193; number in Queensland, 175, 176, 185, 191, 757; number in New South Wales, 175, 176, 185, 191, 757; number of vacuum pans in, 713, 721, 727, 745; pollution from, 712, 731–738; staffed with analytical chemists, 110, 197–201; twentieth century innovations in, 705, 708–715, 722–723, 724–729, 738–740, 743–746, 748, 756–757; upgraded with steam-driven machinery during the 1870s and 1880s, 177; weekly crushing rates, 703, 731; yearly crushing volumes, 703, 715, 731, 749, 757; see also cane unloading (at sugar mills), coefficient of work, machinery manufacturers (sugar mills) & Peak Year Scheme
sugar mill machinery (manufacture of); see machinery manufacturers (sugar mills)
Sugar North Ltd., 753
Sugar Peaks; see Peak Year Scheme
sugar plantations (in Australia):
area cultivated on, 80; areal size of, 79–80; closure of, 53, 56, 57, 87–88, 91–92; distribution of, 74; housing for workers on, 85–86; labour force of, 83–85; location near watercourses, 78–79; non–cultivated lands, use of, 80; number in Australia, 74, 75; ownership of, 81–83; persist after 1904, 92; size of, 79–80; subdivision of, 89–92; unsuccessful sale of, 88; see also names of individual sugar plantations
sugar planters (in Australia):
affected by labour shortages, 57, 85; affected by ‘rust’ disease, 143; and Aborigines, 84, 88; background of, 81–83; efforts to reduce numbers of cane beetles and cane grubs, 159–160; employing Europeans, 84–85, 130; leasing land to farmers, 89–90, 104–106; leasing land to Chinese, 89; leasing land to Pacific Islanders, 89; opposition to loss of Pacific Islander labourers, 55, 59; recruiting Javanese workers, 87; recruiting Japanese workers, 90; relations with small farmers, 100; responses to labour shortages, 85, 87; sale of land to farmers, 89–91, 104–106; source of funding, 50, 82–83;
terms for land disposal 1880s & 1890s, 89–90, 104–106
sugar prices; see prices of sugar in Australia (for producers) & prices of sugar in Australia (retail)
sugar products; see caster sugar, icing sugar, liquid sugar, sugar cubes, sugar, raw (in Australia), sugar, refined (in Australia) & tablet sugar
sugar rationing (in Australia), 786, 788
sugar refineries (in Australia):
agitation for one in North Queensland, 791;
agitation for one in Tasmania, 789; acquired by the Queensland National Bank, 234; bone char usage at, 808; closed by CSR, 817; competition between, 35, 37, 246–247, 249–252, 819–820; damaged by fire, 779; erected by Australian Sugar Co., 33; erected by Australasia Sugar Refining Co., 237; erected by CSR, 234–235, 779–780; erected by Isaac Peck, 37; erected by Joshua Bros., 235; erected by Poolman family, 237, 247; erected by Robert Cooper, 35; erected by Robert Cran & Co., 233–234; erected by Robert Tooth & Co., 237; erected by Robey & Co., 37; erected by Thomas Bowden, 34; erected by Tooth & Cran, 81; erected by Victoria Sugar Co., 36, 235; erected by William Ross, 235; failure of due to CSR's price reduction policy, 35, 247; modified products manufactured at during World War II, 787; output of, 33, 36, 37, 771, 779, 781–782, 786, 787, 789; pollution reduced at, 809 products manufactured at, 33, 787, 809, 810, 811; proposed by Charles Jacobs & Sons, 238; proposed nationalisation of, 256, 261; shortage of hessian bags at, 807; shortage of raw sugar at, 789; shortage of workers at, 789, 807; steam economy in, 807; see also Colonial Sugar Refining Company, Millaquin Sugar Co. Ltd., Victoria Sugar Co. & sugar, refined (in Australia)
Sugar Research and Development Corporation, 503, 513
Sugar Research Institute:
Cullen, Rod, 739; formation of (1949), 719; Hale, David, 744; history of, 719; investigations into bagasse consumption and preservation, 747; investigations into cane trains and locomotives, 662; investigations into clarifier design, 720, 744; investigations into continuous vacuum pans, 746; investigations into design of feeders for sets of crushing rollers, 725–726; investigations into methods to reduce air and water pollution, 720, 735, 739; investigations into transport scheduling, 669, 720; Murry, Rod, 668; Sawyer, Graham, 739; Shann, Don, 725; Whayman, Ted, 744
Sugar Yield Decline Joint Venture, 513, 514
sulphur deficiency (in soils), 385
sulphur dioxide, 182, 479, 489, 496
sulfuric acid, 16, 182, 473, 496
Sullivan, Victor (politician), 313, 314, 315, 316
Summerville Mill, 94
Sunshine Sugar, 815
Supreme Court of Queensland, 692
suSCon®Blue (insecticide), 552, 553, 554, 555
Sutherland, Dr Keith (CSR’s Director of Research), 500
Sutton’s Atmospheric Evaporating Pan, 188
Swallow & Ariell Ltd. (biscuit manufacturers), 247
Swallow & Derham (sugar planters), 213, 236; see also Hambledon plantation
Swallow, Thomas (sugar planter), 80, 213; see also Hambledon plantation
swamp hens, 540
Swayne, Edward (politician), 159
Sydney:
commission agents for sugar in, 244; Kent Brewery, 231; merchants importing sugar, 31–32; sugar machinery makers in, 184; sugar refineries erected in, 33–35, 37, 234–235
Sydney Botanic Gardens, 23
Sydney Morning Herald, 95, 123, 127, 129
Sydney Sugar Works, 34
tablet sugar, 787
tachinid flies, 521, 522
Taiwan:
as source of cane varieties, 495; as source of common rust disease, 600; sugar imports from, 233, 771
Tariff Board, 774–775, 788; see also Industries Assistance Commission & Industry Commission
tariffs:
on sugar imports into Australia, 245, 324, 328, 329, 774–775, 815; on sugar imports into New South Wales, 37; on sugar imports into Queensland, 45; suggested removal of in New South Wales, 1895, 58
Tate and Lyle International, 753, 793, 816
Taylor bag filters, 232, 240, 241, 786
Te Kowai Mill, 179, 184, 190, 207
Te Kowai plantation, 82, 83, 84, 88
Technical HCH; see BHC
tenanted sugar plantations, 89–90
termites, 155
thallium sulphate baits, 549, 557; see also rats (in sugar cane)
*The Canecutters*, 636
*The Cane Growers' Quarterly Bulletin*, 354
*The Queensland Cane Growers' Handbook*, 354
Theodore government (Queensland), 275, 279, 527, 776, 779
Theodore, Edward (Premier and Treasurer of Queensland), 397, 619
Thomas, Nehemiah (inventor), 799; see also Petree-Thomas process
Thornton (locality), 316
Tierney, P. F. (canegrower & inventor), 638
Tinana Creek, 194, 447
Tingalpa, 45
tobacco growing (in Queensland), 310–311, 448
Toft Brothers, 422, 642, 651, 653
Toft Brothers Industries Ltd., 647, 649
Toft, Colin, 647
Toft, Harold, 647
Toft, Joseph Jnr, 632
Toft, Joseph Snr, 632, 638
Toft hydraulic grab-type cane loader, 642, 643
Toft mechanical cane harvesters, 638, 647
Toft mechanical cane loaders, 422, 428, 632–633, 638, 639
Toft, Stan, 638
toll refining, 777
Tomlinson, Thomas, 140; see also cane harvesters
Toohey, John and James (brewers), 82
Tooth & Cran (sugar refiners), 81, 175, 231–233; see also Yengarie Refinery
Tooth, Edwin (brewer), 36
Tooth, Robert, 81, 175, 231, 233
Tooth, Robert & Co. (sugar refiner), 237
top rot disease, 570, 572
Torres Strait Islanders, 630, 635
torricellian waters, 733, 736
*Toscanella* (ship), 637
Town, Robert & Co., 32, 37, 49
Townsville:
as a port, 209, 215, 371, 793, 796, 797, 798, 800; bulk sugar terminal at, 795, 799, 821; commission agents at (for sugar), 245, 250; connected to Ingham by rail, 272; connected to Lower Burdekin by rail, 209; sugar plantation at, 49
Townsville Bulk Sugar Terminal, 795, 799, 821
Townsville Municipal Council, 209
tractors:
first used by Australian canegrowers, 342–343; horsepower of, 363–364, 379; impressed during World War II, 292, 359–360; models of, 342–343, 351, 362–363, 379; number per cane farm, 362; slow to be adopted by canegrowers in New South Wales, 350; used to drive irrigation pumps, 343, 398
tramlines:
amount of cane moved by, 657, 670; ballasting of, 669–670; extension of, 208, 659, 678, 679; first built in 1880s, 207; repairs to, 656, 669–670; see also transport (of cane to sugar mills)
tramways; see tramlines
transloader, 667
transport (of cane to sugar mills):
transport (of raw sugar):
by bags, 211, 213, 216, 796, 798; by rail, 213, 215, 793, 794, 799; by road, 212, 213, 794, 821; by ship, 213–215, 798–799; in bulk, 792–800, 821; see also bulk handling of raw sugar
transport scheduling (of cane trains), 664, 669
trash burning, 139, 347–348, 349, 359, 376, 411, 532, 538
trash conservation or retention, 348, 355, 359, 362, 374, 378, 453–455, 524
trashing (of cane), 125–126, 216, 365, 531
travelling irrigators, 444–445, 749
treacle, 809
Treacy lift, 658
Treasury Department, Queensland; see Queensland Treasury
treble crushing in Australian sugar mills, 192, 193, 202, 702, 721
tree clearing, 123, 361
Trevor, Pyrce (inventor), 140
trickle or drip irrigation, 449
triple effets, 186, 192, 193, 202, 699, 701, 703, 711, 719
Triton cane variety, 305, 495, 502, 509, 512, 587, 596
Trojan cane variety, 471, 482, 484, 485, 487, 499, 512, 582, 584, 585, 587
tropical fruits, 65, 66, 87, 272
Tryon, Henry:
   collected cane varieties in New Guinea during 1896, 146; lack of involvement in cane variety breeding trials, 149; identifies a fungal pathogen fatal to cane grubs, 554; identifies link between rainfall and grub attacks, 158; research into controlling cane grubs, 159, 162, 163, 554; records leaf freckle disease of sugar cane, 583
Tuckean Swamp, 437
Tully Cooperative Sugar Milling Association Ltd., 299, 368, 670, 699
Tully district:
   acid sulphate soils in, 440; Bellenden Plains plantation, 49; cane first cultivated in, 49, 50; central mill erected in, 276; drainage improvements in, 408; feral pigs damage cane crops in, 540; growth in number of canegrowers in during the 1960s, 310; irrigation in, 405; isolation plots established in, 577; rejected as a locality for a central sugar mill in 1916, 271; ‘root rot’ outbreaks in, 598; weed control in, 368
Tully Mill:
   canegrowers gain control of, 699; computerised process control adopted in, 749; crushing rate at, 731; crushes record amount of cane, 715; continuous vacuum pan installed at, 746, 756; effluent treatment plant at, 737; erection of (1924–25), 276, 701; exceeds mill peak deliberately, 287; machinery upgrades to, 701, 709, 712, 713, 724, 744; mill peak of, 281, 282, 286; possible duplication of, 295, 296, 299; receives emergency government funding to operate, 751; tours of, 752
Tully River, 50, 276, 425, 433, 434
Turkmenistan, 478, 495
Turner, Neil (politician), 321
Tweed Herald and Brunswick Chronicle, 123, 219
Tweed River, 48, 51, 79, 274, 413, 437, 672, 740
Tweed River district:
   acid sulphate soils in, 440; area under cane in, 48, 51, 55, 274, 275; cane grub attacks in, 552; cane first cultivated in, 48; changing distribution of cane growing in, 65; CSR’s difficulties in leasing its land to tenants, 77, 90; CSR erects a sugar mill in (1880), 77, 98; drainage unions in, 400, 402, 413; drainage improvements in, 275, 400, 402, 412, 413, 429, 437, 439; decline in area under cane in, 303; Fiji disease outbreaks in and their control, 591, 592, 595; flood mitigation works in, 427, 437; flooding of, 413; frost-prone, 48; gumming disease outbreaks in, 568; lack of drainage in, 127; land reclamation in, 275, 402; mechanical loading of cane in, 428, 643; mosaic disease present in, 566; outbreaks of Fiji disease in, 591, 592, 595; outbreaks of gumming disease in, 474; prices received for cane in, 55; quarantine zone in, 575; small millers in, 93; wireworms damage cane in, 532; tramlines in, 205; see also Condong and Cudgen plantations
Tweed River Flood Mitigation Committee, 427
Tweed Shire Council, 427, 428
Tygalgah Drainage Union, 413
Uba cane variety, 470, 571, 578, 580
Ulmarra, 52, 94
underground water supplies, 135–136, 399, 414, 417, 419, 450
Union Bank of Australia Ltd., 88, 92, 125
unions; see trade unions
United Cane Growers’ Association, 279, 526, 618, 696; see also Queensland Cane Growers’ Association
United Kingdom; see Great Britain
United States; see USA
University of Queensland, 582, 668
University of Sydney, 565
unloading, cane:
at sugar mills, 206, 210–211; 743; from wagons to punts, 97, 205, 657; from wagons onto rail trucks, 210, 658–659; with mechanical grabs, 206
Upper Pioneer River Improvement Trust, 429
Urangan (as port for sugar exports), 216, 796, 798, 799
urea, 371, 372, 383, 384, 385
USA:
as a sugar market, 306, 781, 803, 821; cotton production in, 44; source of cane varieties, 143, 486, 503; sugar import quotas, 306
vacuum pans, 182, 187, 188, 699, 703, 705, 713–714, 721, 727, 755, 779, 756, 808
Val Bird Weir, 447
Vallance, L.G. (soil scientist), 430, 654
Vanuatu, 83
vapour bleeding; see steam bleeding
Venton, Ray (inventor), 647
Versatile Toft Ltd., 647
vertical louvre separator, 744; see also entrainment
vertical pusher feeders, 709, 833
Very Low Colour (VLC) sugar, 818
Vesta cane variety, 471, 482, 495, 584
Vichie, Martin (‘Jim’), 625, 645
‘Victor mills’, 188
Victoria:
CSR controls price of sugar in, 255; demand for sugar in, 36, 83; import tariff on sugar in, 38; capital from invested in sugar plantations, 4, 50, 83; sugar refineries erected in, 36, 235, 237
Victoria Foundry, 185, 207
Victoria Mill, Herbert River district:
amount of rat damaged cane supplied to, 530; artificial wetlands constructed nearby, 737; computerised process control adopted in, 748; connected to Halifax by tramline, 213; duplication of (1953), 297, 722; continuous vacuum pan installed in, 756; crushes record amount of cane, 715; effluent treatment plant at, 735, 736; erection of, 186; largest sugar mill in Australia, 757; machinery upgrades to, 192, 709, 710, 711, 719, 744; tramline network for, 213, 659; treatment of waste waters at, 735; see also Colonial Sugar Refining Company
Victoria Mill and plantation, Mackay district, 82, 207
Victoria plantation, Herbert River district, 84, 130, 131
Victoria Sugar Co.:
amalgamated with CSR (1888), 238; CSR main shareholder in, 36; erects Sandridge Refinery (1858–59), 36; financial difficulties of, 237–238; formation 1857, 36; funds upgrades to Yarraville Refinery, 237; imports raw sugar from Philippines, 36; partner with CSR in Queensland, 82; purchases Yarraville Sugar Refinery, 235; Sandridge Refinery destroyed by fire 1875, 235; see also Colonial Sugar Refining Company
Victorian-based companies (with interests in sugar), 50, 82
Vilele Mill and plantation, 82, 88, 186, 213
Vulcan Foundry, Maryborough, 185, 188
wagons, 203–205, 210
Walkamin Research Station, 507
Walker, John & Co., 185; see also Walkers Ltd.
Walker, Robert (mill manager), 182
Walkers Ltd.:
develops heavy duty shredder, 743–744; formation of, 185; invests in Brisbane River Sugar Refinery, 237; manufactures Davids mechanical cane unloaders, 211; manufactures first triple effest in Australia, 185; manufactures machinery for Australian sugar mills, 185, 701, 718, 756
Walkerton Boiling Down Works, 81
wallabies (in cane), 540, 544, 550
Walrus (boat), 99
Walton, Thomas (analytical chemist & CSR employee), 198
Warner, Dr John, 489
waste water treatment plants (at Australian sugar mills), 734–737
waste waters (at Australian sugar mills), 712, 732–737
water canons, 449
water discharge licenses (of Australian sugar mills), 735, 737, 739
water pollution (near Australian sugar mills), 732–736; see also fish kills
Water Quality Council of Queensland, 736, 737, 739
water transport (of harvested cane), 204–206, 656, 657, 659, 672
Waterford Mill, 732
waterlogged soils and land, 300, 402, 404, 408, 439, 831, 832, 835
Waterloo Mill, 193, 701, 698
waterside workers, 789, 791, 792, 793, 794, 797
Watson, Don, 326
Webb, Mr Justice William, 287, 288, 620, 621
Webb Royal Commission into Sugar Peaks, 287–288, 357
Webre vacuum pans, 713–714, 721
weedicides; see herbicides
weeds, 123, 124, 125, 128, 133, 343, 359, 366–367, 376, 379, 381, 453
weevil borers, 348, 355, 411, 477, 521, 522, 528, 530, 531–532, 536, 538, 556
weighbridges (in Australian sugar mills), 202, 748
Weil's disease, 355, 411, 529, 530, 627, 628, 629
Weil's disease strike (1934), 529, 627–628
Wells, Thomas, 467
Wells, Walton (public servant), 430
West Indies:
cane growing in, 1, 128; central sugar mills in, 100; centre for cane breeding, 146; late nineteenth century milling technology in, 183; visited by Edward W. Knox, 183
Western Australia:
anti-sugar imports embargo meetings in, 784; CSR in 1897 contemplates erecting a refinery in, 239; CSR erects a refinery in (1929–1930), 779–780; government encourages canegrowing in 1885, 52; investigations in 1950s and 1960s into growing sugar cane in, 332–333; Ord River District Cooperative, 333; trials to identify suitable cane varieties for New South Wales at, 137, 149, 150
women:
as field workers, 359; as mill workers, 718; cooks for cane cutting gangs, 613
Woodburn, 51, 65, 94
Woodlands Mill (Bundaberg), 191
Woodlands Mill and plantation, 79, 237, 271; see also Marburg district
Woodford, 583
Woods, John & Joseph (merchants), 91, 236, 243; see also Ripple Creek plantation
Woodside Mill, 75
Woongarra locality, 79, 420
Woongarra Shire Council, 209
Woongoolba and Area Drainage Committee, 425
Woongoolba Drainage Scheme, 425, 427
workers (in Australian sugar industry):
world price of sugar, 36, 52, 63, 277, 282, 293, 307, 311, 785

Wheeler, Frederick, 292
White Australia Policy, 58, 834
‘white’ workers, 58, 59, 85, 341, 833
Whitlam government (Commonwealth), 441
Wide Bay Farmers’ and Planters’ Association, 129
Wildlife Preservation Society of Queensland, 734
Williams, James, 23
Willis, Geoffrey (geographer), 670
Wilson, George (entomologist), 542, 569
Windemere Mill and plantation, 90, 209, 252
windmills, 398
Windsor Mill, 191
wire netting, 540, 544, 550
wireworms, 532, 533, 542, 543, 555
Wizard rotary vacuum filter, 713, 719, 720
Wolfensberger, Otto, 307
Wollongbar Experiment Farm (near Lismore):
established (1893), 137; receives imported cane varieties, 147; trials at with inorganic fertilisers at, 352; trials to identify suitable cane varieties for New South Wales at, 137, 149, 150
Western Australian government, 52, 332, 333
Wet Tropics World Heritage Area, 557
wetlands:
artificial, 455, 737, 836; drainage of, 274, 317; freshwater, 316, 836; loss of in Australian sugar–producing districts, 300, 316, 836
Wetzel pans, 181, 187, 188
wharf workers; see waterside workers
wharves, 213, 215, 789
Whayman, Ted (Sugar Research Institute researcher), 744
World War I:
  BSES suspends cultivation and fertiliser trials during, 347; impact on Australian sugar prices, 272, 769, 772–773; production of sugar in Australia during, 272, 769; operating costs for Australian sugar producers during, 273; shortages of fertilisers during, 345

World War II:
  anti-Italian feeling during, 630; disruption to International Sugar Agreement, 285; disruption to Mutual Control Scheme, 707; disruption to sugar production during, 290–291, 718; field worker shortages during, 291, 359; fertiliser shortages during, 291, 358–359; impact on area under cane, 291; interrupts breeding cane varieties, 493; interrupts cane disease investigations, 580; interrupts pest control activities, 537, 540; interrupts rail transport of harvested cane, 634; measures to protect sugar mills during, 717; new cane harvesting techniques during, 634; shortages of workers during, 359, 629–631, 633, 717; sugar rationing in, 786; women assume new roles during, 359, 718

Yamba, Port of, 816, 821

Yarrabah, 635

Yarraville Refinery (Melbourne):
  boiler and machinery upgrades to, 237, 239, 779, 807, 808, 814; bulk handling of raw sugar at, 794; descriptions of, 235, 242; erected (1873), 235; liquid sugar manufactured at, 809, 818; output of, 239, 777, 807; purchased by Victoria Sugar Co. (1875), 235; site for enlarged, 239; supplies South Australian market, 817; supplies Tasmanian market, 238; see also Colonial Sugar Refining Company

Yaryan evaporator, 192, 833

Yarwillpah plantation, 127

Yatala Mill and plantation, 87, 191

Yerra plantation, 175

yellow stripe disease; see mosaic disease.

yellow spot disease, 583, 584, 586, 595–596, 600, 602

Yengarie Boiling Down Works, 80, 231

Yengarie plantation, 80

Yengarie Refinery (near Maryborough):
  acquired by Queensland National Bank, 234; closed (1900), 194, 234; erection of (1871), 175, 231; improvements to, 232; operates only six months a year, 233; purchases juice from local millers, 175, 177, 233; relies initially on imported sugar, 233; see also Cran, Robert & Co. & Queensland National Bank

Yeomans, Percival (mining engineer), 430

Yeppoon district, 271

Yeppoon plantation, 57, 90, 92

Yeppoon Sugar Co., 53, 57

Yield (of cane):
  affected by gumming disease, 144; affected by poor cultivation methods, 129; assisted by plant breeding, 512, 513; during World War II, 360; increased by better cultivation methods, 141, 513; increased by more fertiliser use, 383

Yield (of sugar), 512, 513, 514

Young, A., H. & E. (Bundaberg):
  adopt soil fumigation against cane grubs on Lynwood Estate, 162; asked by CSR to negotiate a deal to limit the amount of mill whites manufactured in Queensland, 250; decide to maintain plantation agriculture, 92; establish a tramline network at Fairymead plantation, 207; imports cane varieties, 147; manufacture mill whites, 237, 250; operate a cane nursery, 146, 148; offers to sell Fairymead Mill, 251; purchase estates in Kolan River and Isis districts, 217; recruits Gilbert and Ellice Islanders, 90; practice crop rotation on Fairymead plantation, 134; see also Fairymead plantation, Fairymead Mill & Fairymead Sugar Co. Ltd.

Young Brothers; see Young, A., H. & E. (Bundaberg)

Young, Charles (Kalamia plantation), 106–107, 194

Young, Charles (Fairymead plantation), 281, 410, 625, 645, 646

Yugoslav cane cutters and immigrants (to Australia), 637, 806

Zinc deficiency (in soils), 385, 514

Zones of influence (in cane supply), 216, 218–220