

From Tembakan to Sorjan: The History of Martapura Citrus Cultivation in the Banjar Wetland Landscape

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Received 30 June 2026; Received in revised form 8 Juli 2026; Accepted 10 July 2026

Abstrak

Tujuan artikel ini adalah menganalisis sejarah perkebunan jeruk Martapura-Sungai Tabuk sebagai lanskap agraria lahan basah Banjar. Penelitian menggunakan metode sejarah melalui tahap heuristik, kritik sumber, interpretasi, dan historiografi. Sumber utama adalah laporan agronomi kolonial Donicie tahun 1942 tentang djeroekcultuur di Bandjermasin-Marabahan dan Martapoera, dipadukan dengan peta kolonial, kajian sejarah lokal, data agribisnis 1992, berita revitalisasi jeruk Sungai Tabuk, dan Kabupaten Banjar Dalam Angka 2026. Hasil penelitian menunjukkan bahwa jeruk Martapura bukan sekadar komoditas hortikultura, tetapi arsip agraria yang merekam adaptasi masyarakat terhadap rawa, danau, sungai, tembakan, sorjan, jaringan dagang, dan perubahan selera kultural. Data BPS 2026 menunjukkan Sungai Tabuk tetap menjadi sentra penting produksi jeruk siam/keprok Kabupaten Banjar.

Kata kunci: jeruk martapura, lahan basah, agraria banjar.

Abstract

This article analyzes the history of Martapura-Sungai Tabuk citrus cultivation as a wetland agrarian landscape of Banjar. Using historical method through heuristics, source criticism, interpretation, and historiography, the study combines Donicie's 1942 colonial agronomic report on djeroekcultuur in Bandjermasin-Marabahan and Martapoera with colonial maps, local historical studies, 1992 agribusiness data, contemporary reports on Sungai Tabuk citrus revitalization, and Banjar Regency in Figures 2026. The findings show that Martapura citrus was not merely a horticultural commodity, but an agrarian archive of community adaptation to swamps, lakes, rivers, tembakan, sorjan, trade networks, and changing cultural taste. BPS 2026 data confirm that Sungai Tabuk remains an important producer of siam/keprok citrus in Banjar Regency. The article's novelty lies in reading citrus as a bridge between wetland technology, village economy, trade networks, and Banjar taste memory.

Keywords: martapura citrus, wetlands, banjar agrarian history.

INTRODUCTION

Martapura has usually appeared in local historiography as a diamond town, the late political center of the Banjar Sultanate, and an important religious space in Banjar culture. This reading is strong, but it does not sufficiently explain the everyday agrarian life that shaped relations between people, rivers, swamps, embankments, markets, and crops. Citrus opens a way to see that other side. Ir. P. J. Donicie's 1942 colonial agronomic report

shows that Martapura already had an old citrus-growing tradition, concentrated in certain villages and connected to regional trading networks (Donicie, 1942).

Donicie stated that citrus cultivation in Martapura had probably existed for at least seventy-five years before the report was written. If 1942 is used as the reference point, the tradition can be traced back to the second half of the nineteenth century. This information is important because it places citrus

within a major period of transition: from the end of the Banjar Sultanate, through the consolidation of colonial rule, to the strengthening of the commercial economy in Banjarmasin and Martapura. Citrus was therefore not a crop separate from political, commercial, and ecological change in Banjar.

This article argues that Martapura citrus cultivation was a form of agrarian adaptation among wetland communities that must be understood through the relationship between environment, adaptive technology, local knowledge, and everyday social practice (Yahya, 2024). Citrus did not grow in neutral space. It was planted in alluvial, swamp, and lake areas that had to be managed through tembokan, tongkongan, drainage channels, and seedling selection. Citrus orchards were traces of local technology that combined knowledge of water, mud, flooding, embankments, harvest seasons, and markets. Citrus therefore needs to be read not only as a horticultural commodity but also as a cultural landscape.

This study is also important because the history of Martapura citrus did not end in the colonial period. Agribusiness data from 1992 and news on the revitalization of Sungai Tabuk citrus in 2020 show that citrus remained alive in local economic memory (Pemerintah Kabupaten Banjar, 2020; Rusastra et al., 1992). Recent BPS data even show that Sungai Tabuk was still one of the

important contributors to siam/keprok citrus production in Banjar Regency in 2025 (BPS Kabupaten Banjar, 2026). Colonial archives, old maps, and contemporary statistics can therefore be read in layers to understand continuity and change in Banjar agrarian history.

The main questions of this article are: (1) what were the origins and development of Martapura citrus cultivation according to Donicie's 1942 source; (2) how did citrus cultivation techniques reveal adaptation to the wetland landscape; (3) how did trade networks connect Martapura citrus orchards with Banjarmasin, the east coast of Borneo, and Singapore; and (4) how can agribusiness data and contemporary statistics strengthen the argument about the historical continuity of Martapura-Sungai Tabuk citrus?

Existing studies on Banjar and South Kalimantan have tended to place Martapura within the frameworks of political history, diamond mining, the sultanate city, and trade. Listiana's two studies provide an important basis for understanding socio-economic change in Martapura from 1826 to 1942 and for explaining Banjarmasin as a colonial trading town and estuary node in commodity networks (Listiana, 2011, 2012). Early sources also strengthen the context of Borneo/Banjar as a space of navigation, trade, colonial administration, political conflict, and mineral economy

(Anonim, 1912; Beeckman, 1718; Hageman, 1861; Leyden, 1814; van Rees, 1865; Wiggers, 1910). However, these sources do not place citrus at the center of agrarian historical analysis.

The source closest to the theme of this article is Donicie, because it specifically recorded citrus cultivation, tembokan techniques, tree numbers, citrus types, harvests, and trade (Donicie, 1942). Early cartographic sources, both official and travel-based, support the spatial reading through river networks, estuaries, alluvium, vegetation, and cultivation centers (Ministerie van Marine, 1909; Muller, 1857a, 1857b; Schophuys, 1936; Schwaner, 1853). Rural markets can be understood as economic and social arenas (Soekarno et al., 1990), while citrus in South Kalimantan retained an important place in the modern agribusiness system (Rusastra et al., 1992).

Methodologically, this article follows the principles of historical method that emphasize heuristics, source criticism, interpretation, and historiography (Gottschalk, 1985; Kuntowijoyo, 2013). The social approach to agrarian data follows Kartodirdjo's suggestion that history should not stop at political events but should also read social, economic, and ecological structures (Kartodirdjo, 1992). The concept of landscape as a result of interaction between humans and the

environment helps read citrus orchards as cultural formations (Sauer, 1925), while Geertz inspires a view of Indonesian agriculture as an interconnected ecological, technological, and social process (Geertz, 1963).

Contemporary sources are not used to reconstruct colonial history, but to show economic continuity, revitalization policy, production statistics, and the taste memory of limau kuit (Al Ghifari, 2020; Indomie Official Shop, n.d.; Nissa, 2022; Pemerintah Kabupaten Banjar, 2020; Yoline, n.d.). Thus, the novelty of this article lies in combining colonial agronomic reports, wetland cartography, urban history, horticultural statistics, and contemporary taste representation to read citrus as a Banjar agrarian archive. The article asks not only where citrus was planted, but also how citrus reveals relations among water, orchards, markets, transaction risk, and taste identity.

METHODS

This study uses the historical method, consisting of four main stages: heuristics, source criticism, interpretation, and historiography. These stages follow the general principles of historical research that emphasize source collection, credibility assessment, interpretation, and historical narrative construction (Gottschalk, 1985; Kuntowijoyo, 2013). The heuristic stage was carried out by collecting colonial agronomic reports,

maps, local history books, journal articles, statistical documents, news reports, and government releases relevant to the history of citrus in Martapura and Sungai Tabuk. The main source is Donicie's article, which specifically discusses citrus cultivation in Banjarmasin-Marabahan and Martapura (Donicie, 1942).

Source criticism was conducted by distinguishing types of data. Donicie's data are treated as a strong colonial primary source for technical agronomic information, but they still require critical reading because they were written from the perspective of a colonial official or agricultural expert. Travel accounts, colonial histories, and regulations such as Beeckman, Leyden, Hageman, van Rees, and Wiggers are used as comparative context, not as direct evidence of citrus cultivation. Maps by Muller, Schwaner, the Hydrographic Department, and Schophuys are used as cartographic data to read the positions of rivers, alluvium, and cultivation centers. BPS 2026 data are treated as the most recent official statistics, while contemporary news and product pages are used in a limited way as indicators of economic memory and taste representation, not as the main sources for colonial history.

The most recent hard data are drawn from Banjar Regency in Figures 2026. This publication is used to strengthen the article in three aspects: geographical and topographical data on

Sungai Tabuk, Martapura, East Martapura, West Martapura, and Astambul; agricultural institutional data such as extension workers and farmer groups; and fruit production data, especially siam/keprok citrus in 2024-2025 (BPS Kabupaten Banjar, 2026). Thus, this article does not rely only on historical narrative but also presents official statistics as a comparative basis and as support for the argument.

Interpretation was carried out by reading agronomic data as social historical data. Numbers of trees, layering techniques, tembakan, harvest yields, seedling prices, merchant networks, and production statistics are not treated merely as technical information. They are read as signs of the relationship between humans, wetland environments, local technology, markets, and socio-economic change. This reading is in line with Kartodirdjo's social historical approach and with the idea of landscape as the result of human cultural work upon the environment (Sauer, 1925).

RESULTS AND DISCUSSION

Martapura-Sungai Tabuk as a Low Alluvial Landscape

Spatially, this article needs to distinguish Martapura and Sungai Tabuk clearly. Martapura is the capital of Banjar Regency and, since the sultanate-colonial period, has been an important administrative, economic, and symbolic node. Sungai

Tabuk is a district within Banjar Regency located in the river corridor between Martapura and Banjarmasin. Therefore, when this article uses the term Martapura citrus, it refers not only to the present urban point of Martapura, but also to the historical landscape of the Martapoera onderafdeling and the wider Banjar Regency area connected by the Martapura River, Riam Kiwa, Riam Kanan, and the surrounding swamp-alluvial system.

Recent geographical data help confirm the low and flat character of this landscape. Banjar Regency in Figures 2026 records that Sungai Tabuk covers 147.30 km², has an elevation of about 5 meters above sea level, and lies 24.63 km from the regency capital. Martapura, East Martapura, West Martapura, Astambul, and Sungai Tabuk are all located within a lowland network relevant to wetland citrus cultivation. The alluvial reading of Sungai Tabuk is also strengthened by a toponymic study of Sungai Tabuk Keramat Village. Place names such as Laut and Pantai Rumbia show that local communities understand space through proximity to rivers, riverbank forms, vegetation, and life experience in wetlands (Yahya, 2025). Podes data in the BPS publication show that villages in this area are not coastal villages, but many are categorized as lowland settlements (BPS Kabupaten Banjar, 2026). This confirms that the ecological base of citrus was not

the sea coast but riverine lowlands, swamps, and alluvium.

Nineteenth- and early twentieth-century maps show that readings of Banjar space have long depended on rivers. Muller's two maps placed Banjarmasing, Martapoera, the Lawut lands, coastal areas, and inland regions within a chain of watersheds and land-water routes (Muller, 1857a, 1857b). The hydrographic map of the Barito from the estuary to Soengai Kween emphasizes the importance of depth, river branches, and Barito-Martapura connections for navigation and distribution (Ministerie van Marine, 1909). Thus, when Donicie later recorded Martapura citrus orchards, the data need to be read within a landscape that had long been connected by rivers, canals, estuaries, and low alluvial plains.

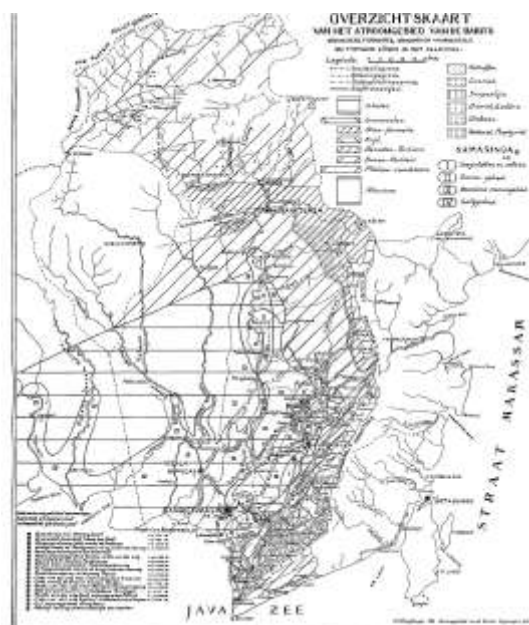


Figure 1. Overzichtskaart van het stroomgebied van de Barito showing Barito-Martapura as an alluvial system. Source: Schophuys (1936, map 1).



Figure 2. Begroeiingskaart van het stroomgebied van de Barito containing the legend for cultivation centers, including centra van djeroekteelt. Source: Schopphuys (1936, map 2).

The Origins of Martapura Citrus and Commodity Mobility Networks

Before Donicie's report, travel sources and geographical descriptions had already positioned Banjarmasin-Martapura as a commodity space. Beeckman described Borneo through its ports, population, products, and trade (Beeckman, 1718), while Leyden mentioned Banjar Massing, Martapura, rivers, gold, diamonds, bird's nests, wax, rattan, pepper, and trade relations (Leyden, 1814). These data do not discuss citrus, but they are important because they show that when Martapura citrus developed in the nineteenth century, it grew in an area already known as a node of trade, minerals, and interregional mobility.

Donicie described citrus cultivation in Martapura and Banjarmasin-Marabahan as important, but different from citrus orchards in other areas. In Martapura, the origin of citrus was linked to diamond traders who had commercial relations with Malacca, China, Indochina, and other regions. This detail opens an important interpretation: plants did not always move through official agricultural programs but could travel with merchant networks, seedling knowledge, and human mobility.

The relationship between diamonds and citrus expands the reading of Martapura. Martapura was not only a space of mineral extraction but also an agrarian space. Listiana shows that during the colonial period Martapura underwent socio-economic change, shifts in land use, transportation infrastructure, trade, and the development of plantation and industrial activity (Listiana, 2012). Within such a landscape, citrus can be seen as a popular commodity growing alongside the diamond economy, markets, and rivers.

Maps by Muller and Schwaner, the hydrographic map of the Barito, and Schopphuys's maps strengthen this spatial context. Muller showed Banjermasing, Martapoera, the Lawut lands, the coast, and the interior as a space connected by rivers and routes of movement (Muller, 1857a, 1857b). Schwaner located Martapura, Banjarmasin, the Barito estuary, and river networks within one regional system (Schwaner, 1853). The

Barito hydrographic map shows the importance of the Barito channel from the estuary to Soengai Kween for navigation (Ministerie van Marine, 1909). Schophuys's maps are more specific because they include geological formations, alluvial zones, and a vegetation map of the Barito; the legend of the vegetation map even mentions centra van djeroekteelt, or citrus-cultivation centers (Schophuys, 1936). Although the map is synoptic, the presence of a citrus symbol shows that citrus cultivation was important enough to be mapped as a commodity center.

Tembokan, Tongkongan, and Wetland Adaptation Technology

The ecological core of Martapura citrus cultivation was water management. Donicie explained that citrus orchards in lake areas had to face west-monsoon flooding and changes in water level. Citrus was therefore planted on tembokan or tongkongan, raised earth mounds that protected the roots from waterlogging. In this context, tembokan was not simply a planting medium but a local technology for turning wetlands into productive space for perennial crops.

This technology reveals community sensitivity to the rhythms of flood and mud. In lake areas, fertilization used mud, while in tidal areas tembokan techniques could differ because the character of flood and tide was smaller. These technical differences show that farmers

did not apply one cultivation model uniformly. They read local micro-ecologies: water height, soil quality, sedimentation, and crop risk.

Van Kregten provides a broader context for wetland opening in South Borneo. He placed swamps, polders, dikes, sluices, and flood regulation within the larger problem of wetland management (van Kregten, 1949). If van Kregten shows water engineering at the infrastructural scale, Donicie shows water engineering at the level of smallholder orchards. These two sources complement one another: Martapura citrus is an example of how local communities managed the same problem through simple but effective agrarian technology.

Orchard Scale, Citrus Types, and the Village Economy

Donicie estimated that the Martapura onderafdeling had around 32,000 productive citrus trees. Their composition was approximately 40% keprok citrus, 50% sweet citrus, and 10% other types. Donicie's description of citrus types is important because it reveals the diversity of local taste resources. The most common type was djeroek keprok, especially thin-skinned keprok, alongside thick-skinned keprok. The second type was djeroek hirisan or djeroek manis, described as very good in taste and very thin-skinned. The third group was pomelo or large citrus, with local names such as

bali, antalagi, and sassangan. Donicie also recorded more limited types: nipis, koeit, citroen, poeroet, and wangkang. The note that koeit was unknown in Java and was possibly a Chinese form suggests that Martapura citrus orchards stored traces of seedling mobility across regions.

The three main villages in Donicie's report were Sei Toewan (Sungai Tuan), Tambak Anjar (Tambak Anyar), and Pingaran. Together they contained about 90% of the citrus trees in the Martapura onderafdeling. This shows that citrus orchards were not distributed evenly, but were concentrated in particular villages that likely had a better combination of land, water, river access, skill, and market networks.

The village data show that citrus was a household economy accumulated at the village scale. Average ownership of about 50-64 trees per owner does not indicate a large plantation model, but rather commercialized smallholder orchards. This scale was large enough to generate market surplus, yet remained rooted in local ownership and labor.

Donicie also noted the dominance of air layering as a propagation technique. The center of air layering was Pengambangan, while large-scale layering in Martapura was not dominant. Prices of planting materials, seedling types, and techniques of incision and wrapping reveal an economy of plant knowledge. Farmers and nurseries did not only produce fruit;

they also produced knowledge about seedlings.

Table 1. Number of citrus trees in the three main Martapura villages according to Donicie

Village in Donicie's source	Number of owners	Number of trees	Average trees per owner
Sei Toewan	207	12.213	59
Tambak Anjar	134	6.710	50
Pingaran	150	9.655	64
Total	491	28.578	about 58

Source: processed from Donicie (1942, p. 21).

Jeruk Koeit, Limau Kuit, and the Continuity of Banjar Taste Memory

One small but valuable detail in Donicie's report is the mention of djeroek koeit. In contemporary Banjar-Indonesian spelling, this form is close to limau kuit, an aromatic citrus commonly used to sharpen the flavor of Banjar dishes. Donicie did not make koeit a quantitatively dominant type, but his statement that koeit existed in Banjar citrus orchards and was not known in Java makes it important as a marker of local distinctiveness. It shows that Banjar citrus identity was formed not only by the production volume of keprok and sweet citrus, but also by aromatic types that lived in the kitchen and in popular taste.

The continuity of jeruk koeit/limau kuit is visible in contemporary consumption culture. The Indomie Soto Banjar Limau Kuit variant shows how

limau kuit functions as a nationally recognizable symbol of Banjar taste. Meanwhile, the use of limau kuit in soto Banjar shows that this aromatic citrus still works as a flavor enhancer in everyday culinary practice. In this article, instant noodle products and culinary dishes are not used as evidence for colonial history, but as cultural evidence that Banjar aromatic citrus still has a taste-memory force. From the perspective of agrarian historiography, this enriches the argument that Martapura-Sungai Tabuk citrus cultivation left not only statistical and orchard-landscape traces, but also taste traces that moved from orchard, market, and kitchen into popular food products.



Figure 3. Indomie Soto Banjar Limau Kuit packaging as a contemporary commercial representation of limau kuit taste memory in Banjar culinary identity. Image source: Indomie Official Shop (n.d.); comparative product data: Yoline (n.d.).



Figure 4. Soto Banjar with limau kuit as an illustration of Banjar aromatic citrus in everyday culinary practice. Source: Nissa (2022), Suara.com, photo from YouTuber/Dapur Ajiib Samarinda.

Harvests, Prices, and Regional Trade Networks

The first citrus harvest occurred about three and three-quarter years after planting. Donicie recorded that the first harvest averaged about 100 fruits per tree, the second around 300 fruits, and the third around 500 fruits. After the trees were about fifteen years old, production began to decline. This cycle is important because contemporary data on the decline of Sungai Tabuk citrus also mention old and unproductive trees as one cause of the weakening citrus center. Tree age therefore appears as a historical problem that re-emerges in the modern context.

Donicie distinguished between the main harvest and the off-season harvest. The main harvest took place roughly from May to July and produced about 75-80% of total production. The more interesting note concerns pre-harvest transactions. Donicie wrote that in the practice of Martapura citrus trade *de boom wordt dikwijls voorverkocht*, or the fruit on the tree was often sold in advance to

collectors or traders before picking time. This pattern shows that citrus trade did not only begin after the fruit was harvested, but started earlier through yield estimation in the orchard. For orchard owners, advance selling could reduce the risk of theft, save picking costs, and reduce uncertainty from price fluctuation. Conversely, traders took on the risk of estimating fruit quantity, harvest quality, weather disturbance, transportation costs, and market price change. Citrus transactions in that period can therefore be read as a mechanism for distributing risk between growers/tree owners and merchants. Such patterns may still persist today, although contract forms, price information access, transportation modes, and bargaining positions have changed in the modern economy.

The marketing network of Martapura citrus did not stop at local markets. Donicie recorded shipments to east-coast Borneo towns such as Kota Baroe, Pasir, Balikpapan, Samarinda, and Tarakan, as well as exports to Singapore. East-coast exports were said to have been carried out largely by Banjar merchants with family ties or acquaintances in destination towns, while Singapore exports were more controlled by Chinese merchants. This structure reveals a division of trading networks based on ethnicity, access to ships, and commercial relations.

Listiana helps place these export data within an upstream-estuary model. In trade, there is always a network from upstream commodity-producing regions to estuary markets. Martapura can be read as a production space, while Banjarmasin functioned as a market, port, and distribution node (Listiana, 2011). Rivers were crucial because the river system was the lifeblood of the Banjarmasin economy and the Banjar interior. At the rural scale, Soekarno's study helps read the market not merely as a place of buying and selling, but as an arena of social encounter, price information, distribution of agricultural products, and relationships between villages and wider trade centers (Soekarno et al., 1990).

Table 2. Citrus exports to Singapore according to Donicie

Year	Exports to Singapore (thousand fruits)
1935	1.568
1936	2.785
1937	3.115
1938	2.960
1939	5.078
1940	4.039

Source: processed from Donicie (1942, p. 26). Figures follow the source as thousand fruits.

A Modern Comparison: South Kalimantan Citrus Agribusiness in 1992

Rusastra's study provides a bridge between Donicie's colonial source and contemporary conditions. It shows that South Kalimantan citrus once had an important reputation before Pontianak citrus became more dominant in the

national imagination. Citrus development potential was estimated at around 509 thousand hectares on alluvial soils, or about 14% of South Kalimantan's land area (Rusastra et al., 1992). This figure is consistent with Schophuys's map reading, which places the Barito-Martapura region within a broad alluvial area and includes *centra van djeroekteelt* on the vegetation map (Schophuys, 1936).

The 1989 data in that study recorded South Kalimantan citrus production at 7.870 tons, around 20.5% of Kalimantan production and 2.5% of national production. Banjar Regency was identified as one of the centers, contributing 24.5% of South Kalimantan production. This information proves that the continuity of Banjar citrus was not only a matter of local memory, but also had a modern production basis.

However, the study also shows structural problems. During 1979-1989, harvested area increased by 11.5% per year and production increased by 1.3% per year, but productivity declined by 11.38% per year. Expansion of land therefore did not automatically mean stronger productivity. Seedlings, maintenance, farmer bargaining position, and marketing channels became part of the long history of Banjar citrus.

BPS 2026 Hard Data: Siam/Kepron Citrus Production and the New Concentration in Sungai Tabuk

Banjar Regency in Figures 2026 strengthens this article with official statistical data. In 2025, *siam/kepron* citrus production in Banjar Regency was recorded at 86.988.30 quintals, or about 8.698.83 tons. This figure fell sharply from 304.375.21 quintals in 2024, a decline of around 71.4% based on calculations from BPS data (BPS Kabupaten Banjar, 2026). This decline must be read carefully because annual fruit statistics can be influenced by tree age, harvest cycles, disease, climate, and recording methods. In general, however, the data confirm that citrus remains an important horticultural commodity in Banjar Regency.

District-level data show an interesting change. Astambul remained the largest contributor in 2025 with 33.750.00 quintals, or around 38.8% of regency production. Sungai Tabuk occupied an important position with 20.543.00 quintals, or about 23.6%. Mataraman and Simpang Empat produced around 12.400.00 and 12.500.00 quintals respectively. West Martapura produced 6.602.30 quintals. If Sungai Tabuk, Astambul, Martapura, East Martapura, and West Martapura are read as a Martapura-Sungai Tabuk-Astambul landscape cluster, then this cluster contributed around 70.6%

of Banjar Regency siam/keprok citrus production in 2025.

The Sungai Tabuk figure is central to this article. Siam/keprok citrus production in Sungai Tabuk increased from 8.950.00 quintals in 2024 to 20.543.00 quintals in 2025, or by about 129.5%. This increase provides quantitative support that the narrative of Sungai Tabuk citrus revitalization is not merely rhetorical. Sungai Tabuk truly appears as a relevant production center in the latest official statistics.

BPS data also help read the institutional basis of agriculture. Sungai Tabuk had 13 agricultural extension workers and 228 farmer groups with 6.904 members in 2025. The number of farmer-group members in Sungai Tabuk is among the largest in the district data of Banjar Regency. This provides a basis for seeing contemporary citrus development as institutionally supported, not merely land-based. If Donicie's source allows orchards to be read through tree owners and villages, contemporary BPS data allow citrus orchards to be read through agricultural extension institutions and farmer groups.

Tourism data in BPS 2026 are also relevant for reading new directions in citrus development. Lok Baintan Floating Market is listed as a historical and cultural tourism object in Lok Baintan Village, Sungai Tabuk District, 29.5 km from Martapura. The ALRI Division IV Monument

Museum is also located in Paku Alam Village, Sungai Tabuk. These data show that Sungai Tabuk already has a base of cultural and historical destinations. Therefore, the idea of citrus-picking agrotourism and river cruising mentioned in contemporary sources has a reasonable spatial foundation.

Table 3. Siam/keprok citrus production in selected districts of Banjar Regency, 2024-2025

District	2024 production (quintals)	2025 production (quintals)	2025 production (tons)	2025 share (%)
Astambul	249.750.00	33.750.00	3.375.00	38.8
Sungai Tabuk	8.950.00	20.543.00	2.054.30	23.6
Simpang Empat	12.881.00	12.500.00	1.250.00	14.4
Mataraman	15.038.00	12.400.00	1.240.00	14.3
West Martapura	2.580.50	6.602.30	660.23	7.6
East Martapura	850.00	400.00	40.00	0.5
Martapura	25.00	95.00	9.50	0.1
Banjar Regency	304.375.21	86.988.30	8.698.83	100.0

Source: processed from BPS Kabupaten Banjar (2026, p. 256), Table 5.2.13. Ton conversion calculated as quintals x 0.1

Table 4. Hard data from Banjar Regency in Figures 2026 relevant to the article

Aspect	BPS 2026 data	Analytical function
Area of Sungai Tabuk	147.30 km ² ; 5 m above sea level; 24.63 km from the regency capital	Confirms a low, flat environment relevant to wetlands and citrus.
Topography of Sungai Tabuk	21 villages/urban villages all categorized as lowland	Strengthens the reading of citrus as a river-lowland commodity, not an upland

		commodity.
Sungai Tabuk siam/keprok citrus production	20,543.00 quintals in 2025	Proves that Sungai Tabuk remains an important citrus center in Banjar Regency.
Sungai Tabuk share	23.6% of regency siam/keprok citrus production in 2025	Provides hard data to connect history with contemporary revitalization.
Farmer institutions	13 agricultural extension workers; 228 farmer groups; 6,904 farmer-group members	Shows the institutional base that can support citrus agribusiness.
Sungai Tabuk tourism objects	Lok Baintan Floating Market, 29.5 km from Martapura	Supports the possibility of river-based citrus agrotourism.
Administrative spatial context	Martapura is the capital of Banjar Regency; Sungai Tabuk is a district within Banjar Regency	Prevents spatial ambiguity between city, district, and historical Martapoera landscape.
Limau kuit taste memory	Indomie Soto Banjar Limau Kuit circulates as a popular product using Banjar limau kuit identity	Serves as contemporary cultural data showing how Banjar aromatic citrus moves from orchard and kitchen into popular consumption products.

Source: processed from BPS Kabupaten Banjar (2026, pp. 8-12, 214-215, 256, 327).

Contemporary Revitalization: Si Manis from Sungai Madang, Sorjan, and River Agrotourism

Contemporary sources from Kanal Kalimantan and the Banjar Regency Government show that Sungai Tabuk citrus remains part of local economic memory (Al Ghifari, 2020; Pemerintah Kabupaten Banjar, 2020). Sungai Madang citrus is called Si Manis that was lost, a phrase that shows citrus was not only a production commodity but also an identity of taste, place, and community memory. The decline of the citrus center is explained through old and unproductive trees, diplodia disease, and the conversion of land into housing and other developments.

These sources also mention indicative data: of the 20 villages/urban villages in Sungai Tabuk, 10 villages were considered suitable for redeveloping citrus farming; the planted area was said to be around 925 hectares; and Paku Alam Village about 250 hectares. These figures require verification with more detailed sectoral statistics, but they are relevant as field-policy data. They show that Sungai Tabuk is still viewed as a strategic citrus space, not merely a former center.

The most important practice is the sorjan system. In this system, citrus is planted on raised beds or sorjan, while the spaces between raised beds are planted with wet-rice paddy. This system is a contemporary form of wetland adaptation that historically appeared in Donicie's tembokan and tongkongkan.

Tembakan and sorjan differ in technical context and period, but both reveal the same logic: land is raised for perennial crops, while wet space remains useful for other crops or water regulation.

Plans for citrus-picking agrotourism combined with river cruising and Lok Baintan Floating Market show a transformation in orchard function. In the early twentieth century, citrus orchards were connected to Banjarmasin markets, the east coast of Borneo, and Singapore. In the twenty-first century, citrus orchards may be connected to river tourism, fruit-picking experiences, and a landscape-based local economy. Martapura-Sungai Tabuk citrus therefore has a long trajectory: from smallholder orchard commodity, to agribusiness, to agroecological heritage that can be packaged as river-culture tourism.

SYNTHESIS: CITRUS AS A BANJAR WETLAND AGRARIAN ARCHIVE

Based on the entire body of data, Martapura citrus can be read through five layers. The first is the ecological layer. Citrus orchards grew in alluvial lowlands connected to rivers, swamps, and lakes. The second is the technological layer. Tembakan, tongkongan, mud fertilization, air layering, and sorjan show the ability of communities to adapt perennial crops to water. The third is the varietal layer. Keprok, sweet/hirisan, pomelo, nipis, koeit, citroen, poeroet, and wangkang

show that Banjar citrus history was not singular but consisted of diverse types and taste functions. The fourth is the economic layer. Donicie shows citrus as a commodity entering the market networks of Banjarmasin, the east coast of Borneo, and Singapore. He also recorded the *voorverkocht* pattern, or the advance sale of fruit on trees before picking time, which reveals risk calculation between orchard owners and merchants. Listiana helps explain the position of Banjarmasin and Martapura within colonial economic networks (Listiana, 2011), while Rusastra shows that modern citrus agribusiness problems still relate to distribution, margins, and farmer bargaining position (Rusastra et al., 1992).

The history of Martapura citrus should not therefore be reduced to the history of a plant. It is a history of how Banjar communities managed water, built orchards, distributed risk, formed markets, and gave meaning to landscape. This article shows that a small commodity can open a large understanding of local history. Through citrus, Martapura and Sungai Tabuk can be read as agrarian spaces that continually changed but remained marked by the old relationship between rivers, swamps, markets, and local knowledge.

CONCLUSION

First, Donicie's 1942 report shows that Martapura was an old citrus-cultivation

center in South Kalimantan. This cultivation probably had existed at least since the second half of the nineteenth century and may have been related to the mobility of diamond traders. Data on tree numbers, air layering, tembokan, harvest networks, and citrus varieties show that citrus orchards had become an established village economy. In contemporary administrative terms, Martapura is the capital of Banjar Regency, while Sungai Tabuk is a district in Banjar Regency that is now one of the important concentrations of citrus production.

Second, the main strength of Martapura citrus lay in its adaptation to wetlands. Tembokan, tongkongan, mud use, and intercropping show local technology that combined perennial crops with river and swamp dynamics. The contemporary sorjan practice in Sungai Tabuk shows the continuity of this adaptive logic in modern agribusiness form.

Third, Martapura citrus was embedded in wide trade networks. In Donicie's period, citrus was shipped to Banjarmasin, the east coast of Borneo, and Singapore. In the modern period, 1992 agribusiness data show that Banjar Regency remained one of the citrus production centers of South Kalimantan. BPS 2026 data strengthen this continuity: Banjar Regency siam/keprok citrus production in 2025 reached 86.988.30 quintals, and Sungai Tabuk contributed

20.543.00 quintals or about 23.6% of regency production.

Fourth, contemporary data show that citrus history has policy and heritage value. Diplodia disease, old trees, land conversion, and production decline need to be handled not only as technical problems, but also as efforts to preserve an economic landscape and agrarian memory. The sorjan system and river agrotourism show that citrus revitalization can be directed as a combination of agriculture, wetland conservation, and cultural tourism.

Fifth, jeruk koeit or limau kuit enriches this article with the dimension of taste. Donicie recorded koeit as one of the citrus types found in Banjar orchards and unknown in Java. The continuity of limau kuit in Banjar cuisine, including as a flavor choice in Indomie Soto Banjar Limau Kuit and as a complement to soto Banjar, shows that the history of Martapura-Sungai Tabuk citrus survives not only in archives and statistics, but also in the taste memory of the community. However, these contemporary data must be positioned as supporting cultural evidence, not as the main source for reconstructing colonial history.

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