

AGREP

Arkansas Global Rice Economics Program

International Rice Outlook

International Rice Baseline Projections, 2014-2024

Report Prepared by

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In cooperation with

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International Rice Outlook

International Rice Baseline Projections, 2014-2024

Eric J. Wailes and Eddie C. Chavez

Keywords: International rice, baseline, policy, deterministic, stochastic, Arkansas Global Rice Model

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Abstract

This outlook contains updated baseline rice projections from the Arkansas Global Rice Economics Program (AGREP) for the U.S. and international rice economies. The purpose of this document is to present the current state and the expected directions of the rice economies in the world by assessing their potential supply and demand paths over the next decade. This set of projections serves as a baseline for evaluating and comparing alternative macroeconomic, policy, weather, and technological scenarios. The estimates are intended for use by government agencies and officials, farmers, consumers, agribusinesses and other stakeholders who conduct medium- and long-term planning.

The AGREP baseline projections are grounded in a series of assumptions about the general economy, agricultural policies, weather, and technological change. It is generally assumed that current agricultural policies will continue in the United States and other countries reported in this study. The projections included in this outlook are based on information available as of January 2015. In light of the volatility of the global rice economy, a stochastic analysis is included in this report to provide a better understanding of the probable distribution of future outcomes. The stochastic estimates establish likely upper and lower bounds for selected variables.

Introduction

This outlook is a framework to present a baseline of the likely direction of key variables in the global rice economy and the degree of variability of some of the key variables. It is not a set of predictions.

Deterministic and stochastic baseline estimates presented in this report are generated using the Arkansas Global Rice Model (AGRM). AGRM is a multi-country/regional statistical simulation and econometric framework developed and maintained by the Arkansas Global Rice Economics Program (AGREP) with the Department of Agricultural Economics and Agribusiness at the Division of Agriculture, University of Arkansas in Fayetteville.

The AGRM has benefited from working closely with the Food and Agricultural Policy Research Institute (FAPRI) based at the University of Missouri, Columbia which maintains U.S. agricultural and other commodity models. They provide projections on variable costs of production for U.S. rice, and prices and net returns for other U.S. crops which are transmitted into the AGRM country models.

In particular, prices and net returns for corn, cotton, soybeans, and wheat are relevant considering that these commodities are substitute crops for rice in the U.S. and other countries. For example, rice area competes with a number of crops including soybeans, corn, and cotton in rice-producing states in the U.S. (Arkansas, Louisiana, Missouri, Mississippi, Texas, and California). In the People's Republic of China (PRC), rice competes with corn in the provinces of Guangxi, Heilongjiang, Jilin, and Liaoning; with wheat in the province of Jiangsu; and with both corn and wheat in the provinces of Anhui, Chongqing, Guizhou, Hubei, Ningxia, Sichuan, and Yunnan. In India, rice competes with wheat particularly in the northern states (Carriquiry et al., 2012; Wailes and Chavez, 2013).

The historical rice data is obtained from the Production, Supply, and Distribution (PS&D) online database (USDA-FAS, 2015) and Rice Outlook (USDA-ERS, 2015) as of January 2015. The AGRM rice marketing years by country generally follow the USDA system. For example, *the year 2014 or marketing year 2014/15* in the model refers to January 2015–December 2015 for Thailand, Vietnam, and Indonesia; October 2014–September 2015 for India; July 2014–June 2015 for the Philippines; and April 2015–March 2016 for South American countries. See <http://apps.fas.usda.gov/psdonline/psdAvailability.aspx> for details. As such, the annual cumulative growth rates as well as the total growth estimates presented in this document are based from the marketing year 2013/14 and cover the 11-year period 2013-2024.

The global model is disaggregated into 46 of the major rice producing, consuming and trading rice countries/regions. The rest-of-the-world is grouped into five regional aggregations: Africa, the Americas, Asia, Europe, and Oceania. Rice is an ascendant food staple in Sub-Sahara Africa. Therefore we provide projections of selected West African countries and for the ECOWAS (the Economic Community of West African States). Each country or regional model includes a supply sector (harvested area and yields per hectare), a domestic demand sector (per capita use), international trade, stocks and price linkage equations. Net global rice trade for long grain and medium grain solves for two world reference prices, long grain and medium grain.

The deterministic baseline assumes the following: a continuation of existing policies; IHS Global Insight projections for macroeconomic variables; no new WTO Doha Round trade reforms; and average weather conditions. Growth rates in rice yields in selected countries are made relatively stronger than previous baselines in recognition of potential positive impacts from the Global Rice Science Partnership (GRiSP) R&D and other funding to improve global rice productivity.

The stochastic baseline provides a range of probable outcomes (confidence intervals), as opposed to the deterministic analysis which generates average point estimates. Stochastic estimates are useful because the underlying assumptions in the deterministic baseline usually do not hold true in reality, i.e., actual market outcomes deviate from average estimates. Stochastic analysis provides information on risk and uncertainty which is an important characteristic of the international rice economy.

The stochastic framework is generated using multivariate empirical distributions (MVE) of the yield variable for each of the 51 countries and regions in the model, as well as for each of the six rice-producing states in the United States. Yield is used because it is the variable that not only varies by year and by country but it is also very sensitive to changes in weather conditions and water availability—factors that are critical for rice production. The MVE take into account serial and geographical covariance. A total of 200 random draws are implemented using a 31-year empirical distribution of historical yields from 1983 through 2013, generated using the software Simulation & Econometrics to Analyze Risk (Simetar) developed by Richardson et al.(2008).

Rice Policy Overview

The rice sector policy assumptions by country are documented in Appendix Table 1 of the publication by Wailes and Chavez (2012). Changes in policies are primarily updated using USDA, Foreign Agricultural Service attaché reports and the *Rice Market Monitor*, published by the United Nations-Food and Agricultural Organization. Current domestic and trade policies (e.g. tariff rates) are maintained over the baseline.

Key Market Drivers

India and Thailand Domestic Rice Policies

Over the last four years, the international rice market has been impacted and dominated by two key events. The first is India's official lifting of its ban on non-basmati rice exports as of September 2011. The second is Thailand's implementation in October 2011 of its controversial and costly paddy pledging program (PPP), a producer price-floor support and government storage policy. The PPP provided price supports to Thai rice producers which were 50% higher than prevailing market prices (Wailes and Chavez, 2013). This resulted in a separation between Thailand's rice export prices and those of other Asian countries until early 2014, when the policy was discontinued (Figure 1). The long grain Thai 100% B price subsequently declined substantially from \$614 per metric ton (mt) in May 2012 to \$399 per mt in May 2014, a 35% drop.

The major consequence of the PPP is that Thailand lost leadership in global long grain rice trade and its rice exports plunged 40% in 2011; and its rice stockpiles more than doubled (Figure 2).

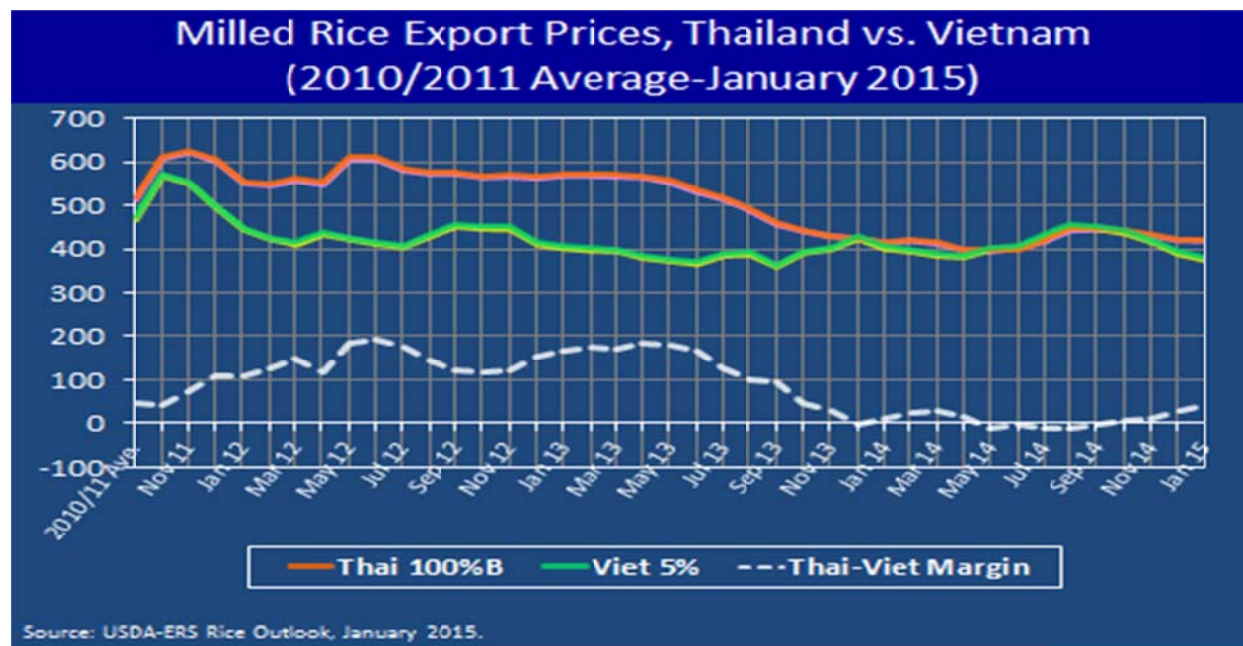


Figure 1 Thai and Viet Rice Export Prices after Implementation of the Paddy Pledging Program

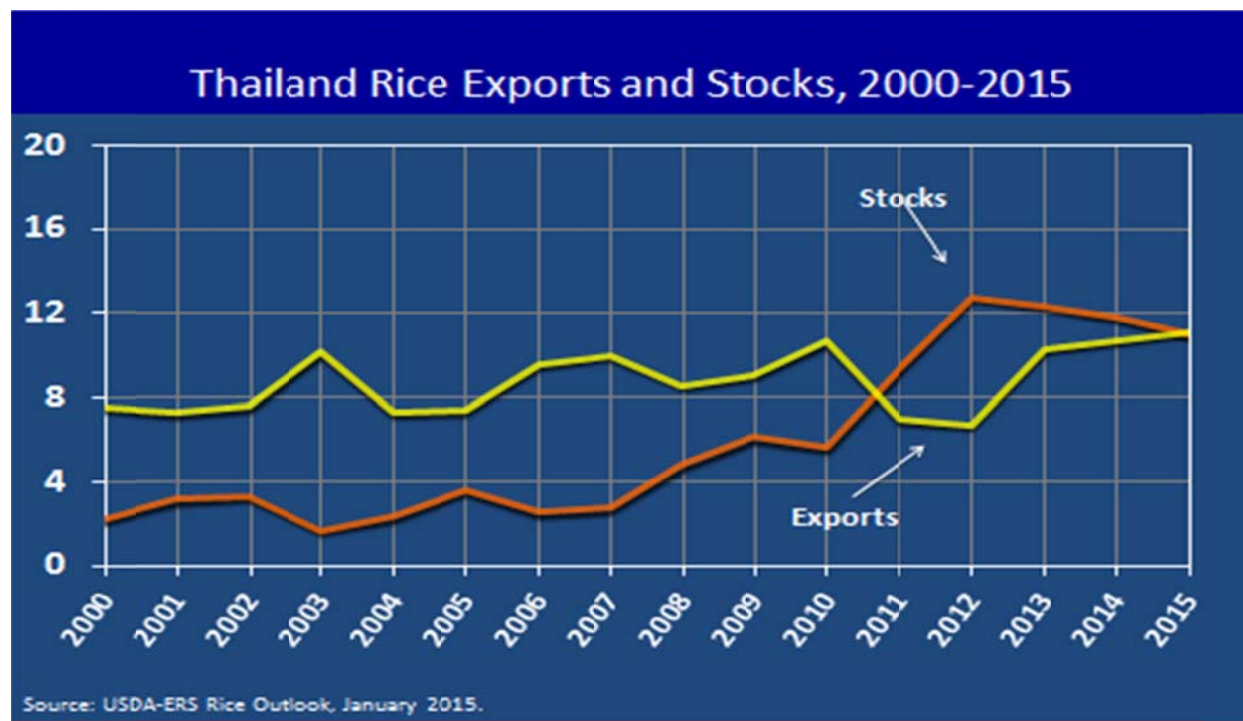


Figure 2 Impacts of the 2011 Paddy Pledging Program on Thai Exports and Stocks.

Another consequence of the PPP is that the government controlled Thai rice price limited its usefulness as the world's long grain rice reference price. During the period in which PPP was in effect, the net trade equilibrating international rice reference prices generated by AGRM (Figure 3) were closer to the prevailing export prices of Vietnam and India (Wailes and Chavez, 2013). This is supported by the fact that the global rice export market was dominated by India and Vietnam, with relatively dependable supplies also coming from Pakistan, the United States, Cambodia and Myanmar.

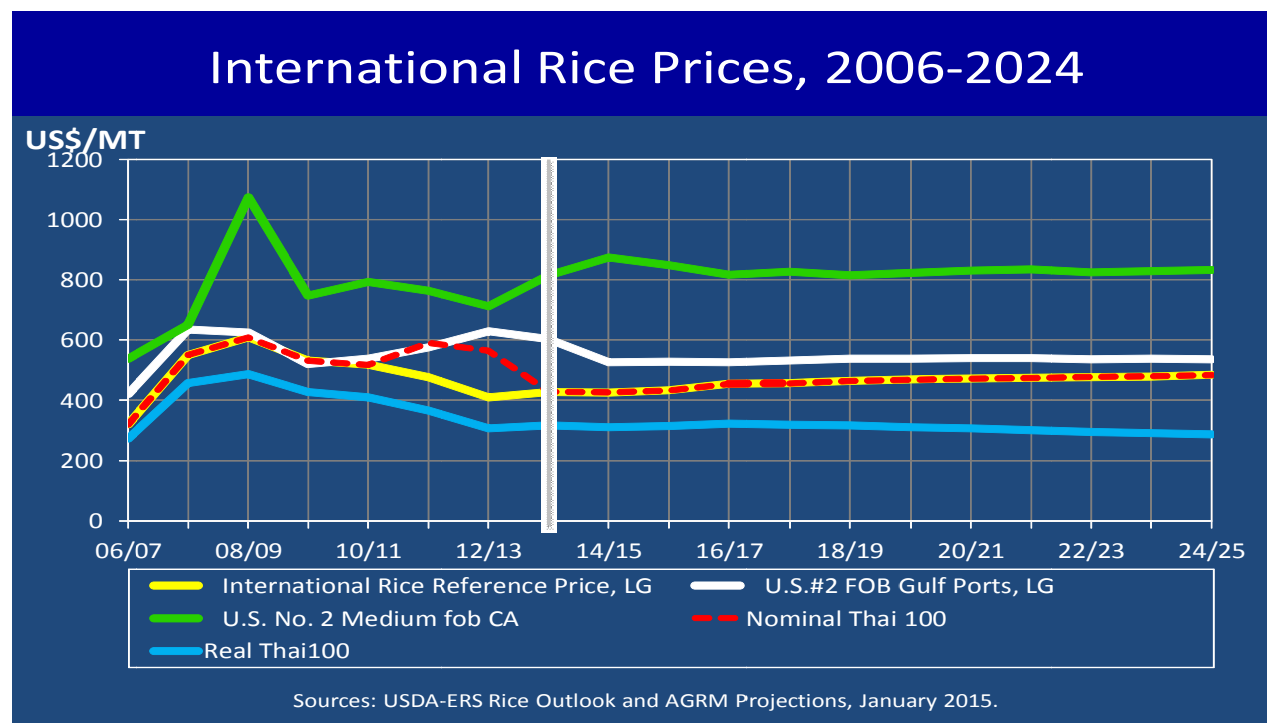


Figure 3 Historical and Projected World Reference Rice Prices, 2006-2024.

Thailand Returns as an Active Participant in Rice Trade

In addition to the loss of global export market share, the PPP faced numerous criticisms including an overwhelming government budget deficit, charges of corruption and ultimately inadequate government funds to pay the Thai rice farmers a price support as promised by the former Prime Minister Yingluck Shinawatra. Following the May 22, 2014 military coup d'état, the PPP was suspended for the remainder of the 2013/14 marketing year by the new government and replaced with the Rice Farmer Assistance Program. This new program provides subsidized credit and production inputs to farmers (USA Rice Federation, 2014). Government storage of new crop rice is no longer guaranteed. This policy change has resulted in Thai exports and prices becoming more globally competitive once again (Figure 1).

On November 4, 2014, a region-specific on-farm pledging program was approved by Thailand's Rice Policy and Management Committee chaired by the new Prime Minister Prayut Chan-o-cha. The new

program is implemented for the October 2014-September 2015 paddy main crop, fragrant and glutinous rice; and available only in northern and northeastern production areas of the country under limited conditions (USDA-FAS, 2014).

To date, the new military leadership has been prudent in release and sales of the country's excessive rice stockpile which stands at a conservatively estimated 12.0 mmt (USDA-FAS, 2015). A key question is what percent of these stocks are of export quality? Much of the rice in government storage has deteriorated. Therefore one of the key policy assumptions of this baseline study is an exogenous Thai rice stock reduction that drives a return by Thailand to export levels consistent with prices competitive with Vietnam and India. Thai stocks may return more quickly to levels of the previous decade than reflected in this baseline. This is particularly likely if the government disposes of the excess and deteriorating stocks for non-food uses.

Wide Margins between U.S. and Asian Rice Prices

U.S. export prices over the past year were high—with margins to Asian prices as high as \$200 per mt (Figure 4). The disparity in prices is a result of the smaller 2013/2014 U.S. production. As a result of regional and bilateral trade agreements, U.S. rice exports have become more concentrated on Western Hemisphere markets where Asian supplies are less competitive. With a return to more normal production levels in the U.S. the baseline suggests that U.S. long grain rice prices will likely be influenced by the Asian price levels. Over the projection period, while Asian reference rice prices increase slightly, U.S. rice export prices are expected to decline to a margin above the Asian prices of about \$50 per mt by the end of the projection period—making U.S. prices relatively more competitive (Table 1). Rigidity in the price margin is based on negotiated preferences for US rice in bilateral and regional trade agreements. U.S. average rice farm prices are projected to follow the declining trend of export prices (Table 3).

Sources of Growth in Rice Trade

While China remains an important major rice importer over the next decade, the growth in imports will come mainly from West African and the Middle Eastern countries. Expansion in exports is expected from significant investment in production and processing capacity in Southeast Asian countries of Vietnam, Cambodia and Myanmar. Productivity gains from adoption of hybrid rice varieties and farmer adoption of GRiSP research innovations are expected to positively impact Asian and African rice production.

Growing Segmentation in Rice Markets

There is increasing segmentation in global rice trade flows, reflected in projected international reference price differences between long and medium grain markets. This is indicated by the recent trend where the medium California rice price is much higher than the Southeast Asian long grain prices (Figure 3). The lack of substitution in production between for medium grain and long grain supports this trend.

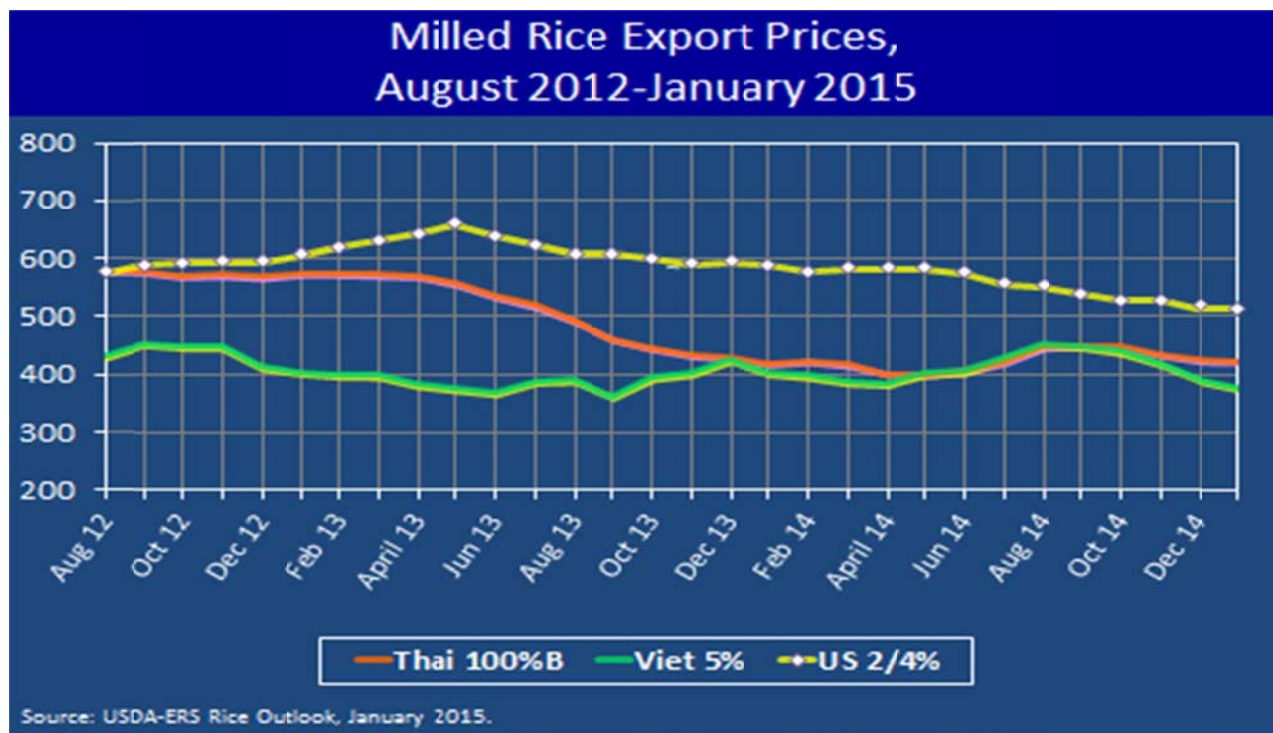


Figure 4 U.S. Rice Export Prices relative to World Reference Prices for long-grain rice, 2012-2014.

Overview of Global Rice Supply and Demand

Rice is the most important food crop of the developing world and the staple food of more than half of the world's population. It accounts for more than 20% of daily caloric requirements (IRRI, 2013).

International rice prices are highly volatile due to a number of reasons. Rice has price inelastic supply and demand throughout much of Asia, where it is the dominant food staple. While rice is the primary staple for half the world's population, it is thinly-traded. Only about 7% of rice production is traded as opposed to 10 percent for coarse grains and 16 percent for wheat (Wailes and Chavez, 2012). The international rice trade is highly concentrated, with five dominant players (Thailand, India, Vietnam, Pakistan, and the U.S.) accounting for over 80% of global net trade (Table 1).

Over the baseline period, rice output is projected to expand driven by the use of higher-yielding inbred varieties and hybrids and other improved production technologies—in line with post-2008 rice crisis self-sufficiency policies of many consuming countries. With growth in global domestic use slightly exceeding domestic supply as countries replenish stocks, total rice trade expands by 1.4% per year. This results in a steady increase of 1.1% in long grain international rice prices. The average long grain rice international reference price increases from \$426 per mt in 2014 to \$485 per mt in 2024. Over the same period, international medium grain rice prices are projected to sustain a relatively high level, ranging from \$815-875 per mt, with an average of \$833 per mt (Table 1 and Figure 3).

Over the next decade, world rice output grows at 0.93% per year, reaching 528.1 million metric tons (mmt) in 2024 with 0.80% growth based on yield improvement and 0.13% growth expansion in area harvested (Figure 5). Driven primarily by population growth, global rice consumption gains 0.87% annually, reaching 526.1 mmt in 2024—with population growth of 1.01% per year projected to be offset partly by a 0.14% average annual decline in world rice per capita use (Table 2 and Figure 6).

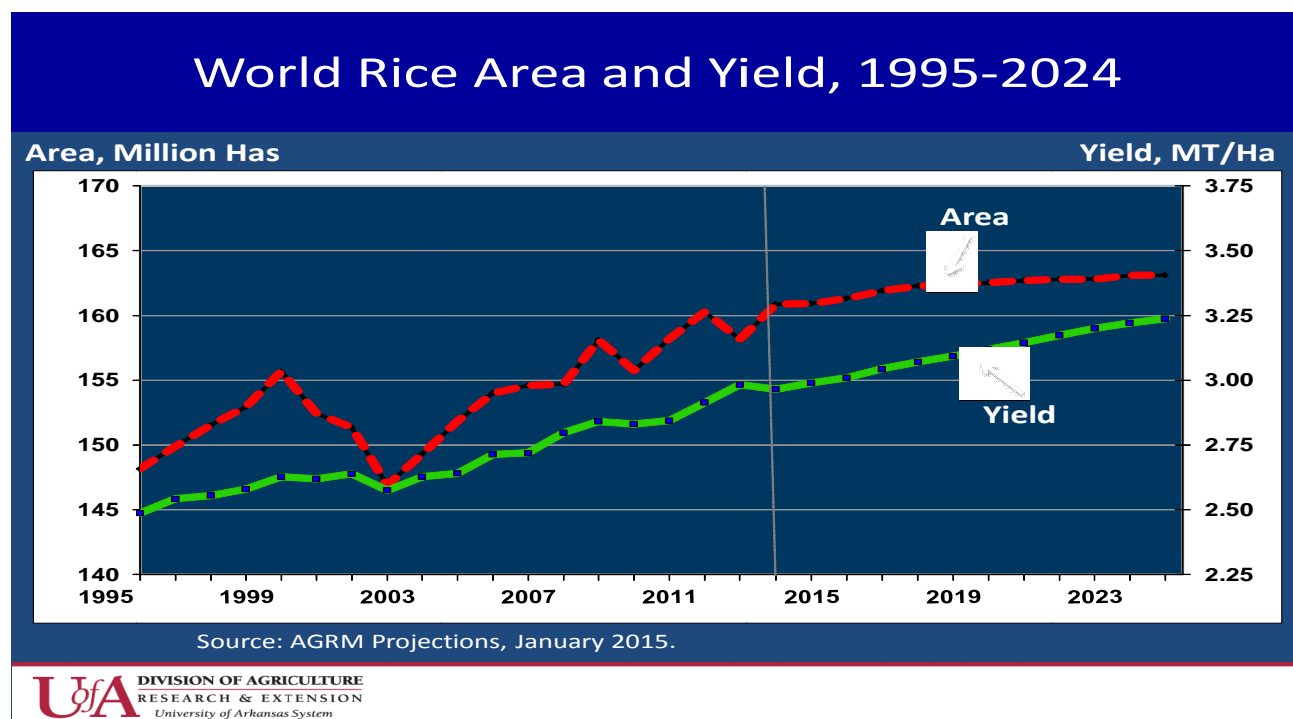


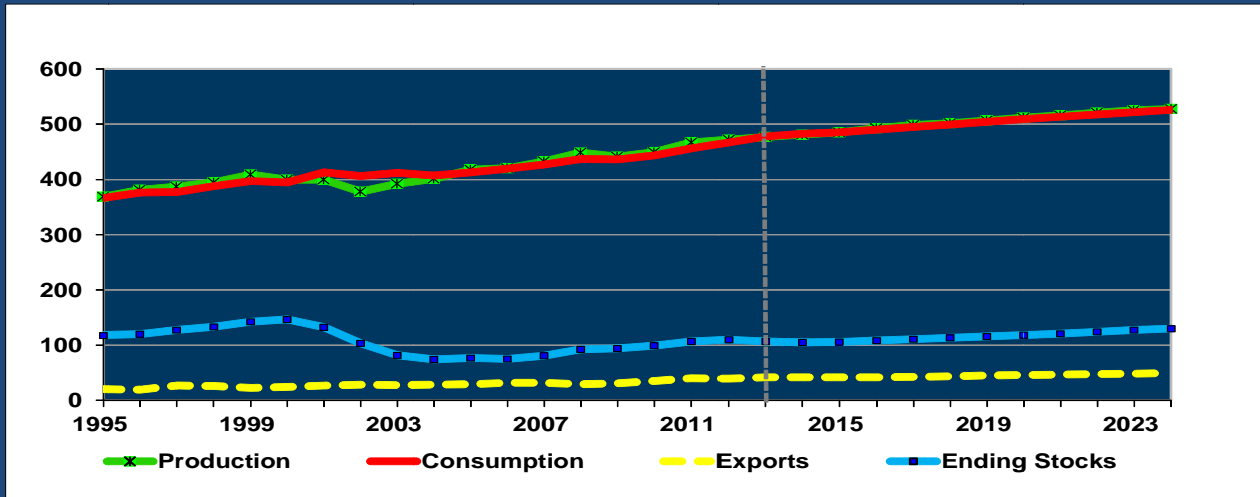
Figure 5 World Rice Harvested Area and Yield, Historical and Projected, 1995-2024.

While industry and government reports typically present only the total rice stocks for particular countries, it is equally interesting to examine rice stocks on a per capita basis to make population-weighted comparisons that have implications for food security. Figure 7 depicts comparative paths of per capita stocks in kilogram of selected major rice exporting and importing countries.

As total rice stocks in Thailand increased sharply as a result of the PPP policy, per capita stocks spiked in 172 kg during the 3-year period 2011-2013, equivalent to more than one-year’s average per capita consumption. Over the projection period, the average per capita stock is projected to decline. PRC’s rice per capita stock has increased from an average of 29.4 kg during the 2006-2010 period to 34.1 kg over the 2011-2013 period. China has expanded production and imports in response to highly attractive international rice import prices. With relatively flat production over the next decade, China continues to steadily build up per capita stocks, reaching 50.8 kg per person by 2024. In contrast, Vietnam’s average per capita stock during the 2006-2010 period decreased from 20.1 kg to an average of only 12.9 kg over the past three years but is projected rebuild to 16.4 kg by 2024.

World Rice Supply and Utilization, 1995-2024

Million MT



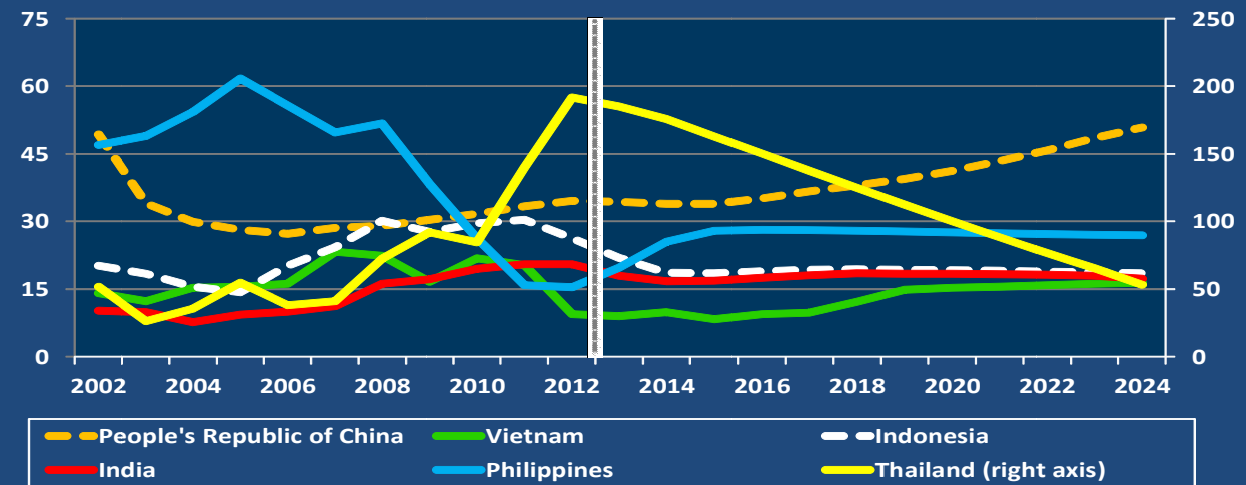
Source: AGRM Projections, January 2015.



Figure 6 World Rice Supply, Use, Trade and Ending Stocks, Historical and Projected, 1995-2024.

Per Capita Rice Stocks, 2002-2024

Kilograms



Source: AGRM Projections, January 2015.



Figure 7 Per capita rice ending stocks for selected countries, Historical and Projected, 2002-2024.



India expanded its exports substantially in 2011 to 10.4 mmt from 2.8 mmt the previous year. This expanded trade was supported by substantial spike in Indian production (+9.3 mmt in 2011 alone) and by the reduced Thai exports. Despite higher exports India also increased per capita stock levels, from 14.9 kg in 2006-2010 to 19.7 kg in 2011-2013. Per capita stocks in India are projected to remain stable over the next decade at 18 kg.

Paradoxically, average per capita stock levels for the Philippines dropped from an average of 44.1 kg during 2006-2010 to 17.0 kg over the period 2011-2013 as a result of the country's drive to limit imports and attain rice self-sufficiency. During the past year, the Philippines re-assessed its unattained self-sufficiency program and resumed rice imports to replenish its declining stocks. Per capita stocks recover to an average of 27.4 kg over the baseline period assuming the projected imports materialize. It should be noted that this level is still 38% below the historical norm—a situation which could still be a food security concern should weather-related production shortfalls occur.

Indonesia's average per capita stock has been relatively steady during period 2006-2013 averaging 26 kg. This level, however, is projected to decline and level off at 19 kg over the next decade. Indonesia has also been trying to push for self-sufficiency by limiting imports and encouraging diet diversification away from rice.

Results of the Deterministic Baseline Analysis

- Projections generated from the deterministic analysis by country and by region for the period 2013-2024 are presented in Tables 1 thru 56. To serve as convenient reference, a list of the tables with description is included below:
- Table 1 is a summary of the *net trade* by country and international rice prices (international long grain reference price, U.S. long grain export price, and the U.S. medium grain export price which serves as the international reference price for medium grain).
- Table 2 presents the summary of the global rice supply and demand.
- Tables 3 thru 47 are the basic supply and demand projections (production, consumption, stocks, and net trade), by country.
- Tables 48 thru 65 present the world regional (Africa, Asia, Western Hemisphere, Europe, and Oceania) rice supply and demand projections with a sub-regional aggregate for countries of each region that are modeled individually in AGRM, and another sub-regional aggregate for countries of each region that are modeled as a group in AGRM.
- Table 66 presents the rice supply and demand projections for ECOWAS, presented separately to highlight the increasing importance of this region to the global rice economy.
- Table 67 summarizes the rice average yield per hectare by country.
- Table 68 presents the rice average per capita use by country.
- Table 69 shows the world's rice *total trade*, as opposed to *net trade* in Table 1.

Detailed Results on Global Rice Supply and Demand

Over the projection period, India and PRC are projected to account for 25.6% of the growth in total global population, with a combined share in world population of 36.3% in 2014 and 35.3% by 2024. By sheer magnitude, these two countries remain the largest global rice economies with combined share of 45.2% of world area harvested, 51.2% of total milled rice production, 50.0% of total rice consumption, and 69.5% of world rice ending stocks.

In comparison, the combined global shares of the next six largest rice countries of Indonesia, Bangladesh, Vietnam, Thailand, the Philippines and Myanmar are 30.7% of area harvested, 27.4% of production, 24.6% of consumption, and 14.9% of ending stocks over the same period. Thailand, with its recent PPP-related build-up, accounts for 42.0% of this group's stocks.

Rice Export Supplies

Total rice trade is projected to expand from 41.7 mmt in 2014/15 to 49.4 mmt in 2024. Figure 8 depicts the world's top country rice exporters over the projection period. Following Thailand's costly paddy pledging program, it is projected to resume a strong presence in the global rice market over the next decade. Reports indicate that Thailand is increasing its efforts on negotiating government-to-government rice deals to liquidate their excessive rice stockpile. While the new administration reportedly plans to liquidate the PPP stocks over the next three years, it has been relatively cautious in releasing the PPP rice stocks into the market to avoid depressing prices (USDA-FAS, 2013-2014).

The Thai government is expected to incur substantial financial losses in the short-term as it ships rice bought at high farm prices onto the global market at competitively low prices. However it is expected to regain its global position as the top rice exporter over the baseline period--given its good export infrastructure and a concerted focus on developing and maintaining a strong presence in the branded high quality long grain and fragrant rice markets. The popularity of the country's fragrant "Thai Hom Mali"-branded Jasmine, is strongly preferred by consumers in many nations.

India became the top rice exporter in 2011/12 and 2012/13 marketing years, and is projected to remain a major exporter in 2013/14, with total shipments these years exceeding 10 mmt. However, India's exports are projected to decline to 8.6 mmt in 2014/15 and 7.0 mmt in 2016/17 before increasing steadily to the 8-mmt level by 2024, supported by relatively strong gains in yield. Its rice consumption will remain strong with population growing at 1.06% and per capita consumption rising slightly by 0.1% per year—and as the country implements its subsidized domestic rice consumption program as legislated in the National Food Security Bill which was signed into law on September 12, 2013 (USDA-FAS, 2013b). The law creates an entitlement for eligible beneficiaries to receive 5 kilograms per month of rice, wheat or coarse grain (millet) at highly subsidized prices. This reportedly covers 50% of the urban and 75% of the rural populations which translate to about 820 million people (USDA-FAS, 2014).

Top World Rice Exporting Countries, 2002-2024

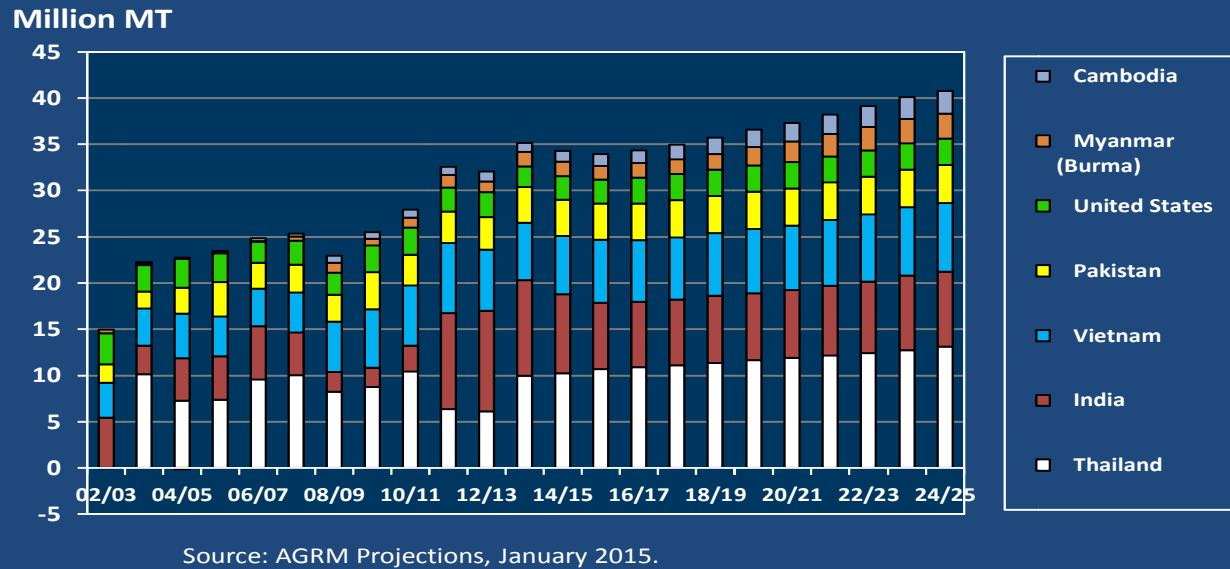


Figure 8 Top World Rice Exporting Countries, Historical and Projected, 2002-2024.

India’s total exports in 2013/14 matched those of Thailand’s at 10.3 mmt, followed by Vietnam at 6.5 mmt. Thailand is projected to start exceeding India’s exports in 2014/15 (10.7 mmt vs. 8.6 mmt) as the new government administration embarks on releasing the PPP stocks into the international market, and retaking the rice export leadership position over the projection period (Table 1).

Over the baseline, total rice exports of the U.S. expand by 735 thousand mt (tmt) and remain in the range of 3.3-3.7 mmt; and total imports grow by 148 tmt (Table 69), resulting in expansion in net trade of 587 tmt (Table 3).

With increasing interest, investments, and government focus, Thailand’s two neighboring countries of Cambodia and Myanmar are poised to expand rice exports in the years to come. Cambodia’s rice exports are projected to expand steadily and double from 1.2 mmt in 2014 to 2.4 mmt in 2024 as yield-based production growth exceeds that of consumption whereas Myanmar’s exports are projected to expand from 1.5 mmt to 2.7 mmt over the same period.

Global net rice exports reach 44.8 mmt in 2024, or a total growth of 8.0 mmt over the baseline period (2014-2024), or about 1.6% annually, of which nearly 44% of the growth is accounted for by Thailand, as it expands exports substantially and regains dominance in global rice trade. By world regions, the top rice exporters are shown in Figures 9 and 10. ASEAN is a 10-country sub-regional group of Southeast Asian countries that include Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

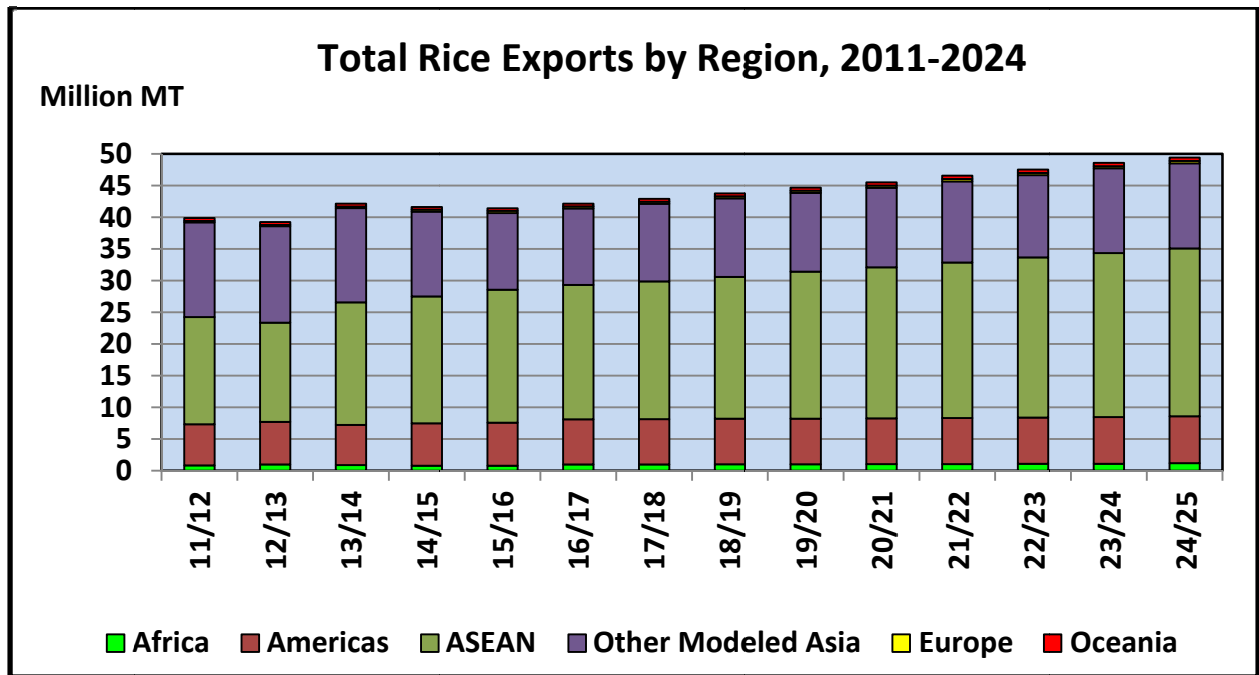


Figure 9 Net Rice Exports by World Regions, Historical and Projected, 2011-2024.

The ASEAN region is expected to expand its global export share from 50% in 2013 to 58% by 2024.

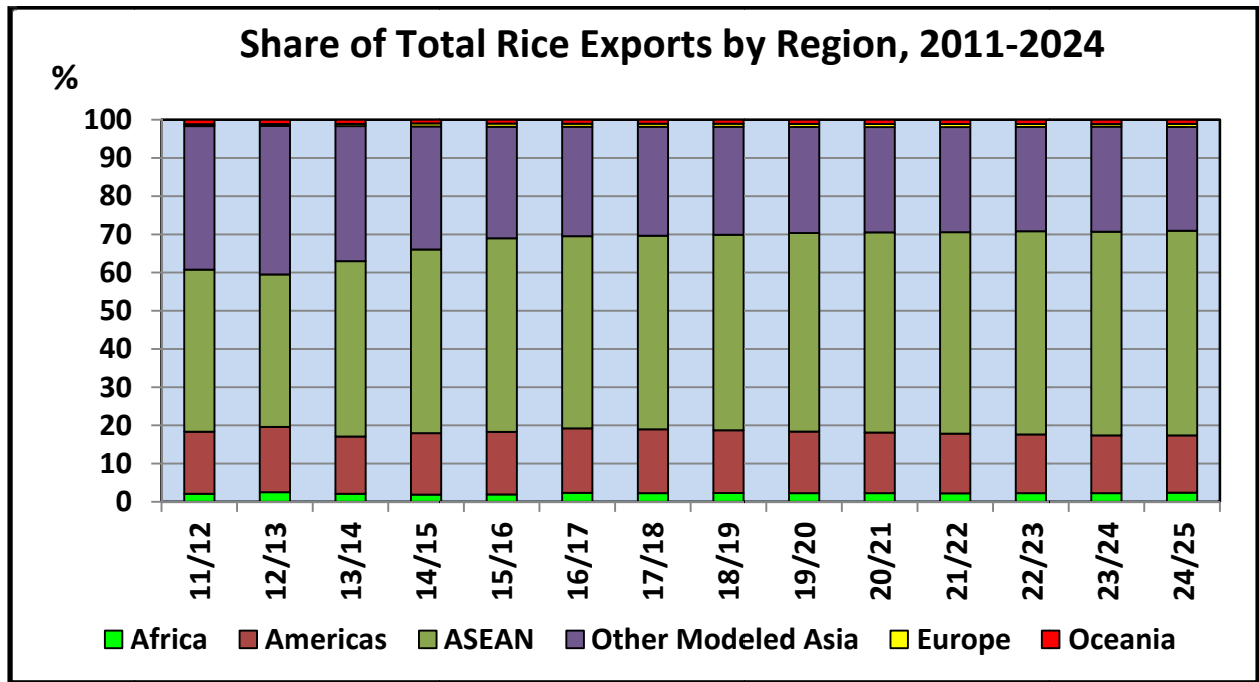


Figure 10 Shares of Total Rice Exports by World Regions, Historical and Projected, 2011-2024.

Rice Import Demand

World rice imports are dominated by 14 countries that account for 56.0% of total imports over the baseline period. They are Nigeria, PRC, Iran, Iraq, Saudi Arabia, the Philippines, Indonesia, EU-28, Senegal, Cote d'Ivoire, Malaysia, South Africa, Mexico, and Ghana. Figure 11 shows the world's top 8 country rice importers.

Global rice net imports are projected to grow by 7.1 mmt over the 2013-2024 period, reaching 44.8 mmt, of which 77% of the growth is projected to come from Africa and 18% from the Middle East. Of the growth in African net imports, 62% is accounted for by the 15-member ECOWAS (Economic Community of West African States)² of which 37% is from Nigeria. The Middle East is projected to expand imports as production continues to lag consumption with population growing at 1.6% a year.

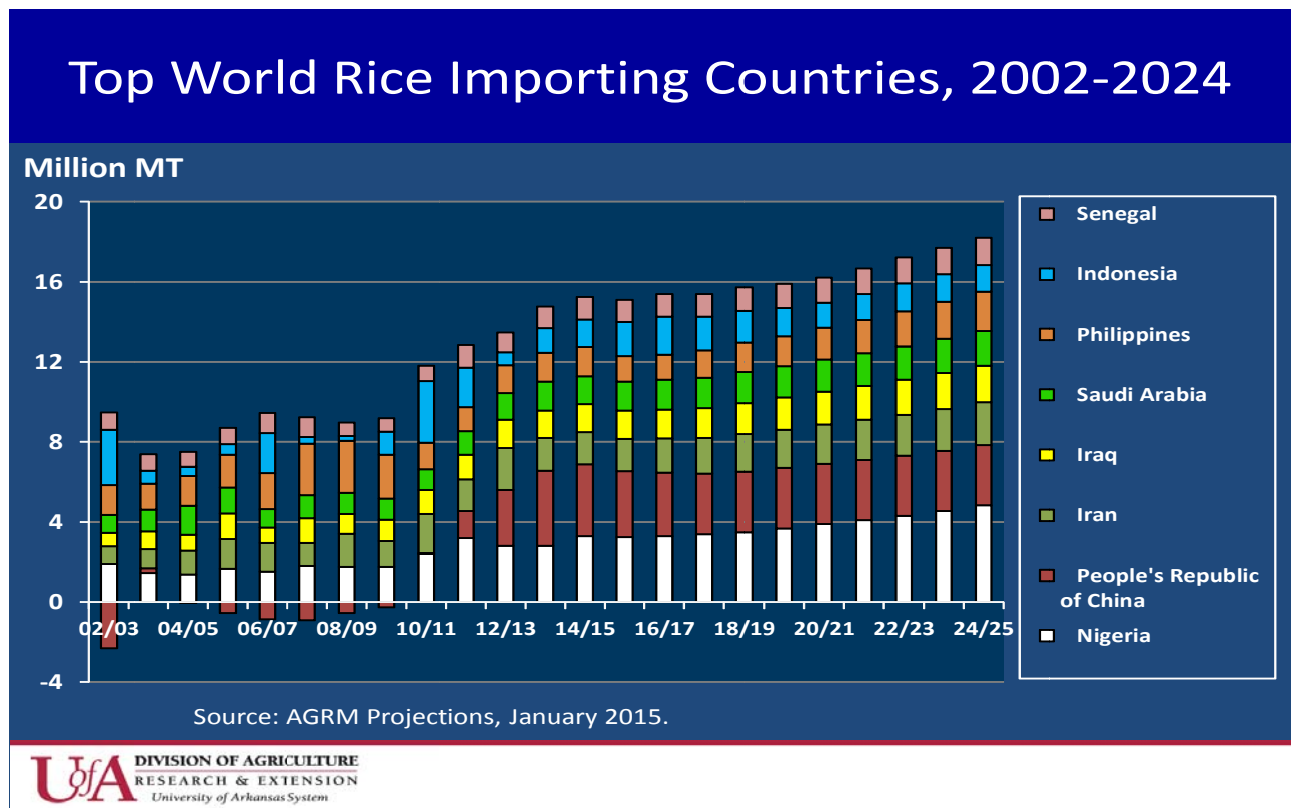


Figure 11 Net Rice Imports by Top Countries, Historical and Projected, 2002-2024.

The total rice imports by regions are shown in Figures 12 and 13.

² ECOWAS15-member countries include Cote D'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Benin, Burkina-Faso, Gambia, Guinea-Bissau, Niger, Togo, and Cabo Verde.

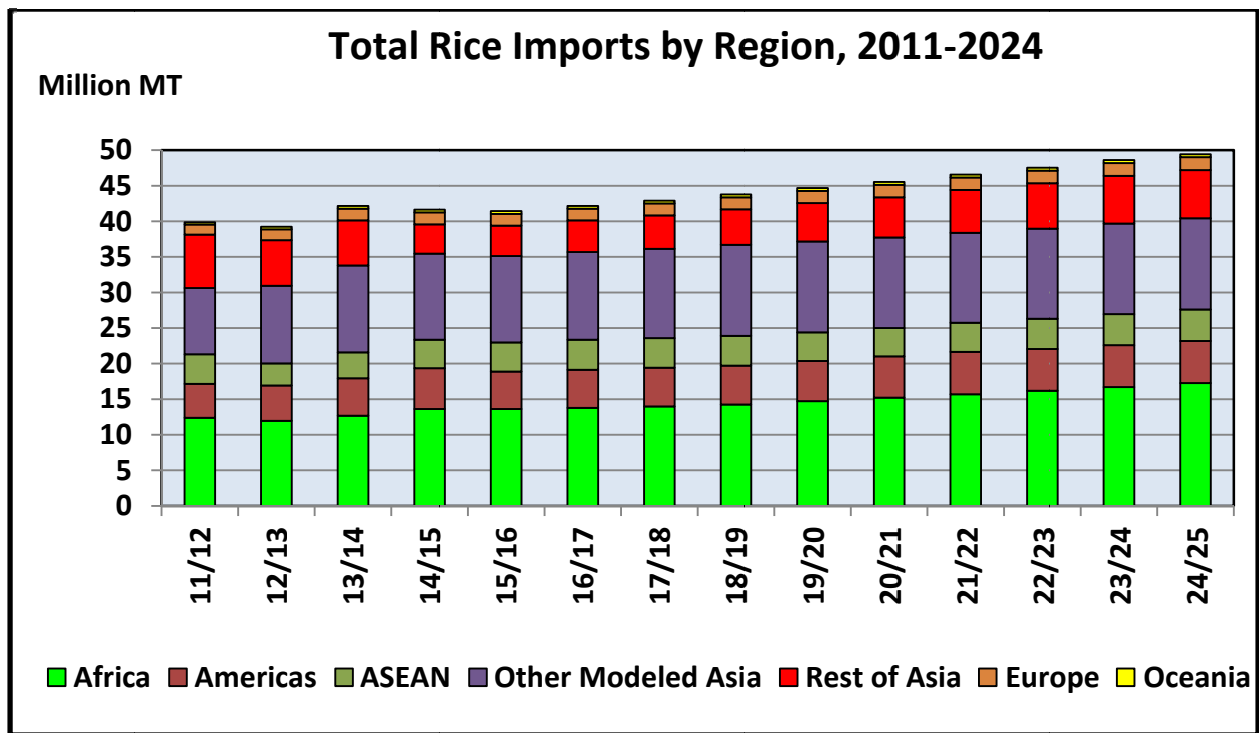


Figure 12 Total Rice Imports by World Regions, Historical and Projected, 2011-2024.

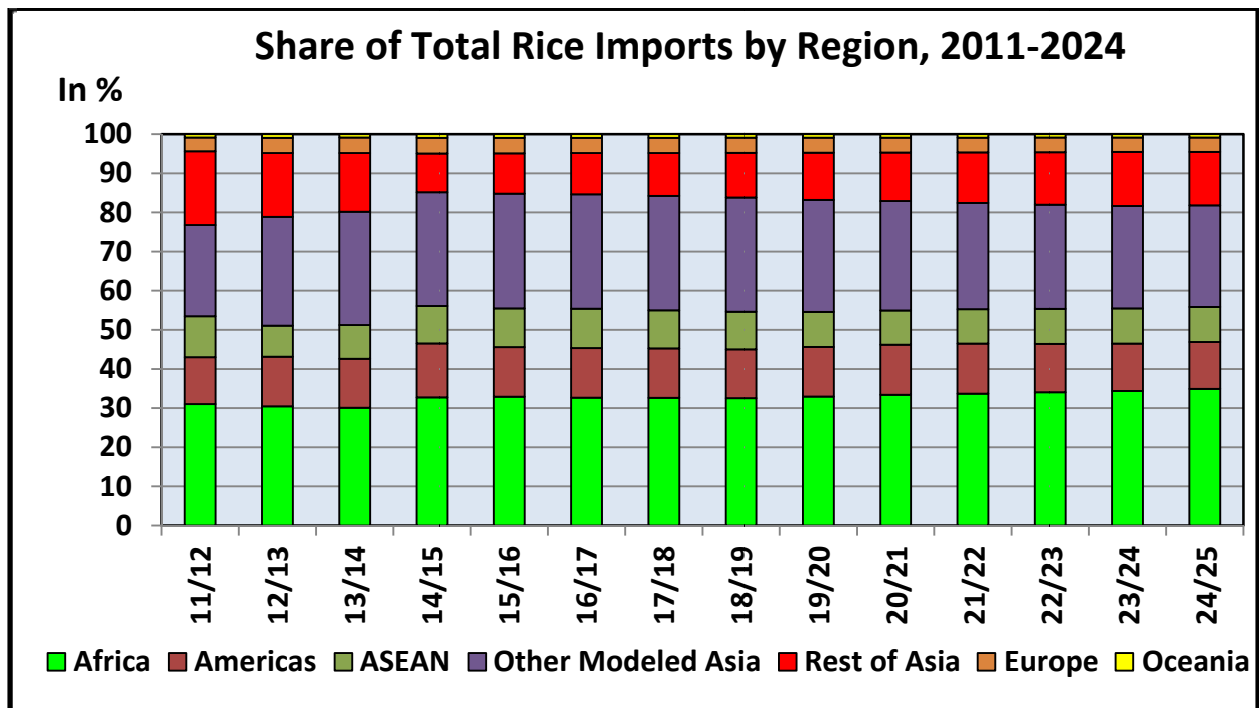


Figure 13 Shares of Total Rice Imports by World Regions, Historical and Projected, 2011-2024.

Rice Harvested Area and Production

Major rice producing nations are shown in Figure 14. While the global rice harvested area is expected to increase by 2.25 million hectares over the baseline period reaching 165.1 million hectares in 2024, some notable changes for a number of countries/region are behind this figure. Expansion totaling 1.68 million hectares of rice is projected for six countries including Myanmar, Cambodia, Tanzania, Bangladesh, the U.S., and Lao PDR. An additional 1.64 million hectare expansion is expected in the West African ECOWAS region. In contrast, the total rice harvested area of the PRC is projected to decline by nearly 1.1 million hectares due to a shift to substitute crops and irrigation constraints. Indonesia, India, and Japan are expected to reduce combined area harvested by 598 thousand hectares.

The U.S. rice harvested area declined by 85 thousand hectares or 8% in 2013 to 1.0 million hectares (2.47 million acres) due to heavy rains that prevented planting in the Delta but expanded to 1.18 million hectares (2.92 million acres) in 2014 supported by normal weather and relatively higher returns compared to other crops. Thereafter, U.S. rice harvested area is projected to decline by 0.5% per year reaching 1.12 million hectares (2.78 million acres) due to increasing water constraints and a competitive market environment posed by substitute crops.

Other constraints to potential global rice expansion include competing uses for limited land and water; changing farm demographics—with farmers getting older and rising farm wages as labor migrates from farms to cities. Production pressures from climate change including rising sea levels and more variable precipitation patterns; demand pressures including changing consumer tastes towards diversified diets; and emerging environmental issues associated with the rice carbon footprint also contribute to limit growth in the global rice economy.

The global milled rice output is projected to grow by a total of 51.1 mmt, reaching 528.1 mmt, over the period 2013-2024. By volume, 26.5% of the expected growth will come from India; 44.3% from the seven countries of Bangladesh, Indonesia, Myanmar, PRC, Thailand, Cambodia, and Vietnam combined; and 9.4% from ECOWAS. Total U.S. rice production is projected to increase by about 1.35 mmt (or 43.4 mil. cwt) over the same period, equivalent to 1.8% annual growth—with 1.1% of the growth attributed to area harvested and 0.7% to improved yields.

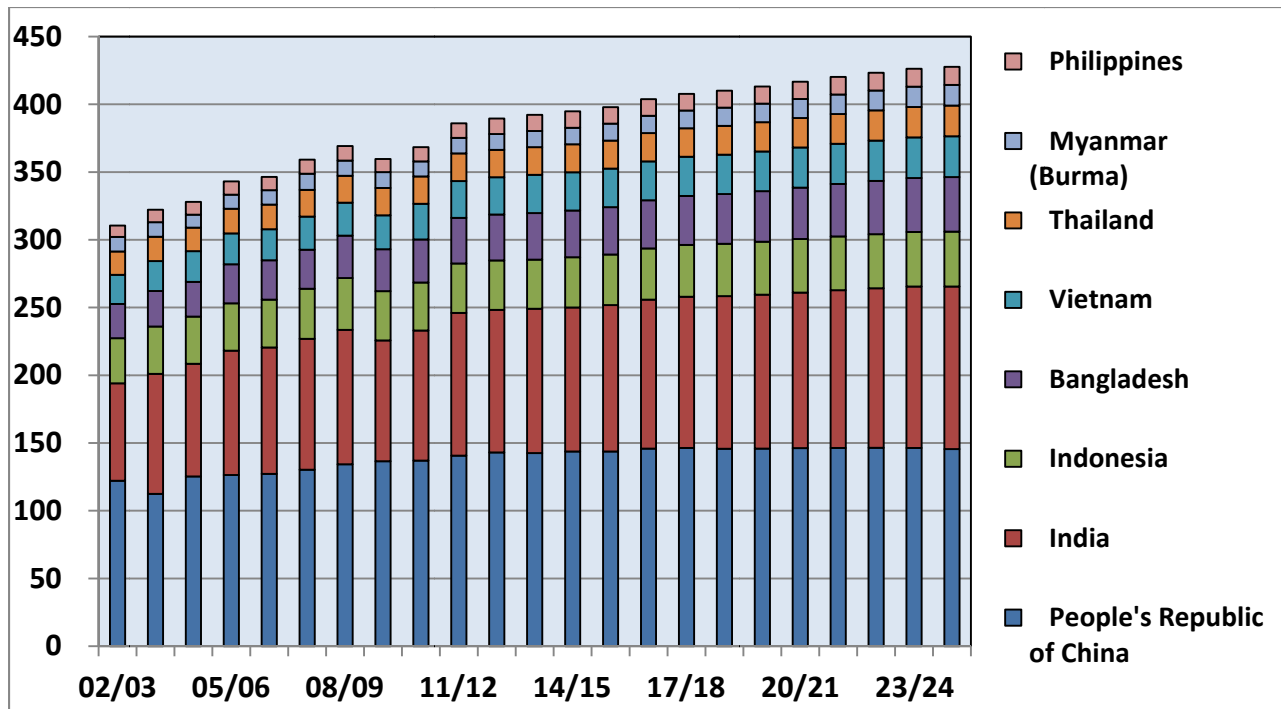


Figure 14 Top World Rice Producing Countries, Historical and Projected 2002-2024.

Rice Domestic Consumption³

Rice consumption is largely determined by dietary tastes, per capita income, population, and other demographic variables. Rising incomes are associated with declining per capita consumption in some Asian countries where rice is considered an inferior good. Demographic trends also reducing rice demand as aging populations eat less rice and increasing health consciousness shifts preferences away from dependence on carbohydrates and towards more protein-based diets.

Over the projection period, global rice consumption will begin to slow and increase by only 47.9 mmt reaching 526.1 mmt in 2024. About 28% of the growth is accounted for by India; 27.1% by the four countries of Bangladesh, Indonesia, the Philippines, and Myanmar combined; and 16.6% by ECOWAS. Led by Nigeria, the total consumption of ECOWAS expands substantially at 3.7% per year, as the region’s population grows at 2.6% and per capita consumption by 1.1%. The top world rice consuming countries are shown in Figure 15.

The PRC’s rice per capita use continues to decline by 0.47% per year, while the country’s population grows at 0.39% annually, resulting in net decline in total rice consumption of 0.8% annually or a total decrease of 1.22 mmt over the baseline. China’s total consumption is projected at 145.1 mmt in 2024.

³ In this study, domestic consumption includes direct consumption, industrial, seed and other uses.

U.S. rice consumption increases by nearly 582 tmt (or 18.2 mil. cwt) over the same period, reaching 4.6 mmt (143.2 million cwt) in 2024. This is equivalent to an annual growth of 1.24%, of which 0.49% comes from per capita use and 0.75% from population growth.

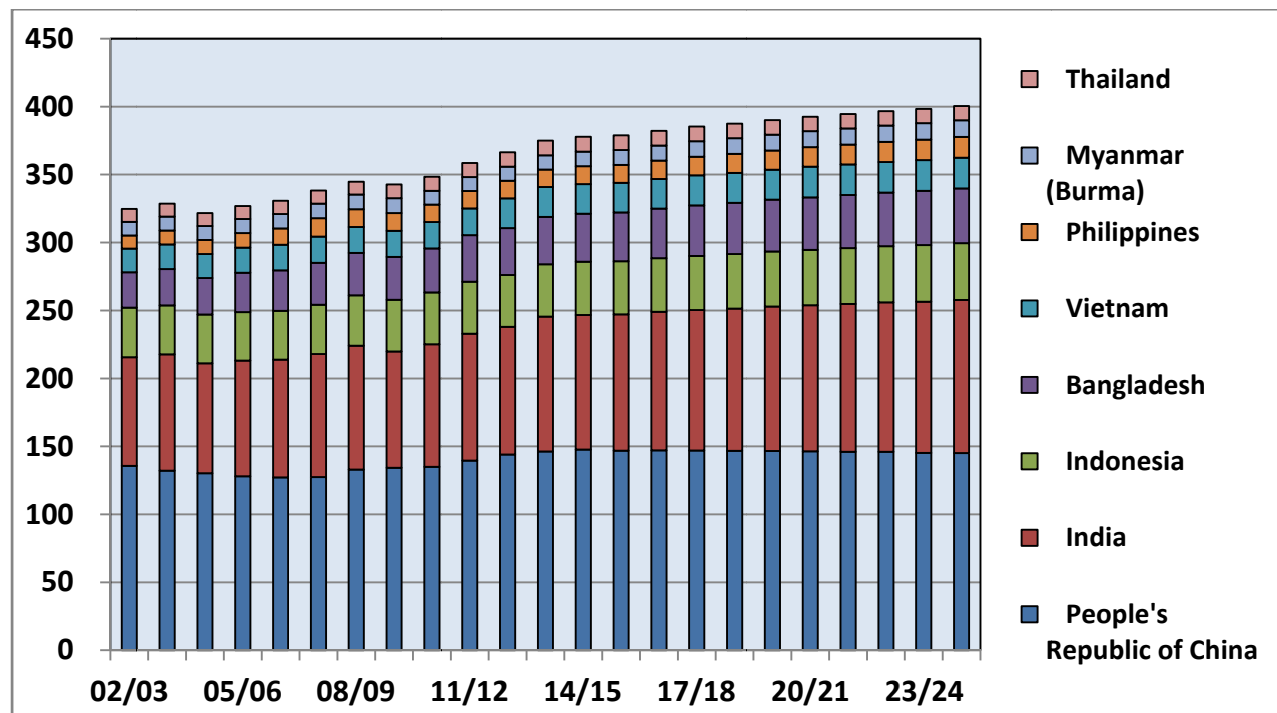


Figure 15 Top World Rice Consuming Countries, Historical and Projected, 2002-2024.

Rice Global Stocks

Global rice stocks increases by an expected 23 mmt over the projection period, from 107 mmt in 2013 to 130 mmt in 2024, as increases production exceeds growth in consumption during the period.

Two countries are responsible for the bulk of the change in stocks over the baseline. China stocks expand by 25.4 mmt, as the country maintains a level of importation driven by low international import prices compared to its higher supported domestic prices. China also has a tariff rate quota (TRQ) for rice of 5.2 mmt, with a 1% tariff rate. Therefore we expect that the TRQ will continue to be used as long as imported price remain below local domestic prices. On the other hand, Thailand’s stocks are expected to decline by 8.9 mmt over the period 2013 to 2024 as PPP government held stocks are liquidated. See Figure 16 for the major rice stock holding countries.

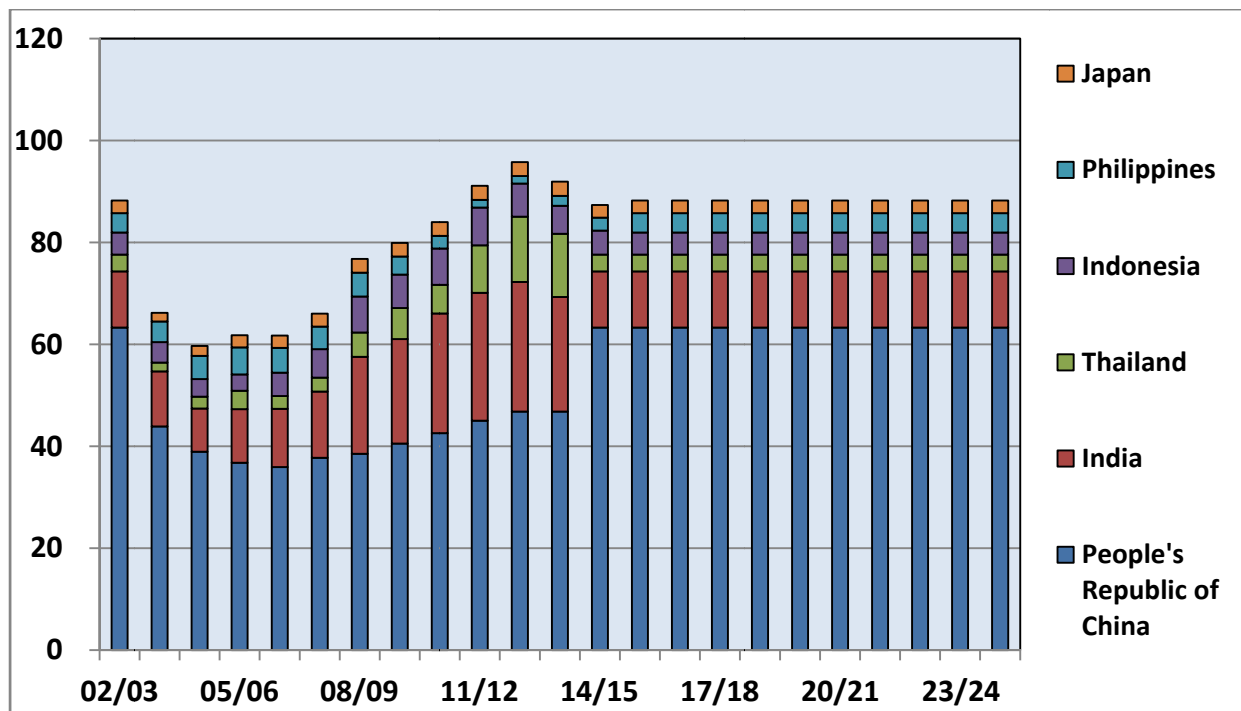


Figure 16 Top countries in rice ending stocks, Historical and Projected, 2002-2024.

Rice Supply and Demand by World Region

The summary results for the five world regions are presented in Tables 48-64. Three tables are associated with each region: the first table is the total for the region; the second is the sum of individually-modeled countries in the region; and the third consists of the aggregate of the remaining countries in the region, which are modeled as a group. Thus, the sum of the five world regions represents the entire world rice economy.

A more detailed look at the regional projections is useful as it provides a better understanding of the geographical dynamics and the relative importance of each region to the global rice economy.

Africa

Table 48 shows that Africa’s total rice output is projected to grow by 3.1% per year, driven by both growth in area (1.8%) and yields (1.3%). This expected productivity improvement is supported by availability of increased research funding from international institutions and NGOs, a more focused effort by the Africa Rice Center and the International Rice Research Institute (IRRI), and expanded distribution and adoption of improved rice varieties such the locally-developed New Rice for Africa (NERICA) cultivars. The region’s total rice consumption grows by 3.2% per year as population grows by 2.3% and

per capita use by 0.9% annually. This increased consumption is supported by a 4.9% growth in real per capita income.

Table 49 presents the results for the group of individually-modeled African countries in AGRM. This group is expected to grow total rice production by 3.2% per year, as area and yields grow by 2.0% and 1.2%, respectively. Total consumption of this group gains 3.2% annually, driven by 2.2% growth in population, 1.0% growth in per capita use, and 5.0% growth in real per capita income.

Table 50 shows that the “Other Africa” region (or the rest of African countries that are modeled as a group) expands its rice output by 2.4% per year, with 0.8% coming from growth in area and 1.6% from yield. Total consumption of this group expands at 2.8% per year, of which 2.3% comes from population growth and 0.5% from per capita use gain, supported by 4.7% gain in real per capita income.

Americas

Total rice production of the Western Hemisphere (Table 51) grows at 1.3% per year which comes from 1.1% yield growth and an area harvested gain of 0.2% annually. Total consumption increases at 1.2% annually, a combined effect of 0.9% population growth and 0.3% gain in per capita use driven by a 2.6% growth in real per capita income.

The group of individually-modeled Western Hemisphere countries (Table 52) is projected to grow total rice output by 1.4% per year, as area harvested increases by 0.2% and yields grow by 1.2%. Total rice consumption of this group gains 0.9% annually, as the 1.2% growth in population is offset by a 0.3% decline in per capita use. Real per capita income grows at 2.6% per year.

Total rice production of the “Other Western Hemisphere” region modeled as a group (Table 53) increases by 1.1% per year, with 0.1% coming from area expansion and 1.0% from yield gain. Total consumption of this group grows at 1.9% per year, of which 0.9% comes from population growth and 1.0% from per capita use. Real per capita income grows by 3.5% annually.

Asia

Total rice production of Asia (Table 54) increases by 0.8% per year, solely accounted for by yield growth as area harvested remains flat. The growth in total Asian consumption is 0.7% per year as population growth of 0.9% is offset by a 0.2% decline in per capita use. Rice is an inferior good in most Asian countries and the relatively strong projected growth of 4.8% in real per capita income has a dampening effect on rice consumption.

Similarly, the group of individually-modeled Asian countries (Table 55) is projected to grow total rice production by 0.8% annually based entirely on yield increases. Total rice consumption of this group grows by 0.6% annually, a result of population growth as per capita use declines by 0.2%. Real per capita increases by an average annual rate of 4.8%.

The growth of total rice output of the “Other Asia” region modeled as a group (Table 56) is 1.2% annually, with area harvested growing by 0.6% and yields gaining 0.6% per year. Total consumption of this group grows at 2.0% per year, of which 1.4% comes from population growth and 0.6% from per capita use; and real per capita income grows at 4.3% which is slightly slower than for the group of modeled Asian countries.

Europe

The total rice production of Europe (Table 57) grows at 0.8% per year which is all accounted for by yield improvements. Total consumption increases slightly at 0.6%, almost solely from an increase of per capita use, as population is relatively flat. Real per capita income is up 1.8% per year.

The group of individually-modeled European countries (Table 58) is projected to increase total rice output slightly by 0.8% per year, based only on improvement in yields. Total consumption of this group increases by 0.5% annually, with population and per capita use accounting for 0.2% and 0.3%, respectively. Real per capita income of this group grows at 1.8% per year.

Total rice production of the “Other Europe” region modeled as a group (Table 59) grows slightly by 3.0% per year, as yield grows by 2.3% and harvested area by 0.7%. Consumption of this group grows at 1.5% per year, with the 1.8% gain in per capita use being offset by a 0.3% decline in population. The real per capita income of this group grows at 1.9% per year.

Oceania

Tables 60 thru 62 show the results for Oceania which mainly consists of Australia. Total rice production expands by 2.6% per year, mainly from 2.1% gain in area harvested as yield grows only at 0.5%. Total consumption grows 1.7% annually, with 1.3% attributed to population growth and 0.4% to increases in per capita use. Real per capita income grows at 2.8% annually.

World

Tables 63 thru 65 present the sum of the five world regions discussed above.

ECOWAS

Production of this 15-country region is projected to grow by 4.2% per year, which comes from a 2.1% increase of harvested area and a 2.1% yield improvement (Table 66). Consumption expands by 3.7% per year, driven by 2.6% population growth, 1.1% gain in per capita use, and 5.8% income growth. Net imports are projected to expand by 3.4 mmt over the next decade, equivalent to a growth rate of 3.3% per year—reaching 11.3 mmt by 2024.

Nigeria is the largest producer/consumer in the ECOWAS region’s rice industry over the baseline period. Nigeria accounts for nearly 60% of the region’s volume growth in net imports, as the country’s domestic use continues to exceed domestic supply.

Nigeria accounts for 39% of the region's gain in rice area harvested. It contributes 33% of the region's rice output gain, based on a 4.1% annual growth in production supported by the strong growth in both area (2.0%) and yield (2.1%). Lastly, Nigeria accounts for 42% of the region's volume growth in consumption, as the country's rice consumption expands 4.2% annually with population growing at 2.7% and per capita use by 1.5% per year.

Results of Stochastic Baseline Analysis

Detailed Results of the Stochastic Baseline Analysis

The detailed results of the stochastic analyses for selected variables and countries are presented in Figures 17-33. In order to show the direction and dispersion of the stochastic outcome distribution, four selected outcome items (stochastic average, 10th percentile, 90th percentile, and the coefficient of variation) for selected variables are presented. Intuitively, the gap between the two percentiles (10th and 90th) indicates volatility or risk. Widening of this interval indicates increasing volatility over time and narrowing indicates decreasing volatility.

Another measure of dispersion of data points in a data series, such as each of the resulting probability distributions in this study, is the coefficient of variation (C.V.) which shows the extent of variability in relation to the mean. It is computed by dividing the standard deviation by the mean. A Lower C.V. indicates more stability, i.e., less risk. This information served as a useful decision-making guide for any agriculture-based business undertaking or government policy-making exercise.

The information projected in each one of the charts is similar in principle. Hence, for space consideration only one representative chart (Figure 17) will be discussed--which can then be used as a pattern in understanding the rest of the charts.

Figure 17 shows the long grain rice international reference price. For 2015, while the deterministic mean price is \$433 per mt (Table 1), the stochastic distribution indicates that 10% of the time the average price will be higher than \$535 per mt and 10% of the time lower than \$364 per mt. The gap between the two percentiles is \$171, which varies across the estimation period. The computed C.V. for 2015 is 15.3%.

Going forward to 2024, while the deterministic mean price is \$485 per mt (Table 1), the stochastic distribution indicates that 10% of the time the average price will be higher than \$574 per mt and lower than \$421 per mt 10% of the time. In 2024 the gap between the two percentiles is smaller at \$153, with a C.V. of only 11.9%.

Again, a similar analysis can be made for the rest of the stochastic results for the other selected variables presented. The same principle holds—with the difference being only with varying units and absolute numbers. This feature of the stochastic analysis provides an advantage as it indicates how the possible outcomes are distributed, thus providing additional information on risk and uncertainty which is an innate

characteristic of agricultural commodity enterprises and markets, such as that of rice. Thus, the stochastic analysis complements the basic information generated by the deterministic analysis by providing a better understanding of the dynamics of the global rice market.

Summary and Conclusions

Projections in this baseline over the next decade indicate steady growth in global rice trade. Exports are expected to expand in Thailand, Cambodia, Vietnam, and Myanmar. Strong import growth is projected for Nigeria, other Western African countries, and the Middle East. Production growth will come mainly from yield improvements as area harvested increases only marginally. The world is projected to face abundant rice supplies due to surpluses, assuming normal weather conditions; increased productivity and increased use of modern growing and processing technologies; and a continuing policy focus on self-sufficiency in rice. Consumption growth will be driven solely by population growth as per capita use declines slightly.

Under the assumption of normal average weather, with global trade continuing to grow as deficit rice-consuming countries become more attuned to food security issues, an environment of reasonable, steady increase in global rice prices will likely prevail.

As in any other enterprise, however, there are risks involved in the rice industry due to the uncertainties of weather, domestic policies, political developments, and other unexpected events. Actual market outcomes usually deviate from average estimates hence a stochastic analysis is included in this report which indicate the probable upper and lower bounds (confidence intervals) of future possible distribution of outcomes.

Some of the uncertainties in the rice market include the following issues:

- Timing and ability of Thailand regarding its PPP rice stock disposal
- India's export capacity with expanded Public Distribution System
- How the high margins between Western Hemisphere and Asian prices will play out?
- The extent of growth in African import markets
- How successful will the rice self-sufficiency programs by SE Asian importers be?
- The growth in government subsidies (PRC, Indonesia, the Philippines, and Thailand)

Lastly, the authors hope that the information contained in this report serves as useful guide for various domestic and international stakeholders in the rice industry.

Estimates of the Deterministic Baseline Analysis

Tables and Charts of Rice Supply, Utilization and Net Trade, 2013-2024

Table 1 World Rice Net Trade by Country and International Reference Prices, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Net Exporters	(Thousand Metric Tons)											
Argentina	595	590	624	647	636	665	651	653	672	680	688	702
Australia	310	250	266	280	290	304	330	355	368	382	388	391
Cambodia	995	1,178	1,268	1,362	1,565	1,766	1,890	2,003	2,114	2,235	2,360	2,417
Lao PDR	-15	-10	33	57	65	78	91	106	121	145	166	194
Egypt	575	476	479	648	644	670	690	710	726	734	738	741
India	10,300	8,582	7,185	7,038	7,122	7,244	7,246	7,314	7,544	7,694	8,045	8,064
Myanmar (Burma)	1,550	1,549	1,478	1,552	1,580	1,719	1,973	2,211	2,434	2,550	2,655	2,712
Pakistan	3,870	3,930	3,962	3,976	3,995	3,989	4,028	4,046	4,059	4,088	4,093	4,112
Thailand	10,000	10,208	10,692	10,913	11,096	11,365	11,650	11,921	12,173	12,444	12,744	13,129
United States	2,252	2,571	2,564	2,818	2,858	2,844	2,825	2,832	2,822	2,833	2,826	2,839
Uruguay	890	967	1,000	1,032	1,051	1,071	1,089	1,106	1,122	1,136	1,150	1,147
Vietnam	6,200	6,278	6,782	6,671	6,735	6,795	6,954	6,961	7,085	7,287	7,394	7,476
Brazil	200	159	409	472	513	523	621	705	749	813	833	853
Total Net Exports *	37,722	36,728	36,740	37,464	38,150	39,032	40,039	40,925	41,990	43,021	44,080	44,778
Net Importers												
Bangladesh	751	615	872	846	986	1,012	819	620	378	223	128	84
People's Republic of China	3,758	3,581	3,295	3,184	3,038	3,025	3,039	3,021	3,008	3,015	2,996	3,001
Brunei Darussalam	60	44	44	46	46	48	48	49	50	51	53	53
Cameroon	525	508	509	523	544	542	560	586	587	598	592	586
Canada	377	381	386	391	404	413	423	431	440	448	457	465
China - Hong Kong	420	426	423	423	426	428	430	432	433	435	436	437
Colombia	325	362	345	347	359	372	377	383	385	386	392	394
Cote d'Ivoire	1,120	1,129	1,156	1,169	1,169	1,200	1,215	1,230	1,243	1,255	1,270	1,268
European Union-28	1,285	1,182	1,165	1,171	1,190	1,204	1,220	1,222	1,234	1,270	1,304	1,271
Ghana	600	638	693	731	740	764	784	802	814	840	844	870
Guinea	240	225	205	199	189	162	162	169	169	177	188	215
Indonesia	1,225	1,368	1,705	1,910	1,682	1,599	1,412	1,270	1,311	1,376	1,359	1,315
Iran	1,650	1,603	1,605	1,714	1,782	1,870	1,899	1,957	2,006	2,046	2,104	2,138
Iraq	1,350	1,396	1,412	1,445	1,491	1,553	1,598	1,644	1,697	1,747	1,796	1,842
Japan	454	482	482	482	482	482	482	482	482	482	482	482

Kenya	430	387	419	427	440	447	474	502	522	553	583	605
Liberia	300	301	302	295	300	307	314	324	334	342	356	369
Malaysia	1,100	1,098	1,049	1,061	1,092	1,099	1,135	1,138	1,157	1,170	1,196	1,210
Mali	150	51	17	-32	-16	-18	-7	2	1	-24	-42	-128
Mexico	691	777	755	769	788	808	827	848	876	884	885	906
Mozambique	500	532	541	563	585	618	643	670	700	729	759	781
Nigeria	2,800	3,302	3,254	3,280	3,381	3,484	3,673	3,889	4,086	4,299	4,550	4,830
Philippines	1,450	1,469	1,270	1,246	1,364	1,471	1,483	1,570	1,649	1,752	1,860	1,981
Saudi Arabia	1,450	1,404	1,457	1,485	1,518	1,551	1,585	1,616	1,645	1,673	1,701	1,726
Senegal	1,090	1,130	1,105	1,121	1,143	1,175	1,206	1,239	1,271	1,306	1,335	1,369
Sierra Leone	270	222	205	196	176	158	153	151	154	141	135	139
Singapore	300	304	308	312	317	319	322	325	327	329	331	332
South Africa	910	968	969	985	1,004	1,024	1,049	1,070	1,094	1,105	1,113	1,125
South Korea	308	409	409	409	409	409	409	409	409	409	409	409
Taiwan	125	116	116	116	116	116	116	116	116	116	116	116
Tanzania	170	178	127	83	66	62	73	75	108	130	182	204
Turkey	321	275	268	296	287	299	311	319	315	325	331	329
Other Africa	3,205	3,683	3,752	3,825	3,878	3,929	4,035	4,128	4,230	4,328	4,424	4,523
Other Americas	1,493	1,810	1,569	1,702	1,760	1,772	2,018	2,218	2,342	2,296	2,300	2,281
Other Asia	3,056	2,772	2,921	3,036	3,175	3,378	3,703	3,865	4,137	4,404	4,656	4,672
Other Europe	130	165	143	131	137	139	143	146	149	151	154	157
Other Oceania	215	230	235	239	244	248	252	256	261	265	269	273
Ecowas 7	1,340	1,308	1,346	1,441	1,559	1,674	1,785	1,910	2,039	2,176	2,268	2,349
Residual	1,778	-101	-95	-102	-103	-111	-133	-159	-172	-187	-192	-199
Total Net Imports	37,722	36,728	36,740	37,464	38,150	39,032	40,039	40,925	41,990	43,021	44,080	44,778
Prices												
International Rice Reference Price	428	426	433	455	457	465	469	473	475	478	479	485
U.S. FOB Gulf Ports	603	527	528	527	532	538	538	541	541	537	538	536
U.S. No. 2 Medium FOB CA	816	875	849	818	826	815	822	831	834	825	829	832

(U.S. Dollars per Metric Ton)

*Total net exports are the sum of all positive net exports and negative net imports.

Table 2 World Rice Supply, Utilization, Total Trade and Stocks-to Use, 2013-2024.

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	160,865	160,920	161,316	161,910	162,268	162,395	162,521	162,686	162,783	162,804	163,076	163,110
	(Metric Tons per Hectare)											
Yield	2.96	2.99	3.01	3.04	3.07	3.09	3.12	3.15	3.17	3.20	3.22	3.24
	(Thousand Metric Tons)											
Production	476,960	481,031	485,460	492,798	498,335	502,293	506,810	511,660	516,527	520,994	525,281	528,072
Beginning Stocks	110,095	107,067	105,159	105,552	108,056	111,050	113,633	115,813	118,146	121,051	124,159	127,747
Domestic Supply	587,055	588,098	590,619	598,350	606,391	613,343	620,443	627,473	634,674	642,045	649,441	655,820
Consumption	478,200	483,033	485,162	490,396	495,444	499,821	504,763	509,486	513,794	518,072	521,885	526,094
Ending Stocks	107,067	105,159	105,552	108,056	111,050	113,633	115,813	118,146	121,051	124,159	127,747	129,925
Domestic Use	585,267	588,193	590,714	598,453	606,495	613,454	620,576	627,632	634,845	642,232	649,633	656,019
Total Trade	42,226	41,705	41,502	42,205	42,960	43,830	44,746	45,594	46,639	47,582	48,638	49,377
	(Percent)											
Stocks-to-Use Ratio	22.39	21.77	21.76	22.03	22.41	22.73	22.94	23.19	23.56	23.97	24.48	24.70

Table 3 U.S. Rice Supply, Utilization, Net Trade and Farm Prices, 2013-2024.

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	999	1,181	1,156	1,158	1,155	1,155	1,150	1,141	1,134	1,129	1,124	1,124
	(Metric Tons per Hectare)											
Yield	6.12	5.98	6.10	6.17	6.23	6.29	6.35	6.40	6.46	6.52	6.58	6.64
	(Thousand Metric Tons)											
Production	6,117	7,068	7,056	7,138	7,193	7,262	7,299	7,308	7,327	7,361	7,391	7,462
Beginning Stocks	1,156	1,025	1,288	1,488	1,422	1,328	1,270	1,247	1,212	1,194	1,170	1,165
Domestic Supply	7,273	8,093	8,344	8,625	8,615	8,590	8,569	8,556	8,539	8,555	8,561	8,627
Consumption	3,996	4,227	4,293	4,386	4,428	4,476	4,496	4,511	4,523	4,552	4,571	4,578
Ending Stocks	1,025	1,288	1,488	1,422	1,328	1,270	1,247	1,212	1,194	1,170	1,165	1,209
Domestic Use	5,021	5,515	5,780	5,808	5,756	5,746	5,743	5,724	5,717	5,722	5,735	5,788
Net Trade	2,252	2,571	2,564	2,818	2,858	2,844	2,825	2,832	2,822	2,833	2,826	2,839

U.S. Rice Farm Prices	(U.S. Dollars per Hundredweight)											
Season Average Farm Price	16.10	14.15	13.65	13.64	13.75	13.90	13.92	13.97	13.96	13.87	13.88	13.86
Long Grain Farm Price	15.40	12.32	12.25	12.21	12.28	12.41	12.43	12.48	12.46	12.37	12.37	12.34
Japonica Farm Price	19.90	21.74	18.65	18.58	18.69	18.88	18.90	18.97	18.94	18.81	18.81	18.78
Medium/short (excl. Japonica) Farm Price	15.80	15.00	14.92	14.87	14.95	15.11	15.12	15.18	15.16	15.06	15.06	15.03

Table 4 Argentina Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Area Harvested	241	241	240	242	243	243	244	244	245	245	245	245
Yield	4.26	4.24	4.31	4.38	4.45	4.50	4.56	4.62	4.67	4.71	4.76	4.83
Production	1,027	1,022	1,035	1,061	1,083	1,096	1,111	1,129	1,145	1,155	1,166	1,180
Beginning Stocks	227	224	215	181	147	141	117	117	130	135	139	142
Domestic Supply	1,254	1,246	1,250	1,242	1,230	1,238	1,228	1,246	1,275	1,290	1,305	1,322
Consumption	435	442	444	448	453	456	460	463	468	471	475	479
Ending Stocks	224	215	181	147	141	117	117	130	135	139	142	140
Domestic Use	659	657	625	595	594	573	577	593	603	610	617	620
Net Trade	595	590	624	647	636	665	651	653	672	680	688	702

Table 5 Australia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	76	71	87	95	99	101	100	99	99	98	97	96
					(Metric Tons per Hectare)							
Yield	7.89	7.11	7.42	7.49	7.57	7.66	7.77	7.87	7.98	8.08	8.19	8.30
					(Thousand Metric Tons)							
Production	600	505	642	709	748	771	778	782	787	791	792	794
Beginning Stocks	238	171	60	64	117	195	274	328	357	372	370	358
Domestic Supply	838	676	702	773	865	965	1,052	1,110	1,144	1,163	1,161	1,152
Consumption	357	366	372	376	381	387	394	398	404	412	416	419
Ending Stocks	171	60	64	117	195	274	328	357	372	370	358	342
Domestic Use	528	426	436	493	575	661	722	755	776	781	773	761
Net Trade	310	250	266	280	290	304	330	355	368	382	388	391

Table 6 Bangladesh Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	11,770	11,800	11,804	11,844	11,863	11,876	11,922	11,969	12,021	12,045	12,066	12,060
					(Metric Tons per Hectare)							
Yield	2.92	2.93	2.96	3.01	3.05	3.09	3.13	3.17	3.22	3.26	3.30	3.33
					(Thousand Metric Tons)							
Production	34,390	34,600	34,959	35,593	36,159	36,660	37,308	37,967	38,680	39,250	39,770	40,212
Beginning Stocks	696	937	905	867	830	823	833	833	832	841	849	858
Domestic Supply	35,086	35,537	35,864	36,460	36,989	37,483	38,141	38,799	39,512	40,091	40,620	41,069
Consumption	34,900	35,247	35,869	36,477	37,152	37,661	38,128	38,588	39,049	39,464	39,890	40,287
Ending Stocks	937	905	867	830	823	833	833	832	841	849	858	866
Domestic Use	35,837	36,152	36,736	37,306	37,975	38,494	38,960	39,420	39,890	40,313	40,748	41,153
Net Trade	-751	-615	-872	-846	-986	-1,012	-819	-620	-378	-223	-128	-84

Table 7 Brazil Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	2,400	2,403	2,394	2,378	2,385	2,378	2,371	2,372	2,373	2,375	2,373	2,371
					(Metric Tons per Hectare)							
Yield	3.46	3.47	3.48	3.53	3.55	3.60	3.66	3.71	3.75	3.79	3.83	3.87
					(Thousand Metric Tons)							
Production	8,300	8,331	8,337	8,389	8,467	8,551	8,686	8,801	8,899	9,002	9,097	9,175
Beginning Stocks	528	728	977	1,104	1,184	1,229	1,267	1,301	1,335	1,371	1,407	1,444
Domestic Supply	8,828	9,059	9,314	9,493	9,652	9,780	9,953	10,101	10,234	10,372	10,504	10,619
Consumption	7,900	7,923	7,802	7,837	7,909	7,990	8,031	8,061	8,115	8,152	8,226	8,282
Ending Stocks	728	977	1,104	1,184	1,229	1,267	1,301	1,335	1,371	1,407	1,444	1,484
Domestic Use	8,628	8,900	8,906	9,022	9,138	9,257	9,332	9,396	9,485	9,559	9,670	9,766
Net Trade	200	159	409	472	513	523	621	705	749	813	833	853

Table 8 Brunei Darussalam Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	5	5	5	5	5	5	5	5	5	5	5	5
					(Metric Tons per Hectare)							
Yield	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					(Thousand Metric Tons)							
Production	1	1	1	1	1	1	1	1	1	1	1	1
Beginning Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Supply	1	1	1	1	1	1	1	1	1	1	1	1
Consumption	61	45	45	47	47	49	49	50	51	52	54	54
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	61	45	45	47	47	49	49	50	51	52	54	54
Net Trade	-60	-44	-44	-46	-46	-48	-48	-49	-50	-51	-53	-53

Table 9 Cambodia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	2,970	3,056	3,052	3,112	3,172	3,223	3,277	3,286	3,301	3,316	3,326	3,337
	(Metric Tons per Hectare)											
Yield	1.59	1.61	1.67	1.70	1.75	1.81	1.84	1.89	1.95	2.00	2.05	2.08
	(Thousand Metric Tons)											
Production	4,725	4,934	5,101	5,276	5,561	5,841	6,044	6,227	6,424	6,624	6,817	6,946
Beginning Stocks	221	301	305	308	311	314	317	320	323	326	329	332
Domestic Supply	4,946	5,235	5,406	5,584	5,872	6,155	6,361	6,547	6,746	6,950	7,147	7,278
Consumption	3,650	3,752	3,831	3,911	3,992	4,071	4,151	4,221	4,306	4,386	4,455	4,526
Ending Stocks	301	305	308	311	314	317	320	323	326	329	332	335
Domestic Use	3,951	4,057	4,138	4,222	4,306	4,389	4,472	4,544	4,632	4,715	4,787	4,861
Net Trade	995	1,178	1,268	1,362	1,565	1,766	1,890	2,003	2,114	2,235	2,360	2,417

Table 10 Cameroon Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	167	148	155	166	176	186	196	207	216	228	240	253
	(Metric Tons per Hectare)											
Yield	0.73	0.87	0.92	0.98	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.17
	(Thousand Metric Tons)											
Production	122	130	143	163	178	194	208	225	239	255	275	296
Beginning Stocks	0	0	2	3	8	14	14	15	16	16	16	17
Domestic Supply	122	130	145	166	187	207	223	239	254	271	291	313
Consumption	647	636	652	681	717	736	768	810	826	852	866	882
Ending Stocks	0	2	3	8	14	14	15	16	16	16	17	17
Domestic Use	647	638	654	689	731	750	783	826	842	869	883	899
Net Trade	-525	-508	-509	-523	-544	-542	-560	-586	-587	-598	-592	-586

Table 11 Canada Rice Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Metric Tons)											
Consumption	377	381	386	391	404	413	423	431	440	448	457	465
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	377	381	386	391	404	413	423	431	440	448	457	465
Net Trade	-377	-381	-386	-391	-404	-413	-423	-431	-440	-448	-457	-465

Table 12 People's Republic of China Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	30,312	30,313	30,131	30,226	30,234	30,020	29,872	29,784	29,637	29,495	29,384	29,218
	(Metric Tons per Hectare)											
Yield	4.70	4.74	4.77	4.83	4.84	4.86	4.88	4.91	4.94	4.97	4.98	4.98
	(Thousand Metric Tons)											
Production	142,530	143,697	143,786	145,900	146,372	145,754	145,814	146,165	146,286	146,512	146,291	145,463
Beginning Stocks	46,826	46,814	46,385	46,618	48,637	51,049	53,129	55,322	58,063	61,287	64,780	68,822
Domestic Supply	189,356	190,511	190,171	192,517	195,008	196,803	198,943	201,487	204,349	207,799	211,072	214,286
Consumption	146,300	147,707	146,848	147,064	146,998	146,699	146,660	146,445	146,071	146,033	145,246	145,079
Ending Stocks	46,814	46,385	46,618	48,637	51,049	53,129	55,322	58,063	61,287	64,780	68,822	72,207
Domestic Use	193,114	194,092	193,466	195,701	198,047	199,828	201,982	204,508	207,358	210,813	214,068	217,286
Net Trade	-3,758	-3,581	-3,295	-3,184	-3,038	-3,025	-3,039	-3,021	-3,008	-3,015	-2,996	-3,001

Table 13 Colombia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	450	400	408	413	417	418	418	418	418	417	417	416
					(Metric Tons per Hectare)							
Yield	2.91	3.25	3.29	3.33	3.37	3.41	3.45	3.49	3.53	3.57	3.61	3.65
					(Thousand Metric Tons)							
Production	1,310	1,300	1,342	1,375	1,403	1,425	1,444	1,459	1,475	1,490	1,505	1,520
Beginning Stocks	85	120	162	219	276	325	365	402	436	469	504	535
Domestic Supply	1,395	1,420	1,504	1,594	1,678	1,750	1,809	1,861	1,910	1,959	2,009	2,055
Consumption	1,600	1,620	1,630	1,665	1,713	1,757	1,784	1,808	1,827	1,841	1,866	1,884
Ending Stocks	120	162	219	276	325	365	402	436	469	504	535	565
Domestic Use	1,720	1,782	1,849	1,941	2,038	2,122	2,186	2,244	2,296	2,345	2,401	2,449
Net Trade	-325	-362	-345	-347	-359	-372	-377	-383	-385	-386	-392	-394

Table 14 Cote D'Ivoire Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	450	458	466	489	498	500	510	521	537	553	562	575
					(Metric Tons per Hectare)							
Yield	1.16	1.18	1.19	1.23	1.27	1.29	1.32	1.34	1.37	1.39	1.42	1.46
					(Thousand Metric Tons)							
Production	520	541	553	602	631	646	671	699	734	770	796	838
Beginning Stocks	181	171	165	167	173	175	178	182	185	189	194	197
Domestic Supply	701	712	718	768	804	820	850	881	919	959	990	1,036
Consumption	1,650	1,676	1,708	1,765	1,798	1,842	1,883	1,926	1,972	2,020	2,062	2,103
Ending Stocks	171	165	167	173	175	178	182	185	189	194	197	201
Domestic Use	1,821	1,841	1,875	1,937	1,973	2,020	2,065	2,111	2,162	2,214	2,259	2,304
Net Trade	-1,120	-1,129	-1,156	-1,169	-1,169	-1,200	-1,215	-1,230	-1,243	-1,255	-1,270	-1,268

Table 15 Egypt Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	770	665	709	718	727	729	734	739	740	740	741	741
					(Metric Tons per Hectare)							
Yield	6.17	6.77	6.23	6.34	6.43	6.55	6.62	6.68	6.74	6.80	6.86	6.92
					(Thousand Metric Tons)							
Production	4,750	4,501	4,415	4,550	4,672	4,777	4,861	4,933	4,987	5,034	5,081	5,125
Beginning Stocks	427	602	630	599	514	554	604	651	691	708	709	698
Domestic Supply	5,177	5,103	5,045	5,148	5,186	5,331	5,465	5,584	5,678	5,742	5,790	5,823
Consumption	4,000	3,997	3,967	3,987	3,988	4,057	4,125	4,183	4,244	4,299	4,354	4,402
Ending Stocks	602	630	599	514	554	604	651	691	708	709	698	680
Domestic Use	4,602	4,626	4,565	4,501	4,542	4,661	4,776	4,874	4,951	5,008	5,052	5,082
Net Trade	575	476	479	648	644	670	690	710	726	734	738	741

Table 16 EU-28 Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	438	438	439	439	439	439	438	438	438	438	438	438
					(Metric Tons per Hectare)							
Yield	4.49	4.48	4.54	4.58	4.62	4.66	4.70	4.74	4.78	4.82	4.86	4.90
					(Thousand Metric Tons)							
Production	1,965	1,966	1,994	2,011	2,027	2,044	2,058	2,075	2,093	2,111	2,129	2,147
Beginning Stocks	1,188	1,188	1,077	993	919	848	786	730	671	619	599	612
Domestic Supply	3,153	3,154	3,071	3,003	2,946	2,892	2,845	2,805	2,764	2,730	2,729	2,759
Consumption	3,250	3,259	3,243	3,255	3,288	3,309	3,334	3,356	3,380	3,400	3,421	3,439
Ending Stocks	1,188	1,077	993	919	848	786	730	671	619	599	612	592
Domestic Use	4,438	4,336	4,236	4,174	4,136	4,096	4,065	4,027	3,998	3,999	4,033	4,030
Net Trade	-1,285	-1,182	-1,165	-1,171	-1,190	-1,204	-1,220	-1,222	-1,234	-1,270	-1,304	-1,271

Table 17 Ghana Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	220	223	235	249	266	280	294	309	324	339	354	369
					(Metric Tons per Hectare)							
Yield	1.60	1.63	1.66	1.71	1.76	1.80	1.83	1.86	1.89	1.92	1.95	1.98
					(Thousand Metric Tons)							
Production	352	363	388	426	468	503	538	574	612	651	690	730
Beginning Stocks	172	149	150	164	178	189	201	212	223	233	246	255
Domestic Supply	524	512	538	590	646	692	739	786	835	884	935	985
Consumption	975	1,000	1,068	1,142	1,197	1,255	1,311	1,365	1,416	1,478	1,525	1,587
Ending Stocks	149	150	164	178	189	201	212	223	233	246	255	267
Domestic Use	1,124	1,150	1,231	1,320	1,386	1,456	1,523	1,588	1,649	1,723	1,780	1,855
Net Trade	-600	-638	-693	-731	-740	-764	-784	-802	-814	-840	-844	-870

Table 18 Guinea Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	1,100	1,151	1,155	1,166	1,179	1,193	1,196	1,198	1,202	1,206	1,212	1,218
					(Metric Tons per Hectare)							
Yield	1.23	1.27	1.29	1.32	1.35	1.38	1.40	1.43	1.46	1.49	1.52	1.55
					(Thousand Metric Tons)							
Production	1,355	1,456	1,496	1,541	1,590	1,642	1,680	1,717	1,756	1,797	1,840	1,886
Beginning Stocks	145	130	163	165	167	168	169	171	172	174	176	178
Domestic Supply	1,500	1,586	1,660	1,706	1,757	1,811	1,850	1,888	1,928	1,971	2,016	2,063
Consumption	1,610	1,648	1,699	1,739	1,778	1,803	1,841	1,884	1,924	1,972	2,026	2,098
Ending Stocks	130	163	165	167	168	169	171	172	174	176	178	181
Domestic Use	1,740	1,811	1,865	1,906	1,947	1,972	2,011	2,056	2,098	2,148	2,204	2,278
Net Trade	-240	-225	-205	-199	-189	-162	-162	-169	-169	-177	-188	-215

Table 19 China-Hong Kong Rice Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Metric Tons)											
Consumption	420	426	423	423	426	428	430	432	433	435	436	437
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	420	426	423	423	426	428	430	432	433	435	436	437
Net Trade	-420	-426	-423	-423	-426	-428	-430	-432	-433	-435	-436	-437

Table 20 India Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	43,940	43,505	43,606	43,661	43,660	43,649	43,584	43,568	43,531	43,474	43,637	43,666
	(Metric Tons per Hectare)											
Yield	2.42	2.44	2.48	2.52	2.55	2.58	2.61	2.64	2.68	2.71	2.73	2.75
	(Thousand Metric Tons)											
Production	106,540	106,331	108,004	109,958	111,549	112,662	113,690	114,912	116,453	117,694	119,204	120,108
Beginning Stocks	25,440	22,500	21,228	21,704	22,693	23,792	24,531	24,728	24,862	25,016	25,075	24,985
Domestic Supply	131,980	128,831	129,233	131,662	134,242	136,454	138,221	139,640	141,315	142,710	144,280	145,094
Consumption	99,180	99,020	100,344	101,931	103,329	104,678	106,248	107,464	108,755	109,940	111,250	112,636
Ending Stocks	22,500	21,228	21,704	22,693	23,792	24,531	24,728	24,862	25,016	25,075	24,985	24,393
Domestic Use	121,680	120,249	122,048	124,624	127,120	129,210	130,975	132,325	133,770	135,015	136,235	137,029
Net Trade	10,300	8,582	7,185	7,038	7,122	7,244	7,246	7,314	7,544	7,694	8,045	8,064

Table 21 Indonesia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	12,100	12,159	12,200	12,201	12,202	12,193	12,173	12,133	12,090	12,031	11,997	11,995
					(Metric Tons per Hectare)							
Yield	3.00	3.05	3.06	3.09	3.14	3.17	3.21	3.25	3.29	3.32	3.36	3.37
					(Thousand Metric Tons)							
Production	36,300	37,047	37,371	37,735	38,315	38,658	39,119	39,480	39,797	39,975	40,328	40,478
Beginning Stocks	6,476	5,501	4,708	4,736	4,906	5,041	5,120	5,160	5,178	5,186	5,189	5,190
Domestic Supply	42,776	42,548	42,078	42,471	43,221	43,699	44,239	44,640	44,975	45,161	45,517	45,667
Consumption	38,500	39,208	39,047	39,475	39,862	40,178	40,491	40,733	41,100	41,348	41,687	41,793
Ending Stocks	5,501	4,708	4,736	4,906	5,041	5,120	5,160	5,178	5,186	5,189	5,190	5,190
Domestic Use	44,001	43,916	43,783	44,381	44,903	45,298	45,651	45,911	46,285	46,537	46,876	46,983
Net Trade	-1,225	-1,368	-1,705	-1,910	-1,682	-1,599	-1,412	-1,270	-1,311	-1,376	-1,359	-1,315

Table 22 Iran Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	590	604	609	616	623	625	629	631	638	644	649	655
					(Metric Tons per Hectare)							
Yield	2.80	2.83	2.86	2.88	2.91	2.93	2.96	2.98	3.01	3.03	3.06	3.08
					(Thousand Metric Tons)							
Production	1,650	1,711	1,741	1,775	1,810	1,832	1,860	1,883	1,919	1,953	1,985	2,020
Beginning Stocks	925	825	759	648	604	593	600	612	630	650	672	696
Domestic Supply	2,575	2,536	2,500	2,424	2,414	2,425	2,460	2,495	2,549	2,604	2,657	2,716
Consumption	3,400	3,379	3,457	3,534	3,603	3,694	3,747	3,823	3,905	3,978	4,066	4,136
Ending Stocks	825	759	648	604	593	600	612	630	650	672	696	718
Domestic Use	4,225	4,139	4,105	4,138	4,196	4,295	4,359	4,452	4,555	4,650	4,761	4,854
Net Trade	-1,650	-1,603	-1,605	-1,714	-1,782	-1,870	-1,899	-1,957	-2,006	-2,046	-2,104	-2,138

Table 23 Iraq Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	82	82	78	79	81	83	88	90	89	89	89	92
					(Metric Tons per Hectare)							
Yield	2.20	2.21	2.21	2.23	2.25	2.26	2.28	2.29	2.30	2.31	2.32	2.34
					(Thousand Metric Tons)							
Production	180	181	173	176	182	189	201	205	204	206	207	216
Beginning Stocks	219	274	321	347	358	365	371	377	383	387	391	394
Domestic Supply	399	455	494	523	540	554	572	582	587	593	598	610
Consumption	1,475	1,529	1,559	1,609	1,666	1,736	1,792	1,844	1,897	1,949	2,000	2,054
Ending Stocks	274	321	347	358	365	371	377	383	387	391	394	397
Domestic Use	1,749	1,850	1,906	1,968	2,032	2,107	2,170	2,226	2,283	2,340	2,394	2,451
Net Trade	-1,350	-1,396	-1,412	-1,445	-1,491	-1,553	-1,598	-1,644	-1,697	-1,747	-1,796	-1,842

Table 24 Japan Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	1,599	1,598	1,574	1,525	1,488	1,470	1,462	1,440	1,436	1,433	1,419	1,379
					(Metric Tons per Hectare)							
Yield	4.90	4.89	4.87	4.86	4.88	4.89	4.90	4.92	4.93	4.93	4.94	4.95
					(Thousand Metric Tons)							
Production	7,832	7,804	7,664	7,412	7,262	7,187	7,167	7,078	7,070	7,066	7,010	6,823
Beginning Stocks	2,742	2,778	2,841	2,909	2,750	2,611	2,426	2,262	2,084	1,963	1,892	1,850
Domestic Supply	10,574	10,582	10,506	10,320	10,012	9,799	9,593	9,340	9,154	9,029	8,902	8,673
Consumption	8,250	8,223	8,079	8,052	7,883	7,854	7,813	7,737	7,673	7,619	7,534	7,460
Ending Stocks	2,778	2,841	2,909	2,750	2,611	2,426	2,262	2,084	1,963	1,892	1,850	1,695
Domestic Use	11,028	11,064	10,988	10,802	10,494	10,281	10,075	9,822	9,636	9,511	9,384	9,155
Net Trade	-454	-482	-482	-482	-482	-482	-482	-482	-482	-482	-482	-482

Table 25 Kenya Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	28	29	31	32	33	34	35	36	37	38	39	40
					(Metric Tons per Hectare)							
Yield	3.46	3.29	3.40	3.53	3.61	3.69	3.74	3.79	3.84	3.89	3.94	3.99
					(Thousand Metric Tons)							
Production	97	96	104	112	119	125	131	137	142	148	154	160
Beginning Stocks	100	142	133	139	141	144	143	150	158	164	173	182
Domestic Supply	197	238	237	251	260	269	274	286	300	313	327	342
Consumption	475	492	517	537	556	573	599	630	658	693	728	758
Ending Stocks	142	133	139	141	144	143	150	158	164	173	182	190
Domestic Use	617	625	656	679	700	716	748	788	822	866	910	948
Net Trade	-430	-387	-419	-427	-440	-447	-474	-502	-522	-553	-583	-605

Table 26 Lao PDR Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	869	901	904	922	930	936	943	949	961	972	982	991
					(Metric Tons per Hectare)							
Yield	1.69	1.72	1.81	1.84	1.87	1.90	1.93	1.96	1.99	2.02	2.05	2.09
					(Thousand Metric Tons)							
Production	1,465	1,547	1,636	1,699	1,741	1,781	1,823	1,865	1,909	1,960	2,010	2,068
Beginning Stocks	206	136	120	122	123	124	125	127	128	129	130	131
Domestic Supply	1,671	1,683	1,756	1,820	1,865	1,906	1,948	1,992	2,036	2,089	2,140	2,199
Consumption	1,550	1,572	1,602	1,640	1,675	1,703	1,731	1,758	1,786	1,815	1,843	1,873
Ending Stocks	136	120	122	123	124	125	127	128	129	130	131	132
Domestic Use	1,686	1,693	1,724	1,764	1,800	1,828	1,857	1,886	1,915	1,944	1,974	2,005
Net Trade	-15	-10	33	57	65	78	91	106	121	145	166	194

Table 27 Liberia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	230	250	256	261	267	273	278	284	288	293	297	301
					(Metric Tons per Hectare)							
Yield	0.65	0.80	0.83	0.85	0.88	0.89	0.90	0.91	0.92	0.93	0.94	0.94
					(Thousand Metric Tons)							
Production	150	200	212	223	235	243	250	257	264	271	278	285
Beginning Stocks	53	43	54	55	55	56	56	57	57	58	59	59
Domestic Supply	203	243	265	278	290	298	306	314	322	329	337	344
Consumption	460	490	512	518	535	549	564	581	597	612	634	653
Ending Stocks	43	54	55	55	56	56	57	57	58	59	59	60
Domestic Use	503	544	567	573	590	605	621	638	655	671	693	713
Net Trade	-300	-301	-302	-295	-300	-307	-314	-324	-334	-342	-356	-369

Table 28 Malaysia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	690	689	688	687	687	686	686	685	685	685	684	683
					(Metric Tons per Hectare)							
Yield	2.54	2.58	2.59	2.62	2.64	2.66	2.69	2.73	2.75	2.79	2.82	2.85
					(Thousand Metric Tons)							
Production	1,755	1,775	1,781	1,800	1,814	1,825	1,849	1,869	1,887	1,908	1,929	1,950
Beginning Stocks	588	668	737	735	730	736	721	729	725	721	718	724
Domestic Supply	2,343	2,443	2,518	2,535	2,544	2,561	2,570	2,599	2,612	2,630	2,647	2,674
Consumption	2,775	2,804	2,832	2,865	2,900	2,938	2,976	3,012	3,048	3,082	3,118	3,154
Ending Stocks	668	737	735	730	736	721	729	725	721	718	724	730
Domestic Use	3,443	3,541	3,567	3,595	3,636	3,660	3,705	3,737	3,769	3,800	3,842	3,884
Net Trade	-1,100	-1,098	-1,049	-1,061	-1,092	-1,099	-1,135	-1,138	-1,157	-1,170	-1,196	-1,210

Table 29 Mali Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	605	690	703	727	744	753	761	767	773	782	790	819
					(Metric Tons per Hectare)							
Yield	2.38	2.12	2.20	2.27	2.35	2.42	2.48	2.54	2.60	2.68	2.74	2.80
					(Thousand Metric Tons)							
Production	1,438	1,466	1,549	1,650	1,746	1,822	1,891	1,946	2,011	2,093	2,165	2,296
Beginning Stocks	87	195	198	200	197	197	194	193	190	187	185	182
Domestic Supply	1,525	1,661	1,747	1,851	1,944	2,018	2,085	2,139	2,201	2,280	2,349	2,478
Consumption	1,480	1,513	1,563	1,621	1,731	1,806	1,886	1,951	2,015	2,071	2,126	2,171
Ending Stocks	195	198	200	197	197	194	193	190	187	185	182	178
Domestic Use	1,675	1,712	1,764	1,819	1,928	2,000	2,078	2,141	2,202	2,256	2,308	2,349
Net Trade	-150	-51	-17	32	16	18	7	-2	-1	24	42	128

Table 30 Mexico Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	35	39	40	40	41	41	40	40	40	40	40	40
					(Metric Tons per Hectare)							
Yield	3.74	3.76	3.79	3.83	3.86	3.88	3.91	3.93	3.96	4.00	4.02	4.01
					(Thousand Metric Tons)							
Production	131	145	151	155	157	157	158	159	160	161	162	161
Beginning Stocks	189	151	180	185	187	190	193	194	196	199	199	192
Domestic Supply	320	296	332	340	343	347	351	353	356	360	361	354
Consumption	860	893	901	922	942	962	984	1,004	1,034	1,045	1,054	1,063
Ending Stocks	151	180	185	187	190	193	194	196	199	199	192	197
Domestic Use	1,011	1,073	1,087	1,109	1,132	1,155	1,178	1,200	1,232	1,244	1,246	1,259
Net Trade	-691	-777	-755	-769	-788	-808	-827	-848	-876	-884	-885	-906

Table 31 Mozambique Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	240	240	240	241	241	242	243	245	246	248	250	252
					(Metric Tons per Hectare)							
Yield	0.95	0.95	0.97	0.99	1.01	1.03	1.04	1.05	1.07	1.09	1.11	1.14
					(Thousand Metric Tons)							
Production	228	228	234	239	245	250	254	257	263	270	277	287
Beginning Stocks	0	0	14	15	16	17	18	19	21	22	23	25
Domestic Supply	228	228	248	254	260	267	272	277	284	292	301	312
Consumption	728	746	774	801	828	866	895	926	962	998	1,035	1,067
Ending Stocks	0	14	15	16	17	18	19	21	22	23	25	26
Domestic Use	728	760	789	817	845	885	914	947	984	1,021	1,060	1,093
Net Trade	-500	-532	-541	-563	-585	-618	-643	-670	-700	-729	-759	-781

Table 32 Myanmar Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	7,050	7,093	7,138	7,181	7,236	7,277	7,323	7,370	7,410	7,438	7,470	7,495
					(Metric Tons per Hectare)							
Yield	1.70	1.71	1.74	1.78	1.81	1.85	1.88	1.91	1.94	1.97	2.00	2.02
					(Thousand Metric Tons)							
Production	11,957	12,152	12,452	12,789	13,101	13,436	13,759	14,088	14,407	14,657	14,940	15,162
Beginning Stocks	553	510	394	436	520	638	816	943	1,059	1,169	1,307	1,486
Domestic Supply	12,510	12,662	12,846	13,225	13,621	14,073	14,575	15,032	15,466	15,826	16,246	16,648
Consumption	10,450	10,719	10,932	11,154	11,403	11,539	11,658	11,761	11,864	11,969	12,105	12,286
Ending Stocks	510	394	436	520	638	816	943	1,059	1,169	1,307	1,486	1,650
Domestic Use	10,960	11,113	11,368	11,673	12,041	12,355	12,602	12,820	13,032	13,276	13,591	13,936
Net Trade	1,550	1,549	1,478	1,552	1,580	1,719	1,973	2,211	2,434	2,550	2,655	2,712

Table 33 Nigeria Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	2,500	2,303	2,497	2,630	2,730	2,815	2,864	2,928	2,996	3,065	3,110	3,117
					(Metric Tons per Hectare)							
Yield	1.11	1.11	1.14	1.18	1.22	1.26	1.29	1.30	1.32	1.34	1.36	1.40
					(Thousand Metric Tons)							
Production	2,772	2,563	2,853	3,111	3,323	3,551	3,681	3,805	3,952	4,101	4,237	4,353
Beginning Stocks	885	657	649	667	683	696	704	711	715	718	721	722
Domestic Supply	3,657	3,220	3,502	3,778	4,007	4,246	4,386	4,515	4,667	4,819	4,957	5,075
Consumption	5,800	5,873	6,089	6,374	6,692	7,026	7,348	7,690	8,034	8,398	8,785	9,182
Ending Stocks	657	649	667	683	696	704	711	715	718	721	722	723
Domestic Use	6,457	6,522	6,756	7,058	7,387	7,730	8,058	8,405	8,753	9,118	9,507	9,906
Net Trade	-2,800	-3,302	-3,254	-3,280	-3,381	-3,484	-3,673	-3,889	-4,086	-4,299	-4,550	-4,830

Table 34 Pakistan Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	2,760	2,749	2,745	2,728	2,729	2,730	2,726	2,737	2,729	2,717	2,727	2,726
					(Metric Tons per Hectare)							
Yield	2.43	2.43	2.45	2.49	2.51	2.55	2.58	2.58	2.62	2.65	2.66	2.67
					(Thousand Metric Tons)							
Production	6,700	6,684	6,718	6,803	6,853	6,963	7,024	7,063	7,158	7,194	7,242	7,268
Beginning Stocks	500	700	759	754	771	776	844	873	874	897	876	835
Domestic Supply	7,200	7,384	7,477	7,558	7,624	7,740	7,868	7,935	8,033	8,091	8,118	8,103
Consumption	2,630	2,696	2,761	2,811	2,853	2,907	2,967	3,016	3,077	3,126	3,189	3,243
Ending Stocks	700	759	754	771	776	844	873	874	897	876	835	748
Domestic Use	3,330	3,455	3,515	3,582	3,629	3,751	3,840	3,890	3,974	4,002	4,025	3,992
Net Trade	3,870	3,930	3,962	3,976	3,995	3,989	4,028	4,046	4,059	4,088	4,093	4,112

Table 35 Philippines Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	4,800	4,888	4,877	4,866	4,850	4,872	4,890	4,893	4,898	4,893	4,898	4,893
	(Metric Tons per Hectare)											
Yield	2.47	2.50	2.51	2.52	2.55	2.57	2.59	2.62	2.65	2.68	2.71	2.73
	(Thousand Metric Tons)											
Production	11,858	12,227	12,255	12,282	12,348	12,506	12,688	12,808	12,962	13,109	13,253	13,375
Beginning Stocks	1,487	1,945	2,551	2,846	2,919	2,956	2,986	3,019	3,045	3,071	3,100	3,130
Domestic Supply	13,345	14,172	14,806	15,129	15,268	15,462	15,674	15,827	16,007	16,180	16,353	16,505
Consumption	12,850	13,090	13,230	13,455	13,675	13,947	14,138	14,353	14,585	14,832	15,082	15,326
Ending Stocks	1,945	2,551	2,846	2,919	2,956	2,986	3,019	3,045	3,071	3,100	3,130	3,161
Domestic Use	14,795	15,641	16,076	16,374	16,631	16,933	17,157	17,397	17,656	17,931	18,212	18,487
Net Trade	-1,450	-1,469	-1,270	-1,246	-1,364	-1,471	-1,483	-1,570	-1,649	-1,752	-1,860	-1,981

Table 36 Saudi Arabia Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Metric Tons)											
Beginning Stocks	260	285	260	261	263	266	269	272	275	278	281	284
Domestic Supply	260	285	260	261	263	266	269	272	275	278	281	284
Consumption	1,425	1,429	1,456	1,483	1,516	1,548	1,582	1,613	1,642	1,671	1,698	1,724
Ending Stocks	285	260	261	263	266	269	272	275	278	281	284	286
Domestic Use	1,710	1,689	1,717	1,746	1,782	1,817	1,854	1,888	1,920	1,952	1,982	2,010
Net Trade	-1,450	-1,404	-1,457	-1,485	-1,518	-1,551	-1,585	-1,616	-1,645	-1,673	-1,701	-1,726

Table 37 Senegal Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	107	130	142	150	154	155	156	157	157	157	157	157
					(Metric Tons per Hectare)							
Yield	2.71	2.71	2.77	2.84	2.91	2.98	3.05	3.11	3.19	3.25	3.30	3.36
					(Thousand Metric Tons)							
Production	290	353	392	425	448	463	476	487	500	510	519	529
Beginning Stocks	174	154	190	198	207	216	226	235	243	252	261	265
Domestic Supply	464	507	582	623	655	679	702	722	743	762	780	794
Consumption	1,400	1,448	1,489	1,536	1,582	1,629	1,673	1,717	1,762	1,806	1,850	1,894
Ending Stocks	154	190	198	207	216	226	235	243	252	261	265	269
Domestic Use	1,554	1,638	1,687	1,744	1,798	1,854	1,908	1,961	2,014	2,068	2,115	2,163
Net Trade	-1,090	-1,130	-1,105	-1,121	-1,143	-1,175	-1,206	-1,239	-1,271	-1,306	-1,335	-1,369

Table 38 Sierra Leone Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	650	649	660	675	693	713	729	747	763	780	796	811
					(Metric Tons per Hectare)							
Yield	1.22	1.22	1.26	1.30	1.35	1.39	1.42	1.45	1.46	1.51	1.54	1.56
					(Thousand Metric Tons)							
Production	791	793	832	876	933	989	1,033	1,079	1,115	1,174	1,223	1,266
Beginning Stocks	0	0	19	20	21	21	22	23	24	24	25	26
Domestic Supply	791	793	851	896	954	1,010	1,055	1,102	1,139	1,199	1,248	1,292
Consumption	1,061	996	1,036	1,072	1,108	1,146	1,185	1,229	1,269	1,315	1,357	1,404
Ending Stocks	0	19	20	21	21	22	23	24	24	25	26	27
Domestic Use	1,061	1,016	1,056	1,092	1,130	1,168	1,208	1,252	1,293	1,340	1,383	1,431
Net Trade	-270	-222	-205	-196	-176	-158	-153	-151	-154	-141	-135	-139

Table 39 Singapore Rice Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Metric Tons)											
Consumption	300	304	308	312	317	319	322	325	327	329	331	332
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	300	304	308	312	317	319	322	325	327	329	331	332
Net Trade	-300	-304	-308	-312	-317	-319	-322	-325	-327	-329	-331	-332

Table 40 South Africa Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Metric Tons)											
Beginning Stocks	16	21	32	34	36	40	44	49	53	58	60	62
Domestic Supply	16	21	32	34	36	40	44	49	53	58	60	62
Consumption	905	958	968	982	1,000	1,020	1,044	1,066	1,089	1,102	1,111	1,123
Ending Stocks	21	32	34	36	40	44	49	53	58	60	62	65
Domestic Use	926	989	1,001	1,018	1,040	1,064	1,093	1,119	1,147	1,162	1,173	1,187
Net Trade	-910	-968	-969	-985	-1,004	-1,024	-1,049	-1,070	-1,094	-1,105	-1,113	-1,125

Table 41 South Korea Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	833	828	816	806	791	789	783	779	780	777	774	771
	(Metric Tons per Hectare)											
Yield	5.08	5.10	5.14	5.16	5.17	5.18	5.20	5.21	5.22	5.24	5.25	5.27
	(Thousand Metric Tons)											
Production	4,230	4,222	4,193	4,154	4,090	4,088	4,068	4,057	4,073	4,070	4,067	4,062
Beginning Stocks	780	858	969	1,076	1,162	1,192	1,220	1,278	1,333	1,409	1,469	1,522
Domestic Supply	5,010	5,080	5,161	5,230	5,252	5,279	5,288	5,335	5,407	5,479	5,536	5,585
Consumption	4,460	4,520	4,494	4,477	4,469	4,468	4,419	4,410	4,406	4,419	4,422	4,421
Ending Stocks	858	969	1,076	1,162	1,192	1,220	1,278	1,333	1,409	1,469	1,522	1,572
Domestic Use	5,318	5,489	5,570	5,638	5,661	5,688	5,697	5,743	5,816	5,888	5,944	5,993
Net Trade	-308	-409	-409	-409	-409	-409	-409	-409	-409	-409	-409	-409

Table 42 Taiwan Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	270	269	269	267	265	263	261	259	256	255	254	252
	(Metric Tons per Hectare)											
Yield	4.12	4.22	4.15	4.16	4.16	4.17	4.17	4.18	4.20	4.23	4.25	4.28
	(Thousand Metric Tons)											
Production	1,113	1,134	1,116	1,109	1,102	1,097	1,090	1,082	1,077	1,076	1,078	1,078
Beginning Stocks	363	301	258	233	212	200	198	197	194	192	192	200
Domestic Supply	1,476	1,435	1,374	1,342	1,314	1,297	1,288	1,279	1,271	1,268	1,271	1,278
Consumption	1,300	1,293	1,257	1,247	1,229	1,215	1,208	1,201	1,196	1,191	1,187	1,184
Ending Stocks	301	258	233	212	200	198	197	194	192	192	200	210
Domestic Use	1,601	1,551	1,490	1,458	1,430	1,413	1,404	1,395	1,387	1,384	1,387	1,394
Net Trade	-125	-116	-116	-116	-116	-116	-116	-116	-116	-116	-116	-116

Table 43 Tanzania Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	900	950	994	1,032	1,069	1,100	1,129	1,154	1,176	1,196	1,213	1,229
	(Metric Tons per Hectare)											
Yield	1.47	1.46	1.50	1.53	1.55	1.58	1.61	1.64	1.66	1.69	1.72	1.75
	(Thousand Metric Tons)											
Production	1,327	1,386	1,491	1,577	1,662	1,742	1,817	1,889	1,958	2,024	2,087	2,148
Beginning Stocks	0	0	10	11	12	13	15	16	18	20	21	24
Domestic Supply	1,327	1,386	1,500	1,588	1,673	1,755	1,832	1,906	1,976	2,043	2,108	2,171
Consumption	1,497	1,554	1,616	1,659	1,726	1,802	1,888	1,963	2,064	2,152	2,266	2,351
Ending Stocks	0	10	11	12	13	15	16	18	20	21	24	25
Domestic Use	1,497	1,564	1,627	1,671	1,739	1,817	1,905	1,981	2,084	2,174	2,290	2,376
Net Trade	-170	-178	-127	-83	-66	-62	-73	-75	-108	-130	-182	-204

Table 44 Thailand Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	10,920	10,900	10,869	10,861	10,803	10,801	10,803	10,811	10,813	10,822	10,830	10,847
	(Metric Tons per Hectare)											
Yield	1.87	1.89	1.91	1.93	1.95	1.97	1.99	2.01	2.03	2.06	2.08	2.10
	(Thousand Metric Tons)											
Production	20,460	20,570	20,713	20,928	21,049	21,276	21,515	21,760	22,001	22,254	22,495	22,768
Beginning Stocks	12,808	12,393	11,824	10,975	10,157	9,288	8,464	7,628	6,798	5,998	5,210	4,448
Domestic Supply	33,268	32,963	32,537	31,903	31,206	30,565	29,980	29,388	28,799	28,251	27,704	27,216
Consumption	10,875	10,931	10,869	10,833	10,822	10,736	10,702	10,669	10,629	10,597	10,512	10,478
Ending Stocks	12,393	11,824	10,975	10,157	9,288	8,464	7,628	6,798	5,998	5,210	4,448	3,608
Domestic Use	23,268	22,755	21,845	20,990	20,110	19,200	18,329	17,467	16,626	15,807	14,960	14,086
Net Trade	10,000	10,208	10,692	10,913	11,096	11,365	11,650	11,921	12,173	12,444	12,744	13,129

Table 45 Turkey Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	98	96	98	99	100	101	102	103	104	105	106	107
					(Metric Tons per Hectare)							
Yield	5.10	5.03	5.10	5.19	5.25	5.31	5.37	5.43	5.48	5.54	5.60	5.66
					(Thousand Metric Tons)							
Production	500	482	499	516	527	536	546	556	568	579	591	603
Beginning Stocks	194	245	218	204	212	211	214	218	221	219	222	224
Domestic Supply	694	727	717	720	739	747	759	774	789	799	813	827
Consumption	770	784	780	804	816	833	853	872	884	902	920	934
Ending Stocks	245	218	204	212	211	214	218	221	219	222	224	222
Domestic Use	1,015	1,001	984	1,016	1,026	1,047	1,071	1,093	1,103	1,124	1,144	1,156
Net Trade	-321	-275	-268	-296	-287	-299	-311	-319	-315	-325	-331	-329

Table 46 Uruguay Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	167	183	183	186	188	190	192	193	194	194	194	192
					(Metric Tons per Hectare)							
Yield	5.65	5.67	5.77	5.85	5.91	5.96	6.00	6.05	6.09	6.17	6.25	6.33
					(Thousand Metric Tons)							
Production	944	1,038	1,057	1,091	1,111	1,130	1,149	1,167	1,183	1,197	1,211	1,214
Beginning Stocks	21	20	34	34	36	38	40	42	44	47	49	52
Domestic Supply	965	1,058	1,091	1,125	1,147	1,168	1,189	1,209	1,227	1,244	1,260	1,265
Consumption	55	57	57	57	58	58	58	58	59	59	59	63
Ending Stocks	20	34	34	36	38	40	42	44	47	49	52	55
Domestic Use	75	91	91	94	96	98	100	103	105	108	111	118
Net Trade	890	967	1,000	1,032	1,051	1,071	1,089	1,106	1,122	1,136	1,150	1,147

Table 47 Vietnam Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	7,788	7,772	7,818	7,833	7,848	7,854	7,861	7,866	7,868	7,871	7,873	7,875
					(Metric Tons per Hectare)							
Yield	3.62	3.63	3.64	3.66	3.68	3.70	3.73	3.76	3.77	3.79	3.81	3.82
					(Thousand Metric Tons)							
Production	28,161	28,228	28,432	28,638	28,871	29,091	29,314	29,570	29,649	29,827	29,990	30,117
Beginning Stocks	863	824	913	776	887	934	1,173	1,435	1,483	1,514	1,561	1,600
Domestic Supply	29,024	29,052	29,344	29,414	29,758	30,025	30,486	31,006	31,132	31,341	31,550	31,717
Consumption	22,000	21,862	21,787	21,855	22,089	22,058	22,097	22,561	22,534	22,494	22,556	22,609
Ending Stocks	824	913	776	887	934	1,173	1,435	1,483	1,514	1,561	1,600	1,632
Domestic Use	22,824	22,774	22,563	22,743	23,023	23,230	23,532	24,044	24,047	24,055	24,156	24,241
Net Trade	6,200	6,278	6,782	6,671	6,735	6,795	6,954	6,961	7,085	7,287	7,394	7,476

Table 48 Africa Total Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	10,604	10,554	10,935	11,267	11,551	11,781	11,966	12,157	12,351	12,546	12,708	12,855
					(Metric Tons per Hectare)							
Yield	1.69	1.70	1.71	1.74	1.78	1.81	1.84	1.86	1.88	1.90	1.93	1.96
					(Thousand Metric Tons)							
Production	17,947	17,945	18,673	19,617	20,520	21,340	21,978	22,593	23,205	23,855	24,485	25,169
Beginning Stocks	2,406	2,475	2,600	2,630	2,599	2,696	2,792	2,884	2,970	3,030	3,081	3,104
Domestic Supply	20,353	20,420	21,273	22,247	23,119	24,036	24,770	25,477	26,174	26,885	27,566	28,273
Consumption	30,943	31,907	32,764	33,807	34,938	36,103	37,315	38,543	39,771	41,025	42,280	43,510
Ending Stocks	2,475	2,600	2,630	2,599	2,696	2,792	2,884	2,970	3,030	3,081	3,104	3,126
Domestic Use	33,418	34,507	35,394	36,406	37,635	38,894	40,199	41,513	42,801	44,106	45,384	46,637
Net Trade	-13,065	-14,087	-14,121	-14,159	-14,515	-14,858	-15,429	-16,036	-16,627	-17,221	-17,817	-18,364

Table 49 African Aggregate of Countries with Individual AGRM Models – Rice Supply, Utilization, and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	8,431	8,383	8,747	9,052	9,311	9,522	9,688	9,862	10,037	10,214	10,357	10,485
					(Metric Tons per Hectare)							
Yield	1.76	1.76	1.76	1.79	1.83	1.86	1.89	1.91	1.93	1.96	1.98	2.01
					(Thousand Metric Tons)							
Production	14,817	14,759	15,381	16,239	17,025	17,744	18,315	18,846	19,390	19,971	20,510	21,102
Beginning Stocks	2,314	2,369	2,507	2,534	2,501	2,595	2,687	2,776	2,858	2,915	2,963	2,983
Domestic Supply	17,131	17,128	17,889	18,773	19,525	20,338	21,003	21,623	22,249	22,887	23,474	24,084
Consumption	24,622	25,024	25,723	26,607	27,568	28,580	29,620	30,673	31,730	32,816	33,884	34,924
Ending Stocks	2,369	2,507	2,534	2,501	2,595	2,687	2,776	2,858	2,915	2,963	2,983	3,001
Domestic Use	26,991	27,531	28,258	29,107	30,162	31,267	32,397	33,532	34,646	35,779	36,867	37,925
Net Trade	-9,860	-10,404	-10,369	-10,334	-10,637	-10,929	-11,394	-11,909	-12,397	-12,892	-13,393	-13,841

Table 50 African Aggregate of Other Countries Modeled as a Group in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	2,173	2,170	2,188	2,215	2,240	2,259	2,278	2,295	2,313	2,332	2,351	2,370
					(Metric Tons per Hectare)							
Yield	1.44	1.47	1.50	1.53	1.56	1.59	1.61	1.63	1.65	1.67	1.69	1.72
					(Thousand Metric Tons)							
Production	3,130	3,187	3,292	3,378	3,496	3,596	3,663	3,746	3,814	3,884	3,975	4,067
Beginning Stocks	92	106	92	95	98	102	105	108	111	115	118	121
Domestic Supply	3,222	3,293	3,384	3,474	3,594	3,698	3,767	3,854	3,926	3,998	4,092	4,189
Consumption	6,321	6,883	7,041	7,200	7,371	7,523	7,694	7,870	8,041	8,209	8,395	8,586
Ending Stocks	106	92	95	98	102	105	108	111	115	118	121	125
Domestic Use	6,427	6,976	7,136	7,299	7,472	7,628	7,802	7,982	8,156	8,327	8,517	8,711
Net Trade	-3,205	-3,683	-3,752	-3,825	-3,878	-3,929	-4,035	-4,128	-4,230	-4,328	-4,424	-4,523

Table 51 Western Hemisphere Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	6,434	6,571	6,543	6,531	6,539	6,539	6,537	6,538	6,541	6,545	6,545	6,548
	(Metric Tons per Hectare)											
Yield	3.78	3.86	3.90	3.94	3.97	4.01	4.06	4.10	4.15	4.20	4.24	4.29
	(Thousand Metric Tons)											
Production	24,350	25,377	25,489	25,740	25,976	26,234	26,536	26,833	27,122	27,474	27,766	28,071
Beginning Stocks	3,202	3,436	4,140	4,481	4,544	4,562	4,576	4,683	4,796	4,909	4,993	5,081
Domestic Supply	27,552	28,813	29,629	30,221	30,520	30,796	31,113	31,516	31,918	32,382	32,758	33,152
Consumption	23,065	23,709	23,607	23,918	24,211	24,484	24,888	25,302	25,688	25,942	26,215	26,433
Ending Stocks	3,436	4,140	4,481	4,544	4,562	4,576	4,683	4,796	4,909	4,993	5,081	5,224
Domestic Use	26,501	27,850	28,088	28,462	28,773	29,060	29,571	30,099	30,596	30,935	31,296	31,656
Net Trade	1,051	964	1,541	1,759	1,747	1,736	1,542	1,417	1,322	1,447	1,462	1,496

Table 52 Western Hemisphere Aggregate of Countries with Individual AGRM Models – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	4,292	4,447	4,420	4,418	4,428	4,424	4,415	4,409	4,405	4,401	4,393	4,388
	(Metric Tons per Hectare)											
Yield	4.15	4.25	4.29	4.35	4.38	4.44	4.50	4.54	4.58	4.63	4.67	4.72
	(Thousand Metric Tons)											
Production	17,829	18,905	18,977	19,208	19,413	19,622	19,846	20,023	20,189	20,366	20,532	20,712
Beginning Stocks	2,206	2,268	2,857	3,212	3,251	3,252	3,252	3,302	3,353	3,414	3,468	3,530
Domestic Supply	20,035	21,173	21,834	22,420	22,665	22,874	23,099	23,325	23,542	23,780	24,000	24,241
Consumption	15,223	15,542	15,512	15,707	15,906	16,113	16,236	16,337	16,464	16,568	16,708	16,815
Ending Stocks	2,268	2,857	3,212	3,251	3,252	3,252	3,302	3,353	3,414	3,468	3,530	3,650
Domestic Use	17,491	18,399	18,724	18,959	19,158	19,365	19,539	19,690	19,878	20,036	20,238	20,465
Net Trade	2,544	2,774	3,110	3,461	3,507	3,508	3,560	3,635	3,664	3,744	3,762	3,777

Table 53 Western Hemisphere Aggregate of Other Countries Modeled as a Group in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	2,142	2,124	2,122	2,113	2,111	2,115	2,123	2,129	2,136	2,144	2,152	2,160
	(Metric Tons per Hectare)											
Yield	3.04	3.05	3.07	3.09	3.11	3.13	3.15	3.20	3.25	3.32	3.36	3.41
	(Thousand Metric Tons)											
Production	6,521	6,472	6,512	6,532	6,563	6,611	6,690	6,810	6,933	7,108	7,234	7,360
Beginning Stocks	996	1,168	1,283	1,269	1,292	1,311	1,324	1,380	1,443	1,495	1,525	1,551
Domestic Supply	7,517	7,640	7,795	7,801	7,855	7,922	8,014	8,191	8,376	8,602	8,758	8,911
Consumption	7,842	8,167	8,095	8,211	8,304	8,370	8,652	8,965	9,223	9,374	9,507	9,618
Ending Stocks	1,168	1,283	1,269	1,292	1,311	1,324	1,380	1,443	1,495	1,525	1,551	1,574
Domestic Use	9,010	9,450	9,364	9,503	9,615	9,695	10,032	10,408	10,718	10,899	11,059	11,192
Net Trade	-1,493	-1,810	-1,569	-1,702	-1,760	-1,772	-2,018	-2,218	-2,342	-2,296	-2,300	-2,281

Table 54 Asian Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	143,310	143,283	143,309	143,575	143,637	143,532	143,477	143,451	143,352	143,175	143,286	143,170
	(Metric Tons per Hectare)											
Yield	3.02	3.04	3.06	3.10	3.13	3.15	3.17	3.20	3.23	3.26	3.28	3.30
	(Thousand Metric Tons)											
Production	432,088	435,226	438,650	444,708	449,050	451,891	455,446	459,364	463,307	466,749	470,096	471,877
Beginning Stocks	103,003	99,744	97,202	97,304	99,799	102,669	105,125	107,107	109,271	112,040	115,034	118,509
Domestic Supply	535,091	534,970	535,852	542,012	548,848	554,561	560,570	566,470	572,578	578,789	585,130	590,386
Consumption	420,225	423,412	424,786	428,655	432,233	435,138	438,424	441,471	444,129	446,864	449,118	451,850
Ending Stocks	99,744	97,202	97,304	99,799	102,669	105,125	107,107	109,271	112,040	115,034	118,509	120,558
Domestic Use	519,969	520,614	522,090	528,454	534,903	540,263	545,531	550,742	556,169	561,898	567,627	572,408
Net Trade	15,122	14,356	13,762	13,559	13,946	14,298	15,040	15,729	16,409	16,891	17,503	17,978

Table 55 Asian Aggregate of Countries with Individual Models in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	139,446	139,305	139,280	139,521	139,569	139,454	139,391	139,357	139,252	139,068	139,171	139,048
	(Metric Tons per Hectare)											
Yield	3.03	3.05	3.08	3.11	3.14	3.17	3.19	3.22	3.25	3.28	3.30	3.31
	(Thousand Metric Tons)											
Production	422,347	425,328	428,595	434,543	438,709	441,384	444,881	448,637	452,527	455,916	459,209	460,718
Beginning Stocks	102,147	98,795	96,455	96,555	99,045	101,910	104,358	106,332	108,490	111,253	114,241	117,711
Domestic Supply	524,494	524,123	525,050	531,098	537,754	543,293	549,238	554,970	561,017	567,168	573,451	578,429
Consumption	407,521	410,541	411,813	415,458	418,723	421,260	424,164	426,885	429,218	431,632	433,581	436,025
Ending Stocks	98,795	96,455	96,555	99,045	101,910	104,358	106,332	108,490	111,253	114,241	117,711	119,754
Domestic Use	506,316	506,995	508,367	514,503	520,633	525,618	530,496	535,376	540,470	545,873	551,292	555,779
Net Trade	18,178	17,127	16,683	16,595	17,121	17,675	18,742	19,594	20,546	21,295	22,159	22,650

Table 56 Asian Aggregate of Other Countries Modeled as a Group in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	3,864	3,978	4,029	4,054	4,068	4,078	4,086	4,093	4,100	4,107	4,114	4,121
	(Metric Tons per Hectare)											
Yield	2.52	2.49	2.50	2.51	2.54	2.58	2.59	2.62	2.63	2.64	2.65	2.71
	(Thousand Metric Tons)											
Production	9,741	9,898	10,054	10,165	10,341	10,508	10,565	10,727	10,781	10,834	10,886	11,159
Beginning Stocks	856	949	748	749	754	760	767	774	780	787	793	799
Domestic Supply	10,597	10,847	10,802	10,914	11,095	11,267	11,332	11,501	11,561	11,621	11,679	11,958
Consumption	12,704	12,871	12,973	13,197	13,510	13,878	14,260	14,586	14,912	15,232	15,537	15,825
Ending Stocks	949	748	749	754	760	767	774	780	787	793	799	804
Domestic Use	13,653	13,618	13,723	13,950	14,270	14,645	15,035	15,366	15,699	16,025	16,335	16,629
Net Trade	-3,056	-2,772	-2,921	-3,036	-3,175	-3,378	-3,703	-3,865	-4,137	-4,404	-4,656	-4,672

Table 57 European Total Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	441	442	443	442	442	442	441	441	441	441	441	441
					(Metric Tons per Hectare)							
Yield	4.48	4.48	4.53	4.57	4.61	4.65	4.70	4.74	4.78	4.82	4.86	4.90
					(Thousand Metric Tons)							
Production	1,975	1,978	2,006	2,024	2,040	2,057	2,072	2,088	2,107	2,125	2,143	2,161
Beginning Stocks	1,246	1,241	1,152	1,068	993	923	862	806	747	695	677	690
Domestic Supply	3,221	3,219	3,159	3,092	3,034	2,980	2,933	2,895	2,854	2,820	2,820	2,851
Consumption	3,395	3,413	3,398	3,401	3,438	3,462	3,490	3,515	3,541	3,565	3,589	3,609
Ending Stocks	1,241	1,152	1,068	993	923	862	806	747	695	677	690	670
Domestic Use	4,636	4,566	4,467	4,395	4,361	4,323	4,297	4,262	4,237	4,242	4,279	4,279
Net Trade	-1,415	-1,347	-1,308	-1,302	-1,327	-1,343	-1,363	-1,367	-1,383	-1,421	-1,459	-1,428

Table 58 European Aggregate of Countries Modeled Individually in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	438	438	439	439	439	439	438	438	438	438	438	438
					(Metric Tons per Hectare)							
Yield	4.49	4.48	4.54	4.58	4.62	4.66	4.70	4.74	4.78	4.82	4.86	4.90
					(Thousand Metric Tons)							
Production	1,965	1,966	1,994	2,011	2,027	2,044	2,058	2,075	2,093	2,111	2,129	2,147
Beginning Stocks	1,188	1,188	1,077	993	919	848	786	730	671	619	599	612
Domestic Supply	3,153	3,154	3,071	3,003	2,946	2,892	2,845	2,805	2,764	2,730	2,729	2,759
Consumption	3,250	3,259	3,243	3,255	3,288	3,309	3,334	3,356	3,380	3,400	3,421	3,439
Ending Stocks	1,188	1,077	993	919	848	786	730	671	619	599	612	592
Domestic Use	4,438	4,336	4,236	4,174	4,136	4,096	4,065	4,027	3,998	3,999	4,033	4,030
Net Trade	-1,285	-1,182	-1,165	-1,171	-1,190	-1,204	-1,220	-1,222	-1,234	-1,270	-1,304	-1,271

Table 59 European Aggregate of Other Countries Modeled as a Group in AGRM - Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	3	3	3	3	3	3	3	3	3	3	3	3
	(Metric Tons per Hectare)											
Yield	3.33	3.61	3.87	4.06	4.12	4.09	4.16	4.19	4.21	4.25	4.28	4.31
	(Thousand Metric Tons)											
Production	10	11	12	13	13	13	14	14	14	14	14	14
Beginning Stocks	58	53	76	76	74	75	75	76	76	77	77	78
Domestic Supply	68	64	88	89	88	88	89	90	90	91	91	92
Consumption	145	154	155	146	150	152	156	159	162	165	168	170
Ending Stocks	53	76	76	74	75	75	76	76	77	77	78	78
Domestic Use	198	229	231	220	225	228	232	235	239	242	246	249
Net Trade	-130	-165	-143	-131	-137	-139	-143	-146	-149	-151	-154	-157

Table 60 Oceania Total Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	76	71	87	95	99	101	100	99	99	98	97	96
	(Metric Tons per Hectare)											
Yield	7.89	7.11	7.42	7.49	7.57	7.66	7.77	7.87	7.98	8.08	8.19	8.30
	(Thousand Metric Tons)											
Production	600	505	642	709	748	771	778	782	787	791	792	794
Beginning Stocks	238	171	64	69	121	199	279	333	362	377	375	363
Domestic Supply	838	676	706	778	870	970	1,056	1,115	1,149	1,168	1,166	1,157
Consumption	572	592	606	615	624	635	646	654	664	676	684	692
Ending Stocks	171	64	69	121	199	279	333	362	377	375	363	347
Domestic Use	743	656	675	737	823	914	979	1,016	1,042	1,051	1,047	1,039
Net Trade	95	20	32	41	46	56	78	99	107	117	119	118

Table 61 Oceania Aggregate of Countries Modeled individually in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	76	71	87	95	99	101	100	99	99	98	97	96
	(Metric Tons per Hectare)											
Yield	7.89	7.11	7.42	7.49	7.57	7.66	7.77	7.87	7.98	8.08	8.19	8.30
	(Thousand Metric Tons)											
Production	600	505	642	709	748	771	778	782	787	791	792	794
Beginning Stocks	238	171	60	64	117	195	274	328	357	372	370	358
Domestic Supply	838	676	702	773	865	965	1,052	1,110	1,144	1,163	1,161	1,152
Consumption	357	366	372	376	381	387	394	398	404	412	416	419
Ending Stocks	171	60	64	117	195	274	328	357	372	370	358	342
Domestic Use	528	426	436	493	575	661	722	755	776	781	773	761
Net Trade	310	250	266	280	290	304	330	355	368	382	388	391

Table 62 Oceania Aggregate of Other Countries Modeled as a Group in AGRM – Rice Supply, Utilization, and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	0	0	0	0	0	0	0	0	0	0	0	0
	(Metric Tons per Hectare)											
Yield	0	0	0	0	0	0	0	0	0	0	0	0
	(Thousand Metric Tons)											
Production	0	0	0	0	0	0	0	0	0	0	0	0
Beginning Stocks	0	0	4	5	5	5	5	5	5	5	5	5
Domestic Supply	0	0	4	5	5	5	5	5	5	5	5	5
Consumption	215	225	234	239	243	248	252	256	260	265	269	273
Ending Stocks	0	4	5	5	5	5	5	5	5	5	5	5
Domestic Use	215	230	239	244	248	253	257	261	265	270	274	278
Net Trade	-215	-230	-235	-239	-244	-248	-252	-256	-261	-265	-269	-273

Table 63 World Total Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	160,865	160,920	161,316	161,910	162,268	162,395	162,521	162,686	162,783	162,804	163,076	163,110
	(Metric Tons per Hectare)											
Yield	2.96	2.99	3.01	3.04	3.07	3.09	3.12	3.15	3.17	3.20	3.22	3.24
	(Thousand Metric Tons)											
Production	476,960	481,031	485,460	492,798	498,335	502,293	506,810	511,660	516,527	520,994	525,281	528,072
Beginning Stocks	110,095	107,067	105,159	105,552	108,056	111,050	113,633	115,813	118,146	121,051	124,159	127,747
Domestic Supply	587,055	588,098	590,619	598,350	606,391	613,343	620,443	627,473	634,674	642,045	649,441	655,820
Consumption	478,200	483,033	485,162	490,396	495,444	499,821	504,763	509,486	513,794	518,072	521,885	526,094
Ending Stocks	107,067	105,159	105,552	108,056	111,050	113,633	115,813	118,146	121,051	124,159	127,747	129,925
Domestic Use	585,267	588,193	590,714	598,453	606,495	613,454	620,576	627,632	634,845	642,232	649,633	656,019
Residual	1,788	-95	-95	-102	-103	-111	-133	-159	-172	-187	-192	-199

Table 64 World Aggregate of Countries Modeled individually in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Thousand Hectares)											
Area Harvested	152,683	152,644	152,973	153,525	153,846	153,940	154,032	154,165	154,230	154,218	154,455	154,455
	(Metric Tons per Hectare)											
Yield	3.00	3.02	3.04	3.08	3.11	3.13	3.15	3.18	3.21	3.24	3.26	3.27
	(Thousand Metric Tons)											
Production	457,558	461,463	465,590	472,710	477,922	481,564	485,878	490,363	494,986	499,155	503,173	505,473
Beginning Stocks	108,093	104,791	102,956	103,358	105,833	108,798	111,357	113,470	115,730	118,573	121,641	125,193
Domestic Supply	565,651	566,254	568,546	576,068	583,755	590,363	597,236	603,833	610,716	617,728	624,815	630,665
Consumption	450,973	454,733	456,663	461,404	465,866	469,650	473,748	477,649	481,196	484,828	488,010	491,622
Ending Stocks	104,791	102,956	103,358	105,833	108,798	111,357	113,470	115,730	118,573	121,641	125,193	127,338
Domestic Use	555,764	557,689	560,021	567,237	574,665	581,007	587,218	593,379	599,769	606,470	613,202	618,960
Net Trade	9,887	8,565	8,525	8,831	9,090	9,356	10,018	10,453	10,947	11,259	11,612	11,705

Table 65 World Aggregate of Other Countries Modeled as a Group in AGRM – Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	8,182	8,276	8,343	8,385	8,422	8,456	8,490	8,520	8,553	8,587	8,621	8,655
					(Metric Tons per Hectare)							
Yield	2.37	2.36	2.38	2.40	2.42	2.45	2.47	2.50	2.52	2.54	2.56	2.61
					(Thousand Metric Tons)							
Production	19,402	19,568	19,870	20,088	20,413	20,729	20,931	21,297	21,541	21,839	22,108	22,600
Beginning Stocks	2,002	2,276	2,203	2,194	2,223	2,252	2,276	2,343	2,416	2,478	2,518	2,555
Domestic Supply	21,404	21,844	22,073	22,283	22,636	22,981	23,207	23,640	23,958	24,317	24,626	25,154
Consumption	27,227	28,301	28,498	28,993	29,578	30,172	31,014	31,837	32,599	33,244	33,875	34,472
Ending Stocks	2,276	2,203	2,194	2,223	2,252	2,276	2,343	2,416	2,478	2,518	2,555	2,587
Domestic Use	29,503	30,504	30,692	31,216	31,830	32,447	33,358	34,253	35,077	35,762	36,430	37,059
Net Trade	-8,099	-8,659	-8,619	-8,933	-9,194	-9,467	-10,151	-10,613	-11,119	-11,445	-11,804	-11,904

Table 66 ECOWAS Total Rice Supply, Utilization and Net Trade, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
					(Thousand Hectares)							
Area Harvested	6,326	6,351	6,619	6,864	7,066	7,230	7,350	7,482	7,621	7,763	7,873	7,969
					(Metric Tons per Hectare)							
Yield	1.31	1.33	1.36	1.40	1.44	1.47	1.50	1.52	1.55	1.58	1.61	1.64
					(Thousand Metric Tons)							
Production	8,293	8,418	8,995	9,598	10,149	10,656	11,044	11,405	11,801	12,240	12,637	13,085
Beginning Stocks	1,771	1,604	1,687	1,735	1,774	1,813	1,849	1,877	1,903	1,928	1,959	1,975
Domestic Supply	10,064	10,022	10,682	11,333	11,923	12,469	12,893	13,282	13,704	14,168	14,596	15,060
Consumption	16,370	16,641	17,230	17,959	18,753	19,526	20,301	21,095	21,888	22,720	23,524	24,342
Ending Stocks	1,604	1,687	1,735	1,774	1,813	1,849	1,877	1,903	1,928	1,959	1,975	1,999
Domestic Use	17,974	18,329	18,965	19,733	20,565	21,375	22,178	22,998	23,816	24,679	25,499	26,341
Net Trade	-7,910	-8,307	-8,283	-8,400	-8,643	-8,906	-9,285	-9,716	-10,111	-10,512	-10,903	-11,281

Table 67 Projected Rice Milled Yields Per Hectare for the World and Selected Countries, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Metric Tons per Hectare)											
Argentina	4.3	4.2	4.3	4.4	4.5	4.5	4.6	4.6	4.7	4.7	4.8	4.8
Australia	7.9	7.1	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.3
Bangladesh	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.3	3.3	3.3
Brazil	3.5	3.5	3.5	3.5	3.6	3.6	3.7	3.7	3.7	3.8	3.8	3.9
Brunei Darussalam	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Cambodia	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1
Cameroon	0.7	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2
Canada	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
People's Republic of China	4.7	4.7	4.8	4.8	4.8	4.9	4.9	4.9	4.9	5.0	5.0	5.0
Colombia	2.9	3.3	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.6	3.6	3.7
Egypt	6.2	6.8	6.2	6.3	6.4	6.5	6.6	6.7	6.7	6.8	6.9	6.9
European Union-28	4.5	4.5	4.5	4.6	4.6	4.7	4.7	4.7	4.8	4.8	4.9	4.9
Ghana	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0
Guinea	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5
China - Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.8
Indonesia	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.3	3.3	3.3	3.4	3.4
Iran	2.8	2.8	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.1	3.1
Iraq	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Cote d'Ivoire	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.5
Japan	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Kenya	3.5	3.3	3.4	3.5	3.6	3.7	3.7	3.8	3.8	3.9	3.9	4.0
Lao PDR	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1
Liberia	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Malaysia	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.8	2.9
Mali	2.4	2.1	2.2	2.3	2.3	2.4	2.5	2.5	2.6	2.7	2.7	2.8
Mexico	3.7	3.8	3.8	3.8	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4.0
Mozambique	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Myanmar (Burma)	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0

Nigeria	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.4	1.4
Pakistan	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.7	2.7
Philippines	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7
Saudi Arabia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Senegal	2.7	2.7	2.8	2.8	2.9	3.0	3.0	3.1	3.2	3.2	3.3	3.4
Sierra Leone	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.6
Singapore	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Africa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Korea	5.1	5.1	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.3	5.3
Taiwan	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.3
Tanzania	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7
Thailand	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1
Turkey	5.1	5.0	5.1	5.2	5.2	5.3	5.4	5.4	5.5	5.5	5.6	5.7
United States	6.1	6.0	6.1	6.2	6.2	6.3	6.3	6.4	6.5	6.5	6.6	6.6
Uruguay	5.7	5.7	5.8	5.9	5.9	6.0	6.0	6.0	6.1	6.2	6.3	6.3
Vietnam	3.6	3.6	3.6	3.7	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8
Rest of World	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.6
<u>World</u>	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.2

Table 68 Projected Per Capita Rice Utilization for the World and Selected Countries, 2013-2024

	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
	(Kilograms)											
Argentina	10.5	10.6	10.5	10.5	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
Australia	15.3	15.5	15.5	15.5	15.5	15.6	15.7	15.6	15.7	15.8	15.8	15.8
Bangladesh	222.9	222.4	223.6	224.8	226.3	226.9	227.2	227.6	227.9	228.1	228.4	228.5
Brazil	39.4	39.2	38.3	38.2	38.3	38.4	38.3	38.2	38.2	38.1	38.2	38.3
Brunei Darussalam	146.0	105.2	106.1	107.8	108.2	109.8	109.9	110.8	111.9	113.0	114.2	114.8
Cambodia	241.2	243.5	244.3	245.4	246.5	247.5	248.6	249.1	250.5	251.6	252.2	252.9
Cameroon	34.9	33.7	34.1	35.1	36.5	37.0	38.1	39.7	40.0	40.8	40.9	41.2
Canada	10.7	10.7	10.8	10.8	11.0	11.1	11.3	11.4	11.5	11.6	11.7	11.8
People's Republic of China	107.5	107.9	106.7	106.3	105.7	105.0	104.6	104.1	103.5	103.2	102.4	102.1
Colombia	33.2	33.2	33.0	33.3	33.9	34.4	34.5	34.6	34.7	34.6	34.7	34.8
Cote d'Ivoire	80.8	81.0	81.4	83.0	83.5	84.4	85.2	86.0	87.0	88.1	88.8	89.5
Egypt	48.7	47.9	46.8	46.4	45.7	45.8	45.9	45.9	46.0	46.0	46.0	45.9
European Union-28	6.4	6.4	6.3	6.3	6.4	6.4	6.5	6.5	6.5	6.6	6.6	6.6
Ghana	37.6	37.8	39.6	41.5	42.6	43.8	44.9	45.9	46.7	47.9	48.6	49.7
Guinea	137.1	137.0	138.0	138.0	138.0	136.9	136.8	137.2	137.3	138.0	139.1	141.4
China - Hong Kong	58.3	58.7	57.9	57.4	57.5	57.3	57.3	57.2	57.1	57.0	56.8	56.7
India	79.2	78.1	78.2	78.6	78.8	79.0	79.3	79.4	79.6	79.7	79.8	80.1
Indonesia	154.1	155.1	152.7	152.7	152.5	152.1	151.8	151.2	151.1	150.6	150.4	149.5
Iran	43.9	43.1	43.5	43.9	44.3	44.9	45.0	45.4	45.9	46.4	47.0	47.4
Iraq	43.7	44.0	43.6	43.8	44.2	44.9	45.2	45.3	45.5	45.6	45.7	45.8
Japan	64.8	64.7	63.7	63.7	62.5	62.5	62.4	62.1	61.8	61.7	61.2	60.9
Kenya	10.7	10.8	11.1	11.2	11.3	11.4	11.6	11.9	12.1	12.5	12.8	13.1
Lao PDR	229.0	228.1	228.2	229.6	230.4	230.1	230.0	229.8	229.8	229.8	229.9	230.2
Liberia	107.0	111.1	113.4	111.9	112.9	113.3	113.9	114.8	115.7	116.4	118.1	119.4
Malaysia	93.4	92.9	92.4	92.1	91.9	91.9	91.8	91.7	91.6	91.4	91.3	91.3
Mali	97.0	96.5	97.0	97.9	101.8	103.5	105.4	106.4	107.2	107.7	108.0	107.8
Mexico	7.0	7.2	7.2	7.3	7.4	7.4	7.5	7.6	7.8	7.8	7.8	7.8
Mozambique	28.2	28.2	28.5	28.8	29.1	29.7	30.0	30.3	30.8	31.1	31.5	31.7
Myanmar (Burma)	166.3	167.2	167.2	167.2	167.6	167.9	168.1	168.4	168.9	169.4	170.4	172.1

Nigeria	33.4	32.9	33.2	33.8	34.5	35.3	35.9	36.6	37.2	37.9	38.6	39.3
Pakistan	14.4	14.6	14.7	14.7	14.7	14.7	14.8	14.8	14.9	14.9	15.0	15.1
Philippines	130.6	130.8	130.0	130.0	130.0	130.4	130.1	130.0	130.0	130.2	130.4	130.5
Saudi Arabia	49.4	48.7	48.7	48.7	49.0	49.3	49.6	49.9	50.1	50.4	50.6	50.9
Senegal	99.6	100.3	100.5	101.1	101.5	102.0	102.3	102.5	102.8	103.0	103.2	103.4
Sierra Leone	174.1	160.5	163.8	166.3	168.9	171.5	174.1	177.4	179.9	183.2	185.8	189.0
Singapore	55.4	55.1	54.9	54.6	54.5	54.1	53.9	53.6	53.5	53.3	53.1	52.8
South Africa	17.9	18.8	18.9	19.1	19.3	19.6	20.0	20.2	20.6	20.7	20.7	20.8
South Korea	90.5	91.3	90.3	89.6	89.0	88.7	87.4	86.9	86.5	86.4	86.2	85.9
Taiwan	56.0	55.6	53.9	53.3	52.5	51.8	51.4	51.1	50.8	50.5	50.2	50.0
Tanzania	29.5	29.7	30.0	29.9	30.3	30.7	31.3	31.6	32.3	32.8	33.6	33.9
Thailand	162.3	162.6	161.3	160.4	160.0	158.5	157.8	157.2	156.5	156.0	154.8	154.3
Turkey	10.3	10.3	10.2	10.4	10.4	10.6	10.7	10.9	10.9	11.0	11.2	11.2
United States	12.6	13.2	13.4	13.5	13.6	13.6	13.6	13.5	13.4	13.4	13.4	13.3
Uruguay	16.1	16.6	16.6	16.7	16.7	16.7	16.8	16.7	16.8	16.7	16.8	17.9
Vietnam	240.0	236.2	233.3	232.0	232.6	230.5	229.2	232.5	230.7	228.9	228.3	227.6
Rest of World	22.7	23.2	23.1	23.2	23.4	23.6	24.0	24.3	24.6	39.6	25.0	25.1
World	66.5	66.5	66.0	66.0	66.0	65.9	65.9	65.8	65.8	65.7	65.6	65.5

Table 69 Total World Rice Trade by Country, 2013-2024

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EXPORTERS												
United States	2985	3284	3334	3584	3639	3622	3621	3635	3636	3659	3678	3720
Thailand	10300	10708	11158	11335	11559	11815	12095	12374	12623	12894	13195	13579
Pakistan	3900	3973	4001	4013	4035	4028	4067	4085	4098	4127	4132	4151
Myanmar	1550	1549	1478	1552	1580	1719	1973	2211	2434	2550	2655	2712
Vietnam	6500	6578	7082	6971	7035	7095	7254	7261	7385	7587	7694	7776
People's Republic of China	257	417	487	589	648	676	679	709	735	741	770	781
India	10300	8582	7185	7038	7122	7244	7246	7314	7544	7694	8045	8064
Cambodia	1000	1183	1273	1367	1570	1771	1895	2008	2119	2240	2365	2422
Lao PDR	-15	-10	33	57	65	78	91	106	121	145	166	194
Australia	460	402	417	431	440	452	477	502	515	528	535	538
Egypt	600	501	504	673	669	695	715	735	751	759	763	766
Turkey	20	20	20	20	20	20	20	20	20	20	20	20
European Union 28	245	331	338	341	344	347	352	368	374	355	338	387
Brazil	900	898	879	892	890	887	890	889	889	889	889	889
Cote d'Ivoire	30	30	30	30	30	30	30	30	30	30	30	30
Senegal	10	10	10	10	10	10	10	10	10	10	10	10
Guinea	100	100	100	100	100	100	100	100	100	100	100	100
Tanzania	30	30	30	30	30	30	30	30	30	30	30	30
Japan	200	200	200	200	200	200	200	200	200	200	200	200
Argentina	600	595	629	652	641	670	656	658	677	685	693	707
Uruguay	890	967	1000	1032	1051	1071	1089	1106	1122	1136	1150	1147
ROW and Residual	1364	1357	1314	1290	1282	1269	1256	1241	1226	1202	1181	1153
Total Exports	42226	41705	41502	42205	42960	43830	44746	45594	46639	47582	48638	49377
IMPORTERS												
United States	733	712	771	766	781	778	795	803	814	827	852	881
Thailand	300	500	467	422	463	451	445	453	450	449	451	450
Pakistan	30	43	39	37	40	39	39	39	39	39	39	39
Vietnam	300	300	300	300	300	300	300	300	300	300	300	300
People's Republic of China	4015	3998	3781	3773	3686	3701	3718	3731	3743	3756	3767	3782
China-Hong Kong	420	426	423	423	426	428	430	432	433	435	436	437
Egypt	25	25	25	25	25	25	25	25	25	25	25	25

Japan	654	682	682	682	682	682	682	682	682	682	682	682
Bangladesh	751	615	872	846	986	1012	819	620	378	223	128	84
Indonesia	1225	1368	1705	1910	1682	1599	1412	1270	1311	1376	1359	1315
Iraq	1350	1396	1412	1445	1491	1553	1598	1644	1697	1747	1796	1842
Iran	1650	1603	1605	1714	1782	1870	1899	1957	2006	2046	2104	2138
Malaysia	1100	1098	1049	1061	1092	1099	1135	1138	1157	1170	1196	1210
Philippines	1450	1469	1270	1246	1364	1471	1483	1570	1649	1752	1860	1981
Saudi Arabia	1450	1404	1457	1485	1518	1551	1585	1616	1645	1673	1701	1726
European Union 28	1530	1513	1503	1512	1535	1551	1572	1590	1608	1625	1642	1658
Singapore	300	304	308	312	317	319	322	325	327	329	331	332
Brunei Darussalam	60	44	44	46	46	48	48	49	50	51	53	53
Turkey	341	295	288	316	307	319	331	339	335	345	351	349
South Korea	310	409	409	409	409	409	409	409	409	409	409	409
Taiwan	135	126	126	126	126	126	126	126	126	126	126	126
Australia	150	152	151	151	150	148	147	147	147	147	147	147
Brazil	700	739	471	421	376	364	269	183	139	76	55	36
Mexico	693	779	757	771	790	810	829	850	878	886	887	908
Canada	377	381	386	391	404	413	423	431	440	448	457	465
Cote d'Ivoire	1150	1159	1186	1199	1199	1230	1245	1260	1273	1285	1300	1298
Nigeria	2800	3302	3254	3280	3381	3484	3673	3889	4086	4299	4550	4830
South Africa	975	1033	1034	1050	1069	1089	1114	1135	1159	1170	1178	1190
Senegal	1100	1140	1115	1131	1153	1185	1216	1249	1281	1316	1345	1379
Ghana	600	638	693	731	740	764	784	802	814	840	844	870
Cameroon	525	508	509	523	544	542	560	586	587	598	592	586
Mozambique	500	532	541	563	585	618	643	670	700	729	759	781
Guinea	340	325	305	299	289	262	262	269	269	277	288	315
Kenya	430	387	419	427	440	447	474	502	522	553	583	605
Tanzania	200	208	157	113	96	92	103	105	138	160	212	234
Sierra Leone	270	222	205	196	176	158	153	151	154	141	135	139
Mali	150	51	17	-32	-16	-18	-7	2	1	-24	-42	-128
Liberia	300	301	302	295	300	307	314	324	334	342	356	369
Colombia	325	362	345	347	359	372	377	383	385	386	392	394
ROW and Residual	12512	11156	11118	11495	11865	12232	12992	13538	14145	14570	14994	15140
Total Imports	42226	41705	41502	42205	42960	43830	44746	45594	46639	47582	48638	49377

Estimates of the Stochastic Baseline Analysis

Charts of Selected Price and Trade Variables Showing the 10th and 90th Percentiles, the Stochastic Mean, and the C.V. of Future Probable Distributions Based on Outcomes from 200 Random Draws

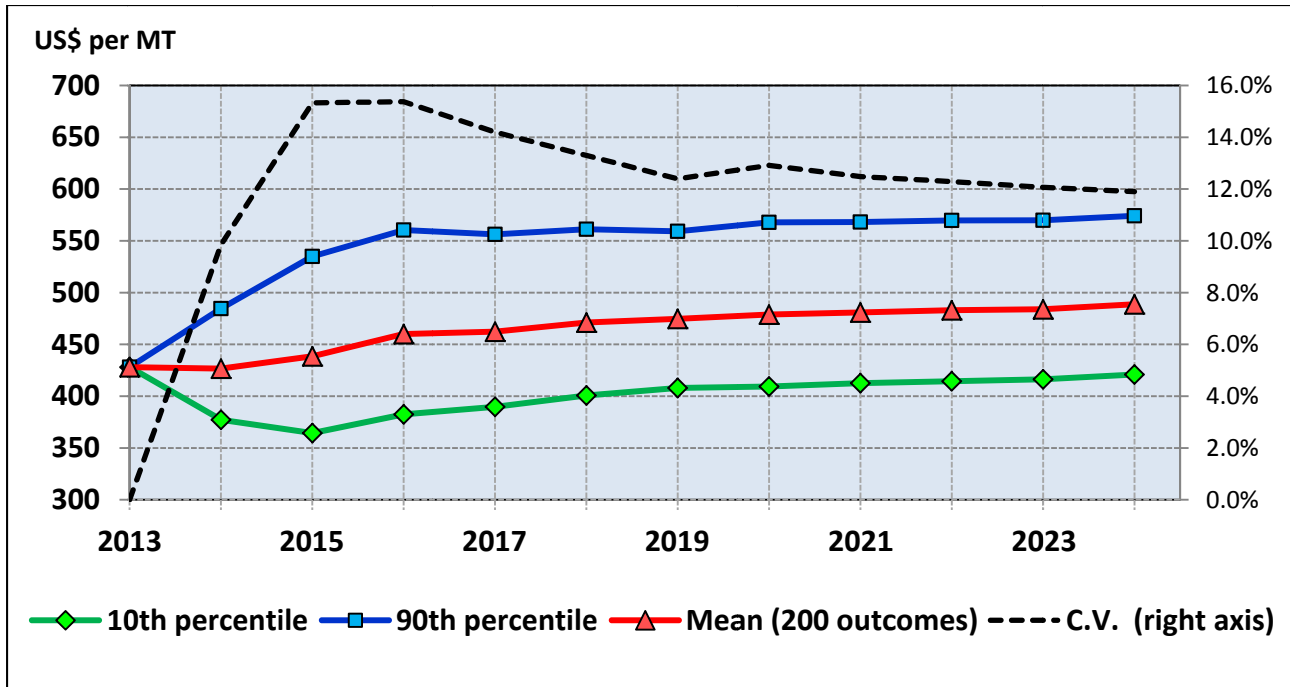


Figure 17 Stochastic Projection of Long Grain Rice International Reference Price, 2013-2024

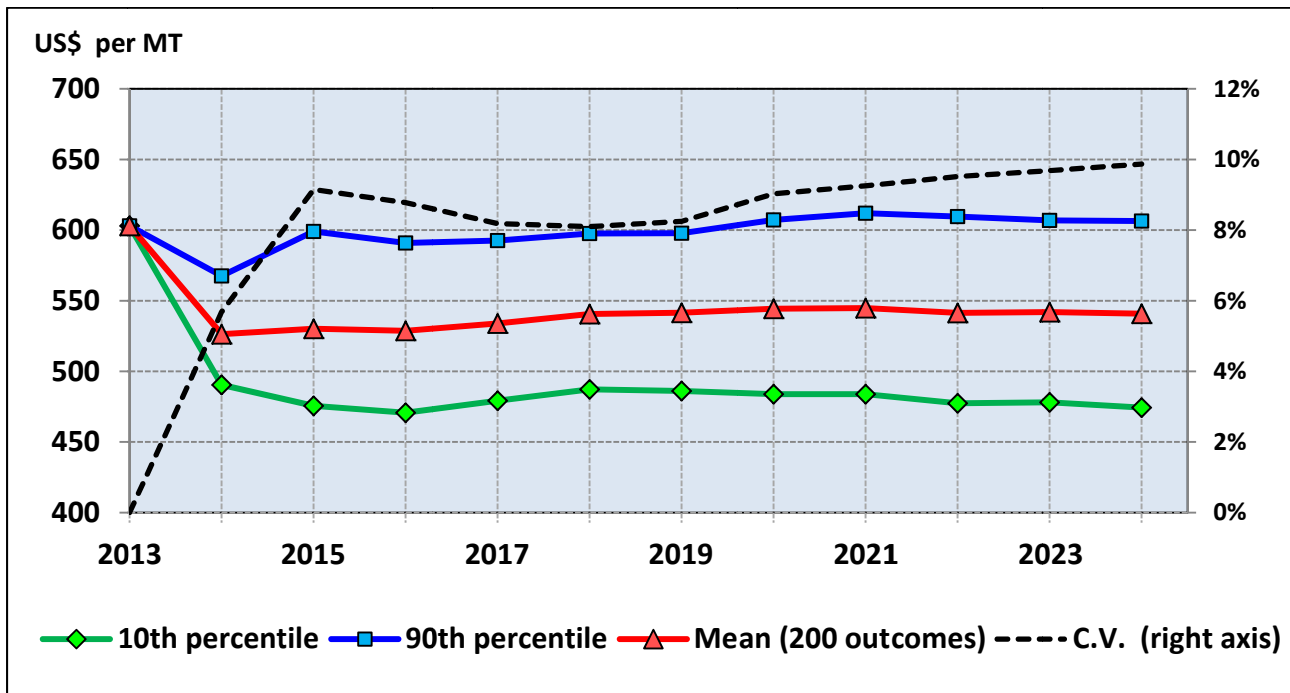


Figure 18 Stochastic Projection of U.S. Long Grain Rice FOB Export Price, 2013-2024

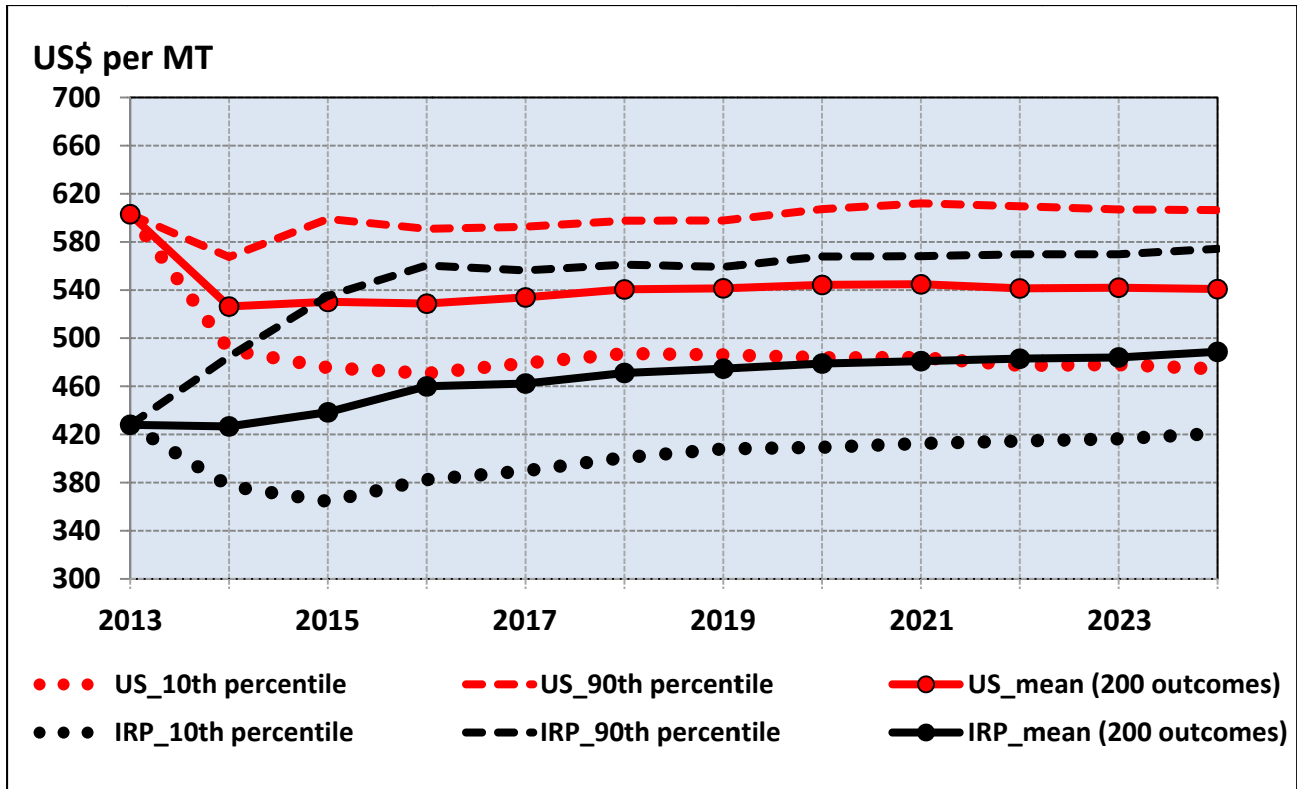


Figure 19 Stochastic Projections of International Reference and U.S. Long Grain Rice Export Prices, 2013-2024

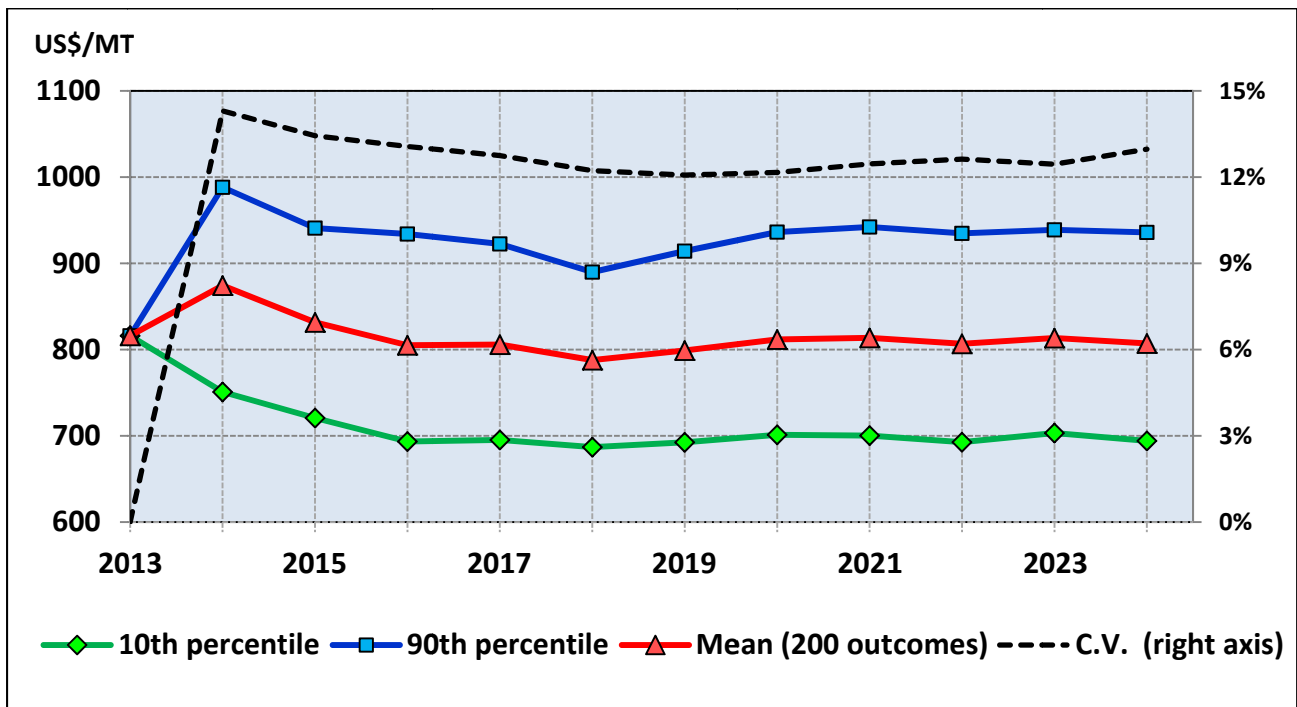


Figure 20 Stochastic Projection of Medium Grain Rice Price, FOB California, 2013-2024

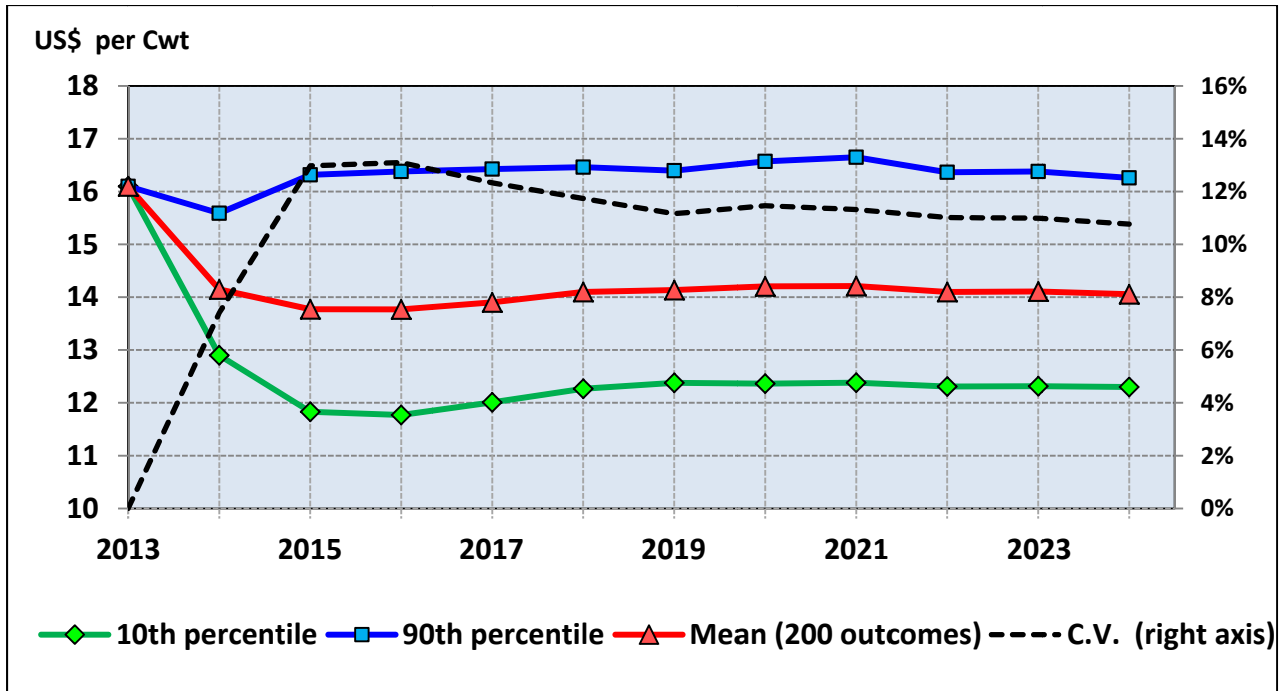


Figure 21 Stochastic Projection of U.S. Season Average All Rice Farm Price, 2013-2024

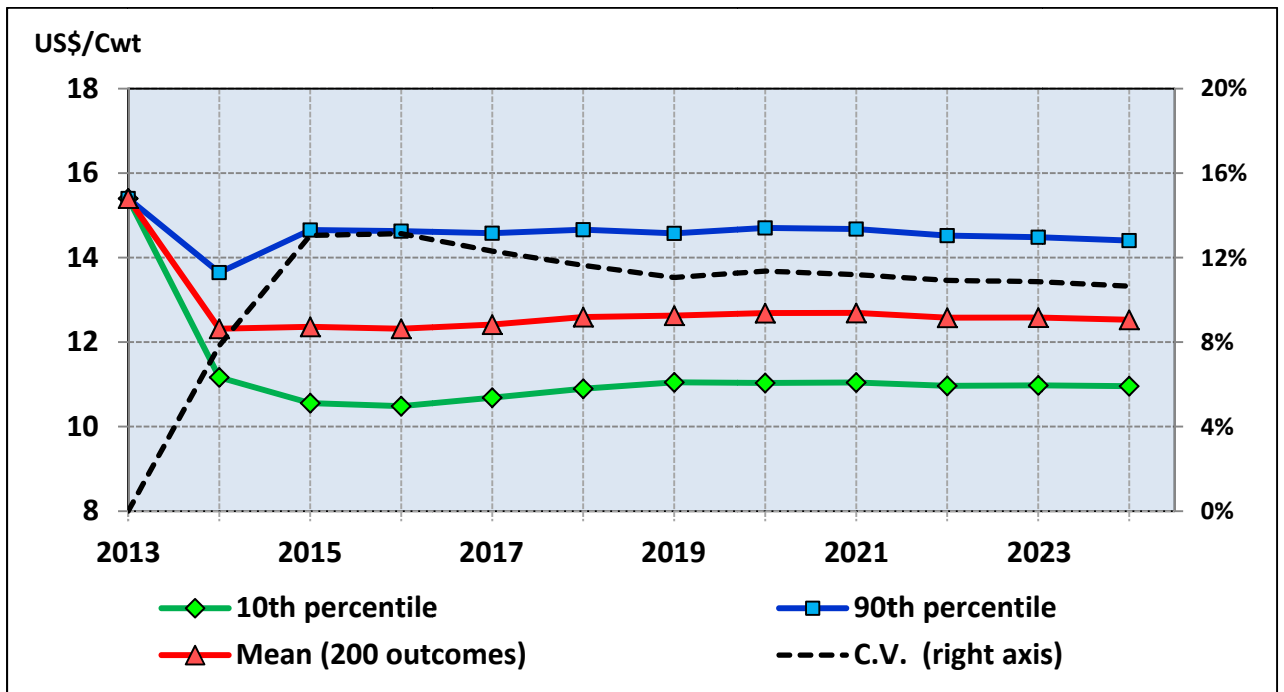


Figure 22 Stochastic Projection of U.S. Long Grain Average Farm Price, 2013-2024

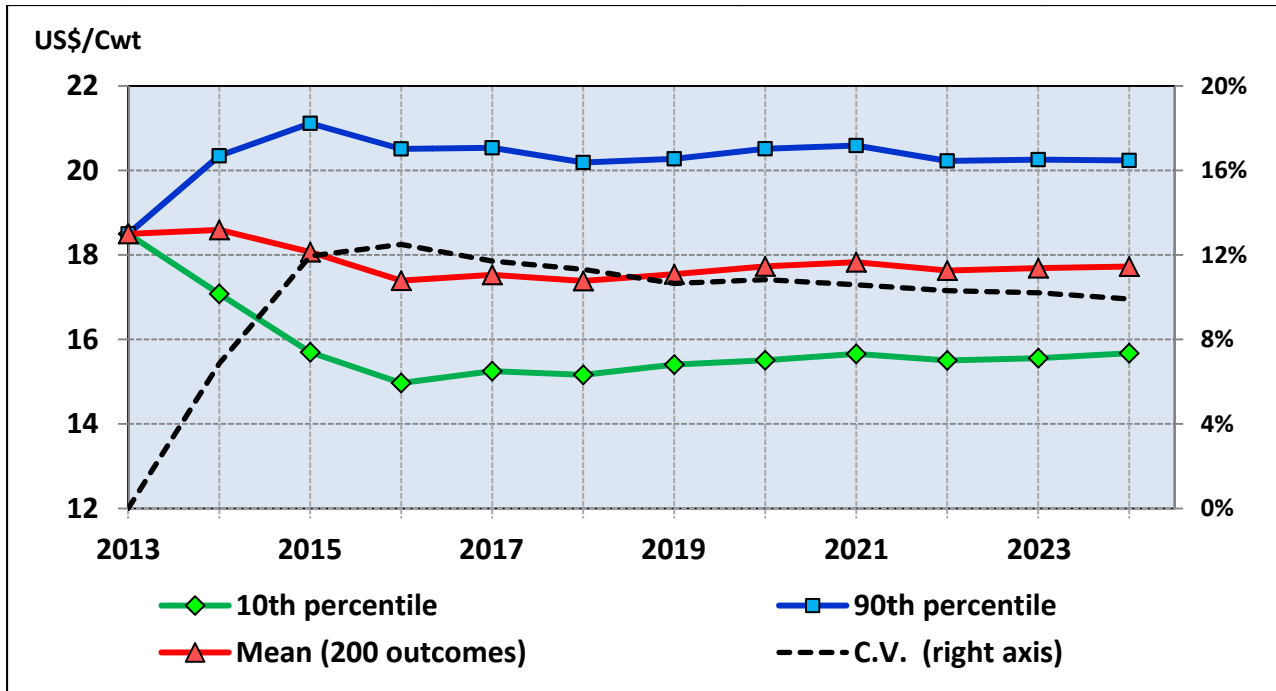


Figure 23 Stochastic Projection of U.S. Medium Grain Average Farm Price, 2013-2024

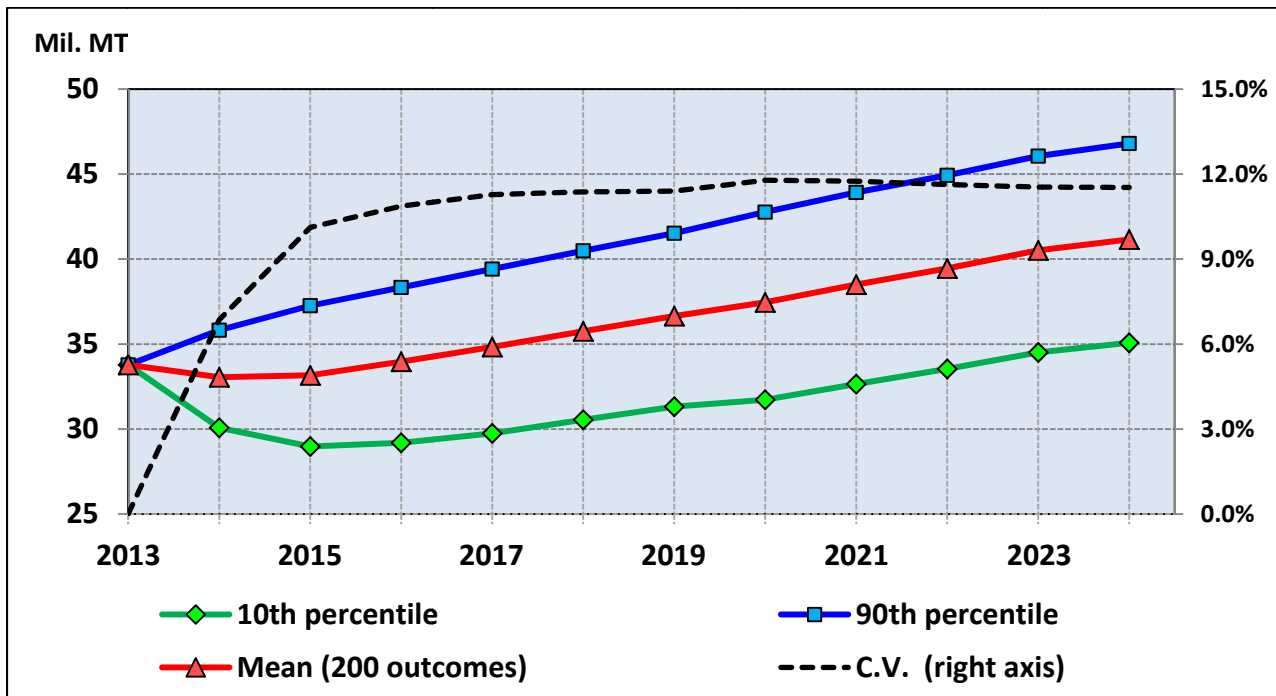


Figure 24 Stochastic Projection of World Rice Net Trade, 2013-2024

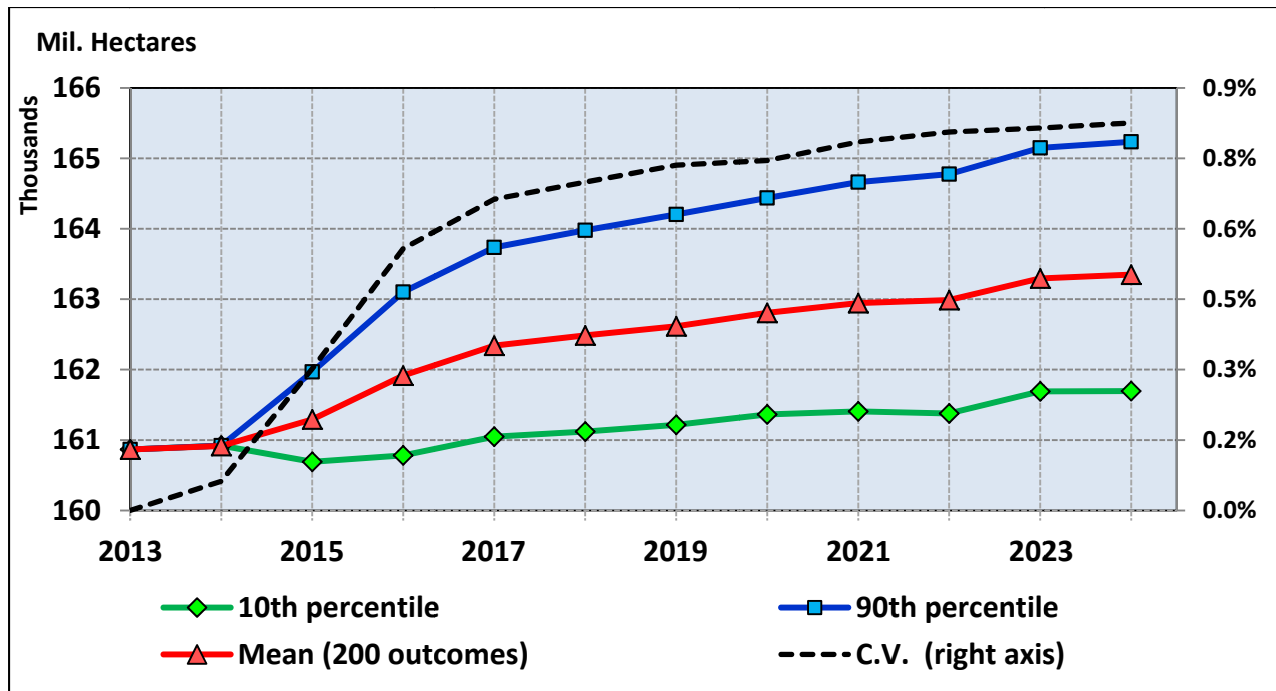


Figure 25 Stochastic Projection of World Rice Area Harvested, 2013-2024

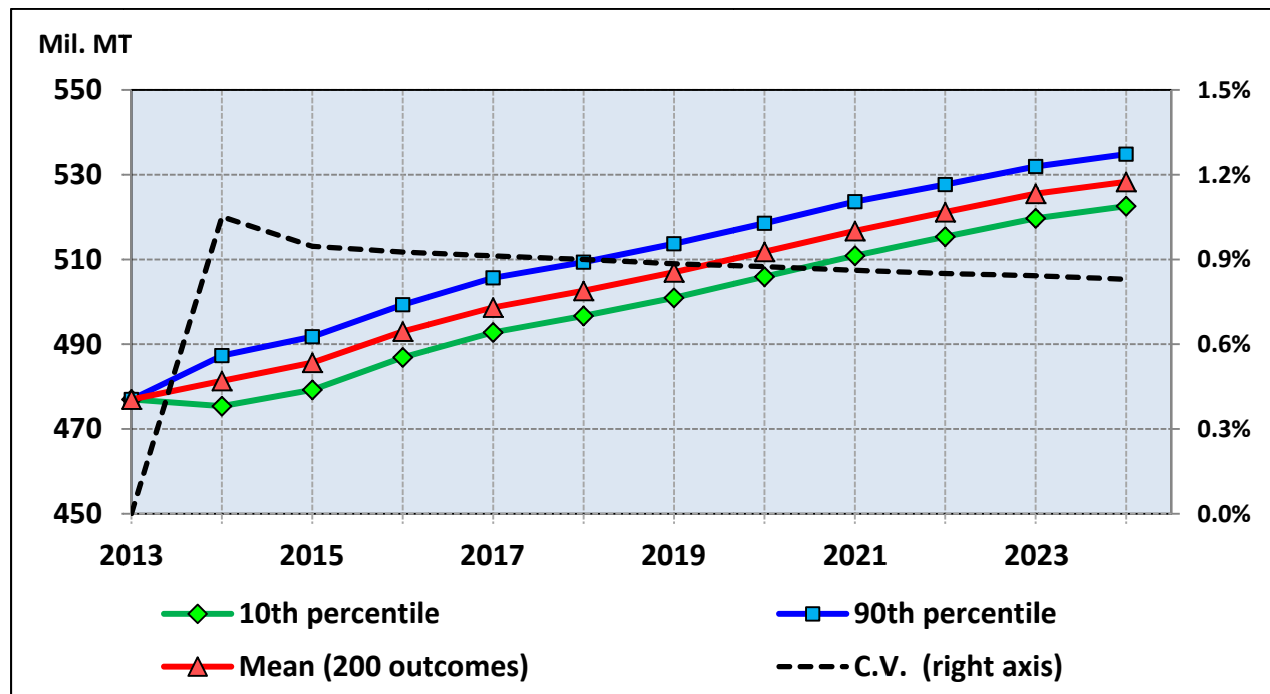


Figure 26 Stochastic Projection of World Rice Milled Production, 2013-2024

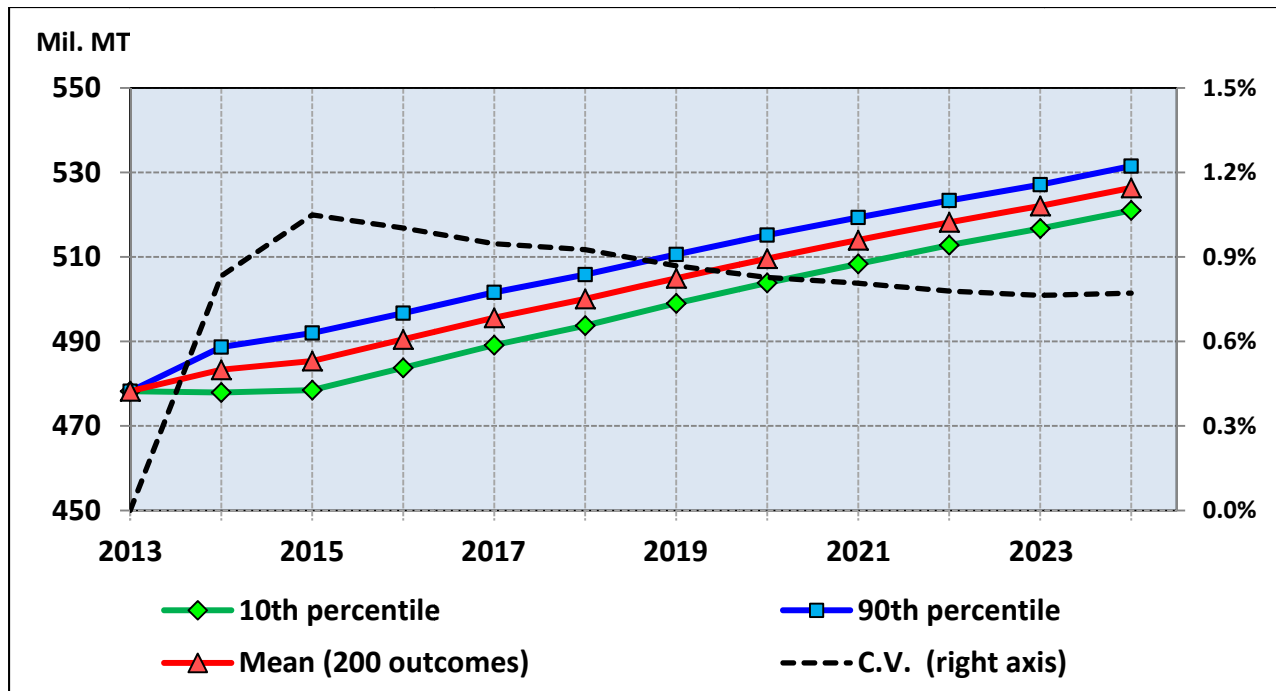


Figure 27 Stochastic Projection of World Total Rice Consumption, 2013-2024

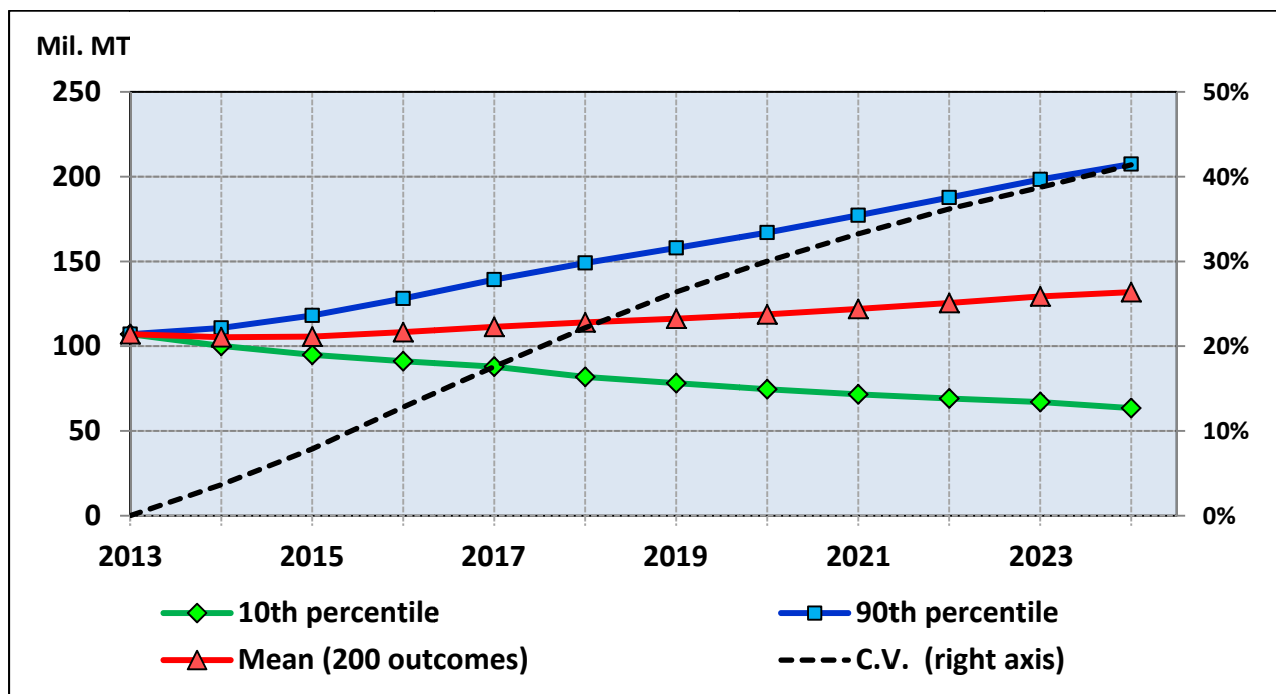


Figure 28 Stochastic Projection of World Rice Ending Stocks, 2013-2024

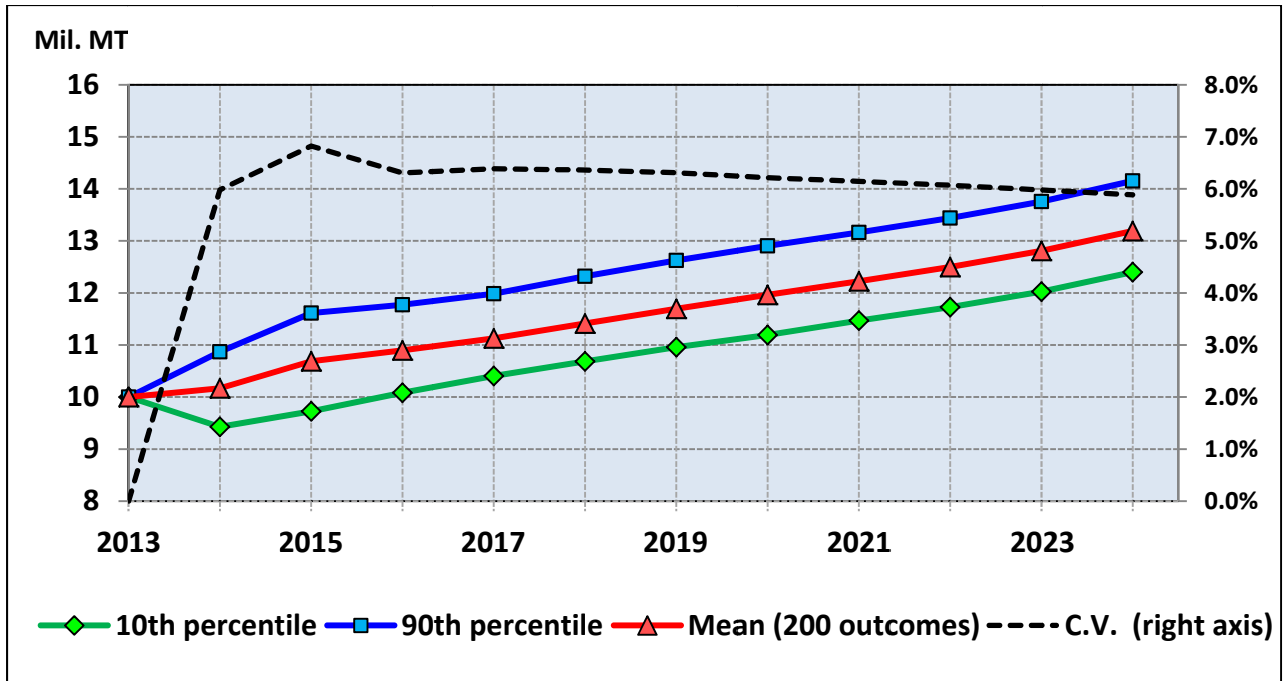


Figure 29 Stochastic Projections of Thailand Net Rice Exports, 2013-2024

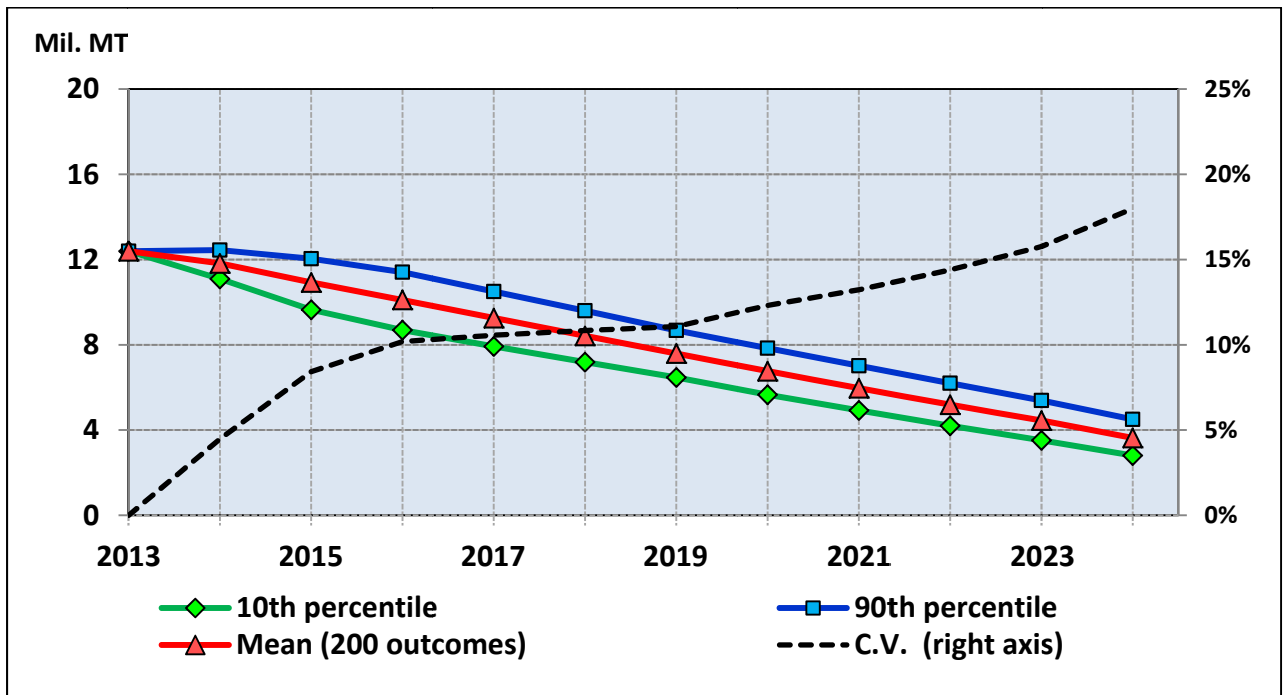


Figure 30 Stochastic Projection of Thailand Rice Ending Stocks, 2013-2024

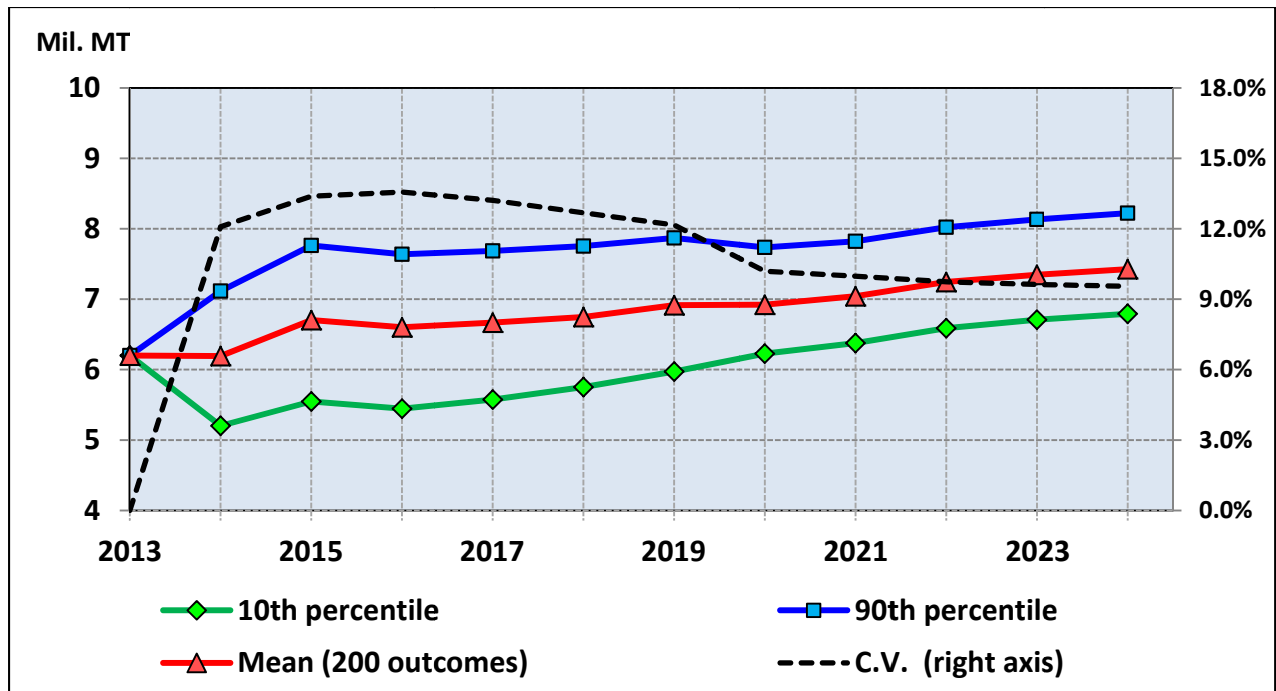


Figure 31 Stochastic Projections of Vietnam Net Rice Exports, 2013-2024

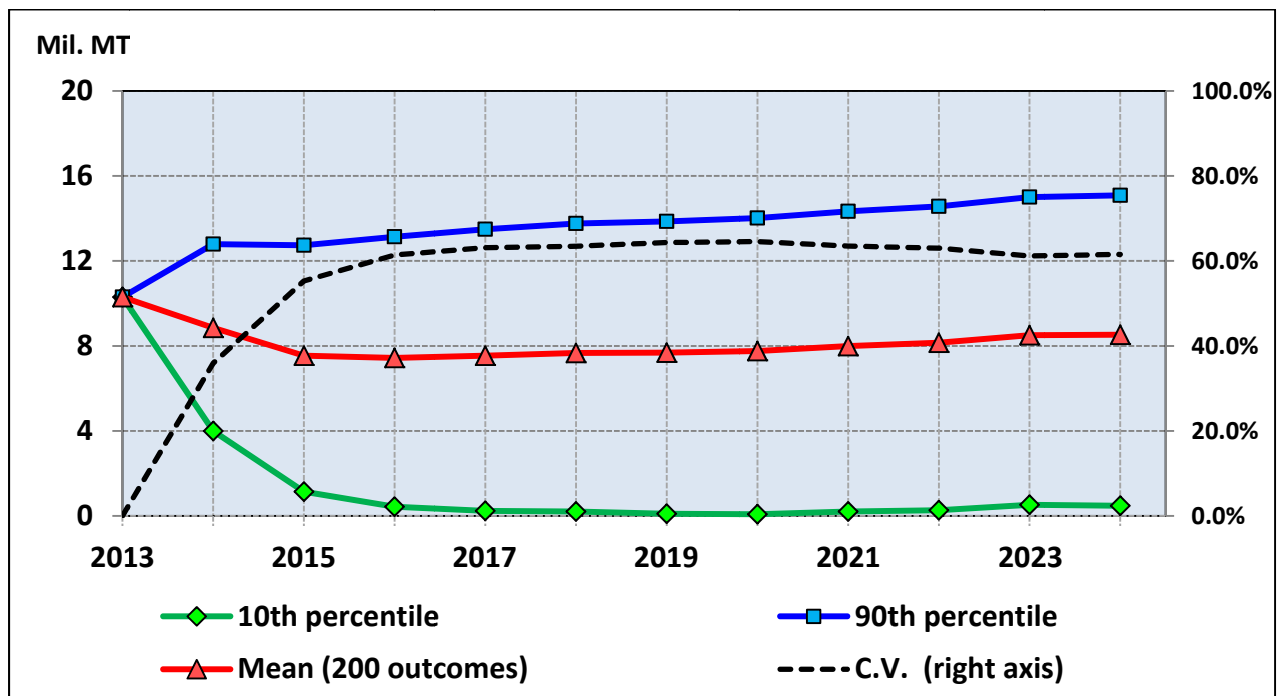


Figure 32 Stochastic Projections of India Net Rice Exports, 2013-2024

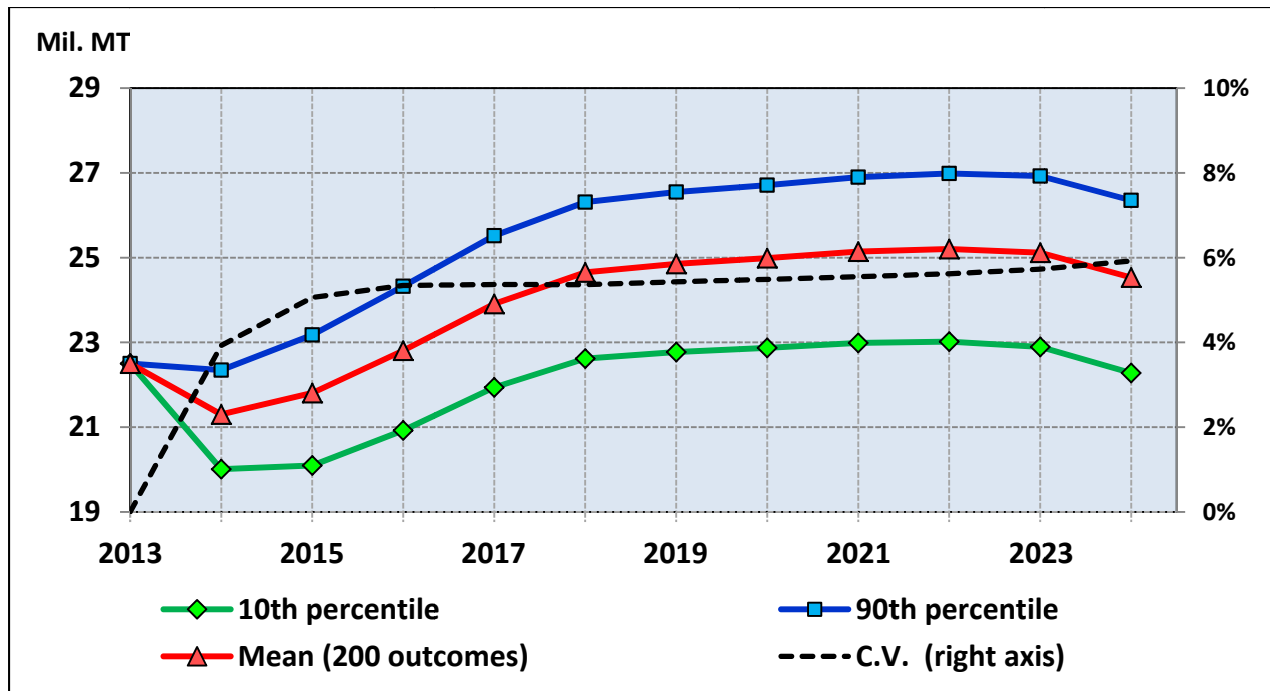


Figure 33 Stochastic Projection of India Rice Ending Stocks, 2013-2024

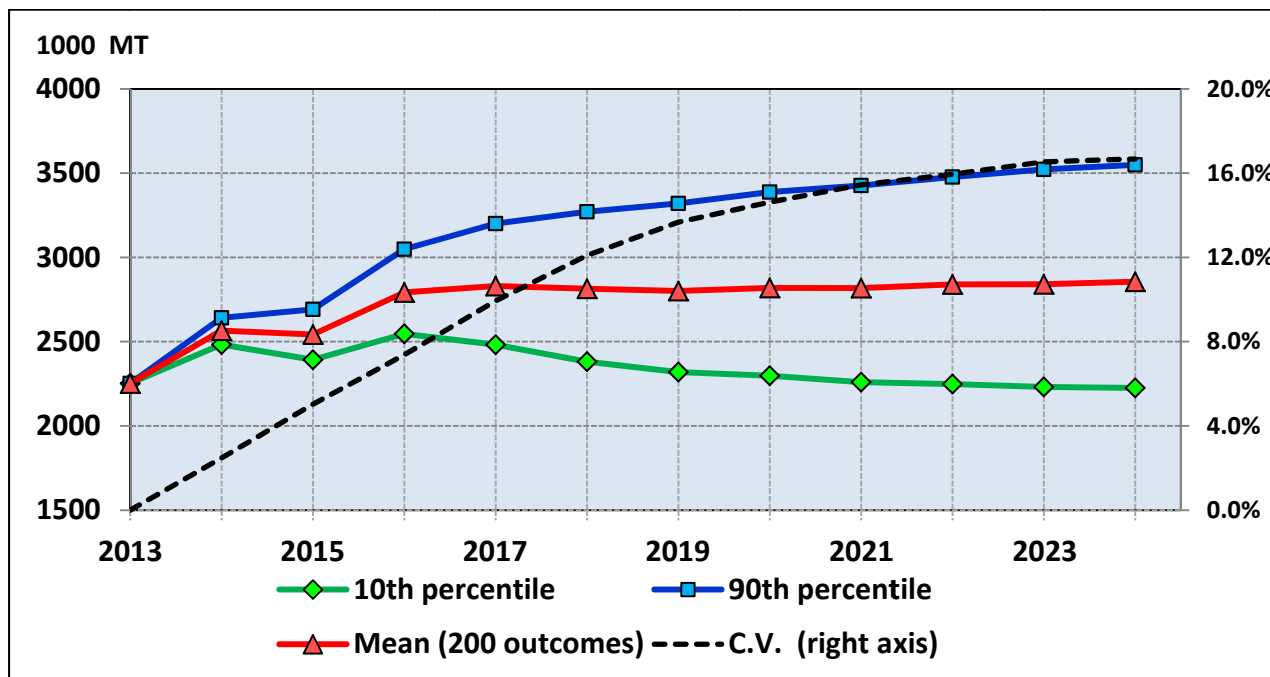


Figure 34 Stochastic Projections of U.S. Net Rice Exports, 2013-2024

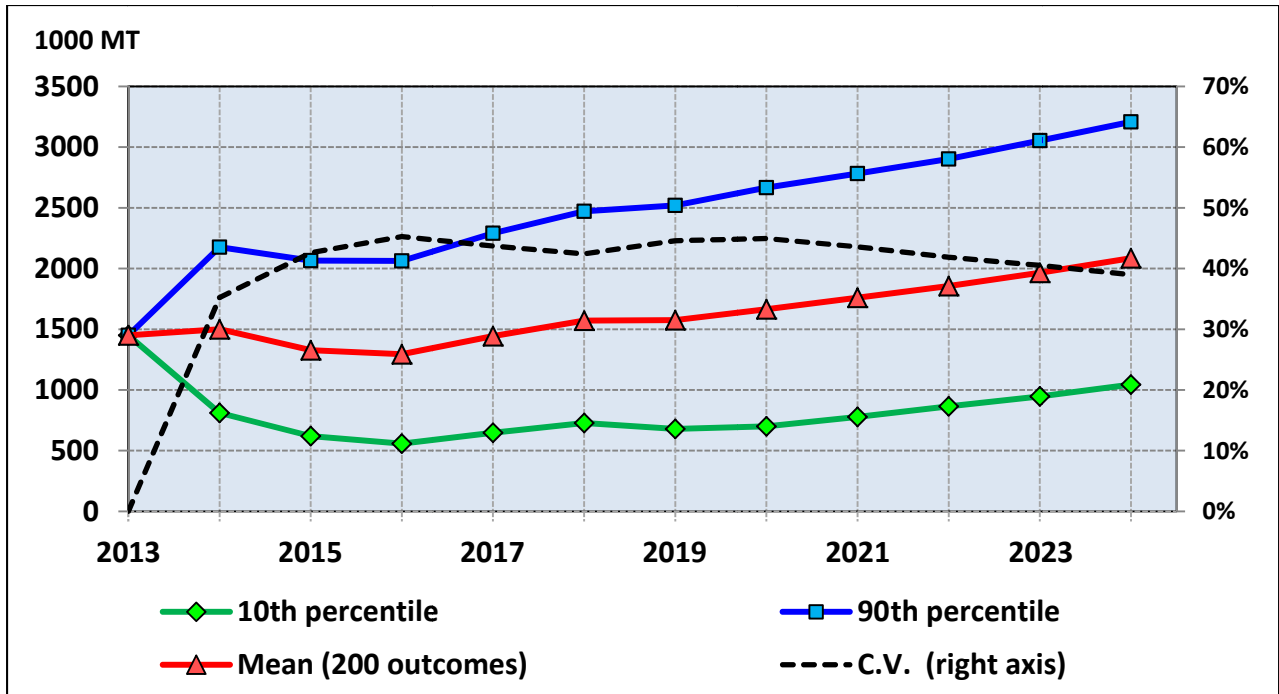


Figure 35 Stochastic Projections of Philippine Net Rice Imports, 2013-2024

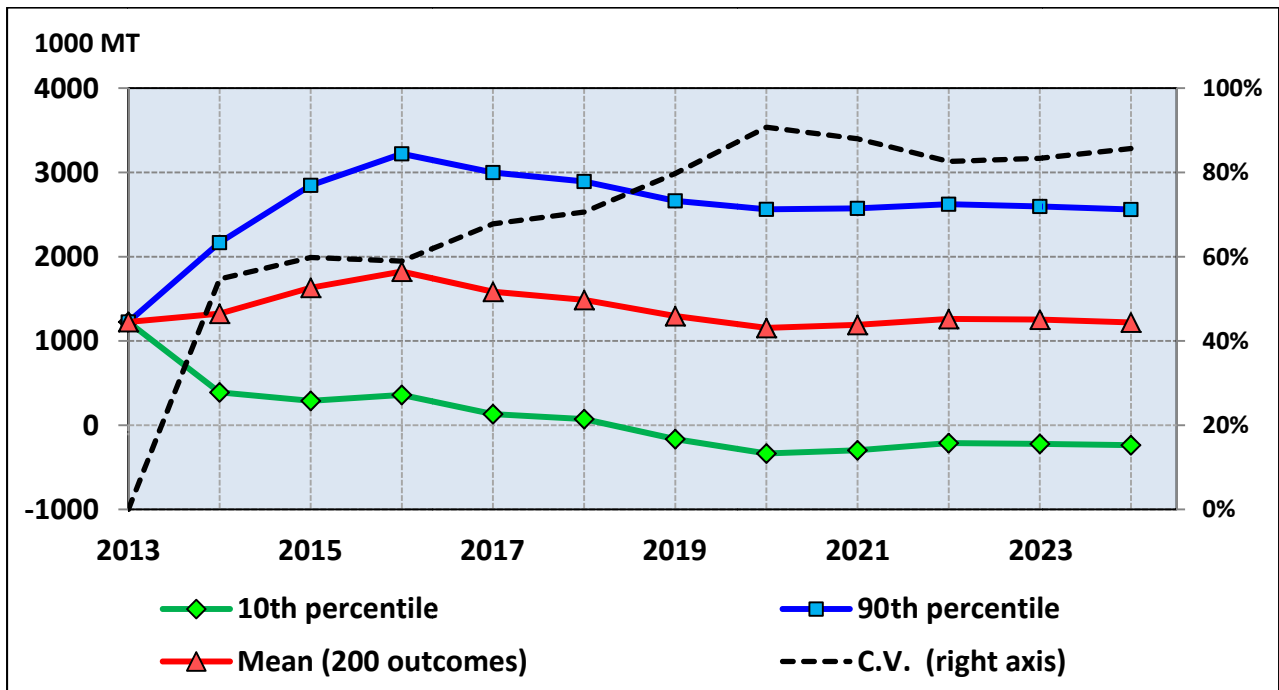


Figure 36 Stochastic Projections of Indonesia Net Rice Imports, 2013-2024

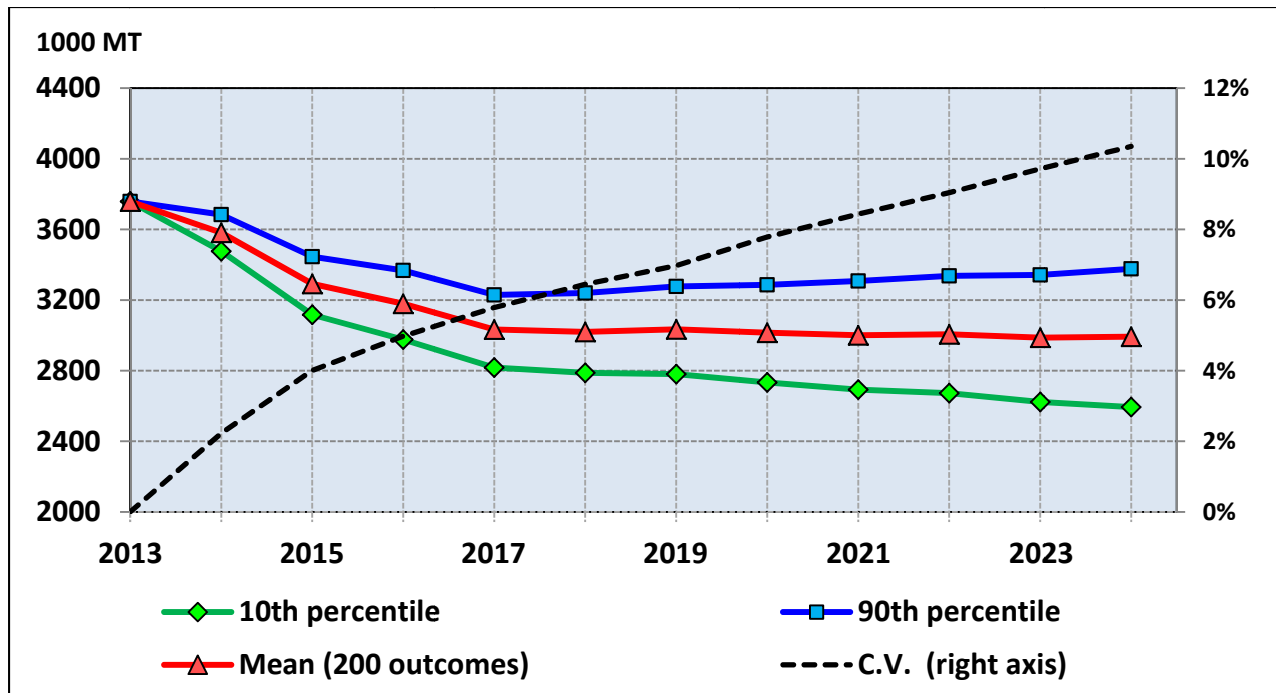


Figure 37 Stochastic Projections of People’s Republic of China Net Rice Imports, 2013-2024

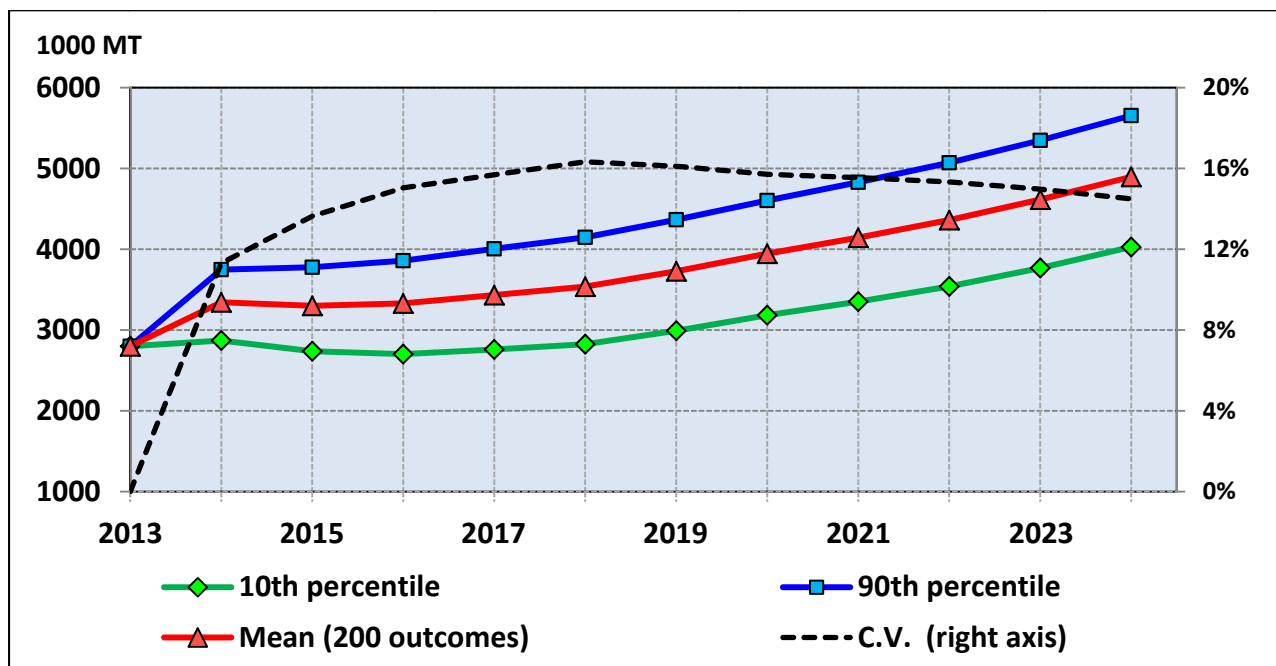


Figure 38 Stochastic Projections of Nigeria Net Rice Imports, 2013-2024

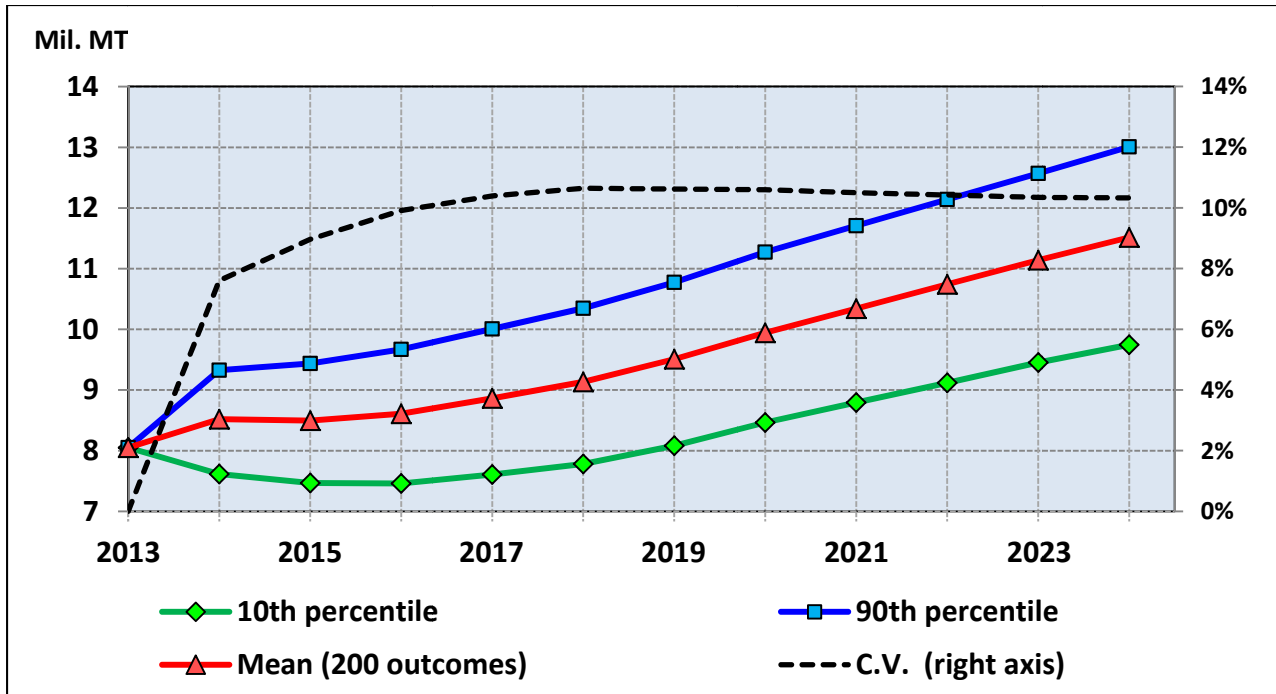


Figure 39 Stochastic Projections of ECOWAS-15 Net Rice Imports, 2013-2024

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