Rubber: from botanical experiment to global commodity

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Wickham's seeds and the seedlings of 1877

Tin had been known in the peninsula for centuries, whereas rubber was a botanical import. The Pará rubber tree, *Hevea brasiliensis*, is native to the Amazon basin, where Brazil held a near-monopoly of wild rubber in the second half of the nineteenth century. The India Office and the Royal Botanic Gardens at Kew set out to break it. In 1876 Henry Wickham shipped about 70,000 seeds from the region of Santarém to England. They reached Kew on 15 June 1876, where some 2,700 of them sprouted within a few weeks.[1]

The seedlings were sent to the botanical gardens of the British tropical colonies. The first rubber seedlings arrived in Singapore from Kew in 1877.[2] The accounts of the shipment differ in detail. The National Library's biography of Ridley states that 22 seedlings came from Ceylon and that twelve were planted at the Botanic Gardens, while other accounts give eleven.[3] For a decade the trees attracted little interest, because planters in the Straits preferred coffee, sugar and gambier, which had established markets.

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Ridley and the technique of tapping

The decisive impulse came from Henry Nicholas Ridley, who was appointed director of Gardens and Forests of the Straits Settlements in 1888 and became the first scientific director of the Singapore Botanic Gardens. Ridley experimented with the trees and recognised their commercial potential. His most important contribution was technical. In 1895 he refined and promoted a herringbone method of tapping, which allowed latex to be harvested without seriously damaging the trees.[4] Trees could thus be tapped regularly over many years.

Ridley pressed seeds on every planter who visited the gardens, an enthusiasm that earned him the nickname “Mad Ridley”. He was proved right within twenty years. The gardens describe their role as having perfected the technique of rubber extraction that is still in use today. At its peak in the 1920s the Malayan peninsula produced about half of the world’s latex. Ridley later returned to Kew, where he completed a five-volume flora of the Malay Peninsula and died on 24 October 1956 at the age of one hundred.[5]

The first planters

The first commercial planting of rubber in Malaya is dated to 1896. Among the pioneers was Tan Chay Yan, a Chinese merchant from Malacca who is described as the first man to plant rubber on a commercial basis. Introduced to the crop by Ridley, he opened a 22-acre estate at Bukit Lintang near Malacca.[6] The estate shows how rubber began. A Chinese merchant from the Straits Settlements, advised by a colonial scientist, took the risk of planting a crop that would yield nothing for several years.

Demand did the rest, because the bicycle and then the motor car created a market for pneumatic tyres that wild rubber from Brazil could not satisfy. Some 20,000 acres in Malaya were planted with rubber in 1903, an area that had risen to 2,260,000 acres by 1922. Drabble gives 935,000 hectares, or about 2.3 million acres, for 1921, which

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was about 55 per cent of the total planted area of South and Southeast Asia.[7] The two series, from different sources, are therefore broadly consistent. Both show a revolution in land use within twenty years.

Estates, agency houses and smallholders

Rubber planting demanded more capital than tin mining, because the trees took years to mature. The capital came above all from London, where companies were floated to acquire and plant estates in Malaya, so that some 260 companies were registered to operate in the country between 1903 and 1912. Their estates were managed by the agency houses of Singapore and Kuala Lumpur, which acted as secretaries, buyers of supplies and selling agents. Huff lists the leading Singapore houses as Boustead, Barlow, Sandilands Buttery, Paterson Simons, the East Asiatic Company, the Borneo Company, Harrisons Barker, Guthrie and Sime Darby.[8] Chapter II of this part describes these houses and the exchange banks that financed them.

Labour for the estates came mainly from southern India and was recruited under systems of indenture and later of assisted migration. Chinese labour remained important in tapping and on the smaller estates. Malay farmers planted rubber on their own holdings, often alongside rice and fruit trees, because the crop could be tapped by the family and sold for cash. In 1921 estates covered about 60 per cent of the planted area in Malaya, three quarters of them in European ownership, while smallholdings covered about 40 per cent.[9] The smallholders' share is the more remarkable because colonial policy repeatedly favoured the estates, both in the allocation of land and under the restriction schemes discussed below.

Chinese capital played a role of its own. Lee Kong Chian, who began his career in the rubber business of his father-in-law Tan Kah Kee, turned a rubber smoking house in Muar into the Nam Aik Rubber Company in 1928 and founded the Lee Rubber Company in 1931. He became known as Southeast Asia's "Rubber and Pineapple King". As vice-chairman of the Chinese Commercial Bank he took part in

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the merger that created OCBC in 1932, which he went on to chair from 1938 until his death in 1967.[10] His career links the rubber trade directly to the Chinese banks examined in Chapter III of this part.

Singapore as the rubber market

Rubber reached its buyers through Singapore. The latex was coagulated and rolled into sheets on the estates and smallholdings, then smoked, graded and packed. Rubber from the smallholdings of Malaya and, increasingly, from the Netherlands Indies arrived in Singapore in uneven quality and was remilled, graded and repacked by Chinese dealers before export. Huff, who has written the leading study of the market, calls its development an outstanding feature of the British Malayan industry that has remained relatively overlooked.[11]

Estate rubber was at first sold in London through brokers in Mincing Lane. The merchants of Singapore wanted a local market, which would allow sellers to realise their crop without waiting months for a London sale. In November 1910 the Singapore Chamber of Commerce formed a subcommittee to consider the establishment of a local rubber exchange, and a building opened as the Singapore Rubber Exchange in February 1911. A special general meeting of the Chamber on 20 June 1911 formed a rubber association, whose first auction took place on 12 September 1911. Twelve auctions were held in the rest of that year and fifty-two in 1912.[12] The weekly auction gave the colony a public price, which became a reference for planters, dealers and lenders across the region.

Common misconception

It is sometimes assumed that Singapore grew rich because it produced tin and rubber. The island itself produced neither in significant quantities. The mines lay in Perak and Selangor, the plantations in the Malay states and later in Sumatra and Borneo. Singapore's income came from the functions it performed for these producers: smelting tin, grading and auctioning rubber, financing miners and

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planters, managing estates through agency houses, insuring cargoes and shipping them. This pattern of earning from intermediation without owning the resource has remained the basis of Singapore's commodity business, which Part G examines.

Notes

1. Wikipedia, "Henry Wickham (explorer)" (accessed November 2026): about 70,000 rubber tree seeds from the Santarém area in 1876; the seeds reached Kew on 15 June 1876; within a few weeks 2,700 had sprouted. ↩
2. Wikipedia, "Singapore Botanic Gardens" (accessed November 2026): the first rubber seedlings arrived from Kew Gardens in 1877. ↩
3. NLB Infopedia, "Henry Nicholas Ridley" (SIP_518): 22 seedlings from Sri Lanka in 1877, of which 12 were planted at the Botanic Gardens. Other accounts give eleven trees and a direct shipment from Kew. ↩
4. Wikipedia, "Henry Nicholas Ridley" (accessed November 2026): selected in 1888 for the post of director of Gardens and Forests in the Straits Settlements; first scientific director of the Singapore Botanic Gardens; in 1895 he refined and promoted a herringbone tapping method that "enabled latex to be harvested without seriously damaging the trees"; his enthusiasm earned him the nickname "Mad Ridley". ↩
5. Wikipedia, "Singapore Botanic Gardens" (accessed November 2026): Ridley "spearheaded rubber cultivation"; the gardens helped perfect "the technique of rubber extraction, which is still in use today"; at its peak in the 1920s the Malayan peninsula "cornered half of the global latex production". Wikipedia, "Henry Nicholas Ridley" (accessed November 2026): returned to England in 1911 and worked at Kew on a five-volume Malayan flora published 1922–1925; died at Kew on 24 October 1956, aged 100. ↩
6. Wikipedia, "Rubber industry in Malaysia" (accessed November 2026): "The first commercial rubber planting was in 1896." Wikipedia, "Tan Chay Yan" (accessed November 2026): "the first man to plant rubber on a commercial

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basis", introduced to rubber planting by Henry Nicholas Ridley; started a "22-acre (89,000 m2) rubber estate at Bukit Lintang". ↩

7. Wikipedia, "Rubber industry in Malaysia" (accessed November 2026): "In 1903, 20,000 acres were dedicated to rubber production in Malaya. By 1922, this number had risen to 2,260,000 acres." John H. Drabble, "The Economic History of Malaysia", EH.Net Encyclopedia, 31 July 2004: Malayan rubber acreage reached 935,000 hectares (about 2.3 million acres) by 1921, about 55 per cent of the South and Southeast Asian total, with output at 50 per cent of world production. ↩
8. John H. Drabble, "The Economic History of Malaysia", EH.Net Encyclopedia, 31 July 2004: between 1903 and 1912 some 260 companies were registered to operate in Malaya. W.G. Huff, "The Development of the Rubber Market in Pre-World War II Singapore", *Journal of Southeast Asian Studies*, vol. 24, no. 2, September 1993, pp. 285–306, footnote 7 (as displayed on Cambridge Core): list of the principal Singapore agency houses holding plantation shares and selling and supplying agencies. ↩
9. John H. Drabble, "The Economic History of Malaysia", EH.Net Encyclopedia, 31 July 2004: in 1921 estates covered about 60 per cent of planted area (75 per cent European-owned) and smallholdings about 40 per cent; smallholdings were defined as under 40 hectares, those of 2 hectares or less mostly Malay-owned. ↩
10. Wikipedia, "Lee Kong Chian" (accessed November 2026): known as "Southeast Asia's Rubber and Pineapple King"; Nam Aik Rubber Company in 1928; Lee Rubber Company started in 1931; vice-chairman of the Chinese Commercial Bank and party to the 1932 merger that formed OCBC; OCBC vice-chairman from 1932 and chairman from 1938 until his death in 1967. ↩
11. W.G. Huff, "The Development of the Rubber Market in Pre-World War II Singapore", *Journal of Southeast Asian Studies*, vol. 24, no. 2, September 1993, pp. 285–306, opening extract as displayed on Cambridge Core: "an outstanding feature of the British Malayan industry remains relatively overlooked", namely "the development of the Singapore rubber market";

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footnotes 44–45 on poorly prepared smallholder rubber from the Netherlands Indies. ↩

12. Wikipedia, "100 Robinson Road" (accessed November 2026), citing *The Straits Times* of 11 November 1910 and 2 February 1911: the Chamber "formed a subcommittee to deliberate the establishment of a local Rubber Exchange"; the exchange building opened by February 1911. Wikipedia, "Rubber Trade Association of Penang" (accessed November 2026), citing *The Straits Times* of 12 and 21 June 1911: the Singapore association was "formed at a special general meeting" of the Singapore Chamber of Commerce and Exchange on 20 June 1911; twelve auctions from its first auction on 12 September to the end of the year; "Fifty-two auctions were held in 1912." ↩

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