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Vietnam

Grain and Feed Annual

2019

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Report Highlights:

In marketing year (MY) 2019/2020, Post forecasts wheat imports at 4.5 million metric tons (MMT), and estimates MY18/19 at 4.0 MMT. Post forecasts imports of corn at 10.0 MMT in MY19/20 and estimates MY18/19 imports at 10.2 MMT, a drop of 800,000 MT from the official USDA estimate, due to African Swine Fever (ASF). For rice, Post forecasts MY19/20 export volume to rebound to 6.5 MMT of milled rice, due to increased production. Post revises the MY18/19 export volume down from 7.0 MMT to 6.0 MMT due to decreased harvested area and production.

SITUATION AND OUTLOOK

Vietnam is one of world's top pork consuming countries and stands second in Asia only to China. The hog industry has developed rapidly since the 1990s and is the key driver of the local feed industry. After the 2017 price crash crisis, only big players with fully integrated production cycles survived, as they could produce with very tight margin. Today, the Vietnam hog industry is facing African Swine Fever (ASF), which will disrupt production and the feed market in the coming years.

However, despite the issues in the animal husbandry sector, Vietnam's feed industry is still expected to expand at a modest rate in calendar year (CY) 2019, supported by the higher growth in aquaculture and broiler industries. Post forecasts that the sector remain almost unchanged in CY20.

Vietnam Feed Industry Summary

| | CY 2018 | CY 2019 | CY 2020 | | |
|-------------------------|----------------------------|--------------------------|------------|--|--|
| Animal Feed | 23,800,000 | 23,700,000 | 23,500,000 | | |
| Aqua feed | 6,200,000 | 6,800,000 | 7,000,000 | | |
| Total Feed | 30,000,000 | 30,500,000 | 30,500,000 | | |
| Manufactured | 21,900,000 | 23,000,000 | 23,200,000 | | |
| Animal Feed | 18,000,000 | 18,500,000 | 18,500,000 | | |
| Aqua feed | 3,900,000 | 4,500,000 | 4,700,000 | | |
| Home made | 8,100,000 | 7,500,000 | 7,300,000 | | |
| Animal Feed | 5,600,000 | 5,200,000 | 5,000,000 | | |
| Aqua feed | 2,500,000 | 2,300,000 | 2,300,000 | | |
| Total Feed | 30,000,000 | 30,500,000 | 30,500,000 | | |
| Source: FAS-VN estimate | (as of March 2019) | | | | |
| Table 2: Source of feed | l ingredients supplied for | Vietnam feed industry CY | 2018-2020 | | |
| | CY 2018 | | | | |
| Import(1) | 19,300,000 | 20,300,000 | 20,300,000 | | |
| Soybean Meal * | 6,050,000 | 6,000,000 | 6,000,000 | | |
| Corn | 8,700,000 | 10,200,000 | 10,000,000 | | |
| DDGS | 690,000 | 1,000,000 | 1,000,000 | | |
| Feed wheat | 2,200,000 | 1,300,000 | 1,500,000 | | |
| Other meal/bran | 850,000 | 900,000 | 900,000 | | |
| Others (MBM, FM,) | 810,000 | 900,000 | 900,000 | | |
| Local supply (2) | 9,200,000 | 8,700,000 | 8,700,000 | | |
| Corn | 3,000,000 | 3,000,000 | 3,000,000 | | |
| Rice bran | 5,000,000 | 5,000,000 | 5,000,000 | | |
| Broken rice | 500,000 | 200,000 | 200,000 | | |
| Cassava | 700,000 | 500,000 | 500,000 | | |
| Imported feed (3) | 1,500,000 | 1,500,000 | 1,500,000 | | |
| Grand Total (4) | 30,000,000 | 30,500,000 | 30,500,000 | | |
| Manufactured feed (5) | 21,900,000 | 23,000,000 | 23,200,000 | | |
| Home-made feed (6)** | 8,100,000 | 7,500,000 | 7,300,000 | | |
| Source: FAS-VN estimate | | ,,500,000 | 7,300 | | |

Source: FAS-VN estimate (as of March 2019)

*: include local crushed from imported beans **: (6) = (4) (3) (5): Source: Post's estimate

**: (6) = (4)-(3)-(5); Source: Post's estimate

The Vietnam feed industry relies heavily on imported ingredients; about 65-70 percent of feed or feed ingredients are imported. This trend will continue as the feed industry continues to grow and local supply cannot keep pace with the increased demand from the feed industry.

Local sources for feed include rice bran and broken rice, which are obtained from the local rice industry. The rice milling industry produces approximately 5 MMT of rice bran, most of which is used for feed. Broken rice is used in relatively small volumes due to strong competition with the export sector. Amounts vary according to export demand, but is about 0.5 MMT per year. The use of cassava in feed

is falling, from 700,000 MT in CY18 to 500,000 MT in both CY19 and CY20, due to reduced production stemming from leaf mosaic virus, and high demand from export markets, industrial production, and the biofuels industry.

Imported raw materials include soybean meal, corn, DDGS, feed wheat, and various kinds of meal and bran like copra, canola, rape seed meal, and wheat bran. Imported ingredients also include animal protein sources such as meat and bone meal (MBM) and fish meal. Feed wheat is increasingly becoming an important alternative energy source for the animal feed industry in Vietnam. Yearly feed wheat import volumes vary, depending on their price competitiveness with corn.

Home-made feed is based mostly on local ingredients from locally supplied sources, such as corn, rice bran, broken rice, cassava, other local vegetables, and various kinds of food waste, which are mainly from local sources. However, home-made feed is not a sustainable feed source for the growing intensive animal production industry. In CY19 and CY20, Post estimates that the use of home-made feed will decrease continuously as the backyard animal husbandry industry shrinks due to disease and food safety issues. Post estimates imports of finished feed at 1.5 MMT per year. Imported feed is for specific groups of animals and fish, such as prawns, ornamental fish, and pets.

Below is an outline of some major changes in the Vietnam feed industry:

Demand-side

- In CY 2019, Post estimates that total demand will increase slightly, from 30 to 30.5 MMT, while Post forecasts that total demand will remain at the same level in CY 2020.
- While animal feed demand will decline slightly, aqua feed production will make up a larger part of total production, rising from 6.2 MMT in CY18 to 6.8 MMT in CY 2019 and 7.0 MMT in 2020.
- Within animal feed, the true decline is from the homemade sector because ASF is mainly affecting small-scale farms. Manufactured feed is still increasing, mainly for the poultry sector.
- There is also the decrease in homemade aqua feed, as large feed manufacturers change focus from the hog sector with no growth potential, to the aqua sector.

Supply-side

- Corn and DDGS imports are likely to increase in CY19.
- Overall CY19 feed wheat imports will decline from CY18 due to uncompetitive prices and uncertainty over quarantine inspections due to recent Cirsium arvense detections.
- Supplies of local broken rice and local cassava for feed are declining.

Prices for pork and broilers have a great impact on Vietnam's local feed production, since pork accounts for 75 percent and chicken accounts for 10 percent of total meat consumption. Figure 1 shows pork prices below VND 35,000 per kilo in February 2018. According to farmers, production costs range from VND 35,000-40,000 per kilogram. However, prices rose steadily until December 2018 when they fell as a result of increased production in preparation for Tet. Poultry prices have followed a similar trend general in CY18.

Figure 1: Prices for Pork and Broiler Meat, January 2015- February 2019



The first case of ASF was announced in Vietnam in early February 2019. As a result, pork prices have been falling throughout the month of March (see Figure 2). Therefore, Post estimates and forecasts hog feed production for CY19 and CY20 unchanged at similar levels to CY18.

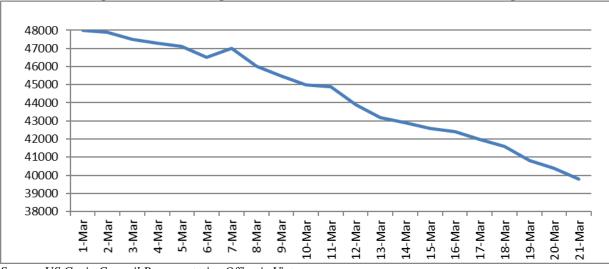


Figure 2: Live Weight Prices for Pork in March 2019 (VND/kg)

Source: US Grain Council Representative Office in Vietnam

However, as noted above, thanks to strong growth in other industries, such as poultry and aqua, Vietnam's overall production of protein is still growing steadily in spite of difficult periods for the hog sector in CY16, CY17, and CY19 (see Figure 3).

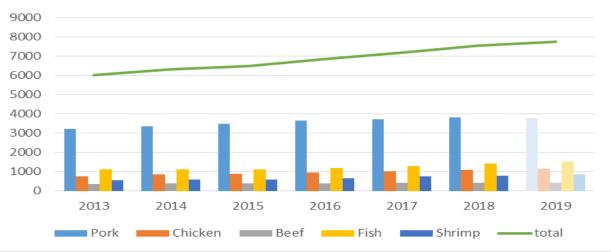


Figure 3: Vietnam's Production of Protein, 2013-2019 (forecasted) (1,000 MT)

Source: MARD

1. WHEAT

STATISTICAL TABLES

Vietnam's Production, Supply, and Demand for Wheat

| Wheat | 2017/202 | 18 | 2018/202 | 19 | 2019/202 | 20 | |
|-----------------------|------------------|-------------|------------------|-------------|------------------|-------------|--|
| Market Begin Year | Jul 201 | 7 | Jul 201 | 8 | Jul 2019 | | |
| Vietnam | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post | |
| Area Harvested | 0 | 0 | 0 | 0 | 0 | 0 | |
| Beginning Stocks | 1022 | 1022 | 886 | 766 | 0 | 666 | |
| Production | 0 | 0 | 0 | 0 | 0 | 0 | |
| MY Imports | 4655 | 4780 | 4500 | 4000 | 0 | 4500 | |
| TY Imports | 4655 | 4780 | 4500 | 4000 | 0 | 4500 | |
| TY Imp. from U.S. | 181 | 184 | 0 | 207 | 0 | 200 | |
| Total Supply | 5677 | 5802 | 5386 | 4766 | 0 | 5166 | |
| MY Exports | 291 | 256 | 300 | 300 | 0 | 300 | |
| TY Exports | 291 | 256 | 300 | 300 | 0 | 300 | |
| Feed and Residual | 2500 | 2260 | 2200 | 1300 | 0 | 1500 | |
| FSI Consumption | 2000 | 2520 | 2200 | 2500 | 0 | 2500 | |
| Total Consumption | 4500 | 4780 | 4400 | 3800 | 0 | 4000 | |
| Ending Stocks | 886 | 766 | 686 | 666 | 0 | 866 | |
| Total Distribution | 5677 | 5802 | 5386 | 4766 | 0 | 5166 | |
| Yield | 0 | 0 | 0 | 0 | 0 | 0 | |

PRODUCTION

Vietnam does not produce wheat.

CONSUMPTION

In MY18/19, Post's estimates total wheat consumption down due to the uncompetitive price of feed wheat as compared to corn; however, the use of milling wheat rose slightly (see Figure 4). Post forecasts MY19/20 total wheat consumption up slightly over MY18/19, on strength in the aqua feed sector. In MY19/20, Post forecasts that consumption of milling wheat will remain stagnant at about 2.5 MMT, as Vietnam's tightening quarantine inspections make it difficult to bring in specific high quality varieties.

For a discussion of the general dynamics in the wheat market, please see the <u>2018 Annual Grain and Feed</u> <u>Report</u>.

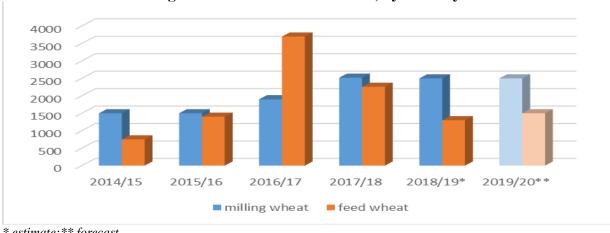


Figure 4: Wheat Use in Vietnam, by industry

TRADE / COMPETITION

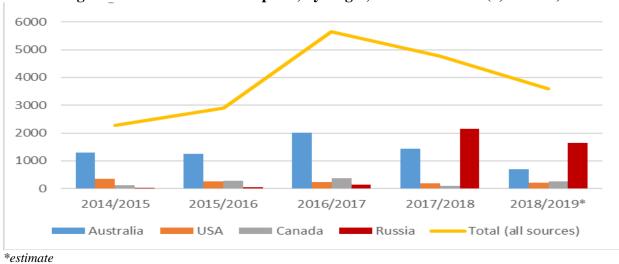
Imports

Vietnam is a net importer of wheat. Current Most Favored Nation (MFN) import duties are 5 percent for wheat and 15 percent for wheat flour. Australian wheat, however, enjoys duty free access to Vietnam under the Australia-Vietnam Free Trade Agreement (FTA). The Vietnam-Eurasia Economic Union (VN-EAEU) FTA also brings zero import duty wheat from Russia, Belarus, Kazakhstan, Armenia, and Kyrgyzstan into Vietnam. Wheat from Canada also benefits from tariff-free entry into Vietnam as a result of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which began on January 14, 2019.

Australian milling wheat has traditionally dominated the wheat import market in Vietnam, accounting for 70-80 percent of Vietnam's total wheat imported volume (see Figure 5). However, beginning in MY17/18, Russia has been the top supplier to the Vietnamese market as its prices are competitive and Australian wheat is hit by drought and high prices.

^{*} estimate; ** forecast Source: Trade

U.S. wheat is considered high quality, and Vietnamese mills blend it as a cost-effective way to improve the quality of their flour products. Imports of U.S. wheat have been stable at approximately 200,000 MT in MY17/18, MY18/19, and MY19/20.





In MY18/19, Post estimates Vietnam's total wheat imports at 4.0 MMT, a drop from the USDA official estimate, due to the reduced consumption of feed wheat. Imports for MY19/20 are forecast at 4.5 MMT, partially fueled by the small aforementioned rise in feed wheat consumption.

The important factor for buyers deciding on feed wheat as an alternative to corn is its comparative selling price. Feed wheat prices were running lower or at nearly the same level as corn prices from mid-2016 to August 2018 (see Figure 6). Afterwards, they began diverting higher, which explains the lower volumes of feed wheat imports in MY18/19.

The current issue of zero tolerance for Cirsium arvense has blunted shipments of wheat from diverse sources to Vietnam since the end of CY18. The local wheat milling industry is expected to face difficulties in providing high quality wheat flour, especially soft white wheat flour, to customers. Industry also expressed concerns with sourcing quality feed wheat. Therefore, Post estimates flour imports (wheat equivalent) from other Southeast Asian countries at 200,000 MT in both MY18/19 and MY19/20 in order to compensate for the lack of milling wheat.

^{}estimate* Source: Trade

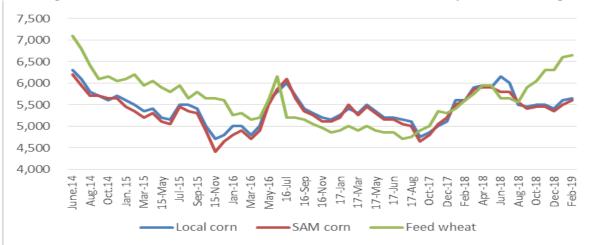
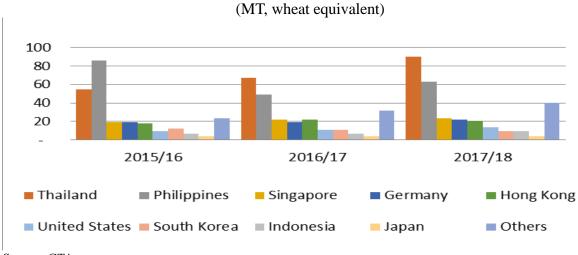


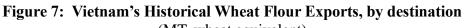
Figure 6: Prices of Corn vs. Feed Wheat, June 2014- February 2018 (VND/kg)

Source: US Grain Council Representative Office in Vietnam

Exports

The low price of Vietnam-made wheat flour signals that the quality of the product is low; however, it also means that it is competitively priced. The product is mainly supplied as an ingredient for the aquaculture industry. The export growth of Vietnam wheat flour has been flat recent years. Vietnam is the largest exporter of wheat flour to Thailand and also exports to other countries, including Indonesia, Malaysia, and the Philippines. Additionally, Vietnam exports flour to Singapore, Hong Kong, and Taiwan for the food processing industry, and/or re-selling to other countries. Vietnam also exports small quantities of instant noodle. In MY18/19, Post estimates Vietnam's exports of wheat flour and flour products up slightly over MY17/18, but forecasts flat exports in MY19/20 due to a lack of milling wheat imports.





Source: GTA

2. CORN

STATISTICAL TABLES

Vietnam's Production, Supply, and Demand for Corn

| Corn | 2017/20 | 18 | 2018/20 | 19 | 2019/202 | 20 | |
|-----------------------|------------------|-------------|------------------|-------------|------------------|-------------|--|
| Market Begin Year | May 20 | 17 | May 20 | 18 | May 2019 | | |
| Vietnam | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post | |
| Area Harvested | 1050 | 1039 | 850 | 950 | 0 | 1000 | |
| Beginning Stocks | 1054 | 1054 | 834 | 1059 | 0 | 719 | |
| Production | 4880 | 4905 | 3950 | 4560 | 0 | 4850 | |
| MY Imports | 8800 | 8700 | 11000 | 10200 | 0 | 10000 | |
| TY Imports | 9500 | 9480 | 11000 | 11000 | 0 | 10500 | |
| TY Imp. from U.S. | 1913 | 724 | 0 | 1700 | 0 | 1500 | |
| Total Supply | 14734 | 14659 | 15784 | 15819 | 0 | 15569 | |
| MY Exports | 500 | 500 | 500 | 500 | 0 | 500 | |
| TY Exports | 500 | 500 | 500 | 500 | 0 | 500 | |
| Feed and Residual | 12000 | 11700 | 12800 | 13200 | 0 | 13000 | |
| FSI Consumption | 1400 | 1400 | 1400 | 1400 | 0 | 1400 | |
| Total Consumption | 13400 | 13100 | 14200 | 14600 | 0 | 14400 | |
| Ending Stocks | 834 | 1059 | 1084 | 719 | 0 | 669 | |
| Total Distribution | 14734 | 14659 | 15784 | 15819 | 0 | 15569 | |
| Yield | 4.6476 | 4.7209 | 4.6471 | 4.8 | 0 | 4.85 | |

PRODUCTION

In Vietnam, corn has long been the second largest annual crop in terms of acreage. Corn is one of several local crops, including cassava, broken rice, and rice bran, that is used to supply the feed industry. However, corn is planted only in mountainous regions with poor soil fertility and other regions lacking adequate water supplies. Since corn is primarily grown in unfavorable conditions, Vietnam's corn yields are low. In addition, corn yields are also affected by crop losses due to pests and disease.

Local corn production has been unable to meet demand in recent years and, coupled with low imported corn prices, has resulted in increasing volumes of imported corn brought into Vietnam. Local corn production faces stiff competition from major corn producers like Argentina, and Brazil, and more recently from Eastern Europe countries, and cannot compete with imported corn on cost and quality. This discourages farmers from expanding corn area, and forces them to find alternative cash crops. Young corn plants from some local corn production areas are also used to feed beef cattle, as prices for corn plants lead to higher incomes compared to traditional corn production.

In MY18/19, Post estimates corn production area at 950,000 ha, up from the USDA official estimate, but down from MY17/18. Estimated production is 4.56 MMT. For MY19/20, Post forecasts production area at 1 million ha, with total production reaching 4.85 MMT.

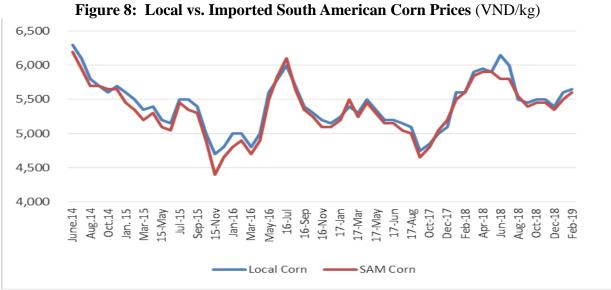
| | Unit | MY 201 | 7/2018 | MY 201 | 8/2019 | 2019/2020 |
|----------------|----------|--------|--------|----------|---------|-----------|
| | | Old | New | estimate | Revised | Forecast |
| Harvested area | 1,000 ha | 1,050 | 1,039 | 850 | 950 | 1,000 |
| Yield | MT/ha | 4.65 | 4.72 | 4.65 | 4.80 | 4.85 |
| Production | 1,000 MT | 4,883 | 4,905 | 3,953 | 4,560 | 4,850 |

Table 3: Vietnam Corn Production in MY 2017/2018, 2018/2019 and forecast 2019/2020

Source: MARD / Post Estimate

DOMESTIC PRICES

One of the primary factors driving corn imports into Vietnam is the lower price of imported corn. In general, local corn prices track international prices, regardless of the season. Current low prices are discouraging farmers from expanding their corn planting area.



Source: US Grain Council Representative Office in Vietnam

CONSUMPTION

In Vietnam, 90 percent of corn is used as a feed ingredient. There are limited alternative uses, such as for cornstarch, brewing, textiles, and pharmaceuticals. In the animal feed industry, corn is used in both the commercial and home-made sectors, mainly for hog and poultry feeds. As noted in the wheat section, feed wheat is the main alternative to corn, and the price differential is the key factor for relative product consumption. In the first half of MY18/19, when wheat prices rose above corn prices, corn was imported at higher volumes, despite the threat of ASF facing the local hog industry.

The consumption of imported corn also depends on the availability of other local products, such as broken rice, rice bran, and cassava. However, in recent years, rice and cassava farmers have focused more on export markets, reducing supply to the animal feed industry.

In MY18/19, Post estimates feed and residual consumption of corn up slightly from the USDA official number to 13.2 MMT, mainly on increases in poultry. However, Post forecasts that feed consumption for corn will decrease in MY19/20 due to ASF.

TRADE / COMPETITION

Imports

Imported corn volume depends on growth in the hog and poultry sectors, local corn supply, and the supply of alternative products. In recent years, the local feed industry has strongly relied on imported corn due to competitive pricing from diverse sources, including the United States, South America, and Eastern Europe.

Post estimates the MY18/19 imported corn volume at 10.2 MMT, 800,000 MT lower than the USDA official estimate, due to the expected spread of ASF. In MY19/20, Post forecasts imports down to 10 MMT on ASF.

Figure 9 shows the main sources of corn exported to Vietnam from January 2017 to March 2019, based on date of arrival. In January 2018, when corn prices from South America became more expensive, traders offered U.S. corn as an option, and approximately 724,000 MT of U.S. corn was booked.

In MY18/19, Post estimates that U.S. corn exports to Vietnam will reach a record 1.7 MMT due to competitive pricing. For MY19/20, Post forecasts that U.S. corn exports to Vietnam will remain strong, reaching approximately 1.5 MMT due to ongoing competitive pricing and the fact that industry is becoming more accustomed to using U.S. corn, though expansion will be tampered down by ASF.

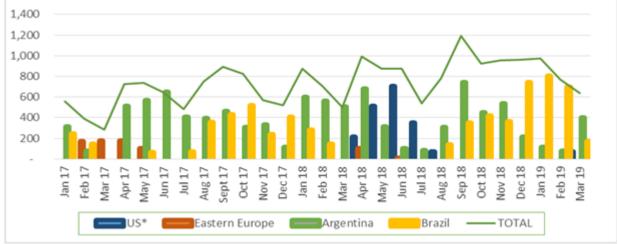


Figure 9: Vietnam's Corn Imports from Main Sources, January 2017- March 2019 (TMT)

Source: * U.S. source: USDA Export Sales Reporting; other, trade sources

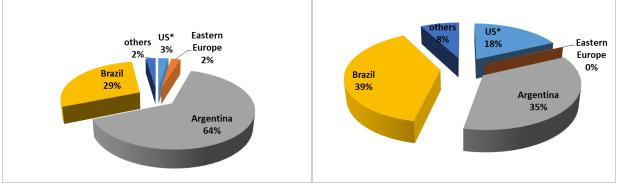


Figure 10: Vietnam's Corn Imports, MY17/18 and MY18/19

Source: Trade

Exports

According to industry, Vietnam exports some of its locally produced corn to China via border trade; however, there is no official data on the total volume. In MY17/18, Post estimated that Vietnam exported approximately 500,000 MT of corn to China. Sources stated that China is tightening its border in MY18/19 and MY19/20. However, Post estimates that the border trade volume will remain steady at 500,000 MT, as traders will export corn by both road and sea. Post also notes shipments of corn from Vietnam to the Philippines, where buyers can enjoy preferential ASEAN tariffs.

Imports of DDGS

The United States continues to be the dominant supplier of DDGS to the Vietnam market, where it is used for animal feed. The import volume of DDGS in MY17/18 was approximately 690,000 MT. Post estimates MY18/19 imports at 960,000 MT, and forecasts MY19/20 imports at 1.2 MMT.

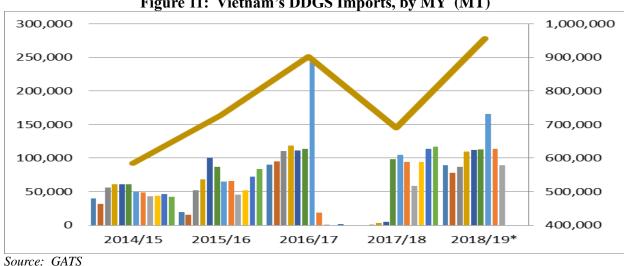


Figure 11: Vietnam's DDGS Imports, by MY (MT)

STATISTICAL TABLES

Vietnam's Production, Supply, and Demand for Rice

| Rice, Milled | 2017/20 | 18 | 2018/20 | 19 | 2019/20 | 20 | |
|-----------------------------|------------------|-------------|------------------|-------------|------------------|-------------|--|
| Market Begin Year | Jan 202 | 18 | Jan 20 1 | 18 | Jan 2019 | | |
| Vietnam | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post | |
| Area Harvested | 7690 | 7645 | 7760 | 7550 | 0 | 7550 | |
| Beginning Stocks | 967 | 967 | 1248 | 734 | 0 | 945 | |
| Milled Production | 28471 | 27657 | 29069 | 27711 | 0 | 28178 | |
| Rough Production | 45554 | 44251 | 46510 | 44338 | 0 | 45085 | |
| Milling Rate (.9999) | 6250 | 6250 | 6250 | 6250 | 0 | 6250 | |
| MY Imports | 400 | 500 | 400 | 500 | 0 | 500 | |
| TY Imports | 400 | 500 | 400 | 500 | 0 | 500 | |
| TY Imp. from U.S. | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Supply | 29838 | 29124 | 30717 | 28945 | 0 | 29623 | |
| MY Exports | 6590 | 6590 | 7000 | 6000 | 0 | 6500 | |
| TY Exports | 6590 | 6590 | 7000 | 6000 | 0 | 6500 | |
| Consumption and Residual | 22000 | 21800 | 22200 | 22000 | 0 | 22400 | |
| Ending Stocks | 1248 | 734 | 1517 | 945 | 0 | 723 | |
| Total Distribution | 29838 | 29124 | 30717 | 28945 | 0 | 29623 | |
| Yield (Rough) | 5.9238 | 5.7882 | 5.9936 | 5.8726 | 0 | 5.9715 | |

PRODUCTION

| Marketing Year | 2017/ Rev | | 2018/ Estin | | | 2019/2020 Forecast | |
|----------------------|--------------|--------|----------------|--------|-----|-----------------------|--|
| Harvested Area (THA) | Old | New | Old | New | Old | New | |
| Winter ¹ | 1,700 | 1,700 | 1,700 | 1,650 | | 1,650 | |
| Spring ² | 3,100 | 3,100 | 3,100 | 3,100 | | 3,100 | |
| Autumn ³ | 2,845 | 2,845 | 2,900 | 2,800 | | 2,800 | |
| TOTAL | 7,645 | 7,645 | 7,700 | 7,550 | | 7,550 | |
| Yield (MT/HA) | | | | | | | |
| Winter | 4.90 | 4.90 | 4.95 | 4.95 | | 4.97 | |
| Spring | 6.62 | 6.62 | 6.70 | 6.70 | | 6.75 | |
| Autumn | 5.41 | 5.41 | 5.70 | 5.50 | | 5.70 | |
| AVERAGE | 5.79 | 5.79 | 5.94 | 5.87 | | 5.97 | |
| Production (TMT) | | | | | | | |
| Winter | 8,330 | 8,330 | 8,415 | 8,168 | | 8,200 | |
| Spring | 20,522 | 20,522 | 20,780 | 20,770 | | 20,925 | |
| Autumn | 15,400 | 15,400 | 16,530 | 15,400 | | 15,960 | |
| TOTAL | 44,252 | 44,252 | 45,725 | 44,338 | | 45,085 | |

Table 4: Vietnam's Area, Yield, and Production for Rough Rice (as of March 2019)

¹ Lua Mua (10th Month), ² Winter-Spring, ³ Summer-Autumn *Source: MARD, Post estimates*

For MY17/18, Post revises total paddy production down 1.3 MMT from the USDA official number, from 45.6 MMT to 44.3 MMT, or for milled equivalent, from 28.5 MMT to 27.7 MMT. This is due mainly to an estimated smaller harvested area for the Autumn crop in the Mekong River Delta (MRD) and lower yields for the Winter and Autumn crops from a previous Post estimate.

For MY18/19, Post revises total paddy production down 2.2 MMT compared to the USDA official number, from 46.5 MMT to 44.3 MMT, or for milled rice equivalent, down about 1.3 MMT, from 29.1 MMT to 27.7 MMT. This is mainly due to an estimate of smaller harvested area for the Autumn crop in the MRD and the winter crop and lower yields for the Autumn crop.

For MY19/20, Post forecasts total production at 45.1 MMT, about 0.8 MMT higher than Post's MY18/19 estimate, due mainly to higher yields from Spring and Autumn crop.

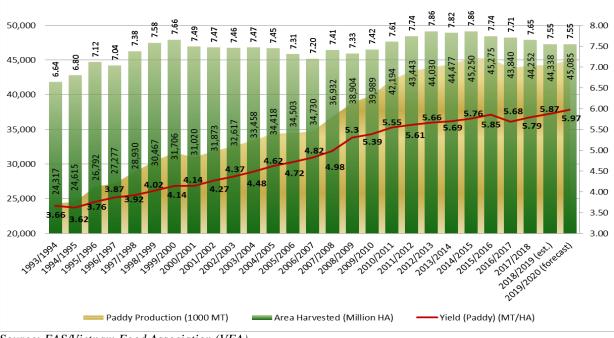


Figure 12: Vietnam Area, Yield, and Paddy Production, 1993-2019

Source: FAS/Vietnam Food Association (VFA)

Mekong River Delta

More than 90 percent of Vietnam's rice exports come from the MRD, where farmers plant intensively, at three crops per year. With about 1.6 million ha. of land suitable for rice planting, farmers generally plant from 4.1 to 4.2 million ha of rice annually.

The Winter crop cycle is usually six months, as farmers grow long-duration, traditional varieties. In terms of planted and harvested area, it is the most stable, though farmers sometimes scale the area down.

The Spring crop is the main, largest crop in the MRD and can reach the maximum planted area of 1.6 million ha. The Main Autumn comes directly after the harvest of the Spring crop and can reach the same size as the Spring crop. However, it usually has a lower yield due to many factors, such as pest and disease, and lower quality because of the rainy season. In addition, the selling price of Main Autumn paddy is usually lower than the other crops because it is harvested at the same time as rice from other countries in the region. Recently, the government has been encouraging farmers to use land devoted to the Main Autumn crop for other purposes. Therefore, in the MRD planted area fell from 1.6 million ha. in MY17/18 to 1.5 million ha. in MY18/19 (see Table 5).

The Late Autumn crop, planted only in the MRD, appears right after the Main Autumn crop in areas not affected by annual flooding. In MY18/19, Post estimates harvested area at a maximum of 800,000 ha., due to high water levels which limited the expansion of the planting area (see Table 5). The selling price for Late Autumn crop paddy is generally higher than the price of Main Autumn crop paddy.

Table 5: Rice Production in the Mekong Delta by Marketing Year (000 ha; mt/ha; 000 mt)

| 2017/2018 (Revised) 2018/2019 (Estimate) 2019/2020 (forecast) | | 2017/2018 (Revised) | 2018/2019 (Estimate) | 2019/2020 (forecast) |
|---|--|---------------------|----------------------|----------------------|
|---|--|---------------------|----------------------|----------------------|

| | Area | Yiel d | Prod. | Area | Yiel d | Prod. | Area | Yiel d | Prod. |
|----------------------|-----------|-----------|------------|------------------|-----------|------------|-----------|-----------|------------|
| Winter | 180 | 4.60 | 828 | 180 | 4.60 | 828 | 180 | 4.60 | 828 |
| Spring | 1,57 4 | 6.92 | 10,89 2 | 1,59 5 | 6.90 | 11,00 6 | 1,59 5 | 6.95 | 11,08 5 |
| Autumn (in which) | 2,39 0 | 5.77 | 13,78 5 | 2,30 0 | 5.83 | 13,40 5 | 2,30 0 | 5.90 | 13,56 5 |
| Main Autumn | 1,60 0 | 5.90 | 9,440 | 1,50 0 | 5.95 | 8,925 | 1,50 0 | 5.95 | 8,925 |
| Late Autumn | 790 | 5.50 | 4,345 | 800 | 5.60 | 4,480 | 800 | 5.80 | 4,640 |
| Total | 4,14 4 | 6.15 | 25,50 5 | 4,07 5 | 6.19 | 25,23 9 | 4,07 5 | 6.25 | 25,47 8 |

Source: MARD, Post estimate

CONSUMPTION

Rice is the main staple food in Vietnam. Vietnam's decline in per capita rice consumption is consistent with other countries in Asia. As the economy develops, consumers have greater purchasing power and more access to other foods and per capita consumption declines.

According to Food and Agriculture Organization (FAO) data, per capita rice consumption is about 145 kilograms (kg), with consumption lower in urban areas. However, due to population growth, Post estimates that Vietnam needs an additional 150,000-200,000 MT of rice each year to meet domestic consumption demands.

Post's per capita consumption is over 200 kg in the PSD table. Part of this is due to "residual" volume, which is actually the unrecorded volume of border trade, estimated at about 1 MMT of milled rice in both MY18/19 and MY19/20.

STOCKS

There is no official number for Vietnam's rice stocks. Post estimates rice carry-over stocks in MY18/19 at 945,000 MT and forecasts 723,000 MT in MY19/20.

TRADE / COMPETITION

Domestic Prices

Domestic price fluctuations depend on several factors: the availability of paddy harvested from different crops during the year; export demand; and, the overall carry-over stock/ending stocks. Generally, paddy prices drop to their lowest point two times per year, once at the peak harvest of the Spring crop (March-April), and also at peak harvest of the Main Autumn crop (June-July). The harvest of the Spring paddy crop in the MRD starts at the end of January (see Figure 13).

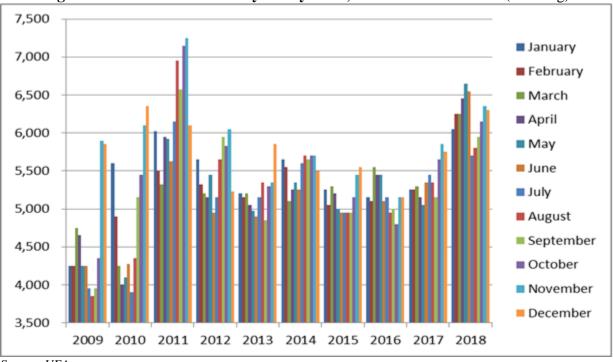


Figure 13: Vietnamese Monthly Paddy Price, MY08/09 to MY17/18 (VND/kg)

Local price trends in MY17/18 were different from MY16/17. In MY17/18, prices rose from the beginning of the year, reaching their highest levels in May (see Figure 12). Prices dropped in July, but climbed steadily until the end of the year. This demonstrates that demand was very high in MY17/18 and that rice stocks were low near the end of the harvest of the MY17/18 Spring to Autumn crop.



Figure 14: Vietnamese Paddy Price, first three months of 2009-2018 (VND/kg)

Source: VFA

Source: VFA, Post's calculations

In January 2019, prices dropped to about VND 5,500 per kg and dramatically dropped further to about VND 4,300- 4,400 per kg in February due to very low export demand, especially from China (see Figure 14). Paddy prices bounced back in March 2019 on demand from many of Vietnam's traditional buyers, including the Philippines, Malaysia, Cuba, as well as Middle Eastern and African countries.

Exports

Post revises the MY18/19 export volume down from 7.0 MMT to 6.0 MMT, due to lower rice production. For MY19/20, Post forecasts export volume to reach 6.5 MMT, due to expected increased production.

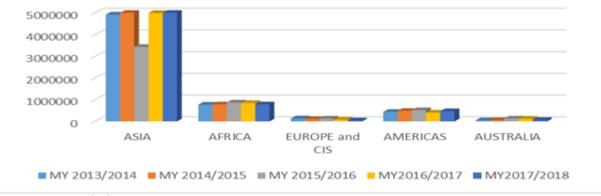


Figure 15: Vietnam's Rice Exports, by destination, MY13/14 to MY 17/18 (MT)

In MY17/18, Asia remained the largest market for Vietnam rice exports, followed by Africa, the Americas, Australia, and Europe. Rice export volumes were up in Asia and the Americas, but slightly down everywhere else (see Figure 15).

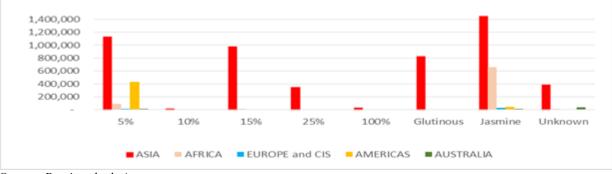


Figure 16: Vietnam's Rice Exports, by grade and destination, MY17/18 (MT)

Asian markets continued to import diverse grades of Vietnamese rice (see Figure 16). After Asia, Australia, has imported the most Japonica rice (other/unknown rice).

Source: Post's calculation

Source: Post's calculation

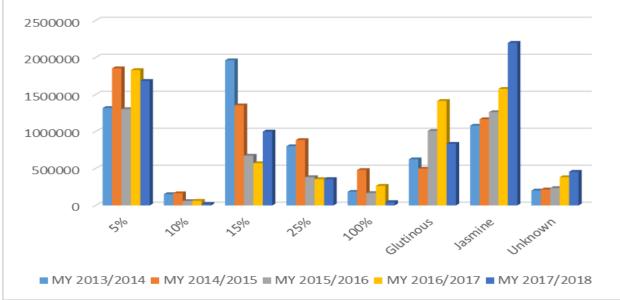


Figure 17: Vietnam's Rice Exports, by grade, MY13/14 to MY17/18 (MT)

Over the past five MYs, Vietnam has exported major volumes of 5 percent broken rice to Cuba and the Philippines (see Table 6). Jasmine mainly went to China, African countries, and Iraq, and other rice (Japonica) mainly went to Australia. In MY17/18, there were sharp declines in exports of glutinous, 100 percent broken, and 10 percent broken rice, while 25 percent broken was stable at low levels, and 15 percent broken bounced back to nearly 1 MMT due to high demand from the Indonesian market (see Figure 17).

| | 5% | 10% | 15% | 25% | 100% | Glutinou s | Jasmine | Unknow n | Total |
|-------------|---------------|------------|-------------|-------------|------------|---------------|---------------|-------------|---------------|
| ASIA | 1,137,22 3 | 17,99 1 | 984,25 6 | 353,96 4 | 35,23 8 | 831,980 | 1,457,17 1 | 394,256 | 5,212,07 9 |
| Indonesia | 117,950 | - | 611,65 0 | - | - | 39,669 | 35,572 | 2,289 | 807,130 |
| Philippines | 513,167 | 8,760 | 79,768 | 321,29 4 | 2,624 | 64,815 | 149,254 | 675 | 1,140,35 7 |
| Malaysia | 226,461 | 7,330 | 228,89 5 | 513 | 10,01 2 | 32,282 | 150,586 | 10,035 | 666,114 |
| Singapore | 19,142 | - | 1,056 | 550 | 3,860 | 2,758 | 60,967 | 6,245 | 94,578 |
| East Timor | 3,650 | - | 53,610 | - | - | - | 4,468 | 75 | 61,803 |
| Iraq | - | - | - | - | - | - | 270,000 | - | 270,000 |
| Iran | _ | _ | _ | _ | - | - | 138 | 12 | 150 |
| Syria | 69,377 | - | - | - | - | - | - | - | 69,377 |
| Yemen | 390 | - | _ | _ | - | - | _ | - | 390 |

Source: Post's calculation

| 1 | 1 | 1 | | | 1 | | |
|--------|-------------------------|--------|------------|---------|----------|----------------|---------------|
| 5,800 | 12 - | - | - | 4 | 384 | 119,894 | 126,094 |
| - | 668 - | - | - | 75 | 1,402 | 874 | 3,019 |
| - | | - | - | - | 324 | 185 | 509 |
| 532 | 8,090 - | 7,039 | 1 | 2,497 | 95,545 | 4,768 | 128,472 |
| - | 9,338 25 | 141 | - | 680 | 43,908 | 4,653 | 58,745 |
| | | | | | | | |
| 6 - | 5,274 1,426 | 472 | - | 11,548 | 1,530 | 310 | 20,560 |
| - | 23 - | - | - | 33 | 2,118 | 211 | 2,385 |
| - | 17,319 - | - | - | 11 | 134 | 4,350 | 21,814 |
| - | 4,528 - | - | - | 82 | 16,699 | 2,915 | 24,224 |
| 870 | 95,221 450 | 1,240 | 14,34 7 | 674,754 | 600,622 | 30,571 | 1,418,07 5 |
| 1,200 | 4,450 - | _ | _ | 100 | 1,150 | 69 | 6,969 |
| 875 | 32,163 - | 22,715 | 4,394 | 2,672 | 22,370 | 206,125 | 291,314 |
| 10,018 | 90,545 - | 1,671 | 9,297 | 59 | 660,689 | 16,167 | 788,446 |
| | | | | - | | - | |
| - | 1,750 - | - | - | - | 8,788 | - | 10,538 |
| - | | - | 7,525 | - | 375 | | 7,900 |
| - | 4,264 - | - | - | | 772 | 68 | 5,104 |
| - | | - | - | - | - | - | - |
| - | 53,902 - | 1,515 | 1,772 | - | 332,251 | 3,801 | 393,241 |
| - | | - | _ | - | - | - | - |
| _ | 18,000 - | 156 | _ | - | 225,511 | - | 243,667 |
| _ | 175 - | - | - | - | 8,052 | - | 8,227 |
| | | _ | _ | - | 0,032 | - | 0,227 |
| | | - | - | - | - 44.220 | - | - |
| - | 1,650 - | - | - | - | 44,229 | - | 45,879 |
| - | | - | - | - | - | | - |
| - | | - | - | - | 520 | - 79 | 599 |
| - | 23 - | - | - | - | 41 | - | 64 |
| - | | - | - | | - | | - |
| 9,850 | 1,637 - | - | - | - | 66 | 275 | 11,828 |
| - | 399 - | - | - | - | 3,416 | - | 3,815 |
| - | | - | - | - | - | - | _ |
| | | | | - | | 87 | 2,843 |
| | | | | - | 2,000 | - | - |
| | | | | - | - 74 | - | - 74 |
| | 373 - - - - - - - | - | | | | <u>-</u> 2,383 | 2,383 87 |

| Guinea Bissau | - | - | - | - | - | - | - | - | - |
|----------------------------|---------|-------|--------|--------|-------|---------|----------|---------|----------|
| Madagascar | - | - | - | - | - | - | - | 10 | 10 |
| Mali | - | - | - | - | - | - | - | - | - |
| Mauritania | 15 | - | - | - | - | 2 | 657 | 6 | 680 |
| Nigeria | 76 | - | - | - | _ | - | 704 | - | 780 |
| Sierra Leone | 250 | _ | _ | _ | _ | - | 402 | - | 652 |
| Somali | - | | | _ | _ | - | _ | - | _ |
| South Africa | 281 | _ | _ | _ | _ | - | 2,565 | 1,675 | 4,521 |
| Togo | 452 | _ | _ | _ | - | - | 3,775 | - | 4,227 |
| Zambia | | | | | | - | | - | |
| others* | - | - | - | - | - | | - | 10.1.55 | - |
| EUROPE and CIS | 7,298 | - | 168 | - | - | 57 | 26,108 | 10,166 | 43,797 |
| In which: Russia | 12,741 | 1,729 | 395 | 408 | 383 | 951 | 25,455 | 7,447 | 49,509 |
| Ukraine | 5,134 | 1,078 | - | 231 | - | 126 | 1,004 | 2,113 | 9,686 |
| Poland | 209 | - | 200 | - | - | 1 | 453 | 538 | 1,401 |
| | - | - | - | - | - | - | 1,239 | 22 | 1,261 |
| others* | 7,398 | 651 | 195 | 177 | 383 | 824 | 22,759 | 4,774 | 37,161 |
| AMERICAS | 428,794 | - | 2 | 26 | 44 | 222 | 41,054 | 2,685 | 472,827 |
| In which: Cuba | 423,400 | - | 2 | - | - | - | - | - | 423,402 |
| Brazil | 48 | _ | _ | - | _ | 11 | - | 349 | 408 |
| Haiti | - | _ | _ | _ | _ | - | 54 | - | 54 |
| Mexico | - | _ | _ | _ | _ | - | | 125 | 125 |
| Chile | | | | | | 12 | | 455 | |
| Puerto Rico | 25 | - | - | - | - | - 12 | 3 | 455 - | 495 |
| others* | - | - | - | - | - | 105 | - | 1 == - | - |
| AUSTRALIA | 5,321 | - | - | 26 | 44 | 199 | 40,997 | 1,756 | 48,343 |
| In which: | 14,995 | 804 | 3,963 | 253 | 275 | 77 | 14,625 | 34,297 | 69,289 |
| Australia New Caledonia | 2,783 | 604 | 900 | - | 114 | 49 | 4,986 | 3,937 | 13,373 |
| | - | - | - | - | - | 2 | 67 | 65 | 134 |
| New Zealand | 746 | - | 20 | - | 161 | 26 | 959 | 1,184 | 3,096 |
| others* | 11,466 | 200 | 3,043 | 253 | - | - | 8,613 | 29,111 | 52,686 |
| UNKNOWN | | | | | | | | | - |
| | İ | | 998,63 | 356,32 | 45,23 | 833,289 | 2,198,99 | 454,852 | 6,592,15 |

Imports

Due to a drop in production in the MRD and export dynamics in Cambodia, Post estimates that in MY17/18 and MY18/19, Vietnam will import 500,000 MT of Cambodian rice. Post forecasts imports from Cambodia will remain stable in MY19/20.