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AGREP

**Arkansas Global Rice Economics Program**

**International Rice Outlook**

**International Rice Baseline Projections, 2017-2027**

By

Eric J. Wailes, Eddie C. Chavez and Alvaro Durand-Morat

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March 2018

Eric Wailes is the L. C. Carter Chair and Distinguished Professor, Chavez is a Program Associate III and Durand-Morat is an Assistant Professor, in the Department of Agricultural Economics, Division of Agriculture, University of Arkansas, Fayetteville.

# **AGREP**

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**Report Prepared by**

Eric J. Wailes, Eddie C. Chavez, and Alvaro Durand-Morat<sup>1</sup>

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Department of Agricultural Economics and Agribusiness  
Division of Agriculture  
Room 217, Agriculture Building  
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Fayetteville, AR 72701

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<sup>1</sup> L.C. Carter Chair and Distinguished Professor, Program Associate III, and Assistant Professor, respectively, at the Department of Agricultural Economics, Division of Agriculture, University of Arkansas, Fayetteville.

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The global rice projections presented in this report were prepared by the team at AGREP, including Eric J. Wailes ([ewailes@uark.edu](mailto:ewailes@uark.edu)), Eddie C. Chavez ([echavez@uark.edu](mailto:echavez@uark.edu)), and Alvaro Durand-Morat ([adurand@uark.edu](mailto:adurand@uark.edu)).

These projections were generated using simulated inputs from various crop models with the assistance of the team at FAPRI-MU, including Pat Westhoff ([westhoffp@missouri.edu](mailto:westhoffp@missouri.edu)), Scott Gerlt ([gerlts@missouri.edu](mailto:gerlts@missouri.edu)), Jarrett Whistance ([jwxbb@mail.missouri.edu](mailto:jwxbb@mail.missouri.edu)), Julian Binfield ([binfieldj@missouri.edu](mailto:binfieldj@missouri.edu)) and Deepayan Debnath ([debnathd@missouri.edu](mailto:debnathd@missouri.edu)), Daniel Madison ([MadisonDC@missouri.edu](mailto:MadisonDC@missouri.edu)); Sera Chiuchiarelli ([chiuchiarellis@missouri.edu](mailto:chiuchiarellis@missouri.edu)); Schroeder, Kateryna G. ([SchroederKG@missouri.edu](mailto:SchroederKG@missouri.edu)); Hoang, Hoa ([HoangH@missouri.edu](mailto:HoangH@missouri.edu)); Soon, Byung Min <[bsp5f@mail.missouri.edu](mailto:bsp5f@mail.missouri.edu)>; and Mike Helmar ([mhelmar@cabnr.unr.edu](mailto:mhelmar@cabnr.unr.edu)) at the University of Nevada-Reno, and Darren Hudson ([Darren.hudson@ttu.edu](mailto:Darren.hudson@ttu.edu)) at Texas Tech University. Any errors, however, in this report are solely the responsibility of the authors.

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# **International Rice Outlook**

## **International Rice Baseline Projections, 2017-2027**

Eric J. Wailes, Eddie C. Chavez, and Alvaro Durand-Morat

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

**JEL Codes:** C02, F01, F14, F17, Q17, Q18, R11

### **Abstract**

This outlook contains updated baseline rice projections for U.S. and international rice economies as of January 2018. 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 baseline projections are generated by the Arkansas Global Rice Economics Program (AGREP); and are grounded in a series of assumptions about the general economy, agricultural policies, weather, and technological change. It is assumed that current agricultural policies will be continued in the United States and other countries included in this study. Projections in this outlook are based on the information available as of January 2018. 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 the likely upper and lower bounds for selected variables, which serve as indications of inherent risks associated with the global rice economy.

The authors acknowledge and appreciate the collaboration with the team at FAPRI-MU based at the University of Missouri in Columbia; but take full responsibility for any remaining errors in this document.

## Introduction

This updated outlook is not a set of predictions but rather 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. Deterministic and stochastic baseline estimates presented in this report are generated using the Arkansas Global Rice Model (AGRM). AGRM is a 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 University of Arkansas in Fayetteville. It covers 66 rice-producing/exporting and rice-consuming/importing countries/regions.

The AGRM researchers have benefited from working closely with colleagues at 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 iteratively-exchanged with the AGRM international rice prices and country models until an equilibrium market conditions are obtained.

In particular, prices and net returns for corn, 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, 2018) and Rice Outlook (USDA-ERS, 2018) as of January 2018. The AGRM rice marketing years by country generally follow the USDA system. For example, *the year 2017 or marketing year 2017/18* in the model refers to January 2018–December 2018 for Thailand, Vietnam, and Indonesia; October 2017–September 2018 for India; July 2017–June 2018 for the Philippines; August 2017–July 2018 for the U.S.; and April 2018–March 2019 for South American countries. See the link <http://apps.fas.usda.gov/psdonline/psdAvailability.aspx> for details. The annual compound growth rates as well as the total growth numbers presented in this document are estimated using the three-year average from 2015 through 17 as the base year; and cover the next 10-year period ending in 2027.

The global model is disaggregated into 66 of the major rice producing, consuming and trading rice countries/regions; and the rest-of-the-world is grouped into five regional aggregations: Africa, the Americas, Asia, Europe, and Oceania. With rice as an ascendant food staple in Sub-Saharan Africa, we provide projections of selected West African countries and for the Economic Community of West African States (ECOWAS). Each country or regional model includes a supply sector (harvested area and yields), a demand sector (per capita use), with trade, stocks, and price linkage equations. Net global rice trade for long grain and medium grain solves for the two respective 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 consider the potential positive impacts from the Global Rice Science Partnership (GRiSP) R&D funding on global rice productivity.

The stochastic baseline provides a range of probable outcomes (confidence intervals), as opposed to the deterministic analysis, which generates only average point estimates. Stochastic estimates are useful given the fact that 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 that 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 66 countries and regions in the model, as well as for each of the six rice-producing states in the United States. We use yield as the stochastic variable because it varies by year and by country, and it is very sensitive to changes in weather conditions and water availability—factors that are critical for rice production. The MVE takes into account serial and geographical covariance. A total of 300 random draws are implemented using a 33-year empirical distribution of historical yields from 1984 through 2016, generated using the software Simulation & Econometrics to Analyze Risk (Simetar) developed by Richardson et al.(2008).

## **Rice Policy Overview**

The global rice economy is one of the most policy distorted commodity markets (Wailes, 2005) The AGRM projections reflect policy interventions through the trade, stocks, supply and demand equation in the model. There is significant border protection through tariffs and tariff rate quotas in many importing countries. The primary rationale is to indirectly support domestic producers, usually with a goal of becoming more self-sufficient in rice, a basic food staple in many countries. Rice exporters have increasingly turned to rice price and input subsidies to help rice producers become competitive in world markets and to support farmers' incomes that have declined relative to urban incomes. The primary data sources for rice policies in the model include 1) the World Trade Organization Tariff Analysis Online (TAO) and the tariff download facility; Food and Agriculture Organization (FAO), United Nations, Rice Market Monitor; the Agricultural Market Information System (AMIS) policy database, and the Food Policy and Market Development in Global Information and Early Warning System (GIEWS); and Foreign Agricultural Service (FAS)/US Department of Agriculture, Global Agricultural Information Network (GAIN) Reports.

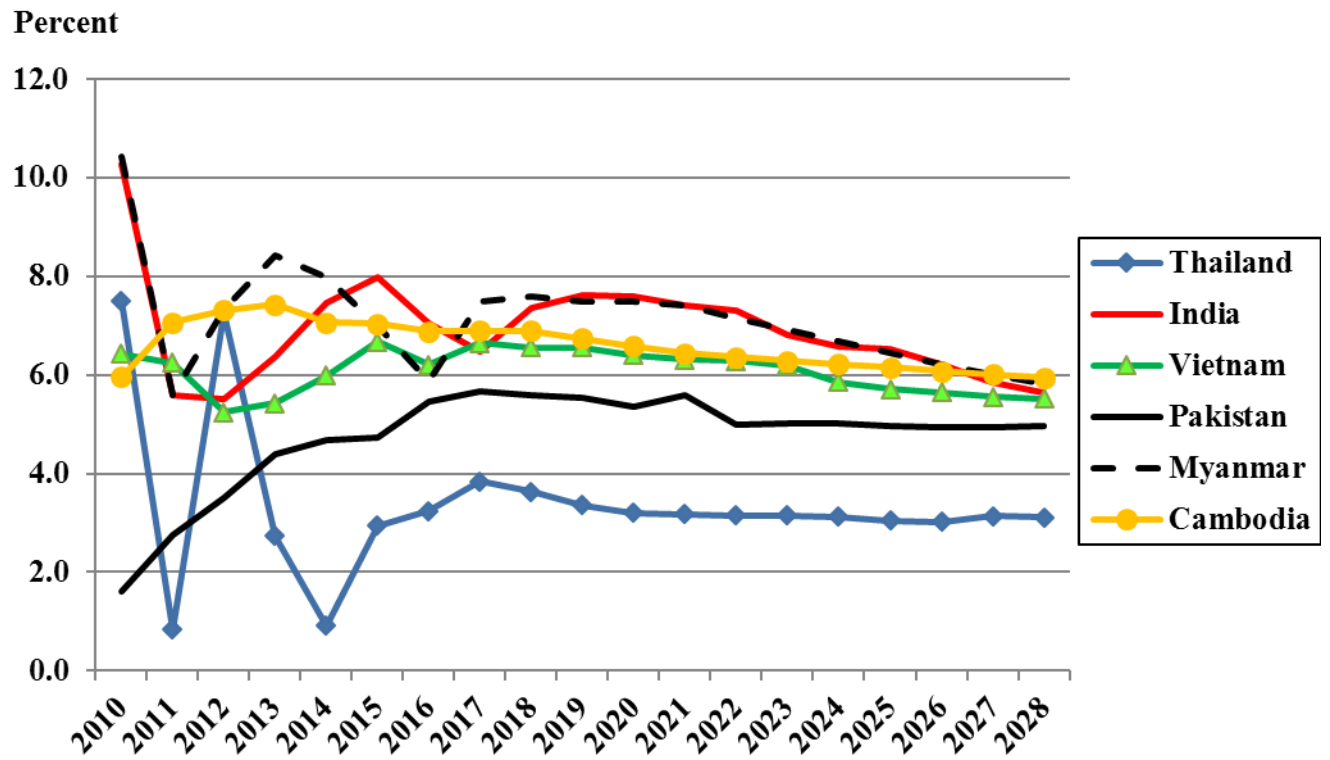
Rice sector policy assumptions by country are documented in Appendix Table 1.

## **Macro Data for Major Exporting Countries**

Basic macro data for real gross domestic production growth (RGDP ), exchange rates relative to the US dollar (USD), and population growth are depicted in Figures 1-3 for major exporting countries that include Thailand, India, Vietnam, Pakistan, Myanmar, and Cambodia.;

For the major exporters', annual GDP generally grows from 5-8% over the baseline period, except for Thailand that has relatively low growth of 2-4% (Figure 1). The global rice market is denominated in US dollars hence exchange rate relative to USD is relevant in rice trade. Figure 2 shows nominal foreign exchange rate indices in terms of US\$ per local currency using 2010 as the base year. Currencies of Thailand and India remain on par relative to the US dollar over the baseline period, whereas those of Vietnam, Pakistan, Myanmar, and Cambodia depreciate relative to USD. This implies that export competitiveness of these four countries will be expected to improve over the baseline.

The population of each of the same set of major exporters is growing but at a declining rate (Figure 3). Growth in Thailand is expected to approach zero percent by 2028.



**Figure 1 Annual growth of Gross Domestic Product (GDP) of major rice exporting countries, percent, 2010-2028.**



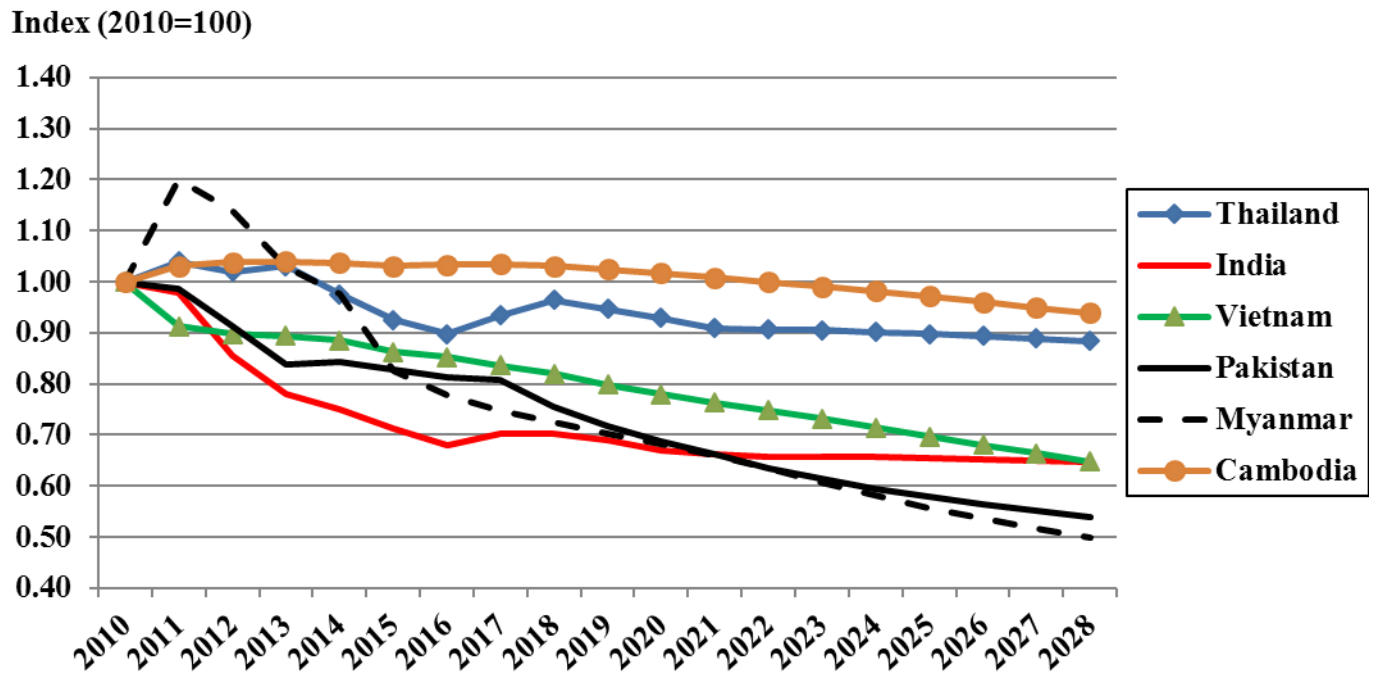


Figure 2 Nominal foreign exchange rate index (2010=100) of major rice exporting countries, US dollar/local currency, 2010-2028.

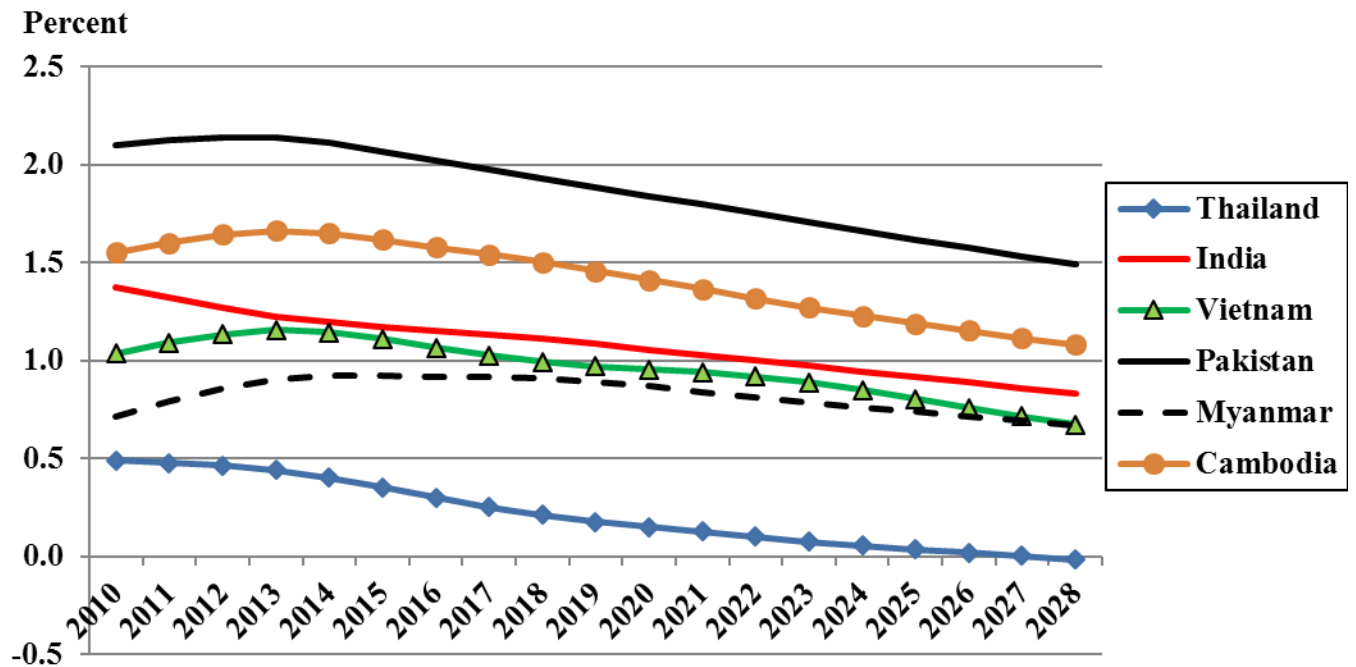


Figure 3 Annual growth of population of major rice exporting countries, percent, 2010-2028.

## Macro Data for Major Importing Countries

Macro data for major importing countries including Nigeria, PRC, China, Indonesia, the Philippines, Iran, Iraq and Saudi Arabia are presented in Figures 4-6.

Figure 4 presents the annual GDP growth rates of the major importing countries, which generally range from 4-7% over the baseline period, except for Iran, Saudi Arabia and Nigeria, which have lower projected growth rates.

Figure 5 shows that China's currency depreciates initially then appreciates thereafter. The currencies of Indonesia, the Philippines, Saudi Arabia, and Iraq are stable. Iran and Nigeria have depreciating local currencies over the baseline, which will make their imports more expensive.

The populations of all the major rice importing countries are generally growing, but at a declining rate with those of Saudi Arabia and Iran at a relatively faster decline (Figure 6).

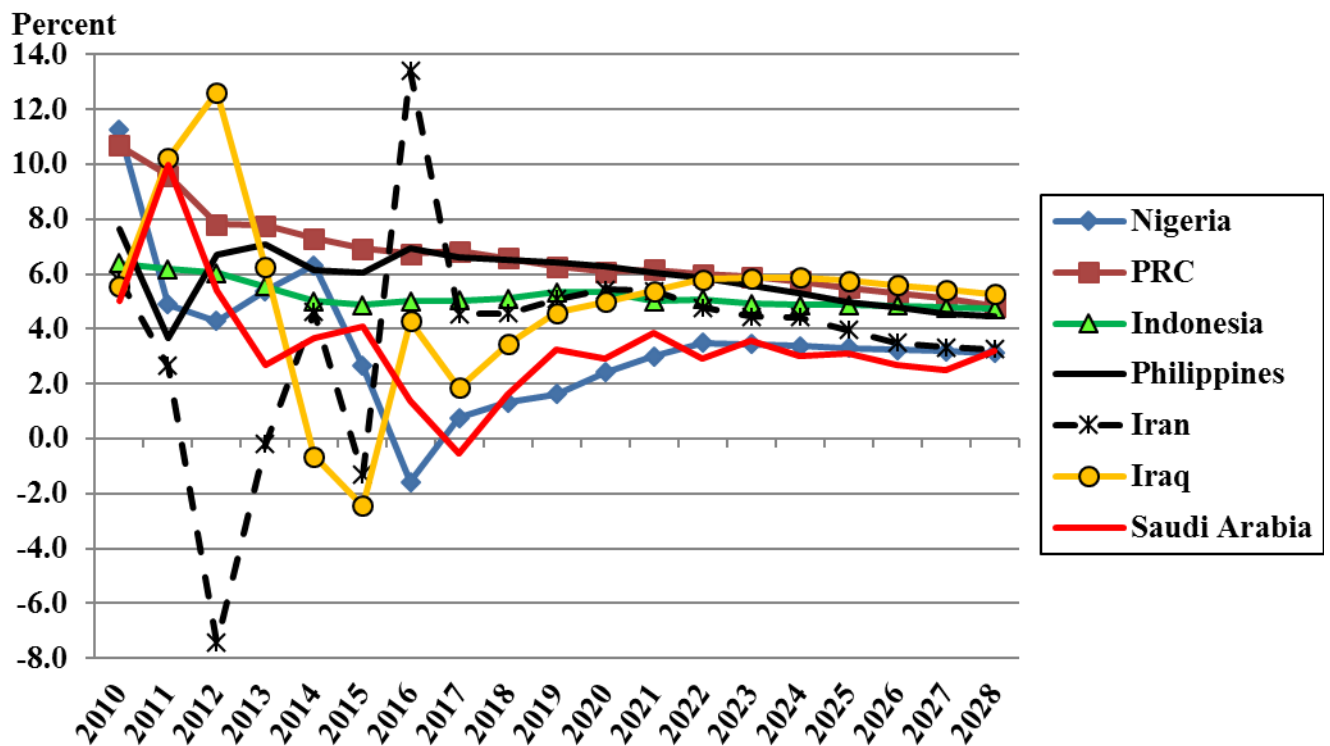


Figure 4 Annual growth of Gross Domestic Product (GDP) of major rice importing countries, percent, 2010-2027.

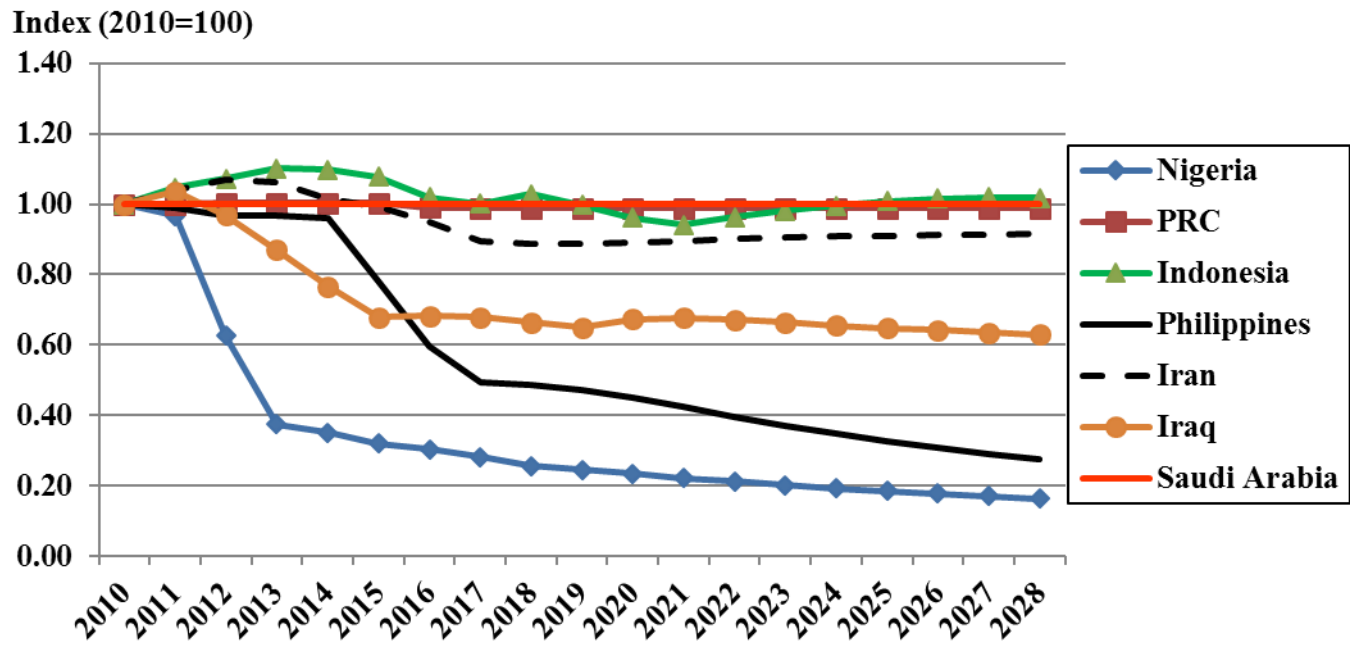


Figure 5 Nominal foreign exchange rate index (2010=100) of major rice importing countries, US dollar/local currency, 2010-2027.

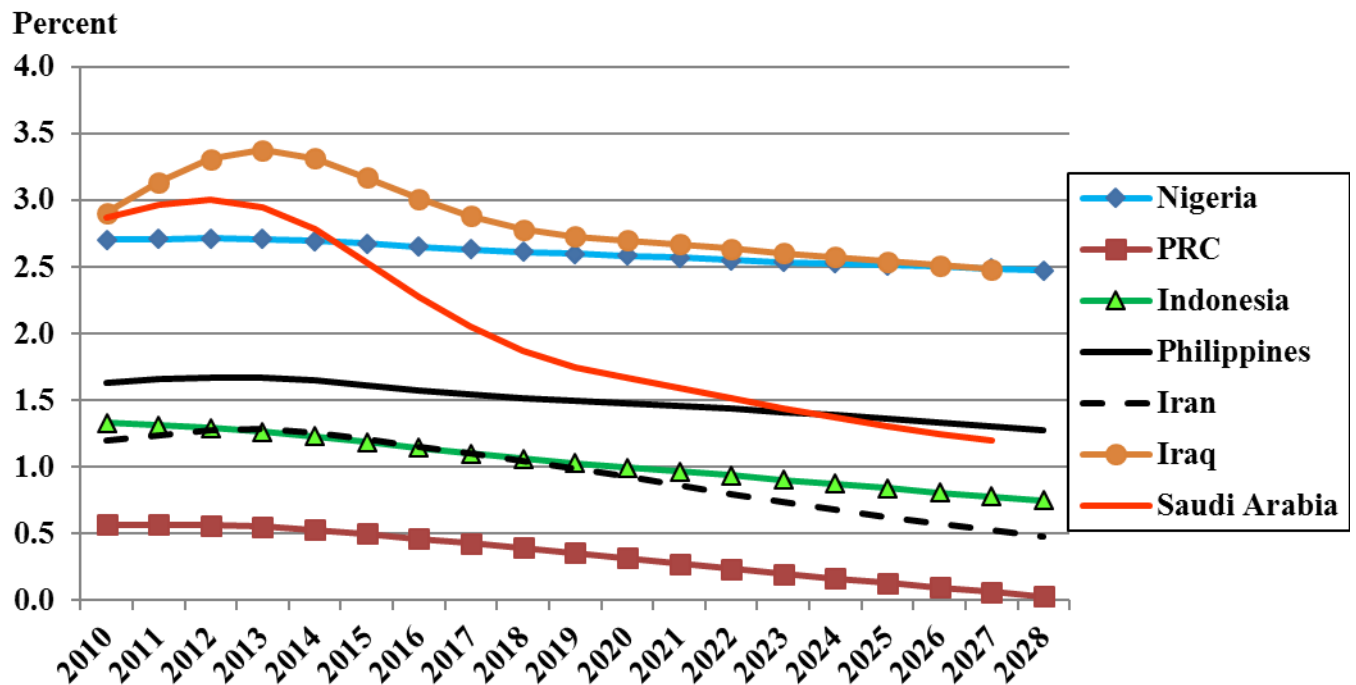


Figure 6 Annual growth of population of major rice importing countries, percent, 2010-2027.

## **Key Market Drivers**

### ***Recent Developments and Baseline Overview***

International rice prices strengthened in the first half of 2017, reaching a peak in July 2017. The price drive was primarily due to the increasing import demand from Bangladesh and Sri Lanka. Prices eased significantly in August-October, but have strengthened again since then due to the continuation of imports by Bangladesh and Sri Lanka, and the increased demand from Indonesia. Prices for Thai and Vietnamese long grain rice 5% broken remain above \$410 per metric ton (mt) (FAO Rice Price Update, March 2018).

The global rice market absorbed the impacts of Thailand's controversial and costly Shinawatra paddy pledging program (PPP), a politically-motivated price-floor support policy for Thai farmers (Wailes and Chavez, 2013). The PPP was reformulated by the military government and under the current government replaced with subsidized credit and inputs to farmers (USA Rice Federation, 2014); and a limited pledging program for fragrant and glutinous rice was implemented (USDA-FAS, 2014). The Thai rice industry has now become more market-oriented and its rice price competitive with other major global suppliers, particularly Vietnam.

Over the next decade, growth in global domestic use is projected to exceed domestic supply, increasing total rice trade and steadily increasing nominal long grain international prices. Major rice-deficit countries continue to import as domestic production falls short of domestic demand despite subsidies and intentions to achieve self-sufficiency.

The average world reference long grain rice price (Thai 100% B) is projected to increase by 2.2% annually, as total global net trade grows at 1.9% over the same period. Major rice-deficit countries continue to import as domestic production falls short of domestic demand. The nominal average world long grain rice reference price increases from \$400 per mt (2015-2017 average) to \$489 per mt in 2027. However, in real terms (using the base 2015-2017=100) the world long grain rice reference price remains relatively stable, ranging from \$359 to \$379 per metric ton (Table 1 and Figure 7).

The world reference medium grain rice price is projected to remain high and relatively steady, ranging between \$735 (2015-2017 average) and \$763 per mt, as demand for medium grain trade remains stable and relatively limited relative to the expected growth in long grain rice trade (Figure 8).

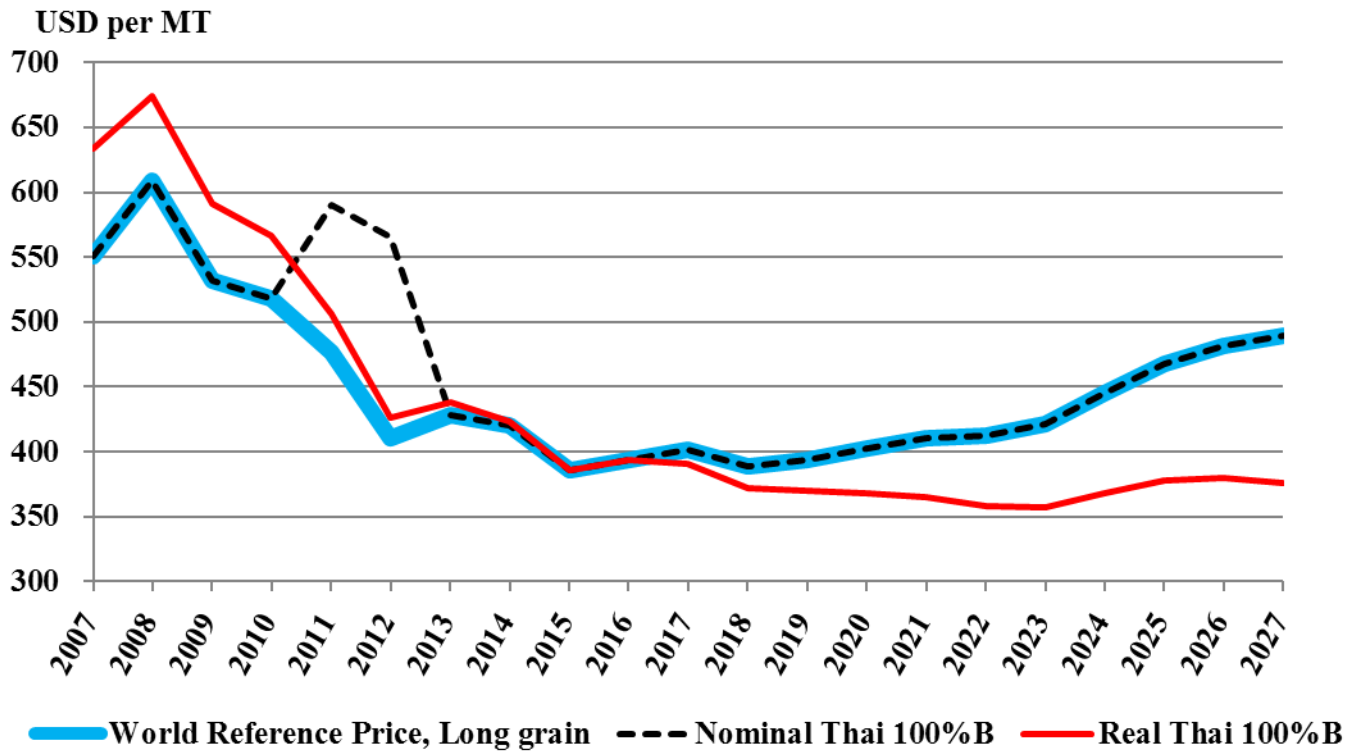
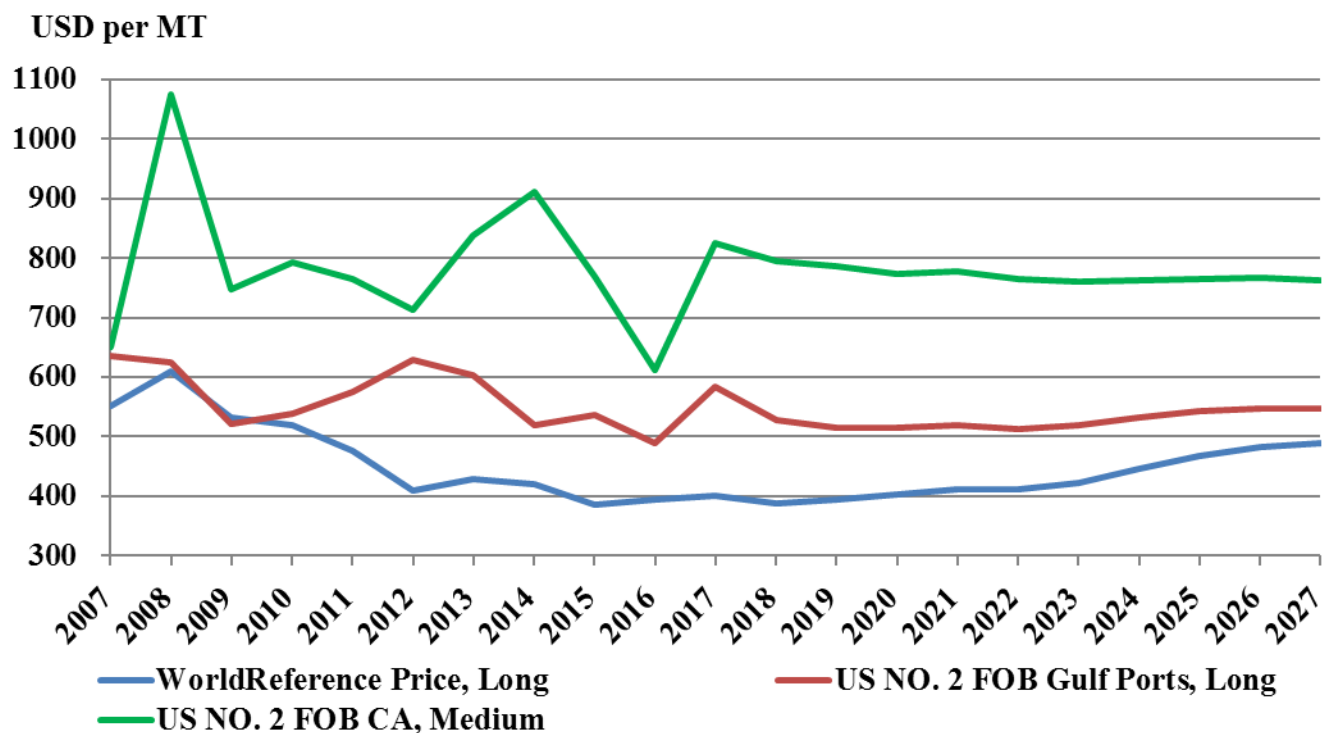


Figure 7 Historical and projected long grain world reference rice price, US dollar per metric ton, 2007-2027.

### ***Margins between U.S. and Asian Rice Prices***

The Western Hemisphere prices, represented by the U.S. prices, remain substantially higher than Asian rice prices---with average margins to Asian prices expanding to as high as \$183 per mt in 2017. The Asian and U.S. long grain margins are expected to narrow steadily over the baseline, reaching \$99 in 2022 and \$58 by 2027, as competition between Asian and Western Hemisphere rice is expected to grow in markets such as Iraq, Nigeria, and Latin America (Table 1 and Figure 8).



**Figure 8 U.S. long grain and medium grain rice export prices (FOB) relative to world long grain reference price, US dollar per metric ton, 2007-2027.**

### ***Growing Segmentation in Rice Markets***

Segmentation in trade flows and prices of long and medium grain markets is a long-standing characteristic of the global rice economy. Our baseline projections reflect that this segmentation is expected to continue, and even within each type (medium grain from Mid-South versus Calrose; long grain from Uruguay and the U.S. versus Vietnam). This is indicated by the price relationships between the medium grain California rice price long grain prices. The lack of substitution between medium grain rice and long grain provides support for a sustained large margin.

### **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, accounting at a global level for approximately 20% of daily caloric consumption (IRRI, 2013). Unlike the baseline prices projected in Figure 8, world rice prices tend to be highly volatile from year-to-year and even within years, due to a number of reasons. Rice has price inelastic supply and demand throughout much of Asia, where it is the dominant food staple. As a result, quantity shocks from either supply or demand of rice result in disproportionate price responses. Furthermore, while rice is the primary staple for half the world's population, it is thinly-traded, which means that there is limited trade flow to address quantitative shocks particularly in rice importing countries, forcing the adjustment burden on price. While the percent of rice traded as a percent of global production is increasing, only about 9.1% of rice production is traded as opposed to 13.9% for coarse grains and 22.5% for wheat (WASDE, 2018).

International rice export supply will remain highly concentrated over the next decade, with the projected five dominant players (India, Thailand, Vietnam, Pakistan, and Myanmar) accounting for over 80% of global net trade (Table 1). India is projected to expand exports over the baseline, replacing Thailand as

the leading exporter. Furthermore, Myanmar is expected to replace the U.S. as the fifth largest global rice exporter owing to Myanmar’s anticipated strong expansion in production over the next decade.

Figures 9 and 10 show the historical and projected paths of world rice supply and Use. Over the projection period, India and the People’s Republic of China (PRC) will continue to account for the bulk of the global rice economy. On average, the two countries combined are projected to account for nearly 36% of the world population from 2017-2027. Over the same period, they will have an average combined share of close to 45% of world rice area harvested, 51% of total milled rice production, 49% of total rice consumption, and 79% of world rice stocks.

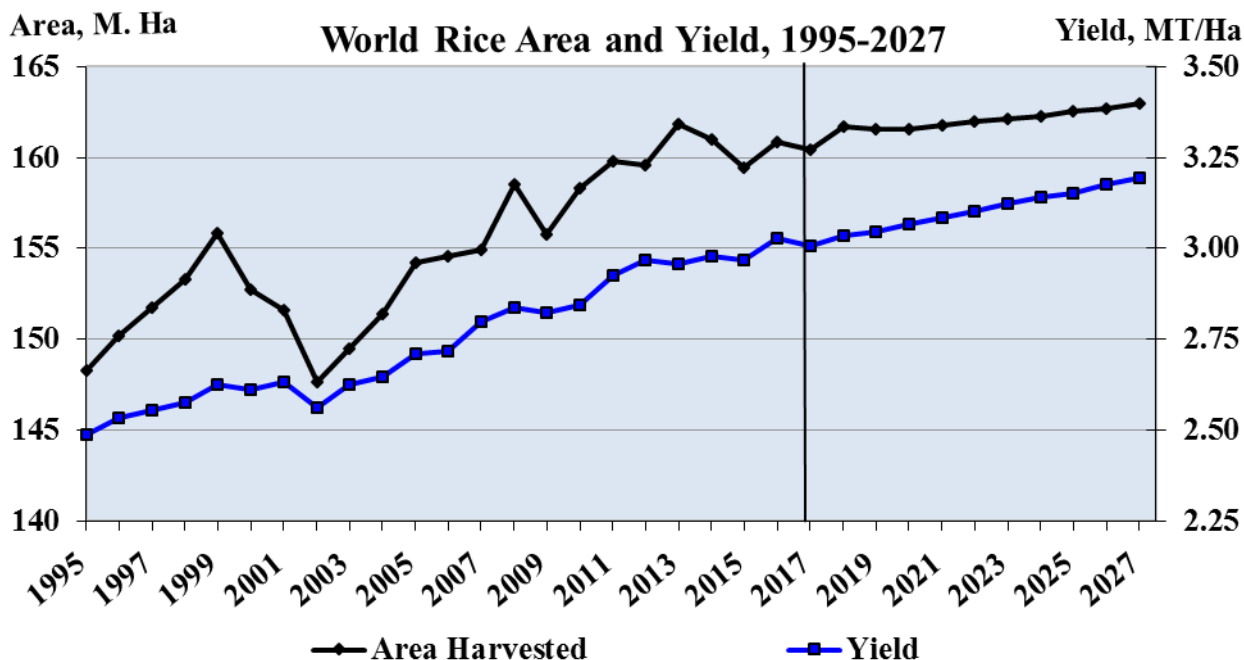


Figure 9 World rice harvested area and yield, historical and projected, 1995-2027.

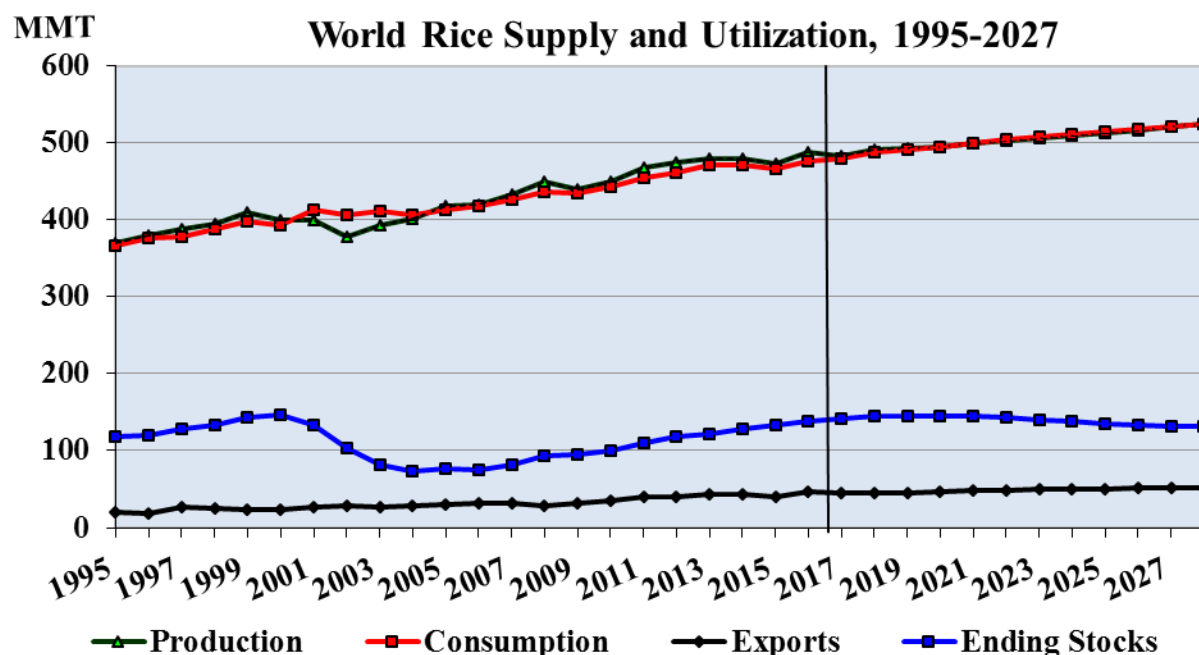


Figure 10 World rice production, consumption, trade and stocks, historical and projected, 1995-2027

### Detailed Results of the Deterministic Baseline Analysis

- Projections generated from the deterministic analysis by country and by region for the period 2017-2027 are presented in Tables 1 through 98. To serve as convenient reference, a list of the tables with description is included below:
- Table 1: Summary of the projected *net trade* by country and international rice prices, Thai 100%B Long Grain, U.S. No. 2 Gulf Ports FOB, Long Grain export price, and the U.S. No. 2 California FOB Medium Grain export price which serves as the international reference price for medium grain).
- Table 2: Summary of the projected global rice supply and demand and stocks to use percent.
- Tables 3-57: Individual country supply and demand projections (production, consumption, stocks, and net trade).
- Tables 58-75: World regional (Africa, Asia, Western Hemisphere, Europe, and Oceania) total 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 the remaining countries of each region that are modeled as a group in AGRM.
- Tables 76-78: Projected rice supply and demand projections for ECOWAS, presented separately to highlight the increasing importance of the region to the global rice economy.
- Table 79: Projected rice milled yield per hectare by country.



- Table 80: Projected per capita rice Use by country.
- Table 81: Projected world and country rice *total trade* (as opposed to World rice *net trade* shown in Table 1).
- Table 82: Projected world and countrylong grain rice trade,
- Table 83: Projected world and country rice medium grain trade,
- Table 84: Projected world rice and FAPRI wheat, corn, and soybean prices and price relationships.
- Tables 85-87: Projected U.S. detailed total, long grain, and medium grain rice supply and Use (in English units),
- Tables 88-93: Projected rice area, yield, and production by individual U.S.State,
- Tables 94-98: Basic supply and demand projections (production, consumption, stocks, and net trade) for five newly-added African countries (Madagascar, Malawi, Zambia, Rwanda, and Uganda).

## ***Global Rice Trade***

Net global rice trade expands 1.9% per year over the 2017-2027 period, reaching 46.6 mmt in 2027 well above the three-year (2015-2017) average of 38.6 mmt (Table 1). On the exporters' side, the significant investment in production and processing capacity in the Mekong Delta in Vietnam, Cambodia and Myanmar bodes well for increasing their role as important rice suppliers over the next decade. As low-cost producers, these countries are poised geographically to supply the relatively steady Chinese rice import market. The productivity gains from hybrids and the research generated by the Global Rice Science Partnership (GRiSP) are expected to have positive supply impacts on Asian and African rice economies over the same period.

Cambodia's exports are projected to grow at 4.9% per year, reaching 2.0 mmt in 2027 up from 1.2 mmt (2015-2017 average) as moe area under production and higher yields increases production above consumption growth. Myanmar's exports are projected to expand from 2.4 mmt (2015-2017 average) to 3.7 mmt in 2027, supported by yield-based growth in production.

For the U.S., total rice exports increase by 240 thousand mt or 6.0 million hundredweight (mil. cwt) over the next decade, reaching 3.7 mmt (or 115 mil. cwt) in 2027. Total imports are stable around 24 mil. cwt. The U.S. has relied increasingly on trade agreements to lock in preferences for its rice exports. However, the Trump administration has sought to renegotiate (NAFTA) or scuttle other negotiations (Trans-Pacific Partnership). Whether the U.S. rice sector can rely on these favorable trade agreements into the future has become uncertain. (See Table 85 for U.S. rice supply and use summary in English units).

## ***Main Sources of Growth in Global Rice Trade***

### **Exports**

Table 1 shows the major global rice suppliers over the next decade with corresponding annual growth rates. While the largest growth by total volume over the same period will come from India (1.9 mmt) and

Vietnam (1.5 mmt), the fastest rate of annual growth is exhibited by Cambodia (4.9%) and Myanmar (4.5%).

One way to gauge the ability of a rice-exporting country to expand exports into the future is to examine the extent by which its per capita production exceeds per capita consumption (i.e., its surplus) as indicated in Table 2, which compares the total change from the past decade (2007-17) and the projected period (2017-2027). It is interesting to note that the relatively smaller countries of Myanmar and Cambodia are shown to have the highest per capita surplus values at nearly 100% and 40%, respectively--indicating their ability to compete for export markets as rice suppliers over the baseline period.

**Table 1. Major global rice exporters, volume in million metric tons and annual percent growth, 2015-2017 average vs. 2027**

Country	2015-17 Average	2027	Change	Annual % Change
Thousand Metric Tons				
India	10,996	12,902	+1,907	+1.6
Thailand	10,445	11,522	+1,077	+1.0
Vietnam	5,990	7,514	+1,524	+2.3
Pakistan	3,847	3,565	-281	-0.8
United States	3,426	3,884	+458	+0.7
Myanmar	2,378	3,686	+1,308	+4.5
Cambodia	1,249	2,017	+768	+4.9

**Table 2 Major rice exporters: average per capita surplus in kilograms, 2007-2017 vs. 2017-2027.**

Country	2007-17 Average	2017-27 Average	Change	% Change
Kilograms				
India	6.9	8.1	+1.2	+17.1

Thailand	136.9	150.3	+13.1	+9.7
Vietnam	65.7	66.2	+0.5	+0.7
Pakistan	20.3	16.2	-4.0	-19.9
United States	8.2	8.1	-0.1	-1.2
Myanmar	28.6	56.6	+27.9	+97.6
Cambodia	64.6	90.4	+25.8	+39.9

## Imports

Rice imports have steadily concentrated over the last several years. For instance, the share of the five largest rice importers increased from 17% in 2006/07 to 27% in 2016/17. However, this trend is projected to ease during the next decade. While China remains an important major rice importer over the baseline period, but because it continues to hold large rice stocks, its imports show only very modest growth from its Tariff Rate Quota (TRQ) level.

Nearly 75% of the growth in global imports over the same period will come from Africa, with the 15-member ECOWAS (including Nigeria) accounting for 44% of the growth in global imports. In general, expansion in imports is associated with a combination of relatively high population growth and lagging production growth relative to expansion of consumption. Supported by increasing population and growing income, the Middle East is another region with strong growth in rice imports.

Table 3 shows the major global rice importing countries/regions and the total increases in imports over the baseline as well as the annual growth rates. The largest change by total volume as well as the fastest rate of growth comes from Nigeria, the other ECOWAS countries, and the Middle East region. Table 4 shows the extent by which per capita production lags per capita consumption (i.e., deficit), showing PRC and ECOWAS (separated into ECOWAS-14 and Nigeria) as having the biggest per capita increases in deficits from the past decade (2007-17) to the projected baseline period (2017-2027). The per capita deficits for South Africa, Indonesia, and the Philippines are projected to decline owing to the downtrend in rice per capita use.

**Table 3 Major global rice exporters, volume in million metric tons and annual percent growth, 2015-2017 average vs. 2027.**

Country	2015-17 Average	2027	Change	Annual % Change
Thousand Metric Tons				
ECOWAS-14	5,963	8,124	+2,161	+3.1

PR China	5,114	5,337	+223	+0.4
Middle East	3,784	5,471	+1,687	+3.8
Nigeria	2,469	3,778	+1,309	+4.3
Philippines	1,337	1,526	+189	+1.3
South Africa	838	1,018	+180	+2.0
Indonesia	672	622	-50	-0.8

**Table 4 Major rice importers: average per capita deficit in kilograms, 2007-2017 vs. 2017-2027.**

Country	2007-17 Average	2017-27 Average	Change	% Change
	Kilograms			
ECOWAS-14	30.6	34.7	+4.1	+13.3
PR China	-2.2	2.8	+5.0	+222.7
Middle East	28.6	29.7	+1.1	+3.7
Nigeria	14.0	14.9	+0.9	+6.3
Philippines	19.5	11.7	-7.8	-39.7
South Africa	28.3	26.5	-1.8	-6.5
Indonesia	4.8	2.7	-2.1	-43.3

### ***Rice Harvested Area and Production***

Global rice output continues to expand over the next decade, driven by the use of higher-yielding varieties and hybrids and other improved production technologies—in line with self-sufficiency programs of major rice consuming countries. China and India will continue to account for more than half of total world production with the rest accounted for by Indonesia, Bangladesh, Vietnam, Thailand, Myanmar, the Philippines and Rest of the World (ROW) (Figure 11). Global output increases by nearly 40 million metric tons (mmt) over the same period, equivalent to an annual growth of 0.8%; and reaching 520.5 mmt in 2027 with 0.6% of gain coming from yield improvement and the rest from increases in area harvested (Table 2).

By volume, about 34% of the expected growth in global rice output over the next ten years will come from India; 45% from seven countries including Bangladesh, Thailand, Vietnam, Myanmar, the

Philippines, Indonesia, and Cambodia; and 21% from the ECOWAS-15. However, rice output in PRC declines by a total of 6.3 mmt, and those of Japan and South Korea decline by 1.0 mmt combined, over the same period. Total U.S. rice production, on the other hand, is projected to increase by a total of nearly 963 thousand mt (or 31 mil. cwt) over the same period, equivalent to 1.4% annual growth, which comes mainly from yield improvement (Table 3).

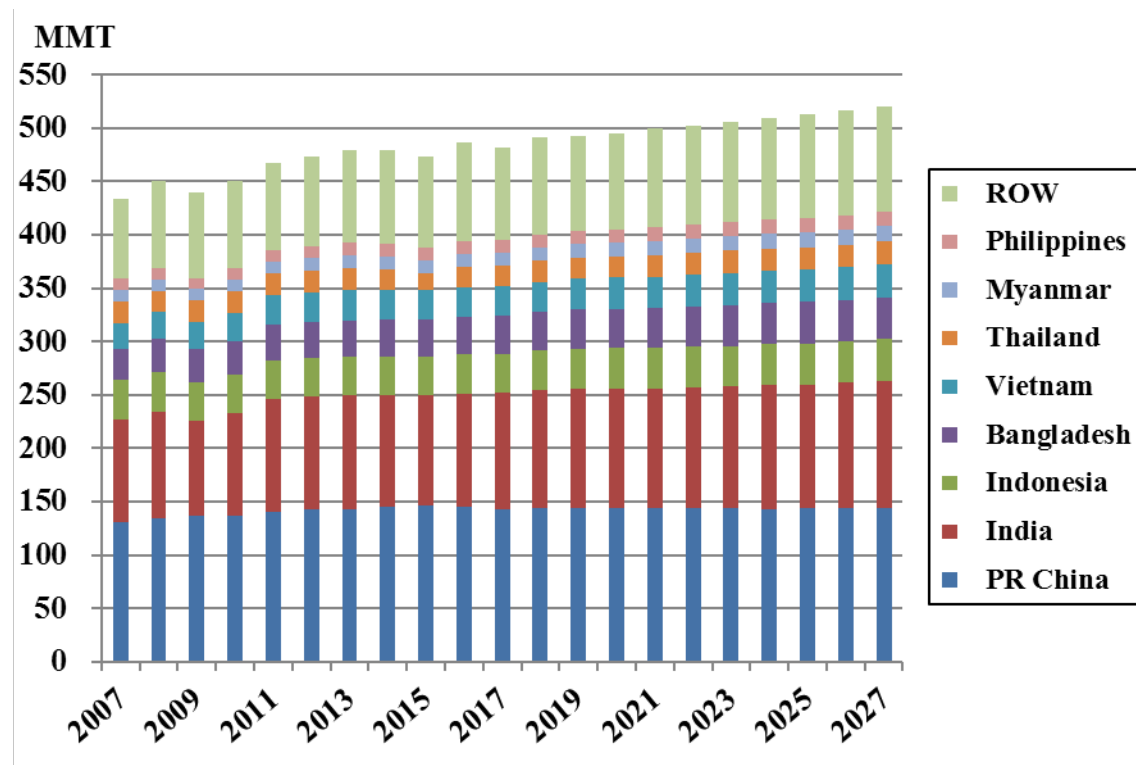


Figure 11 Top world rice-producing countries, historical and projected, million metric tons, 2007-2027.

### ***Rice Domestic Consumption***

Over the next decade, expansion of world rice demand will be driven mainly by population growth in conjunction with other factors such as income level and demographics. In some Asian countries where rice is an inferior good and a food staple, rising incomes continue to dampen per capita rice demand. These countries include Japan, Taiwan, PRC, and South Korea. Demographic trends also weaken rice demand, as aging populations and a growing focus on health and diversification of diets shift preferences away from rice and towards more fruits, vegetables, and protein-based diets.

Over the baseline, global rice consumption is projected to increase by 47.6 mmt reaching 521.8 mmt in 2027, equivalent to an annual growth of just under 1.0%. Global population growth of 1.1% per year is projected to be offset partly by a 0.14% decline in average world rice consumption per capita (Table 2). Nearly half (49.2%) of the total volume of global consumption is accounted for by China and India; while 27% is accounted for by the six countries that include Indonesia, Bangladesh, Vietnam, the Philippines, Thailand, and Myanmar (Figure 12). About 24% of the growth in global rice consumption comes from India; 54% from five additional countries including Bangladesh, PR China, Nigeria, the Philippines, and Indonesia; 17% from ECOWAS; and the rest from ROW. The U.S. total rice

consumption increases by 470 thousand mt (or 15.0 mil. cwt) over the same period, reaching 4.3 mmt (136.1 million cwt) in 2027 or an annual growth of 1.2%; of which 0.9% comes from population growth and 0.3% from higher per capita use.

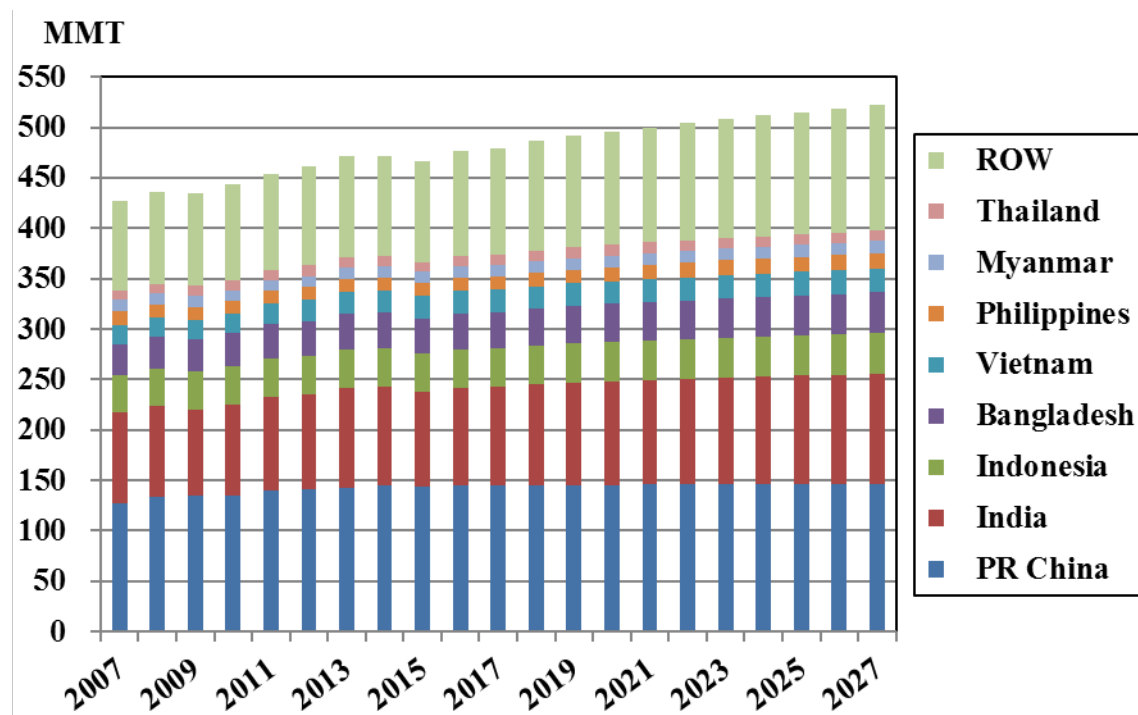


Figure 12 Top world rice-consuming countries, historical and projected, million metric tons, 2007-2027

### Rice Global Stocks

The top rice stockholding countries in the world from 2007 through 2027 are presented in Figure 13, with China accounting for 68% of global stocks on average. Global rice stocks-to-use ratio is projected to decline slightly over the same period, from about 0.23 in 2017 to 0.20 in 2027--reflecting the relatively faster growth in total consumption than that of the total global output. One of the important uncertainties of this baseline is what China will do over the projection period with its large quantity of rice stocks. Production subsidies have contributed to excessive production. Should China begin to liquidate its surplus stocks, there will be significant downward pressure on international long grain prices and production.

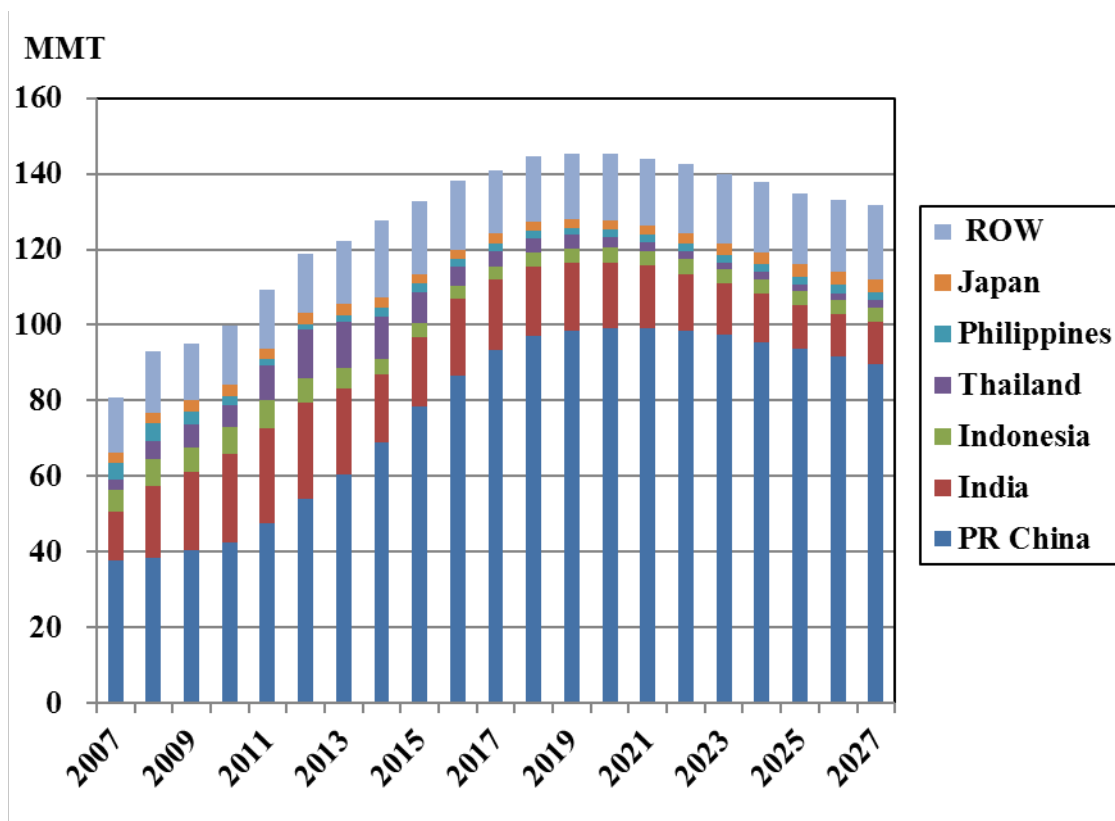


Figure 13 Top-ranking countries in rice ending stocks, historical and projected, million metric tons, 2007-2027.

### ***Rice Supply and Demand by World Region***

The summary results for the five world regions are presented in Tables 62-76. Three tables are associated with each region: the first one is the total for the region; the second is the sum of individually-AGRM modeled countries in the region; and the third consists of the remaining countries in the region that are modeled in AGRM 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 62 shows that Africa’s total rice output is projected to grow by 3.4% per year, driven by both growth in area (1.6%) and yields (1.8%). This expected productivity improvement is supported by availability of increased research funding from public and private organizations, more focused efforts by the Africa Rice Center and the International Rice Research Institute (IRRI), and a possible expanded distribution and adoption of improved rice varieties like the New Rice for Africa (NERICA) cultivars. The region’s total rice consumption grows by 3.4% per year as population grows by 2.6% and per capita use rises by 0.7% annually. This increased consumption is supported by 1.1% annual growth in real per capita income<sup>2</sup>.

<sup>2</sup> Real per capita income is computed by dividing total real gross domestic product by population.

Table 63 presents the results for the group of individually-modeled African countries in AGRM. This group is expected to increase total rice production by 3.4% per year, as both area and yields expand by 1.7%. Total consumption of this group gains 3.4% annually, driven by 2.6% growth in population, 0.7% growth in per capita use, and 1.0% growth in real per capita income.

Table 64 shows that the “Other Africa” region (or the rest of African countries that are modeled as a group) expands its rice output by 2.5% per year, with 0.7% resulting from growth in area harvested and 1.8% from yield increases. Total consumption of this group expands at 2.9% per year, supported by 2.7% population growth and 0.2% gain in per capita use. Real per capita income grows by 1.3% annually.

## **Americas**

Total rice production of the Western Hemisphere (Table 65) grows at 1.5% per year, which comes from a 0.7% and 0.8% average annual growth in yield and area, respectively. Total consumption increases at 1.1% annually, a combined effect of 0.9% population growth and 0.1% gain in per capita use with 1.4% growth in real per capita income.

The group of individually-modeled Western Hemisphere countries (Table 66) is projected to grow total rice output slightly by 1.7% per year, as area gains 1.1% and yields grow by 0.6%. Total rice consumption of this group gains 1.1% annually, as population grows by 0.9% and per capita use by 0.2%. Real per capita income grows at 1.4% per year.

Total rice production of the “Other Western Hemisphere” region modeled as a group (Table 67) contracts by 1.8% per year, as both area and yield declines by 1.6% and 0.2%, respectively. Total consumption of this group grows at 0.5% per year, which comes solely from the 1.2% population growth as per capita use declines by 0.7%. Real per capita income grows by 1.9% annually.

## **Asia**

Total rice production of Asia (Table 68) increases by 0.6% per year, solely accounted for yield as area remains flat. The total Asian rice consumption grows by 0.7% per year as the population growth of 0.9% is offset by a decline in per capita use. Rice is an inferior good in most Asian countries and the relatively strong projected growth of 3.6% in real per capita income has dampening effect on rice consumption.

Similarly, the group of individually-modeled Asian countries (Table 69) is projected to grow total rice production by 0.6% annually solely coming from increase in yield. Total rice consumption of this group grows by 0.7% annually, all contributed by population growth as per capita use declines slightly and real per capita income expands at 3.7% annually.

The net growth of total rice output of the “Other Asia” region modeled as a group (Table 70) is 2.2% annually, with area growing by 1.4% and yield gaining 0.8% per year. Total consumption of this group grows at 1.6% per year, of which 1.5% comes from population growth and the rest from per capita use. Real per capita income grows at 2.3% per year which is relatively slower than that of the group of modeled Asian countries.

## **Europe**

The total rice production of Europe (Table 71) grows at 0.9% per year, which is mainly accounted for by 0.7% gain in yield; with 0.2% increase in area. Total consumption increases at 0.9%, solely from gain in per capita use, as population declines slightly. Real per capita income is up 1.9% per year.



The group of individually-modeled European countries (Table 72) is projected to grow total rice output by 0.9% per year, of which 0.7% comes from improvement in yield and 0.2% from increased area. Total consumption of this group gains 0.9% annually, mainly accounted for by growth in per capita use as population remains relatively flat. Real per capita income of this group grows at 1.7% per year.

Total rice production of the “Other Europe” region modeled as a group (Table 73) grows by 1.2% per year, as both yield and harvested area grow by 0.6% per year. Consumption of this group grows at 2.5% per year, with the 2.7% gain in per capita use being offset by a 0.2% decline in population. The real per capita income of this group grows strongly at 2.3% per year.

## **Oceania**

Tables 74 thru 76 show the results for Oceania which mainly consists of Australia. Total rice production expands by 2.9% per year, accounted for by 1.3% gain in area harvested and 1.6% gain in yield. Total consumption grows 2.5% annually which comes from 1.4% growth in population and 1.1% gain in per capita use. Real per capita income grows at 1.3% annually.

## **World**

Tables 77 thru 79 present the sum of the five world regions discussed above.

## **ECOWAS**

Over the next decade, production of this 15-country region is projected to grow by 3.8% per year, which is accounted for by a 1.7% gain in harvested area and a 2.1% yield improvement (Tables 80-72). Consumption expands by 3.5% per year, driven by 2.8% population growth, 0.6% gain in per capita use, and 1.3% income growth. Net imports is projected to expand by 3.3 mmt over the next decade, equivalent to a growth rate of 3.4% per year—reaching 11.6 mmt by 2027.

Nigeria is the main player in the ECOWAS region’s projected fast-growing rice industry over the baseline period. The country accounts for 40% of the region’s volume growth in net imports, as the country’s domestic use continues to exceed domestic supply (Table 37mos).

Nigeria accounts for 30% of the region’s gain in both rice area harvested and rice output, owing to the country’s 3.6% annual growth in production supported by the strong growth in both area (1.3%) and yield (2.2%). Lastly, Nigeria accounts for 30% of the region’s volume growth in consumption, as the country’s consumption expands 3.4% annually with population growing at 2.6% and per capita use by 0.5% per year.

## **Results of Stochastic Baseline Analysis**

### ***Detailed Results of the Stochastic Baseline Analysis***

The detailed results of the stochastic analyses for selected prices and trade are presented in Figures 14 thru 36. In order to show the direction and dispersion of the stochastic outcome distribution, four selected outcome items (stochastic average, 10<sup>th</sup> percentile, 90<sup>th</sup> percentile, and the coefficient of variation) for selected variables are presented. Intuitively, the gap between the two percentiles (10<sup>th</sup> and 90<sup>th</sup>) indicates the degree of volatility or risk associated with the variable of interest. As the gap widens there is an expected increase in volatility, while a narrowing gap indicates decreased volatility. Another measure of

dispersion used is the coefficient of variation (C.V.) which shows the extent of variability of data points in relation to the stochastic mean. A lower C.V. indicates more stability, i.e., less risk.

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 basis to understanding the remaining charts. Figure 17 shows the long grain rice international reference price. For 2018, while the deterministic mean price generated by the baseline model is \$388 per mt (Table 5), the stochastic distribution indicates that 10% of the time the average price will be higher than \$547 per mt and 10% of the time lower than \$380 per mt. The computed C.V. for 2018 is 13.8%, which increases slightly through 2020 before declining steadily the rest of the projection period, reaching 11.5% by 2027. This feature of the stochastic analysis provides useful information as it indicates how the possible outcomes are distributed, thus providing a better understanding of the dynamics of the global rice market.

## Summary and Conclusions

Global rice trade and prices are projected to grow steadily over the next decade, as exports expand in India, Vietnam, Myanmar, Thailand, and Cambodia; and imports continue to grow strongly in the Western African countries and the Middle East. Over the next decade, Thailand is projected to be replaced by India as the global leader in rice trade and the U.S is to be replaced by Myanmar in the top five rice exporters in the world.

Growth in global rice production comes mainly from yield improvements as area for expansion remains constrained in general. Abundant rice supplies are projected due to current surpluses, productivity growth using new technologies, and increases in production subsidies in many countries. Population remains the main driver of global consumption growth as average 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 prices and trade.

Some of the uncertainties in the rice market that may most significantly affect the baseline projections in this report include the following issues:

- India's reliability as a top exporter given the country's track record, and weather concerns;
- Uncertainty on PRC's high rice stockholding; impact on global prices of possible disposal;
- Will the high Western Hemisphere prices relative to Asian prices remain or will the margins converge?
- Likelihood of Sub-Saharan Africa and SE Asia attaining targeted productivity levels and self-sufficiency goals;
- Prevalent government subsidies in some countries, notably China, Indonesia, and the Philippines;
- Potential impact of production structural reforms (e.g., on the medium grain market in Japan);
- Availability of water for rice production in Australia, Egypt, and CA;
- Unexpected weather-related damages in rice-producing countries; and

- How trade policies/developments under the new administration will play out.

Depending on the developments on these issues going forward, these baseline projections can serve as benchmark for analyzing the potential impacts of specific scenarios on rice supply, demand, and prices. An example of this type of analysis can be gleaned from the study on trade policy responses to higher world agricultural commodity prices by Yu, T. Edward et al. (2017).

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

## **Estimates of the Deterministic Baseline Analysis**

### ***Tables and Charts of Rice Supply, Use and Net Trade, 2016/17-2027/28***

**Table 5. World Rice Net Trade by Country and Prices**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
<b>Net Exporters</b>	Thousand Metric Tons											
Argentina	466	441	415	411	469	499	523	541	565	585	595	609
Australia	45	230	131	124	119	140	155	172	184	191	192	185
Cambodia	1,130	1,426	1,273	1,296	1,328	1,374	1,478	1,612	1,674	1,802	1,858	1,997
Lao PDR	-50	-9	-101	-84	-67	-55	-39	-14	11	45	81	109
Egypt	-50	4	-15	-18	-4	-6	-3	1	4	6	8	11
India	11,219	11,528	11,409	11,533	11,459	12,219	12,413	12,659	12,748	12,772	12,851	12,902
Myanmar (Burma)	3,090	2,723	2,772	2,899	2,964	3,032	3,085	3,247	3,386	3,476	3,570	3,676
Pakistan	3,590	3,723	3,577	3,528	3,438	3,417	3,390	3,393	3,454	3,497	3,536	3,552
Thailand	11,000	9,935	9,924	10,150	10,651	10,652	10,801	11,168	11,131	11,108	11,124	11,247
United States	2,959	2,389	2,512	2,524	2,637	2,719	2,784	2,786	2,816	2,845	2,877	2,900
Uruguay	975	896	873	851	843	856	867	880	892	916	940	955
Vietnam	5,900	5,983	6,156	6,156	6,237	6,298	6,457	6,551	6,648	6,730	6,827	7,014
Brazil	-50	-27	-23	163	236	206	223	219	287	392	514	573
Paraguay	498	522	656	654	666	685	708	729	744	772	810	850
<b>Total Net Exports *</b>	<b>40,722</b>	<b>39,764</b>	<b>39,559</b>	<b>40,186</b>	<b>40,975</b>	<b>42,038</b>	<b>42,843</b>	<b>43,943</b>	<b>44,545</b>	<b>45,137</b>	<b>45,782</b>	<b>46,581</b>
<b>Net Importers</b>												
Bangladesh	70	2,504	1,960	1,796	1,613	1,565	1,570	1,427	1,488	1,557	1,618	1,573
PR China	4,495	4,127	4,240	4,184	4,180	4,162	4,166	4,188	4,211	4,226	4,235	4,253
Brunei Darussalam	50	49	50	51	53	54	54	55	55	55	56	56
Cameroon	550	536	568	584	595	608	622	629	639	678	711	749
Canada	361	376	390	400	410	420	429	437	442	447	454	462
China - Hong Kong	345	344	351	358	363	369	375	379	382	386	390	395
Colombia	143	143	179	169	168	174	176	170	169	175	181	188
Cote d'Ivoire	1,270	1,494	1,501	1,528	1,599	1,589	1,598	1,623	1,664	1,632	1,606	1,624
European Union-28	1,514	1,535	1,587	1,618	1,646	1,675	1,705	1,726	1,736	1,747	1,751	1,762
Ghana	590	535	648	652	670	687	688	704	714	729	693	680
Guinea	645	569	619	641	615	613	606	623	678	733	791	854
Indonesia	280	737	729	848	863	865	848	887	787	724	719	622
Iran	1,600	1,479	1,664	1,663	1,667	1,742	1,790	1,899	1,936	1,909	1,958	1,965
Iraq	1,050	1,123	1,161	1,215	1,260	1,302	1,344	1,385	1,428	1,469	1,511	1,555

Japan	630	627	627	627	627	627	627	627	627	627	627	627
Kenya	650	651	648	656	715	766	779	834	835	873	885	917
Liberia	310	292	332	341	347	360	371	375	371	372	379	388
Malaysia	955	849	1,138	1,015	1,034	1,033	1,035	1,037	1,034	1,024	1,021	1,012
Mali	100	72	276	279	292	336	365	366	352	343	376	414
Mexico	782	754	732	760	770	784	796	805	815	821	826	834
Mozambique	715	731	735	760	789	831	873	932	980	1,015	1,051	1,087
Nigeria	2,500	2,812	2,757	2,902	3,147	3,292	3,385	3,502	3,570	3,641	3,664	3,778
Philippines	1,100	1,308	679	1,041	1,276	1,399	1,461	1,522	1,548	1,487	1,465	1,526
Saudi Arabia	1,400	1,451	1,571	1,632	1,672	1,736	1,797	1,849	1,876	1,900	1,925	1,951
Senegal	990	1,027	1,012	1,006	1,029	1,069	1,113	1,151	1,192	1,229	1,272	1,322
Sierra Leone	350	134	111	114	116	128	116	118	119	124	131	141
Singapore	300	321	317	318	323	329	332	333	331	329	328	329
South Africa	862	835	906	921	942	953	949	969	951	979	993	1,018
South Korea	401	409	409	409	409	409	409	409	409	409	409	409
Taiwan	56	56	56	56	56	56	56	56	56	56	56	56
Tanzania	200	228	338	390	429	502	570	602	627	629	640	671
Turkey	243	301	319	312	316	313	294	312	323	331	334	340
Other Africa	2,582	2,374	2,450	2,539	2,612	2,698	2,764	2,846	2,866	2,992	3,066	3,155
Other Americas	661	386	733	807	843	914	937	978	996	1,010	1,030	1,059
Other Asia	4,219	4,405	3,818	3,615	3,485	3,501	3,517	3,716	3,744	3,818	3,910	4,012
Other Europe	130	141	143	150	155	156	156	159	159	161	161	163
Other Oceania	45	46	47	47	48	49	49	50	50	51	52	52
ECOWAS 7	1,727	1,866	1,896	1,953	2,014	2,101	2,174	2,246	2,340	2,412	2,490	2,580
Madagascar	330	512	95	128	140	152	166	180	194	204	211	216
Malawi	15	18	20	25	27	28	30	31	31	31	32	32
Zambia	10	15	16	15	17	17	18	19	19	19	19	19
Rwanda	40	43	39	42	45	48	49	50	51	49	47	46
Uganda	80	84	91	115	130	139	147	152	151	141	125	108
Cuba	524	550	585	565	556	554	555	554	539	525	517	514
Costa Rica	155	178	145	144	145	147	149	151	152	153	153	154
Dominican Republic	31	14	55	29	26	30	28	30	32	31	29	27
Guatemala	97	113	120	123	127	131	135	138	141	145	148	152
Honduras	145	153	162	164	166	170	175	180	183	185	188	192
Nicaragua	88	56	72	74	76	77	79	80	80	79	79	80
Panama	60	71	67	66	69	71	71	72	71	70	69	68

Chile	136	144	137	139	144	146	148	151	153	156	160	164
Peru	260	253	230	166	117	138	183	223	246	253	245	230
Residual	3,880	-67	26	32	39	25	17	7	0	0	-6	-3
<b>Total Net Imports</b>	<b>40,722</b>	<b>39,764</b>	<b>39,559</b>	<b>40,186</b>	<b>40,975</b>	<b>42,038</b>	<b>42,843</b>	<b>43,943</b>	<b>44,545</b>	<b>45,137</b>	<b>45,782</b>	<b>46,581</b>
<b>Prices</b>	(U.S. Dollars per Metric Ton)											
International Rice Reference Price	394	402	388	394	403	409	413	422	445	467	481	489
U.S. FOB Gulf Ports	488	584	527	515	515	518	513	519	531	543	547	547
U.S. No. 2 Medium FOB CA	611	826	794	785	774	777	765	761	762	764	767	763
Real International Rice Reference Price (2015/17=100)	394	391	372	370	368	364	359	358	368	377	379	376

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

**Table 6. World Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	160,822	160,444	161,726	161,558	161,542	161,800	161,997	162,165	162,255	162,534	162,702	162,948
	(Metric Tons per Hectare)											
Yield	3.03	3.01	3.04	3.05	3.07	3.09	3.10	3.12	3.14	3.15	3.17	3.19
	(Thousand Metric Tons)											
Production	487,078	482,201	490,855	492,155	495,176	499,285	502,695	506,353	509,652	512,382	516,564	520,535
Beginning Stocks	132,632	138,112	140,773	144,496	145,388	145,129	144,101	142,395	140,013	137,688	134,957	133,137
Domestic Supply	619,710	620,313	631,628	636,651	640,563	644,414	646,797	648,748	649,664	650,070	651,521	653,673
Consumption	476,898	479,596	487,383	491,270	495,200	499,657	504,157	508,458	511,692	514,771	518,181	521,788
Ending Stocks	138,112	140,773	144,496	145,388	145,129	144,101	142,395	140,013	137,688	134,957	133,137	131,675
Domestic Use	615,010	620,369	631,879	636,658	640,329	643,758	646,552	648,471	649,380	649,728	651,318	653,463
Total Trade	46,005	45,628	45,374	45,771	46,489	47,581	48,376	49,461	49,966	50,422	50,914	51,621
	(Percent)											
Stocks-to-Use Ratio	22.46	22.69	22.87	22.84	22.66	22.38	22.02	21.59	21.20	20.77	20.44	20.15

**Table 7. U.S. Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
							(Thousand Hectares)					
Area Harvested	1,253	961	1,066	1,060	1,068	1,076	1,081	1,081	1,085	1,087	1,093	1,098
							(Metric Tons per Hectare)					
Yield	5.68	5.89	6.11	6.16	6.21	6.27	6.32	6.39	6.45	6.51	6.56	6.62
							(Thousand Metric Tons)					
Production	7,117	5,659	6,515	6,524	6,633	6,751	6,840	6,903	6,992	7,073	7,175	7,266
Beginning Stocks	1,475	1,462	924	1,126	1,320	1,458	1,588	1,659	1,692	1,732	1,773	1,818
Domestic Supply	8,592	7,121	7,439	7,651	7,953	8,209	8,428	8,562	8,684	8,805	8,948	9,084
Consumption	4,171	3,802	3,800	3,806	3,858	3,902	3,986	4,083	4,136	4,187	4,254	4,321
Ending Stocks	1,462	924	1,126	1,320	1,458	1,588	1,659	1,692	1,732	1,773	1,818	1,863
Domestic Use	5,633	4,726	4,927	5,127	5,316	5,490	5,644	5,776	5,868	5,960	6,072	6,184
Net Trade	2,959	2,389	2,512	2,524	2,637	2,719	2,784	2,786	2,816	2,845	2,877	2,900
<b>U.S. Rice Farm Prices</b>												
Season Average Farm Price	10.40	12.55	11.31	11.46	11.62	11.71	11.39	11.55	11.90	12.30	12.48	12.52
Long Grain Farm Price	9.64	11.73	10.69	10.64	10.79	10.87	10.57	10.72	11.05	11.41	11.58	11.61
Japonica Farm Price	13.70	15.81	14.73	14.79	14.99	15.11	14.69	14.90	15.37	15.87	16.12	16.17
Medium/short (excl. Japonica) Farm Price	10.10	11.93	11.15	11.19	11.36	11.45	11.12	11.28	11.66	12.06	12.26	12.30



**Table 8. Argentina Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	204	191	205	215	225	233	238	241	244	246	248	251
	(Metric Tons per Hectare)											
Yield	4.23	4.38	4.43	4.48	4.54	4.58	4.61	4.65	4.70	4.76	4.80	4.83
	(Thousand Metric Tons)											
Production	863	838	907	964	1,022	1,069	1,098	1,121	1,145	1,170	1,188	1,210
Beginning Stocks	409	286	162	117	123	121	129	133	136	132	128	125
Domestic Supply	1,272	1,124	1,070	1,081	1,145	1,191	1,227	1,255	1,281	1,302	1,316	1,335
Consumption	520	521	538	547	555	563	570	578	584	590	596	602
Ending Stocks	286	162	117	123	121	129	133	136	132	128	125	124
Domestic Use	806	683	655	670	676	691	704	714	716	717	721	726
Net Trade	466	441	415	411	469	499	523	541	565	585	595	609

**Table 9. Australia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	80	87	85	83	82	81	80	78	77	76	75	74
	(Metric Tons per Hectare)											
Yield	7.33	7.29	7.46	7.58	7.70	7.82	7.94	8.05	8.17	8.29	8.41	8.52
	(Thousand Metric Tons)											
Production	586	635	637	632	635	634	634	631	627	626	626	627
Beginning Stocks	77	228	253	347	432	515	567	595	591	564	523	474
Domestic Supply	663	863	890	979	1,067	1,149	1,202	1,225	1,219	1,190	1,149	1,101
Consumption	390	380	412	423	433	442	452	462	471	476	483	495
Ending Stocks	228	253	347	432	515	567	595	591	564	523	474	421
Domestic Use	618	633	758	855	948	1,009	1,047	1,053	1,034	999	957	916
Net Trade	45	230	131	124	119	140	155	172	184	191	192	185

**Table 10. Bangladesh Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	11,748	11,300	11,324	11,330	11,368	11,399	11,420	11,451	11,449	11,455	11,462	11,460

	(Metric Tons per Hectare)											
Yield	2.94	2.92	2.98	3.04	3.08	3.13	3.16	3.20	3.23	3.25	3.27	3.30
	(Thousand Metric Tons)											
Production	34,578	33,000	33,789	34,440	35,069	35,655	36,135	36,620	36,927	37,206	37,482	37,856
Beginning Stocks	1,205	853	1,154	1,116	1,026	984	994	1,053	1,061	1,068	1,075	1,082
Domestic Supply	35,783	33,853	34,944	35,556	36,096	36,639	37,129	37,673	37,987	38,274	38,557	38,938
Consumption	35,000	35,203	35,787	36,325	36,725	37,210	37,646	38,038	38,407	38,755	39,094	39,423
Ending Stocks	853	1,154	1,116	1,026	984	994	1,053	1,061	1,068	1,075	1,082	1,088
Domestic Use	35,853	36,357	36,903	37,351	37,709	38,204	38,699	39,099	39,476	39,831	40,175	40,511
Net Trade	-70	-2,504	-1,960	-1,796	-1,613	-1,565	-1,570	-1,427	-1,488	-1,557	-1,618	-1,573

**Table 11. Brazil Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	1,981	2,014	2,126	2,196	2,240	2,252	2,283	2,293	2,296	2,299	2,304	2,307
	(Metric Tons per Hectare)											
Yield	4.23	3.88	3.75	3.73	3.74	3.73	3.73	3.73	3.75	3.79	3.83	3.86
	(Thousand Metric Tons)											
Production	8,383	7,805	7,978	8,200	8,366	8,407	8,519	8,551	8,609	8,703	8,827	8,897
Beginning Stocks	308	641	500	462	453	454	457	460	463	468	474	478
Domestic Supply	8,691	8,446	8,478	8,661	8,819	8,861	8,976	9,011	9,072	9,171	9,300	9,375
Consumption	8,100	7,973	8,040	8,046	8,129	8,197	8,293	8,329	8,316	8,305	8,308	8,320
Ending Stocks	641	500	462	453	454	457	460	463	468	474	478	482
Domestic Use	8,741	8,473	8,501	8,499	8,583	8,655	8,753	8,792	8,784	8,779	8,786	8,802
Net Trade	-50	-27	-23	163	236	206	223	219	287	392	514	573

**Table 12. Brunei Darussalam Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	6	6	6	6	6	6	6	6	6	6	6	6
	(Metric Tons per Hectare)											
Yield	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
	(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	51	50	51	52	54	55	55	56	56	56	57	57
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	51	50	51	52	54	55	55	56	56	56	57	57
Net Trade	-50	-49	-50	-51	-53	-54	-54	-55	-55	-55	-56	-56

**Table 13. Cambodia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	3,085	3,119	3,115	3,098	3,081	3,085	3,092	3,102	3,115	3,135	3,162	3,183
	(Metric Tons per Hectare)											
Yield	1.60	1.62	1.66	1.70	1.75	1.79	1.84	1.89	1.92	1.97	2.00	2.05
	(Thousand Metric Tons)											
Production	4,950	5,047	5,160	5,274	5,388	5,514	5,702	5,870	5,986	6,177	6,323	6,522
Beginning Stocks	287	357	229	234	238	241	243	246	249	251	254	257
Domestic Supply	5,237	5,404	5,389	5,508	5,626	5,754	5,946	6,117	6,235	6,428	6,577	6,779
Consumption	3,750	3,749	3,881	3,973	4,051	4,118	4,197	4,257	4,319	4,383	4,465	4,524
Ending Stocks	357	229	234	238	241	243	246	249	251	254	257	259
Domestic Use	4,107	3,978	4,116	4,211	4,291	4,361	4,443	4,506	4,570	4,637	4,722	4,783
Net Trade	1,130	1,426	1,273	1,296	1,328	1,374	1,478	1,612	1,674	1,802	1,858	1,997

**Table 14. Cameroon Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	140	142	144	146	150	152	155	157	159	161	163	165
	(Metric Tons per Hectare)											
Yield	0.82	0.90	1.01	1.06	1.08	1.10	1.12	1.14	1.17	1.19	1.21	1.21
	(Thousand Metric Tons)											
Production	115	128	146	155	162	168	173	179	185	192	197	200
Beginning Stocks	0	0	3	4	4	5	5	5	6	6	7	7
Domestic Supply	115	128	148	159	167	173	177	184	191	198	204	208
Consumption	665	661	713	739	758	776	794	808	824	869	907	949
Ending Stocks	0	3	4	4	5	5	5	6	6	7	7	8
Domestic Use	665	664	716	743	762	781	799	813	830	876	915	957
Net Trade	-550	-536	-568	-584	-595	-608	-622	-629	-639	-678	-711	-749

**Table 15. Canada Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Metric Tons)											
Consumption	361	376	390	400	410	420	429	437	442	447	454	462
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	361	376	390	400	410	420	429	437	442	447	454	462
Net Trade	-361	-376	-390	-400	-410	-420	-429	-437	-442	-447	-454	-462

**Table 16. People's Republic of China Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	30,178	30,013	29,673	29,160	29,008	28,909	28,832	28,689	28,501	28,448	28,392	28,307

	(Metric Tons per Hectare)											
Yield	4.80	4.80	4.83	4.83	4.84	4.85	4.86	4.87	4.87	4.88	4.89	4.90
	(Thousand Metric Tons)											
Production	144,953	144,187	143,272	140,944	140,475	140,271	140,062	139,611	138,835	138,750	138,773	138,618
Beginning Stocks	78,500	86,500	93,392	96,967	98,315	99,041	99,193	98,639	97,456	95,559	93,612	91,732
Domestic Supply	223,453	230,687	236,663	237,911	238,790	239,312	239,255	238,250	236,291	234,309	232,385	230,350
Consumption	141,448	141,422	143,937	143,780	143,929	144,281	144,782	144,982	144,944	144,923	144,888	145,094
Ending Stocks	86,500	93,392	96,967	98,315	99,041	99,193	98,639	97,456	95,559	93,612	91,732	89,508
Domestic Use	227,948	234,814	240,904	242,095	242,970	243,474	243,421	242,438	240,502	238,535	236,620	234,603
Net Trade	-4,495	-4,127	-4,240	-4,184	-4,180	-4,162	-4,166	-4,188	-4,211	-4,226	-4,235	-4,253

**Table 17. Colombia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	520	495	510	516	519	521	522	523	523	524	525	526
	(Metric Tons per Hectare)											
Yield	3.30	3.19	3.27	3.28	3.29	3.31	3.32	3.33	3.34	3.36	3.37	3.38
	(Thousand Metric Tons)											
Production	1,718	1,580	1,666	1,696	1,708	1,722	1,733	1,742	1,751	1,760	1,770	1,779
Beginning Stocks	142	253	173	161	160	159	151	141	136	140	172	214
Domestic Supply	1,860	1,833	1,839	1,857	1,869	1,881	1,884	1,883	1,887	1,900	1,942	1,993
Consumption	1,750	1,803	1,857	1,865	1,877	1,903	1,919	1,917	1,916	1,903	1,909	1,921
Ending Stocks	253	173	161	160	159	151	141	136	140	172	214	260
Domestic Use	2,003	1,976	2,018	2,026	2,036	2,054	2,060	2,053	2,056	2,075	2,123	2,181
Net Trade	-143	-143	-179	-169	-168	-174	-176	-170	-169	-175	-181	-188

**Table 18. Cote d'Ivoire Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	1,018	1,029	1,098	1,124	1,139	1,163	1,207	1,230	1,249	1,304	1,344	1,372
	(Metric Tons per Hectare)											
Yield	1.31	1.42	1.45	1.48	1.50	1.53	1.55	1.58	1.60	1.63	1.65	1.68
	(Thousand Metric Tons)											
Production	1,335	1,458	1,594	1,660	1,711	1,775	1,874	1,939	2,001	2,121	2,219	2,301
Beginning Stocks	517	322	321	340	355	373	381	396	410	425	438	444
Domestic Supply	1,852	1,780	1,915	2,000	2,066	2,148	2,255	2,335	2,411	2,546	2,657	2,745
Consumption	2,800	2,953	3,076	3,174	3,292	3,356	3,456	3,548	3,650	3,740	3,820	3,916
Ending Stocks	322	321	340	355	373	381	396	410	425	438	444	453
Domestic Use	3,122	3,274	3,416	3,528	3,665	3,737	3,852	3,958	4,075	4,178	4,264	4,369
Net Trade	-1,270	-1,494	-1,501	-1,528	-1,599	-1,589	-1,598	-1,623	-1,664	-1,632	-1,606	-1,624

**Table 19. Egypt Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	850	702	700	706	706	709	711	708	709	711	717	722
	(Metric Tons per Hectare)											
Yield	5.65	5.88	6.11	6.29	6.44	6.53	6.62	6.71	6.80	6.89	6.98	7.07
	(Thousand Metric Tons)											
Production	4,800	4,126	4,279	4,441	4,549	4,628	4,706	4,753	4,821	4,898	5,004	5,102
Beginning Stocks	924	1,474	1,243	1,150	1,129	1,134	1,134	1,128	1,073	1,013	938	888
Domestic Supply	5,724	5,600	5,522	5,591	5,679	5,762	5,840	5,881	5,894	5,911	5,942	5,991
Consumption	4,300	4,353	4,386	4,480	4,548	4,634	4,715	4,807	4,877	4,967	5,046	5,138
Ending Stocks	1,474	1,243	1,150	1,129	1,134	1,134	1,128	1,073	1,013	938	888	842
Domestic Use	5,774	5,597	5,537	5,609	5,683	5,768	5,843	5,880	5,890	5,905	5,934	5,980
Net Trade	-50	4	-15	-18	-4	-6	-3	1	4	6	8	11

**Table 20. European Union-28 Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	439	443	443	443	444	445	445	447	447	447	447	447
	(Metric Tons per Hectare)											
Yield	4.71	4.72	4.74	4.77	4.81	4.83	4.86	4.90	4.94	4.98	5.02	5.05
	(Thousand Metric Tons)											
Production	2,068	2,088	2,102	2,116	2,135	2,149	2,163	2,190	2,207	2,226	2,242	2,257
Beginning Stocks	1,183	1,115	986	877	787	714	655	616	607	622	659	700
Domestic Supply	3,251	3,203	3,087	2,993	2,921	2,863	2,819	2,806	2,815	2,847	2,901	2,958
Consumption	3,650	3,752	3,797	3,824	3,853	3,882	3,907	3,924	3,929	3,935	3,952	3,975
Ending Stocks	1,115	986	877	787	714	655	616	607	622	659	700	745
Domestic Use	4,765	4,737	4,674	4,611	4,568	4,538	4,524	4,532	4,551	4,594	4,652	4,720
Net Trade	-1,514	-1,535	-1,587	-1,618	-1,646	-1,675	-1,705	-1,726	-1,736	-1,747	-1,751	-1,762

**Table 21. Ghana Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	280	284	293	302	311	321	331	341	352	365	351	363
	(Metric Tons per Hectare)											
Yield	1.85	1.73	1.79	1.82	1.85	1.88	1.91	1.94	1.97	1.99	1.99	2.02
	(Thousand Metric Tons)											
Production	519	492	525	550	576	603	633	663	696	724	697	734
Beginning Stocks	114	173	100	108	114	120	128	135	141	146	151	157
Domestic Supply	633	665	625	658	690	723	761	798	836	870	848	891
Consumption	1,050	1,100	1,138	1,171	1,199	1,242	1,273	1,303	1,332	1,355	1,385	1,409
Ending Stocks	173	100	108	114	120	128	135	141	146	151	157	162
Domestic Use	1,223	1,200	1,245	1,285	1,319	1,370	1,408	1,444	1,478	1,506	1,541	1,571
Net Trade	-590	-535	-648	-652	-670	-687	-688	-704	-714	-729	-693	-680

**Table 22. Guinea Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	1,088	1,098	1,112	1,124	1,136	1,149	1,163	1,174	1,166	1,161	1,156	1,152
	(Metric Tons per Hectare)											
Yield	1.32	1.31	1.31	1.34	1.42	1.46	1.50	1.53	1.54	1.55	1.56	1.56
	(Thousand Metric Tons)											
Production	1,435	1,444	1,457	1,503	1,609	1,681	1,746	1,793	1,793	1,795	1,798	1,801
Beginning Stocks	102	207	179	151	143	145	148	150	153	155	157	159
Domestic Supply	1,537	1,651	1,636	1,654	1,751	1,826	1,894	1,943	1,945	1,950	1,955	1,961
Consumption	1,975	2,041	2,104	2,153	2,221	2,291	2,349	2,414	2,469	2,526	2,587	2,653
Ending Stocks	207	179	151	143	145	148	150	153	155	157	159	162
Domestic Use	2,182	2,220	2,255	2,295	2,366	2,439	2,500	2,566	2,624	2,684	2,746	2,815
Net Trade	-645	-569	-619	-641	-615	-613	-606	-623	-678	-733	-791	-854

**Table 23. China-Hong Kong Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Metric Tons)											
Consumption	345	344	351	358	363	369	375	379	382	386	390	395
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	345	344	351	358	363	369	375	379	382	386	390	395
Net Trade	-345	-344	-351	-358	-363	-369	-375	-379	-382	-386	-390	-395





**Table 26. Iran Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	625	626	624	621	620	618	617	615	613	613	613	614
	(Metric Tons per Hectare)											
Yield	2.85	2.87	2.92	2.96	2.98	3.01	3.03	3.06	3.08	3.11	3.13	3.16
	(Thousand Metric Tons)											
Production	1,782	1,799	1,822	1,838	1,848	1,857	1,869	1,880	1,889	1,904	1,921	1,939
Beginning Stocks	388	620	526	535	541	547	561	577	602	622	631	645
Domestic Supply	2,170	2,419	2,348	2,372	2,390	2,405	2,431	2,457	2,491	2,525	2,552	2,585
Consumption	3,150	3,372	3,477	3,494	3,510	3,585	3,644	3,754	3,806	3,803	3,865	3,893
Ending Stocks	620	526	535	541	547	561	577	602	622	631	645	657
Domestic Use	3,770	3,898	4,012	4,035	4,057	4,146	4,221	4,356	4,427	4,435	4,510	4,550
Net Trade	-1,600	-1,479	-1,664	-1,663	-1,667	-1,742	-1,790	-1,899	-1,936	-1,909	-1,958	-1,965

**Table 27. Iraq Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	65	66	67	66	66	65	63	62	60	59	58	57
	(Metric Tons per Hectare)											
Yield	2.66	2.64	2.66	2.67	2.69	2.70	2.71	2.72	2.74	2.75	2.77	2.78
	(Thousand Metric Tons)											
Production	173	173	177	177	176	175	172	169	165	162	161	159
Beginning Stocks	57	105	129	149	159	167	172	175	177	177	178	178
Domestic Supply	230	278	307	326	335	342	344	344	341	340	339	337
Consumption	1,175	1,272	1,319	1,382	1,428	1,472	1,513	1,552	1,592	1,631	1,672	1,714
Ending Stocks	105	129	149	159	167	172	175	177	177	178	178	178
Domestic Use	1,280	1,401	1,467	1,541	1,596	1,644	1,688	1,728	1,770	1,809	1,850	1,892
Net Trade	-1,050	-1,123	-1,161	-1,215	-1,260	-1,302	-1,344	-1,385	-1,428	-1,469	-1,511	-1,555

**Table 28. Japan Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	1,570	1,563	1,549	1,529	1,514	1,494	1,477	1,468	1,455	1,442	1,427	1,408
	(Metric Tons per Hectare)											
Yield	4.96	4.92	4.95	4.97	4.96	4.99	4.99	5.00	5.01	5.01	5.02	5.02
	(Thousand Metric Tons)											
Production	7,780	7,691	7,668	7,594	7,515	7,455	7,377	7,339	7,285	7,224	7,159	7,064
Beginning Stocks	2,552	2,462	2,412	2,404	2,399	2,468	2,561	2,720	2,896	3,048	3,207	3,368
Domestic Supply	10,332	10,153	10,080	9,998	9,914	9,923	9,938	10,059	10,181	10,272	10,366	10,432
Consumption	8,500	8,368	8,303	8,226	8,073	7,989	7,845	7,790	7,760	7,692	7,625	7,561
Ending Stocks	2,462	2,412	2,404	2,399	2,468	2,561	2,720	2,896	3,048	3,207	3,368	3,498
Domestic Use	10,962	10,780	10,707	10,625	10,541	10,550	10,565	10,686	10,808	10,899	10,993	11,059
Net Trade	-630	-627	-627	-627	-627	-627	-627	-627	-627	-627	-627	-627

**Table 29. Kenya Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	40	43	45	45	46	46	46	46	47	47	47	48
	(Metric Tons per Hectare)											
Yield	1.75	2.38	2.41	2.44	2.47	2.50	2.53	2.56	2.59	2.62	2.64	2.67
	(Thousand Metric Tons)											
Production	70	102	108	111	113	115	117	119	121	123	125	127
Beginning Stocks	100	150	175	177	175	180	186	194	198	195	192	192
Domestic Supply	170	252	283	288	288	295	304	312	319	317	317	319
Consumption	670	721	753	766	810	861	914	956	967	978	1,003	1,037
Ending Stocks	150	175	177	175	180	186	194	198	195	192	192	194
Domestic Use	820	896	930	941	990	1,048	1,108	1,154	1,161	1,170	1,195	1,231
Net Trade	-650	-651	-648	-656	-715	-766	-779	-834	-835	-873	-885	-917

**Table 30. Lao PDR Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	970	981	999	1,014	1,031	1,049	1,068	1,085	1,101	1,119	1,139	1,157
	(Metric Tons per Hectare)											
Yield	2.01	2.04	2.06	2.08	2.10	2.12	2.14	2.16	2.18	2.20	2.22	2.24
	(Thousand Metric Tons)											
Production	1,950	2,003	2,059	2,114	2,166	2,223	2,286	2,345	2,404	2,467	2,532	2,597
Beginning Stocks	448	368	290	293	294	296	298	299	301	302	303	304
Domestic Supply	2,398	2,371	2,349	2,407	2,461	2,519	2,583	2,645	2,704	2,769	2,836	2,902
Consumption	2,080	2,089	2,157	2,196	2,232	2,277	2,323	2,358	2,391	2,420	2,451	2,487
Ending Stocks	368	290	293	294	296	298	299	301	302	303	304	306
Domestic Use	2,448	2,380	2,450	2,491	2,528	2,574	2,622	2,658	2,693	2,723	2,755	2,793
Net Trade	-50	-9	-101	-84	-67	-55	-39	-14	11	45	81	109

**Table 31. Liberia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	200	204	211	217	222	227	232	237	241	245	249	253
	(Metric Tons per Hectare)											
Yield	0.85	0.82	0.77	0.78	0.80	0.82	0.84	0.85	0.88	0.89	0.90	0.91
	(Thousand Metric Tons)											
Production	170	167	163	168	179	187	194	202	212	218	224	230
Beginning Stocks	18	28	23	24	25	25	26	27	27	27	28	28
Domestic Supply	188	195	186	192	203	212	220	229	239	245	251	258
Consumption	470	465	494	508	525	546	564	577	583	590	603	617
Ending Stocks	28	23	24	25	25	26	27	27	27	28	28	29
Domestic Use	498	488	518	533	550	572	591	604	610	617	631	646
Net Trade	-310	-292	-332	-341	-347	-360	-371	-375	-371	-372	-379	-388

**Table 32. Malaysia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	695	695	696	698	699	700	700	701	702	705	708	711
	(Metric Tons per Hectare)											
Yield	2.62	2.64	2.66	2.69	2.73	2.75	2.79	2.82	2.85	2.89	2.91	2.94
	(Thousand Metric Tons)											
Production	1,820	1,834	1,850	1,879	1,907	1,927	1,952	1,977	2,004	2,037	2,060	2,087
Beginning Stocks	455	480	402	551	579	601	608	613	618	622	626	629
Domestic Supply	2,275	2,314	2,251	2,430	2,486	2,528	2,560	2,590	2,622	2,658	2,685	2,716
Consumption	2,750	2,762	2,838	2,866	2,919	2,953	2,982	3,010	3,035	3,057	3,077	3,096
Ending Stocks	480	402	551	579	601	608	613	618	622	626	629	632
Domestic Use	3,230	3,163	3,389	3,446	3,520	3,561	3,595	3,627	3,656	3,683	3,706	3,728
Net Trade	-955	-849	-1,138	-1,015	-1,034	-1,033	-1,035	-1,037	-1,034	-1,024	-1,021	-1,012

**Table 33. Mali Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	834	835	844	849	860	872	887	899	917	932	945	955
	(Metric Tons per Hectare)											
Yield	2.16	2.09	2.13	2.17	2.20	2.24	2.28	2.31	2.35	2.38	2.42	2.46
	(Thousand Metric Tons)											
Production	1,800	1,743	1,796	1,845	1,890	1,948	2,013	2,081	2,158	2,227	2,286	2,343
Beginning Stocks	127	177	112	118	118	118	120	121	122	122	123	125
Domestic Supply	1,927	1,920	1,909	1,962	2,008	2,066	2,133	2,202	2,280	2,349	2,409	2,468
Consumption	1,850	1,879	2,067	2,124	2,182	2,281	2,377	2,446	2,510	2,569	2,660	2,755
Ending Stocks	177	112	118	118	118	120	121	122	122	123	125	126
Domestic Use	2,027	1,992	2,185	2,242	2,301	2,402	2,498	2,568	2,632	2,692	2,785	2,882
Net Trade	-100	-72	-276	-279	-292	-336	-365	-366	-352	-343	-376	-414

**Table 34. Mexico Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	39	42	43	43	42	42	42	42	42	42	42	42
	(Metric Tons per Hectare)											
Yield	4.54	4.39	4.20	4.21	4.21	4.22	4.23	4.24	4.26	4.28	4.30	4.31
	(Thousand Metric Tons)											
Production	177	185	179	179	179	179	179	179	180	180	180	180
Beginning Stocks	127	171	198	183	183	180	177	178	181	186	190	193
Domestic Supply	304	356	377	361	362	358	356	358	361	366	370	373
Consumption	915	912	927	939	952	965	974	981	989	997	1,003	1,010
Ending Stocks	171	198	183	183	180	177	178	181	186	190	193	197
Domestic Use	1,086	1,110	1,109	1,121	1,132	1,142	1,152	1,162	1,176	1,187	1,196	1,207
Net Trade	-782	-754	-732	-760	-770	-784	-796	-805	-815	-821	-826	-834

**Table 35. Mozambique Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	350	350	355	357	358	358	359	360	363	365	367	370
	(Metric Tons per Hectare)											
Yield	0.61	0.67	0.73	0.74	0.75	0.76	0.77	0.79	0.80	0.81	0.82	0.84
	(Thousand Metric Tons)											
Production	213	234	258	264	268	273	278	283	289	296	302	309
Beginning Stocks	0	0	4	5	6	6	7	8	9	10	11	12
Domestic Supply	213	234	263	269	274	279	285	291	299	306	313	321
Consumption	928	961	993	1,023	1,057	1,103	1,150	1,214	1,268	1,310	1,352	1,395
Ending Stocks	0	4	5	6	6	7	8	9	10	11	12	13
Domestic Use	928	965	998	1,028	1,063	1,110	1,158	1,223	1,278	1,321	1,364	1,408
Net Trade	-715	-731	-735	-760	-789	-831	-873	-932	-980	-1,015	-1,051	-1,087

**Table 36. Myanmar Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	7,030	7,037	7,101	7,100	7,108	7,081	7,069	7,077	7,086	7,069	7,073	7,060
	(Metric Tons per Hectare)											
Yield	1.80	1.80	1.85	1.87	1.89	1.92	1.95	1.98	2.00	2.02	2.05	2.08
	(Thousand Metric Tons)											
Production	12,650	12,696	13,111	13,282	13,437	13,618	13,780	14,003	14,185	14,313	14,484	14,666
Beginning Stocks	1,241	601	371	379	382	388	394	397	401	404	407	411
Domestic Supply	13,891	13,297	13,482	13,660	13,819	14,006	14,175	14,400	14,586	14,717	14,891	15,077
Consumption	10,200	10,202	10,332	10,379	10,468	10,579	10,693	10,751	10,796	10,834	10,911	10,986
Ending Stocks	601	371	379	382	388	394	397	401	404	407	411	415
Domestic Use	10,801	10,574	10,710	10,762	10,856	10,974	11,090	11,152	11,200	11,241	11,322	11,402
Net Trade	3,090	2,723	2,772	2,899	2,964	3,032	3,085	3,247	3,386	3,476	3,570	3,676

**Table 37. Nigeria Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	3,200	3,201	3,201	3,216	3,258	3,303	3,354	3,401	3,449	3,504	3,559	3,615
	(Metric Tons per Hectare)											
Yield	1.14	1.08	1.09	1.15	1.19	1.24	1.27	1.30	1.33	1.35	1.38	1.40
	(Thousand Metric Tons)											
Production	3,654	3,457	3,487	3,709	3,870	4,101	4,254	4,405	4,575	4,733	4,929	5,050
Beginning Stocks	1,398	1,352	1,210	1,132	1,014	958	940	945	950	959	965	966
Domestic Supply	5,052	4,809	4,697	4,841	4,884	5,059	5,194	5,350	5,526	5,692	5,894	6,017
Consumption	6,200	6,412	6,630	6,805	7,015	7,223	7,446	7,667	7,893	8,152	8,401	8,630
Ending Stocks	1,352	1,210	1,132	1,014	958	940	945	950	959	965	966	963
Domestic Use	7,552	7,621	7,762	7,819	7,973	8,163	8,391	8,617	8,852	9,118	9,368	9,593
Net Trade	-2,500	-2,812	-2,757	-2,902	-3,147	-3,292	-3,385	-3,502	-3,570	-3,641	-3,664	-3,778

**Table 38. Pakistan Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	2,687	2,709	2,729	2,671	2,639	2,633	2,633	2,629	2,630	2,650	2,675	2,694
	(Metric Tons per Hectare)											
Yield	2.55	2.52	2.51	2.52	2.53	2.56	2.58	2.59	2.60	2.61	2.63	2.65
	(Thousand Metric Tons)											
Production	6,850	6,825	6,844	6,731	6,663	6,735	6,794	6,821	6,841	6,922	7,047	7,135
Beginning Stocks	1,019	1,179	1,106	1,189	1,204	1,195	1,212	1,253	1,271	1,216	1,178	1,181
Domestic Supply	7,869	8,004	7,950	7,919	7,867	7,929	8,006	8,074	8,112	8,138	8,224	8,316
Consumption	3,100	3,175	3,185	3,188	3,234	3,301	3,363	3,410	3,441	3,463	3,507	3,556
Ending Stocks	1,179	1,106	1,189	1,204	1,195	1,212	1,253	1,271	1,216	1,178	1,181	1,208
Domestic Use	4,279	4,281	4,373	4,391	4,429	4,512	4,616	4,681	4,657	4,641	4,688	4,764
Net Trade	3,590	3,723	3,577	3,528	3,438	3,417	3,390	3,393	3,454	3,497	3,536	3,552

**Table 39. Philippines Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	4,723	4,800	4,794	4,798	4,803	4,818	4,822	4,843	4,857	4,872	4,883	4,899
	(Metric Tons per Hectare)											
Yield	2.47	2.49	2.55	2.56	2.58	2.60	2.63	2.65	2.67	2.70	2.74	2.76
	(Thousand Metric Tons)											
Production	11,686	11,970	12,241	12,276	12,374	12,524	12,663	12,821	12,964	13,154	13,373	13,525
Beginning Stocks	2,110	1,996	2,366	2,041	1,960	1,959	1,984	2,014	2,039	2,067	2,089	2,107
Domestic Supply	13,796	13,966	14,607	14,317	14,334	14,483	14,647	14,834	15,003	15,220	15,462	15,631
Consumption	12,900	12,908	13,245	13,398	13,652	13,898	14,094	14,317	14,484	14,619	14,820	15,027
Ending Stocks	1,996	2,366	2,041	1,960	1,959	1,984	2,014	2,039	2,067	2,089	2,107	2,130
Domestic Use	14,896	15,274	15,286	15,358	15,610	15,882	16,108	16,356	16,551	16,708	16,926	17,157
Net Trade	-1,100	-1,308	-679	-1,041	-1,276	-1,399	-1,461	-1,522	-1,548	-1,487	-1,465	-1,526



**Table 40. Saudi Arabia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Metric Tons)											
Beginning Stocks	350	300	253	252	254	255	259	265	270	275	278	280
Domestic Supply	350	300	253	252	254	255	259	265	270	275	278	280
Consumption	1,450	1,498	1,572	1,630	1,672	1,732	1,791	1,844	1,871	1,897	1,923	1,948
Ending Stocks	300	253	252	254	255	259	265	270	275	278	280	283
Domestic Use	1,750	1,751	1,824	1,884	1,927	1,991	2,056	2,114	2,146	2,175	2,203	2,231
Net Trade	-1,400	-1,451	-1,571	-1,632	-1,672	-1,736	-1,797	-1,849	-1,876	-1,900	-1,925	-1,951

**Table 41. Senegal Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	284	303	299	301	304	307	309	310	310	311	313	314
	(Metric Tons per Hectare)											
Yield	2.28	2.30	2.66	2.89	3.05	3.15	3.24	3.29	3.35	3.41	3.45	3.50
	(Thousand Metric Tons)											
Production	647	697	795	872	927	968	1,002	1,019	1,039	1,061	1,080	1,097
Beginning Stocks	251	208	201	214	228	243	259	273	286	299	311	323
Domestic Supply	898	905	996	1,086	1,154	1,211	1,261	1,292	1,325	1,360	1,391	1,420
Consumption	1,680	1,730	1,794	1,863	1,940	2,019	2,092	2,157	2,220	2,280	2,339	2,405
Ending Stocks	208	201	214	228	243	259	273	286	299	311	323	336
Domestic Use	1,888	1,931	2,008	2,091	2,183	2,278	2,365	2,443	2,519	2,591	2,662	2,741
Net Trade	-990	-1,027	-1,012	-1,006	-1,029	-1,069	-1,113	-1,151	-1,192	-1,229	-1,272	-1,322

**Table 42. Sierra Leone Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	625	625	636	643	652	661	669	678	685	692	699	704
	(Metric Tons per Hectare)											
Yield	1.28	1.29	1.37	1.41	1.45	1.46	1.51	1.54	1.56	1.58	1.60	1.62
	(Thousand Metric Tons)											
Production	801	805	874	906	942	965	1,008	1,041	1,069	1,097	1,119	1,140
Beginning Stocks	0	0	0	0	1	2	3	3	4	4	5	6
Domestic Supply	801	805	874	906	943	967	1,010	1,044	1,073	1,101	1,124	1,145
Consumption	1,151	939	985	1,019	1,058	1,092	1,123	1,159	1,187	1,220	1,249	1,281
Ending Stocks	0	0	0	1	2	3	3	4	4	5	6	6
Domestic Use	1,151	939	985	1,020	1,059	1,095	1,126	1,163	1,192	1,225	1,255	1,287
Net Trade	-350	-134	-111	-114	-116	-128	-116	-118	-119	-124	-131	-141

**Table 43. Singapore Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Metric Tons)											
Consumption	300	321	317	318	323	329	332	333	331	329	328	329
Ending Stocks	0	0	0	0	0	0	0	0	0	0	0	0
Domestic Use	300	321	317	318	323	329	332	333	331	329	328	329
Net Trade	-300	-321	-317	-318	-323	-329	-332	-333	-331	-329	-328	-329

**Table 44. South Africa Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Metric Tons)											
Consumption	830	844	904	922	938	951	949	966	953	975	990	1,013
Ending Stocks	42	34	36	34	38	40	40	43	41	45	48	53
Domestic Use	872	877	940	957	976	991	989	1,009	994	1,020	1,038	1,066
Net Trade	-862	-835	-906	-921	-942	-953	-949	-969	-951	-979	-993	-1,018



**Table 47. Tanzania Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	1,100	1,100	1,119	1,115	1,123	1,140	1,159	1,175	1,194	1,223	1,254	1,280
	(Metric Tons per Hectare)											
Yield	1.68	1.68	1.71	1.74	1.77	1.80	1.83	1.87	1.90	1.93	1.97	2.00
	(Thousand Metric Tons)											
Production	1,848	1,848	1,913	1,940	1,989	2,054	2,125	2,193	2,267	2,364	2,467	2,562
Beginning Stocks	0	0	4	6	7	7	9	11	12	13	14	15
Domestic Supply	1,848	1,848	1,916	1,946	1,996	2,062	2,134	2,204	2,279	2,376	2,480	2,576
Consumption	2,048	2,072	2,249	2,329	2,418	2,555	2,693	2,794	2,893	2,992	3,105	3,232
Ending Stocks	0	4	6	7	7	9	11	12	13	14	15	16
Domestic Use	2,048	2,076	2,255	2,336	2,425	2,564	2,704	2,806	2,906	3,005	3,120	3,248
Net Trade	-200	-228	-338	-390	-429	-502	-570	-602	-627	-629	-640	-671

**Table 48. Thailand Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	10,247	10,756	10,880	10,795	10,643	10,559	10,531	10,523	10,513	10,487	10,463	10,441
	(Metric Tons per Hectare)											
Yield	1.87	1.91	1.94	1.98	2.00	2.04	2.07	2.09	2.11	2.11	2.12	2.13
	(Thousand Metric Tons)											
Production	19,200	20,498	21,158	21,405	21,288	21,491	21,802	22,017	22,138	22,174	22,142	22,214
Beginning Stocks	8,403	4,853	3,870	3,650	3,521	2,773	2,339	2,112	1,819	1,737	1,758	1,777
Domestic Supply	27,603	25,351	25,028	25,055	24,810	24,264	24,141	24,129	23,957	23,911	23,900	23,990
Consumption	11,750	11,546	11,454	11,384	11,386	11,272	11,228	11,143	11,089	11,046	11,000	10,954
Ending Stocks	4,853	3,870	3,650	3,521	2,773	2,339	2,112	1,819	1,737	1,758	1,777	1,790
Domestic Use	16,603	15,416	15,104	14,905	14,159	13,611	13,340	12,962	12,826	12,803	12,776	12,743
Net Trade	11,000	9,935	9,924	10,150	10,651	10,652	10,801	11,168	11,131	11,108	11,124	11,247

**Table 49. Turkey Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	98	99	102	103	104	105	105	105	105	106	106	106
	(Metric Tons per Hectare)											
Yield	5.10	5.24	5.30	5.36	5.42	5.48	5.54	5.60	5.65	5.71	5.77	5.83
	(Thousand Metric Tons)											
Production	500	521	539	554	565	574	582	589	596	604	611	618
Beginning Stocks	128	91	98	109	113	117	119	115	119	125	129	132
Domestic Supply	628	612	637	663	678	691	700	704	715	728	740	751
Consumption	780	814	848	862	877	885	880	897	914	930	942	955
Ending Stocks	91	98	109	113	117	119	115	119	125	129	132	136
Domestic Use	871	912	957	975	994	1,004	995	1,016	1,039	1,059	1,074	1,091
Net Trade	-243	-301	-319	-312	-316	-313	-294	-312	-323	-331	-334	-340

**Table 50. Uruguay Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	164	165	162	157	154	155	155	155	155	157	159	159
	(Metric Tons per Hectare)											
Yield	6.02	5.77	5.82	5.86	5.91	5.95	6.03	6.11	6.19	6.27	6.35	6.43
	(Thousand Metric Tons)											
Production	987	955	943	920	912	924	935	948	960	983	1,007	1,022
Beginning Stocks	79	36	38	41	43	45	47	49	52	55	57	60
Domestic Supply	1,066	991	981	960	955	969	983	997	1,012	1,038	1,064	1,083
Consumption	55	57	67	67	66	66	66	66	65	65	64	64
Ending Stocks	36	38	41	43	45	47	49	52	55	57	60	63
Domestic Use	91	95	108	110	111	113	115	118	120	122	125	128
Net Trade	975	896	873	851	843	856	867	880	892	916	940	955

**Table 51. Viet Nam Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	7,714	7,737	7,758	7,718	7,703	7,716	7,725	7,738	7,754	7,770	7,783	7,795
	(Metric Tons per Hectare)											
Yield	3.55	3.68	3.72	3.75	3.77	3.82	3.83	3.85	3.87	3.88	3.90	3.93
	(Thousand Metric Tons)											
Production	27,400	28,441	28,879	28,922	29,049	29,477	29,560	29,796	29,995	30,151	30,389	30,605
Beginning Stocks	1,555	955	1,119	1,586	1,698	1,762	1,777	1,916	2,012	2,086	2,156	2,244
Domestic Supply	28,955	29,396	29,999	30,508	30,747	31,239	31,337	31,712	32,007	32,237	32,545	32,849
Consumption	22,100	22,294	22,256	22,646	22,674	22,795	22,975	23,163	23,287	23,325	23,460	23,495
Ending Stocks	955	1,119	1,586	1,698	1,762	1,777	1,916	2,012	2,086	2,156	2,244	2,335
Domestic Use	23,055	23,413	23,843	24,344	24,436	24,572	24,890	25,175	25,373	25,481	25,703	25,830
Net Trade	5,900	5,983	6,156	6,156	6,237	6,298	6,457	6,551	6,648	6,730	6,827	7,014

**Table 52. Cuba Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	140	190	200	206	210	212	213	214	215	216	218	219
	(Metric Tons per Hectare)											
Yield	2.39	1.95	1.96	1.97	1.98	1.99	2.01	2.02	2.04	2.06	2.08	2.10
	(Thousand Metric Tons)											
Production	335	370	392	407	415	422	428	432	438	445	452	459
Beginning Stocks	0	0	1	2	2	2	2	2	2	2	2	2
Domestic Supply	335	370	392	409	417	424	430	434	440	447	454	461
Consumption	859	919	975	972	971	976	983	987	977	970	970	974
Ending Stocks	0	1	2	2	2	2	2	2	2	2	2	2
Domestic Use	859	920	977	974	973	978	985	988	979	972	971	975
Net Trade	-524	-550	-585	-565	-556	-554	-555	-554	-539	-525	-517	-514

**Table 53. Costa Rica Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	46	61	67	69	70	71	71	72	72	73	73	74
	(Metric Tons per Hectare)											
Yield	2.83	2.20	2.20	2.20	2.19	2.19	2.19	2.19	2.20	2.20	2.20	2.21
	(Thousand Metric Tons)											
Production	130	135	148	152	154	155	156	157	158	159	161	163
Beginning Stocks	35	30	54	54	55	55	55	55	56	56	56	56
Domestic Supply	165	165	202	207	208	210	211	212	213	215	217	219
Consumption	290	288	293	296	299	302	305	308	310	312	315	317
Ending Stocks	30	54	54	55	55	55	55	56	56	56	56	56
Domestic Use	320	342	347	350	354	357	360	363	366	368	371	374
Net Trade	-155	-178	-145	-144	-145	-147	-149	-151	-152	-153	-153	-154

**Table 54. Dominican Republic Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	135	150	154	157	159	161	162	162	163	163	164	164
	(Metric Tons per Hectare)											
Yield	3.53	3.33	3.55	3.55	3.57	3.58	3.59	3.60	3.60	3.63	3.65	3.67
	(Thousand Metric Tons)											
Production	477	500	546	558	568	576	581	584	586	591	597	603
Beginning Stocks	187	140	96	123	124	124	125	126	126	126	127	127
Domestic Supply	664	640	643	681	692	700	707	710	712	718	724	730
Consumption	555	557	575	586	594	605	609	614	618	622	626	630
Ending Stocks	140	96	123	124	124	125	126	126	126	127	127	127
Domestic Use	695	654	698	710	718	730	735	740	744	748	753	757
Net Trade	-31	-14	-55	-29	-26	-30	-28	-30	-32	-31	-29	-27

**Table 55. Guatemala Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	11	11	11	11	11	11	11	12	12	12	12	12
	(Metric Tons per Hectare)											
Yield	2.18	2.41	2.45	2.48	2.50	2.52	2.55	2.57	2.59	2.61	2.63	2.64
	(Thousand Metric Tons)											
Production	24	26	27	27	28	28	29	30	30	31	32	33
Beginning Stocks	0	0	1	2	2	2	2	2	2	3	3	3
Domestic Supply	24	26	28	29	30	30	31	32	33	34	35	36
Consumption	121	138	147	151	155	159	163	168	172	176	180	185
Ending Stocks	0	1	2	2	2	2	2	2	3	3	3	3
Domestic Use	121	140	148	152	157	161	166	170	174	178	183	188
Net Trade	-97	-113	-120	-123	-127	-131	-135	-138	-141	-145	-148	-152

**Table 56. Honduras Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	26	26	27	27	28	28	29	29	30	31	32	33
	(Metric Tons per Hectare)											
Yield	2.69	2.77	2.85	2.93	3.01	3.09	3.17	3.25	3.33	3.41	3.50	3.58
	(Thousand Metric Tons)											
Production	70	73	77	80	83	87	91	95	100	105	111	117
Beginning Stocks	73	60	50	49	50	50	50	50	50	51	51	51
Domestic Supply	143	133	126	129	133	137	141	145	150	156	162	168
Consumption	228	237	238	244	249	256	266	275	282	290	299	308
Ending Stocks	60	50	49	50	50	50	50	50	51	51	51	52
Domestic Use	288	286	288	293	299	306	316	325	333	341	350	360
Net Trade	-145	-153	-162	-164	-166	-170	-175	-180	-183	-185	-188	-192



**Table 57. Nicaragua Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	104	106	107	108	109	111	112	113	114	116	118	119
	(Metric Tons per Hectare)											
Yield	2.79	2.84	2.87	2.90	2.93	2.96	2.98	3.01	3.04	3.07	3.09	3.12
	(Thousand Metric Tons)											
Production	290	300	308	314	320	327	334	341	348	356	364	372
Beginning Stocks	136	144	131	133	134	136	137	139	140	141	142	144
Domestic Supply	426	444	439	447	455	463	471	479	488	497	506	516
Consumption	370	369	378	387	394	403	411	420	426	434	442	451
Ending Stocks	144	131	133	134	136	137	139	140	141	142	144	145
Domestic Use	514	500	511	521	530	540	550	559	567	576	586	596
Net Trade	-88	-56	-72	-74	-76	-77	-79	-80	-80	-79	-79	-80

**Table 58. Panama Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	90	91	91	90	90	89	88	87	87	86	86	87
	(Metric Tons per Hectare)											
Yield	1.74	1.75	1.78	1.81	1.81	1.83	1.86	1.88	1.91	1.94	1.96	1.99
	(Thousand Metric Tons)											
Production	157	159	162	164	162	162	164	164	165	167	170	172
Beginning Stocks	18	13	18	19	19	19	20	20	20	20	21	21
Domestic Supply	175	172	180	183	181	182	184	184	186	188	190	193
Consumption	222	225	228	230	231	233	234	236	237	237	238	239
Ending Stocks	13	18	19	19	19	20	20	20	20	21	21	21
Domestic Use	235	243	247	249	250	252	255	256	257	258	259	260
Net Trade	-60	-71	-67	-66	-69	-71	-71	-72	-71	-70	-69	-68

**Table 59. Chile Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	21	25	25	26	26	26	26	27	27	27	28	28
	(Metric Tons per Hectare)											
Yield	3.90	4.36	4.65	4.72	4.76	4.82	4.89	4.96	5.02	5.08	5.14	5.19
	(Thousand Metric Tons)											
Production	82	109	118	121	122	125	129	132	136	139	142	144
Beginning Stocks	56	39	42	42	43	44	45	46	47	48	49	50
Domestic Supply	138	148	160	164	165	169	174	178	183	187	190	194
Consumption	235	250	254	260	265	271	276	282	287	293	300	307
Ending Stocks	39	42	42	43	44	45	46	47	48	49	50	51
Domestic Use	274	292	297	303	309	316	322	329	335	342	350	358
Net Trade	-136	-144	-137	-139	-144	-146	-148	-151	-153	-156	-160	-164

**Table 60. Paraguay Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	150	160	162	163	164	167	169	172	175	179	185	190
	(Metric Tons per Hectare)											
Yield	3.35	3.99	4.09	4.19	4.21	4.27	4.34	4.40	4.46	4.52	4.57	4.63
	(Thousand Metric Tons)											
Production	502	640	661	681	693	712	733	756	781	810	845	882
Beginning Stocks	18	5	102	85	91	98	105	110	118	136	158	177
Domestic Supply	520	645	763	766	784	810	838	866	899	947	1,003	1,058
Consumption	17	21	22	21	21	20	20	19	18	17	16	15
Ending Stocks	5	102	85	91	98	105	110	118	136	158	177	193
Domestic Use	22	123	107	113	119	125	130	137	154	175	193	209
Net Trade	498	522	656	654	666	685	708	729	744	772	810	850

**Table 61. Peru Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	420	447	445	444	445	447	450	453	457	462	468	473
	(Metric Tons per Hectare)											
Yield	5.20	5.47	5.58	5.66	5.70	5.76	5.83	5.90	5.97	6.04	6.11	6.18
	(Thousand Metric Tons)											
Production	2,185	2,446	2,483	2,509	2,534	2,578	2,624	2,672	2,725	2,789	2,858	2,925
Beginning Stocks	273	308	405	476	459	370	291	246	232	240	264	294
Domestic Supply	2,458	2,754	2,888	2,985	2,994	2,948	2,915	2,918	2,957	3,030	3,123	3,219
Consumption	2,410	2,602	2,642	2,692	2,742	2,794	2,852	2,909	2,964	3,018	3,074	3,131
Ending Stocks	308	405	476	459	370	291	246	232	240	264	294	317
Domestic Use	2,718	3,007	3,118	3,151	3,111	3,085	3,098	3,141	3,204	3,282	3,368	3,449
Net Trade	-260	-253	-230	-166	-117	-138	-183	-223	-246	-253	-245	-230

**WORLD REGIONAL RICE SUPPLY AND USE**  
**Table 62. Africa Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	12,863	12,729	12,976	13,101	13,265	13,460	13,691	13,883	14,072	14,328	14,554	14,787
	(Metric Tons per Hectare)											
Yield	1.65	1.58	1.65	1.70	1.74	1.78	1.81	1.83	1.86	1.88	1.91	1.93
	(Thousand Metric Tons)											
Production	21,234	20,134	21,457	22,318	23,122	23,955	24,763	25,471	26,193	26,994	27,786	28,533
Beginning Stocks	3,671	4,285	3,788	3,645	3,538	3,545	3,582	3,634	3,637	3,624	3,598	3,588
Domestic Supply	24,905	24,419	25,245	25,964	26,660	27,501	28,345	29,105	29,830	30,618	31,384	32,122
Consumption	35,186	35,450	36,951	38,083	39,278	40,599	41,881	43,134	44,240	45,510	46,772	48,116
Ending Stocks	4,285	3,788	3,645	3,538	3,545	3,582	3,634	3,637	3,624	3,598	3,588	3,587
Domestic Use	39,471	39,238	40,597	41,621	42,823	44,181	45,516	46,771	47,864	49,108	50,360	51,703
Net Trade	-14,566	-14,819	-15,352	-15,657	-16,163	-16,680	-17,171	-17,666	-18,034	-18,490	-18,976	-19,582

**Table 63. African Aggregate of Countries with Individual AGRM Models—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	12,227	12,100	12,349	12,471	12,631	12,821	13,046	13,233	13,416	13,665	13,885	14,113
	(Metric Tons per Hectare)											
Yield	1.71	1.63	1.71	1.76	1.80	1.84	1.87	1.89	1.92	1.94	1.97	1.99
	(Thousand Metric Tons)											
Production	20,880	19,775	21,091	21,936	22,726	23,544	24,344	25,044	25,758	26,550	27,333	28,072
Beginning Stocks	3,591	4,167	3,665	3,521	3,412	3,417	3,452	3,503	3,504	3,490	3,462	3,451
Domestic Supply	24,471	23,942	24,756	25,458	26,138	26,961	27,796	28,547	29,262	30,040	30,795	31,523
Consumption	32,288	32,722	34,137	35,164	36,271	37,492	38,700	39,863	40,940	42,077	43,253	44,502
Ending Stocks	4,167	3,665	3,521	3,412	3,417	3,452	3,503	3,504	3,490	3,462	3,451	3,447
Domestic Use	36,455	36,387	37,658	38,576	39,688	40,944	42,203	43,367	44,430	45,539	46,704	47,949
Net Trade	-11,984	-12,446	-12,902	-13,118	-13,551	-13,982	-14,407	-14,820	-15,168	-15,499	-15,909	-16,426

**Table 64. African Aggregate of Other Countries Modeled as a Group in AGRM—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	636	629	626	630	634	639	645	650	656	663	670	675
	(Metric Tons per Hectare)											
Yield	0.56	0.57	0.59	0.61	0.63	0.64	0.65	0.66	0.66	0.67	0.68	0.68
	(Thousand Metric Tons)											
Production	354	359	367	382	396	412	419	427	435	444	453	461
Beginning Stocks	80	118	122	124	126	128	130	131	133	133	136	138
Domestic Supply	434	477	489	506	522	539	549	558	568	578	589	599
Consumption	2,898	2,728	2,815	2,919	3,007	3,107	3,182	3,271	3,300	3,433	3,518	3,614
Ending Stocks	118	122	124	126	128	130	131	133	133	136	138	140
Domestic Use	3,016	2,851	2,939	3,045	3,134	3,237	3,313	3,404	3,434	3,569	3,656	3,754
Net Trade	-2,582	-2,374	-2,450	-2,539	-2,612	-2,698	-2,764	-2,846	-2,866	-2,992	-3,066	-3,155

**Table 65. Western Hemisphere Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	6,220	6,044	6,236	6,295	6,354	6,392	6,443	6,465	6,486	6,511	6,546	6,576
	(Metric Tons per Hectare)											
Yield	4.16	3.96	4.03	4.05	4.07	4.09	4.12	4.14	4.17	4.22	4.26	4.29
	(Thousand Metric Tons)											
Production	25,848	23,943	25,109	25,474	25,851	26,174	26,529	26,772	27,076	27,450	27,872	28,227
Beginning Stocks	3,813	4,079	3,235	3,421	3,616	3,674	3,752	3,794	3,841	3,929	4,064	4,216
Domestic Supply	29,661	28,022	28,343	28,895	29,468	29,849	30,281	30,566	30,917	31,379	31,936	32,443
Consumption	24,177	23,751	24,098	24,283	24,559	24,887	25,241	25,540	25,703	25,855	26,065	26,313
Ending Stocks	4,079	3,235	3,421	3,616	3,674	3,752	3,794	3,841	3,929	4,064	4,216	4,368
Domestic Use	28,256	26,985	27,519	27,900	28,234	28,638	29,034	29,381	29,632	29,919	30,281	30,681
Net Trade	1,405	1,036	825	995	1,234	1,211	1,246	1,184	1,285	1,460	1,655	1,763

**Table 66. Western Hemisphere Aggregate of Countries with Individual AGRM Models—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	5,304	5,136	5,401	5,489	5,560	5,602	5,655	5,677	5,696	5,721	5,754	5,782
	(Metric Tons per Hectare)											
Yield	4.43	4.24	4.28	4.28	4.30	4.32	4.35	4.37	4.41	4.45	4.50	4.54
	(Thousand Metric Tons)											
Production	23,497	21,781	23,109	23,495	23,899	24,225	24,574	24,808	25,103	25,463	25,879	26,224
Beginning Stocks	3,336	3,588	2,895	3,075	3,261	3,316	3,381	3,416	3,455	3,536	3,666	3,813
Domestic Supply	26,833	25,369	26,004	26,570	27,160	27,541	27,955	28,225	28,558	28,999	29,544	30,036
Consumption	21,179	21,052	21,372	21,507	21,767	22,034	22,355	22,608	22,740	22,863	23,047	23,258
Ending Stocks	3,588	2,895	3,075	3,261	3,316	3,381	3,416	3,455	3,536	3,666	3,813	3,957
Domestic Use	24,767	23,947	24,447	24,769	25,083	25,416	25,772	26,063	26,276	26,528	26,860	27,215
Net Trade	2,066	1,422	1,557	1,802	2,077	2,125	2,183	2,162	2,282	2,471	2,685	2,822

**Table 67. Western Hemisphere Aggregate of Other Countries Modeled as a Group in AGRM—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	916	908	835	806	794	789	788	789	790	791	792	794
	(Metric Tons per Hectare)											
Yield	2.57	2.38	2.39	2.45	2.46	2.47	2.48	2.49	2.50	2.51	2.52	2.52
	(Thousand Metric Tons)											
Production	2,351	2,162	1,999	1,979	1,952	1,950	1,955	1,964	1,973	1,987	1,993	2,003
Beginning Stocks	477	491	340	345	355	358	370	377	386	393	398	404
Domestic Supply	2,828	2,653	2,339	2,324	2,308	2,308	2,326	2,341	2,360	2,380	2,392	2,407
Consumption	2,998	2,699	2,727	2,776	2,792	2,852	2,885	2,932	2,964	2,992	3,018	3,055
Ending Stocks	491	340	345	355	358	370	377	386	393	398	404	411
Domestic Use	3,489	3,039	3,072	3,131	3,150	3,223	3,262	3,318	3,356	3,390	3,421	3,466
Net Trade	-661	-386	-733	-807	-843	-914	-937	-978	-996	-1,010	-1,030	-1,059

**Table 68. Asian Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	141,220	141,138	141,983	141,633	141,394	141,420	141,335	141,289	141,170	141,170	141,077	141,061
	(Metric Tons per Hectare)											
Yield	3.10	3.08	3.11	3.12	3.14	3.16	3.17	3.19	3.21	3.22	3.25	3.27
	(Thousand Metric Tons)											
Production	437,342	435,392	441,540	441,604	443,422	446,361	448,595	451,279	453,536	455,075	458,027	460,879
Beginning Stocks	123,874	128,381	132,468	136,160	136,967	136,632	135,496	133,707	131,287	128,901	126,063	124,109
Domestic Supply	561,216	563,773	574,008	577,763	580,389	582,993	584,091	584,986	584,823	583,976	584,090	584,988
Consumption	414,140	416,085	421,927	424,450	426,864	429,632	432,460	435,178	437,129	438,773	440,685	442,662
Ending Stocks	128,381	132,468	136,160	136,967	136,632	135,496	133,707	131,287	128,901	126,063	124,109	122,505
Domestic Use	542,521	548,553	558,087	561,417	563,496	565,129	566,167	566,465	566,030	564,836	564,794	565,167
Net Trade	18,695	15,220	15,921	16,347	16,893	17,864	17,924	18,521	18,794	19,140	19,296	19,821

**Table 69. Asian Aggregate of Countries with Individual AGRM Models—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	137,910	137,427	138,173	137,685	137,357	137,342	137,237	137,182	137,060	137,038	136,938	136,917
	(Metric Tons per Hectare)											
Yield	3.11	3.10	3.13	3.13	3.15	3.17	3.19	3.21	3.23	3.24	3.26	3.28
	(Thousand Metric Tons)											
Production	428,914	426,005	431,822	431,498	432,844	435,640	437,785	440,414	442,607	444,043	446,922	449,730
Beginning Stocks	122,681	127,713	131,410	135,178	136,057	135,642	134,527	132,744	130,305	127,924	125,083	123,123
Domestic Supply	551,595	553,718	563,232	566,676	568,900	571,282	572,312	573,158	572,912	571,967	572,005	572,853
Consumption	400,978	402,684	408,314	410,658	412,881	415,390	418,127	420,616	422,451	423,926	425,676	427,502
Ending Stocks		127,713	131,410	135,17	136,05	135,64	134,52	132,74	130,30	127,92	125,08	123,12
				8	7	2	7	4	5	4	3	3
				543,49	546,71	548,52	549,91	550,87	550,92	550,37	549,00	548,79
Domestic Use		528,691	534,094	2	4	3	7	1	1	5	9	9
Net Trade		22,904	19,625	19,740	19,962	20,377	21,365	21,441	22,237	22,538	22,958	23,206

**Table 70. Asian Aggregate of Other Countries Modeled as a Group in AGRM—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested		3,310	3,711	3,810	3,948	4,037	4,078	4,098	4,107	4,110	4,132	4,139
	(Metric Tons per Hectare)											
Yield		2.55	2.53	2.55	2.56	2.62	2.63	2.64	2.65	2.66	2.67	2.68
	(Thousand Metric Tons)											
Production		8,428	9,387	9,719	10,106	10,579	10,720	10,809	10,865	10,929	11,032	11,105
Beginning Stocks		1,183	668	1,058	982	910	990	969	963	981	977	980
Domestic Supply		9,611	10,055	10,776	11,087	11,489	11,711	11,779	11,828	11,911	12,009	12,135
Consumption		13,162	13,402	13,613	13,792	13,983	14,242	14,333	14,563	14,678	14,847	15,009
Ending Stocks		668	1,058	982	910	990	969	963	981	977	980	985
Domestic Use		13,830	14,459	14,595	14,702	14,973	15,211	15,296	15,544	15,655	15,827	15,994
Net Trade		-4,219	-4,405	-3,818	-3,615	-3,485	-3,501	-3,517	-3,716	-3,744	-3,818	-3,910

**Table 71. European Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	442	446	446	447	447	448	448	450	450	450	450	450
	(Metric Tons per Hectare)											
Yield	4.70	4.71	4.73	4.76	4.80	4.82	4.85	4.89	4.93	4.97	5.01	5.04
	(Thousand Metric Tons)											
Production	2,078	2,098	2,112	2,126	2,145	2,160	2,174	2,201	2,219	2,237	2,253	2,269
Beginning Stocks	1,207	1,139	1,028	922	833	762	703	664	656	670	708	749
Domestic Supply	3,285	3,237	3,140	3,049	2,979	2,922	2,877	2,865	2,874	2,907	2,961	3,018
Consumption	3,790	3,885	3,948	3,984	4,018	4,049	4,074	4,094	4,099	4,106	4,125	4,150
Ending Stocks	1,139	1,028	922	833	762	703	664	656	670	708	749	794
Domestic Use	4,929	4,913	4,870	4,817	4,780	4,752	4,738	4,750	4,769	4,814	4,873	4,943
Net Trade	-1,644	-1,676	-1,730	-1,769	-1,801	-1,831	-1,861	-1,885	-1,895	-1,907	-1,913	-1,926

**Table 72. European Aggregate of Countries with Individual AGRM Models—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	439	443	443	443	444	445	445	447	447	447	447	447
	(Metric Tons per Hectare)											
Yield	4.71	4.72	4.74	4.77	4.81	4.83	4.86	4.90	4.94	4.98	5.02	5.05
	(Thousand Metric Tons)											
Production	2,068	2,088	2,102	2,116	2,135	2,149	2,163	2,190	2,207	2,226	2,242	2,257
Beginning Stocks	1,183	1,115	986	877	787	714	655	616	607	622	659	700
Domestic Supply	3,251	3,203	3,087	2,993	2,921	2,863	2,819	2,806	2,815	2,847	2,901	2,958
Consumption	3,650	3,752	3,797	3,824	3,853	3,882	3,907	3,924	3,929	3,935	3,952	3,975
Ending Stocks	1,115	986	877	787	714	655	616	607	622	659	700	745
Domestic Use	4,765	4,737	4,674	4,611	4,568	4,538	4,524	4,532	4,551	4,594	4,652	4,720
Net Trade	-1,514	-1,535	-1,587	-1,618	-1,646	-1,675	-1,705	-1,726	-1,736	-1,747	-1,751	-1,762



**Table 73. European Aggregate of Other Countries Modeled as a Group in AGRM—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	3	3	3	3	3	3	3	3	3	3	3	3
	(Metric Tons per Hectare)											
Yield	3.33	3.36	3.28	3.35	3.37	3.40	3.42	3.45	3.48	3.50	3.52	3.55
	(Thousand Metric Tons)											
Production	10	11	10	11	11	11	11	11	11	11	11	11
Beginning Stocks	24	24	42	45	47	47	48	48	48	48	49	49
Domestic Supply	34	35	53	56	57	58	59	59	59	60	60	60
Consumption	140	134	151	159	165	167	167	170	170	172	173	175
Ending Stocks	24	42	45	47	47	48	48	48	48	49	49	49
Domestic Use	164	176	196	206	212	215	215	218	218	220	221	224
Net Trade	-130	-141	-143	-150	-155	-156	-156	-159	-159	-161	-161	-163

**Table 74. Oceania Region total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	80	87	85	83	82	81	80	78	77	76	75	74
	(Metric Tons per Hectare)											
Yield	7.33	7.29	7.46	7.58	7.70	7.82	7.94	8.05	8.17	8.29	8.41	8.52
	(Thousand Metric Tons)											
Production	586	635	637	632	635	634	634	631	627	626	626	627
Beginning Stocks	77	228	254	348	433	516	568	596	592	565	524	475
Domestic Supply	663	863	891	980	1,068	1,150	1,203	1,226	1,220	1,191	1,150	1,102
Consumption	435	425	459	470	481	490	501	512	521	527	535	547
Ending Stocks	228	254	348	433	516	568	596	592	565	524	475	422
Domestic Use	663	679	806	903	997	1,058	1,097	1,104	1,086	1,051	1,010	969
Net Trade	0	184	85	77	71	92	106	122	134	140	140	133

**Table 75. Oceania Aggregate of Countries with Individual AGRM Models—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	80	87	85	83	82	81	80	78	77	76	75	74
	(Metric Tons per Hectare)											
Yield	7.33	7.29	7.46	7.58	7.70	7.82	7.94	8.05	8.17	8.29	8.41	8.52
	(Thousand Metric Tons)											
Production	586	635	637	632	635	634	634	631	627	626	626	627
Beginning Stocks	77	228	253	347	432	515	567	595	591	564	523	474
Domestic Supply	663	863	890	979	1,067	1,149	1,202	1,225	1,219	1,190	1,149	1,101
Consumption	390	380	412	423	433	442	452	462	471	476	483	495
Ending Stocks	228	253	347	432	515	567	595	591	564	523	474	421
Domestic Use	618	633	758	855	948	1,009	1,047	1,053	1,034	999	957	916
Net Trade	45	230	131	124	119	140	155	172	184	191	192	185

**Table 76. Oceania Aggregate of Other Countries Modeled as a Group in AGRM—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(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	1	1	1	1	1	1	1	1	1	1
Domestic Supply	0	0	1	1	1	1	1	1	1	1	1	1
Consumption	45	46	47	47	48	49	49	50	50	51	52	52
Ending Stocks	0	1	1	1	1	1	1	1	1	1	1	1
Domestic Use	45	46	48	48	49	50	50	51	51	52	53	53
Net Trade	-45	-46	-47	-47	-48	-49	-49	-50	-50	-51	-52	-52

**Table 77. World Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	160,822	160,444	161,726	161,558	161,542	161,800	161,997	162,165	162,255	162,534	162,702	162,948
	(Metric Tons per Hectare)											
Yield	3.03	3.01	3.04	3.05	3.07	3.09	3.10	3.12	3.14	3.15	3.17	3.19
	(Thousand Metric Tons)											
Production	487,078	482,201	490,855	492,155	495,176	499,285	502,695	506,353	509,652	512,382	516,564	520,535
Beginning Stocks	132,632	138,112	140,773	144,496	145,388	145,129	144,101	142,395	140,013	137,688	134,957	133,137
Domestic Supply	619,710	620,313	631,628	636,651	640,563	644,414	646,797	648,748	649,664	650,070	651,521	653,673
Consumption	476,898	479,596	487,383	491,270	495,200	499,657	504,157	508,458	511,692	514,771	518,181	521,788
Ending Stocks	138,112	140,773	144,496	145,388	145,129	144,101	142,395	140,013	137,688	134,957	133,137	131,675
Domestic Use	615,010	620,369	631,879	636,658	640,329	643,758	646,552	648,471	649,380	649,728	651,318	653,463
Residual	4,700	-55	-252	-7	234	656	245	277	284	342	203	209

**Table 78. World Aggregate of Countries with Individual AGRM Models—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	155,960	155,192	156,451	156,171	156,075	156,291	156,463	156,617	156,696	156,946	157,098	157,333
	(Metric Tons per Hectare)											
Yield	3.05	3.03	3.06	3.07	3.09	3.11	3.13	3.15	3.17	3.18	3.20	3.22
	(Thousand Metric Tons)											
Production	475,945	470,284	478,760	479,677	482,238	486,192	489,500	493,086	496,302	498,908	503,002	506,910
Beginning Stocks	130,868	136,811	139,209	142,999	143,949	143,604	142,583	140,875	138,463	136,135	133,393	131,561
Domestic Supply	606,813	607,095	617,970	622,676	626,186	629,796	632,083	633,961	634,765	635,043	636,394	638,471
Consumption	458,485	460,588	468,031	471,576	475,206	479,240	483,541	487,473	490,530	493,276	496,412	499,732
Ending Stocks	136,811	139,209	142,999	143,949	143,604	142,583	140,875	138,463	136,135	133,393	131,561	130,088
Domestic Use	595,296	599,798	611,030	615,525	618,811	621,823	624,416	625,936	626,666	626,669	627,972	629,819
Net Trade	11,517	7,297	6,940	7,152	7,376	7,973	7,667	8,025	8,099	8,375	8,422	8,651

**Table 79. World Aggregate of Other Countries Modeled as a Group in AGRM—Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	4,862	5,251	5,275	5,387	5,468	5,509	5,534	5,549	5,559	5,589	5,604	5,615
	(Metric Tons per Hectare)											
Yield	2.29	2.27	2.29	2.32	2.37	2.38	2.38	2.39	2.40	2.41	2.42	2.43
	(Thousand Metric Tons)											
Production	11,133	11,918	12,095	12,477	12,938	13,093	13,195	13,267	13,349	13,474	13,563	13,626
Beginning Stocks	1,764	1,301	1,563	1,497	1,439	1,525	1,518	1,520	1,550	1,552	1,564	1,576
Domestic Supply	12,897	13,219	13,658	13,974	14,377	14,618	14,713	14,787	14,899	15,027	15,127	15,202
Consumption	18,413	19,008	19,352	19,694	19,994	20,417	20,616	20,985	21,162	21,495	21,769	22,057
Ending Stocks	1,301	1,563	1,497	1,439	1,525	1,518	1,520	1,550	1,552	1,564	1,576	1,588
Domestic Use	19,714	20,571	20,849	21,133	21,519	21,935	22,136	22,535	22,714	23,059	23,346	23,644
Net Trade	-6,817	-7,352	-7,191	-7,159	-7,142	-7,317	-7,423	-7,748	-7,815	-8,032	-8,219	-8,442

**Table 80. ECOWAS-7\* Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	
	(Thousand Hectares)												
Area Harvested		537	553	555	561	572	586	602	617	634	658	684	709
	(Metric Tons per Hectare)												
Yield		1.32	1.28	1.37	1.41	1.45	1.48	1.51	1.54	1.56	1.57	1.58	1.59
	(Thousand Metric Tons)												
Production		710	706	762	792	828	867	908	951	992	1,034	1,081	1,125
Beginning Stocks		30	34	54	56	58	60	62	64	66	69	71	74
Domestic Supply		740	740	816	848	886	926	970	1,015	1,058	1,103	1,152	1,198
Consumption		2,433	2,552	2,656	2,744	2,840	2,965	3,080	3,194	3,329	3,444	3,568	3,703
Ending Stocks		34	54	56	58	60	62	64	66	69	71	74	76
Domestic Use		2,467	2,606	2,712	2,801	2,900	3,027	3,144	3,261	3,398	3,515	3,642	3,779
Net Trade		-1,727	-1,866	-1,896	-1,953	-2,014	-2,101	-2,174	-2,246	-2,340	-2,412	-2,490	-2,580

\*(Benin, Burkina, Gambia, Guinea-Bissau, Niger, Togo, Cabo Verde); these West African countries are modeled as a group in AGRM

**Table 81. ECOWAS-8\* Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	7,529	7,579	7,695	7,776	7,883	8,002	8,152	8,269	8,371	8,514	8,614	8,728
	(Metric Tons per Hectare)											
Yield	1.38	1.35	1.39	1.44	1.48	1.53	1.56	1.59	1.62	1.64	1.67	1.68
	(Thousand Metric Tons)											
Production	10,361	10,261	10,693	11,214	11,703	12,227	12,722	13,143	13,543	13,977	14,351	14,696
Beginning Stocks	2,527	2,467	2,145	2,086	1,997	1,985	2,005	2,050	2,093	2,138	2,178	2,208
Domestic Supply	12,888	12,728	12,837	13,300	13,701	14,212	14,727	15,193	15,635	16,115	16,530	16,904
Consumption	17,176	17,519	18,286	18,816	19,432	20,051	20,681	21,271	21,843	22,433	23,043	23,666
Ending Stocks	2,467	2,145	2,086	1,997	1,985	2,005	2,050	2,093	2,138	2,178	2,208	2,238
Domestic Use	19,643	19,664	20,373	20,814	21,417	22,056	22,731	23,363	23,981	24,611	25,251	25,903
Net Trade	-6,755	-6,936	-7,535	-7,514	-7,716	-7,844	-8,004	-8,170	-8,346	-8,496	-8,721	-8,999

\*(Cote d'Ivoire, Ghana, Guinea, Liberia, Mali, Nigeria, Senegal, Sierra Leone); these West African countries are modeled as individual countries in AGRM

**Table 82. ECOWAS-15 Region Total Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	8,066	8,132	8,250	8,338	8,455	8,588	8,754	8,886	9,005	9,172	9,299	9,437
	(Metric Tons per Hectare)											
Yield	1.37	1.35	1.39	1.44	1.48	1.52	1.56	1.59	1.61	1.64	1.66	1.68
	(Thousand Metric Tons)											
Production	11,071	10,967	11,455	12,006	12,531	13,094	13,630	14,094	14,535	15,011	15,432	15,821
Beginning Stocks	2,557	2,501	2,199	2,142	2,055	2,045	2,067	2,114	2,159	2,207	2,250	2,281
Domestic Supply	13,628	13,468	13,653	14,148	14,586	15,139	15,698	16,208	16,694	17,218	17,682	18,103
Consumption	19,609	20,072	20,942	21,560	22,272	23,016	23,761	24,465	25,173	25,876	26,612	27,368
Ending Stocks	2,501	2,199	2,142	2,055	2,045	2,067	2,114	2,159	2,207	2,250	2,281	2,314
Domestic Use	22,110	22,271	23,085	23,615	24,317	25,083	25,875	26,624	27,380	28,126	28,893	29,682
Net Trade	-8,482	-8,802	-9,431	-9,467	-9,730	-9,945	-10,177	-10,416	-10,686	-10,908	-11,211	-11,579

**Table 83. Projected Milled Rice Yields per Hectare for Selected Countries and the World**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Metric Tons per Hectare)											
Argentina	4.230	4.384	4.430	4.476	4.542	4.580	4.609	4.654	4.696	4.763	4.798	4.830
Australia	7.325	7.294	7.463	7.584	7.700	7.818	7.935	8.054	8.173	8.291	8.407	8.523
Bangladesh	2.943	2.920	2.984	3.040	3.085	3.128	3.164	3.198	3.225	3.248	3.270	3.303
Brazil	4.232	3.876	3.752	3.734	3.736	3.732	3.731	3.728	3.749	3.785	3.830	3.856
Brunei Darussalam	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161	0.161
Cambodia	1.605	1.618	1.656	1.702	1.749	1.787	1.844	1.892	1.922	1.970	2.000	2.049
Cameroon	0.821	0.901	1.014	1.064	1.083	1.102	1.116	1.142	1.168	1.195	1.210	1.213
Canada	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
People's Republic of China	4.803	4.804	4.828	4.833	4.843	4.852	4.858	4.866	4.871	4.877	4.888	4.897
Colombia	3.304	3.192	3.270	3.283	3.293	3.306	3.319	3.331	3.344	3.357	3.370	3.382
Egypt	5.647	5.880	6.110	6.290	6.440	6.530	6.620	6.710	6.800	6.891	6.981	7.071
European Union-28	4.711	4.717	4.745	4.772	4.806	4.834	4.862	4.903	4.942	4.982	5.017	5.051
Ghana	1.854	1.730	1.793	1.822	1.852	1.881	1.912	1.943	1.974	1.986	1.988	2.020
Guinea	1.319	1.315	1.311	1.337	1.417	1.464	1.503	1.528	1.537	1.547	1.556	1.565
China - Hong Kong	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
India	2.550	2.511	2.541	2.546	2.563	2.579	2.598	2.629	2.667	2.675	2.720	2.755
Indonesia	3.035	3.034	3.077	3.081	3.091	3.103	3.115	3.124	3.132	3.137	3.139	3.145
Iran	2.851	2.874	2.919	2.957	2.982	3.007	3.032	3.057	3.082	3.108	3.133	3.158
Iraq	2.662	2.643	2.662	2.674	2.686	2.700	2.712	2.724	2.737	2.751	2.765	2.778
Cote d'Ivoire	1.311	1.417	1.452	1.477	1.502	1.527	1.552	1.577	1.602	1.627	1.652	1.677
Japan	4.955	4.922	4.950	4.965	4.962	4.989	4.994	5.000	5.006	5.011	5.016	5.018
Kenya	1.750	2.384	2.414	2.443	2.472	2.501	2.530	2.558	2.587	2.616	2.644	2.673
Lao PDR	2.010	2.042	2.062	2.085	2.101	2.119	2.140	2.162	2.183	2.204	2.224	2.245
Liberia	0.850	0.820	0.772	0.777	0.804	0.821	0.838	0.855	0.881	0.890	0.899	0.908
Malaysia	2.619	2.639	2.659	2.693	2.727	2.754	2.788	2.821	2.855	2.889	2.909	2.936
Mali	2.158	2.088	2.131	2.174	2.201	2.239	2.275	2.312	2.349	2.385	2.420	2.455
Mexico	4.538	4.395	4.204	4.206	4.213	4.217	4.228	4.244	4.261	4.278	4.295	4.306
Mozambique	0.609	0.669	0.727	0.738	0.750	0.762	0.773	0.786	0.798	0.810	0.823	0.836
Myanmar (Burma)	1.799	1.804	1.846	1.871	1.890	1.923	1.949	1.979	2.002	2.025	2.048	2.077
Nigeria	1.142	1.080	1.089	1.153	1.188	1.242	1.268	1.295	1.326	1.351	1.385	1.397
Pakistan	2.549	2.519	2.508	2.520	2.525	2.558	2.580	2.594	2.601	2.612	2.634	2.648
Philippines	2.474	2.494	2.553	2.558	2.576	2.600	2.626	2.647	2.669	2.700	2.738	2.761

Saudi Arabia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Senegal	2.278	2.300	2.657	2.894	3.046	3.151	3.243	3.286	3.347	3.408	3.453	3.497
Sierra Leone	1.282	1.286	1.373	1.409	1.445	1.460	1.506	1.537	1.561	1.585	1.601	1.618
Singapore	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
South Africa	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
South Korea	5.388	5.249	5.268	5.283	5.298	5.313	5.330	5.347	5.364	5.382	5.400	5.419
Taiwan	4.400	4.412	4.409	4.409	4.414	4.424	4.436	4.448	4.462	4.478	4.492	4.504
Tanzania	1.680	1.680	1.710	1.740	1.771	1.802	1.834	1.866	1.899	1.933	1.967	2.002
Thailand	1.874	1.906	1.945	1.983	2.000	2.035	2.070	2.092	2.106	2.114	2.116	2.127
Turkey	5.102	5.245	5.303	5.362	5.420	5.478	5.537	5.595	5.654	5.712	5.770	5.829
United States	5.680	5.889	6.112	6.155	6.208	6.273	6.325	6.387	6.447	6.507	6.562	6.618
Uruguay	6.018	5.773	5.817	5.862	5.907	5.951	6.031	6.110	6.190	6.269	6.349	6.429
Vietnam	3.552	3.676	3.723	3.748	3.771	3.820	3.826	3.850	3.868	3.881	3.904	3.926
ECOWAS-7	1.322	1.277	1.373	1.411	1.448	1.478	1.509	1.540	1.563	1.571	1.579	1.587
Madagascar	1.656	1.437	1.701	1.724	1.747	1.769	1.792	1.814	1.837	1.859	1.882	1.904
Malawi	1.277	1.277	1.305	1.320	1.334	1.348	1.362	1.376	1.390	1.404	1.417	1.431
Zambia	1.000	1.000	1.041	1.062	1.083	1.105	1.127	1.150	1.174	1.197	1.221	1.246
Rwanda	3.625	3.625	3.841	3.919	4.011	4.106	4.198	4.286	4.379	4.490	4.599	4.697
Uganda	1.579	1.579	1.594	1.609	1.624	1.638	1.653	1.668	1.683	1.697	1.712	1.727
Cuba	2.393	1.947	1.956	1.972	1.979	1.993	2.007	2.016	2.037	2.057	2.078	2.098
Costa Rica	2.826	2.203	2.195	2.198	2.189	2.190	2.192	2.194	2.196	2.199	2.202	2.206
Dominican Republic	3.533	3.333	3.547	3.553	3.568	3.583	3.592	3.599	3.605	3.628	3.649	3.668
Guatemala	2.182	2.409	2.449	2.475	2.500	2.524	2.546	2.567	2.589	2.609	2.626	2.643
Honduras	2.692	2.770	2.849	2.928	3.007	3.088	3.168	3.250	3.331	3.414	3.497	3.580
Nicaragua	2.788	2.842	2.872	2.900	2.929	2.957	2.984	3.012	3.039	3.065	3.091	3.117
Panama	1.744	1.750	1.777	1.809	1.806	1.833	1.859	1.885	1.911	1.936	1.962	1.987
Chile	3.905	4.360	4.655	4.724	4.756	4.824	4.893	4.961	5.023	5.085	5.140	5.194
Paraguay	3.347	3.988	4.091	4.187	4.213	4.275	4.337	4.398	4.458	4.517	4.575	4.629
Peru	5.202	5.472	5.582	5.656	5.696	5.762	5.827	5.896	5.968	6.039	6.110	6.180
Rest of World	2.291	2.269	2.293	2.316	2.366	2.377	2.384	2.391	2.402	2.411	2.420	2.427
<u>World</u>	<u>3.029</u>	<u>3.005</u>	<u>3.035</u>	<u>3.046</u>	<u>3.065</u>	<u>3.086</u>	<u>3.103</u>	<u>3.122</u>	<u>3.141</u>	<u>3.152</u>	<u>3.175</u>	<u>3.194</u>

**Table 84. Projected per Capita Rice Use for Selected Countries and the World**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Kilograms)											
Argentina	11.9	11.8	12.0	12.1	12.2	12.3	12.3	12.4	12.4	12.4	12.5	12.5
Australia	16.2	15.5	16.6	16.9	17.1	17.2	17.4	17.6	17.7	17.7	17.8	18.0
Bangladesh	214.8	213.8	215.1	216.1	216.3	217.0	217.3	217.4	217.4	217.4	217.4	217.4
Brazil	39.0	38.1	38.1	37.9	38.0	38.1	38.3	38.2	37.9	37.7	37.5	37.4
Brunei Darussalam	120.5	117.3	117.9	119.0	120.9	123.0	121.4	121.2	120.0	119.4	119.5	119.9
Cambodia	237.9	234.2	238.9	241.1	242.3	243.0	244.5	244.9	245.4	246.1	247.9	248.4
Cameroon	28.4	27.5	28.9	29.1	29.1	29.0	29.3	29.0	28.8	29.5	30.1	30.8
Canada	10.0	10.3	10.5	10.7	10.8	11.0	11.1	11.2	11.2	11.2	11.2	11.3
PR China	100.8	100.3	101.7	101.2	101.0	101.0	101.1	101.1	100.9	100.7	100.6	100.7
Colombia	36.0	36.8	37.5	37.4	37.4	37.6	37.7	37.4	37.2	36.7	36.6	36.7
Cote d'Ivoire	118.2	121.5	123.5	124.3	125.8	125.1	125.7	125.9	126.4	126.4	126.0	126.1
Egypt	44.9	44.6	44.1	44.3	44.1	44.2	44.5	44.6	44.5	44.4	44.5	44.7
European Union-28	8.2	8.5	8.5	8.6	8.7	8.7	8.8	8.8	8.8	8.9	8.9	9.0
Ghana	37.3	38.3	38.8	39.2	39.4	40.0	40.3	40.5	40.7	40.8	41.0	41.1
Guinea	159.6	161.2	162.6	162.8	164.4	166.3	167.1	168.4	169.1	169.9	170.9	172.3
China - Hong Kong	47.2	46.7	47.3	47.7	48.1	48.6	49.0	49.4	49.5	49.6	49.9	50.2
India	73.1	73.0	73.3	73.3	73.2	73.1	73.0	73.0	72.9	72.9	72.8	72.8
Indonesia	143.6	142.6	142.7	142.3	141.8	141.2	140.6	140.2	139.0	137.8	136.7	135.6
Iran	39.2	41.5	42.4	42.2	42.0	42.5	42.9	43.9	44.2	43.9	44.3	44.4
Iraq	31.6	33.2	33.5	34.2	34.4	34.5	34.6	34.6	34.6	34.6	34.6	34.6
Japan	66.5	65.6	65.3	64.8	63.8	63.3	62.4	62.2	62.2	61.9	61.6	61.3
Kenya	13.8	14.5	14.8	14.7	15.1	15.7	16.3	16.7	16.5	16.3	16.3	16.5
Lao PDR	307.8	304.7	309.9	310.9	311.5	313.5	315.7	316.5	317.1	317.2	317.5	318.7
Liberia	102.0	98.6	102.3	103.1	104.2	106.2	107.6	107.9	107.0	106.2	106.7	107.4
Malaysia	88.2	87.3	88.6	88.3	88.8	88.7	88.5	88.2	87.8	87.5	87.1	86.7
Mali	102.8	101.4	108.2	107.9	107.6	109.2	110.5	110.4	110.0	109.4	110.1	110.8
Mexico	7.2	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.0	7.0
Mozambique	32.2	32.4	32.5	32.6	32.7	33.2	33.6	34.5	35.1	35.3	35.5	35.6
Myanmar (Burma)	192.9	191.2	191.8	191.0	191.0	191.4	191.9	191.5	190.8	190.1	190.0	190.1
Nigeria	33.3	33.6	33.8	33.9	34.0	34.2	34.3	34.5	34.6	34.9	35.1	35.2
Pakistan	16.0	16.1	15.9	15.6	15.5	15.6	15.6	15.5	15.4	15.3	15.2	15.2
Philippines	124.9	123.0	124.3	123.9	124.4	124.9	124.8	125.0	124.8	124.2	124.3	124.4



Saudi Arabia	44.9	45.5	46.8	47.7	48.2	49.1	50.0	50.8	50.8	50.9	50.9	51.0
Senegal	109.0	109.1	110.1	111.3	112.8	114.4	115.3	116.2	116.7	117.0	117.2	117.7
Sierra Leone	155.6	124.3	127.5	129.2	131.4	133.0	134.1	135.7	136.4	137.5	138.2	139.0
Singapore	53.4	56.3	54.7	54.3	54.4	55.0	55.0	54.7	54.0	53.4	53.0	52.7
South Africa	14.8	14.9	15.8	15.9	16.0	16.0	15.8	15.9	15.6	15.8	15.9	16.1
South Korea	93.1	93.6	88.6	83.7	82.3	80.9	79.8	79.5	79.6	79.1	78.6	78.3
Taiwan	48.4	48.2	49.2	50.0	50.1	49.9	50.2	50.2	50.0	49.2	48.7	48.6
Tanzania	36.9	36.1	38.1	38.2	38.5	39.5	40.4	40.7	41.0	41.2	41.5	42.0
Thailand	170.6	167.2	165.6	164.2	163.9	162.7	160.6	160.1	159.3	158.5	157.8	157.2
Turkey	9.8	10.1	10.3	10.4	10.5	10.5	10.4	10.5	10.7	10.8	10.9	11.0
United States	12.9	11.7	11.6	11.5	11.6	11.6	11.8	12.0	12.0	12.1	12.2	12.3
Uruguay	16.0	16.5	19.4	19.2	19.0	18.8	18.6	18.6	18.4	18.2	18.1	18.0
Vietnam	233.7	233.3	230.7	232.4	230.5	229.6	229.3	229.1	228.4	227.0	226.6	225.3
ECOWAS-7	39.1	39.8	40.1	40.2	40.4	40.9	41.2	41.5	41.9	42.1	42.4	42.7
Madagascar	111.3	100.1	102.7	104.1	104.9	105.6	106.4	107.2	107.9	108.5	109.1	109.6
Malawi	5.4	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4
Zambia	2.4	2.6	2.7	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.1
Rwanda	8.2	8.2	8.2	8.5	8.9	9.2	9.4	9.6	9.8	9.8	9.9	10.1
Uganda	5.5	5.4	5.5	5.9	6.0	6.1	6.1	6.2	6.2	6.2	6.2	6.2
Cuba	74.9	80.0	84.9	84.6	84.5	84.9	85.5	85.7	84.9	84.3	84.2	84.6
Costa Rica	59.7	58.8	59.1	59.2	59.2	59.3	59.5	59.5	59.5	59.5	59.5	59.6
Dominican Republic	52.1	51.7	52.8	53.3	53.4	53.9	53.8	53.7	53.6	53.4	53.4	53.2
Guatemala	7.3	8.2	8.5	8.6	8.6	8.7	8.8	8.9	8.9	9.0	9.0	9.1
Honduras	25.0	25.5	25.3	25.5	25.6	26.0	26.5	27.0	27.4	27.7	28.2	28.7
Nicaragua	60.2	59.3	60.2	60.9	61.5	62.1	62.8	63.5	63.9	64.4	65.0	65.7
Panama	55.0	54.8	54.8	54.4	53.8	53.5	53.1	52.7	52.2	51.7	51.2	50.8
Chile	13.1	13.9	14.0	14.2	14.4	14.5	14.7	14.9	15.1	15.4	15.6	15.9
Paraguay	2.5	3.1	3.2	3.1	2.9	2.8	2.7	2.6	2.4	2.3	2.1	2.0
Peru	75.8	80.9	81.2	81.7	82.3	82.9	83.7	84.5	85.2	85.9	86.6	87.4
Rest of World	13.6	13.8	13.8	13.8	13.8	13.9	22.5	13.9	13.8	13.8	13.8	13.8
World	64.0	63.7	64.0	63.9	63.7	63.6	63.6	63.5	63.3	63.1	62.9	62.8

**Table 85. Total World Rice Trade**

Country	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
<b>EXPORTERS</b>	(Thousand Metric Tons)											
United States	3704	3178	3296	3295	3391	3470	3540	3550	3585	3614	3644	3666
Thailand	11250	10218	10201	10420	10928	10928	11075	11443	11406	11383	11399	11522
Pakistan	3600	3740	3589	3541	3452	3430	3403	3406	3468	3511	3550	3565
Myanmar	3100	2733	2782	2909	2974	3042	3095	3257	3396	3486	3580	3686
Vietnam	6400	6483	6656	6656	6737	6798	6957	7051	7148	7230	7327	7514
PR China	805	1114	1080	1052	1063	1091	1107	1103	1092	1087	1088	1084
India	11219	11528	11409	11533	11459	12219	12413	12659	12748	12772	12851	12902
Cambodia	1150	1446	1293	1316	1348	1394	1498	1632	1694	1822	1878	2017
Lao PDR	-100	-72	-157	-143	-125	-114	-97	-72	-47	-13	22	51
Australia	200	382	280	270	270	291	305	320	332	337	337	330
Egypt	100	98	100	102	106	109	112	114	118	120	122	125
Turkey	57	57	57	57	57	57	57	57	57	57	57	57
European Union 28	319	366	354	353	353	356	355	357	362	367	371	372
Brazil	650	709	635	665	670	657	664	664	661	663	663	662
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	80	80	80	80	80	80	80	80	80	80	80	80
Tanzania	40	40	40	40	40	40	40	40	40	40	40	40
Japan	55	55	55	55	55	55	55	55	55	55	55	55
Argentina	475	450	424	420	478	508	532	550	574	594	604	618
Uruguay	975	896	873	851	843	856	867	880	892	916	940	955
Paraguay	500	524	658	656	668	687	710	731	746	774	812	852
Peru	50	52	52	57	58	57	56	56	58	60	62	64
ROW and Residual	1336	1511	1577	1549	1545	1530	1510	1489	1462	1428	1393	1364
<b>Total Exports</b>	<b>46005</b>	<b>45628</b>	<b>45374</b>	<b>45771</b>	<b>46489</b>	<b>47581</b>	<b>48376</b>	<b>49461</b>	<b>49966</b>	<b>50422</b>	<b>50914</b>	<b>51621</b>
	<b>16/17</b>	<b>17/18</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>23/24</b>	<b>24/25</b>	<b>25/26</b>	<b>26/27</b>	<b>27/28</b>
<b>IMPORTERS</b>	(Thousand Metric Tons)											

United States	745	789	783	771	753	751	756	763	768	769	767	766
Thailand	250	283	278	270	277	275	274	275	275	275	275	275
Pakistan	10	17	12	13	14	13	13	13	13	13	13	13
Vietnam	500	500	500	500	500	500	500	500	500	500	500	500
PR China	5300	5241	5320	5236	5243	5253	5273	5291	5303	5312	5323	5337
China-Hong Kong	345	344	351	358	363	369	375	379	382	386	390	395
Egypt	150	95	115	120	110	115	115	113	114	114	114	114
Japan	685	682	682	682	682	682	682	682	682	682	682	682
Bangladesh	70	2504	1960	1796	1613	1565	1570	1427	1488	1557	1618	1573
Indonesia	300	737	729	848	863	865	848	887	787	724	719	622
Iraq	1050	1123	1161	1215	1260	1302	1344	1385	1428	1469	1511	1555
Iran	1600	1479	1664	1663	1667	1742	1790	1899	1936	1909	1958	1965
Malaysia	1000	894	1183	1060	1079	1078	1080	1082	1079	1069	1066	1057
Philippines	1100	1308	679	1041	1276	1399	1461	1522	1548	1487	1465	1526
Saudi Arabia	1400	1451	1571	1632	1672	1736	1797	1849	1876	1900	1925	1951
European Union 28	1833	1901	1941	1971	2000	2031	2061	2083	2098	2114	2122	2134
Singapore	300	321	317	318	323	329	332	333	331	329	328	329
Brunei Darussalam	50	49	50	51	53	54	54	55	55	55	56	56
Turkey	300	358	376	369	373	370	351	369	380	388	391	397
South Korea	403	409	409	409	409	409	409	409	409	409	409	409
Taiwan	126	126	126	126	126	126	126	126	126	126	126	126
Australia	155	152	149	145	152	151	150	149	148	146	145	145
Brazil	700	736	658	502	434	451	441	445	374	271	148	89
Mexico	867	839	817	845	855	869	881	890	900	906	911	919
Canada	361	376	390	400	410	420	429	437	442	447	454	462
Cote d'Ivoire	1300	1524	1531	1558	1629	1619	1628	1653	1694	1662	1636	1654
Nigeria	2500	2812	2757	2902	3147	3292	3385	3502	3570	3641	3664	3778
South Africa	1002	975	1046	1061	1082	1093	1089	1109	1091	1119	1133	1158
Senegal	1000	1037	1022	1016	1039	1079	1123	1161	1202	1239	1282	1332
Ghana	590	535	648	652	670	687	688	704	714	729	693	680
Cameroon	550	536	568	584	595	608	622	629	639	678	711	749
Mozambique	715	731	735	760	789	831	873	932	980	1015	1051	1087
Guinea	725	649	699	721	695	693	686	703	758	813	871	934
Kenya	650	651	648	656	715	766	779	834	835	873	885	917
Tanzania	240	268	378	430	469	542	610	642	667	669	680	711
Sierra Leone	350	134	111	114	116	128	116	118	119	124	131	141

Mali	100	72	276	279	292	336	365	366	352	343	376	414
Liberia	310	292	332	341	347	360	371	375	371	372	379	388
Colombia	148	148	184	174	173	179	181	175	174	180	186	193
ECOWAS-7	1727	1866	1896	1953	2014	2101	2174	2246	2340	2412	2490	2580
Madagascar	330	512	95	128	140	152	166	180	194	204	211	216
Malawi	15	18	20	25	27	28	30	31	31	31	32	32
Zambia	10	15	16	15	17	17	18	19	19	19	19	19
Rwanda	40	43	39	42	45	48	49	50	51	49	47	46
Uganda	120	124	131	155	170	179	187	192	191	181	165	148
Cuba	524	550	585	565	556	554	555	554	539	525	517	514
Costa Rica	162	178	145	144	145	147	149	151	152	153	153	154
Dominican Republic	41	24	65	39	36	40	38	40	42	41	39	37
Guatemala	97	113	120	123	127	131	135	138	141	145	148	152
Honduras	145	153	162	164	166	170	175	180	183	185	188	192
Nicaragua	94	62	78	80	82	83	85	86	86	85	85	86
Panama	60	71	67	66	69	71	71	72	71	70	69	68
Chile	136	144	137	139	144	146	148	151	153	156	160	164
Paraguay	2	2	2	2	2	2	2	2	2	2	2	2
Peru	310	305	282	224	175	194	238	279	304	313	307	294
ROW and Residual	12412	8371	8376	8317	8307	8451	8530	8823	8856	9040	9186	9383
<b>Total Imports</b>	<b>46005</b>	<b>45628</b>	<b>45374</b>	<b>45771</b>	<b>46489</b>	<b>47581</b>	<b>48376</b>	<b>49461</b>	<b>49966</b>	<b>50422</b>	<b>50914</b>	<b>51621</b>





Peru	310	305	282	224	175	194	238	279	304	313	307	294
Rest of World	12135	8102	8043	7972	7942	8062	8108	8400	8446	8636	8790	8989
<b>Total Imports</b>	43851	43406	43740	43622	44323	45372	46131	47195	47669	48101	48552	49221

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**Table 87. Total World Medium Grain Rice Trade**

Country	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
<b>EXPORTERS</b>	(Thousand Metric Tons)											
United States	1203	932	1000	1002	997	998	993	983	986	994	1007	1020
Australia	200	382	280	270	270	291	305	320	332	337	337	330
Egypt	100	98	100	102	106	109	112	114	118	120	122	125
European Union												
28	185	205	196	194	193	195	194	194	195	197	198	198
Japan	55	55	55	55	55	55	55	55	55	55	55	55
PR China	260	352	414	463	512	536	562	577	596	622	653	685
<b>Total Exports</b>	2004	2024	2045	2085	2133	2183	2220	2243	2282	2324	2372	2413
<b>IMPORTERS</b>	(Thousand Metric Tons)											
United States	102	103	98	96	98	105	112	119	124	131	126	122
Turkey	300	358	376	369	373	370	351	369	380	388	391	397
Japan	685	682	682	682	682	682	682	682	682	682	682	682
South Korea	403	409	409	409	409	409	409	409	409	409	409	409
Taiwan	126	126	126	126	126	126	126	126	126	126	126	126
European Union												
28	173	161	169	185	200	214	219	199	214	222	238	247
Australia	155	152	149	145	152	151	150	149	148	146	145	145
Others (residual)	60	35	36	74	94	127	172	191	199	221	255	286
<b>Total Imports</b>	2004	2024	2045	2085	2133	2183	2220	2243	2282	2324	2372	2413



**Table 88. World Rice Prices and Price Relationship**

Country	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Long Grain Rice, High Quality International Reference	(U.S. Dollars per Metric Ton, except for Ratios)											
Price, long grain	394	402	388	394	403	409	413	422	445	467	481	489
<i>Real International Reference Price (2000=100)</i>	394	391	372	370	368	364	359	358	368	377	379	376
Thai 5% fob	384	397	384	389	398	404	408	416	439	460	474	482
Thai 100% fob	394	402	388	394	403	409	413	422	445	467	481	489
US No. 2, fob Houston	488	584	527	515	515	518	513	519	531	543	547	547
US No. 2 fob - Int Ref Price	94	183	139	121	112	109	99	98	86	75	66	58
Long Grain Rice, Low Quality												
Thai 35% fob	323	351	351	355	364	369	370	375	387	400	407	412
US Wheat No. 2, fob Gulf	170	192	199	201	204	205	204	204	204	204	204	204
Corn, fob price	156	151	165	175	176	175	174	171	174	174	174	173
Soybean, fob price	359	352	355	367	369	367	362	362	362	362	362	362
'Wheat/Thai35% Price Ratio	0.53	0.55	0.57	0.56	0.56	0.56	0.55	0.54	0.53	0.51	0.50	0.50
Rice/Wheat Price Ratio	2.87	3.04	2.64	2.57	2.52	2.53	2.51	2.55	2.60	2.66	2.68	2.68
Rice/Corn Price Ratio	3.14	3.88	3.19	2.94	2.93	2.96	2.95	3.03	3.05	3.12	3.15	3.16
Rice/Soybean Price Ratio	1.36	1.66	1.49	1.41	1.39	1.41	1.42	1.43	1.47	1.50	1.51	1.51
Medium Grain Rice												
U.S. No.2 MG Rice fob CA	611	826	794	785	774	777	765	761	762	764	767	763
MG fob CA - LG fob Houston	123	242	267	270	259	258	252	242	231	222	220	215

**Table 89. Detailed United States Rice Supply and Use (English Units)**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
YIELD (rough basis)						(Lbs. per acre)						
Actual	7237.5	7506.3	7789.9	7845.2	7912.7	7994.9	8061.5	8140.1	8217.0	8294.0	8363.3	8434.3
Price Loss Coverage Yield	5131.0	5131.0	5131.0	5131.0	5131.0	5131.0	5131.0	5131.0	6282.0	6282.0	6282.0	6282.0
HARVESTED ACREAGE						(Thousand Acres)						
Program Area/Contract Area	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0	4760.0
Total Harvested Area	3097.0	2374.0	2633.9	2619.1	2640.1	2659.5	2672.2	2670.9	2679.9	2685.8	2701.9	2713.0
						(Million CWT.)						
SUPPLY (rough basis)	294.1	248.9	259.0	265.2	274.2	282.2	289.3	293.7	297.7	301.5	306.0	310.2
Production	224.1	178.2	205.2	205.5	208.9	212.6	215.4	217.4	220.2	222.8	226.0	228.8
Beginning Stocks	46.5	45.9	29.1	35.5	41.6	45.9	50.0	52.2	53.3	54.5	55.9	57.3
Imports	23.5	24.8	24.7	24.3	23.7	23.7	23.8	24.0	24.2	24.2	24.2	24.1
DOMESTIC USE (rough basis)	131.4	119.7	119.7	119.9	121.5	122.9	125.5	128.6	130.3	131.9	134.0	136.1
Food	104.6	107.9	109.2	110.4	111.4	113.1	115.0	117.0	118.9	120.8	122.7	124.6
Seed	2.0	2.9	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.4
Brewing	19.5	19.2	19.5	19.6	19.7	19.8	19.9	20.0	20.0	20.1	20.1	20.2
Residual	5.3	-10.3	-12.3	-13.3	-12.9	-13.3	-12.7	-11.6	-12.0	-12.3	-12.2	-12.0
EXPORTS	116.6	100.1	103.8	103.8	106.8	109.3	111.5	111.8	112.9	113.8	114.8	115.4
TOTAL USE	248.0	219.8	223.5	223.6	228.3	232.2	237.0	240.4	243.1	245.7	248.7	251.5
ENDING STOCKS	45.9	29.1	35.5	41.6	45.9	50.0	52.2	53.3	54.5	55.9	57.3	58.7
<i>Stocks to Use Ratio</i>	0.19	0.13	0.16	0.19	0.20	0.22	0.22	0.22	0.22	0.23	0.23	0.23
PRICES						(U.S. per CWT.)						
Loan Rate	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Season Ave. Farm Price	10.40	12.55	11.31	11.46	11.62	11.71	11.39	11.55	11.90	12.30	12.48	12.52
<i>Long Grain Farm Price</i>	9.64	11.73	10.69	10.64	10.79	10.87	10.57	10.72	11.05	11.41	11.58	11.61
<i>Medium Grain Farm Price</i>	12.90	14.97	13.92	13.99	14.19	14.32	13.92	14.11	14.55	15.04	15.27	15.32
Reference Price, Long grain	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Export Price, FOB Houston												
(U.S. No. 2)	22.14	26.49	23.92	23.37	23.35	23.52	23.25	23.56	24.08	24.61	24.82	24.83
Medium Grain Price, FOB CA												
(U.S. No. 2)	27.71	37.46	36.01	35.62	35.10	35.22	34.70	34.52	34.55	34.68	34.81	34.59
Average World Price												
(US\$/cwt)	9.22	9.64	9.43	9.33	9.37	9.44	9.42	9.57	9.93	10.27	10.48	10.58
INCOME FACTORS						(Million U.S. Dollars)						
Production Market Value	2349.4	2259.8	2369.1	2374.0	2446.6	2509.9	2474.0	2530.5	2641.9	2759.5	2841.9	2885.7

Price Loss Coverage Payments	859.7	402.7	631.7	633.8	599.7	578.9	648.3	612.9	534.3	449.1	408.4	401.6
Total Income	3209.1	2662.5	3000.7	3007.8	3046.4	3088.8	3122.3	3143.4	3176.1	3208.6	3250.2	3287.3
Market Returns Above Variable Cost	264.3	443.3	386.6	381.6	335.4	335.1	301.1	307.7	331.2	359.2	371.5	372.0
Total Returns Above Variable Cost	541.9	612.9	626.4	623.6	335.4	335.1	301.1	307.7	331.2	359.2	371.5	372.0

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**Table 90. United States Long Grain Rice Supply and Use**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
						(Lbs. per acre)						
YIELD (rough basis)	6927.0	7280.5	7598.9	7637.6	7700.3	7790.1	7862.6	7951.4	8038.8	8126.5	8205.0	8285.9
						(Thousand Acres)						
HARVESTED ACREAGE	2407.0	1749.0	1984.5	1959.0	1975.9	1987.2	1990.5	1981.2	1982.2	1980.5	1989.5	1993.6
						(Million CWT.)						
SUPPLY (rough basis)	209.5	179.0	187.7	193.2	200.7	207.0	212.2	214.6	216.9	218.5	220.6	222.5
Production	166.5	126.1	150.8	149.6	152.2	154.7	156.5	157.3	158.9	160.4	162.7	164.5
Beginning Stocks	22.7	31.3	15.3	22.4	27.9	31.9	35.4	37.1	37.7	37.9	37.7	37.7
Imports	20.3	21.6	21.6	21.2	20.6	20.4	20.3	20.3	20.3	20.1	20.2	20.3
DOMESTIC USE + Residual	99.7	92.9	93.1	93.1	93.4	93.7	94.9	96.1	97.2	98.2	99.8	101.8
EXPORTS	78.7	70.7	72.3	72.2	75.4	77.9	80.2	80.8	81.8	82.5	83.0	83.3
TOTAL USE + Residual	178.4	163.7	165.4	165.3	168.8	171.6	175.1	176.9	179.0	180.7	182.8	185.1
ENDING STOCKS	31.3	15.3	22.4	27.9	31.9	35.4	37.1	37.7	37.9	37.7	37.7	37.4
						(U.S. per CWT.)						
Season Average Farm Price	9.64	11.73	10.69	10.64	10.79	10.87	10.57	10.72	11.05	11.41	11.58	11.61
Export Price, FOB Houston (U.S. No. 2)	22.1	26.5	23.9	23.4	23.3	23.5	23.3	23.6	24.1	24.6	24.8	24.8
						(Million U.S. Dollars)						
PRODUCTION MARKET VALUE	1605.1	1479.5	1611.9	1592.5	1641.3	1682.0	1654.1	1685.7	1756.2	1830.1	1883.7	1910.3

**Table 91. United States Medium Grain Rice Supply and Use**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
						(Lbs. per acre)						
YIELD (rough basis)	8311.0	8121.0	8373.6	8461.4	8544.5	8600.4	8642.2	8682.1	8723.2	8764.6	8806.1	8847.2
						(Thousand Acres)						
HARVESTED ACREAGE	690.0	642.0	649.4	659.7	661.7	669.9	679.1	687.0	695.0	702.5	709.0	715.3
						(Million CWT.)						
SUPPLY (rough basis)	81.8	67.2	68.5	69.2	70.7	72.4	74.2	75.9	77.1	78.8	80.7	82.2
Production	57.7	52.1	54.4	55.9	56.8	57.8	58.9	59.9	60.9	61.8	62.7	63.7
Beginning Stocks	20.9	11.8	11.0	10.3	10.9	11.2	11.7	12.2	12.3	12.9	13.9	14.7
Imports	3.2	3.2	3.1	3.0	3.1	3.3	3.5	3.8	3.9	4.1	4.0	3.8
DOMESTIC USE + Residual	31.7	26.8	26.6	26.8	28.1	29.2	30.6	32.5	33.1	33.6	34.2	34.3
EXPORTS	37.9	29.4	31.5	31.6	31.4	31.4	31.3	31.0	31.1	31.3	31.7	32.1
TOTAL USE + Residual	69.6	56.2	58.1	58.3	59.5	60.6	61.9	63.5	64.1	64.9	65.9	66.4
ENDING STOCKS	11.8	11.0	10.3	10.9	11.2	11.7	12.2	12.3	12.9	13.9	14.7	15.8
PRICES						(U.S. per CWT.)						
Japonica Farm Price	13.7	15.8	14.7	14.8	15.0	15.1	14.7	14.9	15.4	15.9	16.1	16.2
Medium/Short (excl Japonica) MG Farm Price	10.1	11.9	11.1	11.2	11.4	11.5	11.1	11.3	11.7	12.1	12.3	12.3
						(Million U.S. Dollars)						
PRODUCTION MARKET VALUE	744.3	780.3	757.1	781.6	805.4	827.9	819.9	844.8	885.7	929.4	958.2	975.4

**Table 92. Arkansas Rice Supply by rice type**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Long Grain Area (1000 acres)	1390.0	955.0	1105.1	1063.4	1063.4	1079.6	1084.6	1085.8	1087.2	1087.6	1097.5	1102.9
Long Grain Yield (Lbs./acre)	6940.0	7510.1	7771.0	7819.7	7893.8	7977.5	8060.3	8142.5	8224.8	8307.3	8384.6	8467.1
Long Grain Production (M. cwt.)	96.5	71.7	85.9	83.2	83.9	86.1	87.4	88.4	89.4	90.3	92.0	93.4
Medium Grain Area (1000 acres)	131.0	149.0	162.5	162.8	161.8	160.5	162.0	165.1	167.0	168.2	168.9	169.3
Medium Grain Yield (Lbs/acre)	6754.2	7330.9	7560.3	7658.0	7756.3	7855.4	7915.5	7975.5	8035.5	8095.5	8155.5	8215.5
Medium Grain Production (M. cwt)	8.8	10.9	12.3	12.5	12.5	12.6	12.8	13.2	13.4	13.6	13.8	13.9
Total Area (1000 acres)	1521.0	1104.0	1267.7	1226.3	1225.3	1240.4	1245.8	1251.1	1254.4	1255.9	1266.5	1272.4
Average Yield (Lbs. per acre)	6920.0	7490.0	7744.0	7798.2	7875.6	7961.6	8041.5	8120.5	8199.6	8278.9	8354.1	8433.6
Total Production (M.cwt)	105.3	82.6	98.2	95.6	96.5	98.8	100.2	101.6	102.9	104.0	105.8	107.3

**Table 93. Louisiana Rice Supply by rice type**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Long Grain Area (1000 acres)	405.0	364.0	381.8	390.6	397.2	390.0	388.3	377.3	376.4	374.4	372.1	369.9
Long Grain Yield (Lbs./acre)	6660.0	7150.6	7183.3	7215.2	7246.4	7350.0	7380.2	7484.2	7588.9	7694.4	7761.8	7829.1
Long Grain Production (M. cwt.)	27.0	26.0	27.4	28.2	28.8	28.7	28.7	28.2	28.6	28.8	28.9	29.0
Medium Grain Area (1000 acres)	23.0	31.0	30.6	30.5	31.2	31.1	31.3	30.9	30.7	30.6	30.7	30.9
Medium Grain Yield (Lbs/acre)	6160.9	7060.4	7230.4	7322.6	7382.4	7445.7	7506.0	7563.5	7621.8	7680.6	7739.4	7798.6
Medium Grain Production (M. cwt)	1.4	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.5
Total Area (1000 acres)	428.0	395.0	412.4	421.1	430.1	424.2	422.5	410.3	408.2	406.0	404.2	402.5
Average Yield (Lbs. per acre)	6630.0	6710.0	7186.7	7223.0	7256.3	7355.1	7387.1	7503.7	7588.5	7690.1	7762.1	7831.4
Total Production (M.cwt)	28.4	26.5	29.6	30.4	31.2	31.2	31.2	30.7	31.0	31.3	31.4	31.5

**Table 94. Texas Rice Supply**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
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Long Grain Area (1000 acres)	187.0	158.0	166.2	168.4	171.3	170.3	169.8	169.7	171.0	171.8	172.9	173.6
Long Grain Yield (Lbs./acre)	7500.0	7260.0	7764.1	7795.7	7867.4	7939.0	8010.7	8082.3	8154.0	8225.7	8297.3	8369.0
Long Grain Production (M. cwt.)	13.8	11.5	12.9	13.1	13.5	13.5	13.6	13.7	13.9	14.1	14.3	14.5

**Table 95. Missouri Rice Supply**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Long Grain Area (1000 acres)	231.0	160.0	187.0	188.3	189.9	190.4	191.2	191.7	192.3	191.7	191.0	190.3
Long Grain Yield (Lbs./acre)	6640.0	7440.0	7287.0	7298.4	7384.6	7471.2	7555.3	7637.6	7718.6	7800.7	7884.0	7967.9
Long Grain Production (M. cwt.)	15.4	11.9	13.6	13.7	14.0	14.2	14.4	14.6	14.8	15.0	15.1	15.2

**Table 96. Mississippi Rice Supply**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Long Grain Area (1000 acres)	194.0	114.0	144.4	148.3	151.1	151.9	152.5	152.0	151.7	151.6	151.5	151.6
Long Grain Yield (Lbs./acre)	7180.0	7400.0	7594.7	7694.9	7747.8	7837.8	7926.4	8013.7	8111.2	8208.9	8306.5	8404.3
Long Grain Production (M. cwt.)	13.9	8.4	11.0	11.4	11.7	11.9	12.1	12.2	12.3	12.4	12.6	12.7

**Table 97. California Rice Supply**

**Table 97. California Rice Supply (Aggregate; Mostly Medium and Short Grain)**

Variable	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
Medium Grain Area (1000 acres)	536.0	443.0	456.3	466.3	468.7	478.2	485.9	491.0	497.4	503.7	509.5	515.2
Medium Grain Yield (Lbs/acre)	8840.0	8410.0	8739.8	8823.3	8933.8	8961.0	8992.5	9027.0	9057.5	9089.7	9130.8	9173.9
Medium Grain Production (M. cwt)	47.4	37.3	39.9	41.1	41.9	42.9	43.7	44.3	45.0	45.8	46.5	47.3

**Table 98. Madagascar Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	1,475	1,425	1,527	1,554	1,583	1,611	1,640	1,669	1,699	1,729	1,760	1,792
	(Metric Tons per Hectare)											
Yield	1.66	1.44	1.70	1.72	1.75	1.77	1.79	1.81	1.84	1.86	1.88	1.90
	(Thousand Metric Tons)											
Production	2,442	2,048	2,598	2,680	2,764	2,850	2,938	3,028	3,120	3,215	3,312	3,411
Beginning Stocks	0	0	0	-3	-2	-2	-2	-2	-2	-1	-1	-1
Domestic Supply	2,442	2,048	2,598	2,677	2,762	2,848	2,936	3,026	3,118	3,214	3,311	3,411
Consumption	2,772	2,560	2,696	2,807	2,904	3,003	3,104	3,208	3,313	3,418	3,523	3,627
Ending Stocks	0	0	-3	-2	-2	-2	-2	-2	-1	-1	-1	-1
Domestic Use	2,772	2,560	2,693	2,805	2,902	3,000	3,102	3,206	3,312	3,417	3,522	3,627
Net Trade	-330	-512	-95	-128	-140	-152	-166	-180	-194	-204	-211	-216

**Table 99. Malawi Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	65	65	65	65	66	68	71	73	77	80	84	88
	(Metric Tons per Hectare)											
Yield	1.28	1.28	1.31	1.32	1.33	1.35	1.36	1.38	1.39	1.40	1.42	1.43
	(Thousand Metric Tons)											
Production	83	83	85	85	88	92	96	101	106	112	119	126
Beginning Stocks	0	0	1	1	1	1	1	1	2	2	2	2
Domestic Supply	83	83	86	86	89	93	98	102	108	114	121	128
Consumption	98	100	105	110	115	120	126	132	137	144	150	158
Ending Stocks	0	1	1	1	1	1	1	2	2	2	2	2
Domestic Use	98	101	106	111	116	122	127	133	139	145	152	160
Net Trade	-15	-18	-20	-25	-27	-28	-30	-31	-31	-31	-32	-32



**Table 100. Zambia Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	30	30	31	32	33	34	35	36	37	39	40	41
	(Metric Tons per Hectare)											
Yield	1.00	1.00	1.04	1.06	1.08	1.11	1.13	1.15	1.17	1.20	1.22	1.25
	(Thousand Metric Tons)											
Production	30	30	32	34	35	37	39	42	44	46	49	52
Beginning Stocks	0	0	1	1	1	1	1	1	1	1	1	1
Domestic Supply	30	30	33	35	36	38	40	43	45	47	50	53
Consumption	40	44	48	49	52	55	57	60	63	65	68	71
Ending Stocks	0	1	1	1	1	1	1	1	1	1	1	1
Domestic Use	40	45	49	50	53	56	58	61	64	67	69	72
Net Trade	-10	-15	-16	-15	-17	-17	-18	-19	-19	-19	-19	-19

**Table 101. Rwanda Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	16	16	17	17	18	18	19	19	20	21	22	23
	(Metric Tons per Hectare)											
Yield	3.63	3.63	3.84	3.92	4.01	4.11	4.20	4.29	4.38	4.49	4.60	4.70
	(Thousand Metric Tons)											
Production	58	58	64	67	71	75	79	83	88	94	100	107
Beginning Stocks	0	0	1	1	1	1	1	1	2	2	2	2
Domestic Supply	58	58	65	68	72	76	81	85	89	95	102	109
Consumption	98	100	103	109	116	123	128	133	139	142	147	152
Ending Stocks	0	1	1	1	1	1	1	2	2	2	2	2
Domestic Use	98	101	104	110	117	124	130	135	141	144	149	154
Net Trade	-40	-43	-39	-42	-45	-48	-49	-50	-51	-49	-47	-46

**Table 102. Uganda Rice Supply and Use**

	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
	(Thousand Hectares)											
Area Harvested	95	95	97	96	94	96	98	101	108	118	132	147
	(Metric Tons per Hectare)											
Yield	1.58	1.58	1.59	1.61	1.62	1.64	1.65	1.67	1.68	1.70	1.71	1.73
	(Thousand Metric Tons)											
Production	150	150	154	154	153	157	163	169	181	200	225	255
Beginning Stocks	0	0	0	1	1	1	2	2	2	2	3	3
Domestic Supply	150	150	155	155	154	159	164	171	184	202	228	257
Consumption	230	233	245	269	283	296	309	321	332	340	350	362
Ending Stocks	0	0	1	1	1	2	2	2	2	3	3	3
Domestic Use	230	234	246	270	284	298	311	323	335	343	353	365
Net Trade	-80	-84	-91	-115	-130	-139	-147	-152	-151	-141	-125	-108

## **Estimates of the Stochastic Baseline Analysis**

***Charts of Selected Price and Trade Variables Showing the 10<sup>th</sup> and 90<sup>th</sup> Percentiles, the Stochastic Mean, and the C.V. of Future Probable Distributions Based on Outcomes from 300 Random Draws***

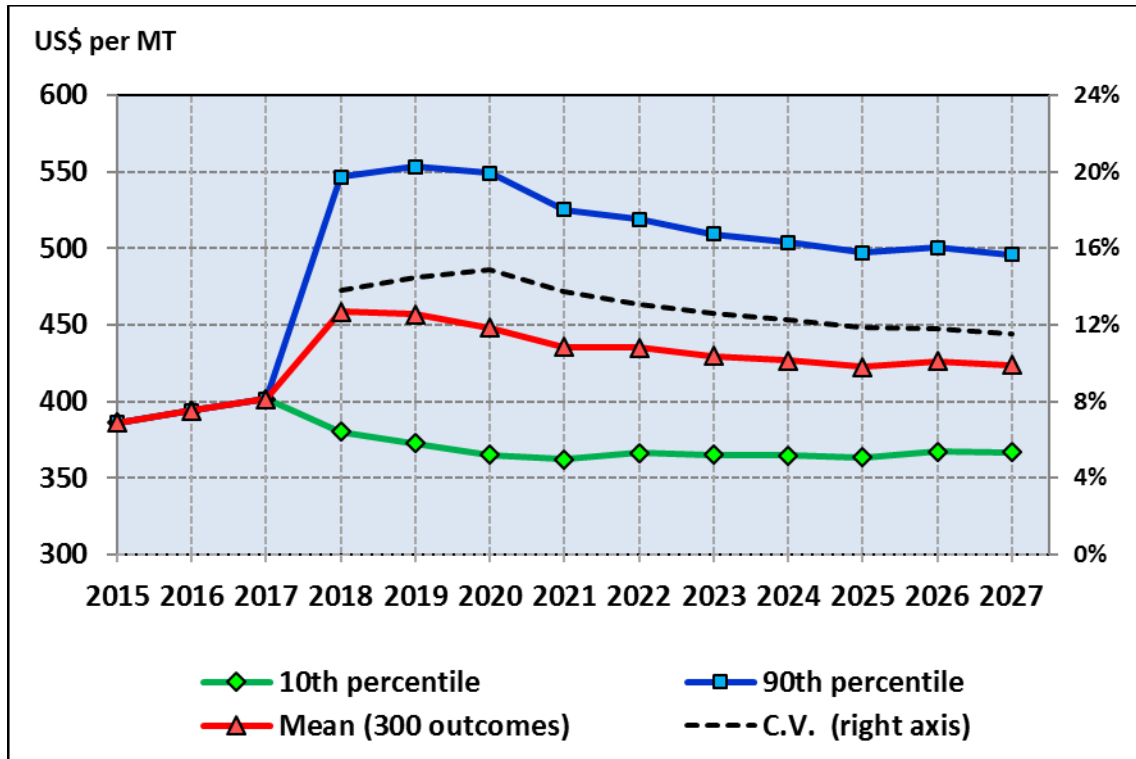


Figure 14 Stochastic Projection of Long Grain Rice International Reference Price, 2015-2027

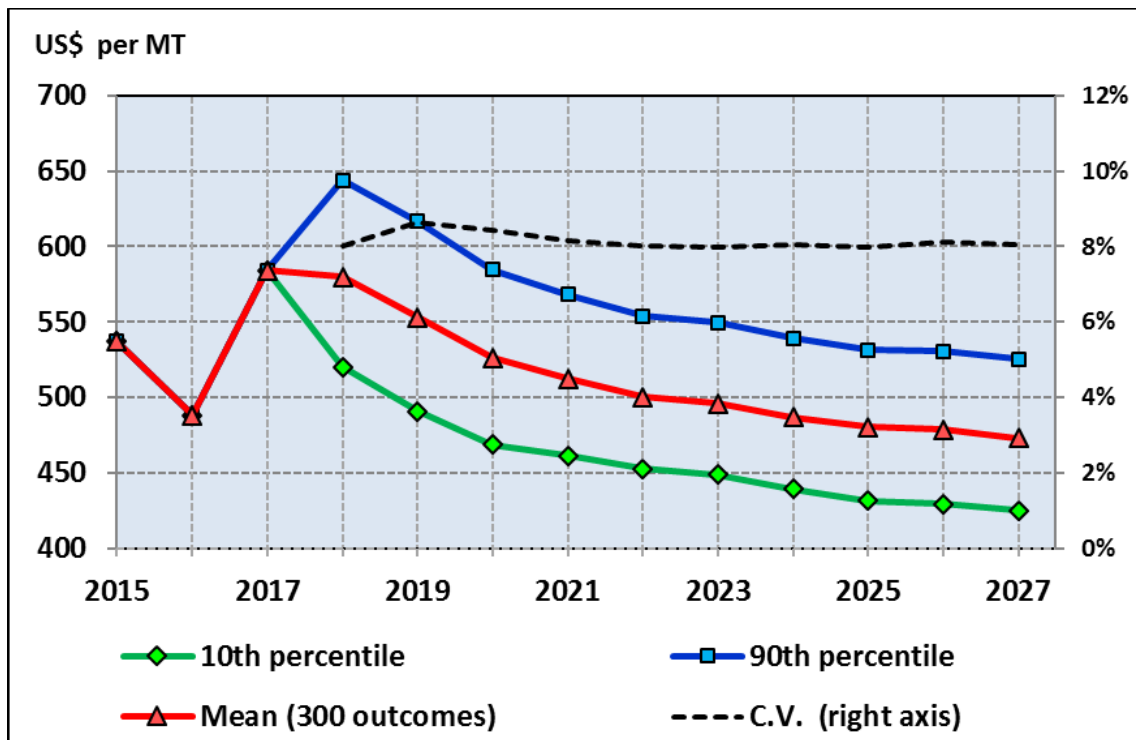
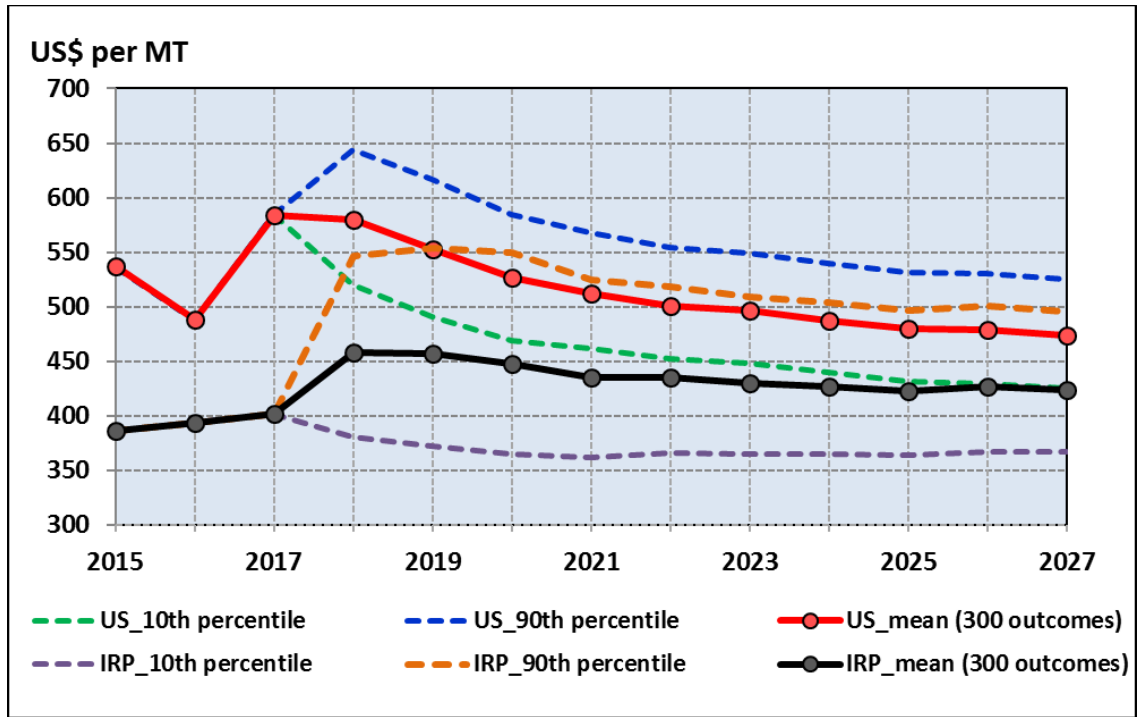
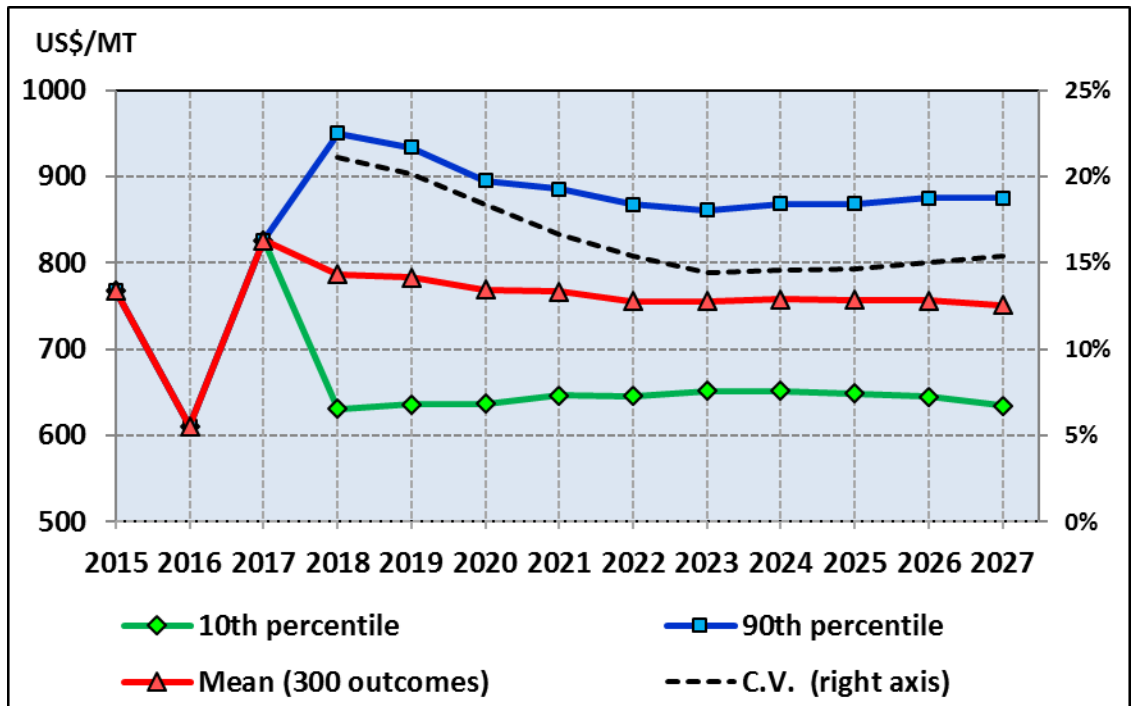


Figure 15 Stochastic Projection of U.S. Long Grain Rice FOB Export Price, 2015-2027



**Figure 16 Stochastic Projection Comparisons of International Reference and U.S. Long Grain Rice Export Prices, 2015-2027**



**Figure 17 Stochastic Projection of Medium Grain Rice Price, FOB California, 2015-2027**

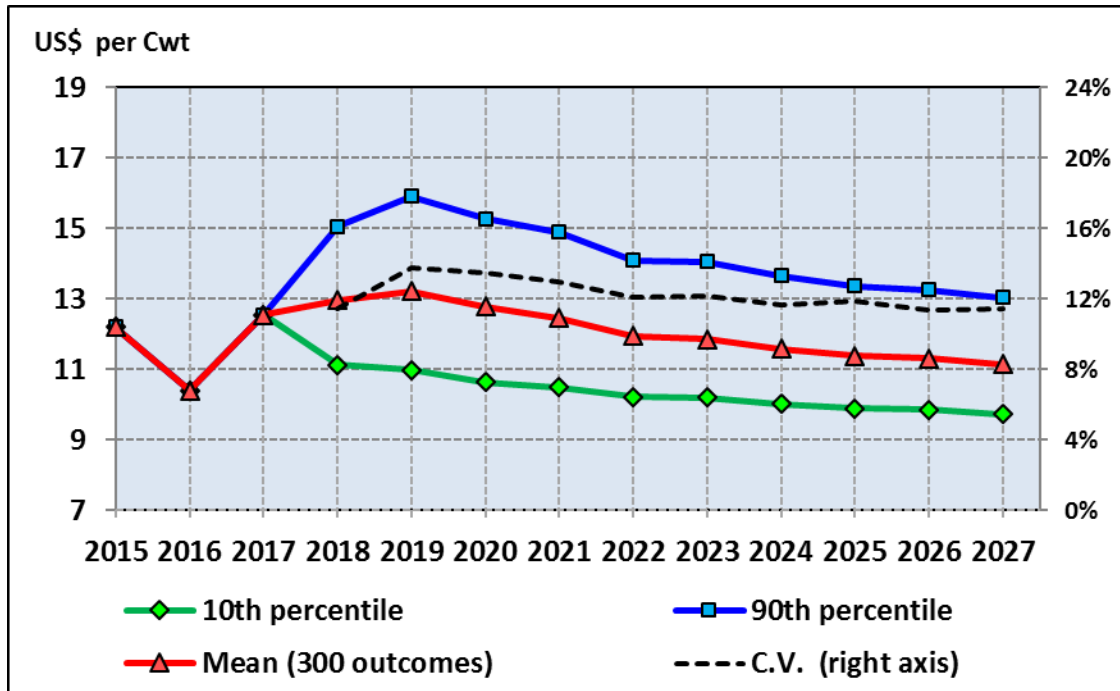


Figure 18 Stochastic Projection of U.S. Season Average All Rice Farm Price, 2015-2027

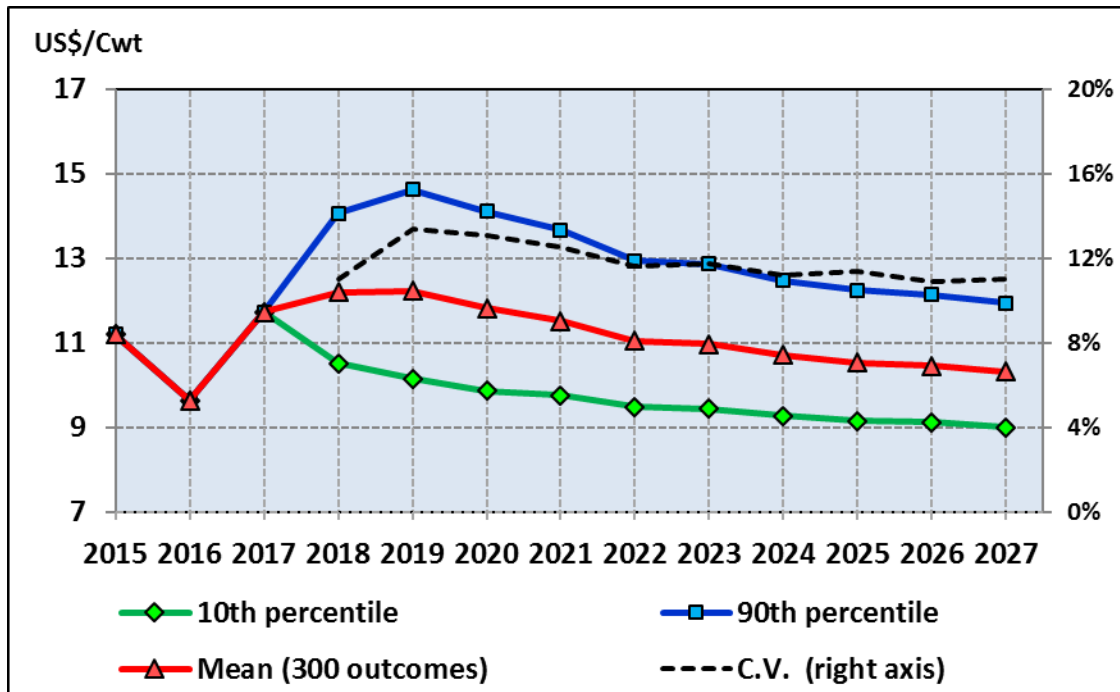


Figure 19 Stochastic Projection of U.S. Long Grain Average Farm Price, 2015-2027

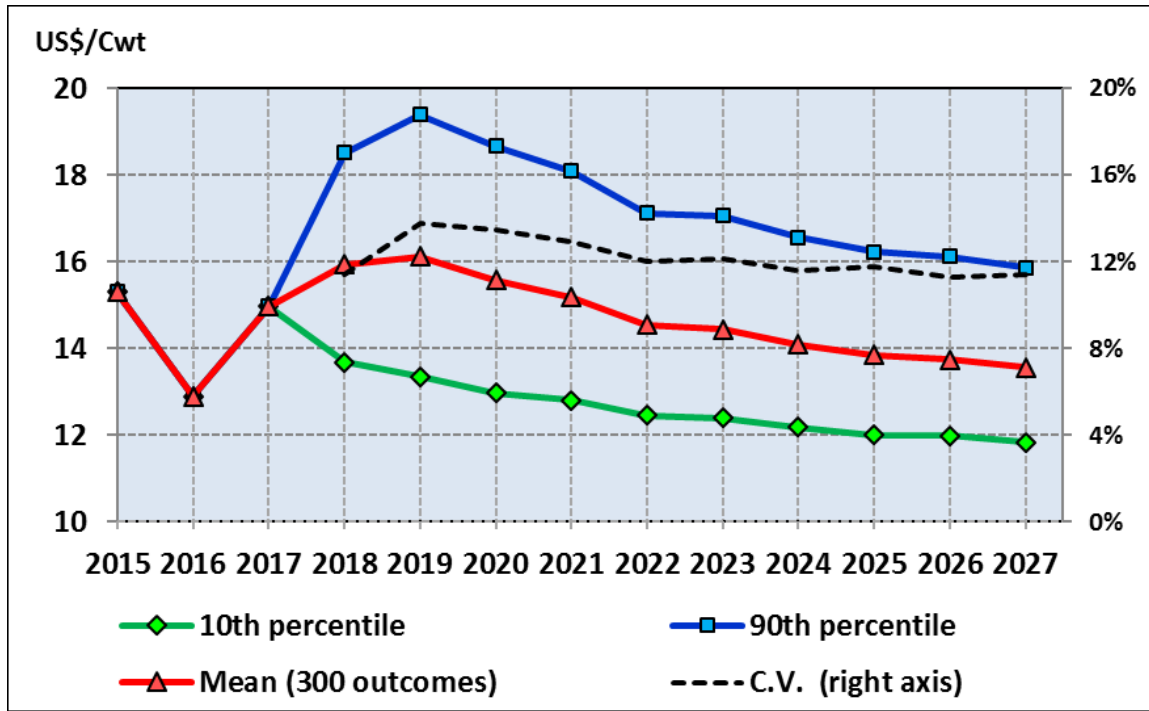


Figure 20 Stochastic Projection of U.S. Medium Grain Average Farm Price, 2015-2027

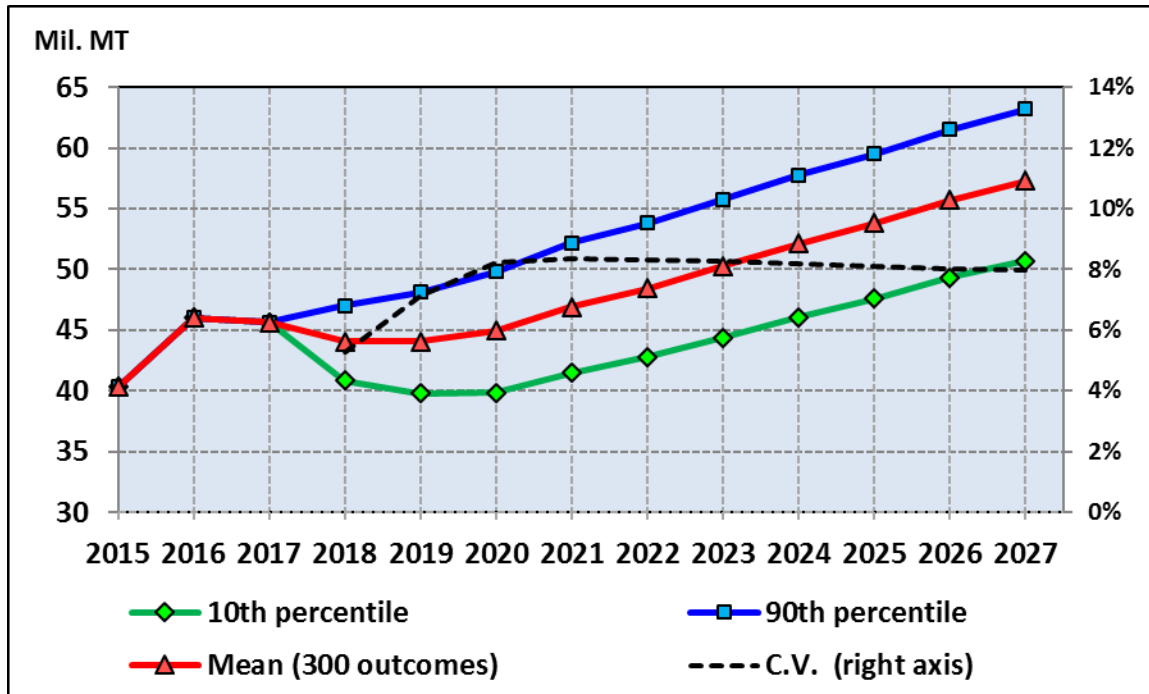


Figure 21 Stochastic Projection of World Rice Total Trade, 2015-2027

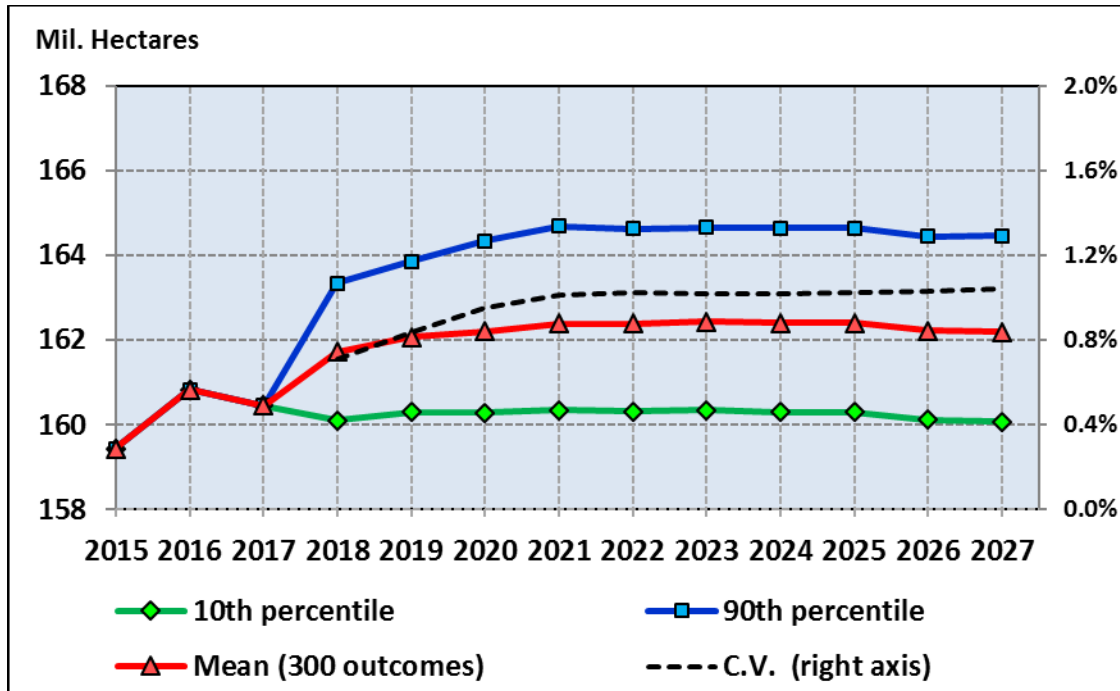


Figure 182 Stochastic Projection of World Rice Area Harvested, 2015-2027

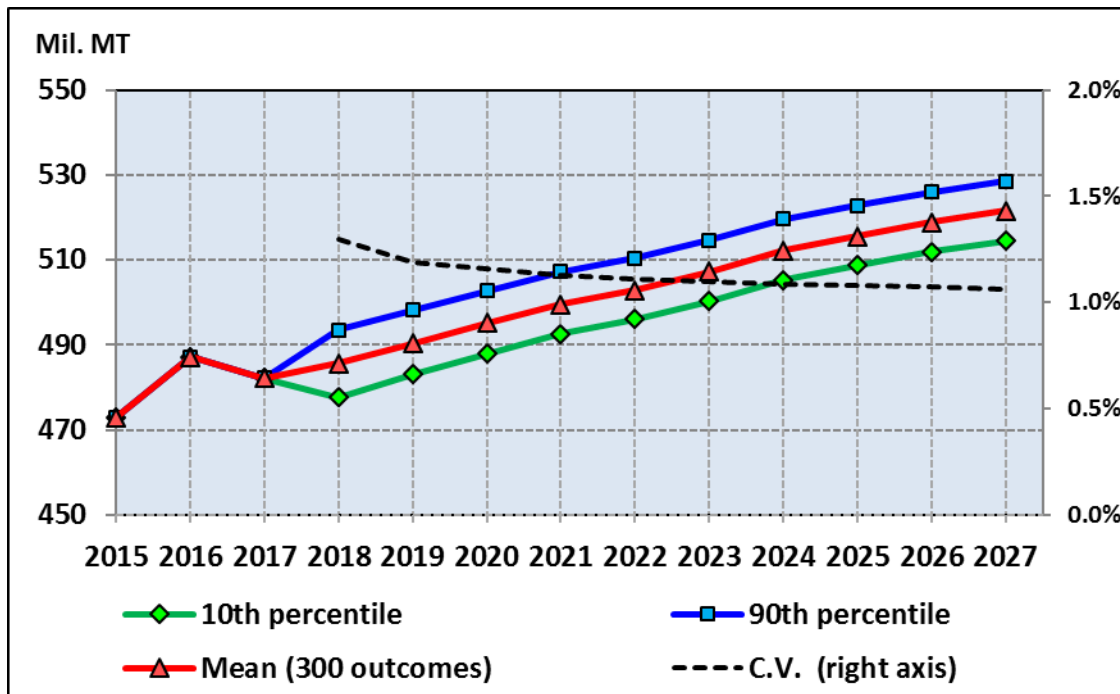


Figure 193 Stochastic Projection of World Rice Milled Production, 2015-2027



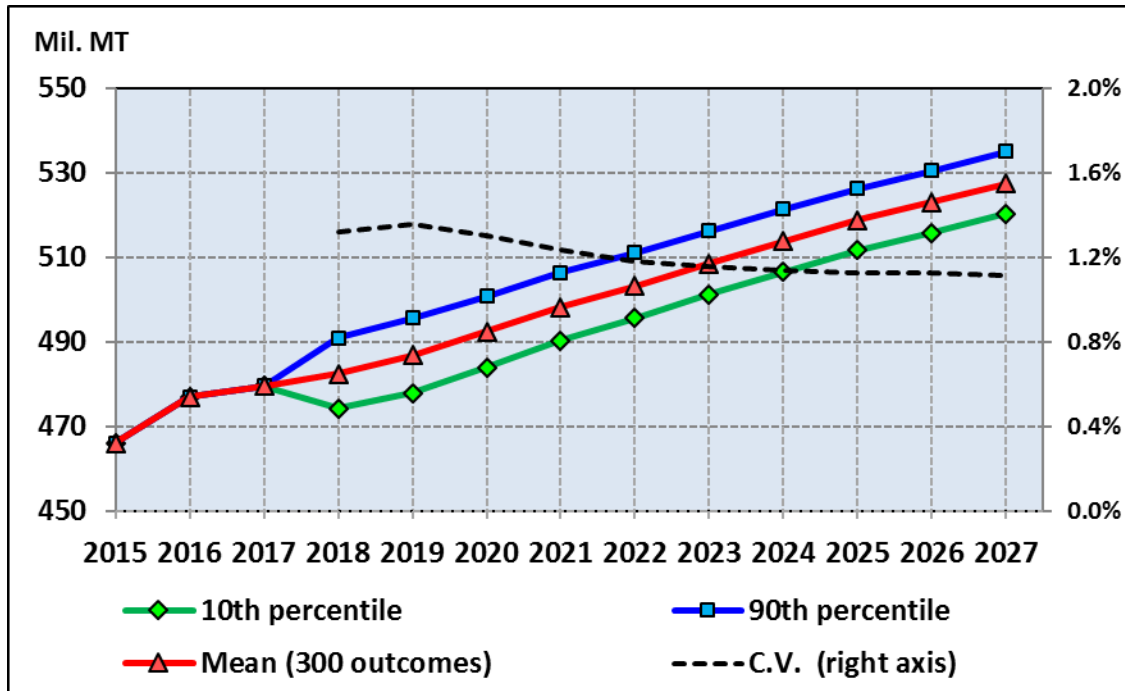


Figure 204 Stochastic Projection of World Total Rice Consumption, 2015-2027

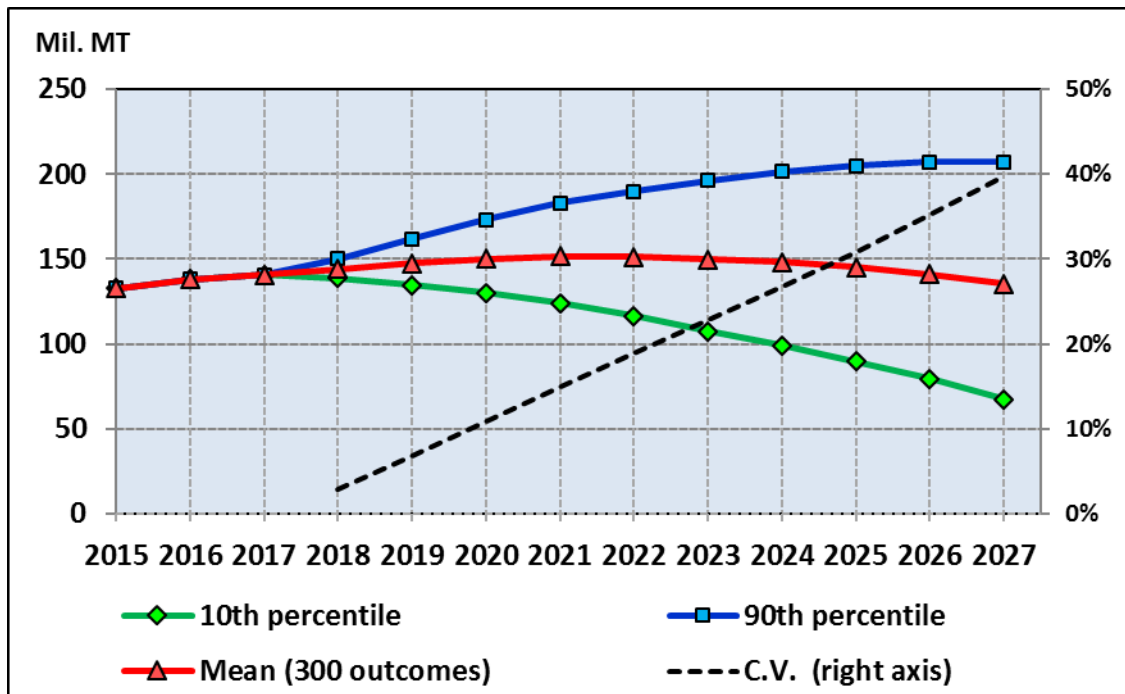


Figure 215 Stochastic Projection of World Rice Ending Stocks, 2015-2027

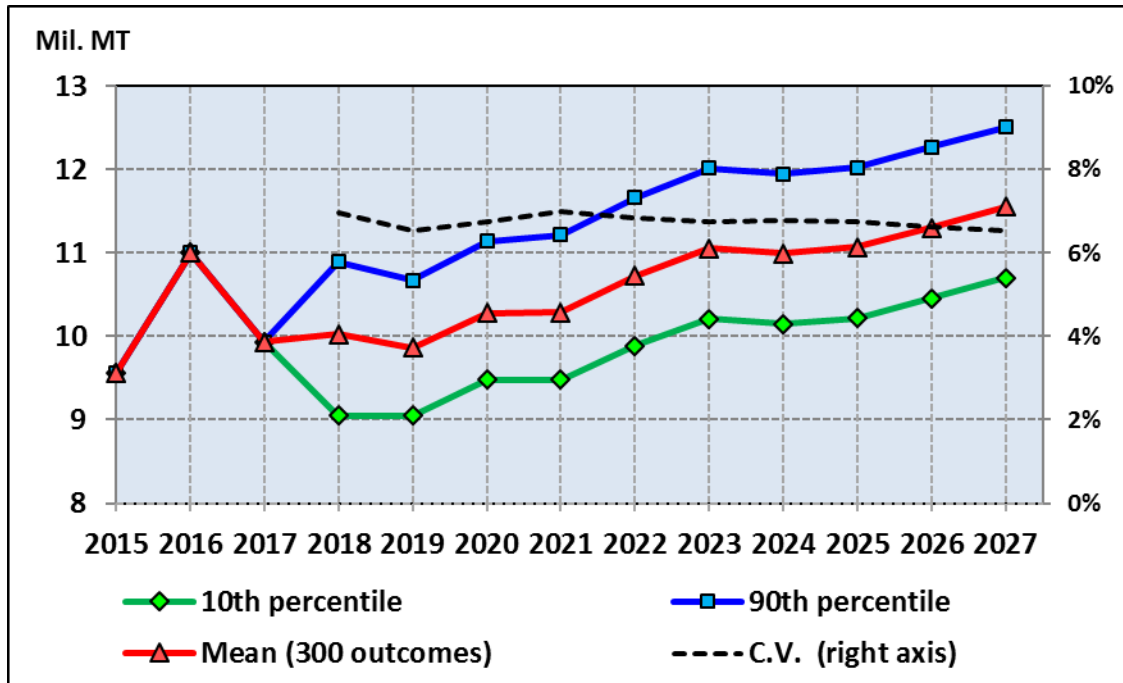


Figure 226 Stochastic Projections of Thailand Net Rice Exports, 2015-2027

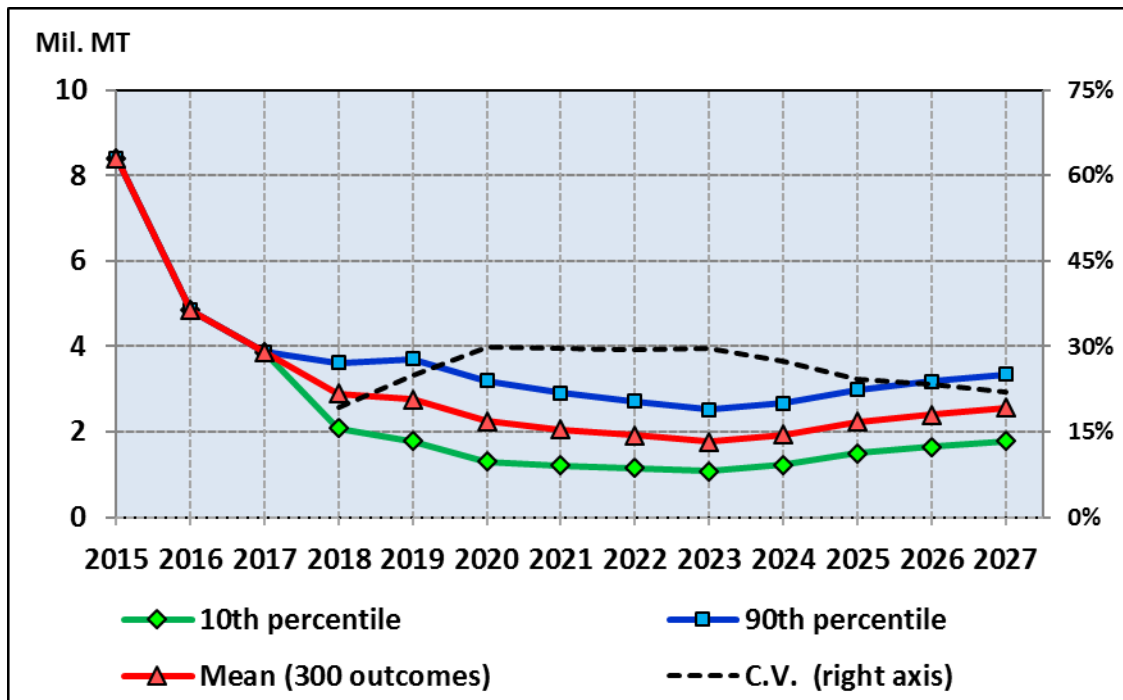


Figure 237 Stochastic Projection of Thailand Rice Ending Stocks, 2015-2027

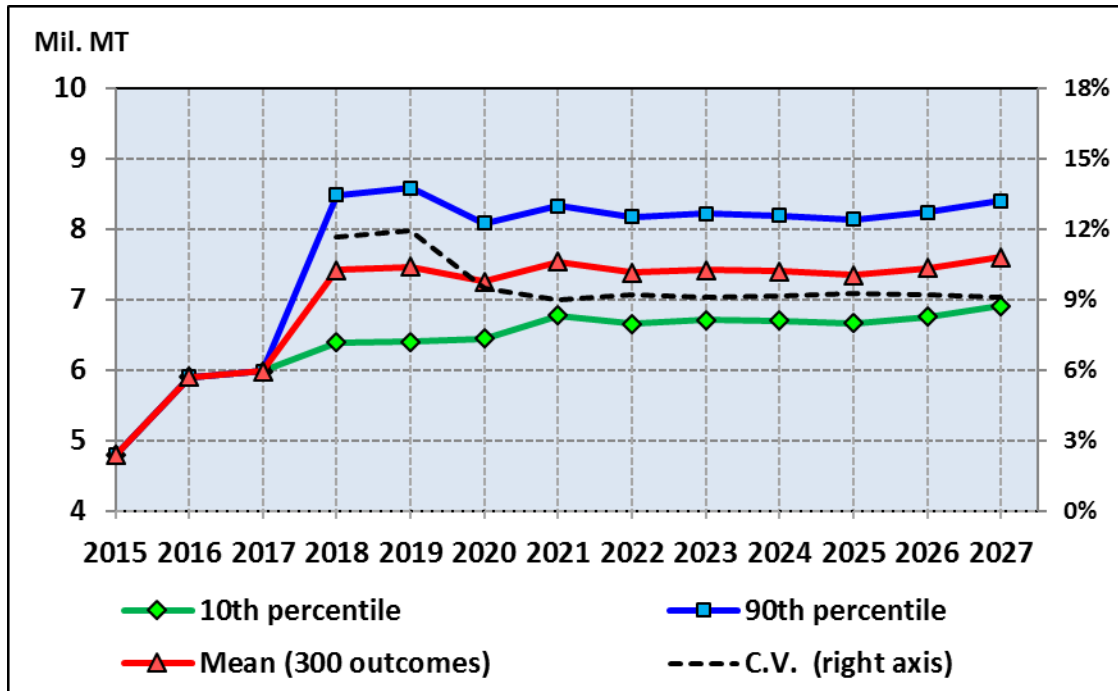


Figure 28 Stochastic Projections of Vietnam Net Rice Exports, 2015-2027

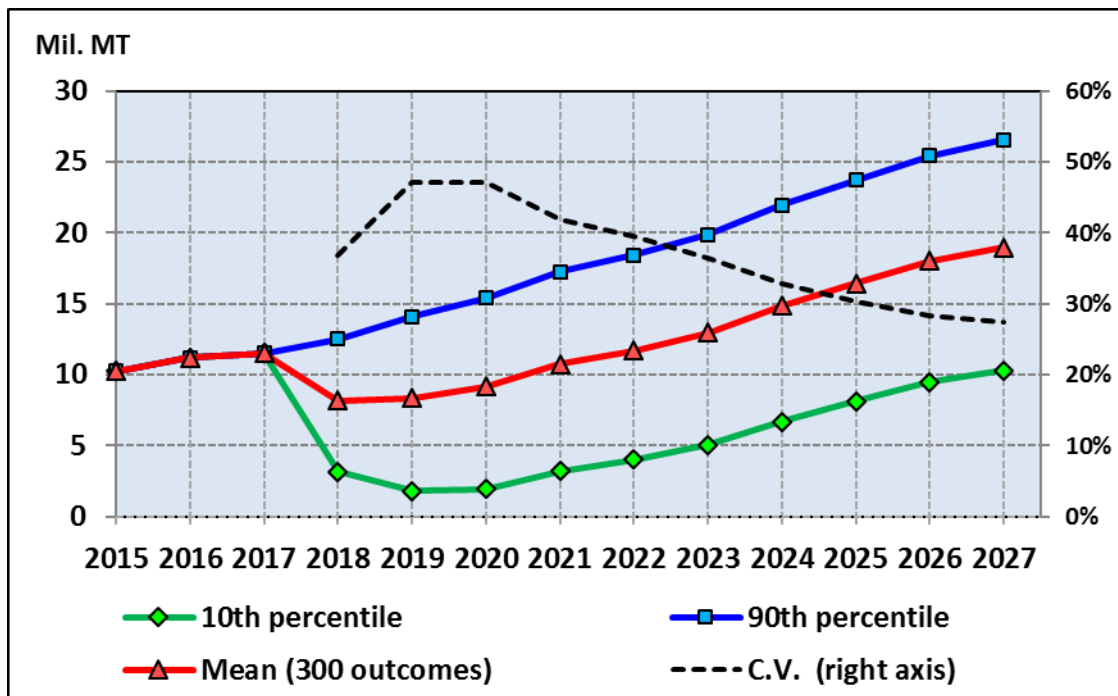


Figure 29 Stochastic Projections of India Net Rice Exports, 2015-2027

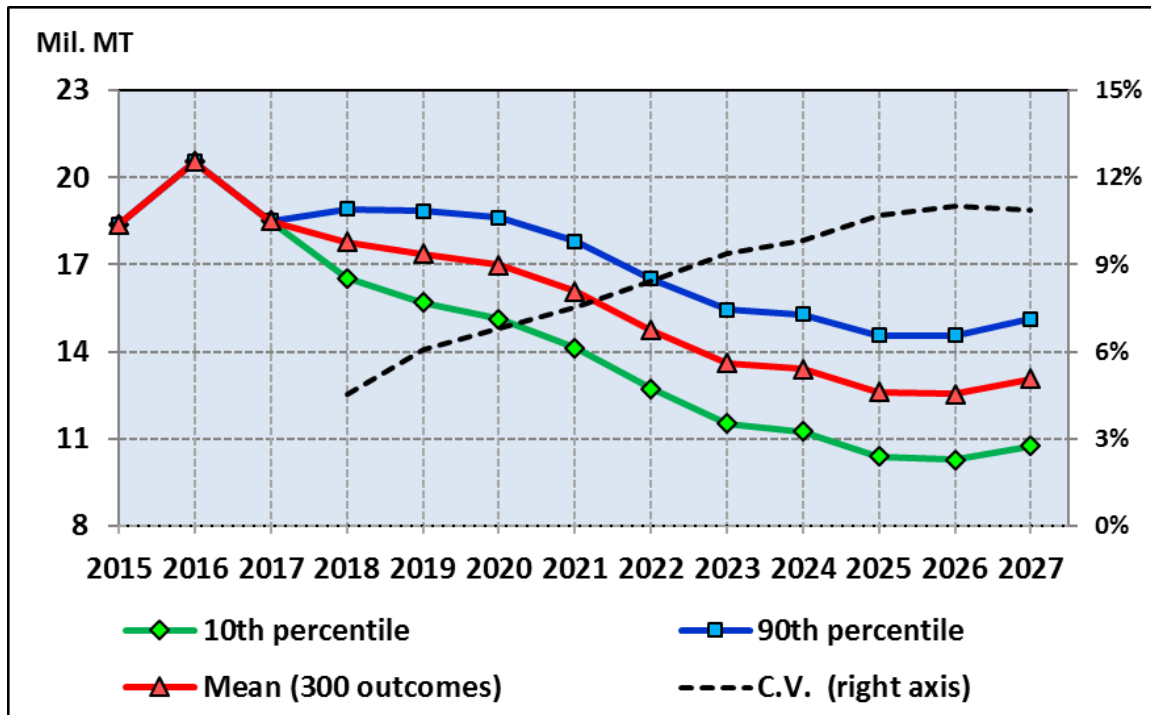


Figure 30 Stochastic Projection of India Rice Ending Stocks, 2015-2027

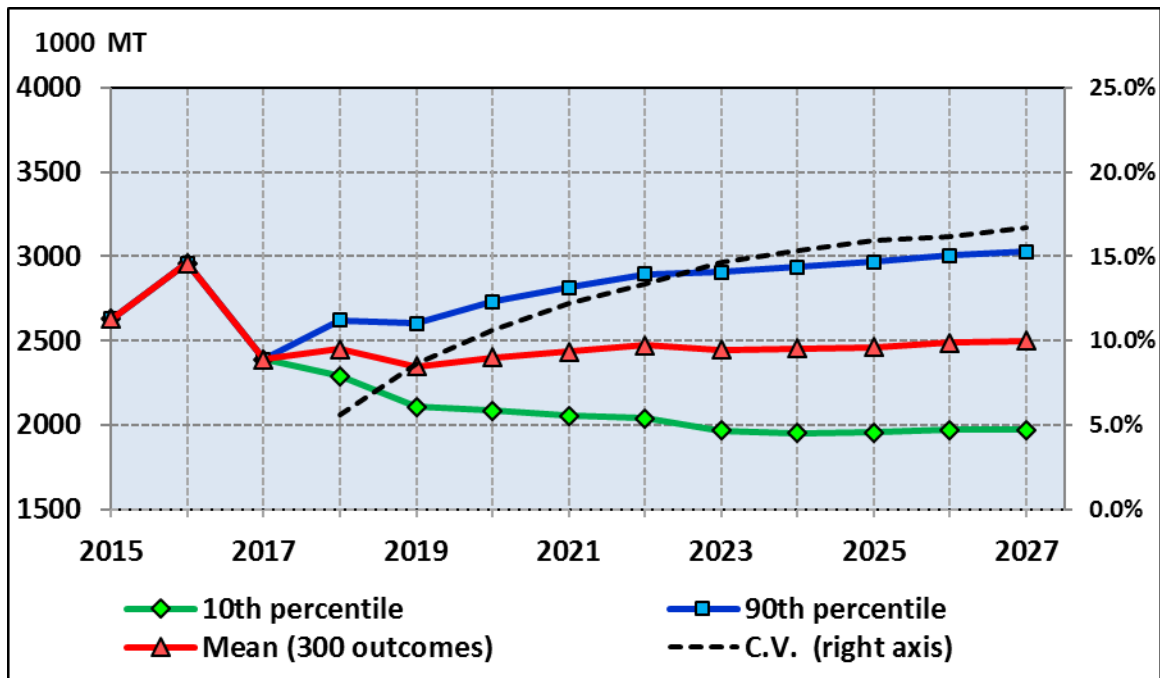


Figure 31 Stochastic Projections of U.S. Net Rice Exports, 2015-2027

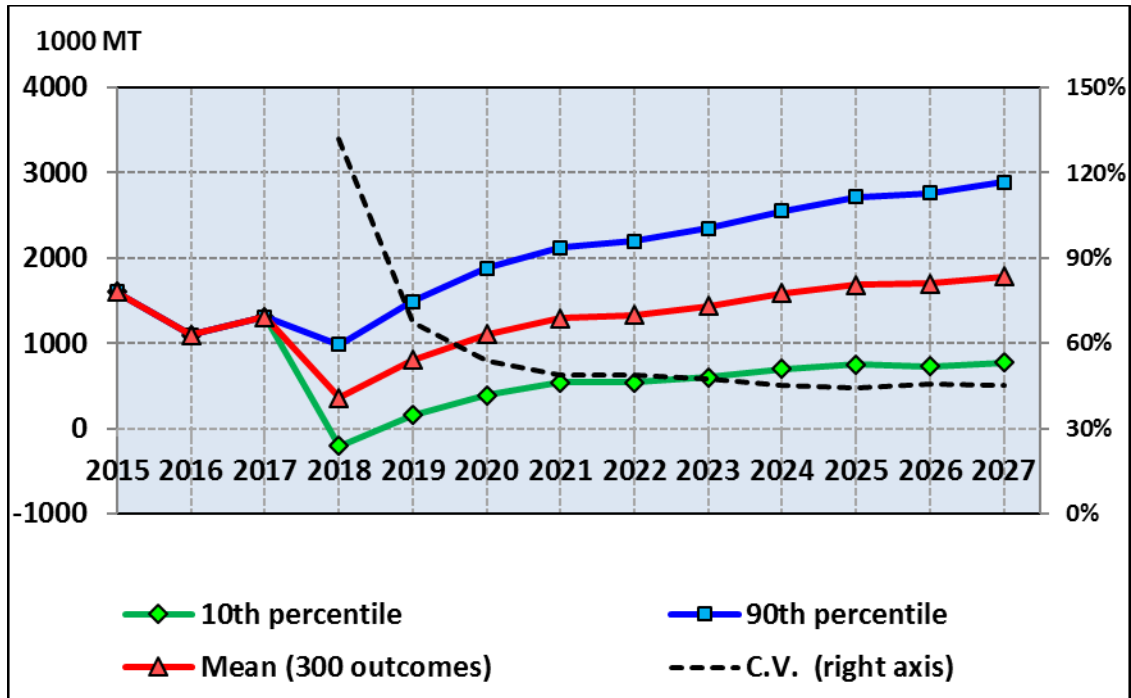


Figure 32 Stochastic Projections of Philippine Net Rice Imports, 2015-2027

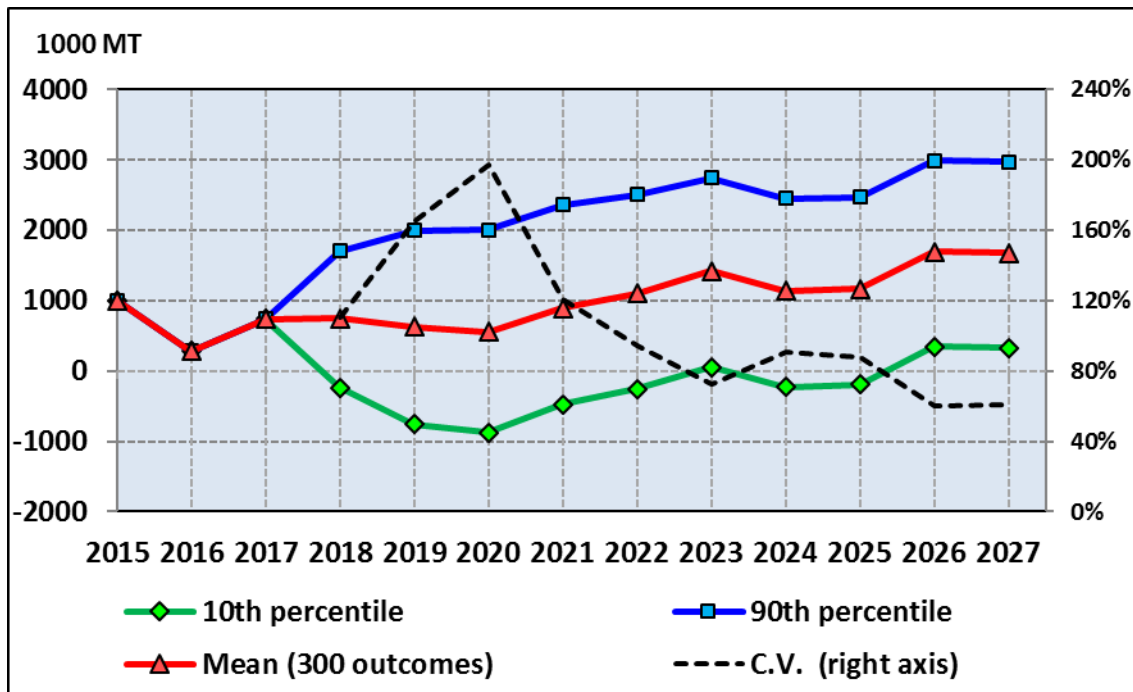


Figure 33 Stochastic Projections of Indonesia Net Rice Imports, 2015-2027

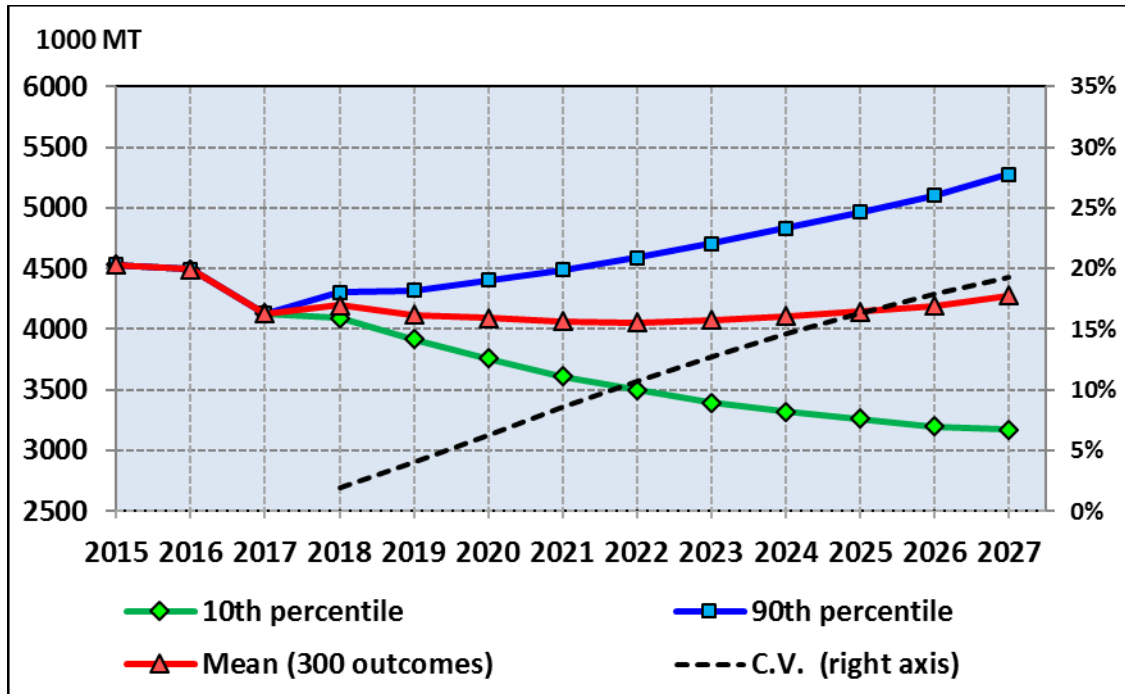


Figure 244 Stochastic Projections of People’s Republic of China Net Rice Imports, 2015-2027

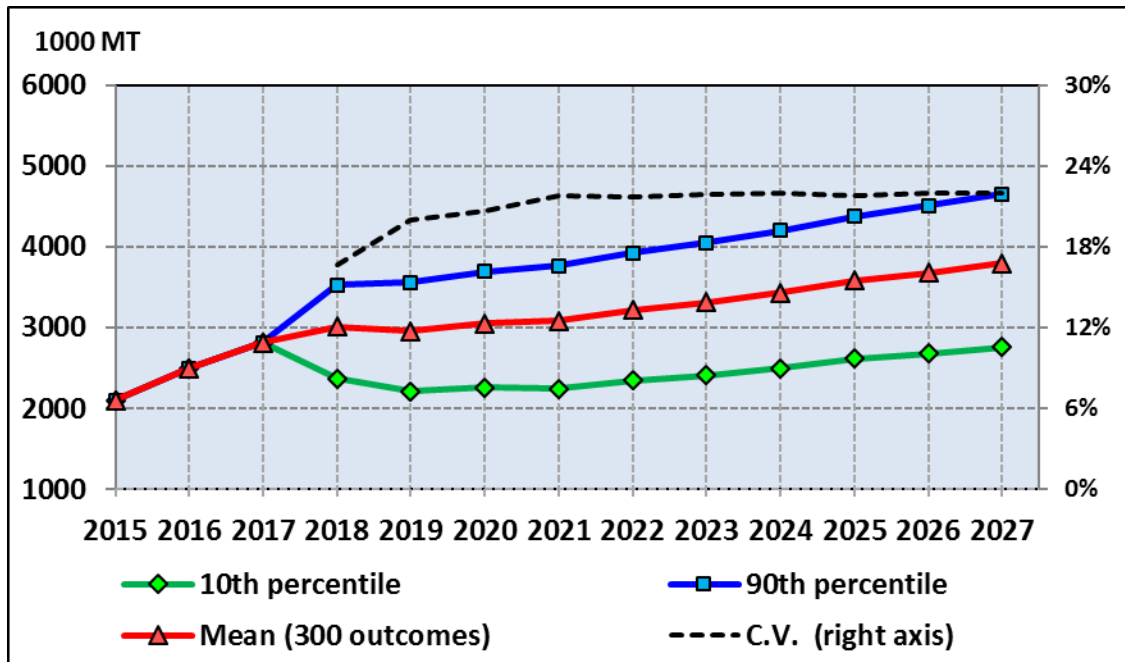


Figure 255 Stochastic Projections of Nigeria Net Rice Imports, 2015-2027

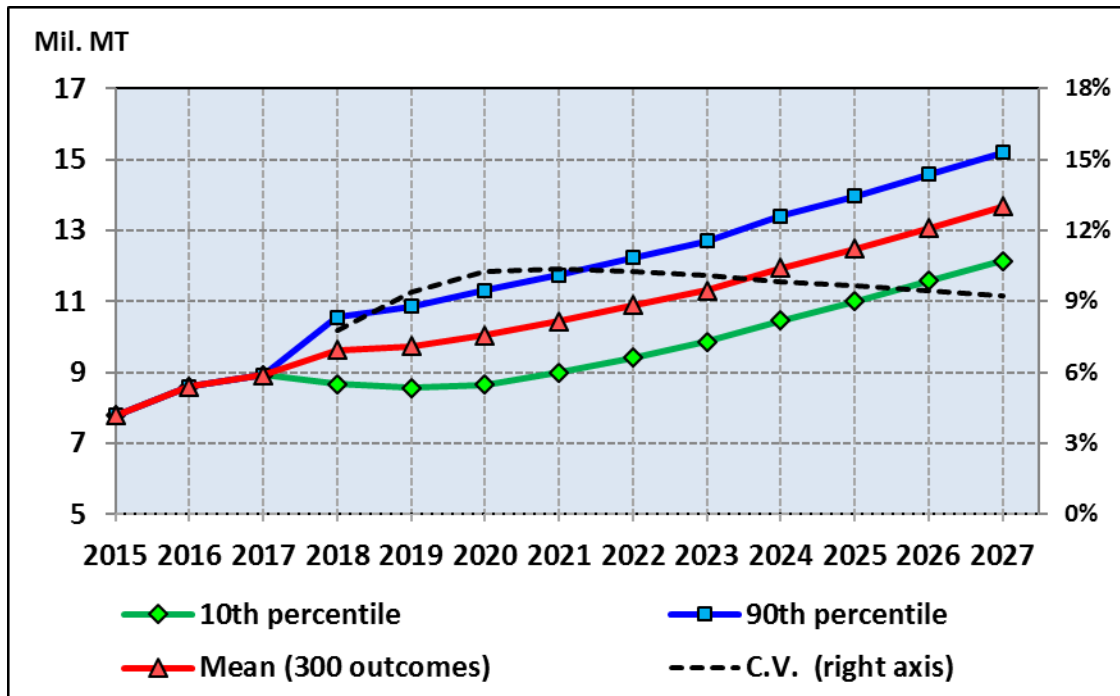


Figure 266 Stochastic Projections of ECOWAS-15 Net Rice Imports, 2015-2027

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## Appendix 1. Rice Policy Assumptions by Country

Country	Units	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28
<b>ARGENTINA</b>													
Import Tariff (MFN)	Percent	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Export Tax	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>BANGLADESH</b>													
Government Procurement Price	Tk/mt	33,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000	39,000
Government Procurement Quantity	1000/mt	500	600	600	600	600	600	600	600	600	600	600	600
Import Tariff	Percent	10.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Other taxes levied on imports (VAT)	Percent	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
<b>BRAZIL</b>													
Import Tariff (MFN)	Percent	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Import Tariff (MERCOSUR)	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Producer Paddy Support Price	R/50kg	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90
Producer Fine Paddy Support Price	R/50kg	34.96	34.96	36.01	36.01	36.01	36.01	36.01	36.01	36.01	36.01	36.01	36.01
<b>CAMBODIA</b>													
Import Tariff (milled)	Percent	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Value Added Tax	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
<b>CAMEROON</b>													
Import Tariff	Percent	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
<b>CANADA</b>													
Import Tariff – MFN	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

<b>CHILE</b>													
Import Tariff – MFN	Percent	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
<b>CHINA</b>													
Japonica Rice TRQ	1000 mt	2660	2660	2660	2660	2660	2660	2660	2660	2660	2660	2660	2660
Indica Rice TRQ	1000 mt	2660	2660	2660	2660	2660	2660	2660	2660	2660	2660	2660	2660
Rice In-quota Tariff rate	Percent	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Rice Over-Quota Tariff rate	Percent	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
Rice Value Added Tax	Percent	13.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Japonica Paddy Minimum Price	CY/mt	3100	3000	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600
Indica Paddy Minimum Price	CY/mt	2760	2720	2520	2520	2520	2520	2520	2520	2520	2520	2520	2520
<b>COLOMBIA</b>													
Import Tariff (MFN)	Percent	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
CTPA TRQ	1000 mt	98.448	102.88	107.51	112.35	117.40	122.69	128.21	133.65	140.00	146.30	152.89	159.77
CTPA Over quota Tariff	Percent	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Purchase price of paddy – wet (OECD)	C\$/Mt	911929	911929	911929	911929	911929	911929	911929	911929	911929	911929	911929	911929
<b>COSTA RICA</b>													
Tariff rate – Paddy (MFN)	Percent	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Tariff rate – Brown (MFN)	Percent	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Tariff rate – Milled (MFN)	Percent	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Guaranteed Paddy Price	CR\$/mt	300801	300801	291500	291500	291500	291500	291500	291500	291500	291500	291500	291500
<b>COTE D' VOIRE</b>													
Import Tariff--MFN--Ordinary Rice	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
<b>CUBA</b>													
Import tariff – Paddy (MFN)	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Import tariff – Milled (MFN)	Percent	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

**DOMINICAN REPUBLIC**

Tariff rate – Paddy (MFN)	Percent	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Tariff rate – Brown (MFN)	Percent	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Tariff rate – Milled (MFN)	Percent	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Tariff rate – Paddy (CAFTA-DR)	Percent	91.08	83.16	75.24	67.32	59.4	47.52	35.64	23.76	11.88	0.0	0.0	0.0
Tariff rate – Brown (CAFTA-DR)	Percent	91.08	83.16	75.24	67.32	59.4	47.52	35.64	23.76	11.88	0.0	0.0	0.0
Tariff rate – Milled (CAFTA-DR)	Percent	91.08	83.16	75.24	67.32	59.4	47.52	35.64	23.76	11.88	0.0	0.0	0.0
Tariff rate quota (TRQ) U.S. brown	MT	3540	3680	3820	3960	4100	4240	4380	4520	4660	N/L	N/L	N/L
Tariff rate quota (TRQ) U.S. milled	MT	14160	14720	15280	15840	16400	16960	17520	18080	18640	N/L	N/L	N/L

**EGYPT**

Import Tariff--MFN	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Government Paddy purchase price	EGP/mt	2400	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000

**EU-15**

Brown (husked) Rice TRQ--ACP/OCT	1000 mt	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0
Broken Rice TRQ--ACP/OCT	1000 mt	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Milled Rice TRQ--Everything But Arms (EBA)	1000 mt	625.0	650.0	675.0	700.0	725.0	750.0	775.0	800.0	825.0	850.0	875.0	900.0
Average Applied Tariff	Euro/mt	17.0	15.8	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
Milled Rice In-quota Tariff-- (EBA)	Euro/mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brown (husked) Rice--General Import Tariff	Euro/mt	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Milled Rice--General Import Tariff	Euro/mt	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0
Rice Intervention Price	Euro/mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**GHANA**

Import Tax (MFN)	Percent	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Value-Added Tax	Percent	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Other taxes levied on imports	Percent	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Total Duties	Percent	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4

**GUATEMALA**

Import Tariff (MFN)	Percent	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7
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**GUINEA**

Import Tariff	Percent	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
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**HONDURAS**

Import Tariff (MFN)	Percent	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Guaranteed paddy price (wet 21%)	L/cwt.	420	420	420	420	420	420	420	420	420	420	420	420

**INDIA**

Import Tariff (MFN)	Percent	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Minimum Support Price (MSP) Low	INR/mt	1470	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550	1550
Minimum Support Price (MSP) A grade	INR/mt	1510	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590

**INDONESIA**

Rice Import Tariff (MFN)	Rp/kg	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0
Wet paddy purchase price (mill)	Rp/kg	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750
Dry paddy purchase price	Rp/kg	4600	4600	4600	4600	4600	4600	4600	4600	4600	4600	4600	4600
Milled rice purchase price at Bulog	Rp/kg	7300	7300	7300	7300	7300	7300	7300	7300	7300	7300	7300	7300
Urea maximum retail price	Rp/kg	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800

**JAPAN**

Import markup or margin	Yen/mt	131516	132500	141446	134248	128444	127107	131366	133346	133261	131202	131498	134099
Special Safeguard duty	Yen/mt	328809	328809	328809	328809	328809	328809	328809	328809	328809	328809	328809	328809
Specific Import Tariff (MFN)	Yen/mt	341000	341000	341000	341000	341000	341000	341000	341000	341000	341000	341000	341000
Minimum Access Import Level	1000 mt	682.0	682.0	682.0	682.0	682.0	682.0	682.0	682.0	682.0	682.0	682.0	682.0

**KENYA**

SOA Import Tariff ( or \$200 if higher)	Percent	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
EAC CET (75% or \$345 if higher)	Percent	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0

**KOREA, REPUBLIC OF**

In-Quota Tariff Rate	Percent	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Over-Quota Tariff rate (MFN)	Percent	513	513	513	513	513	513	513	513	513	513	513	513
Minimum Access Import Level	1000 mt	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7

**LAO PDR**

Import Tariff	Percent	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**LIBERIA**

Import Tariff (MFN)	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**MADAGASCAR**

Import Tariff	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**MALAWI**

Import Tariff (MFN)	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Import Tariff (SADC and COMESA)	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**MALAYSIA**

Milled Rice--Applied Tariff (AFTA)	Percent	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Milled Rice—Tariff (MFN)	Percent	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0

**MALI**

Import Tariff	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
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**MEXICO**

Import Tariff paddy (MFN)	Percent	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Import Tariff milled (MFN)	Percent	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Tariff Rate Quota (TRQ) for non-FTA	1000 mt	0	150	150	150	150	150	150	150	150	150	150	150
TRQ in-quota Tariff	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigated rice land support payment	MXN/ha	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Non-irrigated rice land support	MXN/ha	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500

**MOZAMBIQUE**

Import Tariff for Broken Rice	Percent	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Import Tariff for Whole Rice (MFN)	Percent	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5

**MYANMAR**

Paddy floor price	MMK/mt	0.0	0.0	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000
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**NICARAGUA**

Import Tariff (MFN) - paddy	Percent	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Import Tariff (MFN) - milled	Percent	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

**NIGERIA**

Import Tariff – Domestic Producers	Percent	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Import Tariff – Exclusive Importers	Percent	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Import Levy (addition to tariff)	Percent	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Other import tax and surcharge	Percent	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0

**PAKISTAN**

Import Tariff (MFN)	Percent	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Value-Added Tax	Percent	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

**PANAMA**

Import Tariff (MFN)	Percent	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
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**PARAGUAY**

Import Tariff (MFN)	Percent	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
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**PERU**

Import Tariff (MFN)	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Price Band – Minimum	USD/mt	408	408	599	599	599	599	599	599	599	599	599	599
Price Band – Maximum	USD/mt	480	480	669	669	669	669	669	669	669	669	669	669
Reference price – Variable Levy	Origin	Thai	Thai	Urug	Urug	Urug	Urug	Urug	Urug	Urug	Urug	Urug	Urug
Maximum protection level	Percent	15	15	15	15	15	15	15	15	15	15	15	15

**PHILIPPINES**

MAV (TRQ) import quantity	1000 mt	805.2	805.2	805.2	805.2	805.2	805.2	805.2	805.2	805.2	805.2	805.2	805.2
Milled Rice In-quota Tariff (MFN)	Percent	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00

**RWANDA**

Import Tariff (MFN or \$345 if higher)	Percent	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
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**SENEGAL**

Import Tariff (MFN) - paddy	Percent	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Import Tariff (MFN) - milled	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

**SIERRA LEONE**

Import Tariff	Percent	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
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**SOUTH AFRICA**

Import Tariff (MFN)	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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**TAIWAN**

Minimum Access	1000 mt	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0	126.0
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**TANZANIA**

Import Tariff (MFN or \$345 if higher)	Percent	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
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**THAILAND**

Paddy Pledge Quantity	1000 mt	1500	2000	0	0	0	0	0	0	0	0	0	0
Pledging subsidies for White 5% Paddy	Baht/mt	5600	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100	11,100
Loan Price for White 5% Paddy	Baht/mt	7000	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200	7200

**TURKEY**

Import Tariff (MFN), paddy	Percent	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Import Tariff (IPN), paddy	Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import Tariff (MFN), milled	Percent	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0



Production premium	TL/mt	100	100	100	100	100	100	100	100	100	100	100	100
Production subsidies	TL/ha	190	190	190	190	190	190	190	190	190	190	190	190
<b>URUGUAY</b>													
Import Tariffs (MFN)	Percent	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
<b>UGANDA</b>													
Import Tariff (MFN)	Percent	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>UNITED STATES</b>													
Base Area	1000 ac	4390	4390	4390	4390	4390	4390	4390	4390	4390	4390	4390	4390
MFN Tariff	Percent	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
Price Loss Coverage (PLC):													
PLC Reference Price Long grain	\$/cwt	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
PLC Reference Price South-Medium	\$/cwt	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
PLC Reference Price Japonica	\$/cwt	16.10	16.10	16.10	16.10	16.10	16.10	16.10	16.10	16.10	16.10	16.10	16.10
Loan rate	\$/cwt	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
<b>VIET NAM</b>													
Import Tariffs (MFN)	Percent	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Guaranteed purchase paddy price	1000VD/mt	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
<b>ZAMBIA</b>													
Food Reserve Purchase Paddy Price	MWK/mt	1500	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Import Tariff (MFN)	Percent	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0