

Current status of Indonesian tea industry

Indonesia is currently the seventh largest tea producer in the world. However, due to the lucrative business prospects of oil palm, tea production has declined in recent years as some tea plantations have been converted to oil palm plantations, while other tea plantations have stopped production to produce vegetables or other agricultural products more profitable. Despite the decline in land area, the amount of tea production remained relatively stable. This indicates that the remaining tea plantations are becoming more productive.

The History of Tea in Indonesia

The first tea plant entered Indonesia in 1684, in the form of tea seeds from Japan brought by a German named Andreas Cleyer, and planted as an ornamental plant in Jakarta. In 1694, a priest named F. Valentijn reported seeing young tea shrubs from China growing in the Gardens of the Governor-General Champuys Palace in Jakarta.

In 1728, the Dutch government began to pay attention to tea by bringing tea seeds on a large scale from China to be cultivated on the island of Java. This effort was not very successful and succeeded in 1824, Dr. Van Siebold, a surgeon in the Dutch East Indies army who had conducted natural research in Japan, promoted the cultivation of tea seeds from Japan.

In 1826 tea plants were successfully planted to complement the Bogor Botanical Gardens, and in 1827 at the Cisurupan Experimental Garden, Garut, West Java. The success of large-scale trial plantings in Wanayasa (Purwakarta) and in Raung (Banyuwangi) paved the way for Jacobus Isidorus Loudewijk Levian Jacobson, a tea expert, to lay the foundation for a tea plantation business in Java.

The first tea plantation business pioneered by Jacobson has since become a profitable commodity for the Dutch East Indies government, so that in 1828, during the reign of Governor Van Den Bosh, tea became one of the crops that the people had to plant through the politics of forced cultivation (*Culture Stetsel*). The first recorded tea from Java was received in Amsterdam, the Netherlands in 1835.

Assam tea began to enter Indonesia (Java) from Sri Lanka (Ceylon) in 1877, and was planted by RE Kerkhoven in Kebun Gambung, West Java. With the entry of Assam tea into Indonesia, the Chinese tea plants were gradually replaced with Assam tea, and since then tea plantations in Indonesia have grown wider and wider.

In 1919, plantations began to be built in the Simalungun area of North Sumatra. Tea industry in Indonesia have ups and downs in accordance with the development of the world market situation or the situation in Indonesia alone. During the Japanese occupation (1942-1945), many areas of tea plantations were converted to food crops. Not a few tea gardens were abandoned and eventually the tea plants became extinct. Even after the proclamation of independence of Indonesia, a conflict with the Dutch aimed at re-colonization broke out. Although a peace agreement was signed in 1949, the tea industry, which was mainly run by a Dutch company, faced many obstacles such as safety issues due to the effects of frequent civil wars.

In 1958, the Indonesian government took over the tea plantations of Dutch and British companies, and gradually implemented rehabilitation of tea plantations have become the property of the state. The damage to tea plantations in Indonesia is mentioned above, prompting

the government to establish an institution as a research forum to overcome various obstacles in the tea industry in Indonesia.

After the takeover from the Dutch Colonial Government throughout Indonesia, the State of Indonesia established a State Plantation Company under the name PERUSAHAAN PERKEBUNAN NEGARA LAMA (PPN LAMA/old version).

Between 1957-1960 in the context of the Nationalization of plantation companies ex-owned by the Netherlands and other foreign countries (England, France, and Belgium) made new company named PERUSAHAAN PERKEBUNAN NEGARA BARU (PPN BARU/new version). Especially in West Java in the period 1960-1963 there was a merger of companies within the scope of PPN LAMA and PPN BARU to become Perusahaan Perkebunan Negara Kesatuan Jawa Barat I, Perusahaan Perkebunan Negara Kesatuan Jawa Barat II, Perusahaan Perkebunan Negara Kesatuan Jawa Barat III, Perusahaan Perkebunan Negara Kesatuan Jawa Barat IV, and Perusahaan Perkebunan Negara Kesatuan Jawa Barat V.

During 1963-1968, a reorganization was carried out with the aim of making plantation management more efficient and formed Perusahaan Perkebunan Negara Aneka Tanaman VII, Perusahaan Perkebunan Negara Aneka Tanaman VIII, Perusahaan Perkebunan Negara Aneka Tanaman IX, and Perusahaan Perkebunan Negara Aneka Tanaman X which managed the Tea and quinine plant as well as Perusahaan Perkebunan Negara Aneka Tanaman XI and Perusahaan Perkebunan Negara Aneka Tanaman XII. which manages the rubber plant.

In order to increase the efficiency and effectiveness of the company, in 1968-1971 the State Plantation Companies in West Java were reduced to three Perusahaan Negara Perkebunan (PNP) covering 68 plantations, namely:

1. PNP XI, headquarter in Jakarta covers 24 plantations originating from the Perusahaan Perkebunan Negara Aneka Tanaman X and XI.
2. PNP XII, headquarter in Bandung covering 24 plantations, including several former Perusahaan Perkebunan Negara Aneka Tanaman XI, XII and several former Perusahaan Perkebunan Negara Aneka Tanaman VII, and VIII.
3. PNP XIII headquarter in Bandung covering 20 former plantations of the Perusahaan Perkebunan Negara Aneka Tanaman XII, IX, and X.

Since 1971 the Perusahaan Negara Perkebunan XI, XII, XIII changed its status to a Limited Liability Company and named Perseroan Terbatas Perkebunan (Persero). In order to restructure state-owned plantations from April 1, 1994 to March 10, 1996, the management of the PT. PERKEBUNAN XI, XII, XIII was merged under the management of PT. Perkebunan Group Jawa Barat.

Then on March 11, 1996 the PT Perkebunan XI, XII, XIII were merged into the PT Perkebunan Nusantara VIII (PTPN 8).

Tea production in Indonesia

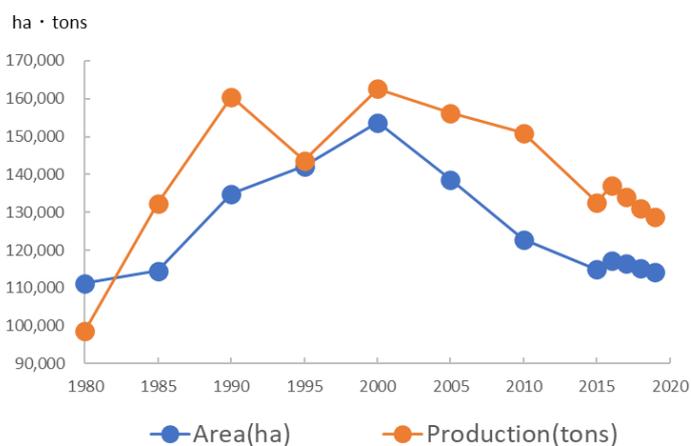
Tea Production by Province in Indonesia (Ton), 2016-2021

No	Province	Year						Growth 2019 over 2018 (%)
		2016	2017	2018	2019	2020*	2021**	
1	Sumatera Utara (North Sumatra)	7,111	8,017	7,943	7,834	8,966	9,070	-1.37
2	Sumatera Barat (West Sumatra)	6,359	7,020	7,527	6,972	6,503	6,770	-7.37
3	Jambi	3,555	5,750	3,606	3,651	2,926	2,960	1.24
4	Sumatera Selatan (South Sumatra)	3,375	3,375	2,626	2,589	3,029	3,067	-1.40
5	Bengkulu	1,319	1,321	2,619	1,776	1,349	1,367	-32.18
6	Jawa Barat (West Java)	98,012	100,999	96,835	90,293	88,265	89,218	-6.75
7	Banten	13	13	49	48	48	49	-2.04
8	Jawa Tengah (Central Java)	12,150	12,441	14,152	14,363	14,596	14,616	1.49
9	DI. Yogyakarta	142	135	1,986	219	242	297	-88.97
10	Jawa Timur (East Java)	6,900	7,043	2,893	2,807	2,091	2,116	-2.97
11	Sulawesi Selatan (South Sulawesi)	-	138	-	-	-	-	-
Indonesia		138,936	146,252	140,236	130,552	128,015	129,530	-6.90

Source: Direktorat Jenderal Perkebunan/Directorate General of Estate: www.pertanian.go.id (2021)

Note: *) Preliminary figure **) Estimation figure: -) Data not available

There are three types of producers; the government-owned plantations, private estates, and small holders. The government plantations produce about 40% of the national output, small holders for 35% and private estates for 25% respectively. They manufacture black, green, jasmine and some specialty teas such as white tea. Large estates produce mainly black tea, and small holders are more involved in pan-fried green tea with jasmine flavour which is popular in local market.



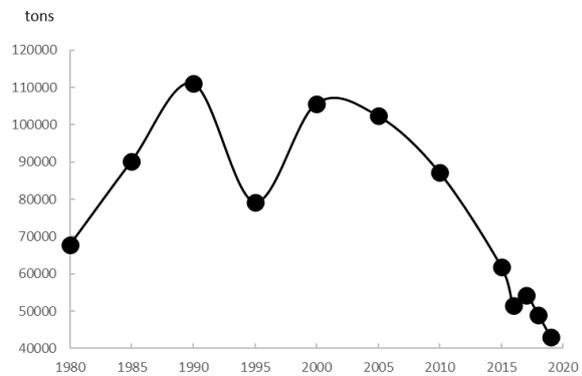
Area and Production of tea in Indonesia

The main production centers for tea in Indonesia for the last five years (2016-2020) have been in six provinces including West Java, Central Java, North Sumatra, West Sumatra, Jambi and East Java. West Java Province provides

the largest production contribution for the in Indonesia, namely 69.16% followed by Central Java (11.00%), North Sumatra (6.00%), West Sumatra (5.34%), Jambi (2.79%), and East Java (2.15%) in 2019.

New movement of tea plantations

PTPN 8 is the largest tea plantation in Indonesia, which is located in West Java. PTPN 8 tea plantation is in an area with an altitude between 600-2000 meters above sea level. With its volcanic soil and tropical climate, the agro climate in the region is suitable for cultivating good flavors, colors and aromas, as well as the exclusive flavors of teas that match the demands of customers in Japan. PTPN8 works daily with distributors to improve and stabilize the quality of tea to meet the market



Export amount of tea in Indonesia

needs of the world and local markets. PTPN 8 works daily with distributors to improve and stabilize the quality of tea to meet the market needs of the world and local markets. The collaboration was carried out on two tea plantations belonging to PTPN 8, then the party cooperating with PTPN 8 is PT Agrijaya. Two of the PTPN 8's Tea Plantations are now in cooperation with PT Agrijaya, they are Ciater Tea Plantation (covering an area of 1,200 ha) and Panyairan Tea Plantation (covering an area of 800ha). The main product of Ciater is black tea Orthodox type while in Panyairan is black tea CTC type. In this business, Agrijaya stands as supervisor and sole agent of those two Tea Plantations. PT Agrijaya supplies massive amounts of tea plantation products from all plantations in Indonesia for both the export and local markets by concerning the certainty of the quantity and quality and consistency of the quality of tea. With the cooperation between PT Agrijaya and PTPN 8 (Ciater and Panyairan tea plantations), there is intensive coordination between the two parties to improve the quality and consistency of the quality of tea.

The improvement in the quality of tea in the two plantations has made Agrijaya successful in selling tea not only locally but also exporting to many countries, including Japan, UK, Russia, Dubai, Poland, Australia, Malaysia, and Pakistan without complaint. Furthermore, in connection with Agrijaya's achievement, since PT Agrijaya became the sole agent and supervised the PTPN 8 tea plantation (Ciater and Panyairan Tea Plantation) in July 2020, Agrijaya succeeded in having export sales contracts of 866.4 tons (since July 2020 to December 2020), while the local sales contract is 461.6 tons (from July 2020 to December 2020). Then the latest export sales contract for January to February 2021 is 279.6 tons. However, PT Agrijaya continues to increase its sales volume, especially exports as much as possible, by providing the best service to meet market needs and tastes. Furthermore, the sales (tea export) made by PT Agrijaya have good implications for Indonesia where the number of tea exports in Indonesia has increased. PT Agrijaya also received good responses from local and export sales, this can be seen from the absence of complaints received from local and overseas customers. The absence of complaints does not make Agrijaya complacent, but Agrijaya is increasingly motivated to ensure consistent quality of tea and improve the performance of other teas to meet the needs of all customers, especially customers in Japan.



Tea mechanization is progressing in Indonesia

INDONESIAN TEA GARDEN

Since 1998, tea plantations in Indonesia began to experience a shortage or decreasing in labor so that they were transferred to mechanization. The initial guidance based on a 2012 study by Candra and Diana and is still ongoing.

To overcome the situation where labor costs continue to rise, PTPN also considered introducing a mechanized system into the tea harvesting process. Aiming for Japan's advanced mechanized cultivation management system to solve labor problems and introduce advanced harvesting technology, PT Agrijaya requested support from Ochiai Cutlery Manufacturing, which manufactures tea plantation management machines, for tea plantation management work. We have been studying efficiency and working on mechanization while receiving guidance and advice from Japanese tea industry officials.



HAND PICKING



MEETING ABOUT MECHANIZATION

First of all we introduced mechanization in tea plantations with a machine which requires 2 people to run it, the machine itself was V8 New Z2 engine type which has now been updated to a V8-World 2 which is more durable than the previous type. By using mechanization in tea plantations, productivity has increased and costs have decreased as the proportion of manpower work has decreased. Furthermore, by mechanizing tea plantation management work, the quality of tea leaves has improved, leading to an increase in selling prices.

This is because the buds were aligned and the tea leaves of constant quality could be harvested by performing pruning work before harvesting, and the background was that labor productivity was improved by efficiently harvesting.



**DEMONSTRATION OF A TWO MEN
PLUCKING MACHINE BY INDONESIAN**



PLUCKING SURFACE

The reduction in labor costs through mechanization and the uniform harvesting of tea leaves have resulted in an increase in plantation income.. Furthermore, at present, we are not only simply promoting the mechanization of harvesting, but also conducting trials of cultivation management systems suitable for Indonesian land and climatic conditions.

Tests of research on efficiency also show that the use of labor before mechanization is not ideal so that it is not efficient for the level of production. Therefore, it is necessary to reduce the number of workers through the application of a plantation mechanization system. And as a result of further research, the introduction of mechanization has had a great impact on production volume. In order to optimize production more, it is necessary to consider the relationship such as labor productivity. In addition, in order to promote mechanization more efficiently, we are also conducting trials on fertilizer spraying and cultivation, and we are conducting research every day with the aim of not only improving productivity but also improving quality.



**DEMONSTRATION OF A TWO MEN
PRUNING MACHINE BY INDONESIAN**



**DEMONSTRATION OF FERTILIZER
SPREADER BY INDONESIAN**

Tea is a popular drink for Indonesians

Drinking tea has been a culture in Indonesia ever since the beginning, which people tend to drink it hot/cold anywhere and anytime. Black tea is the common one that Indonesian people drink but nowadays they are also open into green tea.

Noticing the condition, made some people to begin produce many kinds of tea with the variation in packaging. Even foreign countries such as Japan (Ito-en & Mitsui norin) began to supply tea beverage into Indonesia. One thing that is realized, good tea is aligned with its quality. Therefore, tea quality is one of the important things to do which is now Agrijaya's concerned. Agrijaya and PTPN8 have been instructed by a mechanized cultivation management system, which has made it possible to harvest tea leaves of uniform quality. In recent years, the amount of exports from Indonesia to overseas has been declining, but we would like to continue this challenge to mechanization and focus on exports by establishing a brand. We will continue to cooperate with state-owned plantations, Japanese cooperating companies, and Japanese tea industry officials with the goal of making Indonesian tea more famous and developing worldwide in the future.