



ASEAN FOOD SECURITY INFORMATION SYSTEM

ASEAN AGRICULTURAL COMMODITY OUTLOOK

NO. 29 DECEMBER 2022



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ASEAN FOOD SECURITY INFORMATION SYSTEM (AFSIS)

Report on

ASEAN Agricultural Commodity Outlook

No. 29 December 2022

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AFSIS Secretariat
Office of Agricultural Economics (OAE)
Ministry of Agriculture and Cooperatives
Bangkok, Thailand
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The ACO report activity represents the hard work and well collaboration between the ASEAN member countries. The ACO report No.29 and the previous ACO reports would be beneficial and useful for all ASEAN members, policy makers, and other relevant agencies who need agricultural information for planning and creating the policies to ensure the food security in their countries and the ASEAN region.

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Thank you

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Foreword

ASEAN Agricultural Commodity Outlook (ACO) Report is published semi-annually by the ASEAN Food Security Information System (AFSIS) Secretariat, using the data gathered from 10 ASEAN member states. Like previous editions, this report covers a current situation and a prospect of 5 main commodities including rice, maize, sugarcane, soybeans, and cassava.

In this latest of ASEAN Agricultural Commodity Outlook, it provides both national and regional information on production, utilization, monitoring the global food crisis and food insecurity, stock, trade, and FOB/CIF prices. The explanation for significant changes and unusual phenomena is also showed in this report. Furthermore, the report is scrutinized by all member states before publication.

AFSIS Secretariat
Office of Agricultural Economics (OAE)
Ministry of Agriculture and Cooperatives



Global Situation and ASEAN Outlook in 2022/23

Global Situation in 2022/23

In 2021/22, the global economy had gradually been recovering from the relaxation of COVID-19 measures in many countries. In 2023, however, some global farmers may face volatility in agricultural products and inputs prices which resulted from either the Russia-Ukraine war or climate change. The Russia-Ukraine war has impacts on grain and oilseed supply for the importing countries because Ukraine is one of the world's largest exporters of maize, wheat, and sunflower. As a result, the importing countries of these crops using raw materials for animal feed industries need to accelerate their imports to retain their stocks and prevent the uncertainty from the Russia-Ukraine war. Although some progress has been made in allowing the export of agricultural products from Ukraine, there is still no clear sign of when the war will end. In addition, the Russia-Ukraine war also has impacted higher energy costs resulting in higher costs of fertilizer which resulted in high production costs because Russia is the world's largest natural gas producer and exporter. According to climate change, it has impacts on agriculture by changing the seasons of some crops and reducing yields of agricultural products. Therefore, farmers need to change their crops' season/pattern or increase the amount of fertilizer application in order to remain/increase crops' yield.

Global rice production in 2022/23 is projected to be less than the previous year due to the decrease in harvested area and yield. In particular, rice production is expected to decrease in Bangladesh, Brazil, China, India, Japan, South Korea, Nepal, Nigeria, Pakistan, the Philippines, and the U.S.A. The global demand for rice consumption is predicted to reduce, leading to the world's rice imports and exports being adjusted downward. In addition, India is expected to be the biggest global exporter, followed by Thailand and Vietnam, while China is the largest importer followed by the Philippines, the European Union, and Nigeria.

World maize production in 2022/23 is expected to decline from the last year due to the decrease in harvested area. The United States, which is the world's largest producer, has decreased production resulting from the hot and dry climate in the central of the country. Maize production in the European Union, India, and Ukraine is also forecast to decrease. Likewise, demand in the world market tends to decrease over the past year due to the outbreak situation of COVID-19 and the unresolved situation of the Russia-Ukraine war which resulted in higher production costs and less purchasing power by consumers. Global trade is forecast to go down with lower output of maize in the major exporters – the United States, and Ukraine.

World sugar production in 2022/23 is forecast to go up from the previous year due to an increase in the sugar production of some major producing countries, including Brazil, Russia, Thailand, and China. The global demand for raw sugar has increased due to the higher demand from China, Thailand, Indonesia, and Russia. Thus, global trade is predicted to rise.

Global soybean production in 2022/23 is predicted to increase due to favorable weather in the top three producing and exporting countries, namely Brazil, the United States, and Argentina. Soybean imports and exports tend to rise with the high demands of soybean oil extraction and world consumption. Currently, the biggest soybean importer is China.

World cassava production in 2022/23 is expected to increase from the previous year due to an increase in cassava in some main producing countries. Nigeria was the largest producer of cassava in the world in 2019 followed by the Congo DR, Thailand, Ghana, Brazil, Indonesia, Cambodia, and Vietnam. Thailand is the world's largest exporter in 2020, followed by Cambodia, the United States, Vietnam, and, Lao PDR. China is the world's largest importer in 2020, followed by Thailand, and Vietnam.

ASEAN Outlook in 2022/23

The ASEAN **rice** supply in 2022/23 is forecast at 167.56 million tons, 3.08 million tons higher than the previous year. The production, beginning stock, and aggregate rice import are estimated to increase. Meanwhile, the rice export of ASEAN is expected to increase by 0.38 percent to 18.59 million tons from the last year. However, rice export is projected to decline for Vietnam and Myanmar. Most countries in ASEAN, except Indonesia, tend to increase rice production as there is no extreme natural disaster.

The **maize** supply of ASEAN in 2022/23 is predicted at 60.04 million tons, 0.30 million tons lower than the previous year. The aggregate maize import is expected to shrink by 8.68 percent due to less purchasing power by consumers. However, maize production in ASEAN countries tends to increase due to farmers' response to price increases, favorable weather, and government policies. Meanwhile, the maize export and the ending stock are expected to increase by 4.18 percent and 3.90 percent, respectively.

The **sugar** supply of ASEAN in 2022/23 is estimated at 39.06 million tons, up 3.53 million tons from the previous year due to the increase in stock from the previous year. The sugarcane production in ASEAN is likely to go up by 10.17 percent from 16.72 million tons in 2022 to 18.42 million tons in 2023. Sugarcane production is expected to increase in Thailand, Indonesia, Lao PDR, and Brunei.

The **soybean** supply of ASEAN is projected at 9.92 million tons in 2023, rising by 5.42 percent from the previous year. The aggregate soybean import tends to increase by 7.89 percent or 0.66 million tons from the year earlier. Besides, the production of Indonesia, as the biggest soybean producer in ASEAN, is likely to decrease, same as all countries in ASEAN, except Lao PDR, the Philippines, Thailand, and Vietnam caused by the increase in the price of competing for crops and high production cost.

The **cassava** supply of ASEAN is expected at 115.43 million tons in 2023, up 4.25 percent from the previous year. Meanwhile, cassava production and aggregate export are expected to increase by 0.88 and 2.26 percent, respectively. Thailand, the biggest cassava producer and exporter in ASEAN, tends to increase production and export because farmers respond to the price increase, and use more improved crop varieties together with favorable weather. On the contrary, Lao PDR and Indonesia are projected to decrease their cassava production due to the reduction in planted area and yield.

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Rice Outlook for 2023

Highlights

Rice supply in ASEAN is forecast to increase about 1.87 percent from 164.48 million tons of milled rice in 2022 to 167.56 million tons in 2023 (Table 1). The increase in supply is mostly due to the increase in stock carried over from the previous year and production.

The beginning stock is forecast to increase 4.42 percent or 1.38 million tons from 31.19 million tons in 2022 to 32.57 million tons in 2023.

The rice production in 2023 is forecast to be 128.60 million tons, increasing from 127.35 million tons in 2022, or 0.98 percent increase. The import is expected to increase 7.58 percent or 0.45 million tons from 5.94 million tons in 2022 to 6.39 million tons in 2023.

Considering only available data, rice export is expected to increase 0.38 percent from 18.52 million tons in 2022 to 18.59 million tons in 2023.

The ratio of production to domestic utilization (self-sufficiency ratio) for the region is expected to be 111.99 percent in 2023. The beginning stock to domestic utilization ratio (food security ratio) is estimated to be 28.37 percent in 2023 (Table 1).

Table 1 Summary of the ASEAN rice situation, 2022-2023 (milled rice)

Items	2022	2023	Change		Unit: Million tons
			Quantity	%	
Supply (Million tons)	164.48	167.56	3.08	1.87	
Beginning stock	31.19	32.57	1.38	4.42	
Production	127.35	128.60	1.25	0.98	
Import	5.94	6.39	0.45	7.58	
Demand (Million tons)	164.48	167.56	3.08	1.87	
Domestic utilization	113.38	114.83	1.45	1.28	
Export	18.52	18.59	0.07	0.38	
Ending stock	32.57	34.15	1.58	4.85	
Ratio of production to domestic utilization (%)	112.32	111.99	-0.33	-	
Ratio of beginning stock to domestic utilization (%)	27.51	28.37	0.86	-	

ASEAN Rice Situation in 2022

► Production

ASEAN paddy production in 2022 (crop year 2021/22) was estimated at 197.73 million tons, increasing 4.98 million tons or 2.58 percent from 192.76 million tons in 2021 (crop year 2020/21). The increase was due to the increasing in planted and harvested areas. The increase in production was found in Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, and Thailand (Table 2-5, Figure 1-4).

For **Brunei**, the decrease in production is attributed to the decrease in yield. The decrease in yield came from pests, diseases and unfavorable weather caused by rainy and strong wind at the stage of rice nearing maturity which resulted in collapsed paddy plant.

For **Cambodia**, the increase in production was due to the increase in planted area, harvested area, and yield. The increase in planted area came from farmers' response to price increases and government policy. The increase in harvested area and yield was because farmers used more fertilizer and took better care of the rice crop together with favorable weather.

For **Indonesia**, the increase in production is attributed to the increase in planted area and harvested area due to government policy together with favorable weather.

For **Lao PDR**, the increase in production is attributed to the increase in planted area and yield. The increase in planted area came from farmers' response to price increases together with government policy. The increase in yield was because of favorable weather.

For **Malaysia**, the decrease in production is attributed to the decrease in planted area and yield. The decrease came from unfavorable weather together with flood, pests and diseases.

For **Myanmar**, the increase in production is attributed to the increase in planted area, harvested area, and yield. The increase in planted area came from farmers' response to price increases. The increase in harvested area and yield was due to favorable weather.

For **the Philippines**, the increase in production came from the increase in planted area and harvested area because farmers used more improved varieties together with favorable weather.

For **Thailand**, the increase in production came from the increase in planted area, harvested area, and yield, which was due to farmers' response to price increases and favorable weather together with sufficient irrigation and water supply.

For **Vietnam**, the decrease in production is attributed to the decrease in planted area, harvested area, and yield.

► Utilization and Stock

The domestic utilization of rice (milled rice) within ASEAN in 2022 (calendar year) was estimated to be 113.38 million tons, which decreased from 113.44 million tons in 2021. The decrease was about 0.06 million tons or 0.05 percent (Table 7-8).

The ratio of production to domestic utilization (self-sufficient ratio) of ASEAN in 2022 was estimated at 112.32 percent compared to 109.46 percent in 2021. This indicated that rice production in ASEAN in year 2022, aggregately, is sufficient for rice demand in ASEAN. The increase in the self-sufficient ratio of production to domestic utilization occurred in Cambodia, Indonesia, Lao PDR, Malaysia, and Thailand. While the self-sufficient ratio of Brunei, Myanmar, the Philippines, and Vietnam decreased.

However, on the country-by-country basis, some countries in the region still need to import rice for their domestic consumption. The highest ratio was found in Cambodia, Thailand, Vietnam respectively, while the lowest ratio was found in Brunei (Table 10, Figure 12).

The beginning stock in 2022 (January 2022) of ASEAN was estimated at 31.19 million tons, decreasing 0.16 million tons from 31.34 million tons in 2021 or 0.50 percent. Myanmar carried 11.23 million tons or 36.02 percent of the ASEAN stock, followed by Indonesia and Cambodia with 5.27, 5.25 million tons or 16.91, 16.82 percent of the total stock in ASEAN (Table 7-8).

The ratio of the beginning stock to the domestic utilization (**food security ratio**) in 2022 for the whole ASEAN was estimated at 27.51 percent, which decreased about 0.12 percent from the previous year. Brunei, Cambodia, Myanmar, and Thailand have the ratios above 20 percent of the optimum level (Table 11, Figure 13).

For the overall production, the data from major crop namely rice, the staple food of ASEAN region, demonstrates that many countries in the region ***have self-dependency in terms of food production and have food security.*** However, they still have to deal with the problem of high food prices due to higher cost and inputs prices which resulted from either the Russia-Ukraine war or climate changes, which are the determinants that cause food insecurity. As most of the producing countries in ASEAN are developing countries, the majority of populations in the countries have low-income and middle-income which will affect the most from high food prices crisis. This might raise the concerns of food insecurity in the future. On the other hand, this situation can be advantages for rice export of ASEAN countries, especially for countries

that have excessive supply for generating income from export.

► **Trade**

In 2022, ASEAN as a whole exported 18.52 million tons of milled rice, which increased of 2.26 million tons or 13.90 percent from 16.26 million tons exported in 2021. Vietnam and Thailand, the two major exporting countries, exported about 8.08 million tons and 7.60 million tons, respectively (Table 7-8, Figure 5-6).

The total import by ASEAN in 2022 is estimated to be 5.94 million tons, an increase of 0.56 million tons or about 10.40 percent from 5.38 million tons in 2021. The Philippines was the biggest importer in the region, which imported 3.23 million tons of milled rice (Table 7-8, Figure 8-9).

The quantity and value of rice exported from ASEAN countries by countries of destination and the quantity and value of imported by countries of origin are given in Table 12-13.

► **Prices**

Monthly FOB prices of rice export and CIF prices for rice import in selected countries in ASEAN during 2021-2022 (January-December) are shown in Table 14-15 and Figure 14-16.

► **Damaged Area**

The damaged area of paddy in ASEAN in 2022 (crop year 2021/22) was estimated to be 0.52 million hectares. Of which, 0.49 million hectares or 94.68 percent of the total damaged area were caused by flood. The damage caused by flood occurred mostly in Thailand, which equals to 0.44 million hectares or 89.64 percent of the whole ASEAN. The damage was also caused by many factors such as drought, pests, and diseases (Table 6).

Prospects for Rice in 2023

► Production

ASEAN paddy production in 2023 (crop year 2022/23) is estimated at 199.86 million tons, increasing by 2.13 million tons, which is 1.08 percent from 197.73 million tons in 2022 (crop year 2021/22) by assuring without extreme natural disasters. The production is predicted to increase in all countries, except Indonesia, which are caused by the increase in either planted area or yield (Table 2-5, Figure 1-4).

► Utilization and Stock

The domestic utilization of milled rice in ASEAN in 2023 is projected to be 114.83 million tons, increasing about 1.45 million tons or 1.28 percent compared to 113.38 million tons in 2022 (Table 8-9).

The beginning stock in 2023 is predicted to be 32.57 million tons, which increased by 1.39 million tons or 4.45 percent from 31.19 million tons in 2022. The ending stock is also expected to increase by 1.57 million tons or 4.83 percent from 32.57 million tons in 2022 to 34.15 million tons in 2023 (Table 8-9, Figure 11).

The ratio of production to domestic utilization (**self-sufficient ratio**) is forecast to be 111.99 percent in 2023, which will decrease by 0.33 percent from 2022. This indicates that rice production in ASEAN is still enough for consumption within the region (Table 10, Figure 12).

The ratio of the beginning stock to the domestic utilization (**food security ratio**) in ASEAN in 2023 is forecast to increase from 27.51 percent in 2022 to 28.37 percent in 2023 (Table 11, Figure 13).

► Trade

With missing data from some countries, rice import from ASEAN is forecast to increase from 5.94 million tons in 2022 to 6.39 million tons in 2023 (Table 8-9, Figure 8 and 10).

For the export, the whole ASEAN is forecast to export 18.59 million tons in 2023, increasing of 0.06 million tons or about 0.34 percent compared to 18.52 million tons in 2022 (Table 8-9, Figure 5 and 7).

Table 2 Paddy production in ASEAN countries, 2021 - 2023

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	192,759.59	197,734.77	4,975.18	2.58	199,861.99	2,127.22	1.08
Brunei	4.11	3.98	-0.13	-3.17	4.18	0.20	5.00
Cambodia	10,935.62	12,206.99	1,271.37	11.63	12,223.09	16.10	0.13
Indonesia	54,415.29	57,449.83	3,034.53	5.58	56,153.15	-1,296.68	-2.26
Lao PDR	3,660.05	3,769.21	109.16	2.98	3,907.20	137.99	3.66
Malaysia	2,441.60	2,399.67	-41.93	-1.72	2,418.40	18.73	0.78
Myanmar	25,982.53	26,274.73	292.20	1.12	*26,590.03	315.30	1.20
Philippines	19,708.04	19,903.98	195.94	0.99	*20,593.73	689.75	3.47
Singapore	N/A						
Thailand	31,734.27	32,977.78	1,243.51	3.92	34,084.83	1,107.06	3.36
Vietnam	43,878.08	42,748.61	-1,129.47	-2.57	43,887.38	1,138.77	2.66

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 3 Paddy planted area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	45,780.83	46,925.67	1,144.85	2.50	47,125.73	200.06	0.43
Brunei	1.58	1.67	0.09	5.60	1.75	0.08	5.00
Cambodia	3,404.13	3,552.73	148.59	4.37	3,545.23	-7.50	-0.21
Indonesia	10,497.82	11,228.20	730.38	6.96	10,805.25	-422.95	-3.77
Lao PDR	940.82	956.04	15.23	1.62	919.18	-36.86	-3.86
Malaysia	647.94	644.96	-2.97	-0.46	647.14	2.17	0.34
Myanmar	6,961.93	7,053.36	91.42	1.31	*7,145.98	92.62	1.31
Philippines	*4,761.28	*4,801.98	40.70	0.85	*4,947.77	145.79	3.04
Singapore			N/A				
Thailand	11,324.84	11,609.60	284.76	2.51	11,885.34	275.74	2.38
Vietnam	7,240.50	7,077.14	-163.35	-2.26	7,228.10	150.96	2.13

Remark: *The value is estimated by AFSIS Secretariat. ** Philippines reported only harvested area. N/A refers to data that is not available.

Table 4 Paddy harvested area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	45,043.11	46,238.68	1,195.57	2.65	46,421.68	183.00	0.40
Brunei	1.48	1.56	0.08	5.65	1.64	0.08	5.00
Cambodia	3,268.97	3,497.68	228.71	7.00	3,504.26	6.58	0.19
Indonesia	10,411.80	11,213.99	802.19	7.70	10,805.25	-408.74	-3.64
Lao PDR	939.57	952.62	13.04	1.39	919.18	-33.44	-3.51
Malaysia	645.32	641.89	-3.43	-0.53	647.14	5.24	0.82
Myanmar	6,830.05	6,887.16	57.12	0.84	*6,944.76	57.60	0.84
Philippines	4,761.28	4,801.98	40.70	0.85	*4,947.77	145.79	3.04
Singapore			N/A				
Thailand	10,944.15	11,164.66	220.51	2.01	11,423.59	258.93	2.32
Vietnam	7,240.50	7,077.14	-163.35	-2.26	7,228.10	150.96	2.13

Remark: * The value is estimated by AFSIS Secretariat, N/A refers to data that is not available.

Table 5 Paddy yield in ASEAN countries, 2021 – 2023

Unit: Ton/Hectare

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	4.28	4.28	0.00	0.00	4.31	0.03	0.70
Brunei	2.79	2.55	-0.24	-8.60	2.55	0.00	0.00
Cambodia	3.35	3.49	0.14	4.18	3.49	0.00	0.00
Indonesia	5.23	5.12	-0.11	-2.10	5.20	0.08	1.56
Lao PDR	3.90	3.96	0.06	1.54	4.25	0.29	7.32
Malaysia	3.78	3.74	-0.04	-1.06	3.74	0.00	0.00
Myanmar	3.80	3.82	0.02	0.53	*3.83	0.01	0.26
Philippines	4.14	4.14	0.00	0.00	*4.16	0.02	0.48
Singapore			N/A				
Thailand	2.90	2.95	0.05	1.72	2.98	0.03	1.02
Vietnam	6.06	6.04	-0.02	-0.33	6.07	0.03	0.50

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 6 Paddy damaged area in ASEAN by cause of damage, 2022

Unit: Hectares

Country	Cause of Damage (Hectares)						
	Flood	Drought	Pests	Diseases	Other	Unspecified	Total
ASEAN	491,118	20,983	887	29	377	5,305	518,699
Brunei	14	15	31	29	19	-	108
Cambodia	31,154	20,335	-	-	-	-	51,489
Indonesia	13,475	17	717	-	-	-	14,209
Lao PDR	1,584	-	129	-	-	1,713	3,426
Malaysia	N/A						
Myanmar	4,676	616	11	-	358	-	5,661
Philippines	N/A						
Singapore	N/A						
Thailand	440,215	-	-	-	-	-	440,215
Vietnam							

Remark: N/A refers to data that is not available.**Table 7 Rice balance sheet of ASEAN countries, 2021 (milled rice)**

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	31,342,463	124,167,764	5,380,396	160,890,624	113,440,576	16,263,068	31,186,979	160,890,624
Brunei	21,563	2,675	23,017	47,254	29,344	-	17,910	47,254
Cambodia	3,604,987	6,998,796	-	10,603,783	3,784,284	1,573,581	5,245,918	10,603,783
Indonesia	7,383,601	34,836,671	32,716	42,252,988	36,977,307	3,144	5,272,537	42,252,988
Lao PDR	194,533	2,196,030	46,825	2,437,388	2,283,640	17,309	136,439	2,437,388
Malaysia	-	1,562,622	1,148,909	2,711,531	2,615,271	96,260	-	2,711,531
Myanmar	10,576,492	16,368,992	-	26,945,484	14,817,485	894,737	11,233,262	26,945,484
Philippines	2,332,000	13,053,951	2,966,619	18,352,570	16,492,731	-	1,859,840	18,352,570
Singapore	-	-	381,450	381,450	229,207	152,243	-	381,450
Thailand	*4,640,000	20,627,274	25,217	25,292,491	*14,715,810	6,296,681	*4,280,000	25,292,491
Vietnam	2,589,288	28,520,753	755,644	31,865,684	21,495,497	7,229,114	3,141,073	31,865,684

Remark: * The value is estimated by AFSIS Secretariat. ** Thailand rice waste = 16.19% of domestic rice consumption = 2.38 million tons**Table 8 Rice balance sheet of ASEAN countries, 2022 (milled rice)**

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	31,186,979	127,350,719	5,940,084	164,477,782	113,380,892	18,523,007	32,573,884	164,477,783
Brunei	17,910	2,590	29,560	50,059	31,851	-	18,208	50,059
Cambodia	5,245,918	7,812,472	-	13,058,390	3,670,110	2,053,166	7,335,114	13,058,390
Indonesia	5,272,537	36,779,378	18,909	42,070,824	36,212,160	3,044	5,855,620	42,070,824
Lao PDR	136,439	2,261,526	69,625	2,467,590	2,252,633	66,802	148,155	2,467,590
Malaysia	-	1,535,787	1,020,209	2,555,996	2,462,020	93,976	-	2,555,996
Myanmar	11,233,262	16,553,081	164	27,786,507	16,576,787	499,968	10,709,751	27,786,507
Philippines	1,859,840	*13,183,737	*3,233,615	18,277,191	*16,670,261	-	*1,606,930	18,277,191
Singapore	-	-	344,569	344,569	216,866	127,703	-	344,569
Thailand	*4,280,000	21,435,554	*15,000	25,730,554	*14,247,554	7,600,000	*3,883,000	25,730,554
Vietnam	3,141,073	27,786,594	1,208,434	32,136,102	21,040,650	8,078,347	3,017,105	32,136,102

Remark: * The value is estimated by AFSIS Secretariat. ** Thailand rice waste = 10.81% of domestic rice consumption = 1.54 million tons

Table 9 Rice balance sheet of ASEAN countries, 2023 (milled rice)

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	32,573,884	128,602,538	6,387,871	167,564,294	114,829,831	18,586,145	34,148,318	167,564,293
Brunei	18,208	2,719	30,446	51,373	32,859	-	18,514	51,373
Cambodia	7,335,114	7,822,776	-	15,157,891	3,775,262	2,532,751	8,849,877	15,157,891
Indonesia	5,855,620	35,781,915	18,909	41,656,444	36,331,643	3,044	5,321,757	41,656,444
Lao PDR	148,155	2,344,320	71,000	2,563,475	2,335,692	70,000	157,782	2,563,475
Malaysia	-	1,547,775	1,160,224	2,707,999	2,610,791	97,208	-	2,707,999
Myanmar	*10,709,751	*16,780,490	-	27,490,241	*16,528,036	*493,169	*10,469,036	27,490,241
Philippines	*1,606,930	*13,640,605	*3,524,640	18,772,176	*16,811,293	-	*1,960,882	18,772,176
Singapore	-	-	363,010	363,010	223,037	139,973	-	363,010
Thailand	*3,883,000	22,155,140	*10,000	26,048,140	*14,815,140	8,200,000	*3,033,000	26,048,140
Vietnam	3,017,105	28,526,798	1,209,642	32,753,546	21,366,077	7,050,000	4,337,469	32,753,546

Remark: * The value is estimated by AFSIS Secretariat. ** Thailand rice waste = 17.77% of domestic rice consumption = 2.63 million tons

Table 10 Ratio of rice production to domestic utilization in ASEAN countries (Self-sufficiency ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)
ASEAN	124,167,764	113,440,576	109.46	127,350,719	113,380,892	112.32	128,602,538	114,829,831	111.99
Brunei	2,675	29,344	9.11	2,590	31,851	8.13	2,719	32,859	8.28
Cambodia	6,998,796	3,784,284	184.94	7,812,472	3,670,110	212.87	7,822,776	3,775,262	207.21
Indonesia	34,836,671	36,977,307	94.21	36,779,378	36,212,160	101.57	35,781,915	36,331,643	98.49
Lao PDR	2,196,030	2,283,640	96.16	2,261,526	2,252,633	100.39	2,344,320	2,335,692	100.37
Malaysia	1,562,622	2,615,271	59.75	1,535,787	2,462,020	62.38	1,547,775	2,610,791	59.28
Myanmar	16,368,992	14,817,485	110.47	16,553,081	16,576,787	99.86	16,780,490	16,528,036	101.53
Philippines	13,053,951	16,492,731	79.15	13,183,737	16,670,261	79.09	13,640,605	16,811,293	81.14
Singapore	-	229,207	-	-	216,866	-	-	223,037	0.00
Thailand	20,627,274	14,715,810	140.17	21,435,554	14,247,554	150.45	22,155,140	14,815,140	149.54
Vietnam	28,520,753	21,495,497	132.68	27,786,594	21,040,650	132.06	28,526,798	21,366,077	133.51

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Table 11 Ratio of rice beginning stock to domestic utilization in ASEAN countries, 2021– 2023

Unit: Tons

Country	2021			2022			2023		
	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)
ASEAN	31,342,463	113,440,576	27.63	31,186,979	113,380,892	27.51	32,573,884	114,829,831	28.37
Brunei	21,563	29,344	73.48	17,910	31,851	56.23	18,208	32,859	55.41
Cambodia	3,604,987	3,784,284	95.26	5,245,918	3,670,110	142.94	7,335,114	3,775,262	194.29
Indonesia	7,383,601	36,977,307	19.97	5,272,537	36,212,160	14.56	5,855,620	36,331,643	16.12
Lao PDR	194,533	2,283,640	8.52	136,439	2,252,633	6.06	148,155	2,335,692	6.34
Malaysia	-	2,615,271	-	-	2,462,020	-	-	2,610,791	-
Myanmar	10,576,492	14,817,485	71.38	11,233,262	16,576,787	67.77	10,709,751	16,528,036	64.80
Philippines	2,332,000	16,492,731	14.14	1,859,840	16,670,261	11.16	1,606,930	16,811,293	9.56
Singapore	-	229,207	-	-	216,866	-	-	223,037	-
Thailand	4,640,000	14,715,810	31.53	4,280,000	14,247,554	30.04	3,883,000	14,815,140	26.21
Vietnam	2,589,288	21,495,497	12.05	3,141,073	21,040,650	14.93	3,017,105	21,366,077	14.12

Table 12 Quantity and Value of Rice Export by Countries of Destination in 2022

Quantity: Tons Values: US\$

Exporting Country	Country of Destination													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei	N/A													
Cambodia														
Indonesia									3.33	2,999			2,681	1,210,889
Lao PDR														
Malaysia					93,923	37,104,246								
Myanmar									4,228	1,301,000			97,661	35,094,000
Philippines	N/A													
Singapore	N/A													
Thailand	9,030	5,983,537	1,892	697,010	46,612	19,405,747	27,725	9,297,953	123,854	47,724,644	2,189	723,409	150,474	53,929,757
Vietnam					56,851	27,619,952			396,263	179,888,269			2,739,698	1,266,443,887

[6]

Exporting Country	Country of Destination						Total within ASEAN		Total outside ASEAN		Total		
	Singapore		Thailand		Vietnam								
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	
Brunei	N/A												
Cambodia					1,096,654	-	1,096,654	-	315,015		1,411,669	-	
Indonesia							2,684	1,213,889	50	48,735	2,735	1,262,624	
Lao PDR			17,913	6,909,813	29,788	10,398,723	47,701	17,308,536	19,101	9,300,001	66,802	26,608,537	
Malaysia	50.3	42,948					93,973	37,147,195	3	4,326	93,976	37,151,520	
Myanmar	1,457	563,000	1,018	354,000			104,364	37,312,000	395,604	152,518,650	499,968	189,830,650	
Philippines	N/A												
Singapore	N/A												
Thailand	79,903	59,038,835			11,124	5,803,479	452,802	202,604,371	5,750,468	2,677,290,919	6,203,270	2,879,895,290	
Vietnam	81,482	44,668,147					3,274,294	1,518,620,255	1,997,244	1,007,971,327	5,271,538	2,526,591,582	

Remark: The data in this table is obtained from national focal points of member states and may not complete.

Table 13 Quantity and Value of Rice Import by Countries of Origin in 2022

Quantity: Tons Values: US\$

Importing Country	Country of Origin													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei														
Cambodia														
Indonesia									0.01	3				
Lao PDR														
Malaysia		30,488	21,107,834	12	21,485						253	76,985		
Myanmar														
Philippines											200,173	55,424,491		
Singapore		6,083	4,395,076	0.35	994				72	82,985	3,508	1,624,635		
Thailand		0.0004	8								422.944	37,701	0.052	247
Vietnam		-	327,115,007	-	381,290		-	7,972,269	-	86,492	-	1,105,300	-	39,607

[OI]

Importing Country	Country of Origin						Total within ASEAN		Total outside ASEAN		Total	
	Singapore		Thailand		Vietnam							
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei												
Cambodia												
Indonesia	0.042	353			9,625	5,117,620	9,625	5,117,976	1,310.20	1,591,117	10,935	6,709,093
Lao PDR			58,824	16,569,060	4,943	1,322,592	63,767	17,891,653	5,858	2,666,646	69,625	20,558,299
Malaysia	74.4	29,066	130,040	59,784,084	351,757	173,277,141	512,624	254,296,596	507,585	236,800,252	1,020,209	491,096,847
Myanmar							-	-	160	127,000	160	127,000
Philippines	1,860.7	641157	162,724	55,494,686	2,614,421	836,673,845	2,979,178	948,234,179	172,960	48,209,883	3,152,138	996,444,062
Singapore			93,310	80,949,776	90,643	53,396,513	193,617	140,449,980	150,952	91,284,661	344,569	231,734,641
Thailand	0.002	11			488	288,354	911	326,321	4,638	4,326,997	5,549	4,653,319
Vietnam	-	2,887,005	-	5,583,102			-	345,170,071		191,339,138	-	536,509,209

Remark: The data in this table is obtained from national focal points of member states and may not complete.

Table 14 FOB Price of rice in selected ASEAN countries

Unit: US\$/Ton

Country	Grade	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	Glutinous Rice	2021	-	2,787	-	2,750	1,825	2,916	588	589	596	668	1,990	1,819	1,653
		2022	941	590	-	-	816	-	1,147	1,804	657	-	-	-	993
Lao PDR	Hommali Rice	2021	357	325	320	324	332	341	334	348	455	341	342	342	347
		2022	341	367	362	369	383	378	349	367	367	362	366	378	366
Malaysia	Not specified	2021	425	467	477	492	503	499	499	507	461	434	437	457	471
		2022	468	454	426	496	467	486	538	506	496	517	-	-	485
Myanmar	Milled Rice 25%	2021	399	416	423	425	417	405	397	367	335	-	-	325	391
		2022	327	361	392	311	368	362	386	392	397	394	-	-	369
Thailand	Milled Rice 5%	2021	545	557	525	495	492	460	414	404	398	401	399	400	458
		2022	427	425	422	431	464	439	418	431	439	430	438	-	433
	Hommali Rice	2021	900	891	845	810	783	749	680	677	703	699	666	665	756
		2022	727	778	780	831	939	894	852	870	879	886	885	-	847
Vietnam	Milled Rice 5%	2021	551	544	540	542	541	554	518	488	494	521	523	516	528
		2022	486	476	495	497	489	488	490	473	472	478	-	-	484

Table 15 CIF Price of rice in selected ASEAN countries

Unit: US\$/Ton

Country	Grade	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	Not specified	2021	896	1,200	684	800	919	589	638	647	491	556	561	848	736
		2022	2,964	3,000	-	546	505	603	2,231	2,245	2,207	2,347	-	-	1,850
Malaysia	Not specified	2021	351	374	357	374	389	370	377	394	384	388	386	407	379
		2022	407	420	383	388	420	417	406	377	363	391	-	-	397
Lao PDR	Hommali Rice	2021	389	376	334	357	382	426	488	466	464	355	430	350	401
		2022	361	413	431	327	514	467	412	368	366	361	361	366	396
Singapore	Not specified	2021	689	679	725	681	679	683	675	672	652	670	692	658	680
		2022	689	701	650	612	695	718	684	658	682	654	674	674	674

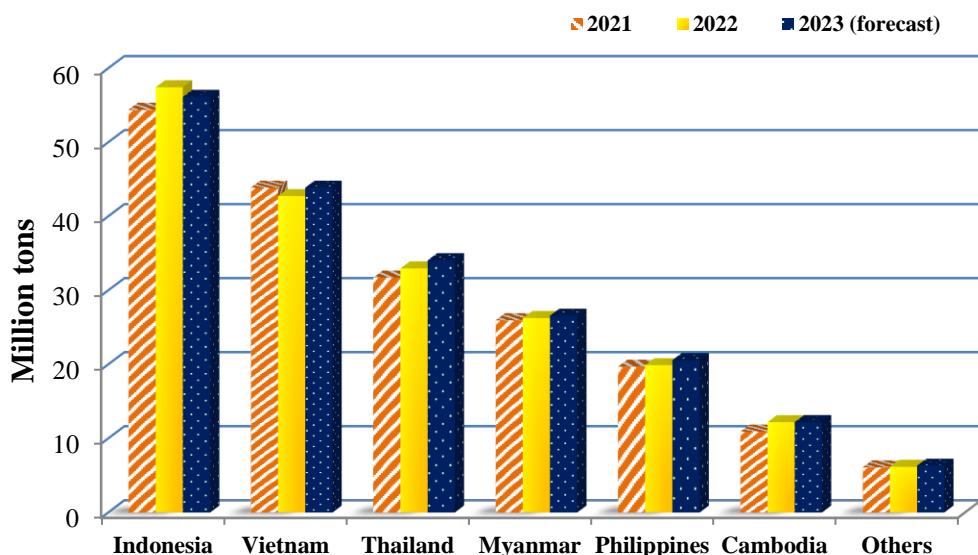


Figure 1 Paddy production of selected countries in ASEAN, 2021 – 2023

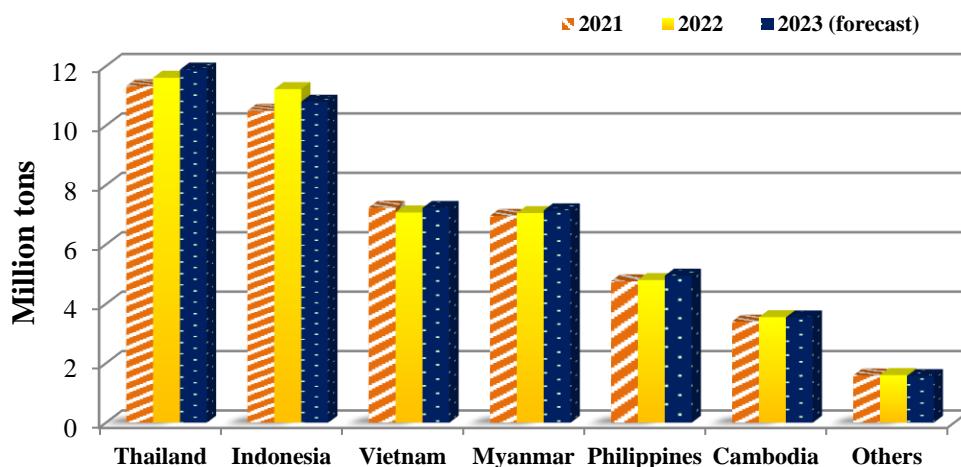


Figure 2 Paddy planted area of selected countries in ASEAN, 2021 – 2023

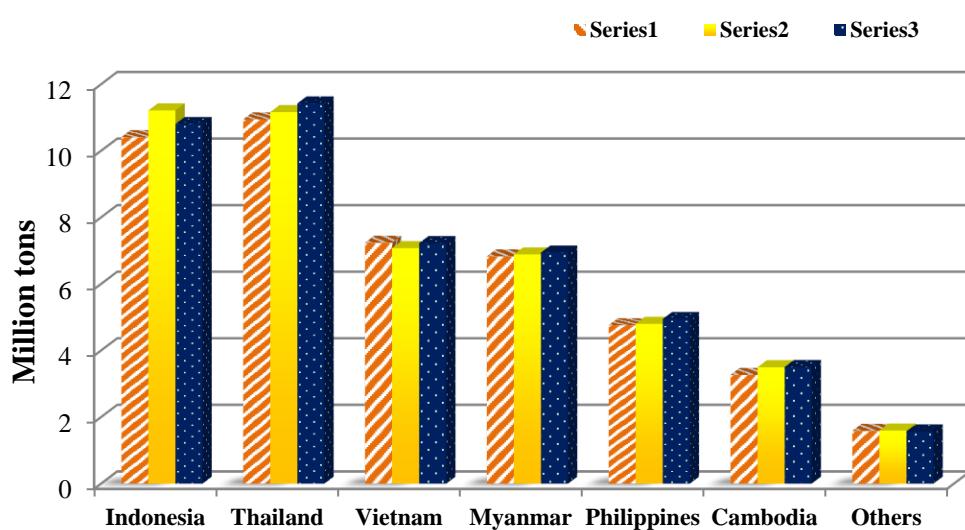


Figure 3 Paddy harvested area of selected countries in ASEAN, 2021 – 2023

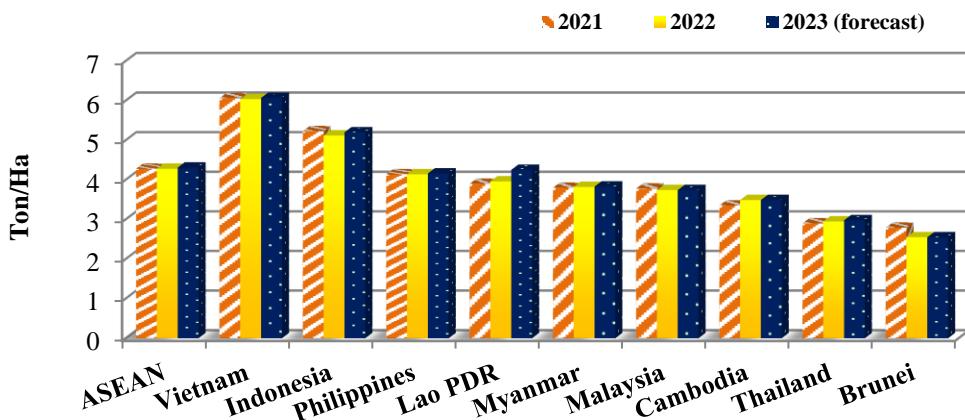


Figure 4 Paddy yield of countries in ASEAN, 2021 – 2023

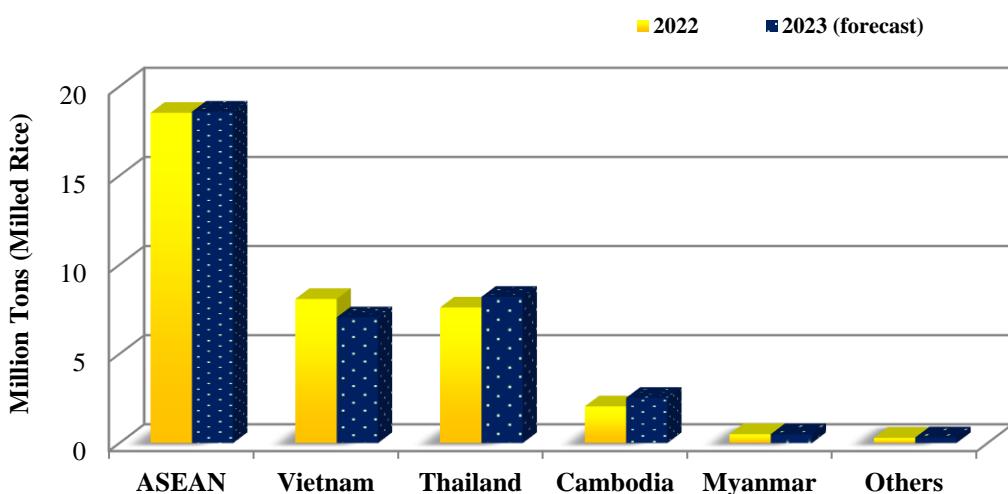
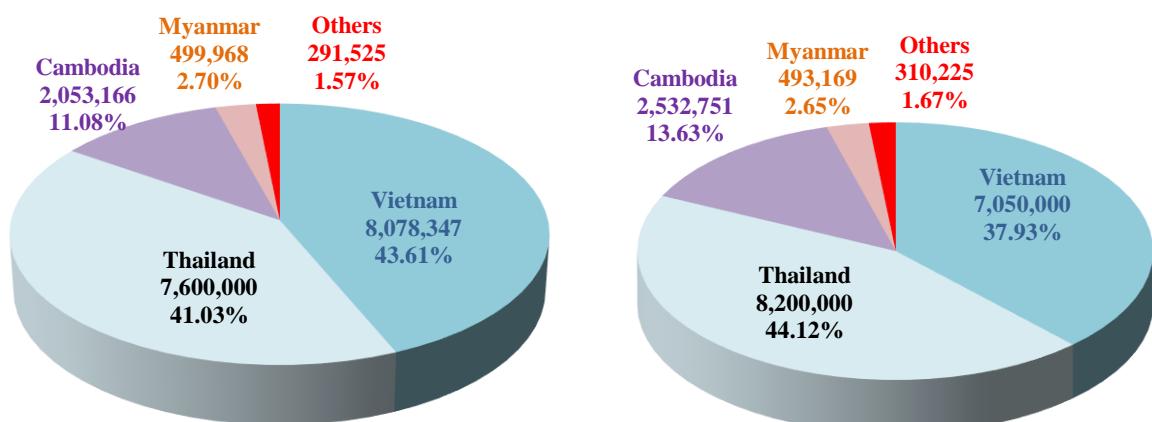


Figure 5 Amount of rice export (million tons) of selected countries in ASEAN in 2022 – 2023



Total 18.52 million tons

Figure 6 Share of rice export (tons) among ASEAN countries, 2022

Total 18.59 million tons

Figure 7 Share of rice export (tons) among ASEAN countries, 2023

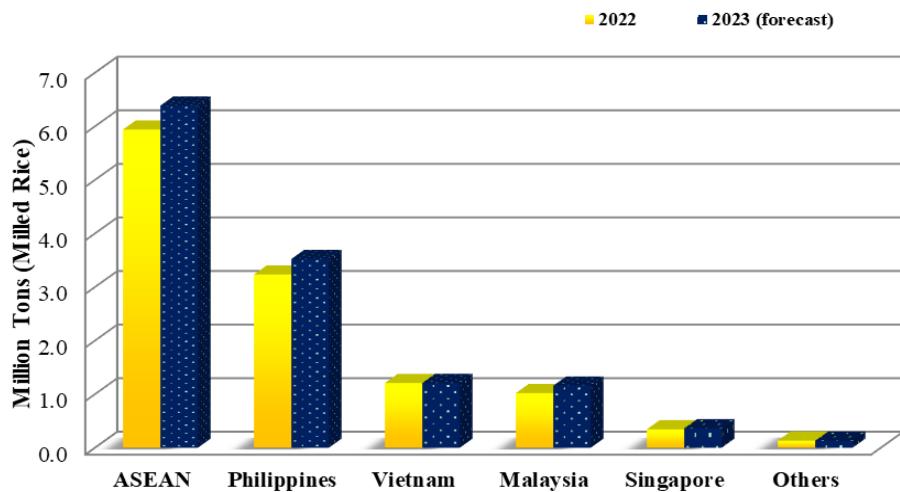
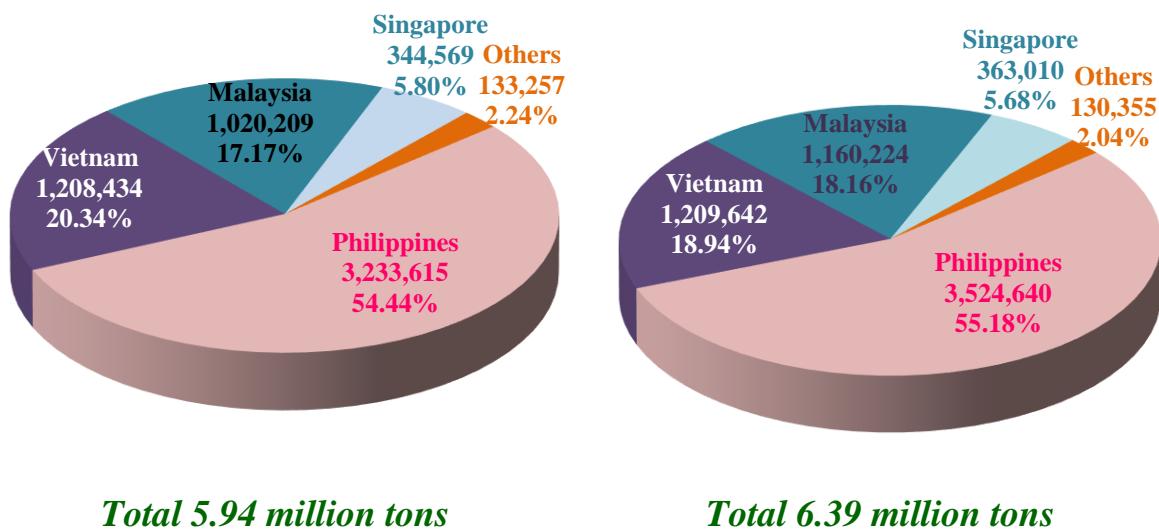


Figure 8 Amount of rice import (million tons) by selected countries in ASEAN in 2022 – 2023



Total 5.94 million tons

Total 6.39 million tons

Figure 9 Share of rice import (tons) among ASEAN countries, 2022

Figure 10 Share of rice import (tons) among ASEAN countries, 2023

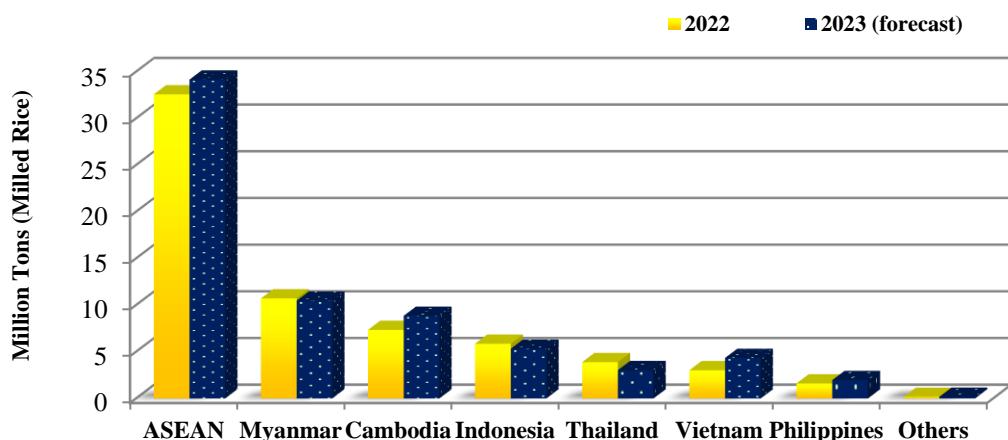


Figure 11 Amount of ending stock of rice in ASEAN countries, 2022 – 2023

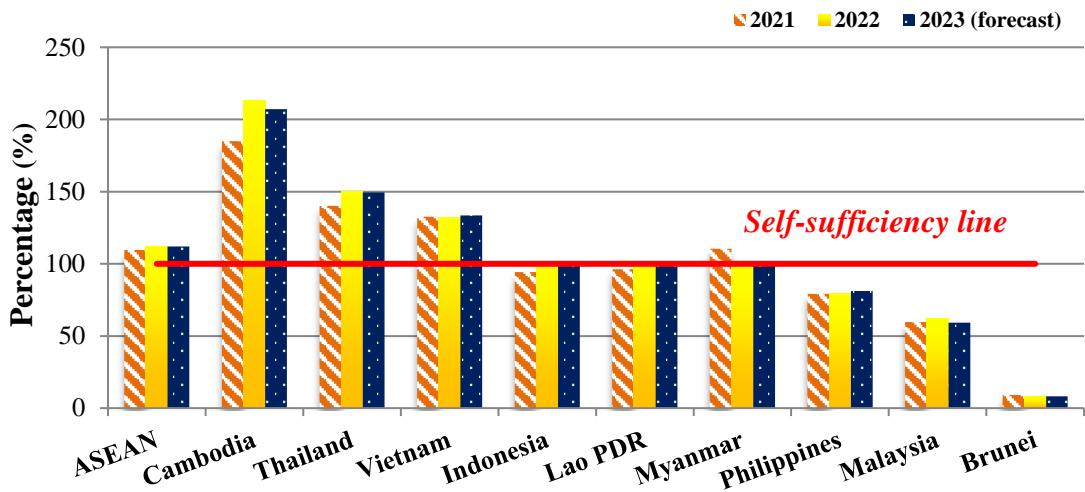


Figure 12 Ratio of rice production to domestic utilization in ASEAN countries, 2021– 2023

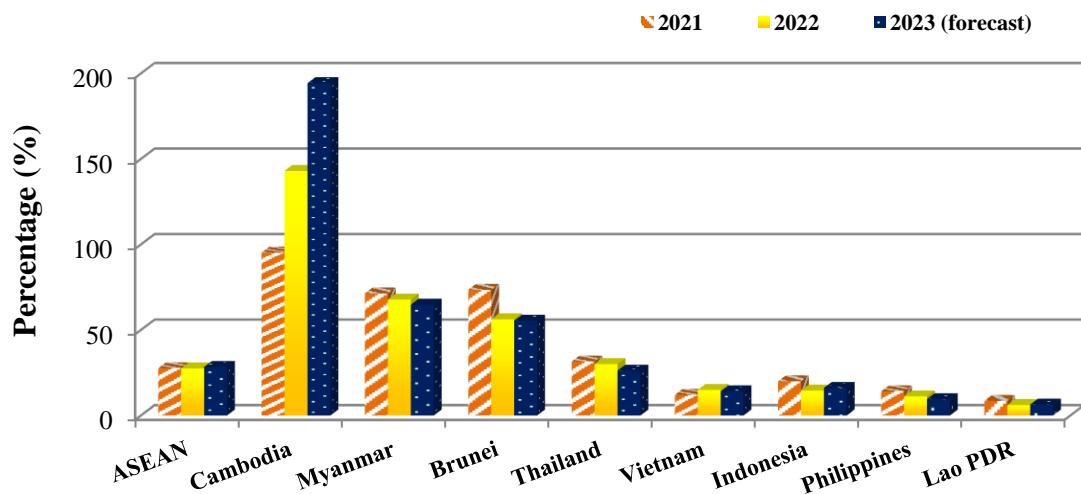


Figure 13 Ratio of rice beginning stock to domestic utilization in ASEAN countries, 2021 – 2023

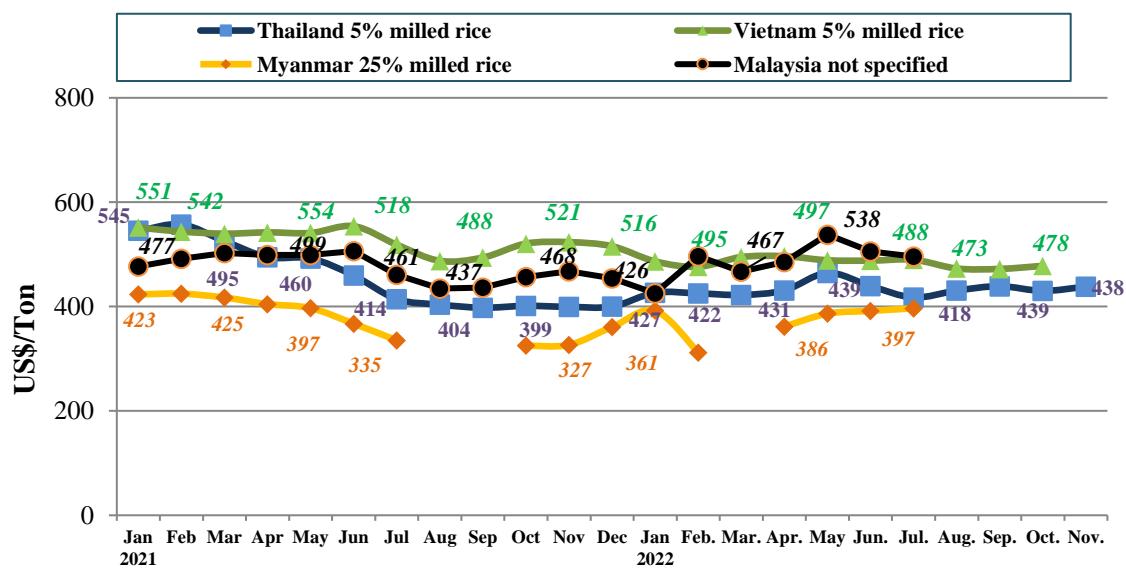


Figure 14 FOB price (US\$/Ton) of milled rice of selected countries in ASEAN in 2021 – 2022

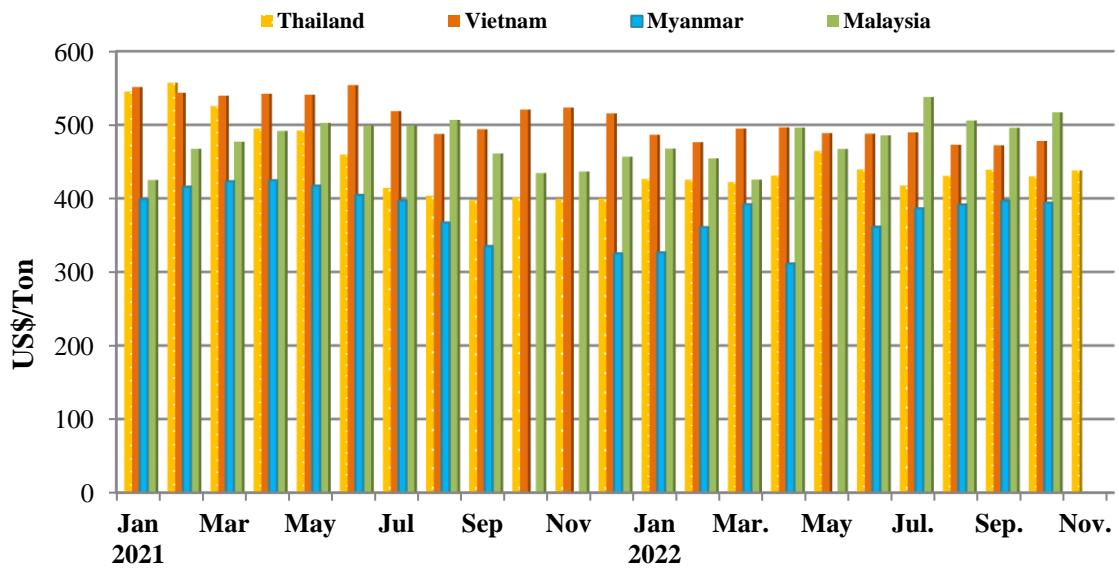


Figure 15 FOB price (US\$/Ton) of milled rice of selected countries in ASEAN in 2021 – 2022

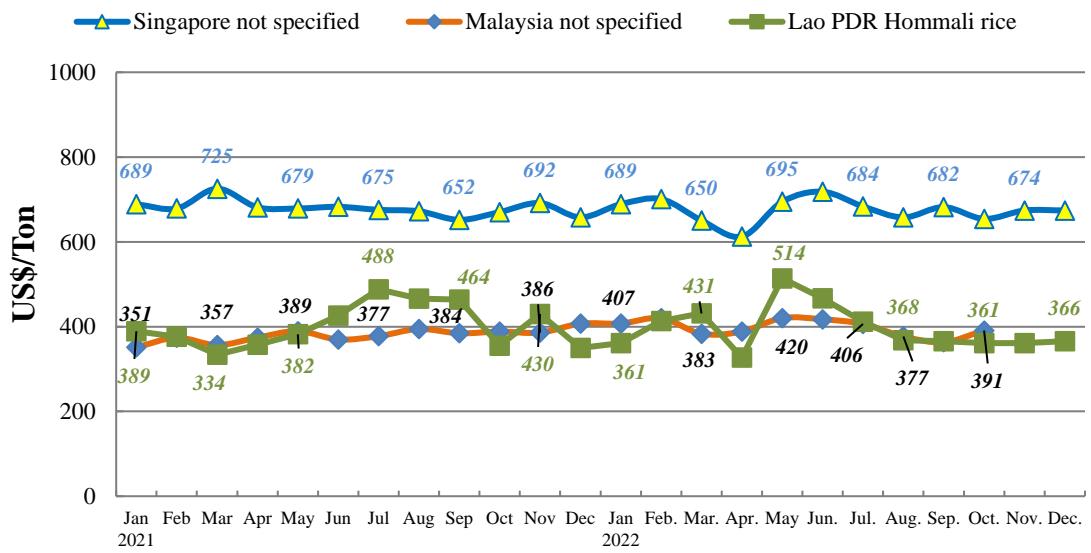


Figure 16 CIF price (US\$/Ton) of milled rice of selected countries in ASEAN in 2021 – 2022

Maize Outlook for 2023



The decrease in the import is the main reason for decreasing in the ASEAN maize supply. The decreasing supply is expected to be 0.50 percent or 0.30 million tons from 60.34 million tons in 2022 to 60.04 million tons in 2023 (Table 16).

Maize production is forecast to increase around 1.01 million tons or 2.63 percent from 38.38 million tons in 2022 to 39.39 million tons in 2023. The beginning stock is expected to increase around 1.32 percent or 0.08 million tons from 6.07 million tons in 2022 to 6.15 million tons in 2023.

Maize's demand in 2023 is expected to decrease around 0.50 percent. Domestic utilization is predicted to decrease by 0.64 million tons from 51.80 million tons in 2022 to 51.16 million tons in 2023. The export of maize is expected to increase around 4.18 percent from 2.39 million tons in 2022 to 2.49 million tons in 2023.

The ending stock of maize is expected to increase around 3.90 percent from 6.15 million tons in 2022 to 6.39 million tons in 2023.

The ratio of production to domestic utilization (self-sufficiency ratio) for the region is expected to increase by 2.89 percent from 74.10 percent in 2022 to 76.99 percent in 2023.

The beginning stock to domestic utilization ratio (food security ratio) in 2023 is forecast to increase around 0.31 percent from 11.71 percent in 2022 to 12.02 percent in 2023. **This indicates that the food (feed) security situation in the ASEAN region is improving.**

Table 16 Summary of the ASEAN maize situation, 2022 – 2023

Items	2022	2023	Change	
			Quantity	%
Supply (Million tons)	60.34	60.04	-0.30	-0.50
Beginning stock	6.07	6.15	0.08	1.32
Production	38.38	39.39	1.01	2.63
Import	15.89	14.51	-1.38	-8.68
Demand (Million tons)	60.34	60.04	-0.30	-0.50
Domestic utilization	51.80	51.16	-0.64	-1.24
Export	2.39	2.49	0.10	4.18
Ending stock	6.15	6.39	0.24	3.90
Ratio of production to domestic utilization (%)	74.10	76.99	2.89	-
Ratio of beginning stock to domestic utilization (%)	11.71	12.02	0.31	-

ASEAN Maize Situation in 2022

► Production

ASEAN maize production in 2022 (crop year 2021/22) was estimated at 44.89 million tons, which increased by 0.30 million tons or about 0.68 percent from 44.19 million tons in 2021 (crop year 2020/21). An increase in maize production in 2022 was found in Indonesia, Myanmar, the Philippines, and Vietnam due to the increase in either planted area and harvested area. While, the production of Cambodia, Lao PDR and Thailand decreased due to the declining of planted area and harvested area (Table 17-20, Figure 17-20).

For **Cambodia**, the decrease in production is attributed to the decrease in planted and harvested areas.

For **Indonesia**, the increase in production is attributed to the increase in planted and harvested areas, which came from farmers' response to price increases, government policies, and favorable weather together with special assistants.

For **Lao PDR**, the decrease in production is attributed to the decrease in planted area and harvested area caused by the increase in the price of competing crop and high production cost.

For **Myanmar**, the increase in production is attributed to the increase in planted and harvested areas, which caused by farmers' response to price increases.

For **the Philippines**, the increase in production is attributed to the increase in yield because farmers used more fertilizer and improved varieties.

For **Thailand**, the decrease in production is attributed to the decrease in the planted and harvested areas caused by the increase in the price of competing crop, unfavorable weather, and high production cost (seed and pesticide spraying).

For **Vietnam**, the increase in production is attributed to the increase in yield because farmers took better care of their crops.

For **Brunei**, there is no cultivation of maize in the country. Only sweet corn is grown for domestic consumption. The production of sweet corn in 2022 (crop year 2021/22) was estimated at 541 tons, which increased by 54 tons or about 11.09 percent from 487 tons in 2021 (crop year 2020/21)

► Utilization and Stock

Maize utilization in ASEAN in 2022 was estimated at 51.80 million tons, which increased 0.53 million tons 1.04 percent compared to 51.27 million tons in 2021 (Table 22-23). Most of the maize production in ASEAN is used for animal feed. The increase in domestic utilization of maize has occurred in Cambodia, Indonesia, Malaysia and Myanmar.

The beginning stock of maize in ASEAN in 2022 was estimated at 6.07 million tons, which increased by 1.19 million tons from 4.88 million tons in 2021 (Table 22-23).

The ratio of maize production to domestic utilization (**self-sufficient ratio**) for the whole ASEAN in 2022 was estimated at 74.10 percent compared to 74.44 percent in year 2021. This indicated that the ASEAN itself produced inadequate maize for the regional consumption (Table 25, Figure 28). On the country basis, Cambodia, Lao PDR, and Myanmar have the ratio above 100 percent. While Indonesia, the Philippines, Thailand and Vietnam have the ratio less than 100 percent. Thus, these countries still need to import maize for their domestic utilization.

The ratio of beginning stock to domestic utilization (**food security ratio**) for the ASEAN in 2022 was estimated to be

11.71 percent and all of country have the ratio less than 20 percent, except Lao PDR and Myanmar. This indicated that the region is not secure enough in terms of feed requirement (Table 26, Figure 29).

Overall, despite maize production in ASEAN was increased, the production volume was considerably insufficient for consumption within the ASEAN region because maize is the important raw material for animal feed industry. Therefore, many ASEAN countries still rely heavily on maize import from abroad.

Additionally, the impact from Russia-Ukraine war has led to the increasing prices of fertilizer and shortage, high energy prices, and increasing price of food, especially maize as these two countries are the major maize producers and exporters in the world. This situation has direct impact to most countries in ASEAN region because they are agricultural producing countries, main income of population in the country comes from agricultural activities which lead to high demand for fertilizers and energy. When the energy price is high, agricultural equipment will be more expensive and fertilizer will also be costly and shortage resulting in the increase of production costs suddenly. This will affect Maize producing countries in ASEAN region and could possibly lead to maize shortage or food insecurity in the future.

► Trade

The maize exported from ASEAN in 2022 is forecast to be 2.39 million tons compared to 15.89 million tons of maize imported (Table 23, Figure 21-22, 24-25).

In 2022, Myanmar, the biggest exporter in ASEAN, is expected to export 1.97 million tons or around 82.42 percent of the total maize exported from the ASEAN (Table 23, Figure 21-22).

The major importing countries in the region are Vietnam, Thailand, Malaysia, Indonesia, the Philippines and Singapore (Table 23, Figure 24-25). The quantity and value of maize exported by countries of destination and the quantity and value of imported by countries of origin are given in Table 27-28.

► Prices

The monthly FOB prices for maize exporting countries and CIF prices for importing countries of 2021 and 2022 are shown in Table 29-30 and Figure 30-31. The annual average of Indonesia FOB prices in 2022 (January-October) was 929 US\$/ton, which increase from 591 US\$/ton as the yearly average in 2021. For Lao PDR (January-December), Myanmar (January-October), and Thailand (January-November), average FOB prices of 2022 were 209, 287, and 353 US\$/ton, respectively. The average CIF prices in 2022 in Indonesia (January-October), Singapore (January-December) and Vietnam (January-October) were 582, 758, and 352 respectively.

► Damaged Area

The damaged area of maize in 2022 is estimated to be 16,064 hectares, of which 11,328 hectares were caused by flood. The most affected areas were caused by flood, which occurred in Thailand, Indonesia, and Myanmar, respectively (Table 21).

Prospects for Maize in 2023

► **Production**

Maize production in ASEAN in 2023 (crop year 2022/23) was estimated at 45.53 million tons. The increase has occurred in all of country, except Thailand. The most increase in terms of quantity was found in Vietnam at approximately 0.49 million tons (Table 17).

For **Cambodia**, the increase in production is attributed to the increase in planted and harvested areas.

For **Indonesia**, the biggest maize producer in ASEAN, the increase in production is attributed to the increase in yield because farmers used more fertilizer and used more varieties together with took better care of their crops.

For **Lao PDR**, the increase in production is attributed to the increase in planted and harvested areas, which caused by government policies.

For **Myanmar**, the increase in production is attributed to the increase in planted and harvested areas.

The **Philippines**, the maize production is forecast to increase due to the increasing in yield.

For **Thailand**, the decrease in production is attributed to the decrease in planted area, harvested area, and yield because farmers used less fertilizer effected by high production cost.

For **Vietnam**, the increase in production is attributed to the increase in planted and harvested areas, which caused by farmers' response to maize price increases (Table 17-20, Figure 17-20).

For **Brunei**, the production of sweet corn in 2023 (crop year 2022/23) was estimated at 568 tons, which increased by 27 tons or about 4.99 percent from 541 tons in 2022 (crop year 2021/22)

► **Utilization and Stock**

The domestic utilization of maize in ASEAN is forecast to be 51.16 million tons in 2023, a decrease of 0.64 million tons from 51.80 million tons in 2022 (Table 23-24). The estimate of the beginning stock for 2023 is around 6.15 million tons, an increase of 0.08 million tons from 6.07 million tons in 2022.

In 2023, the ratio of production to domestic utilization (**self-sufficient ratio**) is expected to be 76.99 percent, increasing 2.89 percent from 74.10 percent in 2022 (Table 25, Figure 28). The ratio of beginning stock to domestic utilization ratio (**food security ratio**) in 2023 is expected to be 12.02 percent, which increases 0.31 percent from 2022 (Table 26, Figure 29).

► **Trade**

The maize export from ASEAN is projected to be 2.49 million tons in 2023, an increase of 0.10 million tons compared to 2.39 million tons in 2022. For the import by ASEAN, it is forecast to be 14.51 million tons in 2023, decreasing from 15.89 million tons in 2022 (Table 23-24, Figure 21, 23, 24, and 26).

Table 17 Maize production in ASEAN countries, 2021 – 2023

Unit: 1,000 Tons

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022			
			Quantities	(%)		Quantities	(%)		
ASEAN	44,186.66	44,485.09	298.43	0.68	45,530.21	1,045.12	2.35		
Brunei			N/A						
Cambodia	821.80	791.51	-30.29	-3.69	805.55	14.04	1.77		
Indonesia	23,042.76	23,342.44	299.67	1.30	23,492.53	150.09	0.64		
Lao PDR	535.26	340.76	-194.50	-36.34	642.60	301.84	88.58		
Malaysia			N/A						
Myanmar	2,072.86	2,274.61	201.75	9.73	*2,382.27	107.66	4.73		
Philippines	8,339.15	8,344.02	4.87	0.06	*8,385.04	41.02	0.49		
Singapore			N/A						
Thailand	4,969.01	4,956.41	-12.61	-0.25	4,898.23	-58.18	-1.17		
Vietnam	4,405.82	4,435.35	29.53	0.67	4,924.00	488.65	11.02		

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 18 Maize planted area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022			
			Quantities	(%)		Quantities	(%)		
ASEAN	9,658.76	9,723.13	64.38	0.67	9,744.57	21.44	0.22		
Brunei			N/A						
Cambodia	178.06	139.21	-38.86	-21.82	152.74	13.53	9.72		
Indonesia	4,240.92	4,361.70	120.78	2.85	4,288.35	-73.35	-1.68		
Lao PDR	110.91	68.57	-42.35	-38.18	140.08	71.52	104.30		
Malaysia			N/A						
Myanmar	556.55	607.66	51.11	9.18	*631.96	24.31	4.00		
Philippines	*2,572.87	*2,562.13	-10.73	-0.42	*2,457.00	-105.14	-4.10		
Singapore			N/A						
Thailand	1,103.53	1,090.60	-12.93	-1.17	1,084.44	-6.16	-0.56		
Vietnam	895.92	893.27	-2.65	-0.30	990.00	96.73	10.83		

Remark: * The value is estimated by AFSIS Secretariat. ** Philippines reported only harvested area. N/A refers to data that is not available.

Table 19 Maize harvested area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022			
			Quantities	(%)		Quantities	(%)		
ASEAN	9,611.20	9,703.21	92.01	0.96	9,743.95	40.75	0.42		
Brunei			N/A						
Cambodia	170.13	135.16	-34.97	-20.55	149.24	14.08	10.41		
Indonesia	4,233.85	4,361.10	127.25	3.01	4,288.35	-72.75	-1.67		
Lao PDR	110.91	68.57	-42.35	-38.18	140.08	71.52	104.30		
Malaysia			N/A						
Myanmar	538.29	603.74	65.45	12.16	*646.00	42.26	7.00		
Philippines	2,572.87	2,562.13	-10.73	-0.42	*2,457.00	-105.14	-4.10		
Singapore			N/A						
Thailand	1,089.23	1,079.24	-10.00	-0.92	1,073.28	-5.95	-0.55		
Vietnam	895.92	893.27	-2.65	-0.30	990.00	96.73	10.83		

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available

Table 20 Maize yield in ASEAN countries, 2021 – 2023

Unit: Tons/Hectares

Country	2021 (2020/21)	2022(2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	4.60	4.58	-0.02	-0.43	4.67	0.09	1.97
Brunei	N/A						
Cambodia	4.83	5.86	1.03	21.33	5.40	-0.46	-7.85
Indonesia	5.44	5.35	-0.09	-1.65	5.48	0.13	2.43
Lao PDR	4.83	4.97	0.14	2.90	4.59	-0.38	-7.65
Malaysia	N/A						
Myanmar	3.85	3.77	-0.08	-2.08	*3.69	-0.08	-2.12
Philippines	3.24	3.26	0.02	0.62	*3.41	0.15	4.60
Singapore	N/A						
Thailand	4.56	4.59	0.03	0.66	4.56	-0.03	-0.65
Vietnam	4.92	4.97	0.05	1.02	4.97	0.00	0.00

Remark: N/A refers to data that is not available.**Table 21 Maize damaged area in ASEAN by cause of damage, 2022**

Unit: Hectares

Country	Cause of Damage (Hectares)						
	Flood	Drought	Pests	Diseases	Unspecified	Others	Total
ASEAN	11,328	643	48	-	-	-	16,064
Brunei	N/A						
Cambodia	-	-	-	-	4,045	-	4,045
Indonesia	530	29	43	-	-	-	602
Lao PDR	N/A						
Malaysia	N/A						
Myanmar	45	-	5	-	-	-	50
Philippines	N/A						
Singapore	N/A						
Thailand	10,753	614	-	-	-	-	11,367
Vietnam	N/A						

Remark: N/A refers to data that is not available.

Table 22 Maize balance sheet of ASEAN countries, 2021

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	4,879,019	38,160,977	16,804,210	59,844,206	51,265,146	2,474,951	6,104,109	59,844,206
Brunei				N/A				
Cambodia	216,116	821,798	-	1,037,914	699,075	201,589	137,250	1,037,914
Indonesia	854,713	**17,017,082	995,999	18,867,794	16,578,993	2,539	2,286,262	18,867,794
Lao PDR	56,684	535,260	1,469	593,413	379,785	72,405	141,223	593,413
Malaysia	-	-	1,698,829	1,698,829	1,695,632	3,197	-	1,698,829
Myanmar	2,079,694	2,072,858	3,452	4,156,004	188,917	1,894,229	2,072,858	4,156,004
Philippines	914,070	8,339,149	459,728	9,712,946	9,166,037	-	546,910	9,712,946
Singapore	-	-	11,427	11,427	11,183	244	-	11,427
Thailand	*200,000	4,969,014	*3,613,707	8,782,721	8,570,109	26,479	*186,133	8,782,721
Vietnam	557,742	4,405,817	10,019,600	14,983,158	13,975,415	274,270	733,473	14,983,158

Remark: * The value is estimated by AFSIS Secretariat. ** Indonesia's maize production in this balance sheet has been converted from maize with moisture value of 27% in Table 17 to maize with moisture value of 14%.

Table 23 Maize balance sheet of ASEAN countries, 2022

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	6,065,282	38,381,047	15,892,850	60,339,179	51,798,472	2,393,855	6,146,852	60,339,179
Brunei				N/A				
Cambodia	137,250	791,512	-	928,762	713,057	150,000	65,705	928,762
Indonesia	2,286,262	**17,238,389	1,165,279	20,689,930	18,235,523	8,107	2,446,300	20,689,930
Lao PDR	141,223	340,760	9,088	491,071	321,063	97,631	72,377	491,071
Malaysia	-	-	1,783,771	1,783,771	1,780,414	3,357	-	1,783,771
Myanmar	2,072,858	2,274,613	10,006	4,357,477	201,310	1,972,963	2,183,205	4,357,477
Philippines	508,083	*8,344,017	*748,000	9,600,099	*9,082,944	-	*517,156	9,600,099
Singapore	-	-	6,561	6,561	6,479	82	-	6,561
Thailand	*186,133	4,956,408	*3,000,000	8,142,541	7,975,471	*20,000	*147,070	8,142,541
Vietnam	733,473	4,435,349	9,170,145	14,338,966	13,482,212	141,715	715,039	14,338,966

Remark: * The value is estimated by AFSIS Secretariat. ** Indonesia's maize production in this balance sheet has been converted from maize with moisture value of 27% in Table 17 to maize with moisture value of 14%.

Table 24 Maize balance sheet of ASEAN countries, 2023

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	6,146,852	39,386,919	14,505,915	60,039,686	51,159,300	2,494,584	6,385,802	60,039,686
Brunei				N/A				
Cambodia	65,705	805,549	-	871,254	720,538	130,000	20,716	871,254
Indonesia	2,446,300	**17,349,230	1,165,279	20,960,810	18,310,699	8,107	2,642,004	20,960,810
Lao PDR	72,377	642,600	6,000	720,977	470,074	130,000	120,904	720,977
Malaysia	-	-	1,872,960	1,872,960	1,869,435	3,525	-	1,872,960
Myanmar	2,183,205	*2,382,275	*10,000	4,575,479	*214,882	*2,054,969	*2,305,629	4,575,479
Philippines	517,156	*8,385,038	*750,000	9,652,193	*9,000,330	-	*651,863	9,652,193
Singapore	-	-	8,994	8,994	8,831	163	-	8,994
Thailand	*147,070	4,898,227	*2,700,000	7,745,298	7,576,697	*19,000	*149,600	7,745,298
Vietnam	715,039	4,924,000	7,992,682	13,631,721	12,987,814	148,821	495,086	13,631,721

Remark: * The value is estimated by AFSIS Secretariat. ** Indonesia's maize production in this balance sheet has been converted from maize with moisture value of 27% in Table 17 to maize with moisture value of 14%.

Table 25 Ratio of maize production to domestic utilization in ASEAN countries (Self-sufficiency ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)
ASEAN	38,160,977	51,265,146	74.44	38,381,047	51,798,472	74.10	39,386,919	51,159,300	76.99
Brunei				N/A					
Cambodia	821,798	699,075	117.56	791,512	713,057	111.00	805,549	720,538	111.80
Indonesia	17,017,082	16,578,993	102.64	17,238,389	18,235,523	94.53	17,349,230	18,310,699	94.75
Lao PDR	535,260	379,785	140.94	340,760	321,063	106.14	642,600	470,074	136.70
Malaysia	-	1,695,632	0.00	-	1,780,414	0.00	-	1,869,435	0.00
Myanmar	2,072,858	188,917	1,097.23	2,274,613	201,310	1,129.91	2,382,275	214,882	1,108.64
Philippines	8,339,149	9,166,037	90.98	8,344,017	9,082,944	91.86	8,385,038	9,000,330	93.16
Singapore	-	11,183	-	-	6,479	-	-	8,831	0.00
Thailand	4,969,014	8,570,109	57.98	4,956,408	7,975,471	62.15	4,898,227	7,576,697	64.65
Vietnam	4,405,817	13,975,415	31.53	4,435,349	13,482,212	32.90	4,924,000	12,987,814	37.91

Remark: * The value is estimated by AFSIS Secretariat, N/A refers to data that is not available.

[24]

Table 26 Ratio of maize beginning stock to domestic utilization in ASEAN countries (Food security ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)
ASEAN	4,879,019	51,265,146	9.52	6,065,282	51,798,472	11.71	6,146,852	51,159,300	12.02
Brunei				N/A					
Cambodia	216,116	699,075	30.91	137,250	713,057	19.25	65,705	720,538	9.12
Indonesia	854,713	16,578,993	5.16	2,286,262	18,235,523	12.54	2,446,300	18,310,699	13.36
Lao PDR	56,684	379,785	14.93	141,223	321,063	43.99	72,377	470,074	15.40
Malaysia	-	1,695,632	-	-	1,780,414	-	-	1,869,435	-
Myanmar	2,079,694	188,917	1,100.85	2,072,858	201,310	1,029.68	2,183,205	214,882	1,016.00
Philippines	914,070	9,166,037	9.97	508,083	9,082,944	5.59	517,156	9,000,330	5.75
Singapore	-	11,183	-	-	6,479	-	-	8,831	-
Thailand	200,000	8,570,109	2.33	186,133	7,975,471	2.33	147,070	7,576,697	1.94
Vietnam	557,742	13,975,415	3.99	733,473	13,482,212	5.44	715,039	12,987,814	5.51

Remark: * The value is estimated by AFSIS Secretariat, N/A refers to data that is not available.

Table 27 Quantity and Value of Maize Export by Countries of Destination in 2022

Quantity: Tons Values: US\$

Exporting Country	Country of Destination													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei	N/A													
Cambodia														
Indonesia									32	26,026			6,100.000	1,970,300
Lao PDR														
Malaysia	N/A													
Myanmar									863	249,000				
Philippines					0.11	1,327							210,594	63,040,000
Singapore	N/A													
Thailand					21	8,267					5	6,329		
Vietnam				7,446,609				1,979,675						34,306,093

[25]

Exporting Country	Country of Destination						Total within ASEAN		Total outside ASEAN		Total		
	Singapore		Thailand		Vietnam								
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	
Brunei	N/A												
Cambodia			42,350	-	158,250	-	200,600	-	989	-	201,589	-	
Indonesia	381	256,560					6,514	2,252,886	304	133,823	6,817	2,386,709	
Lao PDR			20,940	2,521,900	71,424	13,113,396	92,364	15,635,296	5,267	965,609	97,631	16,600,905	
Malaysia	N/A												
Myanmar	215	59,000	1,294,872	360,391,000	322,881	67,783,000	1,618,829	428,482,000	143,539	28,203,000	1,762,368	456,685,000	
Philippines					2,825	8,746,673	213,419	71,788,000	4.62	20,107	213,424	71,808,107	
Singapore	N/A												
Thailand							26	14,596	941	268,316	967	282,913	
Vietnam			-	42,550			-	43,774,927	-	1,887,864	-	45,662,791	

Remark: The data in this table is obtained from national focal points of member states and may not complete, N/A refers to data that is not available.

Table 28 Quantity and Value of Maize Import by Countries of Origin in 2022

Quantity: Tons Values: US\$

Importing Country	Country of Origin													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei									N/A					
Cambodia									N/A					
Indonesia														
Lao PDR														
Malaysia									N/A					
Myanmar														
Philippines									250	89,091	252,521	96,049,578	15,301	5,661,399
Singapore			6	35,358	511	398,395			4,495	1,998,330	0.05	3,903	0.84	574
Thailand			29,281	6,177,414			19,143	3,068,769			1,375,593	369,963,493		
Vietnam			100	25			59,258	23,741						

[26]

Importing Country	Country of Origin						Total within ASEAN	Total outside ASEAN	Total	
	Singapore		Thailand		Vietnam				Quantity	Values
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei							N/A			
Cambodia							N/A			
Indonesia	-	115					-	115	841,720	300,919,291
Lao PDR			3,000	2,937,734	1,969	1,094,551	4,969	4,032,285	4,119	439,182
Malaysia							N/A			
Myanmar			2,894	11717000			2,894	11,717,000	845,839	301,358,473
Philippines	0.05	333.00	278	3,180,522	82,379	31,937,134	350,729	136,918,057	89,527	42,429,023
Singapore			37	70,679	0.01	31	5,050	2,507,269	1,510	1,152,158
Thailand							1,424,017	379,209,676	51,679	18,383,274
Vietnam			4,595	16,575			63,953	40,341	7,473,032	2,613,360
									7,536,985	2,653,701

Remark: The data in this table is obtained from national focal points of member states and may not complete, N/A refers to data that is not available.

Table 29 FOB Price of maize (Feed grain) in selected ASEAN countries

Unit: US\$/Ton

Country	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	2021	525	502	627	648	638	603	665	679	646	485	719	351	591
	2022	657	650	719	1,231	673	1,221	1,007	1,239	998	899	-	-	929
Lao PDR	2021	257	237	216	210	220	236	241	230	208	198	203	215	223
	2022	244	225	217	208	219	230	200	200	200	184	188	198	209
Myanmar	2021	203	171	213	228	231	229	229	232	232	-	-	235	220
	2022	227	246	218	312	312	312	346	334	300	262	-	-	287
Thailand	2021	310	236	307	301	303	315	321	311	342	330	325	316	310
	2022	329	343	385	386	388	378	347	338	322	326	345	-	353

Table 30 CIF Price of maize (Feed grain) in selected ASEAN countries

Unit: US\$/Ton

Country	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	2021	189	200	254	274	281	294	309	320	315	309	317	335	283
	2022	342	334	313	331	392	796	797	765	1,043	707	-	-	582
Singapore	2021	291	288	411	369	416	386	348	384	464	466	475	569	406
	2022	488	639	461	355	557	643	1,073	1,110	1,202	1,451	557	557	758
Vietnam	2021	206	270	276	284	288	303	323	307	309	288	307	318	290
	2022	320	323	336	361	378	384	380	363	345	326	-	-	352

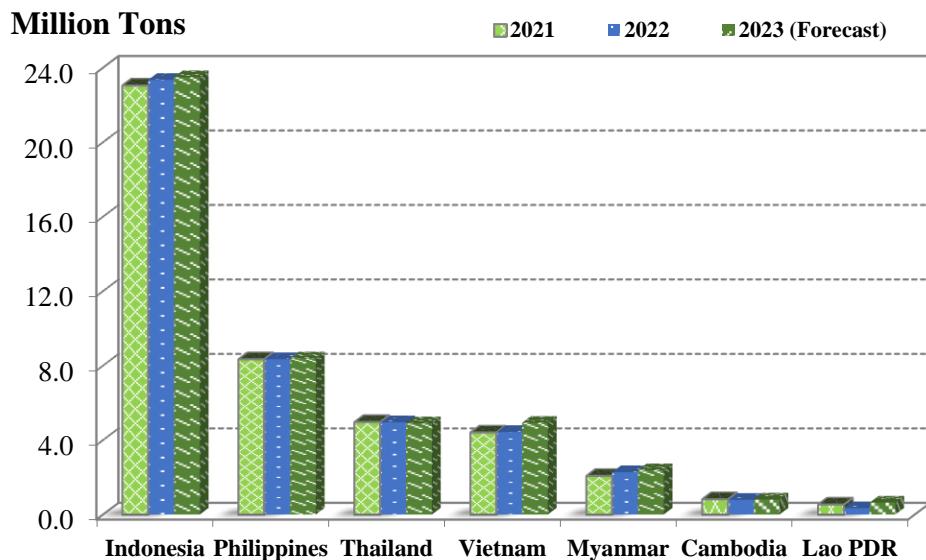


Figure 17 Maize production of selected countries in ASEAN, 2021 – 2023

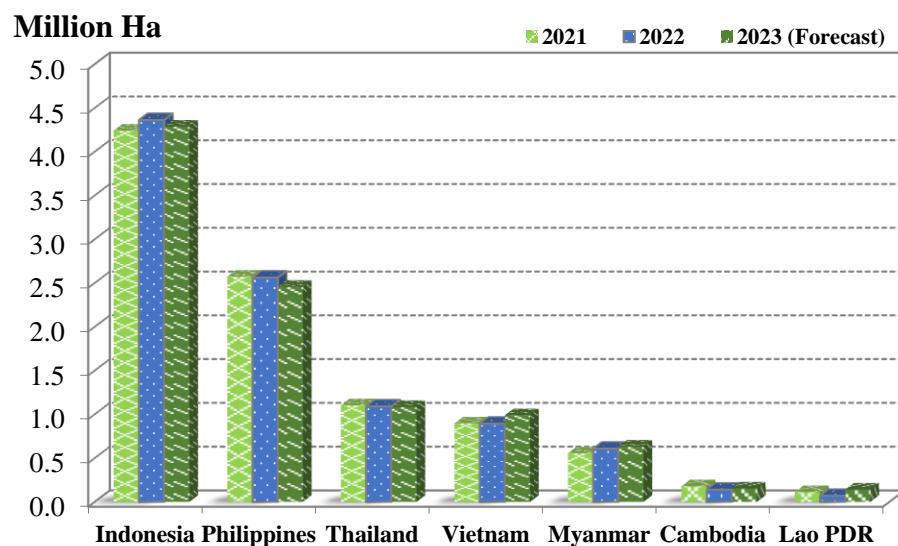


Figure 18 Maize planted area of selected countries in ASEAN, 2021 – 2023

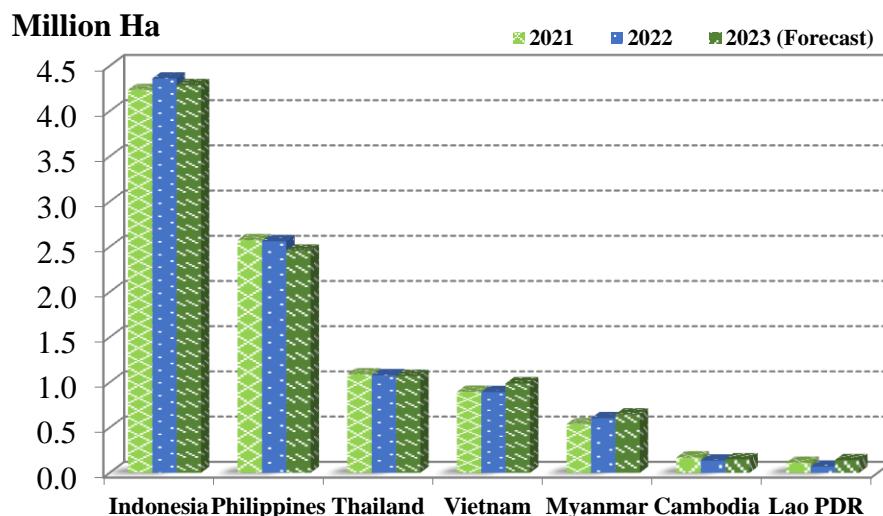


Figure 19 Maize harvested area of selected countries in ASEAN, 2021 – 2023

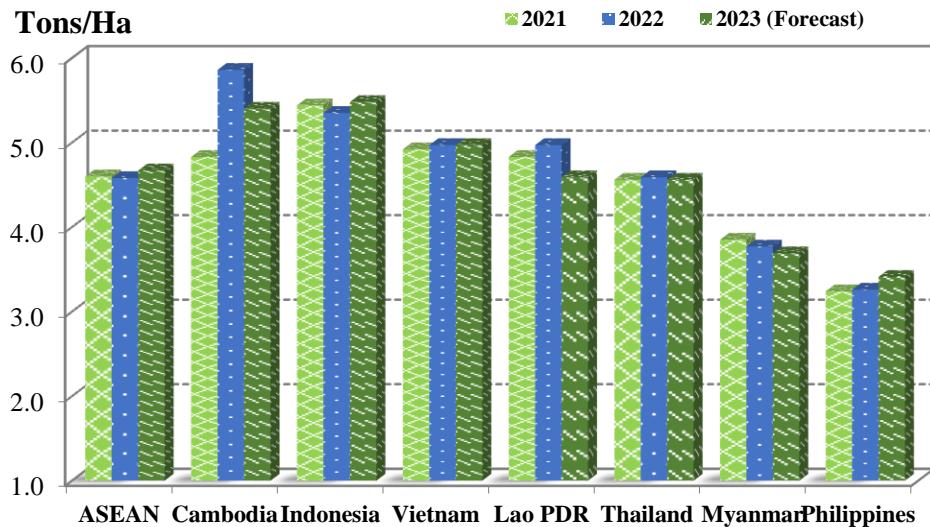


Figure 20 Maize yield of countries in ASEAN, 2021 – 2023

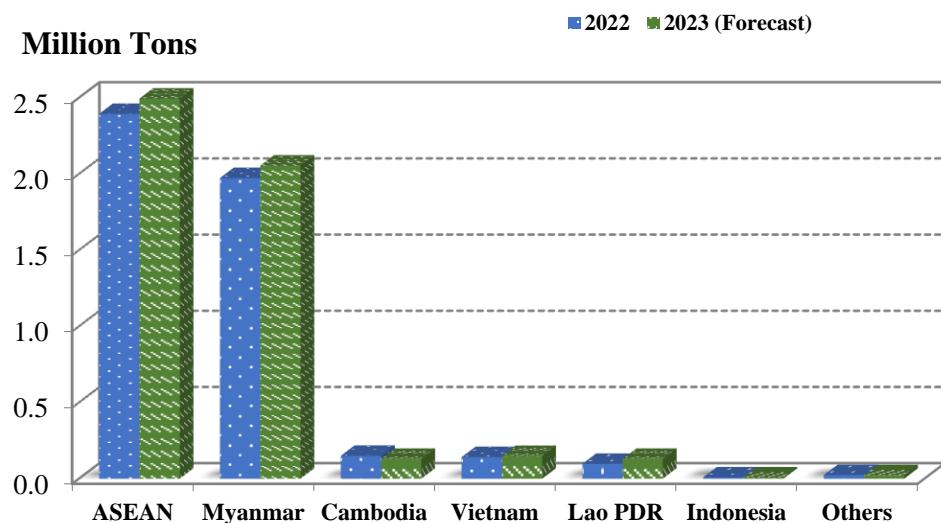
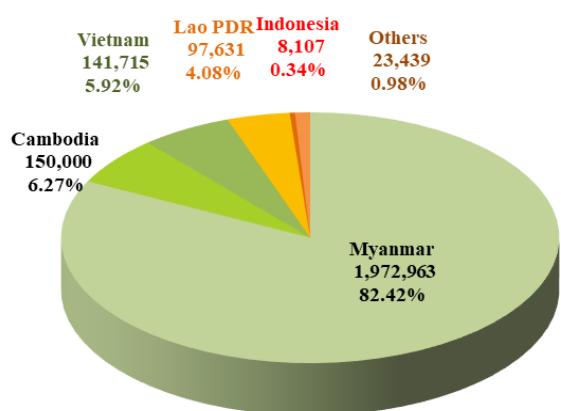
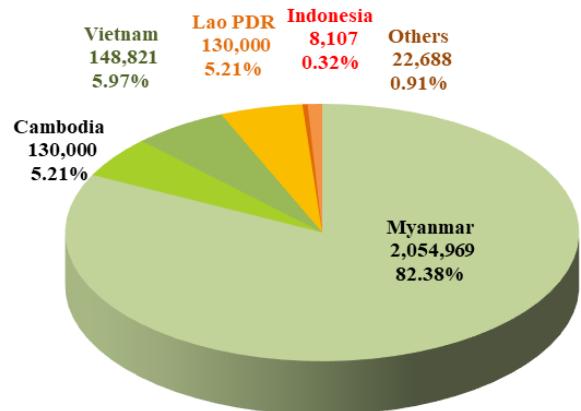


Figure 21 Amount of maize export (million tons) of selected countries in ASEAN in 2022– 2023



Total 2.39 million tons
Figure 22 Share of maize export (tons) among ASEAN countries, 2022



Total 2.49 million tons
Figure 23 Share of maize export (tons) among ASEAN countries, 2023

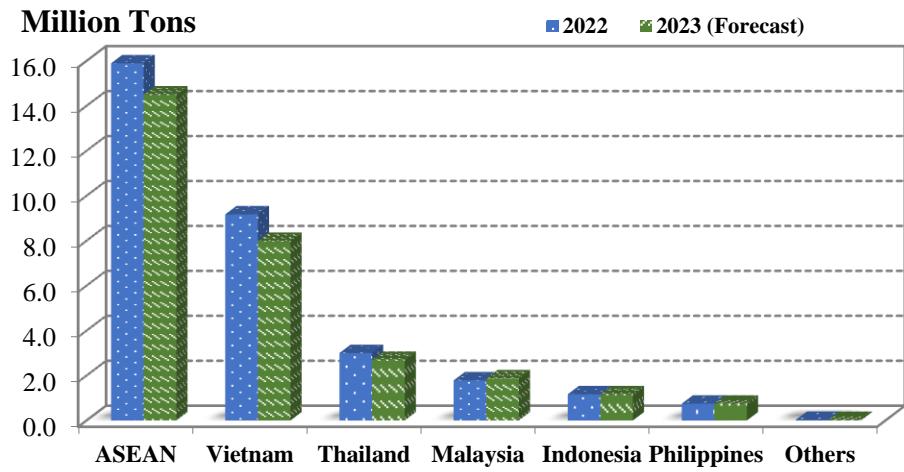
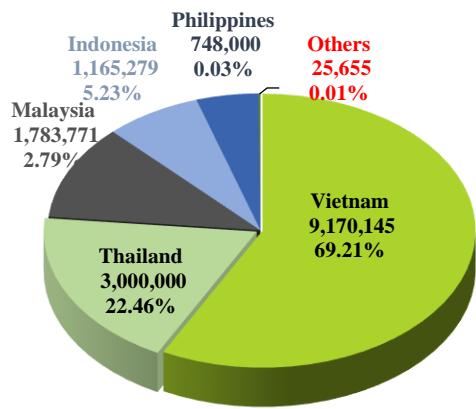
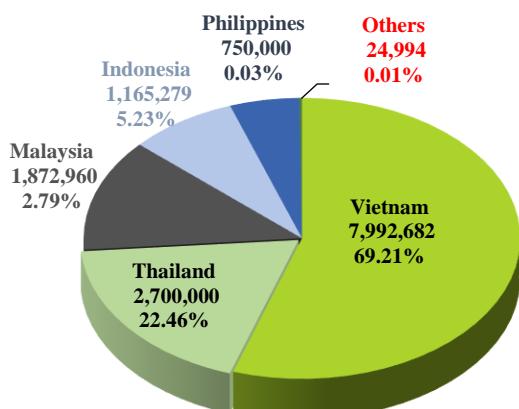


Figure 24 Amount of maize import (million tons) by selected countries in ASEAN in 2022– 2023



Total 15.89 million tons

Figure 25 Share of maize import (tons) among ASEAN countries, 2022



Total 14.51 million tons

Figure 26 Share of maize import (tons) among ASEAN countries, 2023

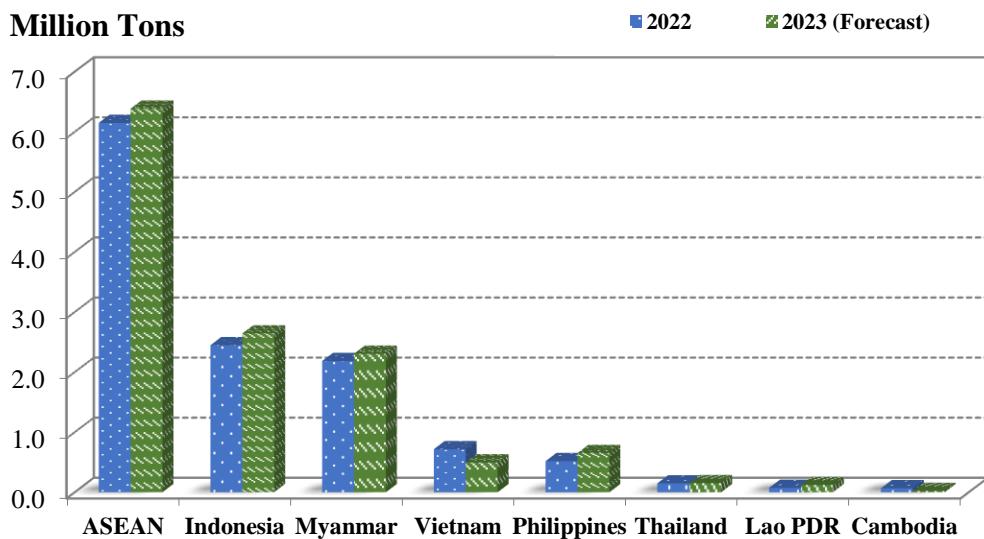


Figure 27 Amount of ending stock of maize in ASEAN countries in 2022 – 2023

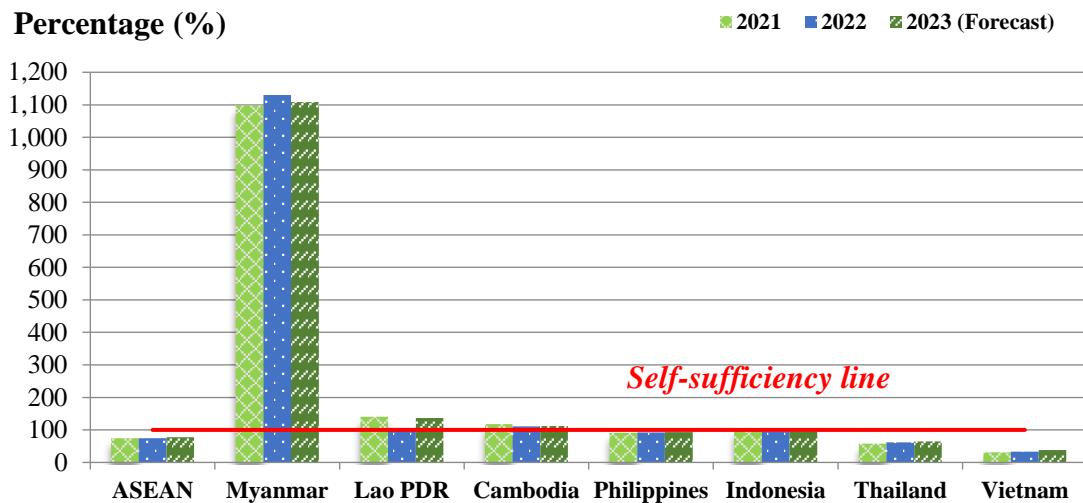


Figure 28 Ratio of maize production to domestic utilization in ASEAN countries, 2021 – 2023

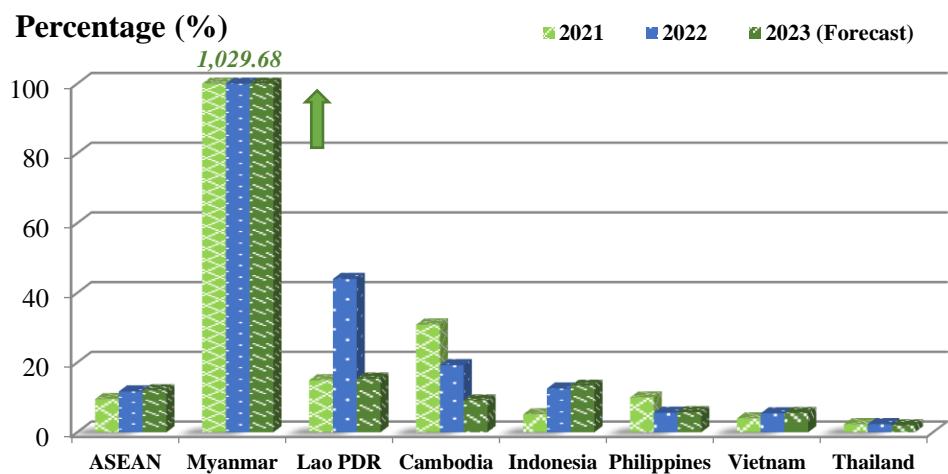


Figure 29 Ratio of maize beginning stock to domestic utilization in ASEAN countries, 2021 – 2023

US\$/Ton

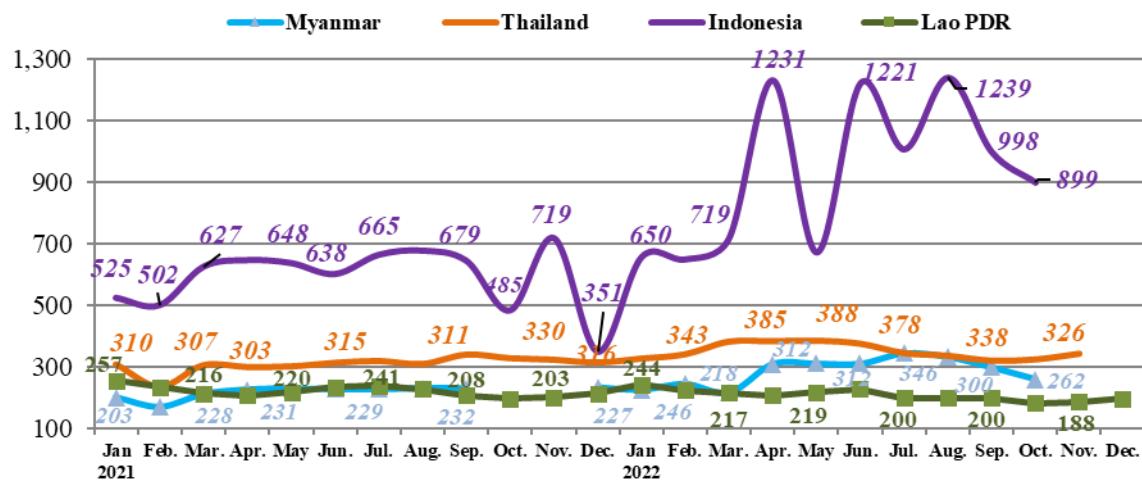


Figure 30 FOB price (US\$/Ton) of maize of selected countries in ASEAN in 2021 – 2022

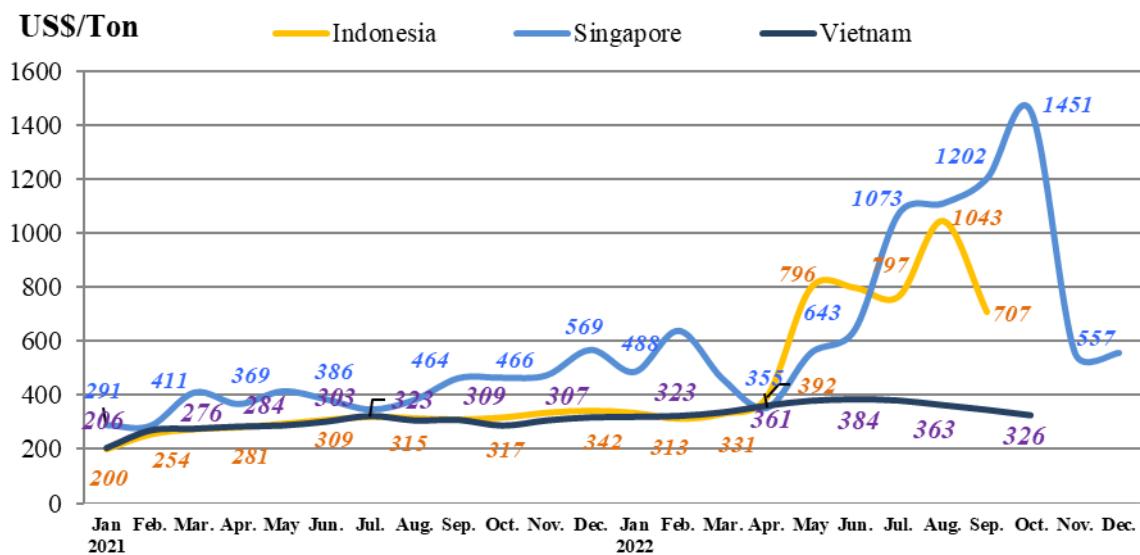


Figure 31 CIF price (US\$/Ton) of maize of selected countries in ASEAN in 2021– 2022

Sugar Outlook for 2023



ASEAN sugar supply is forecast to increase by approximately 9.94 percent or 3.53 million tons from 35.53 million tons in 2022 to 39.06 million tons in 2023, especially with the increase in beginning stock and production (Table 31).

The beginning stock of sugar in 2023 is estimated at 10.55 million tons, which increases from 8.99 million tons in 2022.

The sugar production in 2023 is estimated at 18.42 million tons, which increases from 16.72 million tons in 2022.

The sugar's import of 2023 is forecast to be 10.09 million tons, which increases around 2.64 percent from 9.83 million tons in 2022.

The export of sugar from ASEAN in 2023 is expected to increase from 7.53 million tons in 2022 to 11.54 million tons in 2023.

The production to domestic utilization ratio (self-sufficiency ratio) for sugar in 2023 is forecast to be about 103.76 percent, which increases from 95.85 percent in 2022.

The beginning stock to domestic utilization ratio (food security ratio) in 2023 is forecast to be about 59.46 percent, which increases from 51.52 percent in 2022.

Table 31 Summary of the ASEAN sugar situation, 2022 – 2023

Items	2022	2023	Change	
			Quantity	%
Supply (Million tons)	35.53	39.06	3.53	9.94
Beginning stock	8.99	10.55	1.56	17.35
Production	16.72	18.42	1.70	10.17
Import	9.83	10.09	0.26	2.64
Demand (Million tons)	35.53	39.06	3.53	9.94
Domestic utilization	17.44	17.75	0.31	1.78
Export	7.53	11.54	4.01	53.25
Ending stock	10.55	9.77	-0.78	-7.39
Ratio of production to domestic utilization (%)	95.85	103.76	7.91	-
Ratio of beginning stock to domestic utilization (%)	51.52	59.46	7.94	-

ASEAN Sugar Situation in 2022

► Production

Sugarcane production in ASEAN in 2022 (2021/22 crop year) was estimated at 170.99 million tons, rise 24.03 million tons from 146.96 million tons in 2021 or about 16.35 percent (Table 32, Figure 32). The increase in production was due to the increase in the production of Thailand, Indonesia, Lao PDR, and Brunei. The harvested area of sugarcane in ASEAN in 2022 was estimated at 2.73 million hectares, slightly increasing from 2.70 million hectares in 2021 (Table 34).

Thailand, the largest sugar producing country in the region, the production was estimated to increase mainly due to farmers' response to price increase together with favorable weather (Table 32-35, Figure 32-35).

For **Lao PDR**, the production was estimated to increase due to the increase in planted and harvested areas. The increase in the planted and harvested areas came from government policy together with farmers' response to price increase.

The production in **Indonesia** was estimated to rise due to the increase in planted area, harvested area, and yield. The expansion of planted area was caused by government policy together with farmers' response to price increase. While, the increase in yield was caused by favorable weather.

In **Brunei**, the production was estimated to increase. The sugarcane produced domestically was not processed into sugar, however, it was processed into sugarcane juice.

Vietnam was estimated to decrease its production due to the decrease in the planted area, harvested area, and yield. The decreasing in planted area was due to the slow recovery of the economy and the presence of a large volume of smuggled sugar and officially imported sugar and sweeteners in the market, the output of

sugar produced from cane is shrinking. The decreasing in yield was because farmers used less fertilizer.

In the **Philippines**, the production was estimated to down due to the decrease in planted area, harvested area, and yield because farmers converted to cultivate the other crops.

Myanmar was estimated to decrease its production due to the decrease in planted area and harvested area due to high production cost.

Production in **Cambodia** was estimated to decrease due to the decrease in yield.

► Utilization and Stock

Regarding domestic utilization of sugar in the ASEAN, it has significantly increased to 17.44 million tons in 2022 from 16.54 million tons in 2021 (Table 37-38). The beginning stock of sugar in ASEAN in 2022 was estimated at 8.99 million tons, which significantly increased about 16.91 percent from 2021. The ending stock of sugar in ASEAN in 2022 was estimated to be about 10.55 million tons, an increase of about 17.46 percent from 2021.

The ratio of sugar production to domestic utilization (**self-sufficient ratio**) in 2022 was estimated to be about 95.85 percent. This indicated that the ASEAN itself produced inadequate sugar for the regional consumption (Table 40, Figure 43). However, on the country-by-country basis, sugar production in Cambodia and Thailand exceeds the demand for their domestic consumption.

The ratio of beginning stock to domestic utilization (**food security ratio**) was estimated to be about 51.52 percent in 2022, compared to 46.46 percent in 2021. This indicated that the sugar availability

in the region was slightly up from the previous year (Table 41, Figure 44).

Overall, despite sugar production in ASEAN was increased, the production volume was slightly insufficient for consumption within the ASEAN region. Therefore, many ASEAN countries still rely on sugar import from abroad. Even though sugar may not be a staple food for the ASEAN region, it is an important ingredient used in many kinds of food, especially in the desserts industry. *Sugar is also an alternative food ingredient for people in many countries in the world, which are facing food crisis.* According to the analysis of sugar price, world export, and demand of sugar, the sugar producing countries will produce more sugar in order to meet the demand in ASEAN region. Thus, these countries will earn high revenue from their export.

► **Trade**

The sugar's export from ASEAN in 2022 was 7.53 million tons, which increased about 1.75 million tons or 30.25 percent from 2021 (Table 37-38, Figure 36-37). Thailand is the major sugar exporting country in the region, which constituted about 78.39 percent of the total ASEAN export or about 6.78 million tons.

For the import, ASEAN in 2022 as a whole imported sugar around 9.83 million

tons, increasing about 5.29 percent from the previous year (Table 37-38, Figure 39-40).

The quantity and value of sugar export by countries of destination and the quantity and value of import by countries of origin are given in Tables 42 and 43, respectively.

► **Prices**

The FOB and CIF prices of sugar in exporting and importing countries in ASEAN during 2021-2022 are shown in Tables 44-45. The annual average of Thailand FOB prices of raw sugar and white sugar in 2022 (January-Nov.) were 451 US\$/ton and 530 US\$/ton, respectively. The prices of raw sugar of 2022 were higher than those of 2021, likewise, the prices of white sugar of 2022 were higher than those of 2021. The average CIF price (January-Decemebr) in Singapore in 2022 was 613 US\$/ton, which was higher than in 2021.

► **Damaged Area**

The sugarcane damaged area in ASEAN in 2022 was reported to be 79 hectares, which occurred in Myanmar (Table 36).

Prospects for Sugar in 2023

► Production

Sugarcane production in ASEAN is forecast to increase from 170.99 million tons in 2022 to 186.83 million tons in 2023 (Table 32-35, Figure 32-35). Thailand, the largest sugar-producing country in the region, is forecast to increase its production from 92.10 million tons in 2022 to 106.96 million tons in 2023. The increase in Thai production is mainly caused by increasing in planted area and yield due to farmers' response to price increases.

The second increase in terms of quantity is found in **Indonesia**, which is expected to increase its production from 36.44 million tons in 2022 to 37.94 million tons in 2023. The increase in its production is due to the increase in yield.

Lao PDR is also forecast to increase its production from 1.50 million tons in 2022 to 1.64 million tons in 2023, due to farmers' response to price increases together with government policy.

For **Brunei**, the smallest sugar-producing country in the region, is expected to increase its production from 82.45 tons in 2022 to 86.57 tons in 2023, because farmers use more fertilizer and take better care of the crop together with favorable weather.

Cambodia, the production is expected to decrease from 2.40 million tons in 2022 to 2.37 million tons in 2023, the decrease comes from the decrease in yield.

For **Myanmar**, the production is forecast to decrease from 11.33 million tons in 2022 to 11.11 million tons in 2023 due to the decrease in planted area.

For **Vietnam**, the production is forecast to decrease from 6.90 million tons in 2022 to 6.55 million tons in 2023. The main

reason is due to the decrease in planted area and yield.

The Philippines is expected to decrease its production from 20.33 million tons in 2022 to 20.25 million tons in 2023. The decrease in the Philippines production is due to the decrease in planted and harvested areas.

► Utilization and Stock

The domestic utilization of sugar in ASEAN is forecast to increase from 17.44 million tons of sugar in 2022 to 17.75 million tons in 2023, which increases about 0.31 million tons (Table 38-39). The beginning stock in ASEAN is estimated at 10.55 million tons of sugar in 2023, an increase of 1.57 million tons from 8.99 million tons in the previous year. The ending stock of sugar in ASEAN in 2023 is forecast to be 9.77 million tons which decreases about 0.78 million tons from the previous year.

The ratio of production to domestic utilization in 2023 is forecast to be 103.76 percent, which is greater than the previous year (Table 40, Figure 43).

The ratio of the beginning stock to domestic utilization in 2023 is forecast to be about 59.46 percent, which moderately increases from 2022 (Table 41, Figure 44). This indicates that the domestic availability of sugar in the region is expected to increase moderately compared to the previous year.

► Trade

The export is predicted to increase from 7.53 million tons in 2022 to 11.54 million tons in 2023 (Table 38-39, Figure 36-38). The import is forecast to be 10.09 million tons in 2023, which increases from 9.83 million tons in the previous year (Tables 38-39, Figure 39-41).

Table 32 Sugarcane production in ASEAN countries, 2021 – 2023

Unit: 1,000 Tons

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	146,963.56	170,990.43	24,026.87	16.35	186,828.97	15,838.54	9.26
Brunei	0.08	0.08	0.01	8.09	0.09	0.00	5.00
Cambodia	2,421.97	2,397.75	-24.22	-1.00	2,374.01	-23.73	-0.99
Indonesia	32,340.61	36,436.78	4,096.18	12.67	37,941.62	1,504.84	4.13
Lao PDR	1,141.20	1,502.27	361.07	31.64	1,642.00	139.73	9.30
Malaysia				N/A			
Myanmar	11,560.32	11,333.35	-226.97	-1.96	*11,106.68	-226.67	-2.00
Philippines	25,134.63	20,326.12	-4,808.51	-19.13	*20,251.19	-74.93	-0.37
Singapore				N/A			
Thailand	66,725.46	92,095.78	25,370.32	38.02	106,960.00	14,864.22	16.14
Vietnam	7,639.31	6,898.30	-741.01	-9.70	6,553.39	-344.92	-5.00

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 33 Sugarcane planted area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	2,701.50	2,731.87	30.37	1.12	2,802.73	70.87	2.59
Brunei				N/A			
Cambodia	46.95	47.42	0.47	1.00	48.37	0.95	2.00
Indonesia	447.40	488.98	41.58	9.29	482.27	-6.71	-1.37
Lao PDR	23.01	30.44	7.42	32.25	33.00	2.57	8.43
Malaysia				N/A			
Myanmar	*177.58	173.17	-4.41	-2.48	*165.28	-7.90	-4.56
Philippines	402.08	357.79	-44.29	-11.02	*330.56	-27.23	-7.61
Singapore				N/A			
Thailand	1,485.32	1,525.07	39.75	2.68	1,638.40	113.33	7.43
Vietnam	119.15	108.99	-10.16	-8.52	104.85	-4.14	-3.80

Remark: *The value is estimated by AFSIS Secretariat. ** Philippines reported only harvested area. N/A refers to data that is not available.

Table 34 Sugarcane harvested area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	2,700.13	2,731.79	31.66	1.17	2,802.66	70.87	2.59
Brunei				N/A			
Cambodia	45.71	47.42	1.72	3.76	48.37	0.95	2.00
Indonesia	447.40	488.98	41.58	9.29	482.27	-6.71	-1.37
Lao PDR	23.01	30.44	7.42	32.25	33.00	2.57	8.43
Malaysia				N/A			
Myanmar	177.46	173.10	-4.36	-2.46	*165.20	-7.89	-4.56
Philippines	402.08	357.79	-44.29	-11.02	*330.56	-27.23	-7.61
Singapore				N/A			
Thailand	1,485.32	1,525.07	39.75	2.68	1,638.40	113.33	7.43
Vietnam	119.15	108.99	-10.16	-8.52	104.85	-4.14	-3.80

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 35 Sugarcane yield in ASEAN countries, 2021 – 2023

Unit: Ton/Hectare

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022			
			Quantities	(%)		Quantities	(%)		
ASEAN	54.43	62.59	8.16	14.99	66.66	4.07	6.50		
Brunei			N/A						
Cambodia	52.99	50.56	-2.43	-4.59	49.08	-1.48	-2.93		
Indonesia	72.29	74.52	2.23	3.08	78.67	4.15	5.57		
Lao PDR	49.59	49.36	-0.23	-0.46	49.76	0.40	0.81		
Malaysia			N/A						
Myanmar	65.14	65.47	0.33	0.51	*67.23	1.76	2.69		
Philippines	62.51	56.81	-5.70	-9.12	*61.26	4.45	7.83		
Singapore			N/A						
Thailand	44.92	60.39	15.47	34.44	65.28	4.89	8.10		
Vietnam	64.11	63.29	-0.82	-1.28	62.50	-0.79	-1.25		

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 36 Sugarcane damaged area in ASEAN by cause of damage, 2022

Unit: Hectares

Country	Cause of Damage (Hectares)						
	Flood	Drought	Pests	Diseases	Others	Unspecified	Total
ASEAN	79	-	-	-	-	-	79
Brunei	-	-	-	-	-	-	-
Cambodia	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-
Lao PDR.	-	-	-	-	-	-	-
Malaysia	-	-	-	-	-	-	-
Myanmar	79	-	-	-	-	-	79
Philippines	-	-	-	-	-	-	-
Singapore	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-
Vietnam	-	-	-	-	-	-	-

Table 37 Sugar balance sheet of ASEAN countries, 2021

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	7,686,851	14,295,395	9,331,665	31,313,912	16,544,575	5,783,725	8,985,611	31,313,912
Brunei	3,346	-	5,502	8,848	5,216	-	3,632	8,848
Cambodia	-	242,197	-	242,197	21,223	220,974	-	242,197
Indonesia	804,685	2,350,809	5,482,617	8,638,111	7,532,257	361,648	744,206	8,638,111
Lao PDR	1,428,517	228,240	64	1,656,821	-	133,999	1,522,822	1,656,821
Malaysia	-	-	2,019,023	2,019,023	1,637,773	381,250	-	2,019,023
Myanmar	1,546,590	924,089	-	2,470,679	728,333	749,616	992,730	2,470,679
Philippines	324,401	2,199,526	-	2,523,927	2,081,761	112,008	330,158	2,523,927
Singapore	-	-	300,071	300,071	246,793	53,278	-	300,071
Thailand	3,094,109	7,586,604	85,714	10,766,427	2,291,220	3,565,428	4,909,779	10,766,427
Vietnam	485,203	763,931	1,438,675	2,687,809	2,000,000	205,525	482,284	2,687,809

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

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Table 38 Sugar balance sheet of ASEAN countries, 2022

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	8,986,314	16,719,312	9,825,520	35,531,145	17,443,496	7,533,455	10,554,194	35,531,145
Brunei	3,632	-	5,590	9,223	5,418	-	3,805	9,223
Cambodia		239,775	-	239,775	22,388	217,387	-	239,775
Indonesia	744,206	2,496,326	5,892,295	9,132,827	7,915,342	410,550	806,935	9,132,827
Lao PDR	1,522,822	300,454	86,278	1,909,554	-	6,247	1,903,307	1,909,554
Malaysia	-	-	1,918,072	1,918,072	1,555,885	362,187	-	1,918,072
Myanmar	992,730	*905,946	-	1,898,676	1,189,151	284,227	425,297	1,898,676
Philippines	330,861	1,930,219	40,954	2,302,034	1,948,645	-	353,389	2,302,034
Singapore	-	-	270,353	270,353	206,667	63,686	-	270,353
Thailand	4,909,779	10,156,762	117,194	15,183,735	2,500,000	5,905,547	6,778,188	15,183,735
Vietnam	482,284	689,830	1,494,783	2,666,898	2,100,000	283,625	283,273	2,666,898

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 39 Sugar balance sheet of ASEAN countries, 2023

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	10,554,194	18,415,683	10,086,517	39,056,395	17,748,993	11,537,659	9,769,743	39,056,395
Brunei	3,805	-	5,969	9,774	5,419	-	4,355	9,774
Cambodia	-	237,401	-	237,401	21,352	216,049	-	237,401
Indonesia	806,935	2,610,658	5,892,295	9,309,888	8,092,403	410,550	806,935	9,309,888
Lao PDR	1,903,307	328,400	90,000	2,321,707	-	10,000	2,311,707	2,321,707
Malaysia	-	-	1,889,301	1,889,301	1,532,547	356,754	-	1,889,301
Myanmar	*425,297	*887,827	-	1,313,124	*729,823	*173,838	*409,463	1,313,124
Philippines	353,389	1,900,000	*50,000	2,303,389	*1,935,718	-	*367,671	2,303,389
Singapore	-	-	285,212	285,212	226,730	58,482	-	285,212
Thailand	6,778,188	11,796,059	80,000	18,654,247	3,000,000	10,000,000	5,654,247	18,654,247
Vietnam	283,273	655,339	1,793,740	2,732,352	2,205,000	311,987	215,365	2,732,352

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 40 Ratio of sugar production to domestic utilization in ASEAN countries (Self-sufficiency ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)
ASEAN	14,295,395	16,544,575	86.41	16,719,312	17,443,496	95.85	18,415,683	17,748,993	103.76
Brunei	-	5,216	-	-	5,418	-	-	5,419	-
Cambodia	242,197	21,223	1,141.20	239,775	22,388	1,071.00	237,401	21,352	1,111.83
Indonesia	2,350,809	7,532,257	31.21	2,496,326	7,915,342	31.54	2,610,658	8,092,403	32.26
Lao PDR	228,240	-	-	300,454	-	-	328,400	-	-
Malaysia	-	1,637,773	-	-	1,555,885	-	-	1,532,547	-
Myanmar	924,089	728,333	126.88	905,946	1,189,151	76.18	887,827	729,823	121.65
Philippines	2,199,526	2,081,761	105.66	1,930,219	1,948,645	99.05	1,900,000	1,935,718	98.15
Singapore	-	246,793	-	-	206,667	-	-	226,730	-
Thailand	7,586,604	2,291,220	331.12	10,156,762	2,500,000	406.27	11,796,059	3,000,000	393.20
Vietnam	763,931	2,000,000	38.20	689,830	2,100,000	32.85	655,339	2,205,000	29.72

Remark: * The value is estimated by AFSIS Secretariat.

Table 41 Ratio of sugar beginning stock to domestic utilization in ASEAN countries (food security ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)
ASEAN	7,686,851	16,544,575	46.46	8,986,314	17,443,496	51.52	10,554,194	17,748,993	59.46
Brunei	3,346	5,216	64.15	3,632	5,418	67.05	3,805	5,419	70.22
Cambodia	-	21,223	-	-	22,388	-	-	21,352	-
Indonesia	804,685	7,532,257	10.68	744,206	7,915,342	9.40	806,935	8,092,403	9.97
Lao PDR	1,428,517	-	-	1,522,822	-	-	1,903,307	-	-
Malaysia	-	1,637,773	-	-	1,555,885	-	-	1,532,547	-
Myanmar	1,546,590	728,333	212.35	992,730	1,189,151	83.48	425,297	729,823	58.27
Philippines	324,401	2,081,761	15.58	330,861	1,948,645	16.98	353,389	1,935,718	18.26
Singapore	-	246,793	-	-	206,667	-	-	226,730	-
Thailand	3,094,109	2,291,220	135.04	4,909,779	2,500,000	196.39	6,778,188	3,000,000	225.94
Vietnam	485,203	2,000,000	24.26	482,284	2,100,000	22.97	283,273	2,205,000	12.85

Remark: * The value is estimated by AFSIS Secretariat.

Table 42 Quantity and Value of Sugar Export by Countries of Destination in 2022

Quantity: Tons Values: US\$

Exporting Country	Country of Destination													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei									N/A					
Cambodia									N/A					
Indonesia	38	43,933							784	533,944			2,378	1,427,425
Lao PDR														
Malaysia									N/A					
Myanmar														
Philippines									N/A					
Singapore									N/A					
Thailand	4,881	2,672,463	514,337	250,182,713	2,169,728	853,404,857	383,014	192,358,238	423,551	183,267,541	109,998	65,447,944	376,755	190,278,042
Vietnam			-	2,308,481	-	3,145,949	-	1,376,987	-	6,865,723	-	1,334,272	-	15,525,343

Exporting Country	Country of Destination						Total within ASEAN		Total outside ASEAN		Total	
	Singapore		Thailand		Vietnam		Quantity	Values	Quantity	Values	Quantity	Values
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei							N/A					
Cambodia							N/A					
Indonesia	490	375,552	0.001	1	291,033	178,371,371	294,723	180,752,226	4,481	5,175,693	299,203	185,927,919
Lao PDR			4,379	3,003,772	768	490,169	5,147	3,493,941	1,100	756,850	6,247	4,250,791
Malaysia							N/A					
Myanmar	11	1,000					11	1,000	284,216	15,262,000	284,227	15,263,000
Philippines							N/A					
Singapore							N/A					
Thailand	93,443	48,561,462			110,667	54,856,083	4,186,374	1,841,029,342	2,759,810	1,244,496,570	6,946,184	3,085,525,912
Vietnam	-	1,338,000	-	8,773,203			-	40,667,956	-	131,887,724	-	172,555,680

Remark: The data in this table is obtained from national focal points of member states and may not complete. N/A refers to data that is not available.

Table 43 Quantity and Value of Sugar Import by Countries of Origin in 2022

Quantity: Tons Values: US\$

Importing Country	Country of origin													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei									N/A					
Cambodia									N/A					
Indonesia										0.002	33			
Lao PDR														
Malaysia									N/A					
Myanmar									N/A					
Philippines							48	42,720	3,725	2,282,325				
Singapore						309	500,931		20,525	13,198,626	12	5,427	4	14,690
Thailand		0.001	3	6,196	21,858,649	24,195	3,784,284	1,858	4,702,675	1,823	1,027,677	1,102	3,658,703	
Vietnam		-	58,603,258	-	238,065,645	-	59,034,729	-	88,878,046	-	41,405,105	-	8,881,702	

Importing Country	Country of origin						Total within ASEAN		Total outside ASEAN		Total	
	Singapore		Thailand		Vietnam		Quantity	Values	Quantity	Values	Quantity	Values
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei							N/A					
Cambodia							N/A					
Indonesia	0.013	206.0000	2,326,194	1,165,610,289	21	24,349	2,326,215	1,165,634,877	2,644,261	1,317,037,076	4,970,476	2,482,671,953
Lao PDR			86,129	43,546,571			86,129	43,546,571	149	75,749	86,278	43,622,319
Malaysia							N/A					
Myanmar							N/A					
Philippines			36,809	22,294,912			40,582	24,619,957	372	390,097	40,954	25,010,054
Singapore			103,934	64,210,192	766	616,493	626,171	78,045,738	144,803	85,697,036	770,974	163,742,774
Thailand	845.36	2,519,598			2,665.541	13,064,705	38,685	50,616,295	329,842	228,440,764	368,526	279,057,059
Vietnam	-	16,926,577	-	63,779,026			-	575,574,087	-	305,503,820	-	881,077,907

Remark: The data in this table is obtained from national focal points of member states and may not complete. N/A refers to data that is not available.

Table 44 FOB Price of sugar in selected ASEAN countries

Unit: US\$/Ton

Country	Grade	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Myanmar	Not specified	2021	38	38	37	37	40	35	-	-	-	-	-	40	38
		2022	52	56	80	57	55	44	50	-	-	-	-	-	56
Malaysia	Not specified	2021	771	754	715	715	868	764	683	764	751	754	754	754	754
		2022							N/A						
Thailand	Raw Sugar	2021	349	337	350	362	367	364	395	388	391	425	415	427	381
		2022	440	448	405	428	435	442	440	450	512	458	505	-	451
	White Sugar	2021	421	426	441	453	471	451	467	488	494	488	507	492	467
		2022	511	507	490	517	521	523	526	558	541	547	591	-	530

Remark: N/A refers to data that is not available.

Table 45 CIF Price of sugar in selected ASEAN countries

Unit: US\$/Ton

Country	Grade	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	Refine Sugar	2021	405	455	513	560	523	566	534	547	506	539	548	537	519
		2022	564	555	593	557	625	611	636	628	641	-	-	-	601
	Other sugar	2021	397	396	421	425	412	437	428	446	454	467	501	485	439
		2022	486	485	484	508	512	503	501	493	486	-	-	-	495
Lao PDR	Not specified	2021	428	457	477	480	505	482	469	465	456	454	450	463	465
		2022	433	446	455	468	481	472	-	-	-	450	450	450	456
Malaysia	Not specified	2021	457	405	444	494	503	484	556	438	572	484	484	484	484
		2022							N/A						
Singapore	Sugar	2021	459	490	485	517	487	538	533	548	550	556	591	578	528
		2022	562	563	615	607	599	623	658	627	651	633	608	608	613

Remark: N/A refers to data that is not available.

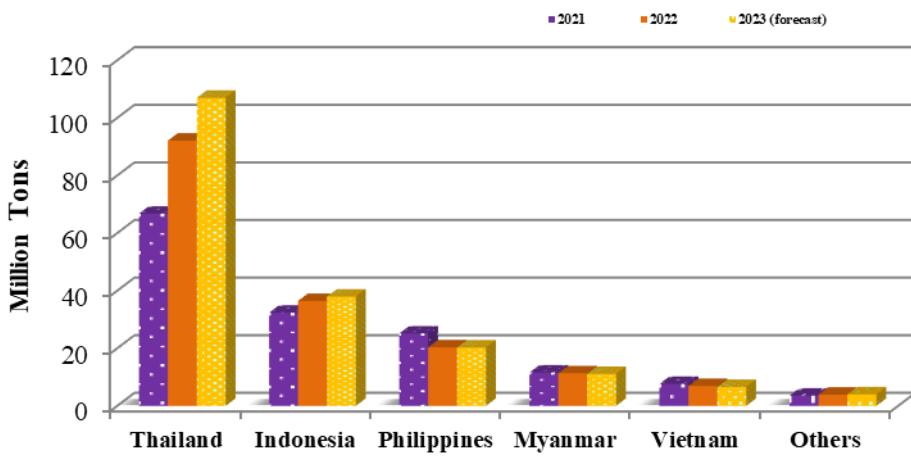


Figure 32 Sugarcane production of selected countries in ASEAN, 2021 – 2023

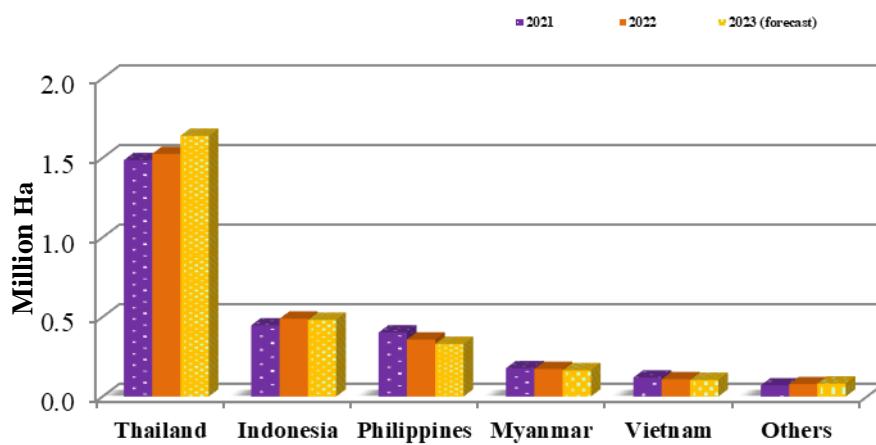


Figure 33 Sugarcane planted area of selected countries in ASEAN, 2021 – 2023

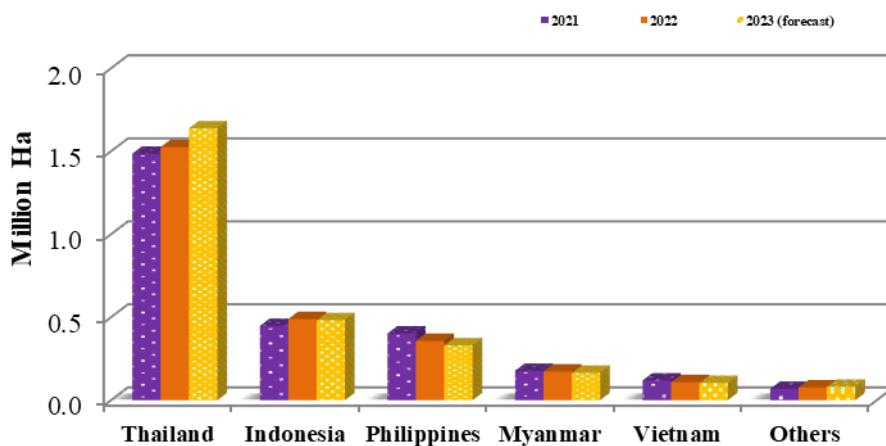


Figure 34 Sugarcane harvested area of selected countries in ASEAN, 2021 – 2023

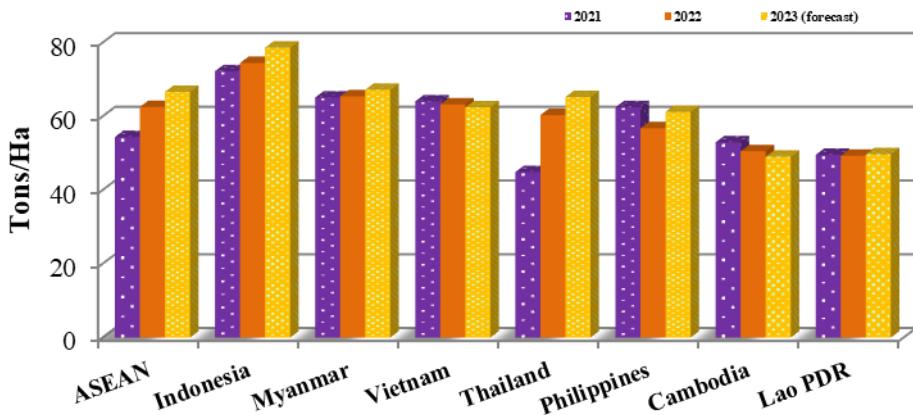


Figure 35 Sugarcane yield of selected countries in ASEAN, 2021 – 2023

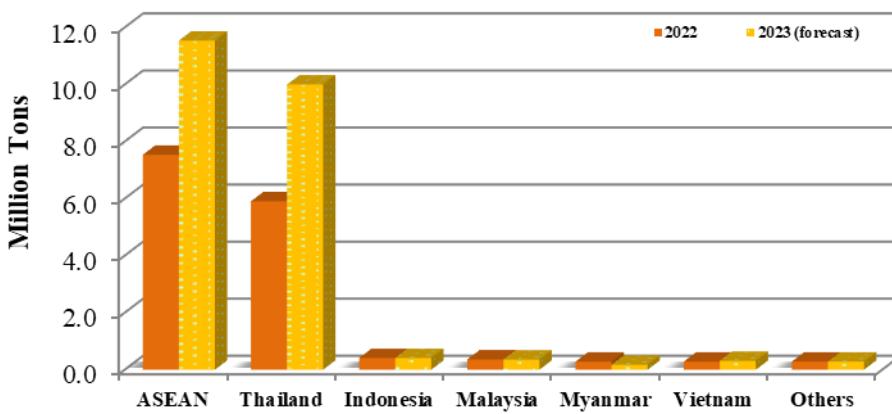


Figure 36 Amount of Sugar export (million tons) of selected countries in ASEAN in 2022 – 2023

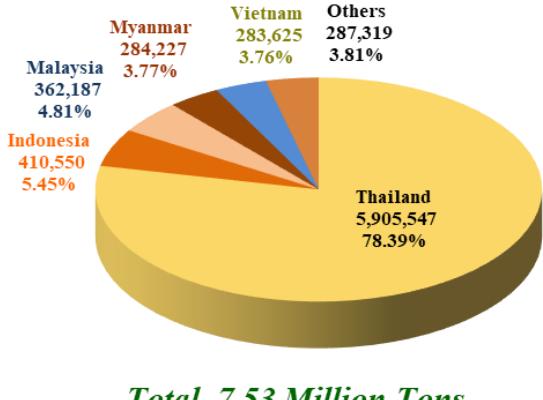


Figure 37 Share of sugar export (tons) among ASEAN countries, 2022

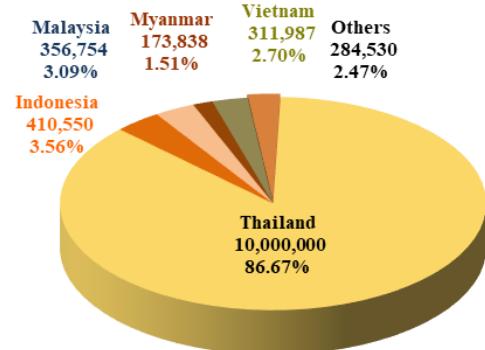


Figure 38 Share of sugar export (tons) among ASEAN countries, 2023

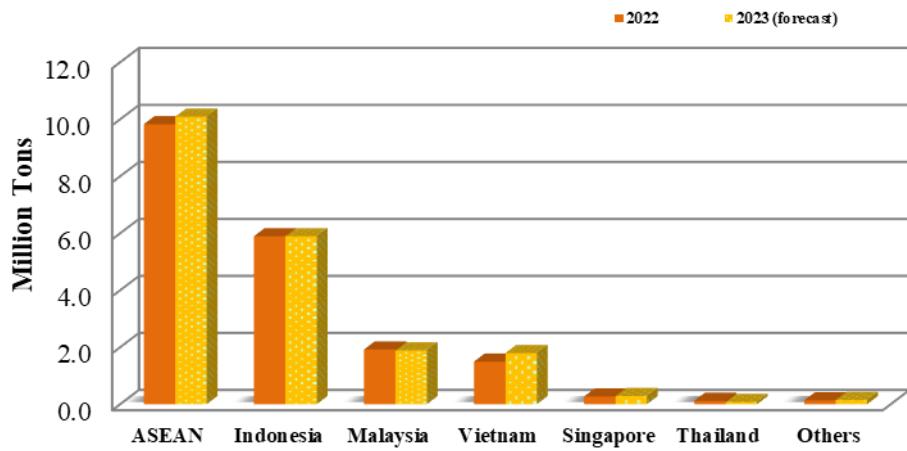
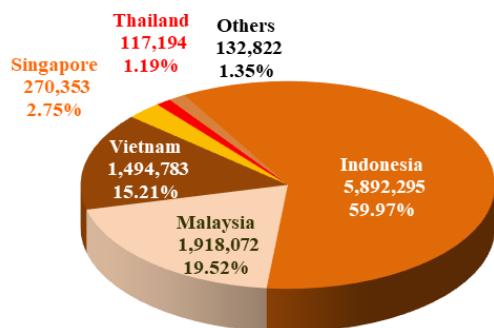
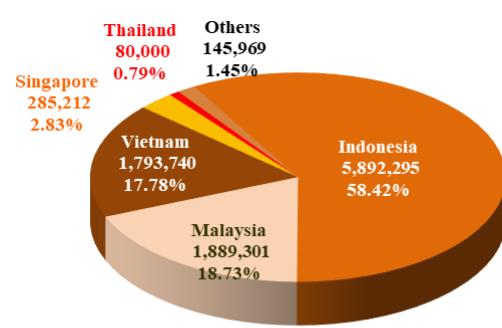


Figure 39 Amount of sugar import (million tons) by selected countries in ASEAN in 2022 – 2023



Total 9.83 Million Tons

Figure 40 Share of sugar import (tons)
among ASEAN countries, 2022



Total 10.09 Million Tons

Figure 41 Share of sugar import (tons)
among ASEAN countries, 2023

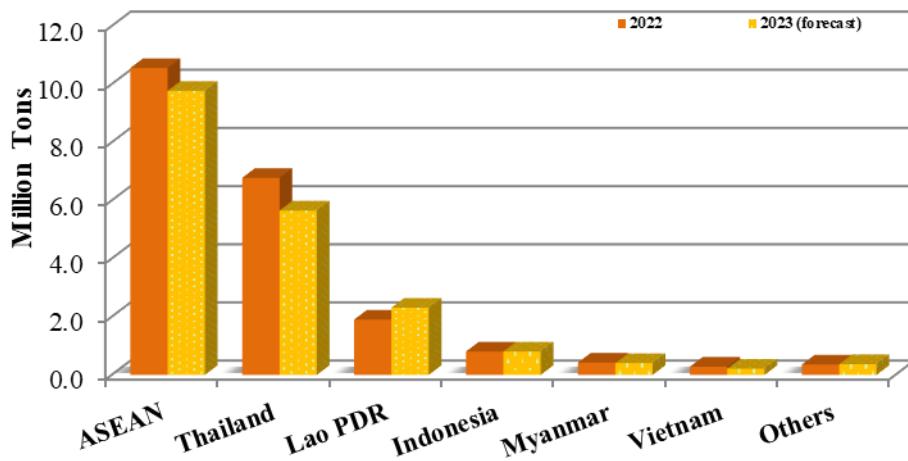


Figure 42 Amount of ending stock of Sugar in ASEAN countries in 2022– 2023

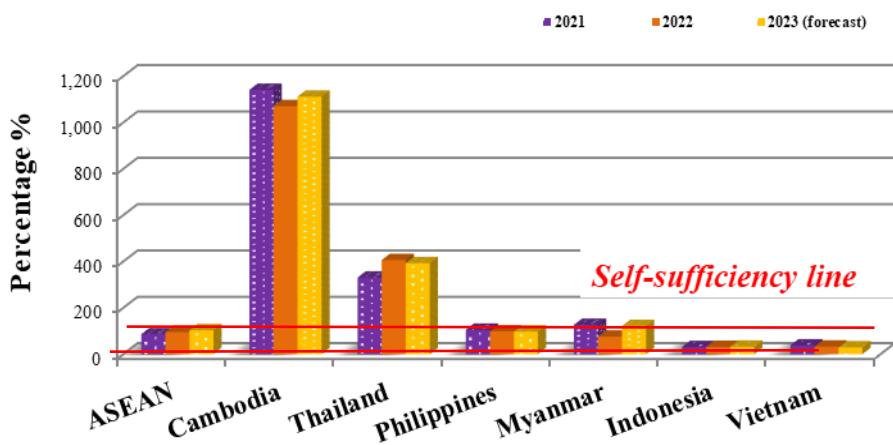


Figure 43 Ratio of sugar production to domestic utilization in ASEAN countries, 2021 – 2023

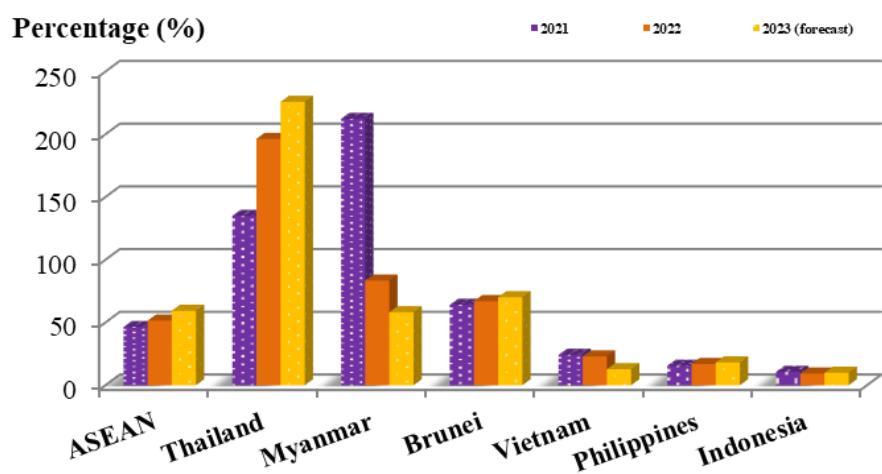


Figure 44 Ratio of sugar beginning stock to domestic utilization in ASEAN countries, 2021 – 2023

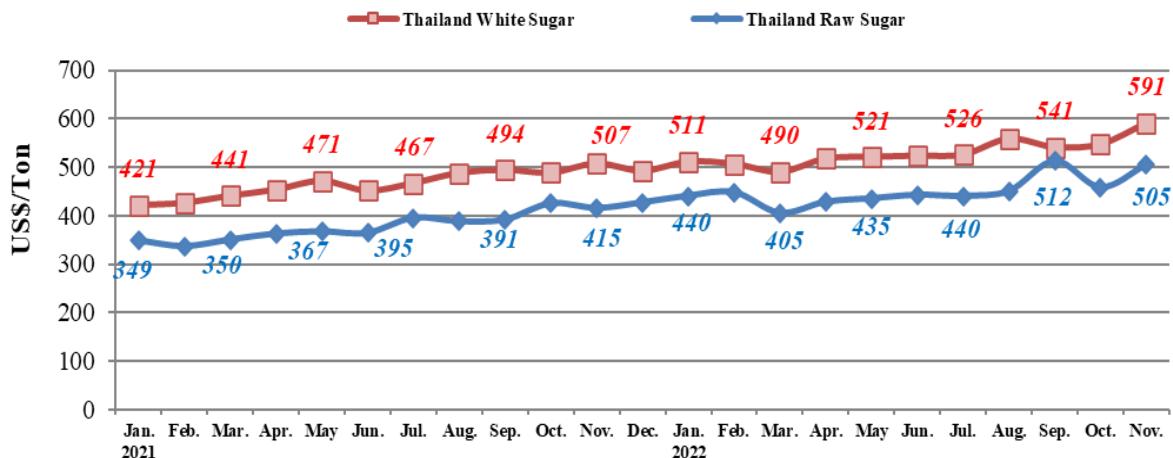


Figure 45 FOB price (US\$/Ton) of white sugar and raw sugar in Thailand in 2021 – 2022

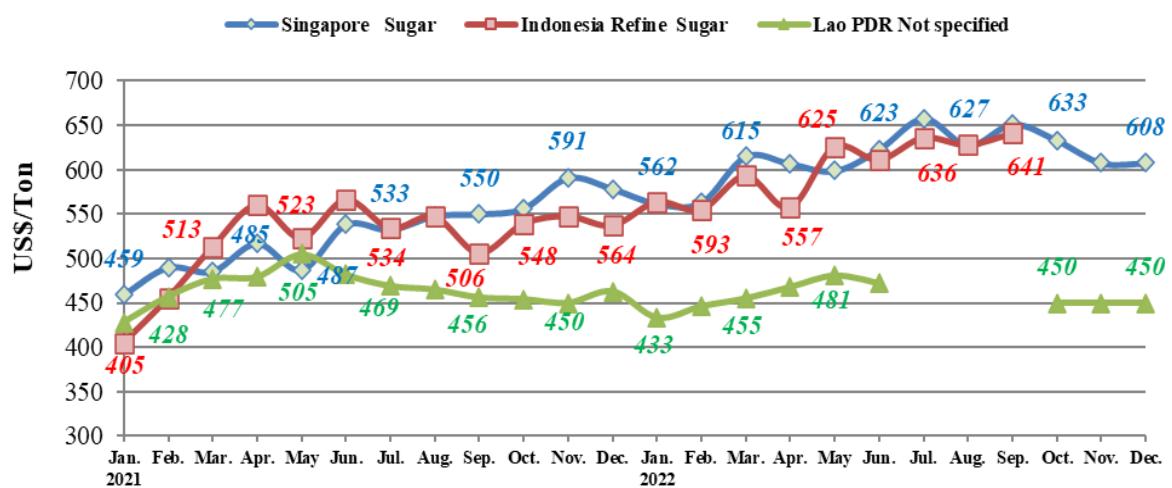


Figure 46 CIF price (US\$/Ton) of sugar of selected countries in ASEAN in 2021 – 2022

Soybean Outlook for 2023

Highlights

The supply of ASEAN soybean in 2023 is forecast to increase from 9.41 million tons in 2022 to 9.92 million tons or approximately 5.42 percent (Table 46). The growth in supply mainly comes from the increase in import, which increase by approximately 7.89 percent. The soybean production is predicted to be 0.52 million tons in 2023, which decreases from the previous year at 0.03 million tons.

In 2023, the beginning stock of soybean in ASEAN is forecast to decline to 0.37 million tons, which decreases by 0.12 million tons from 0.49 million tons in 2022. Additionally, the ending stock is expected to be 0.34 million tons in 2023, a decrease by 0.03 million tons or approximately 8.11 percent from 0.37 million tons in 2022.

In terms of soybean's demand in ASEAN in 2023, the domestic utilization is estimated at 9.54 million tons, which increases in the demand for 0.54 million tons from 9.00 million tons in 2022.

The export in 2023 is forecast to be 0.05 million tons. This indicates that ASEAN exports very few amounts of soybeans.

The production to domestic utilization ratio (self-sufficiency ratio) in 2023 is forecast to be 5.47 percent, which decreases by 0.61 percent from the previous year.

The beginning stock to domestic utilization ratio (food security ratio) is predicted to be 3.88 percent in 2023, which decreases by approximately 1.54 percent from 2022.

Table 46 Summary of the ASEAN soybean situation, 2022 – 2023

Items	2022	2023	Change	
			Quantity	%
Supply (Million tons)	9.41	9.92	0.51	5.42
Beginning stock	0.49	0.37	-0.12	-24.49
Production	0.55	0.52	-0.03	-5.45
Import	8.37	9.03	0.66	7.89
Demand (Million tons)	9.41	9.92	0.51	5.42
Domestic utilization	9.00	9.54	0.54	6.00
Export	0.04	0.05	0.01	25.00
Ending stock	0.37	0.34	-0.03	-8.11
Ratio of production to domestic utilization (%)	6.08	5.47	-0.61	-
Ratio of beginning stock to domestic utilization (%)	5.42	3.88	-1.54	-

ASEAN Soybean Situation 2022

► Production

The estimate of soybean production in ASEAN in 2022 (crop year 2021/22) was 0.55 million tons, an increase of 0.04 million tons from 0.51 million tons in 2021 (crop year 2021/22). The increase in production was due to the increase in planted area and yield. Indonesia is ranked first in soybean production in the region, followed by Myanmar, Vietnam, Thailand, Cambodia, Lao PDR, and the Philippines. The production of soybean decreased in Thailand, Lao PDR, Myanmar, and the Philippines (Table 47-50, Figure 47-50).

For **Cambodia**, the increase in production was due to the increase in yield.

For **Indonesia**, the estimated soybean production in 2022 has increased to 0.25 million tons, increasing approximately 19.06 percent from 0.21 million tons in 2021. The increase in production is attributed to the increase in planted area, which caused by farmers' response to the price increase. While, yield has decreased due to unfavorable weather.

For **Lao PDR**, the decrease in production was due to the decrease in planted area and yield, which caused by farmers' response to the price decrease and using less fertilizer.

For **Myanmar**, the second-largest soybean producing country in ASEAN, the production has decreased due to the reduction of the planted area and yield. The decline in the planted area came from high production costs. The yield has decreased because farmers used less fertilizer.

For the **Philippines**, the decrease in production was due to the decrease in planted area and yield, which caused by lack of seeds in major producing area together with the problem of white mold on some plants and heavy rainfall.

For **Thailand**, the decrease in production was due to the decrease in planted and harvested areas, which caused by high production costs, lack of the development of mechanical soybean harvesting technology, and lack of seeds in major producing area.

For **Vietnam**, the increase in production was due to the increase in planted area and harvested area, which caused by government policy.

► Utilization and Stock

The domestic utilization of soybean in ASEAN in 2022 was estimated at 9.00 million tons, a decrease of 1.14 million tons or about 11.28 percent from 10.14 million tons in 2021. While the beginning stock was estimated at 0.49 million tons in 2022, a sharp decrease by 0.23 million tons or 32.51 percent from 0.72 million tons in 2021. Myanmar had the greatest soybean stock in the region, followed by Indonesia, and Vietnam (Table 52-53).

The ratio of production to domestic utilization (**self-sufficiency ratio**) of ASEAN in 2022 was 6.08 percent, which increased by approximately 1.04 percent from the previous year. However, none of the member countries has the ratio above 100 percent, except Lao PDR (Table 55, Figure 58). The ratio of the beginning stock to the domestic utilization (**food security ratio**) of ASEAN in 2022 was estimated to be 5.42 percent, which dropped from the previous year (Table 56, Figure 59).

Overall, despite soybean production in ASEAN was increased, the production volume was considered insufficient for consumption within the ASEAN region. As a result, many ASEAN countries still rely heavily on soybean import and still have a tendency to increase soybean imports. Even though soybean is not an important crop for consumption in ASEAN region, it is still crucial as it is raw material for animal feed and cooking oil production because the population need to consume a variety of products resulted from the economic growth.

As mentioned before, the impact from Russia-Ukraine war has led to the increasing prices of fertilizer and shortage, high energy prices, and increasing price of food. This situation also affects soybean producing countries in ASEAN region and could possibly lead to soybean shortage or food insecurity in the future.

► Trade

In 2022, ASEAN altogether exported soybean 41,662 tons, which increased 5,285 tons compared to 36,378 tons in 2021 (Table 52-53, Figure 51-52).

The quantity and value of soybean export by countries of destination and the quantity and value of soybean import by countries of origin are given in Table 57-58.

► Prices

The monthly FOB price of soybean for exporting countries during 2021-2022 are shown in Table 59 and the monthly CIF prices for importing countries are shown in Table 60. The annual average FOB prices in 2022 in Myanmar (January-April) was 809 US\$/ton, in Lao PDR (January-December) was 285 US\$/ton, and in Indonesia (January-September) was 622 US\$/ton (Table 59, Figure 60).

For CIF prices of 2022, the annual average in Thailand was 641 US\$/ton, in Indonesia was 692 US\$/ton, in Lao PDR was 541 US\$/ton, and in Singapore was 925 US\$/ton (Table 60, Figure 61).

► Damaged Area

The total damaged area of soybean in the ASEAN in 2022 was estimated to be 405 hectares. The major cause of damage was flood, which constituted about 96.05 percent of the overall damaged area. The majority of flood areas had occurred in Myanmar, followed by Thailand, Indonesia, and Cambodia (Table 51).

Prospects for Soybean in 2023

► Production

Soybean production of ASEAN in 2023 is forecast to be 0.52 million tons, which decrease from 2022 approximately 4.73 percent (Table 47, Figure 47). The decrease in production is expected in Cambodia, Indonesia, and Myanmar. While the increase in production is expected in Lao PDR, the Philippines, Thailand and Vietnam. Indonesia, the biggest soybean-producing country in ASEAN, is forecast to decrease in its production from 0.25 million tons in 2022 to 0.22 million tons in 2023, which accounted for 13.14 percent decrease. The decrease in Indonesian production is derived from the declining in planted and harvested areas (Table 47-50, Figure 47-50). The decrease in production is also expected in Cambodia and Myanmar, which is mainly caused by the reduction of the planted area and yield.

► Utilization and Stock

The domestic utilization of soybeans in ASEAN is forecast to increase by 6.00 percent from 9.00 million tons in 2022 to 9.54 million tons in 2023 (Table 53-54).

The beginning stock in ASEAN in 2023 is forecast to decrease by 0.12 million tons or about 24.15 percent from 0.49 million tons in

2022 to 0.37 million tons in 2023 (Table 53-54). Likewise, the ending stock in ASEAN in 2023 is forecast to decrease from 0.37 million tons in 2022 to 0.34 million tons, which increases about 7.45 percent (Table 53-54, Figure 57).

In 2023, the ratio of production to domestic utilization (**self-sufficiency ratio**) is forecast to be 5.47 percent, which decreases from 6.08 percent in 2022 (Table 55, Figure 58). The ratio of beginning stock to the domestic utilization (**food security ratio**) is forecast to be 3.88 percent, which decreases 1.54 percent from the previous year (Table 56, Figure 59).

► Trade

In 2023, the export of soybeans from the ASEAN is forecast to reach 46,269 tons, increasing 4,606 tons or 11.06 percent compared to the previous year. While the total import by the ASEAN in 2023 is forecast to be 9.03 million tons, increasing 0.66 million tons from 8.37 million tons in 2022 (Table 53-54, Figure 51, 53, 54, and 56).

Table 47 Soybean production in ASEAN countries, 2021 – 2023

Unit: 1,000 Tons

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	510.69	547.18	36.49	7.15	521.30	-25.88	-4.73
Brunei			N/A				
Cambodia	16.21	17.83	1.62	10.00	17.18	-0.65	-3.63
Indonesia	212.86	253.43	40.56	19.06	220.12	-33.30	-13.14
Lao PDR	6.34	3.94	-2.40	-37.85	6.30	2.36	59.90
Malaysia			N/A				
Myanmar	194.60	192.46	-2.14	-1.10	*190.34	-2.12	-1.10
Philippines	0.53	0.41	-0.12	-21.86	*0.42	0.01	2.20
Singapore			N/A				
Thailand	19.96	15.52	-4.45	-22.28	22.58	7.06	45.52
Vietnam	60.18	63.60	3.42	5.67	64.36	0.76	1.19

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 48 Soybean planted area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	337.21	356.91	19.70	5.84	339.75	-17.16	-4.81
Brunei			N/A				
Cambodia	16.22	16.06	-0.16	-1.00	16.38	0.32	2.02
Indonesia	136.26	161.16	24.90	18.27	138.53	-22.63	-14.04
Lao PDR	2.41	1.54	-0.87	-36.14	2.57	1.03	66.99
Malaysia			N/A				
Myanmar	131.61	130.08	-1.52	-1.16	*128.58	-1.51	-1.16
Philippines	0.38	0.30	-0.08	-21.42	*0.31	0.01	3.62
Singapore			N/A				
Thailand	12.98	8.29	-4.69	-36.11	13.28	4.99	60.20
Vietnam	37.35	39.48	2.13	5.69	40.10	0.62	1.57

Remark: *The value is estimated by AFSIS Secretariat. ** Philippines reported only harvested area. N/A refers to data that is not available.

Table 49 Soybean harvested area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	334.28	356.54	22.27	6.66	339.65	-16.90	-4.74
Brunei			N/A				
Cambodia	16.18	16.06	-0.12	-0.75	16.38	0.32	2.02
Indonesia	134.70	161.12	26.42	19.61	138.53	-22.59	-14.02
Lao PDR	2.41	1.54	-0.87	-36.14	2.57	1.03	66.99
Malaysia			N/A				
Myanmar	131.25	129.87	-1.38	-1.05	*128.51	-1.36	-1.05
Philippines	0.38	0.30	-0.08	-21.42	*0.31	0.01	3.62
Singapore			N/A				
Thailand	12.00	8.18	-3.82	-31.82	13.26	5.07	61.96
Vietnam	37.35	39.48	2.13	5.69	40.10	0.62	1.57

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 50 Soybean yield in ASEAN countries, 2021 – 2023

Unit: Tons/Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	1.53	1.53	0.01	0.45	1.53	0.00	0.01
Brunei				N/A			
Cambodia	1.00	1.11	0.11	10.83	1.05	-0.06	-5.54
Indonesia	1.58	1.57	-0.01	-0.46	1.59	0.02	1.02
Lao PDR	2.63	2.56	-0.07	-2.68	2.45	-0.11	-4.25
Malaysia				N/A			
Myanmar	1.48	1.48	0.00	-0.05	*1.48	0.00	-0.05
Philippines	1.40	1.39	-0.01	-0.56	*1.37	-0.02	-1.37
Singapore				N/A			
Thailand	1.66	1.90	0.23	14.00	1.70	-0.19	-10.15
Vietnam	1.61	1.61	0.00	-0.01	1.60	-0.01	-0.37

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 51 Soybean damaged area in ASEAN by cause of damage, 2022

Unit: Hectares

Country	Cause of Damage (Hectares)						
	Flood	Drought	Pests	Diseases	Others	Unspecify	Total
ASEAN	389	16	-	-	-	-	405
Brunei				N/A			
Cambodia	40	-	-	-	-	-	40
Indonesia	45	-	-		-	-	45
Lao PDR				N/A			
Malaysia				N/A			
Myanmar	213	-	-	-	-	-	213
Philippines							
Singapore				N/A			
Thailand	91	16	-	-	-	-	107
Vietnam				N/A			

Remark: N/A refers to data that is not available.

Table 52 Soybean balance sheet of ASEAN countries, 2021

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	722,436	510,686	9,430,697	10,663,819	10,139,846	36,378	487,595	10,663,819
Brunei	-	-	597	597	597	-	-	597
Cambodia	-	16,208	21,628	37,836	22,736	15,100	-	37,836
Indonesia	450,000	212,863	2,489,690	3,152,553	2,959,405	2,178	190,970	3,152,553
Lao PDR	862	6,340	243	7,445	3,724	1,900	1,821	7,445
Malaysia	-	-	709,059	709,059	701,864	7,195	-	709,059
Myanmar	*191,572	194,598	*6,353	392,523	*194,537	3,388	194,598	392,523
Philippines	-	530	165,559	166,090	*166,089	-	-	166,089
Singapore	-		21,467	21,467	20,997	470	-	21,467
Thailand	-	19,962	3,996,772	4,016,734	4,015,792	942		4,016,734
Vietnam	80,002	60,185	2,019,328	2,159,515	2,054,105	5,204	100,207	2,159,515

Remark: * The value is estimated by AFSIS Secretariat.

Table 53 Soybean balance sheet of ASEAN countries, 2022

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	487,595	547,180	8,373,257	9,408,033	8,996,519	41,662	369,852	9,408,033
Brunei	-	-	728	728	728	-	-	728
Cambodia	-	17,828	11,287	29,115	20,055	9,060	-	29,115
Indonesia	190,970	253,427	2,307,146	2,751,543	2,636,191	11,583	103,768	2,751,543
Lao PDR	1,821	3,940	841	6,602	3,880	1,867	855	6,602
Malaysia	-	-	673,606	673,606	666,051	7,555	-	673,606
Myanmar	194,598	192,456	1,023	388,077	203,038	362	184,677	388,077
Philippines	-	414	*171,679	172,093	*172,093	-	-	172,093
Singapore	-	-	22,607	22,607	21,552	1,055	-	22,607
Thailand	-	15,515	3,400,000	3,415,515	3,414,465	1,050	-	3,415,515
Vietnam	100,207	63,600	1,784,341	2,048,148	1,858,466	9,130	80,552	1,948,148

Remark: * The value is estimated by AFSIS Secretariat.

Table 54 Soybean balance sheet of ASEAN countries, 2023

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	369,852	521,301	9,033,301	9,924,454	9,535,900	46,269	342,285	9,924,454
Brunei	-	-	750	750	750	-	-	750
Cambodia	-	17,180	9,000	26,180	18,180	8,000	-	26,180
Indonesia	103,768	220,124	2,786,132	3,110,024	2,994,672	11,583	103,768	3,110,024
Lao PDR	855	6,300	173	7,328	3,938	2,024	1,366	7,328
Malaysia	-	-	660,134	660,134	652,466	7,668	-	660,134
Myanmar	184,677	190,338	*1,000	376,014	*204,651	300	171,063	376,014
Philippines	-	*424	*173,954	174,378	*174,378	-	-	174,378
Singapore	-	-	22,037	22,037	21,274	763	-	22,037
Thailand	-	22,577	3,500,000	3,522,577	3,521,577	1,000	-	3,522,577
Vietnam	80,552	64,359	1,880,121	2,025,032	1,944,014	14,930	66,088	2,025,032

Remark: * The value is estimated by AFSIS Secretariat.

Table 55 Ratio of soybean production to domestic utilization in ASEAN countries (Self-sufficiency ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)
ASEAN	510,686	10,139,846	5.04	547,180	8,996,519	6.08	521,301	9,535,900	5.47
Brunei	-	597	-	-	728	-	-	750	0.00
Cambodia	16,208	22,736	71.29	17,828	20,055	88.90	17,180	18,180	94.50
Indonesia	212,863	2,959,405	7.19	253,427	2,636,191	9.61	220,124	2,994,672	7.35
Lao PDR	6,340	3,724	170.25	3,940	3,880	101.55	6,300	3,938	159.98
Malaysia	-	701,864	-	-	666,051	0.00	-	652,466	-
Myanmar	194,598	194,537	100.03	192,456	203,038	94.79	190,338	204,651	93.01
Philippines	530	166,089	0.32	414	172,093	0.24	424	174,378	0.24
Singapore	-	20,997	-	-	21,552	-	-	21,274	-
Thailand	19,962	4,015,792	0.50	15,515	3,414,465	0.45	22,577	3,521,577	0.64
Vietnam	60,185	2,054,105	2.93	63,600	1,858,466	3.42	64,359	1,944,014	3.31

Remark: * The value is estimated by AFSIS Secretariat.

Table 56 Ratio of soybean beginning stock to domestic utilization in ASEAN countries (Food security ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)
ASEAN	722,436	10,139,846	7.12	487,595	8,996,519	5.42	369,852	9,535,900	3.88
Brunei	-	597	-	-	728	0.00	-	750	-
Cambodia	-	22,736	-	-	20,055	0.00	0	18,180	-
Indonesia	450,000	2,959,405	15.21	190,970	2,636,191	7.24	103,768	2,994,672	3.47
Lao PDR	862	3,724	23.15	1,821	3,880	46.93	855	3,938	21.70
Malaysia	-	701,864	-	-	666,051	-	-	652,466	-
Myanmar	191,572	194,537	98.48	194,598	203,038	95.84	184,677	204,651	90.24
Philippines	-	166,089	-	-	172,093	-	-	174,378	-
Singapore	-	20,997	-	-	21,552	-	-	21,274	-
Thailand	-	4,015,792	-	-	3,414,465	-	-	3,521,577	-
Vietnam	80,002	2,054,105	3.89	100,207	1,858,466	5.39	80,552	1,944,014	4.14

Remark: * The value is estimated by AFSIS Secretariat.

Table 57 Quantity and Value of Soybean Export by Countries of Destination in 2022

Quantity: Tons Values: US\$

Exporting Country	Country of Destination													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei									N/A					
Cambodia														
Indonesia														
Lao PDR														
Malaysia									N/A					
Myanmar														
Philippines														
Singapore									N/A					
Thailand			20	29,424			243	135,989	3	4,524	518	188,847		
Vietnam			-	2,537,125			-	57,940						

Exporting Country	Country of Destination						Total within ASEAN		Total outside ASEAN		Total	
	Singapore		Thailand		Vietnam							
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei							N/A					
Cambodia					82,805	-	82,805	-	8.04	-	82,813	-
Indonesia							-	-	11	5,500	11	5,500
Lao PDR							-	-	16,992	3,732,333	16,992	3,732,333
Malaysia							N/A					
Myanmar							-	-	362	280,000	362	280,000
Philippines							-	-	0.80	1,162	1	1,162
Singapore							N/A					
Thailand	10	17,428					793	376,213	31	50,565	824	426,778
Vietnam	-	1,400					-	2,596,465	-	26,594	-	2,623,058

Remark: The data in this table is obtained from national focal points of member states and may not complete. N/A refers to data that is not available.

Table 58 Quantity and Value of Soybean Import by Countries of Origin in 2022

Quantity: Tons Values: US\$

Importing Country	Country of Origin													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei	N/A													
Cambodia	N/A													
Indonesia									525	313,885				
Lao PDR														
Malaysia	N/A													
Myanmar														
Philippines														
Singapore									4,436	4,499,932	0.01	5		
Thailand		656	259,582						14	12,069				
Vietnam		12,113	9,456											

[6S]

Importing Country	Country of origin						Total within ASEAN		Total outside ASEAN		Total		
	Singapore		Thailand		Vietnam								
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	
Brunei	N/A												
Cambodia	N/A												
Indonesia							525	313,885	186,334	142,937,972	186,859	143,251,857	
Lao PDR			220	53,793	556	289,650	775	343,443	65	10,634	841	354,077	
Malaysia	N/A												
Myanmar							-	-	1,023	334,303	1,023	334,303	
Philippines							-	-	147,161	103,106,330	147,161	103,106,330	
Singapore		0.36	1,644	0.45	95	4,437	4,501,676	18,171	16,421,234	22,607	20,922,910		
Thailand							671	271,651	2,602,559	1,562,475,652	2,603,230	1,562,747,303	
Vietnam							12,113	9,456	1,519,779	1,056,609	1,531,892	1,066,065	

Remark: The data in this table is obtained from national focal points of member states and may not complete. N/A refers to data that is not available.

Table 59 FOB Price of soybean in selected ASEAN countries

Unit: US\$/Tons

Country	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Cambodia	2021	842	889	948	916	996	-	-	-	-	-	-	-	918
	2022													
Indonesia	2021	632	275	162	595	257	286	366	168	199	551	361	315	347
	2022	777	500	312	496	273	1,357	700	455	726	-	-	-	622
Lao PDR	2021	271	380	397	379	380	382	385	383	381	380	331	316	364
	2022	280	322	352	371	384	387	270	210	210	200	220	210	285
Myanmar	2021	611	499	625	302	656	614	665	-	-	-	-	713	586
	2022	730	742	-	955	-	-	-	-	-	-	-	-	809

Remark: N/A refers to data that is not available.

Table 60 CIF Price of soybean in selected ASEAN countries

Unit: US\$/Tons

Country	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	2021	495	516	575	603	608	640	637	629	637	640	627	581	599
	2022	568	586	662	695	711	754	755	758	738	-	-	-	692
Lao PDR	2021	480	480	680	546	586	590	560	580	562	560	550	543	560
	2022	490	496	545	588	590	598	590	510	540	530	510	510	541
Myanmar	2021	637	663	562	730	-	-	-	941	770	-	-	-	717
	2022	847	-	850	858	1001	1096	-	1111	-	1095	-	-	980
Singapore	2021	705	724	796	771	789	830	853	865	902	881	888	882	824
	2022	890	881	899	905	969	941	939	969	924	931	925	925	925
Thailand	2021	490	508	523	512	568	590	588	615	622	621	627	583	571
	2022	600	604	568	576	632	648	687	743	712	-	-	-	641
Vietnam	2021	512	544	560	570	569	603	616	614	621	639	617	592	588
	2022	608	626	687	723	732	738	755	751	702	682	-	-	700

[69]

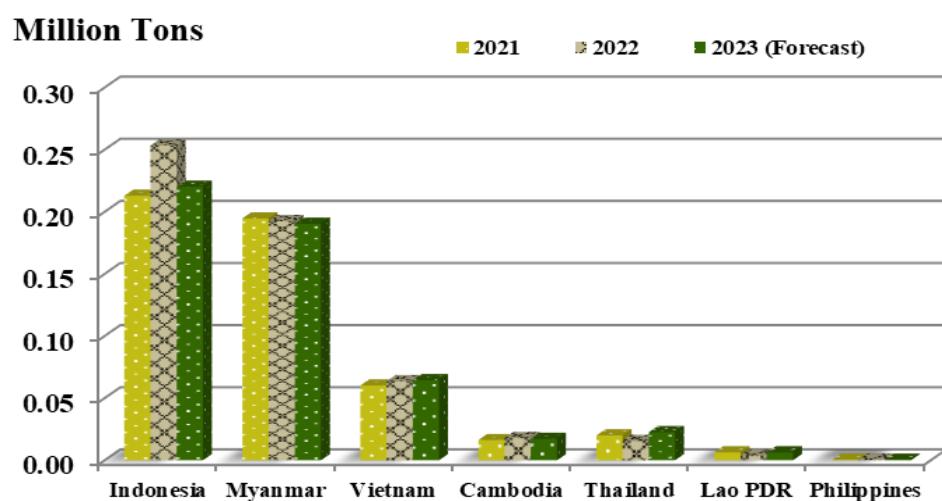


Figure 47 Soybean production of selected countries in ASEAN, 2021 – 2023

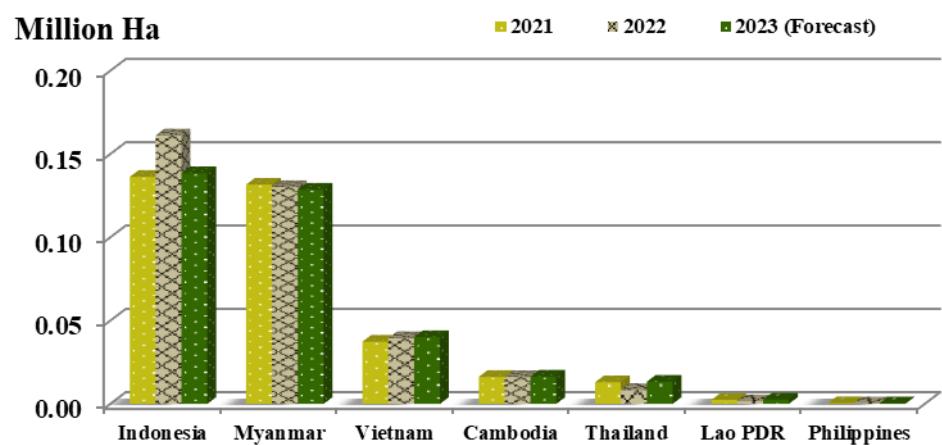


Figure 48 Soybean planted area of selected countries in ASEAN, 2021 – 2023

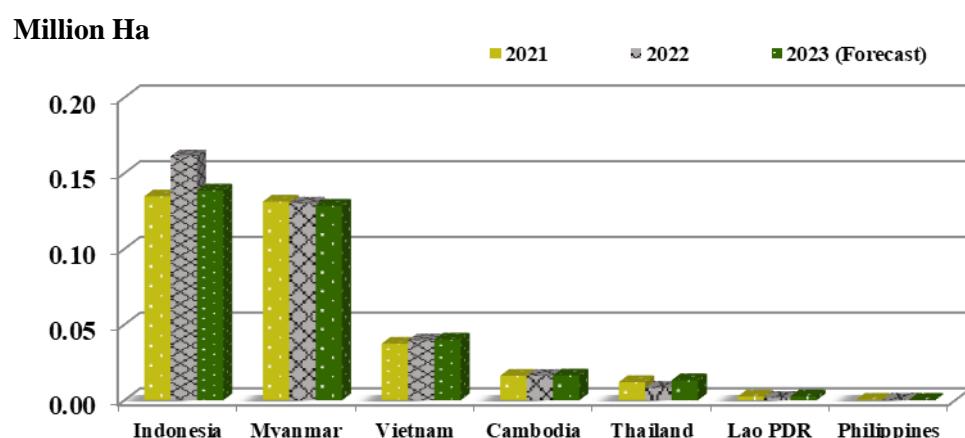


Figure 49 Soybean harvested area of selected countries in ASEAN, 2021 – 2023

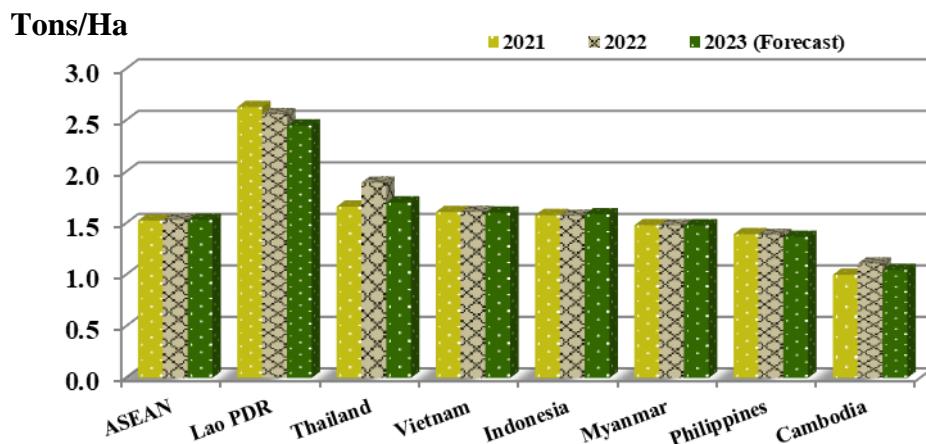


Figure 50 Soybean yield of countries in ASEAN, 2021 – 2023

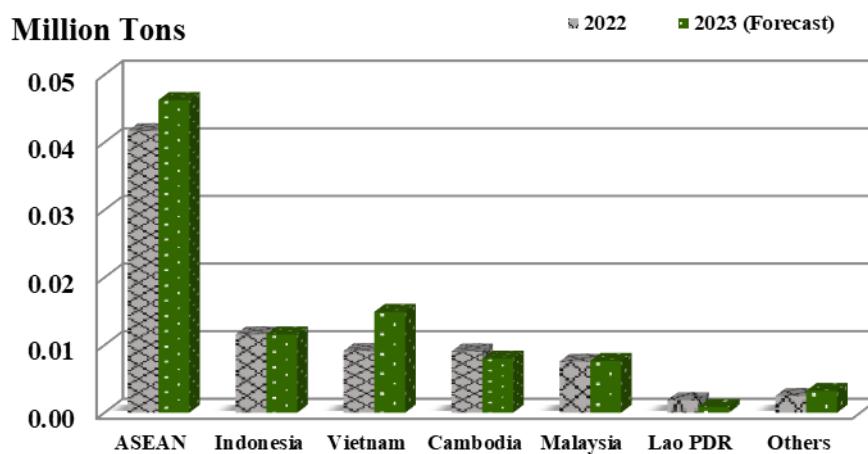
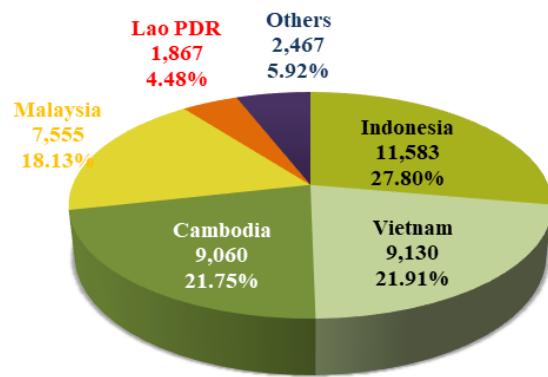
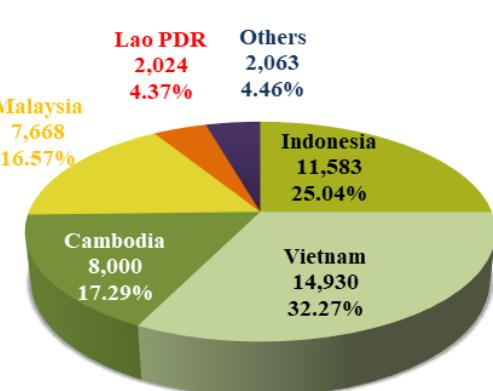


Figure 51 Amount of soybean export (million tons) of selected countries in ASEAN in 2022 – 2023



Total 0.042 million tons

Figure 52 Share of soybean export (tons) among ASEAN countries, 2022



Total 0.046 million tons

Figure 53 Share of soybean export (tons) among ASEAN countries, 2023

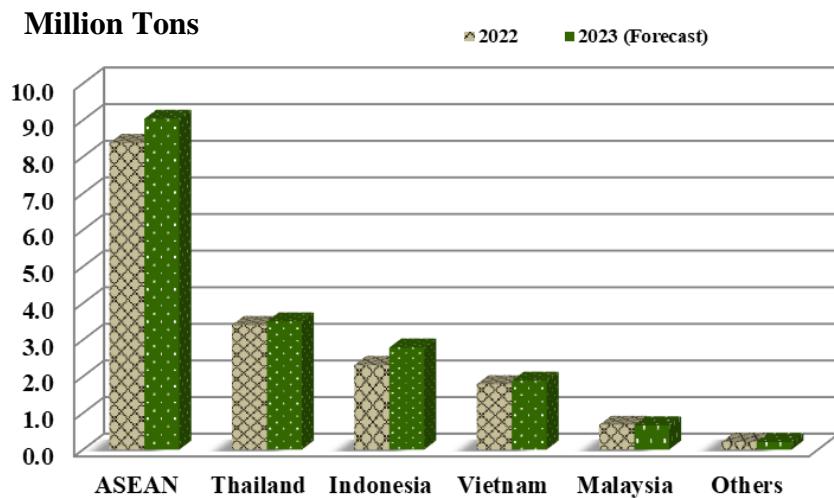
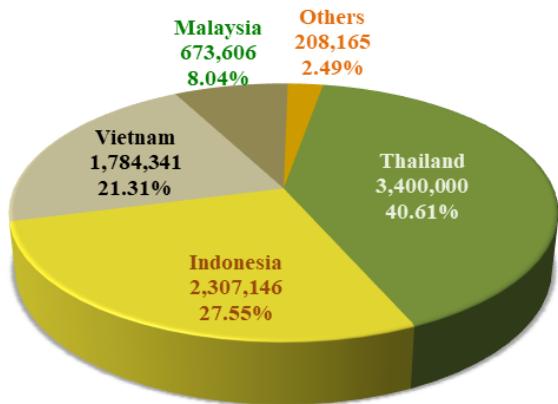
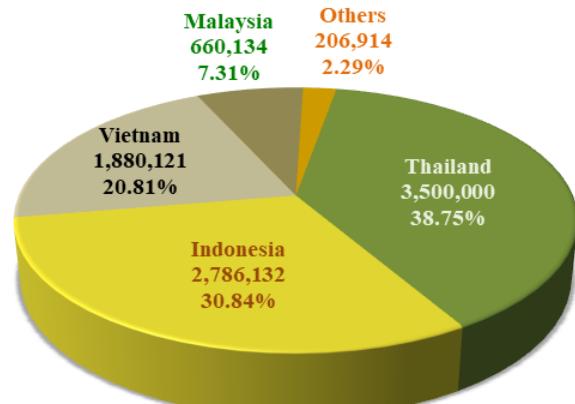


Figure 54 Amount of soybean import (million tons) by selected countries in ASEAN in 2022 – 2023



Total 8.37 million tons

Figure 55 Share of soybean import (tons) among ASEAN countries, 2022



Total 9.03 million tons

Figure 56 Share of soybean import (tons) among ASEAN countries, 2023

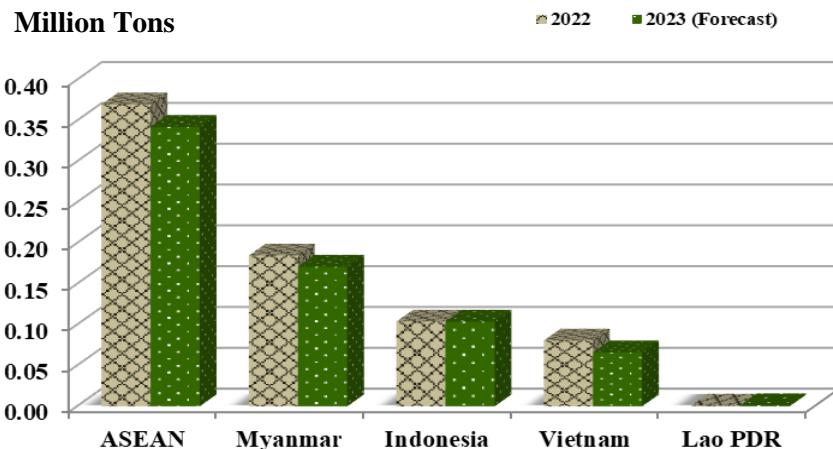


Figure 57 Amount of ending stock of soybean in ASEAN countries in 2022 – 2023

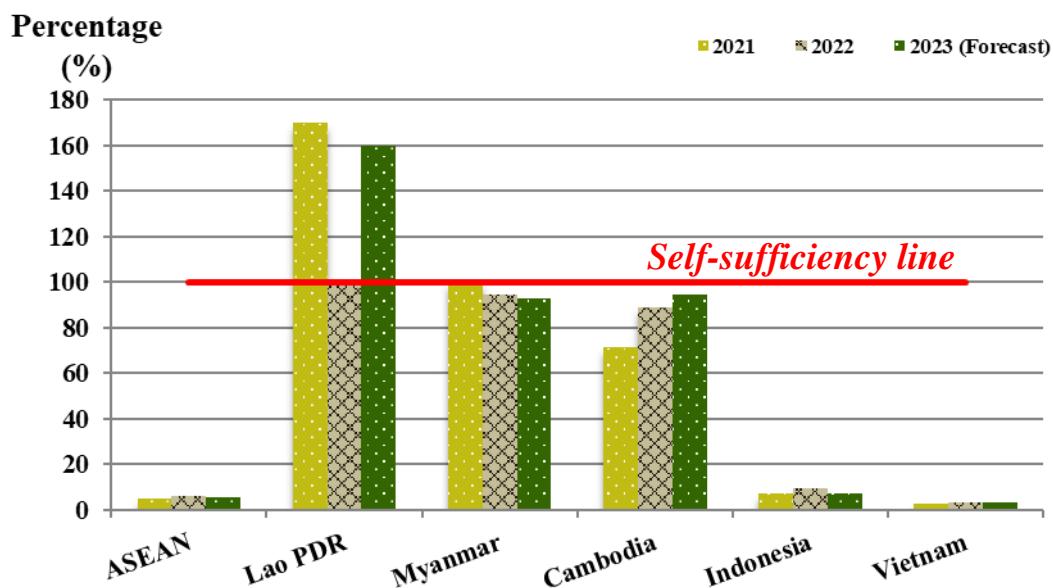


Figure 58 Ratio of soybean production to domestic utilization in ASEAN countries, 2021 – 2023

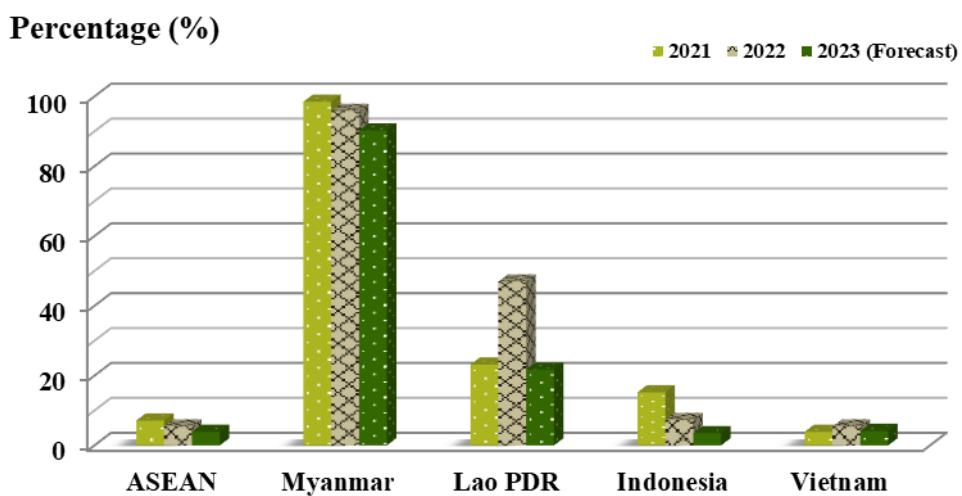


Figure 59 Ratio of soybean beginning stock to domestic utilization in ASEAN countries, 2021 – 2023

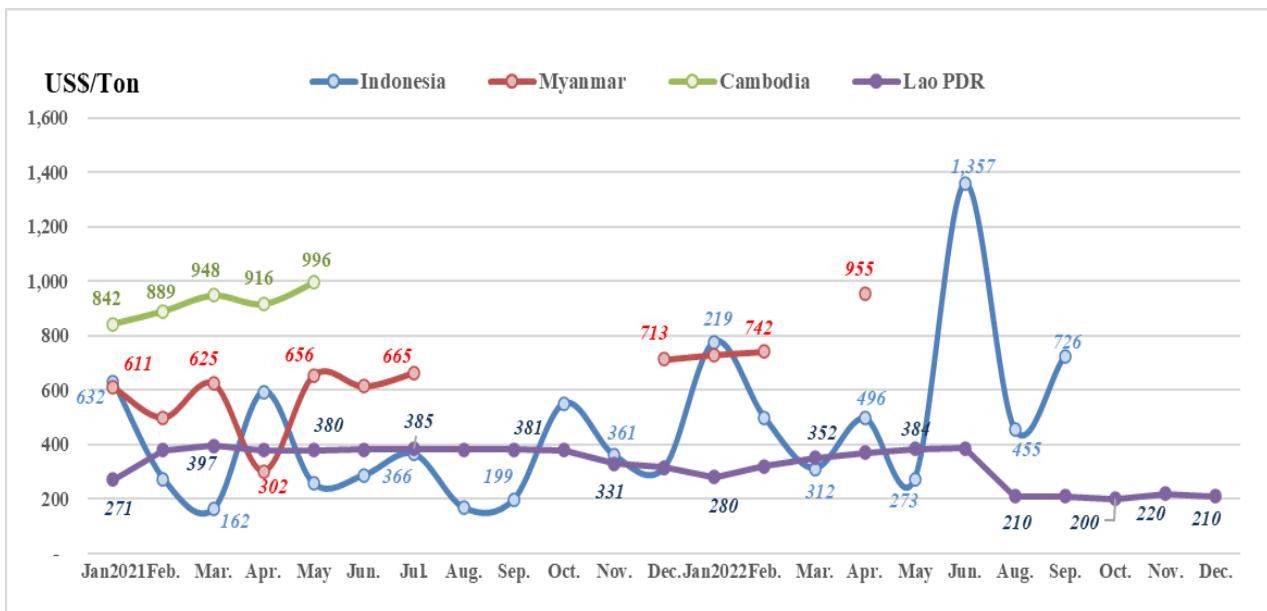


Figure 60 FOB price (US\$/Ton) of soybean of selected countries in ASEAN in 2021 – 2022

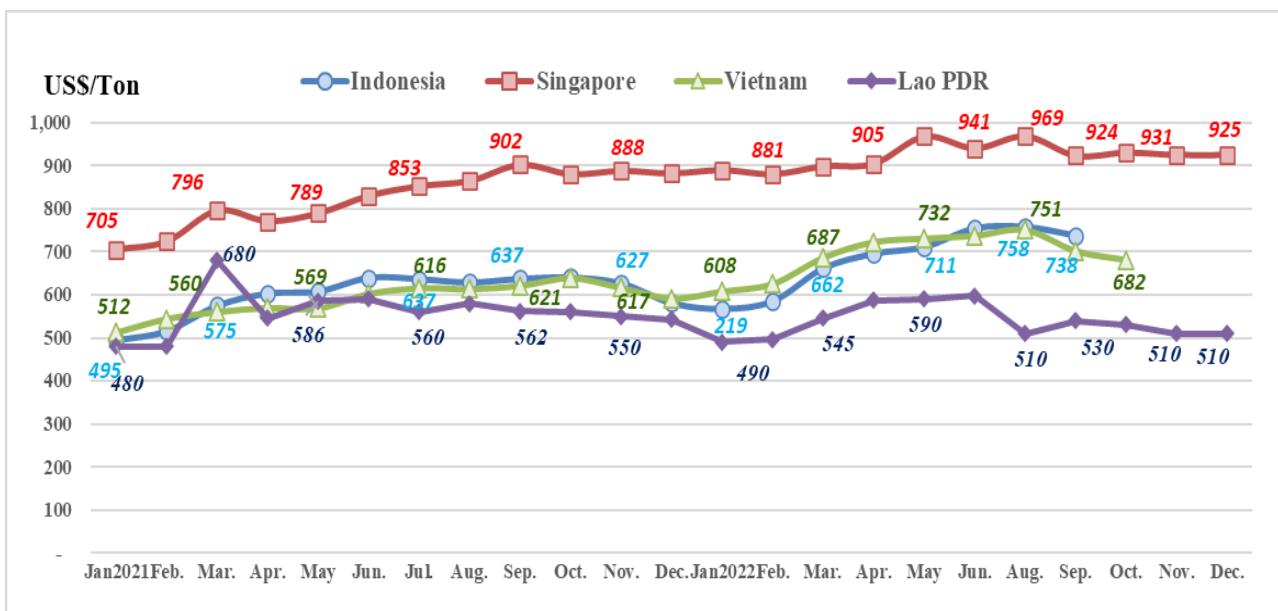


Figure 61 CIF price (US\$/Ton) of soybean of selected countries in ASEAN in 2021 – 2022

Cassava Outlook for 2023

Highlights

In 2023, the supply of cassava in ASEAN is forecast to be 115.43 million tons, an increase of 4.71 million tons or about 4.25 percent from 110.72 million tons in 2022 (Table 61). The rise in supply is due to the increase in beginning stock, production and import.

The beginning stock of cassava in 2023 is projected to be 14.10 million tons, which increases from 13.29 million tons in 2022 due to the increase in stock in Cambodia and Lao PDR (Table 61, 68-69). While the ending stock in 2023 is expected to reach 16.70 million tons, which increases from 14.10 million tons in 2022 (Table 61).

The export of cassava is expected to increase by 1.11 million tons or around 2.26 percent from 49.13 million tons in 2022 to 50.24 million tons in 2023. While, the import of cassava is forecast to be 17.93 million tons in 2023, which increases about 21.48 percent from 14.76 million tons in 2022 (Table 61).

The ratio of production to domestic utilization (self-sufficiency ratio) in 2023 is forecast to be 171.98 percent, which decreases about 2.09 percent from 174.07 percent in 2022. The ratio of beginning stock to domestic utilization (food security ratio) in 2023 is forecast to be 29.07 percent, which increases about 1.09 percent from 27.98 percent in 2022 (Table 61).

Table 61 Summary of the ASEAN cassava situation, 2022-2023

Items	2022	2023	Change	
			Quantity	%
Supply (Million tons)	110.72	115.43	4.71	4.25
Beginning stock	13.29	14.10	0.81	6.09
Production	82.67	83.40	0.73	0.88
Import	14.76	17.93	3.17	21.48
Demand (Million tons)	110.72	115.43	4.71	4.25
Domestic utilization	47.49	48.49	1.00	2.11
Export	49.13	50.24	1.11	2.26
Ending stock	14.10	16.70	2.60	18.44
Ratio of production to domestic utilization (%)	174.07	171.98	-2.09	-
Ratio of beginning stock to domestic utilization (%)	27.98	29.07	1.09	-

ASEAN Cassava Situation in 2022

► Production

The estimated cassava production (root fresh) in ASEAN in 2022 (crop year 2021/22) was 82.67 million tons, which decreased from 84.98 million tons in 2021 or about 2.72 percent. The decrease has occurred in Indonesia, Myanmar and Thailand (Table 62-65, Figure 62-65).

For the country that reported the highest volume in production, **Thailand**, the production was reported to decrease about 3.10 percent or 1.09 million tons (from 35.09 million tons in 2021 to 34.01 million tons in 2022). The decrease in production came from flood caused by Typhoon Tyran Mu during September-October 2021.

For **Myanmar**, the decrease in production was approximately 16.32 percent or 0.06 million tons (from 0.40 million tons in 2021 to 0.33 million tons in 2022). The decrease in production was attributed to decrease in harvested area.

For **Indonesia**, the production was reported to decrease by 15.50 percent or 2.75 million tons (from 17.72 million tons in 2021 to 14.97 million tons in 2022). The decrease in production came from the decrease in planted area, harvested area, and yield due to farmers' response to price decrease together with price of competing crop increase.

For **Brunei**, the production was reported to increase about 8.69 percent or 29.23 tons from 336.21 tons in 2021 to 365.44 tons in 2021. The increase in production was because farmers took better care of the crop.

For **Cambodia**, the production was reported to increase about 1.00 percent or 0.15 million tons (from 14.78 million tons in 2021 to 14.93 million tons in 2022). The increase in production came from the increase in planted area and harvested area.

For **Lao PDR**, the production was reported to increase about 32.65 percent or 1.21 million tons (from 3.71 million tons in

2021 to 4.92 million tons in 2022). The increase in production came from the increase in planted area and harvested area caused by farmers' response to price increases together with government policy.

For **Malaysia**, the production was reported to increase about 8.53 percent or 3,360 tons (from 0.039 million tons in 2021 to 0.043 million tons in 2022). The increase in cassava production was attributed to increase in planted area, harvested area, and yield.

For **the Philippines**, the production was reported to increase by 0.54 percent or 0.014 million tons (from 2.54 million tons in 2021 to 2.56 million tons in 2022). The increase in cassava production was attributed to increase in yield because farmers used more improved variety together with favorable weather.

For **Vietnam**, the increase in production was approximately 2.00 percent or 0.21 million tons (from 10.70 million tons in 2021 to 10.91 million tons in 2022). The increase in production was due to the increase in planted area and harvested area due to increasing demand for cassava from China.

► Utilization and Stock

Cassava root in ASEAN, in general, it can be used for human food, animal feed, and ethanol production. In 2022, the domestic utilization of cassava for all purposes in ASEAN was estimated at 47.49 million tons, which decreased by 2.33 million tons or about 4.69 percent from 49.83 million tons in 2021 (Table 67-68).

The beginning stock in 2022 was estimated at 13.29 million tons, which increased sharply around 2.63 million tons compared to 10.66 million tons in 2021. The ending stock of cassava in 2022 was estimated to be 14.10 million tons, which increased around 0.81 million tons

compared to 13.29 million tons in 2021. This came from the increase in ending stock of Cambodia and Lao PDR.

The ratio of production to domestic utilization (**self-sufficient ratio**) in 2022 was estimated to be 174.07 percent, which increased from 170.55 percent in 2021. *This indicated that, aggregately, the cassava production in ASEAN is sufficient for the demand within ASEAN* (Table 70, Figure 73). Thus, all countries in ASEAN region, except Singapore do not have much concern as they are major producers and are able to produce sufficient cassava to meet domestic demand.

In 2022, the ratio of the ASEAN beginning stock to domestic utilization (**food security ratio**) is estimated to be 27.98 percent, which increased from 21.39 percent in 2021 (Table 71, Figure 74).

For the overall production, the information of cassava in ASEAN demonstrates that many countries in the region have self-dependency in terms of cassava production and have food security. Cassava is not a staple food for the ASEAN region; however, it is an important raw material used in animal feed and energy. For the current food crisis, some countries in ASEAN region that have excessive cassava supply can be advantages from cassava export and obtain high revenue from the export.

► **Trade**

The cassava exported from ASEAN in 2022 is expected to be 49.13 million tons, which increased 4.70 million tons from 44.43 million tons in 2021. The cassava imported by ASEAN in 2022 was estimated to be 14.76 million tons, which increased by approximately 2.85 million tons from 11.91 million tons in 2021 (Table 67-68, Figure 66-67, and 69-70).

The quantity and value of cassava export by countries of destination and the quantity and value of cassava import by countries of origin are given in Table 72 and 73.

► **Prices**

The FOB prices of cassava in Indonesia, Lao PDR, Malaysia, Myanmar, Thailand, and Vietnam between 2021 and 2022, and the CIF prices of Malaysia, and Singapore are presented in Table 74-75. The average FOB prices of starch, pellets, and shredded in Thailand in 2022 increased from 2021.

► **Damaged Area**

In 2022, the cassava damaged area in ASEAN was reported to be 189,199 hectares, of which 182,404 hectares were caused by flood. The damage caused by flood occurred mostly in Thailand, which equals to 173,841 hectares or about 91.88 percent (Table 66).

Prospects for Cassava in 2023

► Production

The cassava production in ASEAN in 2023 is forecast to be 83.40 million tons, which increases by 0.73 million tons or about 0.88 percent from 83.67 million tons in 2022. The greatest increase in terms of quantity is expected in Thailand, which is forecast to be 34.75 million tons or an increase by 2.18 percent from 34.01 million tons in 2022 by increasing in planted area, harvested area, and yield. The rising in planted area and yield is due to favorable weather and farmers' respond to price increase (Table 62-65, Figure 62-65).

Furthermore, the cassava production in Cambodia, Vietnam, Myanmar, the Philippines, Malaysia, and Brunei is forecast to increase due to the increase in either planted area or yield.

On the contrary, the cassava production in Indonesia and Lao PDR is predicted to decrease. The decrease in production in Indonesia, which is forecast to be 14.54 million tons or a decrease by 2.88 percent from 14.97 million tons in 2022, is due to the decrease in planted area, harvested area, and yield. The decrease come from farmers' response to price decrease, together with price of competing crop increase. While, the decrease in production in Lao PDR, which is forecast to be 4.75 million tons or a decrease by 3.42 percent from 4.92 million tons in 2022, is due to the decrease in planted area and yield caused by high production cost.

► Utilization and Stock

The domestic utilization of cassava is predicted to increase to 48.49 million tons in 2023 compared to 47.49 million tons in 2022, an increase by 1.00 million tons. The beginning stock in 2023 is forecast to be 14.10 million tons, an increase by 0.81 million tons, compared to 13.29 million tons in 2022. The ending stock in 2023 is

predicted to be 16.70 million tons, an increase of 2.60 million tons from 14.10 million tons in 2022 (Table 68-69).

The ratio of production to domestic utilization (**self-sufficient ratio**) for 2023 is forecast to be 171.98 percent, which decreases from 174.07 percent in 2022. This indicates that the self-sufficiency in cassava in ASEAN is slightly decreasing (Table 70, Figure 73). The ratio of beginning stock to the domestic utilization (**food security ratio**) in 2023 is predicted to be 29.07 percent, compared to 27.98 percent in 2022. This indicates that the cassava supply situation in ASEAN is slightly increasing (Table 71, Figure 74).

► Trade

The cassava export from ASEAN is expected to increase to 50.24 million tons in 2023, an increase by 1.11 million tons compared to 49.13 million tons in 2022. For the import, it is estimated to be 17.93 million tons in 2023, an increase about 3.17 million tons from 14.76 million tons in 2021 (Table 68-69, Figure 66, 68, 69, and 71).

Table 62 Cassava production in ASEAN countries, 2021 – 2023

Unit: 1,000 Tons

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	84,977.79	82,669.35	-2,308.44	-2.72	83,398.66	729.31	0.88
Brunei	0.336	0.365	0.03	8.69	0.38	0.02	5.00
Cambodia	14,784.07	14,931.91	147.84	1.00	15,230.55	298.64	2.00
Indonesia	17,716.23	14,970.38	-2,745.84	-15.50	14,539.27	-431.12	-2.88
Lao PDR	3,710.00	4,921.21	1,211.21	32.65	4,753.00	-168.21	-3.42
Malaysia	39.39	42.75	3.36	8.53	46.39	3.65	8.53
Myanmar	396.18	331.53	-64.65	-16.32	*365.75	34.21	10.32
Philippines	2,539.79	2,553.41	13.62	0.54	*2,584.37	30.96	1.21
Singapore			N/A				
Thailand	35,094.49	34,006.53	-1,087.95	-3.10	34,749.46	742.93	2.18
Vietnam	10,697.32	10,911.27	213.95	2.00	11,129.49	218.23	2.00

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 63 Cassava planted area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	4,017.01	4,079.26	62.24	1.55	4,097.77	18.51	0.45
Brunei			N/A				
Cambodia	739.43	776.40	36.97	5.00	784.17	7.76	1.00
Indonesia	635.69	594.87	-40.82	-6.42	584.58	-10.30	-1.73
Lao PDR	113.45	150.91	37.46	33.02	147.10	-3.81	-2.53
Malaysia	2.77	2.86	0.08	3.00	2.94	0.09	3.00
Myanmar	33.30	33.49	0.19	0.58	*33.58	0.09	0.26
Philippines	217.39	215.63	-1.76	-0.81	*215.00	-0.63	-0.29
Singapore			N/A				
Thailand	1,747.04	1,761.32	14.28	0.82	1,775.76	14.44	0.82
Vietnam	527.94	543.78	15.84	3.00	554.65	10.88	2.00

Remark: *The value is estimated by AFSIS Secretariat. ** Philippines reported only harvested area.

N/A refers to data that is not available.

Table 64 Cassava harvested area in ASEAN countries, 2021 – 2023

Unit: 1,000 Hectares

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022	
			Quantities	(%)		Quantities	(%)
ASEAN	3,926.09	3,896.94	-29.15	-0.74	3,933.02	36.08	0.93
Brunei			N/A				
Cambodia	730.87	774.72	43.85	6.00	782.47	7.75	1.00
Indonesia	635.69	594.87	-40.82	-6.42	584.58	-10.30	-1.73
Lao PDR	113.45	150.91	37.46	33.02	147.10	-3.81	-2.53
Malaysia	2.44	2.52	0.07	3.00	2.59	0.08	3.00
Myanmar	33.30	27.04	-6.26	-18.81	*28.54	1.50	5.54
Philippines	217.39	215.63	-1.76	-0.81	*215.00	-0.63	-0.29
Singapore			N/A				
Thailand	1,665.01	1,587.48	-77.53	-4.66	1,618.10	30.62	1.93
Vietnam	527.94	543.78	15.84	3.00	554.65	10.88	2.00

Remark: * The value is estimated by AFSIS Secretariat. Brunei reported only production.

Table 65 Cassava yield in ASEAN countries, 2021 – 2023

Country	2021 (2020/21)	2022 (2021/22)	Change 2022 over 2021		2023 (2022/23)	Change 2023 over 2022			
			Quantities	(%)		Quantities	(%)		
ASEAN	21.64	21.21	-0.43	-1.99	21.20	-0.01	-0.05		
Brunei			N/A						
Cambodia	20.23	19.27	-0.96	-4.75	19.46	0.19	0.99		
Indonesia	27.87	25.17	-2.70	-9.69	24.87	-0.30	-1.19		
Lao PDR	32.70	32.61	-0.09	-0.28	32.31	-0.30	-0.92		
Malaysia	16.13	16.99	0.86	5.33	17.91	0.92	5.41		
Myanmar	11.90	12.26	0.36	3.03	*12.82	0.56	4.57		
Philippines	11.68	11.84	0.16	1.37	*12.02	0.18	1.52		
Singapore			N/A						
Thailand	21.08	21.42	0.34	1.61	21.48	0.06	0.28		
Vietnam	20.26	20.07	-0.19	-0.94	20.07	0.00	0.00		

Remark: * The value is estimated by AFSIS Secretariat. N/A refers to data that is not available.

Table 66 Cassava damaged area in ASEAN by cause of damage, 2022

Country	Cause of Damage (Hectares)							Unit: Hectares
	Flood	Drought	Pests	Diseases	Others	Unspecify	Total	
ASEAN	182,404	-	-	-	-	-	6,795	189,199
Brunei	N/A							
Cambodia	8,563	-	-	-	-	-	-	8,563
Indonesia	N/A							
Lao PDR	N/A							
Malaysia	-	-	-	-	-	-	340	340
Myanmar	-	-	-	-	-	-	6,455	6,455
Philippines	N/A							
Singapore	N/A							
Thailand	173,841	-	-	-	-	-	-	173,841
Vietnam	N/A							

Remark: N/A refers to data that is not available.

Table 67 Cassava balance sheet of ASEAN countries, 2021 (Cassava roots fresh)

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	10,659,021	84,977,790	11,912,195	107,549,006	49,826,463	44,432,296	13,290,248	107,549,006
Brunei	-	336	1.01	337	337	-	-	337
Cambodia	3,998,587	14,784,068	-	18,782,655	6,286,491	6,273,658	6,222,506	18,782,655
Indonesia		17,716,226	48,511	17,764,737	17,473,169	291,568	-	17,764,737
Lao PDR	3,824,859	3,710,000	-	7,534,859	2,189,493	1,337,611	4,007,755	7,534,859
Malaysia	-	39,387	432	39,819	38,939	880	-	39,819
Myanmar	*12,525	396,179	*235	408,939	*398,894	*345	9,700	408,939
Philippines	-	2,539,789	80,911	2,620,699	2,618,690	2,009	-	2,620,699
Singapore	-	-	1,874	1,874	1,870.03	3.92	-	1,874
Thailand	*2,531,185	35,094,485	*10,710,000	48,335,670	12,048,000	*33,658,000	*2,629,670	48,335,670
Vietnam	291,865	10,697,320	1,070,232	12,059,417	8,770,579	2,868,221	420,617	12,059,417

Remark: * The value is estimated by AFSIS Secretariat.**Table 68 Cassava balance sheet of ASEAN countries, 2022 (Cassava roots fresh)**

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	13,290,248	82,669,353	14,763,310	110,722,910	47,491,947	49,131,997	14,098,967	110,722,911
Brunei	-	365	1.69	367	367	-	-	367
Cambodia	6,222,506	14,931,908	-	21,154,414	6,387,655	6,823,408	7,943,351	21,154,414
Indonesia	-	14,970,382	259,693	15,230,075	15,174,524	55,550	-	15,230,075
Lao PDR	4,007,755	4,921,208	24	8,928,987	2,156,148	2,016,842	4,755,997	8,928,987
Malaysia	-	42,747	1,171	43,918	43,049	869	-	43,918
Myanmar	*9,700	331,533	24	341,257	*324,542	6,715	10,000	341,257
Philippines	-	2,553,411	127,523	2,680,934	*2,679,114	1,820	-	2,680,934
Singapore	-	-	1,617	1,617	1,615	2	-	1,617
Thailand	*2,629,670	34,006,532	*14,300,000	50,936,202	12,656,000	*37,150,000	*1,130,202	50,936,202
Vietnam	420,617	10,911,266	73,257	11,405,140	8,068,933	3,076,789	259,418	11,405,140

Remark: * The value is estimated by AFSIS Secretariat.**Table 69 Cassava balance sheet of ASEAN countries, 2023 (Cassava roots fresh)**

Unit: Tons

Country	Supply				Demand			
	Beginning Stock	Production	Imports	Total	Domestic Utilization	Exports	Ending stock	Total
ASEAN	14,098,967	83,398,662	17,934,284	115,431,913	48,492,950	50,241,520	16,697,443	115,431,913
Brunei	-	384	1.74	385	385	-	-	385
Cambodia	7,943,351	15,230,546	-	23,173,897	6,490,764	6,943,694	9,739,438	23,173,897
Indonesia	-	14,539,267	259,693	14,798,960	14,743,409	55,550	-	14,798,960
Lao PDR	4,755,997	4,753,000	-	9,508,997	2,220,863	2,000,000	5,288,134	9,508,997
Malaysia	-	46,393	1,100	47,493	46,256	1,237	-	47,493
Myanmar	*10,000	*365,748	-	375,747	*354,916	*8,607	*12,224	375,747
Philippines	-	*2,584,372	*100,000	2,684,372	*2,682,572	*1,800	-	2,684,372
Singapore	-	-	1,746	1,746	1,742	3	-	1,746
Thailand	*1,130,202	34,749,461	*17,000,000	52,879,663	13,532,285	*38,000,000	*1,347,378	52,879,663
Vietnam	259,418	11,129,492	571,744	11,960,654	8,419,756	3,230,629	310,269	11,960,654

Remark: * The value is estimated by AFSIS Secretariat.

Table 70 Ratio of cassava production to domestic utilization in ASEAN countries (Self-sufficiency ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)	Production	Domestic Utilization	Ratio (%)
ASEAN	84,977,790	49,826,463	170.55	82,669,353	47,491,947	174.07	83,398,662	48,492,950	171.98
Brunei	336	337	99.70	365	367	99.54	384	385	99.55
Cambodia	14,784,068	6,286,491	235.17	14,931,908	6,387,655	233.76	15,230,546	6,490,764	234.65
Indonesia	17,716,226	17,473,169	101.39	14,970,382	15,174,524	98.65	14,539,267	14,743,409	98.62
Lao PDR	3,710,000	2,189,493	169.45	4,921,208	2,156,148	228.24	4,753,000	2,220,863	214.02
Malaysia	39,387	38,939	101.15	42,747	43,049	99.30	46,393	46,256	100.30
Myanmar	396,179	398,894	99.32	331,533	324,542	102.15	365,748	354,916	103.05
Philippines	2,539,789	2,618,690	96.99	2,553,411	2,679,114	95.31	2,584,372	2,682,572	96.34
Singapore	-	1,870	-	-	1,615	-	-	1,742	0.00
Thailand	35,094,485	12,048,000	291.29	34,006,532	12,656,000	268.70	34,749,461	13,532,285	256.79
Vietnam	10,697,320	8,770,579	121.97	10,911,266	8,068,933	135.23	11,129,492	8,419,756	132.18

Remark: * The value is estimated by AFSIS Secretariat.

Table 71 Ratio of cassava beginning stock to domestic utilization in ASEAN countries (Food security ratio), 2021 – 2023

Unit: Tons

Country	2021			2022			2023		
	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)	Beginning Stock	Domestic Utilization	Ratio (%)
ASEAN	10,659,021	49,826,463	21.39	13,290,248	47,491,947	27.98	14,098,967	48,492,950	29.07
Brunei	-	337	-	-	367	-	-	385	-
Cambodia	3,998,587	6,286,491	63.61	6,222,506	6,387,655	97.41	7,943,351	6,490,764	122.38
Indonesia	-	17,473,169	-	-	15,174,524	-	-	14,743,409	-
Lao PDR	3,824,859	2,189,493	174.69	4,007,755	2,156,148	185.88	4,755,997	2,220,863	214.15
Malaysia	-	38,939	-	-	43,049	-	-	46,256	-
Myanmar	12,525	398,894	3.14	9,700	324,542	2.99	10,000	354,916	2.82
Philippines	-	2,618,690	-	-	2,679,114	-	-	2,682,572	-
Singapore	-	1,870	-	-	1,615	-	-	1,742	-
Thailand	2,531,185	12,048,000	21.01	2,629,670	12,656,000	20.78	1,130,202	13,532,285	8.35
Vietnam	291,865	8,770,579	3.33	420,617	8,068,933	5.21	259,418	8,419,756	3.08

Remark: * The value is estimated by AFSIS Secretariat.

Table 72 Quantity and Value of Cassava Export by Countries of Destination in 2022

Quantity: Tons, Values: US\$

Exporting Country	Country of Destination													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei	N/A													
Cambodia														
Indonesia									140	30,455				
Lao PDR														
Malaysia														
Myanmar									4,025	1,127,000				
Philippines														
Singapore	N/A													
Thailand	367	219,302	1,090	873,097	361,551	183,763,420	32,104	14,746,229	217,437	101,778,176	9,729	5,878,358	128,349	66,242,799
Vietnam									5,001	2,590,450			23,902	12,260,219

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Exporting Country	Country of Destination						Total within ASEAN		Total outside ASEAN		Total		
	Singapore		Thailand		Vietnam								
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	
Brunei	N/A												
Cambodia			1,298,195	-	1,382,647	-	2,680,842	-	113,397	-	2,794,239	-	
Indonesia	21	30,026					161	60,482	405	658,981	566	719,463	
Lao PDR			1,741,887	250,507,068	266,856	45,566,168	2,008,742	296,073,236	8,100	941,070	2,016,842	297,014,307	
Malaysia	866	250,568					866	250,568	2.9	15,865	869	266,433	
Myanmar			2,691	535,000			6,715	1,662,000			6,715	1,662,000	
Philippines							-	-	1,820	2,239,020	1,820	2,239,020	
Singapore	N/A												
Thailand	59,203	28,114,666			39,608	26,323,804	849,436	427,939,851	8,337,677	2,880,870,563	9,187,112	3,308,810,414	
Vietnam							28,903	14,850,669	2,518,597	1,101,383,510	2,547,500	1,116,234,179	

Remark: The data in this table is obtained from national focal points of member states and may not complete. N/A refers to data that is not available.

Table 73 Quantity and Value of Cassava Import by Countries of Origin in 2022

Quantity: Tons Values: US\$

Importing Country	Country of Origin													
	Brunei		Cambodia		Indonesia		Lao PDR		Malaysia		Myanmar		Philippines	
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values
Brunei	N/A													
Cambodia	N/A													
Indonesia														
Lao PDR														
Malaysia					7.8	1,936					124	46,674		
Myanmar														
Philippines														
Singapore					0.04	280			1,608	547,002			0.001	86
Thailand		2,088,333	225,388,464	678	1,175,183	1,473,844	203,618,064	32	180,391	29,150	4,844,786	2.72	9,595	
Vietnam					-	205	-	19,211,714						

[SL]

Importing Country	Country of Origin						Total within ASEAN		Total outside ASEAN		Total		
	Singapore		Thailand		Vietnam								
	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	Quantity	Values	
Brunei	N/A												
Cambodia	N/A												
Indonesia							-	-	0.001	40	0.001	40	
Lao PDR			0.07	77	33	23,500	33	23,577			33	23,577	
Malaysia	0.04	1,300	2.0	467	515	195,431	649	245,810	522	659,567	1,171	905,376	
Myanmar			24	70,000			24	70,000			24	70,000	
Philippines							-	-	127,523	68,392,679	127,523	68,392,679	
Singapore			0.82	3,904	0.24	1,032	1,609	552,305	8	12,356	1,617	564,661	
Thailand	7.31	516,516			140	276,301	3,592,187	436,009,301	13,736	39,037,854	3,605,924	475,047,154	
Vietnam	-	41,610	-	4,144,979			-	23,398,508	-	3,240,036	-	26,638,544	

Remark: The data in this table is obtained from national focal points of member states and may not complete. N/A refers to data that is not available.

Table 74 FOB Price of Cassava in selected ASEAN countries

Unit: US\$/Ton

Country	Product	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Indonesia	Not specified	2021	331	1,196	1,623	674	1,932	1,300	4,619	1,848	230	2,024	789	7,390	1,996
		2022	997	2,395	2,271	2,018	502	0	1,641	1,896	2,744	-	-	-	1,607
Lao PDR	flour	2021	223	330	367	366	343	350	398	402	339	332	320	331	342
		2022	308	315	360	310	395	367	350	-	-	-	350	350	345
	Pellets	2021	42	45	66	77	90	94	101	74	50	46	45	42	64
		2022	49	51	65	78	91	87	-	-	-	-	70	70	70
Malaysia	Shredded	2021	142	143	138	139	145	148	141	139	140	138	135	137	140
		2022	144	147	150	146	144	145	-	-	-	-	-	140	145
	Not specified	2021	288	247	267	275	279	264	349	272	253	253	-	256	250
		2022	254	311	279	276	295	311	356	276	293	447	-	-	310
Myanmar	Not specified	2021		321	50	429	329	150	-	150	-	-	-	261	241
		2022	330	271	295	224	239	206	-	-	-	-	-	-	261
Thailand	Starch	2021	473	476	483	483	483	483	483	479	478	478	483	488	480
		2022	488	488	490	497	516	535	514	498	485	483	474	-	497
	Pellets	2021	261	318	305	333	314	321	308	336	268	319	287	366	311
		2022	346	348	249	-	277	274	291	312	649	-	-	-	343
Vietnam	Shredded	2021	249	265	265	262	260	260	260	252	250	250	253	253	257
		2022	245	247	262	277	288	291	283	275	271	264	252	-	269
	Not specified	2021	370	368	378	376	405	434	417	444	441	446	458	433	414
		2022	423	411	444	447	439	440	455	469	454	431	-	-	441

Table 75 CIF Price of Cassava in selected ASEAN countries

Unit: US\$/Ton

Country	Product	Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average
Malaysia	Not specified	2021	326	542	571	608	1,065	377	1,243	1,252	330	489	417	1,320	712
		2022	341	444	2,844	536	471	576	392	397	1,456	1,194	-	-	865
Singapore	Not specified	2021	299	300	334	377	306	313	314	317	315	316	349	362	325
		2022	327	351	342	340	336	354	359	354	358	397	349	349	351

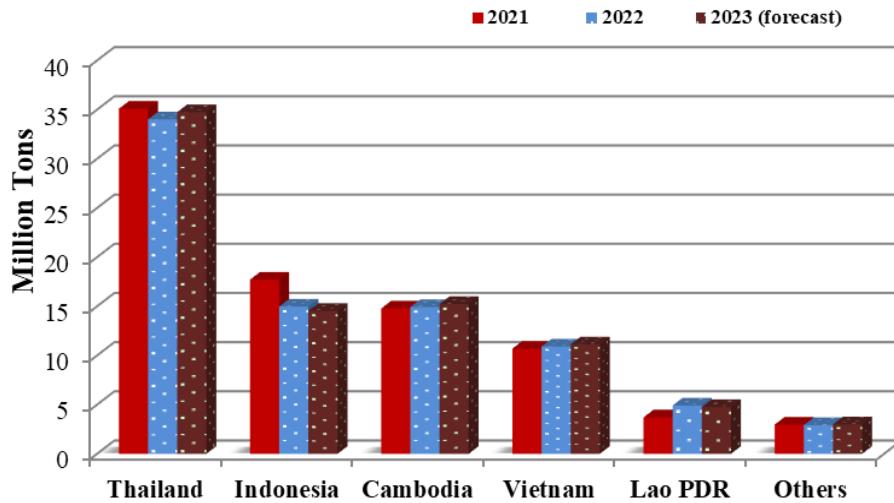


Figure 62 Cassava production of selected countries in ASEAN, 2021 – 2023

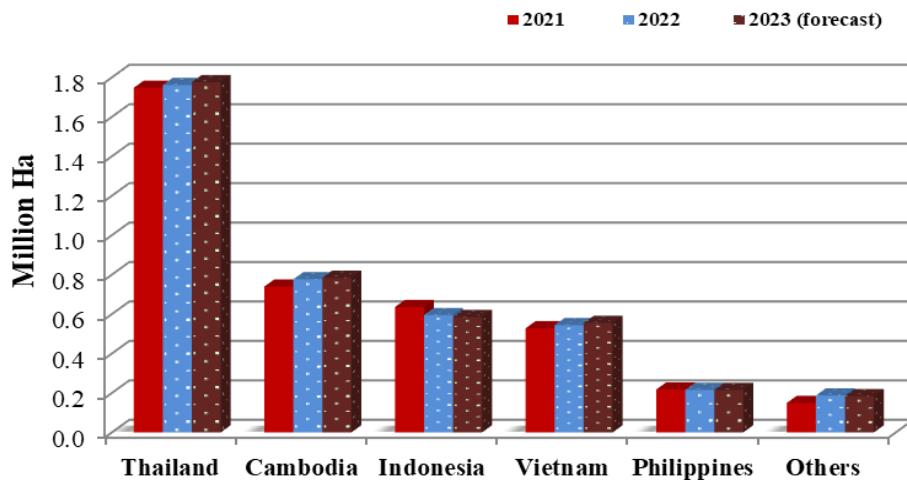


Figure 63 Cassava planted area of selected countries in ASEAN, 2021 – 2023

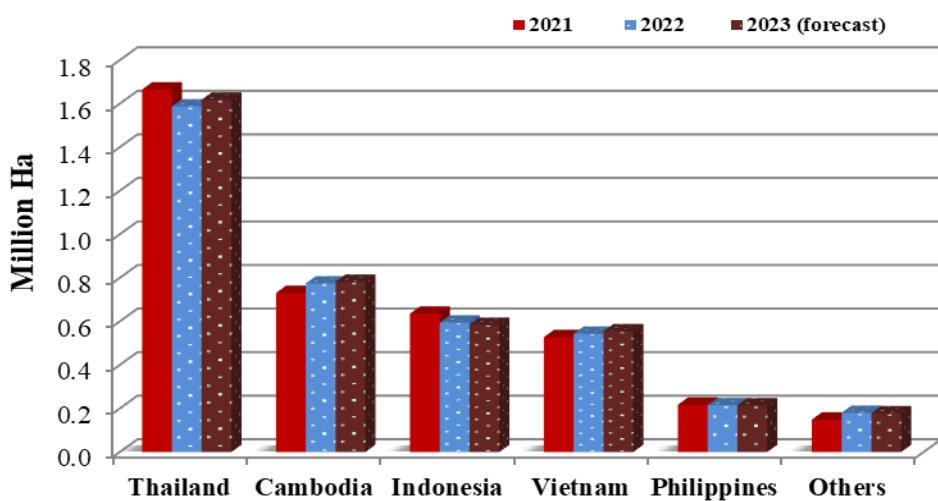


Figure 64 Cassava harvested area of selected countries in ASEAN, 2021 – 2023

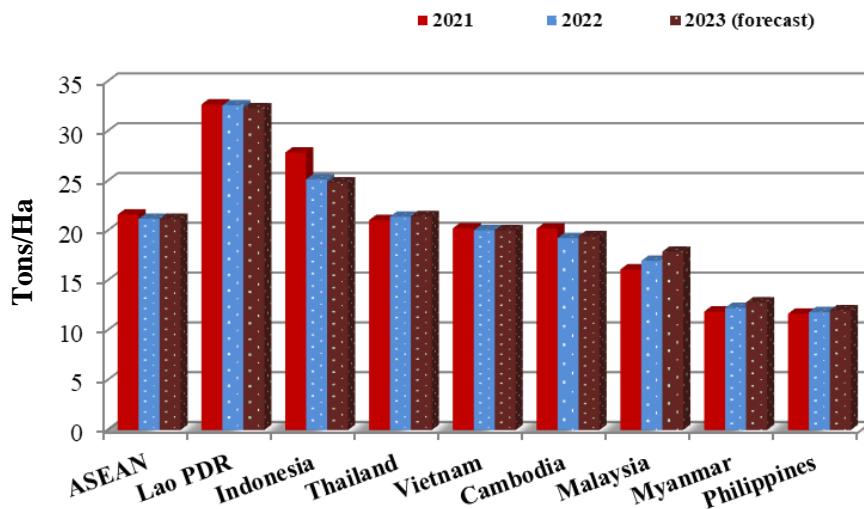


Figure 65 Cassava yield of countries in ASEAN, 2021 – 2023

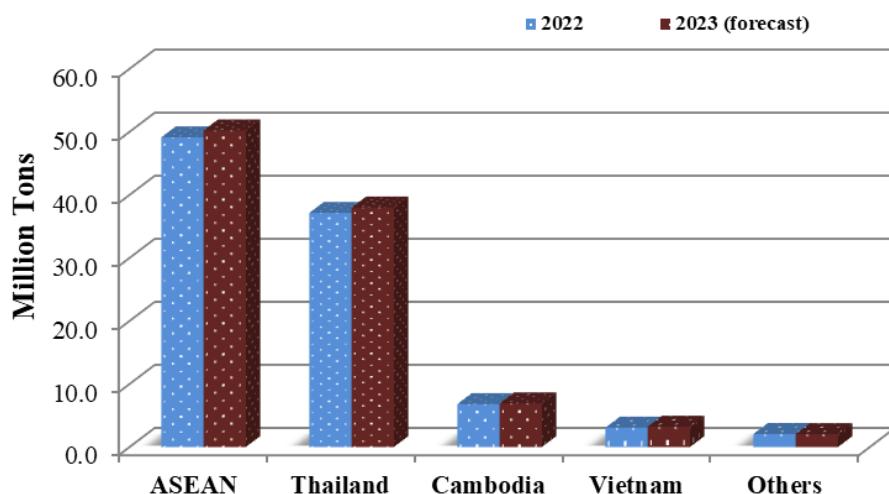


Figure 66 Amount of cassava export (million tons) of selected countries in ASEAN in 2022 – 2023

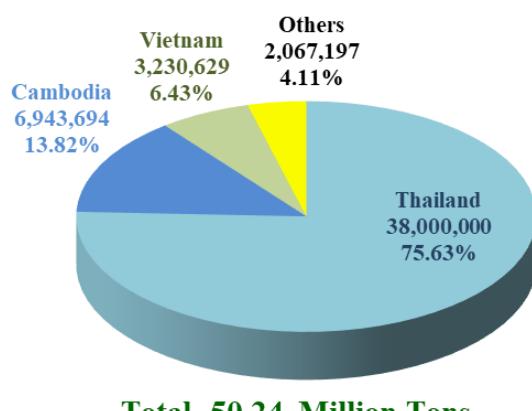
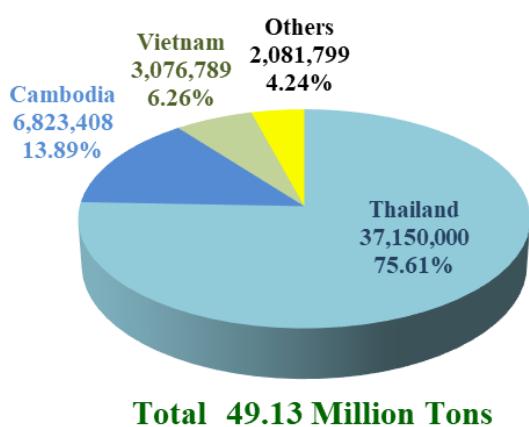


Figure 67 Share of cassava export (tons) among ASEAN countries, 2022

Figure 68 Share of cassava export (tons) among ASEAN countries, 2023

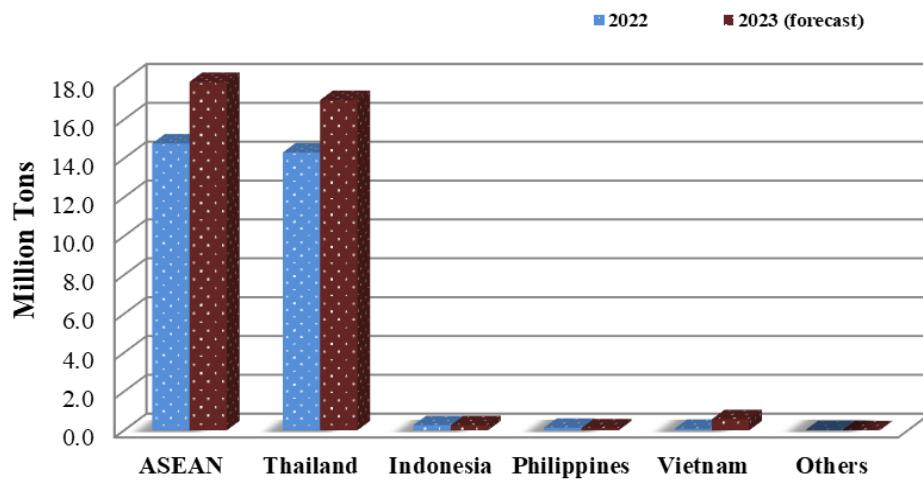
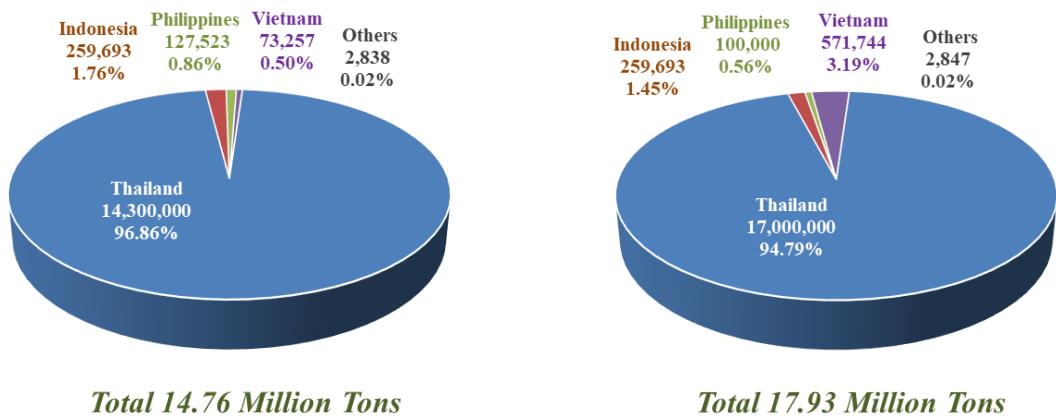


Figure 69 Amount of cassava import (million tons) by selected countries in ASEAN in 2022 – 2023



Total 14.76 Million Tons

Total 17.93 Million Tons

Figure 70 Share of cassava import (tons) among ASEAN countries, 2022

Figure 71 Share of cassava import (tons) among ASEAN countries, 2023

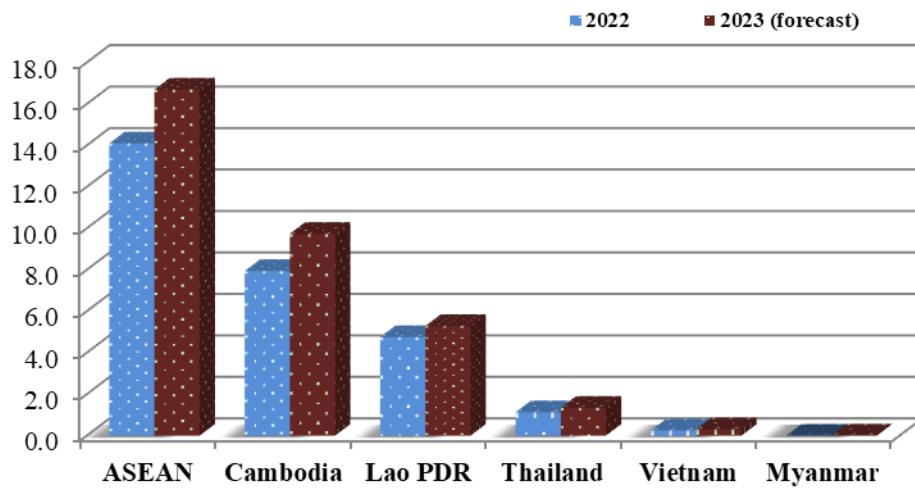


Figure 72 Amount of ending stock of cassava in ASEAN countries in 2022 – 2023

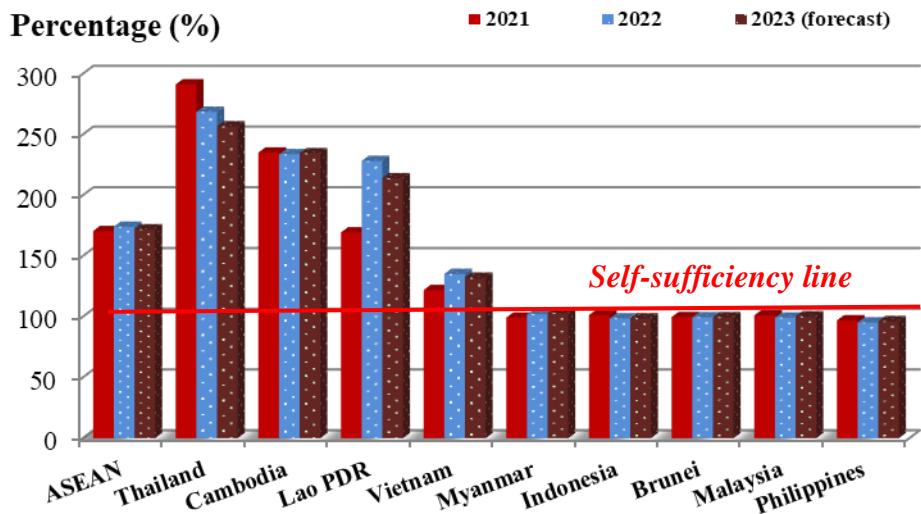


Figure 73 Ratio of cassava production to domestic utilization in ASEAN countries, 2021 – 2023

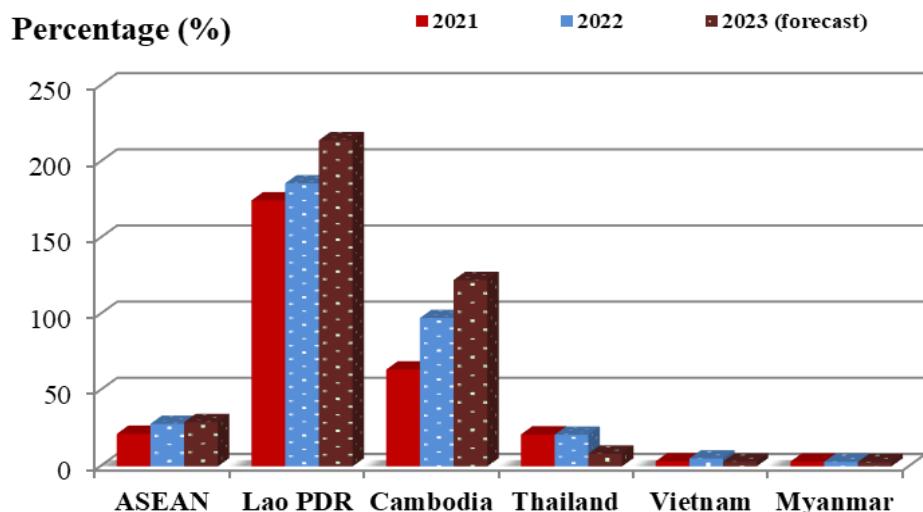


Figure 74 Ratio of cassava beginning stock to domestic utilization in ASEAN countries, 2021 – 2023

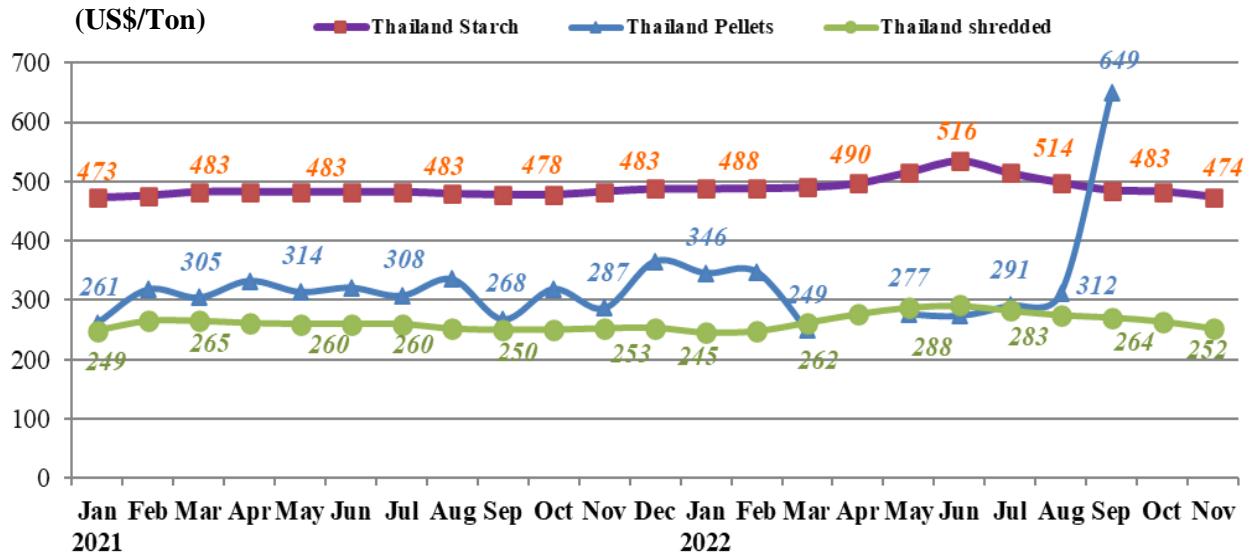


Figure 75 FOB price (US\$/Ton) of cassava of Thailand in 2021 – 2022

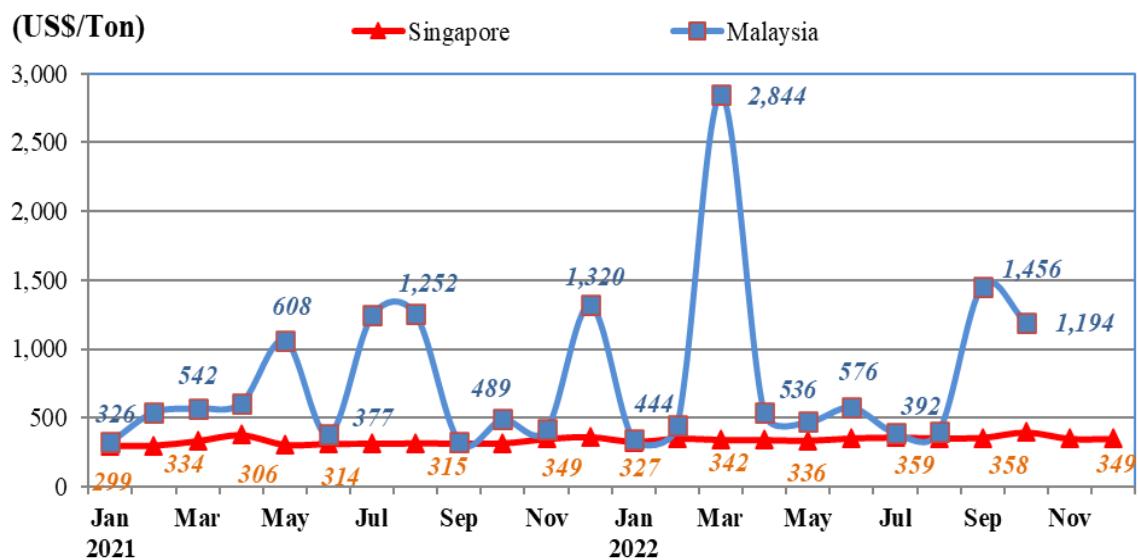


Figure 76 CIF price (US\$/Ton) of cassava selected countries in ASEAN in 2021-2022

Explanatory Notes **Production of Paddy for 2022**

► **Brunei:**

- Wet season refers to the crop harvested during February to July 2022.
- Dry season refers to the crop harvested during July to November 2022.

► **Cambodia:**

- Wet season refers to the crop harvested during August to December 2022.
- Dry season refers to the crop harvested during February to April 2022.

► **Indonesia:**

- Wet season refers to the crop harvested during January 2022 to April 2022.
- Dry season refers to the crop harvested during July to December 2022.

► **Lao PDR:**

- Wet season refers to the crop harvested during September to December 2022.
- Dry season refers to the crop harvested during February to May 2022.

► **Malaysia:**

- Wet season refers to the crop harvested during August 2021 to February 2022.
- Dry season refers to the crop harvested during April to July 2022.

► **Myanmar:**

- Wet season refers to the crop harvested during August 2021 to February 2022.
- Dry season refers to the crop harvested during February to August 2022.

► **Philippines:**

- Wet season refers to the crop harvested during July to December 2021.
- Dry season refers to the crop harvested during January to June 2022.

► **Thailand:**

- Wet season refers to the crop harvested during August 2021 to April 2022.
- Dry season refers to the crop harvested during February to October 2022.

► **Vietnam:**

❖ **Spring-season**

- North refers to the crop harvested during May to July 2022.
- South refers to the crop harvested during March to June 2022.

❖ **Autumn-season**

- North refers to the crop harvested during August to October 2022.
- South refers to the crop harvested during July to September 2022.

❖ **Winter-season**

- North refers to the crop harvested during October to November 2022.
- South refers to the crop harvested during October to December 2022.

Production of Maize for 2022

► Brunei:

- Wet season refers to the crop (Sweet corn) harvested during January to June 2022.
- Dry season refers to the crop (Sweet corn) harvested during July to December 2022.

► Cambodia:

- Wet season refers to the crop harvested during July to December 2022.
- Dry season refers to the crop harvested during February to March 2022.

► Indonesia:

- 1st crop harvested during January to April 2022.
- 2nd crop harvested during May to August 2022.
- 3rd crop harvested during September to December 2022.

► Lao PDR:

- Wet season refers to the crop harvested during September to November 2022.
- Dry season refers to the crop harvested during January 2022 to May 2022.

► Myanmar:

- Wet season refers to the crop harvested during August to December 2021.
- Dry season refers to the crop harvested during January to May 2022.

► Philippines:

- Wet season refers to the crop harvested during July to December 2021.
- Dry season refers to the crop harvested during January to June 2022.

► Thailand:

- Wet season refers to the crop harvested during June 2022 to February 2023.
- Dry season refers to the crop harvested during February to May 2022.

► Vietnam:

- 1st crop harvested during March to May 2022.
- 2nd crop harvested during October to November 2022.

Production of Sugarcane for 2022

► **Brunei:**

- The crop harvested during January to December 2022.

► **Cambodia:**

- The crop harvested during December 2021 to December 2022.

► **Indonesia:**

- The crop harvested during January to December 2022.

► **Lao PDR:**

- The crop harvested during February to May 2022.

► **Myanmar:**

- The crop harvested during October 2021 to June 2022.

► **Philippines:**

- The crop harvested during October 2021 to June 2022.

► **Thailand:**

- The crop harvested during December 2021 to April 2022.

► **Vietnam:**

- The crop harvested during November 2021 to May 2022.



Production of Soybean for 2022

► **Cambodia:**

- The crop harvested during September to October 2022.

► **Indonesia:**

- 1st crop harvested during January to April 2022.
- 2nd crop harvested during May to August 2022.
- 3rd crop harvested during September to December 2022.

► **Lao PDR:**

- Wet season refers to the crop harvested during September to November 2022.
- Dry season refers to the crop harvested during January 2022 to April 2022.

► **Myanmar:**

- Wet season refers to the crop harvested during August 2021 to January 2022.
- Dry season refers to the crop harvested during December 2021 to May 2022.

► **Philippines:**

- Wet season refers to the crop harvested during June to December 2021.
- Dry season refers to the crop harvested during January to June 2022.

► **Thailand:**

- Wet season refers to the crop harvested during August to December 2021.
- Dry season refers to the crop harvested during January to May 2022.

► **Vietnam:**

- Wet season refers to the crop harvested during February to May 2022.
- Dry season refers to the crop harvested during August to November 2022.

Production of Cassava for 2022

► Brunei:

- The crop harvested during January to December 2022.

► Cambodia:

- The crop harvested during November 2021 to January 2022.

► Indonesia:

- 1st crop harvested during January to April 2022.
- 2nd crop harvested during May to August 2022.
- 3rd crop harvested during September to December 2022.

► Lao PDR:

- The crop harvested during January to June 2022.

► Malaysia:

- The crop harvested during December 2021 to December 2022.

► Myanmar:

- The crop harvested during September 2021 to June 2022.

► Philippines:

- 1st crop harvested during July to December 2021.
- 2nd crop harvested during January to June 2022.

► Thailand:

- The crop harvested during October 2021 to September 2022.

► Vietnam:

- Wet season refers to the crop harvested during September to October 2022.
- Dry season refers to the crop harvested during January to March 2023.

Domestic Utilization, Stock, Import and Export: refer to calendar year

N/A: The data is not available due to no collecting or reporting systems in the country yet.

nil: Small amount



Milling Rate of Rice (2022)

Unit: Tons

Country	Paddy	Rice
ASEAN	1	0.64
Brunei	1	0.65
Cambodia	1	0.64
Indonesia	1	0.64
Lao PDR	1	0.60
Malaysia	1	0.64
Myanmar	1	0.63
Philippines	1	0.66
Thailand	1	0.65
Vietnam	1	0.65

Extraction rate of Sugar (2022)

Unit: Tons

Country	Sugarcane	Sugar
ASEAN	1,000	95.44
Cambodia	1,000	100
Indonesia	1,000	68.51
Lao PDR	1,000	200
Myanmar	1,000	79.94
Philippines	1,000	94.96
Thailand	1,000	110.28
Vietnam	1,000	100



ANNEX 1

Rice crop calendar (harvested months) for crop year 2021/22 (2022) in ACO No.29 report

Country		2021						2022						2023						
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Brunei	Wet season																			
	Dry season																			
Cambodia	Wet season																			
	Dry season																			
Indonesia	Wet season																			
	Dry season																			
Lao PDR	Wet season																			
	Dry season																			
Malaysia	Wet season																			
	Dry season																			
Myanmar	Wet season																			
	Dry season																			
Philippines	Wet season																			
	Dry season																			
Thailand	Wet season																			
	Dry season																			
Vietnam	Spring																			
	Autumn																			
	Winter																			

ANNEX 2

Maize crop calendar (harvested months) for crop year 2021/22 (2022) in ACO No.29 report

Country	Crop	2021						2022						2023						
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Brunei	Wet season																			
	Dry season																			
Cambodia	Wet season																			
	Dry season																			
Indonesia	1st																			
	2nd																			
	3rd																			
Lao PDR	Wet season																			
	Dry season																			
Myanmar	Wet season																			
	Dry season																			
Philippines	Wet season																			
	Dry season																			
Thailand	Wet season																			
	Dry season																			
Vietnam	1st																			
	2nd																			

ANNEX 3

Sugarcane crop calendar (harvested months) for crop year 2021/22 (2022) in ACO No.29 report

Country	Crop	2021				2022											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Brunei																	
Cambodia																	
Lao PDR																	
Indonesia																	
Myanmar																	
Philippines																	
Thailand																	
Vietnam																	

The diagram illustrates the sugarcane harvested months for six countries over two years (2021/2022). The countries are listed in the rows: Brunei, Cambodia, Lao PDR, Indonesia, Myanmar, Philippines, Thailand, and Vietnam. The columns represent months from September 2021 to December 2022. Red arrows indicate the harvested months for each country:

- Brunei, Cambodia, Lao PDR, Indonesia, Myanmar, Philippines, Thailand:** Harvest occurs from January to December.
- Vietnam:** Harvest occurs from February to November.

ANNEX 4

Soybean crop calendar (harvested months) for crop year 2021/22 (2022) in ACO No.29 report

Country	Crop	Cambodia	2021						2022										
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Indonesia	1st																		
	2nd																		
	3rd																		
Lao PDR	Wet season																		
	Dry season																		
Myanmar	Wet season																		
	Dry season																		
Philippines	Wet season																		
	Dry season																		
Thailand	Wet season																		
	Dry season																		
Vietnam	Wet season																		
	Dry season																		

ANNEX 5

Cassava crop calendar (harvested months) for crop year 2021/22 (2022) in ACO No.29 report

Country	Crop	2021						2022										
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Brunei																		
Cambodia																		
Indonesia	1st																	
Indonesia	2nd																	
Indonesia	3rd																	
Lao PDR																		
Malaysia																		
Myanmar																		
Philippines	1st																	
Philippines	2nd																	
Thailand																		
Vietnam	North																	
Vietnam	South																	



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ASEAN AGRICULTURAL COMMODITY OUTLOOK

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