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**Report Highlights:**

Private sugar mills expansion leads to increased production in 2022/2023. El Nino, which usually increases sugar content in sugarcane and continues area expansion by private sugar mills is forecast to further increase plantation white sugar production in 2023/24 to 2.6 million metric tons (MMT). Nonetheless, imports of raw sugar are forecast to increase mainly due to higher demand from refineries. In an effort to reduce and stabilize retail prices, the Government of Indonesia (GOI) has issued permits to import 991,000 tons of plantation white sugar in 2022/23.

**Glossary:**

BMKG	: The Indonesian Meteorology, Climatology, and Geophysics Agency
GOI	: Government of Indonesia
HET	: Maximum Retail Price
HFCS-55	: High Fructose Corn Syrup with 55 percent fructose content (HS Code 170260)
ID	: Import Duty
IU	: International Unit
MOA	: Ministry of Agriculture
MOI	: Ministry of Industry
MOT	: Ministry of Trade
OECD	: The Organization for Economic Cooperation and Development
Sembako	: Nine staple foods
TCD	: Tons of Cane per Day
TPD	: Tons Per Day
VAT	: Value Added Tax

**General Summary**

Ministry of Trade (MOT) regulation 27/2017 included sugar as one of the so-called “*Sembako*” or protected products along with rice, corn, soybean, cooking oil, beef, poultry meat, shallot, and eggs as essential food products. The GOI sugar policy classifies domestic sugar into three categories: plantation white sugar for home consumption, raw sugar for domestic sugar refineries, and refined sugar for the local food and beverage industry. MOI regulation No. 3/2021 states that sugar mills can only produce white sugar (plantation white sugar) and refineries can only produce refined sugar. Sugar mills use domestically produced sugarcane as the raw material while refineries source the raw material from imported raw sugar. However, since domestic demand far outpaces local production, significant volumes of imports are required to also fill the idle capacity of sugar mills. The government tightly controls the timing, import volume, and which companies receive import quotas. Additionally, if refined sugar with certain specifications is unavailable in the local market, food and beverage companies may be permitted to import. National demand for both plantation white and refined sugar continues to increase along with population and an expanding food and beverage industry.

COVID-19 conditions have continued to improve in Indonesia with mandatory mask wearing lifted in virtually all public areas except on trains. On March 13, 2023, the World Health Organization (WHO) reported 964 confirmed cases of COVID-19 in Indonesia, a significant decline from 9,629 positive cases on March 14, 2022. As of January 16, 2023, Indonesia administered a total of 444,303,130 vaccine doses. In line with declining cases of COVID-19, the Indonesian economy is projected to continue to recover despite the continuing Ukraine-Russia war and increased interest rates. BPS reported that Indonesia's economy in the fourth quarter of 2022 grew by 5.31 percent compared to 5.02 percent in the fourth quarter of 2021. The Government of Indonesia (GOI) projected that the Indonesian economy will grow by 5.3 percent with an inflation rate of 3.6 percent in 2023. The Indonesian Statistics Agency (*BPS, Badan Pusat Statistik*) reported that the agricultural sector grew by 2.25 percent throughout 2022 on strong consumer demand for staple commodities and a growing food processing sector.

Outdoor activities, tourism, and dining out have started to move the economy and increase demand for refined sugar in the food and beverage industry. As a result, the GOI increased the allocation of raw

sugar imports for refineries to 3.6 MMT in 2023/24 compared to 3.36 MMT authorized in 2022/23. Despite the forecast increase of plantation white sugar production, GOI also authorized sugar mills to import a total of 991,000 tons of raw sugar to fill the idle capacity. A total of 35,000 tons of the first allocation of 107,900 tons is expected to arrive in the country before May 2023.

Sugar consumption for 2022/23 is expected to increase to 7.8 MMT of raw sugar equivalent from 7.6 MMT of raw sugar equivalent in 2021/22. In line with population growth and expected recovery of demand from the food and beverage industry, 2023/24 sugar consumption is forecast to reach to 7.9 MMT of raw sugar equivalent.

Higher demand and increased production cost have increased retail prices of plantation white sugar. In order to stabilize the price, the GOI issued a National Food Agency regulation on reference prices for purchasing and selling of soybean, shallots, chiles, beef, buffalo meat, and sugar, in December 2022. Reference prices for plantation white sugar at producer' level is set at Rp. 11,500/kg (\$768/MT) while Rp. 13,500 to Rp. 14,500/kg (\$901 to 968/MT) at consumer's level. The new refence price at the consumer's level is an increase of 0 to 7.4 percent compared to Rp. 13,500 per kg (\$901/MT) in 2022. The current average retail price is Rp. 14,400/kg (\$961/MT) an increase of 0.8 percent compared to 14,283/kg (\$954/MT).

**Table 1. PSD: Sugarcane for Centrifugal**

Sugar Cane for Centrifugal	2021/2022		2022/2023		2023/2024	
	May 2021		May 2022		May 2023	
Indonesia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	448	448	450	490	0	495
Area Harvested	445	445	447	488	0	490
Production	32200	32200	32400	36000	0	34700
Total Supply	32200	32200	32400	36000	0	34700
Utilization for Sugar	32200	32200	32400	36000	0	34700
Utilization for Alcohol	0	0	0	0	0	0
Total Utilization	32200	32200	32400	36000	0	34700

*Note: The last column of each Marketing Year is not official USDA data.*

**Table 2. PSD: Centrifugal Sugar**

Sugar, Centrifugal Market Begin Year Indonesia	2021/2022				2022/2023	
	May 2021				May 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>Beginning Stocks</b>	2653	2653	2370	2370	0	2330
<b>Beet Sugar Production</b>	0	0	0	0	0	0
<b>Cane Sugar Production</b>	2300	2300	2400	2400	0	2600
<b>Total Sugar Production</b>	2300	2300	2400	2400	0	2600
<b>Raw Imports</b>	5180	5180	5400	5500	0	5300
<b>Refined Imp.(Raw Val)</b>	286	286	300	300	0	330
<b>Total Imports</b>	5466	5466	5700	5800	0	5630
<b>Total Supply</b>	10419	10419	10470	10570	0	10560
<b>Raw Exports</b>	0	0	0	0	0	0
<b>Refined Exp.(Raw Val)</b>	449	449	440	440	0	450
<b>Total Exports</b>	449	449	440	440	0	450
<b>Human Dom. Consumption</b>	7600	7600	7900	7800	0	7900
<b>Other Disappearance</b>	0	0	0	0	0	0
<b>Total Use</b>	7600	7600	7900	7800	0	7900
<b>Ending Stocks</b>	2370	2370	2130	2330	0	2210
<b>Total Distribution</b>	10419	10419	10470	10570	0	10560
(1000 MT)						

Note: The last column of each Marketing Year is not official USDA data.

## Production

White sugar is produced from sugarcane and is primarily for direct human consumption. Refined sugar is made from imported raw sugar, which is generally used for processing by the food and beverage industry. Refined sugar produced from imported raw sugar is prohibited from being distributed to retail markets for human consumption.

Currently, a total of 62 sugar mills are operating in Indonesia, with a national installed capacity of 316,950 TCD. Of these mills, 43 mills are administered by state-owned companies and 9 are privately-owned. Main producing areas of sugarcane in Indonesia are East Java (47 percent), Lampung (32 percent), and Central Java (8 percent). In 2021, BPS reported that small holder farmers account for approximately 56 percent of total sugarcane area, while the balance is managed by state-owned and private companies. Small holder farmers area is on the declining trend due to rapid infrastructure development on Java as well as competition with other food crops such as corn and paddy, which can provide higher margins. Private companies' area expansion which reaches 5.98 percent outside of Java and 6.17 percent on Java island offset the decline in small holders' area. As a result, harvested area in 2022/23 is estimated to increase to 488,000 hectares compared to 445,000 hectares in 2021/22. Harvested area in 2023/24 is forecast to continue increase to 490,000 hectares from area expansion in Sulawesi and Sumatera where new mills have been constructed.

In March 2023, the Indonesian Meteorology, Climatology, and Geophysics Agency (*BMKG, Badan Meteorologi, Klimatologi, dan Geofisika*) projected that the 2023 dry season would arrive earlier than in

the previous year. In addition, the dry season is predicted to be drier than usual. The peak of the 2023 dry season is predicted to occur in August 2023.

Approximately 41 percent of Indonesia will experience an early-onset dry season, 29 percent will begin dry season on time, and 14 percent will experience a late dry season. Regarding atmospheric-ocean dynamics, BMKG also stated that during the second half of 2023 there will be a 50-60 percent chance that the neutral conditions will switch to an El Nino weather pattern. BMKG warned ministries, agencies, regional governments, related institutions, and communities to prepare for the possible negative impact of the coming dry season, especially in areas expected to experience dryer-than-usual weather.

Due to the wet dry season in 2022/23, sugarcane still received rains during the dry season which led to longer stalks as crops could grow longer segments during the vegetative period. Therefore, yields are estimated to increase to 73.8 tons per hectare compared to 72.4 tons per hectare achieved in 2021/22. However, the predicted El Nino will shorten the vegetative period leading to lower yield in 2023/24. Yields are forecast to decline to 70.8 tons per hectare in 2023/24. Considering the larger harvested area and higher yields, 2022/23 sugarcane production is estimated to increase to 36.0 million tons. Sugarcane production are forecast to decline by 3.6 percent to 34.7 million tons in 2023/24.

**Table 3. Profile and Characteristics of Indonesian Sugar Industry in 2021**

No.	Description	Sugarcane Based	Raw Sugar Based
1.	Number of companies	18	11
2.	Number of plants	62	11
3.	Processing capacity	316,950 TCD Avg. 5,100 TCD per mill	5.016 million tons of installed capacity 4.228 million tons of running capacity
4.	Raw material	Sugarcane from mills' own plantation and farmers. Annually authorized amount of imported raw sugar to fill idle capacity.	Imported raw sugar
5.	Number of processing day	Avg. 160 days per year	Avg. 320 days per annum
6.	Annual production potential	2.5-3.0 million tons	3-4 million tons
7.	Number of workers: - On farm - Off farm	28,350 27,427	None 4,833
8.	Number of farmers involved	1,328,250 farming families	None
9.	Age of existing mills	3-186 years old	5-14 years old
10.	Influence of climate on production	Strong	Almost none

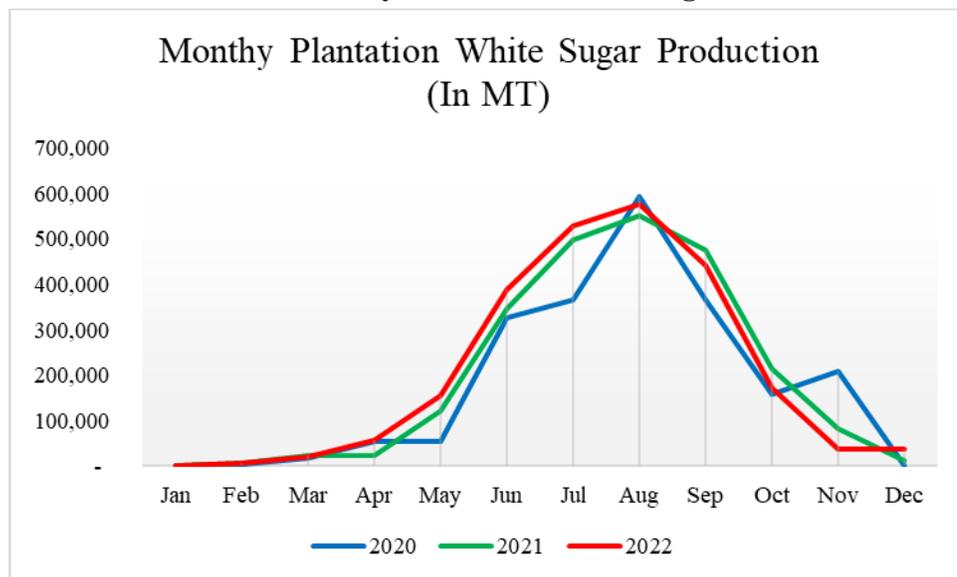
11.	Overseeing agency	Ministry of Agriculture (GOI Reg. No. 17/1986)	Ministry of Industry (Law No. 5/1984)
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Source: MOA, MOI, MOT, compiled by FAS/Jakarta

Small holder farmers supply sugarcane to both state-owned and private sugar mills. Indonesia’s state-owned sugar mills are aging, with approximately 37 out of 43 over 100 years old. Contribution of state-owned sugar mills tend to decline as private companies with more efficient machineries and technology produce more. In addition to aging machineries, unlike private companies, state-owned companies’ ownership of the sugarcane plantation is decreasing. During the period of 2016 to 2021, plantation area of the state-owned companies declined by 4.33 percent per annum while private companies’ areas grew by 5.99 percent per annum. In 2022, state-owned sugar mills contribute 47.9 percent of total national plantation while white sugar production totaled 49 percent, a slight increase compared to 45.1 percent contribution in 2021. As a result of aging machineries, the average 5-year recovery rate across the entire industry is only 7.4 percent. The increased number of workers, which has gradually resumed from the Covid Pandemic is expected to shorten delivery time from field to mill. However, despite shorter lead time, higher moisture content from more rainfall is estimated to reduce recovery rate in 2022/23 to 6.6 percent compared to 7.25 percent in 2021/22. Recovery rate in 2023/24 is forecast to rebound to 7.4 percent due to less rainfall that will increase sucrose content in the sugar cane.

The Muslim fasting month of Ramadan starts in late March 2023. In an effort to avoid less efficient operations due to worker holiday travel, most mills are expected to begin milling season in May 2023 and conclude by November 2023. Considering the abovementioned factors, 2023/24 plantation white sugar production is forecast to increase to 2.6 MMT from 2.4 MMT million tons in 2022/23.

**Chart 1. Indonesia: Monthly Plantation White Sugar Production**



Source: Industry.

There are 11 sugar refineries processing imported raw sugar into refined sugar, with a total installed capacity of 5.016 MMT. Running capacity of these refineries varies depending on the GOI’s issuance of raw sugar import permits. Improving economy due to less COVID-19 cases globally and

domestically as well as more out of houses activities are expected to increase demand for food and beverage. Increased raw sugar import allocation along with higher demand for refined sugar from the food and beverage industry is estimated to increase refinery running capacity. In 2021/22 running capacity increased to 70 percent, compared to 66 percent in 2020/21. Food and beverage industry demand for refined sugar in 2023/24 is expected to increase by 5 percent to 3.64 MMT (3.9 MMT of raw sugar equivalent) compared to 3.45 MMT (3.7 MMT of raw sugar equivalent) in 2022/23. Accordingly, 2022/23 refinery running capacity is forecast to reach approximately 78 percent.

## **Consumption**

OECD forecast that Indonesia consumption of sugar to be around 28.23 kg in 2023, increased from 27.67 kg in 2022. As Indonesia expands its Covid vaccination program (launched in January 2021), fewer social distancing and travel restrictions are expected to reduce home consumption of sugar, while growing demand in the food and beverage industry is expected to increase consumption of refined sugar. As a result, sugar consumption in 2022/23 is estimated to increase to 7.8 MMT of raw sugar equivalent, consisting of 4.1 MMT of sugar for direct consumption and 3.7 MMT of food and beverage industry consumption. In line with population growth, sugar consumption in 2023/24 is forecast to further increase to 7.9 MMT of raw sugar equivalent.

In 2017 there were two corn wet mills operational in the country producing corn starch, HFCS 55, glucose syrup, and maltodextrin from imported corn. As the industry is growing, now there are a total of four wet mills in operational with installed capacity of 4,500 MT per day compared to 1,700 MT per day in 2017. In 2022/23, the industry is forecast to produce a total of 106,000 MT of HFCS-55 (equal to 86,920 MT of raw sugar equivalent), a decline of 11.7 percent from 120,000 MT of HFCS-55 (equal to 98,400 MT of raw sugar equivalent) produced in 2021/22. Despite the local production decline, imports of HFCS 55 have decreased to 32,183 MT of raw sugar equivalent in 21/21 from 34,534 MT of raw sugar equivalent imported in 2020/21. During the period of May 2022 to January 2023, imports of HFCS 55 declined significantly to 5,314 MT of raw sugar equivalent from a total of 28,882 MT of raw sugar equivalent imported during the same period of the previous marketing year. During the period of May 2022 to January 2023, Indonesia imported HFCS 55 from Turkey (41 percent), China (40 percent), and South Korea (13 percent).

## **Prices**

The NFA issued regulation 11/2022 establishing reference purchasing and selling prices for plantation white sugar to address rising white sugar production costs in December 2022. Currently, the average price of plantation white sugar at retail market is still below the reference price.

**Table 4. Indonesia: Jakarta Monthly Average Retail White Sugar Prices (Rp. /Kg)**

Month	2021	2022	2023
January	13,057	13,200	14,400
February	12,967	14,000	14,400
March	12,995	14,100	14,400
April	13,081	14,600	
May	13,065	14,700	
June	13,078	14,600	
July	12,997	14,500	
August	12,978	14,400	
September	12,947	14,400	
October	12,944	14,300	
November	12,995	14,300	
December	13,172	14,300	
Average	13,023	14,283	14,400

Source: Market Monitoring System and Basic Needs (SP2KP, system Pemantauan Pasar dan Kebutuhan Pokok), Ministry of Trade.

## Stocks

Increased imports, higher production of plantation white sugar, higher exports, and rising demand for home and food and beverage industry consumptions is expected to reduce 2022/23 ending stocks to 2.33 MMT of raw sugar equivalent compared to 2.37 MMT of raw sugar equivalent in 2021/22. Stocks are forecast to decline further to 2.21 MMT of raw sugar equivalent in 2023/24 in line with growing population demand.

## Trade

The GOI expects the food and beverage industry to consume domestically produced refined sugar, although companies with specific refined sugar requirements unavailable from domestic producers may still import a limited amount of refined sugar to meet demand. On the other hand, the GOI must also ensure a stable price of plantation white sugar directly consumed by the households. Therefore, since 2022, sugar is subject to the new GOI policy to determine import allocations known as the Commodity Balance. According to Presidential Regulation No. 32/2022: “The commodity balance is data and information that includes, among others the situation of consumption and production of certain commodities for the needs of the population and industrial needs within a certain period of time that is determined and applied nationally.” The concept of the commodity balance is essentially a formula that incorporates data gathered from different stakeholders, including consumption and production data of certain commodities (beef, fish, rice, salt, and sugar for 2022) to meet consumer needs and industrial needs within a calendar year. The commodity balance for each commodity to which this policy applies is determined at an inter-ministerial meeting that takes place prior to the issuance of import permits. One outcome of the commodity balances is the determination of an import volume (by commodity) to be permitted by the GOI each year. The inter-ministerial meeting to determine the commodity balance for each commodity is organized by the Coordinating Ministry for Economic Affairs (CMEA) and is

supposed to take place no later than the first week of December in order for import licenses to be issued in time for the upcoming year. The new scheme requires industry to submit import applications in September. Nonetheless, since the commodity balance is a new import scheme, the process to evaluate the application has resulted in the delayed issuance of import licenses for several commodities, including sugar.

In 2022, sugar refineries imported a total of 3.478 MMT of raw sugar from the total allocation of 3.48 MMT. This sugar must be refined and may only be distributed to the domestic food and beverage industry. The 2022 raw sugar import realization by sugar refineries is higher than 3.303 million tons materialized in 2021. The increase is in line with higher demand of refined sugar by the food and beverage industry as malls and restaurants are open as well as growing food manufactures. Based on the newly implemented Commodity Balance, in January 2023, Ministry of Industry authorized a total of 3.6 MMT of raw sugar for the 11 refineries. During an inter-ministerial meeting in September 2021, the GOI estimated total national demand sugar is 7.3 MMT per year, consisting of 4.1 MMT of refined sugar for the food and beverage industry and 3.2 MMT of plantation white sugar for household consumption. Import permits for the allocation are issued altogether in early 2023.

In an effort to prevent soaring prices of plantation white sugar, GOI also authorized state-owned companies to import a total of 991,000 MT of plantation white for direct household consumption, an increase of 560 percent from allocation of 891,627 MT in 2022. In 2022 GOI authorized only a total of 150,000 MT of plantation white sugar import as at the same time GOI also authorized a total of 938,555 MT and an additional of 440,000 MT of raw sugar to be processed into plantation white sugar. The imported raw sugar for sugar mills is expected to arrive before the beginning of milling season in May 2023. Consequently, 2022/23, raw sugar imports are forecast to increase to 5.4 million tons, consisting mainly of raw sugar imports for refineries.

As mandated by the Law Number 7/2021 concerning Harmonization of Tax Regulations, the GOI sets sugar import duties and taxes as follows:

**Table 5. Indonesia: Sugar Import Duty (ID) and Value Added Tax (VAT), 2023**

No.	Commodity	ID		VAT
		(Rp./Kg)	(US\$/ton)	(%)
1.	Raw cane sugar	550	37	11
2.	White sugar	790	53	11
3.	Refined sugar	790	53	11

*Source: Indonesian National Single Window.*

Thailand remains the main supplier of raw and refined sugar to Indonesia. For the period May 2022 to January 2023, Indonesia's raw sugar imports originated from Thailand (36 percent), Brazil (33 percent), Australia (17 percent) and India (13 percent). Refined sugar was supplied mostly by Thailand (91 percent), India (4 percent), while the balance was from South Korea (4 percent).

## Policy

In order to support bioethanol industry in Indonesia while trying to achieve sugar self-sufficiency target, the president launched the Sugarcane Bioethanol Program for Energy Security in early November 2022. The program targets sugar self-sufficiency in five years and production of bioethanol at 1.2 billion liters in 2030 by expanding sugarcane production to 700,000 hectares (ha) from the current 450,000 ha. The GOI launched a similar self-sufficiency initiative in 2009 targeting land expansion and revitalization of sugars mills. While the 2009 sugar production at 2.05 million metric ton (MMT), the program have increased local sugar production by 12 percent up to last year, yet it fell short of achieving the GOI's self-sufficiency objective as Indonesia consumer sugar demand jumped 41 percent in the past decade. On bioethanol side, Indonesia ethanol producers rely on the molasses, a byproduct of sugarcane processing. At yield of 7.4 percent, the 2021/22 sugar production is estimated to output a 1.49 MMT of molasses. Of that, an average of 516,000 MT of molasses were exported every year and about 52 percent of the molasses supplies used by ethanol distillers.

Indonesia produces ethanol mostly industrial grade for both domestic use and exports. Demand for fuel-grade ethanol virtually non-existent, as the bioethanol mandate program has been inactive since 2010. According to the draft, the sugar self-sufficiency program will cover:

- Sugarcane yield increase to 93 MT per hectare from currently 72.3 MT per hectare through improved agriculture practices
- Sugarcane land expansion up to 700,000 hectares from plantation, social forestry, agroforestry, and smallholders.
- Improved efficiency, utilization, and capacity of sugar mills to reach a yield of 11.2 percent.
- Improved sugarcane farmers welfare.

The 2022 sugar initiative possibly will face the same difficulties with 2009 program. Industry sources reported that considering the cultivation from planting to economic scale of harvest will take no less than 8 years to achieve the break event point. Farmers on Java continue to opt for growing food crops such as rice, corn, or soybean that can be harvested three times in a year. Lack of infrastructure make it difficult to expand area to outside of Java. The only area feasible for sugarcane plantation expansion is in southern part of Sumatera. Yet, even in the area, sugarcane faces strong competition with cassava. Therefore, instead of expanding, Indonesian sugarcane plantations tend to decline over years.

## TRADE MATRICES

**Table 6. Import Trade Matrix, Raw Sugar 2021 -2023**

<b>Import Trade Matrix</b>			
<b>Country</b>	Indonesia		
<b>Commodity</b>	Sugar, Raw		
<b>Time Period</b>	May-Apr	<b>Units:</b>	1,000 MT
Exports for:	2021/22		<b>2022/23*</b>
U.S.	0		0
Others		Others	
Thailand	1963	Thailand	1373
India	1790	Brazil	1266
Australia	826	Australia	645
Brazil	600	India	556
Total for Others	5179		3840
Others not Listed	1		1
Grand Total	5180		3841

Note: \* Only for the period of May 2022 – January 2023

Source: Trade Data Monitor

**Table 7. Import Trade Matrix, Refined Sugar 2021 -2023**

<b>Import Trade Matrix</b>			
<b>Country</b>	Indonesia		
<b>Commodity</b>	Sugar, Refined		
<b>Time Period</b>	May-Apr	<b>Units:</b>	1,000 MT
Exports for:	2021/22		<b>2022/23*</b>
U.S.	0		0
Others		Others	
Thailand	136	Thailand	114
India	125	India	6
South Korea	4	South Korea	5
United Arab Emirates	2		
Total for Others	267		125
Others not Listed	0		0
Grand Total	267		125

Note: \* Only for the period of May 2022 – January 2023

Source: Trade Data Monitor.

**Table 8. Export Trade Matrix, Refined Sugar 2021 -2023**

<b>Export Trade Matrix</b>			
<b>Country</b>	Indonesia		
<b>Commodity</b>	Sugar, Refined		
<b>Time Period</b>	May-Apr	<b>Units:</b>	1,000 MT
Exports for:	2021/22		<b>2022/23*</b>
U.S.	2		1
Others		Others	
Vietnam	418	Vietnam	291
		Malaysia	3
		Singapore	2
Total for Others	418		296
Others not Listed	3		16
Grand Total	423		313

Note: \* Only for the period of May 2022 – January 2023

Source: Trade Data Monitor.

Note: Exchange rate is Rp. 14,977/US \$1, as of March 31, 2023.

**Attachments:**

No Attachments