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# Thailand

# Grain and Feed Update

# August 2019

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**Report Highlights:**
While a dry spell caused marginal damage on rice and corn production in MY2019/20, the impact of fall armyworm infestation adversely affected corn production to a greater extent. While imports of corn, mainly from neighboring countries, are estimated to reach a record high in MY2018/19, continued corn supply shortage should lead to a sharp increase in import demand for feed wheat to replace corn in feed rations in MY2019/20. Rice exports in 2019 is revised down further due to tight supplies of old-crop white rice and strengthening Thai baht.

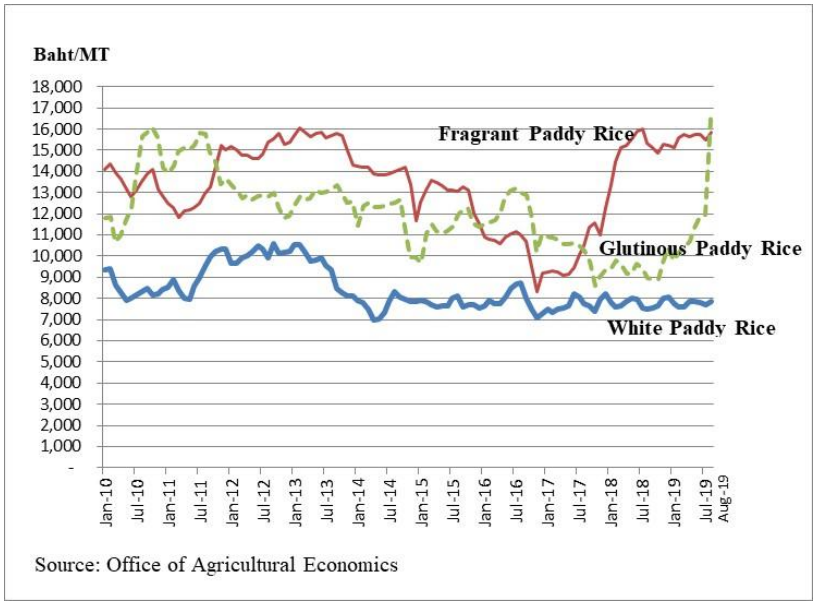
**Commodities:**
Corn
Rice, Milled
Wheat

**Executive Summary**
Despite being affected by a dry spell during June-July 2019, the main crop rice developed well after receiving periodic rainfall in August 2019. As a result, MY2019/20 rice production is revised down to 20.6 million metric tons (MMT) but is still one percent higher than MY2018/19. Rice exports in 2019 are revised down to 9 MMT, down 19 percent from 2018, due mainly to the stronger Thai baht currency and tighter supplies of old-crop white rice, particularly from government rice stocks.

MY2019/20 corn production is revised down to 4.4 million metric tons, down 22 percent from MY2018/19 as main crop corn is adversely affected by outbreaks of fall armyworm and the dry spell during June – July 2019. Additionally, the fall armyworm infestation will likely limit MY2019/20 off-season corn acreage expansion, as rice farmers are expected to continue to grow off-season rice instead of corn. MY2018/19 corn imports are revised up to record levels as feed mills and local corn traders built up their corn stocks due to concerns over the shortage of corn supplies in MY2019/20. The shortage of domestic corn production will likely increase import demand for feed wheat in MY2019/20 up to around 1.7 million metric tons.

**1. Rice**
**1.1 Production**
The MY2019/20 main crop rice growing area, driven by attractive farm-gate prices, especially for fragrant rice, is estimated to increase by one percent over MY2018/19's level. In August 2019, average farm-gate prices for fragrant rice remain high at around 15,900 baht per metric ton (U.S. $521/MT), up 3 percent from the same period in 2018 (Figure 1.1.1). Also, farm-gate prices for glutinous rice increased to the 10-year record levels of around 16,500 baht per metric ton (U.S. $540/MT), up 70 percent from the same period last year. However, acreage expansion of glutinous rice is expected to be limited as farmers already seeded fragrant rice before glutinous rice price reached the record levels. Additionally, farm-gate prices for white rice are also attractive at around 7,800 baht per metric ton (U.S. $256/MT), up 5 percent from the same period last year. These attractive prices should induce rice farmers in the central plains to grow more second main crop rice as they do not need to have concerns over possible flooding in 2019. In addition, they continue to grow MY2019/20 off-season rice instead of corn due to the concern about fall armyworm infestation which adversely affected MY2019/20 main crop corn production.

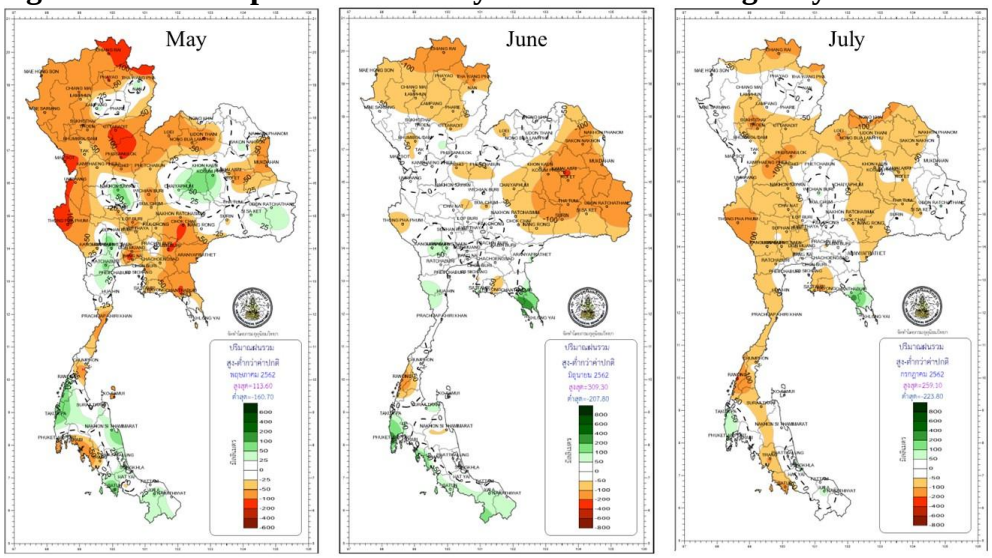
**Figure 1.1.1: Farm-gate Prices of Rice Paddy**



Source: Office of Agricultural Economics

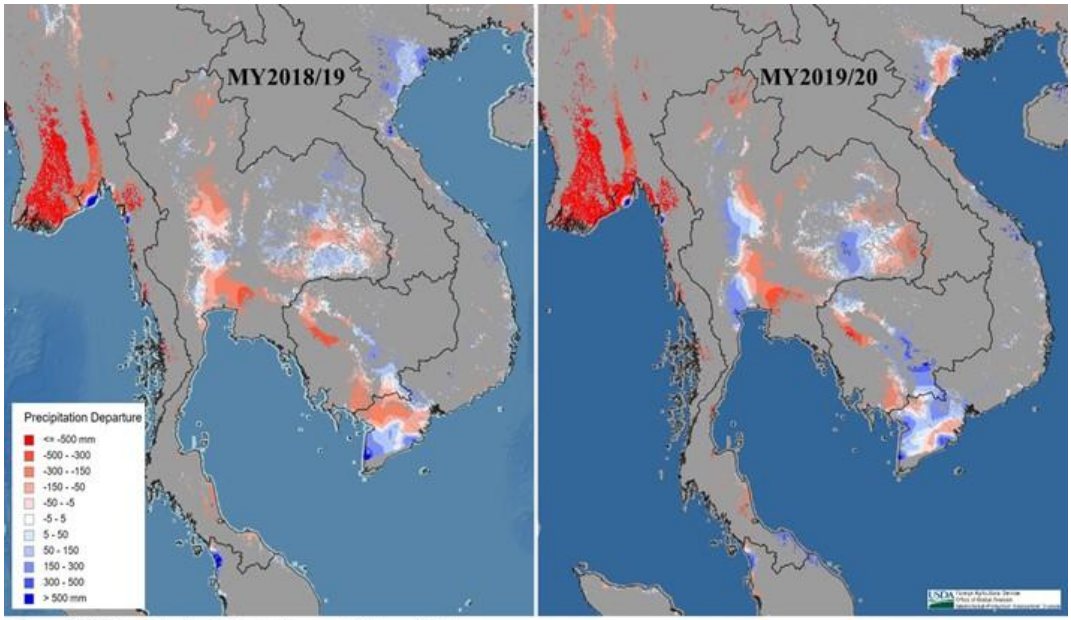
Around 90 percent of MY2019/20 main crop rice has been planted since May 2019 and was affected by the dry spell during June – July 2019, when precipitation was 20-40 percent below average in the major growing areas in the northern and the northeastern regions (Figure 1.1.2 and 1.1.3). Nevertheless, the impact is likely marginal. The Ministry of Agriculture and Cooperatives (MOAC) estimated that the affected area was about 128,000 hectares, which accounted for only one percent of the total main crop rice planting area. In addition to the fact that sub-surface soil moisture in most of the rice planting areas still supports a well-established rice crop (Figure 1.1.4), MY2019/20 main crop rice is reportedly well developed after receiving periodic rainfall in August 2019.

**Figure 1.1.2: Precipitation Anomaly in Thailand during May – June 2019**



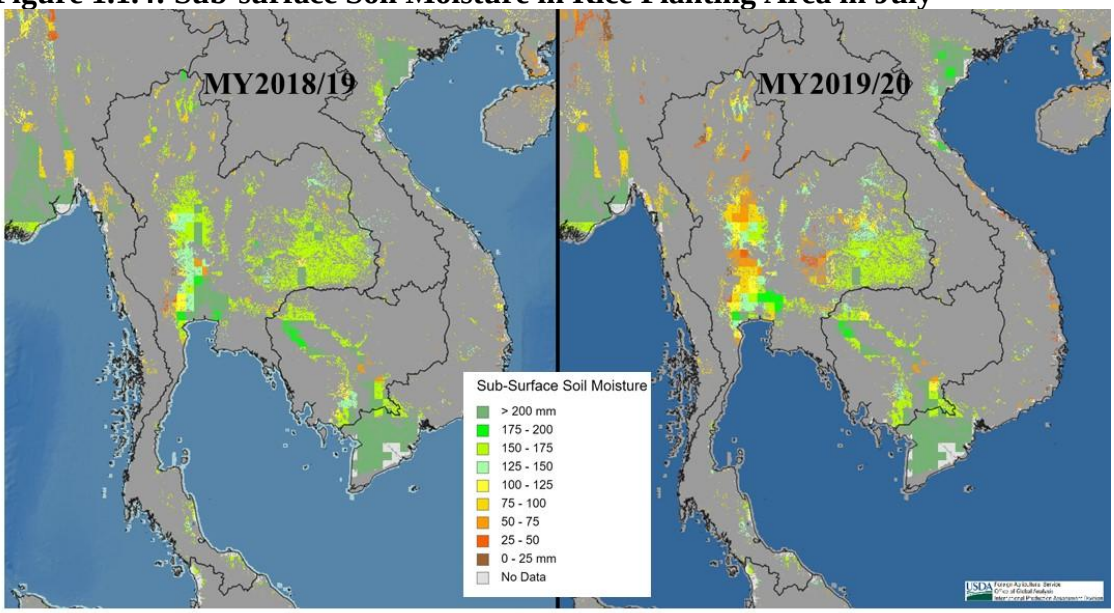
Source: Thai Meteorological Department

**Figure 1.1.3: Precipitation Anomaly in Rice Planting Area during May - July**



Source: Global Agricultural and Disaster Assessment System, USDA

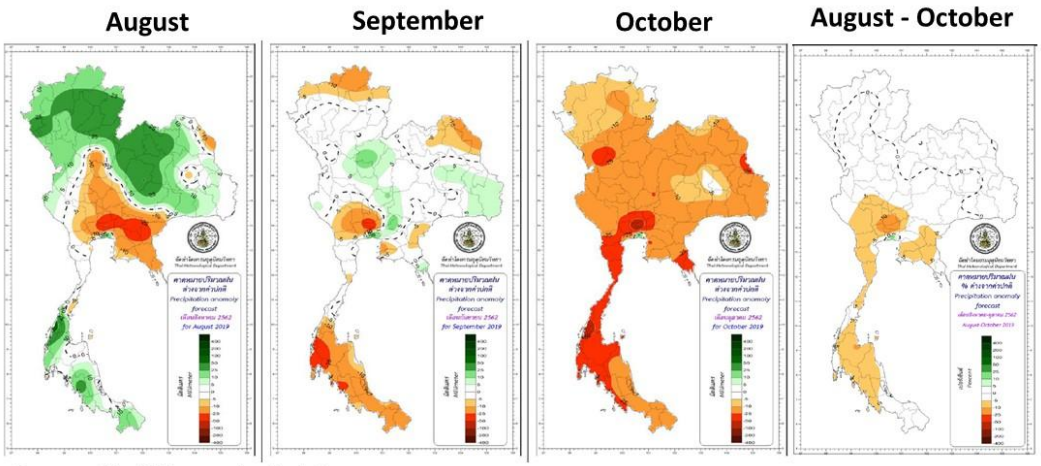
**Figure 1.1.4: Sub-surface Soil Moisture in Rice Planting Area in July**



Source: Global Agricultural and Disaster Assessment System, USDA

MY2019/20 main crop rice is expected to grow well at the reproductive growth stage in anticipation of above normal rainfall in September 2019. Thai Meteorological Department (TMD) expects that precipitation will be 5-10 percent above average in the northern and the northeastern regions during August – September 2019, when the main crop rice enters its reproductive stage (Figure 1.1.5). On the other hand, precipitation in the central plains is expected to be 5 percent below normal in August 2019, but this should not affect rice production because nearly all of rice area in this region is irrigated. Although current reservoir levels are critically low, the Royal Irrigation Department (RID) still supplies irrigation for agriculture in anticipation that rainfall from September - October will increase and help water reserves accumulate in the northern and northeastern regions.

**Figure 1.1.5: Precipitation Anomaly Forecast during August – October 2019**




Source: Thai Meteorological Department

Taking all mentioned factors into consideration, Post revised MY2019/20 rice production downward to 20.6 MMT. It still marks a one percent increase from the MY2018/19's level, due to expanded acreage of main crop rice that will likely more than offset the dry spell damage.
MY2018/19 rice production is also revised down to 20.3 million metric tons, a level which declined 1 percent from MY2017/18, due mainly to lower-than-expected off-season rice production. MY2018/19 off-season rice production dropped 8 percent from MY2017/18's level following reduced acreage in both irrigated and non-irrigated areas (Table 1.1.1). Being favored by government incentives for corn against rice and attractive corn prices, many rice farmers in irrigated and non-irrigated areas switched to off-season corn cultivation. Corn prices were at 8,000 – 9,000 baht per metric ton (U.S. $246 – 276/MT), as compared to average farm-gate prices of white paddy rice at 7,600 – 7,700 baht per metric ton (U.S. $249-252/MT).

**Table 1.1.1: Off-season Rice Planting Area**

| Unit: Million Hectares | MY2016/17 | MY2017/18 | MY2018/19 | % Change |
|---|---|---|---|---|
| Irrigated Area | 1.210 | 1.562 | 1.468 | -6.0 |
| Non-Irrigated Area | 0.690 | 0.492 | 0.432 | -12.3 |
| **Total Planted Area** | **1.900** | **2.054** | **1.900** | -7.5 |
| Source: FAS Forecast | | | | |

**1.2 Trade**

MY2018/19 rice exports are revised down to 9 MMT, a level representing a 19 percent decline from MY2017/18 due to continued stronger Thai baht currency affecting rice exports during January – July 2019 and tighter supplies of old-crop white rice, particularly from government rice stocks. According to the Thai Customs Department, Thai rice exports during January – July 2019 totaled 4.9 MMT, down 22 percent from the same period last year mainly for white rice exports (Table 1.2.1). White rice exports dropped sharply by 36 percent to 2.1 MMT because Thai white rice was less competitive in African markets which account for around half of total Thai rice exports. During January – July 2019, average export prices of Thai white rice were U.S. $40-45/MT higher than Vietnamese rice which is also a major supplier in African markets (Figure 1.2.1). The competitiveness is caused by diminishing supplies of old-crop rice from the government stocks after the government were able to sell nearly all of its rice stockpiles in 2018 (Figure 1.2.2). Additionally, Thai rice exporters, facing a stronger Thai baht currency, need to cover their currency exchange risk by increasing their export price quotes. The Thai baht has appreciated from 31.64 baht/U.S. $1.00 in the beginning of 2019 to a 7-year record 30.62 baht/U.S. $1.00 in July 2019, representing a 4-5 percent increase over an average rate of 32.14 baht/U.S. $ in 2018. Exports of parboiled and fragrant rice during January - July 2019 also declined by 1 and 5 percent, respectively, from the same period in 2018. Thai rice prices are likely to remain uncompetitive in the remainder of 2019 due to existing currency exchange risks perceived by exporters and limited supplies of old-crop rice stocks.

**Table: 1.2.1 Monthly Thai Rice Exports by Variety**

Unit: Metric Tons

| Rice Variety | 2015 | 2016 | 2017 | 2018 | % change | January - July | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 2018 | 2019 | % Change |
| White Rice | 4,994,387 | 4,819,941 | 5,082,384 | 5,892,438 | 15.9 | 3,327,086 | 2,123,360 | -36.2 |
| Parboiled Rice | 2,316,900 | 2,149,597 | 3,380,167 | 2,708,477 | -19.9 | 1,508,380 | 1,497,914 | -0.7 |
| Fragrant Rice | 2,111,658 | 2,497,912 | 2,694,356 | 2,102,078 | -22.0 | 1,186,857 | 1,126,498 | -5.1 |
| Glutinous Rice | 372,835 | 438,943 | 517,425 | 385,749 | -25.4 | 235,356 | 158,415 | -32.7 |
| Total | 9,795,780 | 9,906,393 | 11,674,332 | 11,088,742 | -5.0 | 6,257,679 | 4,906,187 | -21.6 |

Source: Thai Rice Exporter Association

**Figure 1.2.1 Monthly Thai Rice Exports by Variety**

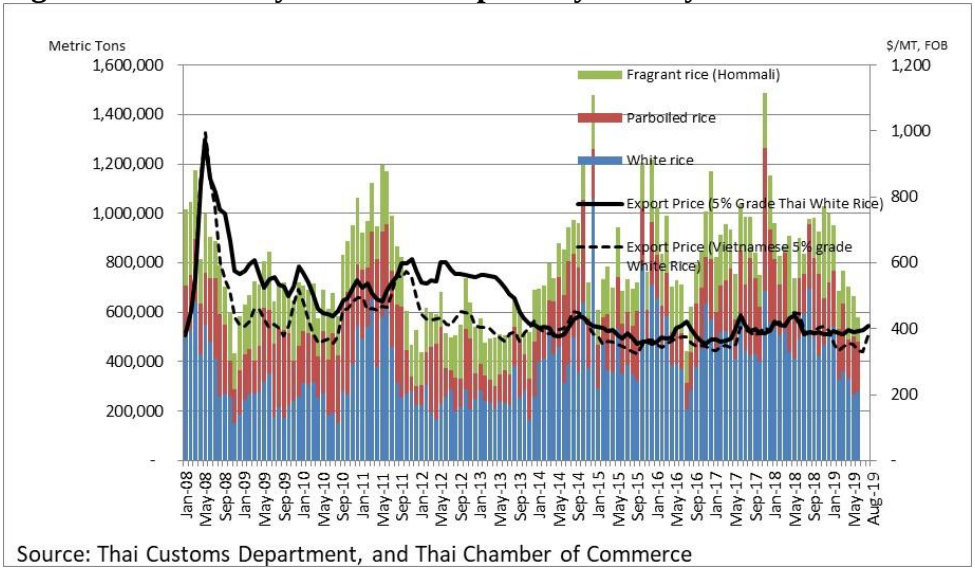
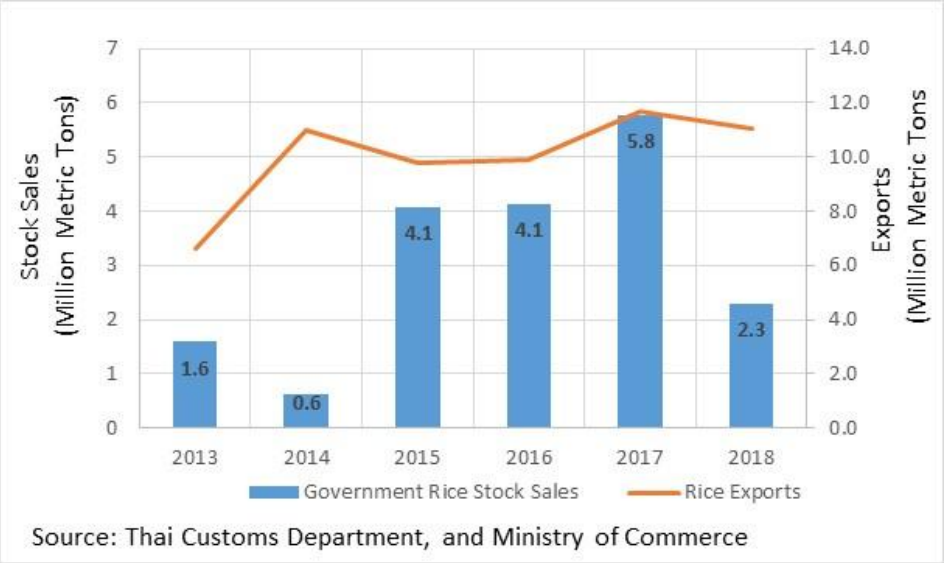



**Figure 1.2.2: Thai Rice Exports and Government Rice Stock Sales**




## 1.3 Stocks

The government is reportedly holding 208,650 metric tons of rice stocks that it acquired during MY2011/12 and MY2012/13 pledging programs. Despite the government's previous attempts to open an auction, these stocks remain unsold due to lingering concerns over quality. The government issued tenders for these rice stocks on July 25, 2019, consisting of 82,444 metric tons of food quality rice, 74,350 metric tons of feed quality rice, and 51,856 metric tons of deteriorated rice. Bids for 5% grade white rice are reportedly as high as market prices due to export demand for old-crop white rice in African countries. The government is expected to finalize the sales of these rice stocks by the end of August 2019.

**1.4 Policy**

On August 27, 2019, the cabinet agreed to allocate a budget of 21.5 billion baht (U.S. $705 million) for the Paddy Rice Price Guarantee program. This Paddy Rice Price Guarantee program, which was previously adopted by the Abhisit Administration from MY2009/2010 to MY2010/11, will replace long standing Paddy Rice Pledging programs implemented in the past. This program is aimed at supporting MY2019/20 main crop rice production. The guarantee prices of white paddy rice in MY2019/20 are set at approximately 30 percent above current market prices (Table 1.4.1). On the other hand, those for other rice varieties are mostly lower than current market prices. The eligible tonnage granted to rice farmers varies by rice varieties based on the average yield of paddy rice production and individual household's actual acreage (not more than 40 rai (6.4 hectares) per household). Farmers will directly receive this compensation only when market prices are lower than the guarantee prices during October 15, 2019 – February 28, 2020. Additionally, the cabinet approved another budget of 25.5 billion baht (U.S. $836 million) to subsidize MY2019/20 main crop rice production cost. Farmers will receive a direct payment of 500 baht per rai (U.S. $102 per hectare) for a maximum of 20 rai (3.2 hectares).

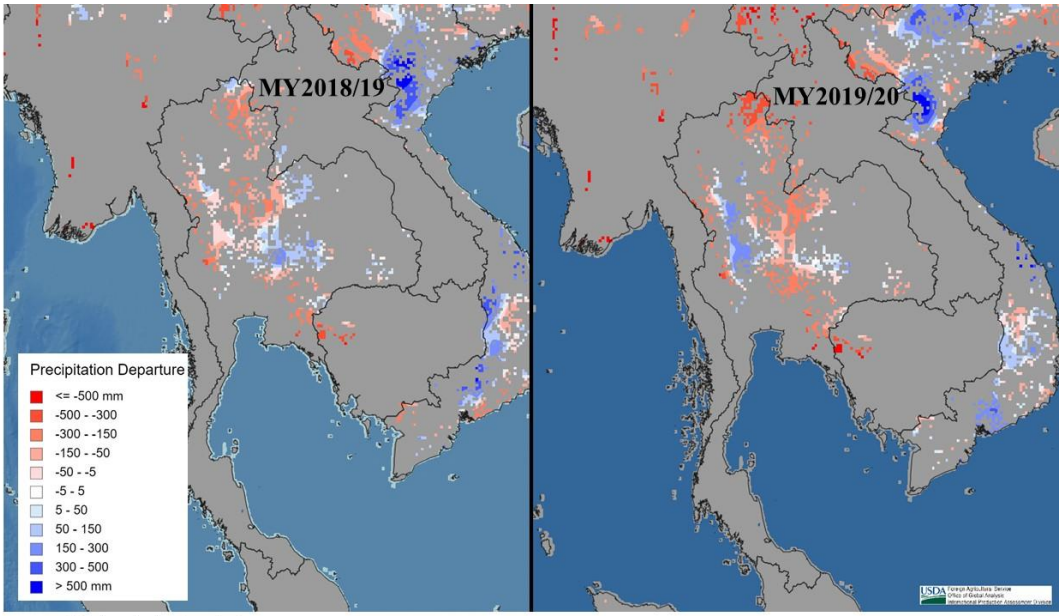
**Table 1.4.1: Paddy Rice Price Guarantee Prices for MY2019/20 Main Crop Rice**

| Paddy Rice Varieties | Guarantee Price (Baht/Metric Ton) | Eligible Tonnage (Metric Ton) | Current Market Price (Baht/Metric Ton) |
|---|---|---|---|
| White Paddy Rice | 10,000 | 30 | 7,600 - 7,700 |
| Fragrant Paddy Rice (Hom Mali) | 15,000 | 14 | 15,100 - 17,000 |
| Pathumthani Fragrant Paddy Rice | 11,000 | 25 | 9,700 - 10,700 |
| Provincial Fragrant Paddy Rice | 14,000 | 16 | N.A. |
| Glutinous Paddy Rice | 12,000 | 16 | 11,670 - 17,000 |
| Source: Ministry of Commerce | | | |

**2. Corn Update**

MY2019/20 corn production is revised down to 4.4 million metric tons, representing a 22 percent reduction from MY2018/19's level, due to widespread infestation of fall armyworm and a dry spell during June – July 2019, when precipitation was 20-40 percent below average in major corn growing areas in the northern and the northeastern regions (Figure 2.1). The MOAC reported that around 1.4 million rai (0.2 million hectares) of MY2019/20 main crop corn acreage are adversely affected by fall armyworm (as of August 14, 2019). The infested areas account for approximately 30 percent of MY2019/20 main crop corn acreage. Average yield in affected area reportedly declined significantly by 60-70 percent from average normal yields. In addition, another growing corn area of about 24,000 hectares are reportedly affected by the dry spell. Farmers in these areas have switched to beans and cassava. MY2019/20 off-season corn production is expected to decline significantly as rice farmers should not grow corn as the second crop after the main crop rice production is harvested as usual.

**Figure 2.1: Precipitation Anomaly in Corn Planting Area during May - July**



Source: Global Agricultural and Disaster Assessment System, USDA

MY2018/19 corn production is revised up to 5.6 MMT, representing a 13 percent increase from MY2017/18's level, mainly because the government financial support favoring corn against rice encouraged rice farmers to shift to off-season corn crop. In addition, non-rice farmers also expanded their off-season corn acreage due to the attractive farm-gate prices of corn. Average farm-gate prices for corn in August 2019 were 7,350 baht per metric ton (U.S. $241/MT). This price level is lower than the government target price of 8,000 baht per metric ton (U.S. $262/MT) but it is 9 percent higher than the same period in MY2017/18.

**Figure 2.2: Farm-gate Prices for Corn**

Source: Office of Agricultural Economics, Ministry of Agriculture and Cooperatives

MY2018/19 corn imports are revised upward to a record high at 1.2 MMT due to the possible shortage of domestic corn production as affected by the fall armyworm outbreaks. Feed mills and local corn traders reportedly built up their corn carry-over stocks to meet their feed demand in MY2019/20. Most of the imports are supplied by Myanmar through border trade activities. This imported corn, currently 10-15 percent cheaper than imported feed wheat, is partly replacing feed wheat in poultry and swine feed rations. Myanmar's corn is currently very competitive due to a sharp reduction in demand from

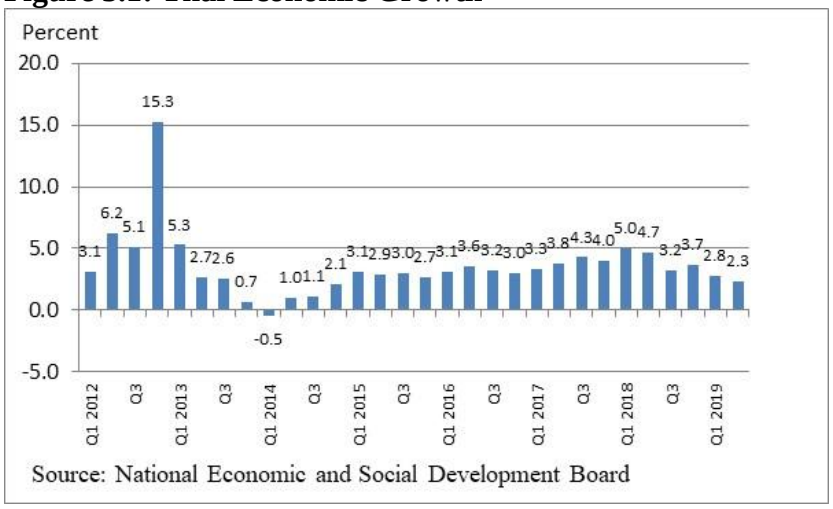
China where Chinese pig farmers are scaling down their pig production as a result of the outbreak of African Swine Fever (ASF). Additionally, ASEAN countries, including Myanmar, enjoy a zero tariff and unlimited quota for corn imported into Thailand from February 1 – August 31, 2019. Meanwhile, corn imports from other countries which have no free trade agreement (FTA) with Thailand, including the United States, are subject to a Tariff-Rate Quota (TRQ) of 54,700 metric tons with a 20 percent in-quota tariff, and an out-of-quota tariff of 73 percent. The out-of-quota tariff is accompanied by a surcharge of 180 baht per metric ton (U.S. $6/MT).

MY2019/20 corn imports are expected to decline significantly in anticipation of reduced corn production in neighboring countries. Their MY2019/20 corn production is reportedly affected by fall armyworm outbreaks. Feed mills and farmers are expected to depend on imported feed wheat for their poultry and swine feed rations in MY2019/20.

**3. Wheat**

MY2019/20 wheat imports are expected to increase to 3.1 MMT, representing 7 percent increase from the MY2018/19's level, following anticipated growing import demand for feed wheat. Feed wheat imports are forecast to rise by 11 percent to 1.7 MMT in MY2019/20 over MY2018/19's level mainly to meet growing demand in the poultry industry. Feed mills should heavily depend on imported feed wheat because of limited supplies of locally produced corn and the impact of fall armyworm outbreaks on corn production in both Thailand and other ASEAN producing countries. MY2019/20 milling wheat imports are forecast to increase to 1.2 MMT, up approximately 2 percent from MY2018/19 in line with slow growth in demand from bakeries and noodle producers affected by the weakened Thai economic situation. The economic growth of Thailand in the first half of 2019 is lower than expected at 2.6 percent (Figure 3.1). The Bank of Thailand recently agreed to revise Thai economic growth downward further to 3.3 percent in 2019 (as compared to the previous forecast of 3.8 percent) and to 3.7 percent (against earlier forecast of 3.9 percent) in line with the outlook on the global economy.

**Figure 3.1: Thai Economic Growth**

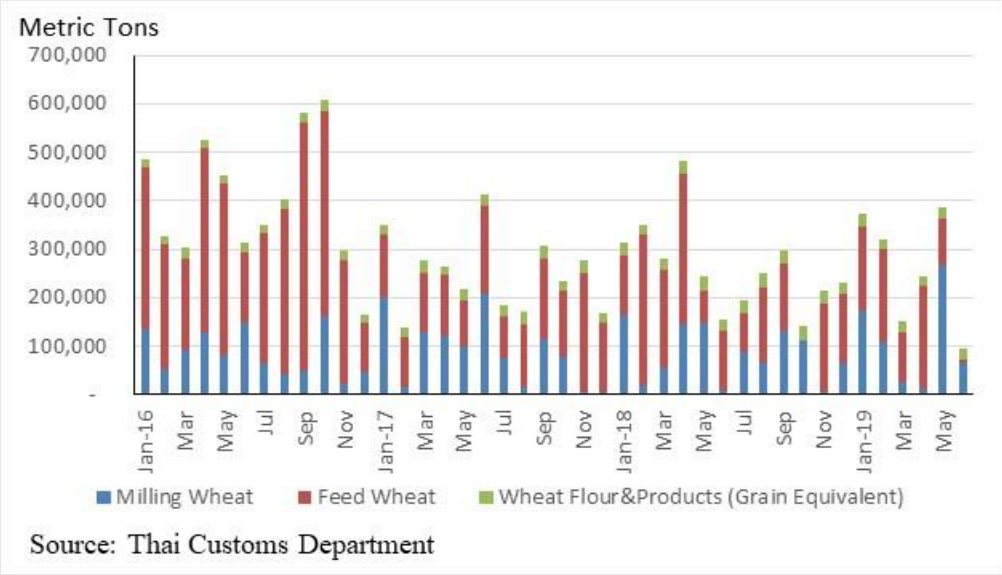


Source: National Economic and Social Development Board

MY2018/19 wheat imports dropped by 9 percent to 2.9 MMT from 3.2 MMT in MY2017/18 reflecting a reduction in feed wheat imports (Figure 3.2). Feed wheat imports declined by 27 percent to 1.5 MMT in MY2018/19 when the Thai feed industry switched from feed wheat to corn imported from ASEAN countries. On the other hand, milling wheat imports increased by 33 percent to 1.1 million metric tons

from 0.8 MMT in MY2017/18 because production from newly emerging flour mills is adding to total current production from the existing flour mills. In the meantime, imports of U.S. wheat, mostly milling wheat, totaled around 0.7 million metric tons, up 18 percent from the MY2017/18's level and accounting for approximately 60 percent of total milling wheat imports. Imports of wheat flour in MY2018/19 increased to 0.3 MMT (milled equivalent) metric tons, up 0.4 percent from MY2017/18. This is a slower import growth pace (compared to 18 percent import growth in MY2017/18) due to competition from locally produced flour, particularly for food-quality flour from newly operational flour mills.

**Figure 3.2: Imports of Wheat Grain and Products**



## Appendix Tables

### Table 1: Thailand's Rice Production, Supply, and Demand

| Rice, Milled | 2017/2018 | | 2018/2019 | | 2019/2020 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jan 2018 | | Jan 2019 | | Jan 2020 | |
| Thailand | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| **Area Harvested** | 10756 | 10756 | 10904 | 10830 | 10900 | 10882 |
| **Beginning Stocks** | 4238 | 4238 | 3009 | 2940 | 3809 | 3680 |
| **Milled Production** | 20577 | 20577 | 20550 | 20340 | 20500 | 20610 |
| **Rough Production** | 31177 | 31177 | 31136 | 30818 | 31061 | 31227 |
| **Milling Rate (.9999)** | 6600 | 6600 | 6600 | 6600 | 6600 | 6600 |
| **MY Imports** | 250 | 200 | 250 | 200 | 250 | 200 |
| **TY Imports** | 250 | 200 | 250 | 200 | 250 | 200 |
| **TY Imp. from U.S.** | 4 | 0 | 0 | 0 | 0 | 0 |
| **Total Supply** | 25065 | 25015 | 23809 | 23480 | 24559 | 24490 |
| **MY Exports** | 11056 | 11075 | 9000 | 9000 | 9500 | 9700 |
| **TY Exports** | 11056 | 11075 | 9000 | 9000 | 9500 | 9700 |
| **Consumption and Residual** | 11000 | 11000 | 11000 | 10800 | 11000 | 10800 |
| **Ending Stocks** | 3009 | 2940 | 3809 | 3680 | 4059 | 3990 |
| **Total Distribution** | 25065 | 25015 | 23809 | 23480 | 24559 | 24490 |
| **Yield (Rough)** | 2.8986 | 2.8986 | 2.8555 | 2.8456 | 2.8496 | 2.8696 |
| | | | | | | |
| (1000 HA) ,(1000 MT) ,(MT/HA) | | | | | | |

### Table 2: Thailand's Rice Production by Crop

| | 2017/18 | | | 2018/19 | | | 2019/20 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Main Crop | Second Crop | Total | Main Crop | Second Crop | Total | Main Crop | Second Crop | Total |
| Area (Million Hectares) | | | | | | | | | |
| Cultivation | 9.000 | 2.054 | 11.054 | 9.230 | 1.900 | 11.130 | 9.280 | 1.985 | 11.265 |
| Harvest | 8.711 | 2.045 | 10.756 | 8.940 | 1.890 | 10.830 | 8.912 | 1.970 | 10.882 |
| Production (Million Tons) | | | | | | | | | |
| Rough | 22.227 | 8.950 | 31.177 | 22.608 | 8.210 | 30.818 | 22.667 | 8.560 | 31.227 |
| Rice | 14.670 | 5.907 | 20.577 | 14.920 | 5.420 | 20.340 | 14.960 | 5.650 | 20.610 |
| Yield (Ton/Hectare) | 2.552 | 4.377 | 2.898 | 2.529 | 4.344 | 2.846 | 2.543 | 4.345 | 2.870 |
| *Note: 1. Main crop rice is mostly cultivated during May - August and harvested during November - December.* | | | | | | | | | |
| *2. Off-season rice is mostly cultivated during November - January and harvested during March - May.* | | | | | | | | | |
| *Source: FAS Estimate* | | | | | | | | | |

## Table 3: Thailand's Corn Production, Supply and Demand

| Corn | 2017/2018 | | 2018/2019 | | 2019/2020 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jul 2017 | | Jul 2018 | | Jul 2019 | |
| Thailand | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| **Area Harvested** | 1124 | 1124 | 1230 | 1296 | 1190 | 1180 |
| **Beginning Stocks** | 143 | 143 | 144 | 166 | 293 | 1045 |
| **Production** | 5000 | 5000 | 5420 | 5625 | 5200 | 4365 |
| **MY Imports** | 700 | 700 | 700 | 1200 | 800 | 700 |
| **TY Imports** | 700 | 700 | 700 | 1200 | 800 | 500 |
| **TY Imp. from U.S.** | 4 | 0 | 0 | 0 | 0 | 0 |
| **Total Supply** | 5843 | 5843 | 6264 | 6991 | 6293 | 6110 |
| **MY Exports** | 199 | 177 | 171 | 146 | 100 | 50 |
| **TY Exports** | 223 | 202 | 150 | 146 | 100 | 50 |
| **Feed and Residual** | 5400 | 5400 | 5700 | 5700 | 5900 | 5700 |
| **FSI Consumption** | 100 | 100 | 100 | 100 | 100 | 100 |
| **Total Consumption** | 5500 | 5500 | 5800 | 5800 | 6000 | 5800 |
| **Ending Stocks** | 144 | 166 | 293 | 1045 | 193 | 260 |
| **Total Distribution** | 5843 | 5843 | 6264 | 6991 | 6293 | 6110 |
| **Yield** | 4.4484 | 4.4484 | 4.4065 | 4.3403 | 4.3697 | 3.6992 |
| | | | | | | |
| (1000 HA) ,(1000 MT) ,(MT/HA) | | | | | | |

## Table 4: Thailand's Wheat Production, Supply and Demand

| Wheat | 2017/2018 | | 2018/2019 | | 2019/2020 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jul 2017 | | Jul 2018 | | Jul 2019 | |
| Thailand | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| **Area Harvested** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Beginning Stocks** | 805 | 805 | 671 | 716 | 495 | 590 |
| **Production** | 0 | 0 | 0 | 0 | 0 | 0 |
| **MY Imports** | 3173 | 3168 | 2899 | 2899 | 3100 | 3100 |
| **TY Imports** | 3173 | 3168 | 2899 | 2899 | 3100 | 3100 |
| **TY Imp. from U.S.** | 666 | 578 | 719 | 680 | 0 | 700 |
| **Total Supply** | 3978 | 3973 | 3570 | 3615 | 3595 | 3690 |
| **MY Exports** | 257 | 257 | 275 | 275 | 250 | 280 |
| **TY Exports** | 257 | 257 | 275 | 275 | 250 | 280 |
| **Feed and Residual** | 1850 | 1700 | 1600 | 1400 | 1600 | 1500 |
| **FSI Consumption** | 1200 | 1300 | 1200 | 1350 | 1225 | 1390 |
| **Total Consumption** | 3050 | 3000 | 2800 | 2750 | 2825 | 2890 |
| **Ending Stocks** | 671 | 716 | 495 | 590 | 520 | 520 |
| **Total Distribution** | 3978 | 3973 | 3570 | 3615 | 3595 | 3690 |
| **Yield** | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | |
| (1000 HA) ,(1000 MT) ,(MT/HA) | | | | | | |

End of report.