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Grain and Feed Annual

2108

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Report Highlights:

The marketing year (MY) 2017/18 and MY 2018/19 wheat import volume forecast remains high due to low domestic selling prices and good harvest reports from wheat producing countries. Post forecasts the imported corn volume in MY 2018/19 at 11 million metric tons (MMT), up 2 MMT from the previous year. The increase in corn import volume is both satisfying the growth of the local feed industry and filling the local corn production shortage. Post forecasts MY 2018/19 total paddy rice production to reach 45.88 MMT or 28.68 MMT of milled rice equivalent. Post estimates the MY 2017/18 export volume to be at 6.7 MMT, and for MY 2018/19, forecasts 6.9 MMT.

SITUATION AND OUTLOOK

Despite the difficult time for Vietnam's husbandry industry in recent years, the Vietnam feed industry is still expected to grow at the modest rate of about 3 percent annually. For a discussion of recent developments in the sector, please see GAIN VM7016, the 2017 Vietnam Grain and Feed Annual. The growth in the feed sector is supported by the development of the aquaculture industry, which has seen growth of 5 to 10 percent in the past year, depending on the production area and sector. For example, the fish industry grew at 5 percent last year, while the shrimp industry grew at 10 percent. The Vietnam feed industry will still need more time to recover, and Post forecasts the MY2018/19 annual growth to remain at 3 percent.

Vietnam is one of world's top pork consuming nations and stands second in Asia after China. Subsequently, the Vietnam hog industry is the key driver of the local feed industry. After the crisis in 2016, the industry faced the challenge of pork prices falling below production costs, which forced many small farmers to give up production. Currently, the market is only for big players with a more fully integrated production cycle, as they are able to continue production on a very tight margin.

For corn, local producers are facing challenges from competitively priced corn from major producers, such as Argentina and Brazil. Since 2014, international corn prices have been lower than prices for Vietnamese corn. In the coming years, the imported corn volume will rise; Post forecasts that corn import volume will reach a record high of 11 million metric tons (MMT) in MY 2018/19.

Under the right conditions, feed wheat can be an alternative feed source in place of corn. Imports of feed wheat depend greatly on its price competitiveness with corn. In MY 2016/17 and MY 2017/18, Post estimates that feed wheat imports increased sharply due to its price competitiveness. However, feed wheat cannot totally replace corn in the feed industry. Initially, feed wheat was almost exclusively used in aquaculture. Currently, due to the competitive price of feed wheat, it is becoming a crucial ingredient in producing compound feed for both aquaculture and livestock. Post forecasts that 2018/19 wheat imports will remain high, at 4.5 MMT, due to the competitive price of feed wheat, compared to corn, and growth in the animal and aquaculture feed sector.

Vietnam feed industry summary

Table 1: Vietnam Total feed demand from calendar year 2017-2019 *(Unit: metric ton)*

	2017	2018	2019
Animal Feed	23,350,000	23,800,000	24,100,000
Aqua feed	5,750,000	6,200,000	6,800,000
Total Feed	**29,100,000**	**30,000,000**	**30,900,000**
Manufactured	**20,520,000**	**21,900,000**	**22,800,000**
Animal Feed	17,220,000	18,000,000	18,500,000
Aqua feed	3,300,000	3,900,000	4,300,000
Home made	**8,580,000**	**8,100,000**	**8,100,000**
Animal Feed	6,080,000	5,600,000	5,600,000
Aqua feed	2,500,000	2,500,000	2,500,000
Total Feed	**29,100,000**	**30,000,000**	**30,900,000**

Source: FAS-VN estimate

Table 2: Source of feed ingredients supplied for Vietnam feed industry, CY 2017-2019
(Unit: metric ton)

	CY 2017	CY 2018	CY 2019
Import (1)	**16,300,000**	**19,500,000**	**21,900,000**
Soybean Meal	5,800,000	6,200,000	6,400,000
Corn	5,700,000	9,000,000	10,250,000
DDGS	800,000	1,000,000	1,200,000
Feed wheat	2,600,000	1,800,000	2,500,000
Other meal/bran	700,000	690,000	700,000
Others (MBM, FM, …)	700,000	810,000	850,000
Local supply (2)	**11,300,000**	**9,000,000**	**9,000,000**
Corn	5,000,000	3,000,000	3,000,000
Rice bran	5,000,000	5,000,000	5,000,000
Broken rice	500,000	500,000	500,000
Cassava	800,000	500,000	500,000
Imported feed (3)	**1,500,000**	**1,500,000**	**1,500,000**
Grand Total (4)	**29,100,000**	**30,000,000**	**30,900,000**
Manufactured feed (5)	**20,520,000**	**21,900,000**	**22,800,000**
Home-made feed (6)*	**8,580,000**	**8,100,000**	**8,100,000**

Source: FAS-VN estimate

(4) = (1)+(2)+(3)
***: include local crushed from imported beans**
****: (6) = (4)-(3)-(5); Source: Post's estimate**

In recent years, the Vietnam feed industry has relied heavily on imported ingredients. In calendar year (CY) 2018, an estimated 70 percent of total raw material volume, including manufactured feed, was imported. Post forecasts for CY19 that over 76 percent of total material volume will be imported, as the feed industry continues to grow. The imported raw materials include soybean meal, corn, DDGS, various other kinds of meals and bran like copra, canola, rape seed, and wheat bran. Imported ingredients also include animal protein sources like meat and bone meal (MBM) and fish meal.

Local supplies for feed include rice bran and broken rice, which are obtained from the local rice industry. The rice milling industry produces approximately 5 MT of rice bran, most of which is used for feed. Broken rice is used in a relatively small volume, of 0.5 MMT per year due to strong competition with the export sector. The use of cassava in feed is falling, from 800,000 MT in CY17 to 500,000 MT in both CY18 and CY19, due to flat production, and high demand from export markets, industrial production, and the biofuel industry.

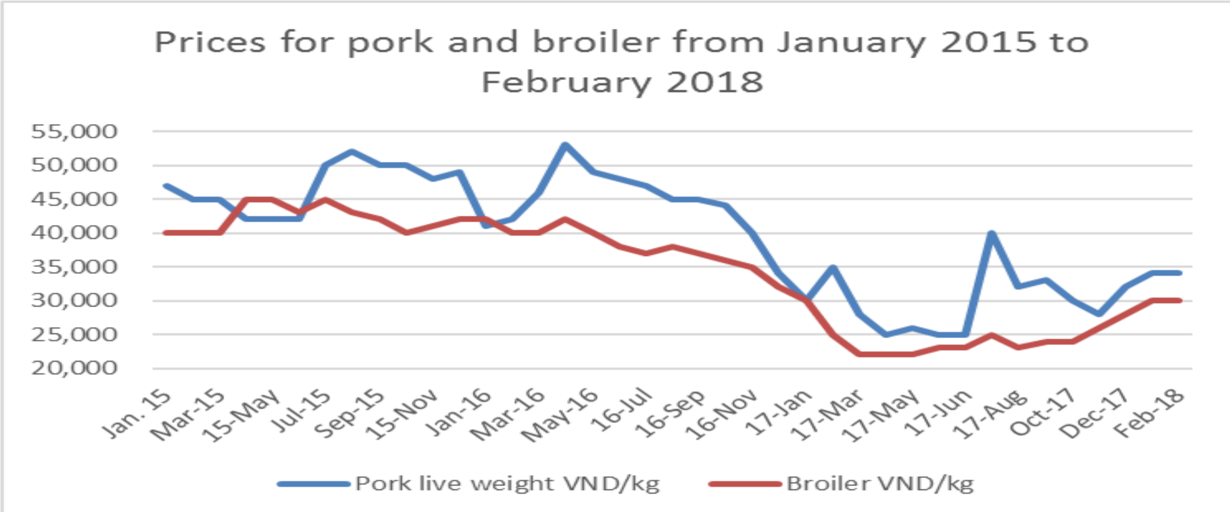
Feed wheat is increasingly becoming an important energy source for the animal feed industry in Vietnam. Feed wheat imports vary from year to year relative to their price competitiveness with corn. In MY 2108/19, Post forecasts that imported feed wheat volume will increase significantly as wheat prices become competitive.

Home-made feed is based mostly on local ingredients, 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 CY18 and CY19, Post estimates that the use of home-made feed will decrease and then flatten. 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.

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 increasing sharply in early CY16, reaching their peak in April and falling quickly from October to January 2017. As of February 2018, pork prices were still lower than VND 35,000 per kilo. According to farmers, production costs range from VND 35,000-40,000 per kilo.

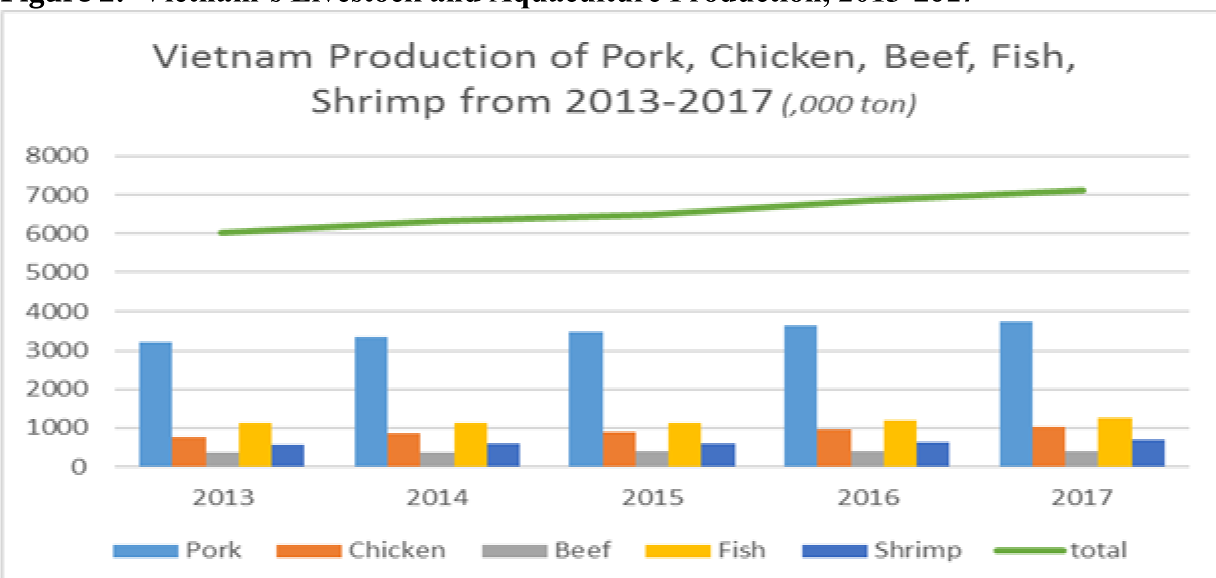
High feed and management costs led to heightened competition between poultry production and other animal protein sources, such as local hogs, fish, and shrimp. As a result, the broiler price only mildly recovered and is still very low compared to CY 2015 and the first half of CY 2016, causing poultry production to rise slowly. Broiler prices are rebounding slightly in late 2017 and early 2018.

Figure 1: Prices for Pork and Broiler Meat, January 2015- February 2018



Source: US Grain Council Representative Office in Vietnam

Figure 2: Vietnam's Livestock and Aquaculture Production, 2013-2017



Source: MARD

Figure 2 shows production of the main protein sources for Vietnam. Aqua-products are mainly exported, while animal proteins are largely consumed domestically. Total meat production is still increasing at a below average rate of 5 percent in CY17 and CY18, due to residual effects from the aforementioned difficult period in CY16 and CY17, while the aquaculture industry has had an average growth of 5-10 percent over the same period. Overall, Post estimates that the total feed industry will grow about 3 percent in both CY18 and CY19.

1. WHEAT

STATISTICAL TABLES

Vietnam's Production, Supply, and Demand for Wheat

Wheat	2016/2017		2017/2018		2018/2019	
Market Begin Year	Jul 2016		Jul 2017		Jul 2018	
Vietnam	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	0	0	0	0	0	0
Beginning Stocks	628	628	1033	1033	0	1083
Production	0	0	0	0	0	0
MY Imports	5546	5546	4200	4200	0	4500
TY Imports	5546	5546	4200	4200	0	4500
TY Imp. from U.S.	187	187	0	100	0	200
Total Supply	6174	6174	5233	5233	0	5583
MY Exports	241	241	300	250	0	250
TY Exports	241	241	300	250	0	250
Feed and Residual	3100	3100	1900	1900	0	2500
FSI Consumption	1800	1800	2000	2000	0	2000
Total Consumption	4900	4900	3900	3900	0	4500
Ending Stocks	1033	1033	1033	1083	0	833
Total Distribution	6174	6174	5233	5233	0	5583
Yield	0	0	0	0	0	0
(1000 HA), (1000 MT), (MT/HA)						

PRODUCTION

Vietnam does not produce wheat.

CONSUMPTION

The MY 2018/19 total wheat consumption forecast remains high as wheat prices are expected to stay low due to larger crops in wheat producing countries in MY2017/18. As noted above, the increase in feed wheat consumption is reflective of the growth in the feed industry and pricing relative to corn. At the same time, increased consumption for milling wheat is driven by the on-going demand for wheat-based products in the fast food industry, which Post expects to flatten in MY 2018/19.

Wheat is the second staple food, after rice, in Vietnam. In large cities, people consume many wheat-based foods, and in recent years the demand for bread/baguette and other baked goods and wheat-based foods has risen. The changes reflect the increasing pace of urbanization and increasing familiarity of consumers with convenience foods. The growing presence of fast food chains in Vietnam, such as such as McDonalds, Dunkin Donuts, and Burger King; western-style cafes; and, the presence of foreign convenience stores, such as Circle K, Aeon, 7-Eleven, and GS 25 are also key factors in boosting the use of wheat-based foods.

While consumption of wheat-based foods is still largely limited to big cities, it is spreading to second-tier cities. As a result, the consumption of milling wheat is still small, but has seen slight and steady increases. This includes an increase in demand for top-quality wheat used for higher quality wheat-based products introduced by western food outlets. As a result, the demand is increasing steadily for U.S. wheat, which is considered as premium quality. Post estimates the total current demand for milling wheat at about 2 MMT per year for both MY 2017/18 and MY 2018/19.

Currently, Vietnam's wheat milling capacity is about 3.4 MMT annually. Strong competition from foreign-owned mills has reduced the number of locally owned mills in Vietnam to only a handful. Given the yearly consumption of 2.0-2.1 MMT, these mills are only running at about 60 percent of the designed capacity. This leads to strong competition in the wheat milling sector and also demonstrates industry is anticipating future wheat consumption growth. The Vietnam milling industry is expected to not only supply its milled flour domestically, but also regionally to other countries in Southeast Asia.

Feed wheat is preferred as an alternative source whenever the price becomes competitive with other energy sources, especially imported corn. Feed wheat functions as a binding factor in feed, especially aqua-feed, as it allows the granules to remain longer in water. It also has higher protein content than other energy sources, such as corn, rice, and cassava. According to local traders, when feed wheat prices fall below $10 higher than corn prices, many users prefer feed wheat to corn.

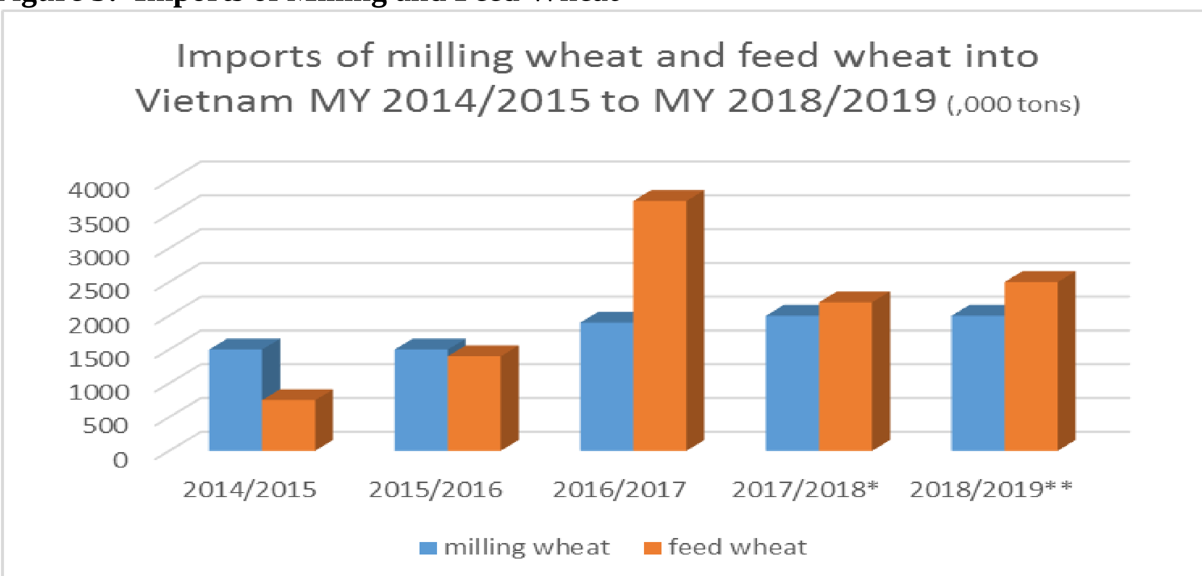
In MY 2018/19, total wheat consumption is forecast at 4.5 MMT, an increase of 600,000 MT over MY 2017/18, primarily due to increased feed use.

TRADE / COMPETITION

Import
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), which entered into force in January 2016. The Vietnam-Eurasia Economic Union (VN-EAEU) FTA, effective in October 2016 also brings zero import duty wheat from Russia, Belarus, Kazakhstan, Armenia, and Kyrgyzstan into Vietnam.

In MY 2016/17, Post estimates, of the about 5.5 MMT of imported wheat, milling wheat is about 1.9 MMT and the outstanding 3.7 MMT is feed wheat. In MY 2017/18, Post estimates Vietnam's wheat import volume at 4.2 MMT, a decrease of more than 1.3 MMT compared to MY 2016/17, due to reduced usage of feed wheat. Of this amount, milling wheat accounted for 2.0 million tons and feed wheat accounted for 2.2 million tons. For MY 2018/19, imported volume is forecasted at 4.5 MMT, due to the increased use of feed wheat. Milling wheat is 2.0 MMT, and feed wheat is 2.5 MMT.

Figure 3: Imports of Milling and Feed Wheat



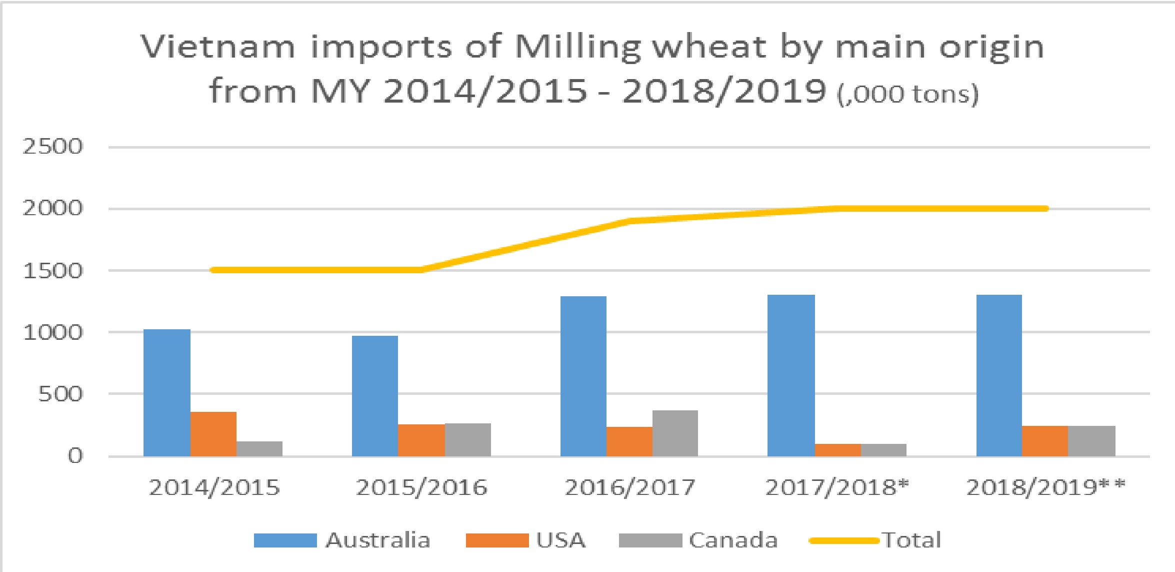
**, **: estimate and forecast*
Source: Trade

Australian milling wheat has traditionally dominated the wheat import market in Vietnam. On average, Australian wheat accounts for over 70-80 percent of Vietnam's total wheat imported volume.

U.S. wheat is only imported as milling wheat, and is considered as high quality. It is used by Vietnamese mills for blending as a cost-effective way to improve the quality of their flour products. The recent year-on-year volumes of U.S. wheat exported to Vietnam are steadily increasing, reflecting the increase in demand for premium quality wheat. Imports of U.S. wheat dropped to 230,000 MT in MY 2016/17 due to Vietnam's plant protection tightening control of U.S. wheat shipments. In MY 2017/18, the import of U.S. wheat is estimated to reach 100,000 MT, and in MY 2018/19 the forecast will be 200,000 MT, due to the increasing demand for high quality wheat.

Vietnam imports around 10,000-15,000 MT of wheat-equivalent wheat-based products like ramen and pasta each year. The volume is still small compared to the volume of wheat for the local wheat milling industry.

Figure 4: Imports of Milling Wheat by Origin

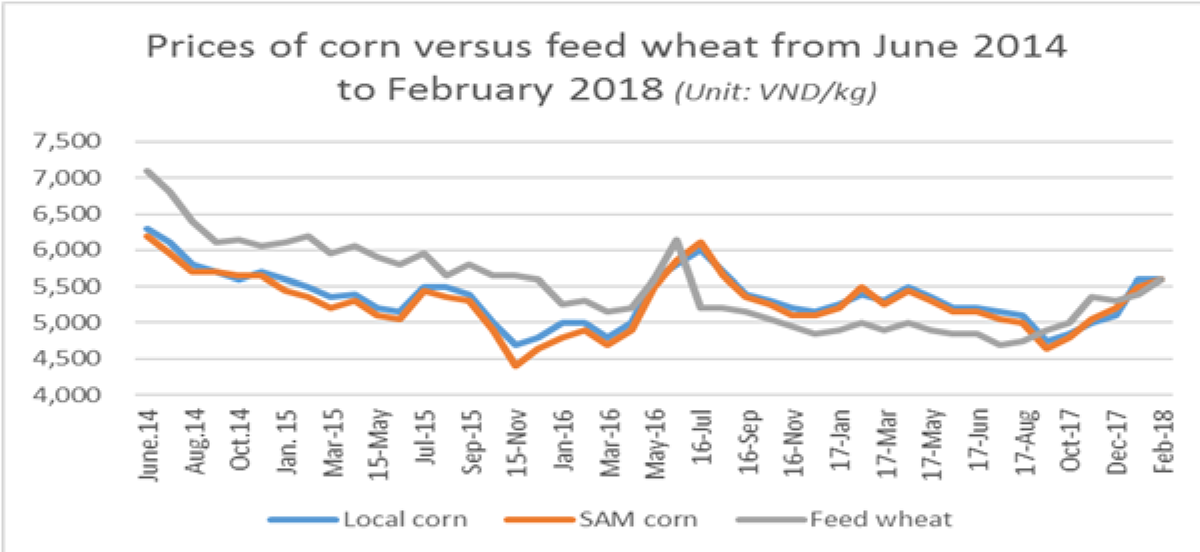


**, **: estimate and forecast*
Source: Trade

Vietnam mainly imports feed wheat from Eastern European countries, such as Romania, Bulgaria, and countries in the Eurasia Economic Union. In MY 2017/18 and MY 2018/19, Post's forecast for wheat import volume remains high due to low selling prices and good harvest reports from wheat producing countries. However, import volumes will also depend on how successfully Vietnam can expand its export of flour products to other markets in the region and the growth prospects of the animal husbandry and aquaculture sectors.

Figure 5 shows that feed wheat prices have been moving with corn prices, though they are recently running lower or at nearly the same level as corn prices. This fall in wheat prices explains the large volume of feed wheat imported into Vietnam.

Figure 5: Prices of Corn versus Feed Wheat

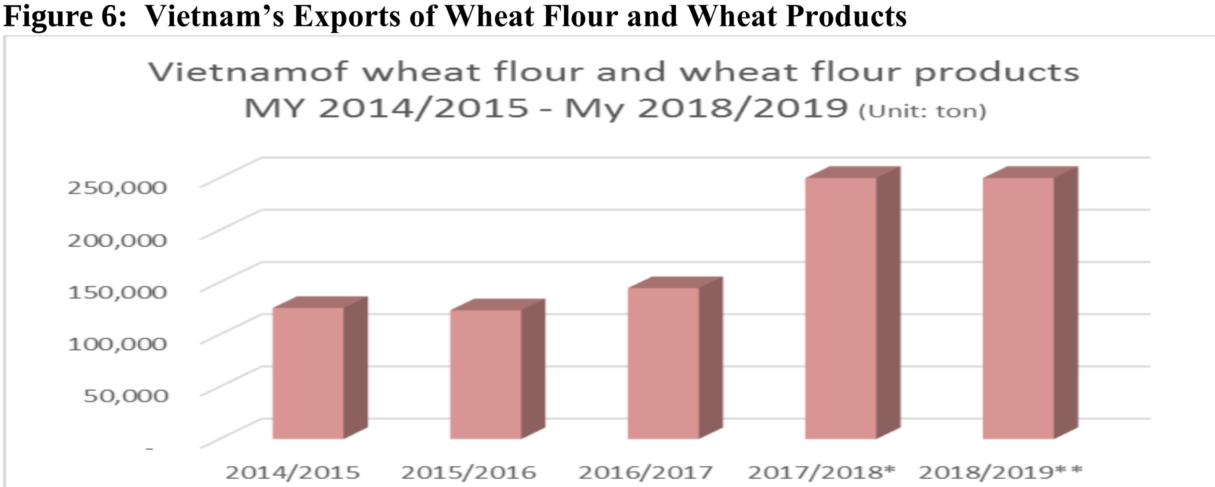


Source: US Grain Council Representative Office in Vietnam

Export

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 will remain flat in MY 2018/19, at 250,000 MT. 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. Small quantities of instant noodles are also exported.

Figure 6: Vietnam's Exports of Wheat Flour and Wheat Products



**, **: estimate and forecast*
Source: GTA

2. CORN

STATISTICAL TABLES

Vietnam's Production, Supply, and Demand for Corn

Corn	2016/2017		2017/2018		2018/2019	
Market Begin Year	May 2016		May 2017		May 2018	
Vietnam	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	1100	1100	1050	1050	0	850
Beginning Stocks	1298	1298	1054	1054	0	1034
Production	5056	5056	4880	4880	0	3953
MY Imports	8100	8100	9000	9000	0	11000
TY Imports	8500	8500	9500	9500	0	11500
TY Imp. from U.S.	111	111	0	300	0	300
Total Supply	14454	14454	14934	14934	0	15987
MY Exports	500	500	500	500	0	500
TY Exports	500	500	500	500	0	500
Feed and Residual	11500	11500	12000	12000	0	13250
FSI Consumption	1400	1400	1400	1400	0	1400
Total Consumption	12900	12900	13400	13400	0	14650
Ending Stocks	1054	1054	1034	1034	0	837
Total Distribution	14454	14454	14934	14934	0	15987
Yield	4.5964	4.5964	4.6476	4.6476	0	4.6506
(1000 HA), (1000 MT), (MT/HA)						

PRODUCTION

In Vietnam, corn has long been the second largest annual crop in terms of acreage. Corn is one of several local crops, such as cassava and broken rice and rice bran, which are 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. Additionally, corn yields are also affected by crop losses due to pests and diseases.

Local corn production has been unable to meet demand in recent years, and coupled with low imported corn prices, this 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 most 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.

Therefore, Post forecasts that corn production area in MY 2018/19 will shrink to as low as 850,000 hectares (ha), or about 200,000 ha less than the production area in MY 2017/18. Post forecasts MY 2018/19 production at about 3.95 million tons, down from 4.8 MMT in MY 2017/18 (see Table 3).

Table 3: Vietnam Corn Production in MY 2016/2017, 2017/2018 and forecast 2018/2019

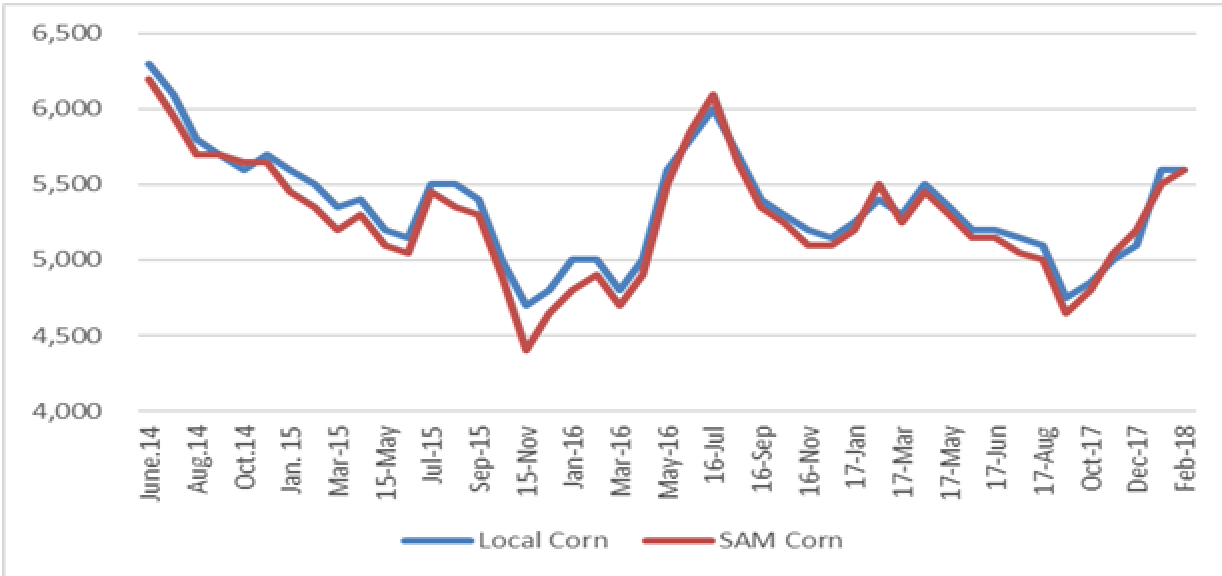
	Unit	MY 2016/2017		MY 2017/2018		2018/2019 Forecast
		Old	New	estimate	Revised	
Harvested area	1,000 Ha	1,100	1,100	1,050	1,050	850
Yield	mt/ha	4.60	4.60	4.65	4.65	4.65
Production	1,000 mt	5,060	5,060	4,883	4,883	3,953

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.

Figure 7: Domestic Price of Local corn and Imported South American Corn (SAM)



Unit: (VND/kg)
Source: US Grain Council Representative Office in Vietnam

CONSUMPTION

In Vietnam, corn is used as the main source of energy ingredient for the animal feed industry, for food use as corn starch, and for limited use by other industries like brewing, textiles, and pharmaceuticals. However, more than 90 percent of corn is used as a feed ingredient. Post estimates the growth in annual consumption of corn for both food and feed at about 200,000- 400,000 MT.

In the animal feed industry, corn is used in both the commercial and home-made sectors, mainly for hog and poultry feeds. Corn use is expected to increase to meet the livestock sector's growth, and the majority of corn in Vietnam comes from imported sources because local corn production is unable to meet the fast-growing demand of the animal feed industry. Imported volume also depends on the availability of other alternative products available locally, such as broken rice, rice bran, and cassava.

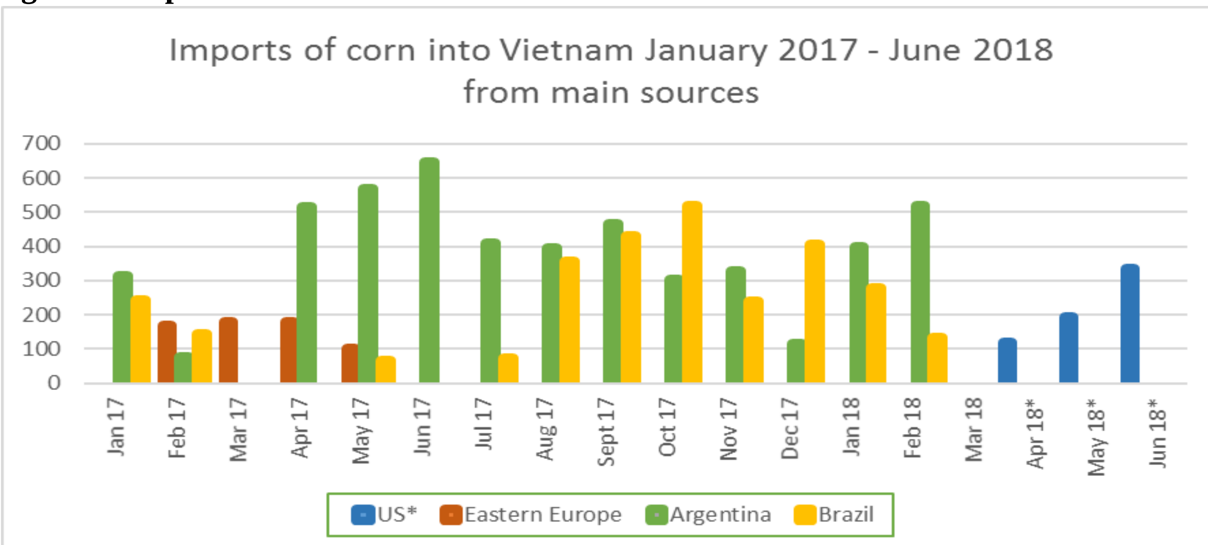
TRADE / COMPETITION

As discussed above, corn has recently faced strong competition from feed wheat, as feed wheat prices have periodically dipped below those of corn. However, in recent years, rice and cassava farmers have focused more on export markets, reducing the supply of broken rice and cassava for the domestic animal feed industry. Therefore, the local feed industry has strongly relied on imported corn to fuel the animal feed sector, due to low corn prices from the United States, South America, and Eastern Europe.

Imported corn volume in MY 2017/2018 is estimated at about 9 million tons. In MY 2018/19, Post forecasts the imported of corn volume at 11 MMT, driven by the growth of the local feed industry and the shortage of local corn.

In MY 2017/18, U.S. corn exports to Vietnam are estimated to reach 650,000 MT on competitive prices compared to South American corn.

Figure 8: Imports of Corn into Vietnam



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

Figure 8 shows the main sources of corn exported to Vietnam from January 2017 to June 2018, based on date of arrival. From January 2017- February 2018, corn was mostly imported from Brazil and Argentina, while about 625,000 MT was imported from Eastern Europe in early 2017. In January 2018, when South American corn became more expensive, traders offered U.S. corn as an option. About 650,000 MT of U.S. corn was booked in from January-March 2018 and is expected to reach Vietnam between April and June. Import numbers from other sources from April to June 2018 are not available.

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. Post estimates exports to China at an estimated 500,000 MT in both MY 2017/18 and MY 2018/19.

Imports of DDGS

The United States continues to be the dominant supplier of DDGS to the Vietnam market. After the import suspension of U.S. DDGS was lifted in September 2017, imports have strongly rebounded due to the high demand from the domestic feed industry. DDGS are used for both an energy and protein source in feed. Import volumes of DDGS in MY 2017/18 are estimated at 500,000 MT and forecasted to rise to 600,000 MT in MY 2018/19 (see Table 4).

Table 4: U.S. Export of DDGS to Vietnam, MY 2014/15-2018/19

		2014/2015		2015/2016		2016/2017		2017/2018 (est.)		2018/2019 (forrecast)	
Product	UOM	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty
Distillers Grains	MT	138,312	584,631	163,176	727,508	179,445	905,172	100,000	500,000	120,000	600,000

Data Source: U.S. Census Bureau Trade Data

RICE

STATISTICAL TABLES

Vietnam’s Production, Supply and Demand for Rice

Rice, Milled	2016/2017		2017/2018		2018/2019	
Market Begin Year	Jan 2017		Jan 2018		Jan 2019	
Vietnam	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	7714	7714	7730	7760	0	7760
Beginning Stocks	1555	1555	967	1000	0	1183
Milled Production	27400	27400	28450	28583	0	28675
Rough Production	43840	43840	45520	45733	0	45880
Milling Rate (.9999)	6250	6250	6250	6250	0	6250
MY Imports	500	500	400	400	0	400
TY Imports	500	500	400	400	0	400
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	29455	29455	29817	29983	0	30258
MY Exports	6488	6455	6700	6700	0	6900
TY Exports	6488	6455	6700	6700	0	6900
Consumption and Residual	22000	22000	22100	22100	0	22200
Ending Stocks	967	1000	1017	1183	0	1158
Total Distribution	29455	29455	29817	29983	0	30258
Yield (Rough)	5.6832	5.6832	5.8887	5.8934	0	5.9124
(1000 HA), (1000 MT), (MT/HA)						

PRODUCTION

Table 5: Vietnam's Area, Yield, and Production for Rough Rice (as of March 2018)

Marketing Year	**2016/2017 Revised**		**2017/2018 Estimate**		**2018/2019 Forecast**	
Harvested Area (t. ha)	**Old**	**New**	**Old**	**New**	**Old**	**New**
Winter[1]	1,700	1,700	1,700	1,700		1,700
Spring[2]	3,074	3,074	3,070	3,100		3,100
Autumn[3]	2,940	2,940	2,960	2,960		2,960
TOTAL	**7,714**	**7,714**	**7,730**	**7,760**		**7,760**
Yield (mt/ha)						
Winter	4.76	4.76	4.95	4.95		4.95
Spring	6.27	6.27	6.50	6.50		6.50
Autumn	5.60	5.60	5.80	5.80		5.85
AVERAGE	**5.68**	**5.68**	**5.89**	**5.89**		**5.91**
Production (t. mt)						
Winter	8,100	8,100	8,415	8,415		8,415
Spring	19,286	19,286	19,955	20,150		20,150
Autumn	16,464	16,464	17,168	17,168		17,316
TOTAL	**43,850**	**43,850**	**45,538**	**45,733**		**45,880**

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

Post forecasts MY 2018/19 total paddy rice production to reach 45.88 MMT, or 28.68 MMT of milled rice equivalent, due mainly to expected yield increases of the second and third crops (Main Autumn and Late Autumn crops) in the Mekong River Delta (MRD). Autumn crop yield is still relatively low compared to the first crop (Spring crop).

For MY 2017/18, total production is estimated at 45.73 MMT, or 28.58 MMT of milled rice, an increase of about 200,000 MT of paddy compared to the previous official estimate. The increase is mainly due to the jump in harvested area for the Spring crop in the MRD, where farmers were expecting good export demand at the beginning of the calendar year. Vietnam grows more than 90 percent of its exported milled rice in the MRD.

<u>Spring Crop</u>
Post estimates the total MY 2017/18 Spring crop harvested area at 3.1 million ha, about 26,000 ha more than the previous Spring crop of MY 2016/2017 due to good weather conditions, sufficient water supply in the MRD, and expected high export prices. However, some areas in the Northern mountainous regions were late in planting due to excess cold temperatures in January. Post forecasts the harvested area for MY 2018/19 spring crop to remain at 3.1 million ha.

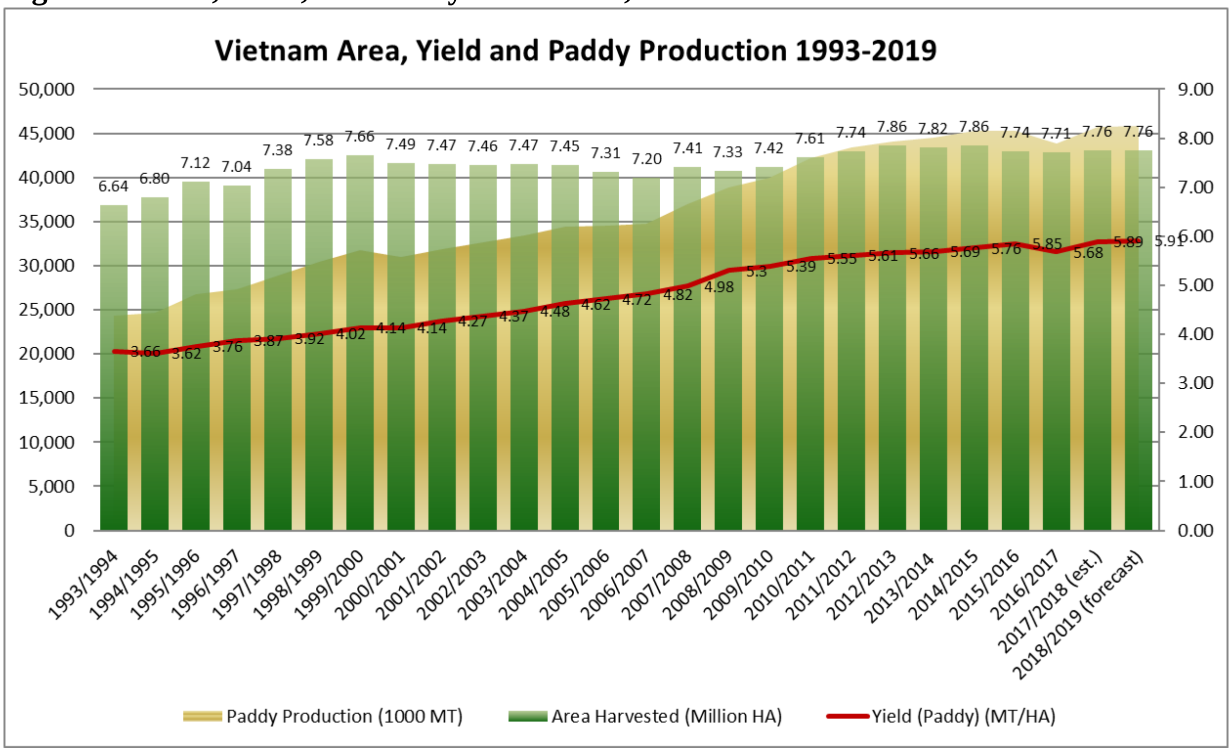
Autumn Crop

The Autumn crop is mainly located in the southern provinces, and the MRD typically accounts for more than 85 percent of the total Autumn crop planting area. Post estimates the total harvested area for MY 2017/18 at 2.96 million ha, of which the MRD accounts for about 2.52 million ha. The harvested area for MY 2018/19 is forecast at the same level as in MY 2017/18.

Winter Crop

In MY 2017/18, Post estimates the harvested area for the Winter crop at 1.70 million ha, and forecasts MY 2018/19 at about the same level. The Winter crop rice is a traditional variety and is grown mainly for local consumption. Rice for local consumption is focused more on quality, rather than a high yield.

Figure 9: Area, Yield, and Paddy Production, 1993-2019



Source: Foreign Agricultural Service, Official USDA Estimates

Mekong River Delta Rice Production in MY 2017/18

The MRD is where more than 90 percent of Vietnam's exported rice is grown. The MRD is also the area with the highest number of crops per year (3 crops or more). MY 2017/18 rice production in the MRD has so far been considered favorable due to suitable weather conditions and good export market prices that have encouraged farmers to increase rice crop inputs. In MY 2017/18, Post estimates MRD production at 26.42 MMT of paddy, or 16.5 MMT of milled rice. In MY 2018/19, Post forecasts about 26.57 MMT, or 16.6 MMT of milled rice, to be produced from the MRD.

Spring Crop

The Spring crop is the first, and also the main, crop of the year. The MY 2017/18 Spring crop is expected to reach a record level due to favorable weather conditions and good export prices.

As of March 20, MRD farmers have harvested about 0.68 million hectares, or about 43 percent of total planted area for their MY 2017/18 Spring crop. Post estimates the harvested area in the region to be 1.575 million ha, up about 40,000 ha from MY 2016/17. The estimated Spring crop production for the MRD is 10.32 MMT of paddy, up about 400,000 MT from MY 2016/17.

Autumn Crop

The Autumn crop consists of Main Autumn and Late Autumn crops. As of March 15, farmers have planted about 300,000 ha of the 1.6 million ha of the Main Autumn crop. The Late Autumn crop appears right after the Main Autumn crop in areas where it is not endangered by annual flooding. According to MARD, the plan for the Late Autumn crop area is robust due to the high selling price of the crop during the harvest, which is off-season with competing countries' harvests. Post estimates the MRD total harvested area for the MY 2017/18 Late Autumn crop at 870,000 ha, an increase of 30,000 ha compared to MY 2016/17.

Post estimates the MY 2017/18 production area for both crops at 2.52 million ha and forecasts the MY 2018/19 steady at 2.52 million ha, bringing the production to 15.28 MMT and 15.42 MMT, respectively, for MY 2017/18 and MY 2018/19.

Winter Crop

The harvested area for the Winter crop in the MRD is forecasted to remain flat in MY 2018/19 at about 180,000 ha.

Table 6: Rice Production in the Mekong Delta by Marketing Year *(000 ha; mt/ha; 000 mt)*

	2016/2017 (Revised)			2017/2018 (Estimate)			2018/2019 (forecast)		
	Area	Yield	Prod.	Area	Yield	Prod.	Area	Yield	Prod.
Winter	**180**	**4.60**	**828**	**180**	**4.60**	**828**	**180**	**4.60**	**828**
Spring	**1,537**	**6.30**	**9,683**	**1,575**	**6.55**	**10,316**	**1,575**	**6.55**	**10,316**
Autumn *(in which)*	**2,490**	**5.86**	**14,601**	**2,520**	**6.06**	**15,276**	**2,520**	**5.74**	**15,424**
Main Autumn	*1,650*	*6.10*	*10,065*	*1,650*	*6.20*	*10,230*	*1,650*	*6.20*	*10,230*
Late Autumn	*840*	*5.40*	*4,536*	*870*	*5.80*	*5,046*	*870*	*5.97*	*5,194*
Total	**4,227**	**5.94**	**25,112**	**4,240**	**6.20**	**26,420**	**4,230**	**6.26**	**26,568**

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 compared to rural areas. However, due to population growth, Post estimates that Vietnam needs an additional 150,000 MT of rice each year to meet domestic consumption demands.

Post's per capita consumption is showing 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 MY 2017/18 and MY 2018/19.

Other factors contributing to Vietnam's increased rice consumption include higher use of rice in home-made animal and aquaculture feeds, and growth in the food processing sector, especially for beer and rice wine.

Post estimates the use of rice for food processing at around 6 MMT per year, with an additional 150,000-200,000 MT increase per year. Rice flour-based food products, such as dumplings, noodles, rice papers, rice flour cakes, beer, and local rice wine production use a large volume of rice.

In the animal feed industry, commercial feed only meets around 70 percent of total demand; the remaining 30 percent is drawn from home-made feed. Rice is one of the main ingredient sources for home-made feed for swine, fish, and poultry, especially in the MRD. Post estimates the increased use of rice for animal feed industry is growing at about 100,000-150,000 MT per year, depending on the price competitiveness of rice compared with other alternative sources, such as corn and cassava.

In total, local rice consumption is increasing at a maximum of 500,000 MT per year.

STOCK

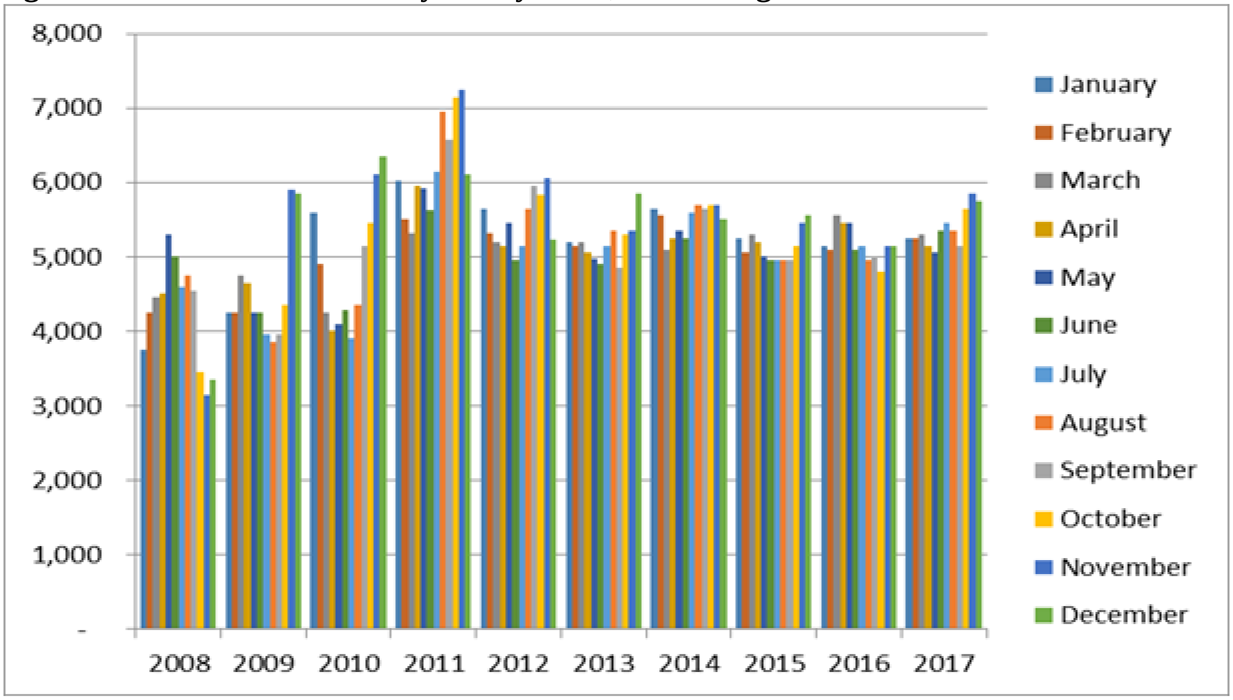
There is no official number for Vietnam's rice stocks. Rice carry-over stocks in MY 2017/18 and MY 2018/19 are estimated to remain around 1 MMT of milled rice; specifically, 1.18 MMT and 1.16 MMT, respectively. According Post's calculation, 1 MMT of milled rice could feed Vietnam's population of 93 million for approximately 28 days.

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.

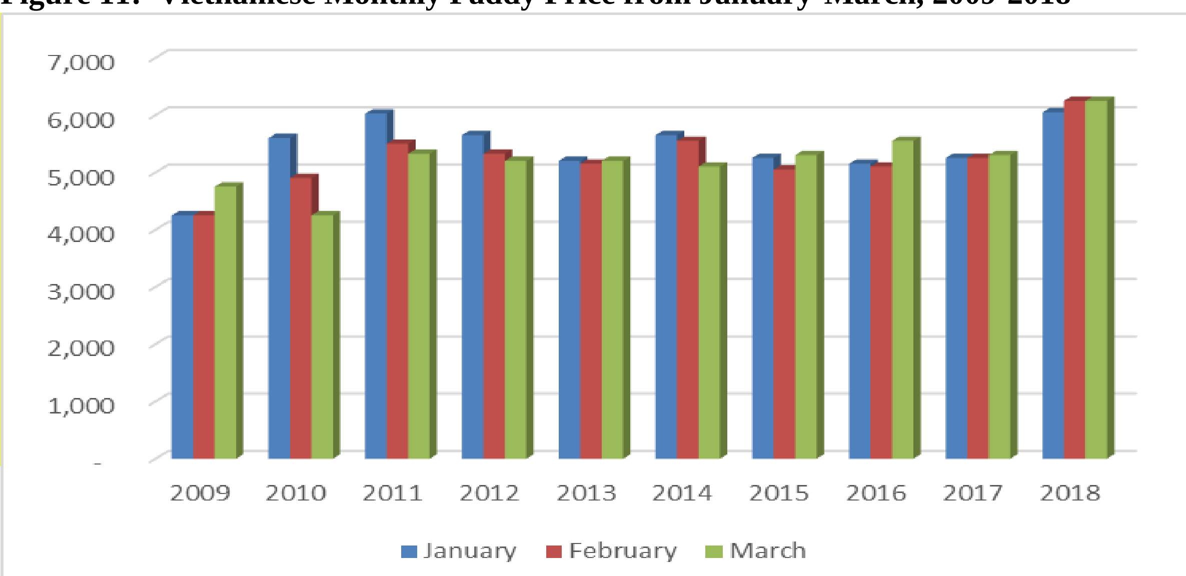
Figure 10: Vietnamese Monthly Paddy Price, Marketing Year 2007/2008-2016/2017



Unit: VND/kg
Source: Vietnam Food Association

Local price trends in MY 2016/17 were different from MY 2015/16. In MY 2017/17, prices trended up at the end of year, reaching their highest levels in November and December. This indicated that demand was very high by end of MY 2016/17 and that rice stocks were low.

Figure 11: Vietnamese Monthly Paddy Price from January-March, 2009-2018



Unit: VND/kg
Source: Vietnam Food Association, Combined data

Figure 11 shows local paddy prices for the first 3 months of the year. In the first quarter of MY 2017/18, paddy prices were at their highest levels in 10 years, despite an expected bumper harvest. However, during the harvest time of the Spring crop in the MRD, prices increased and remained at high levels. This indicates high export demand from conventional export markets and the continuing movement of rice from the MRD to the North for trade across the border.

Exports

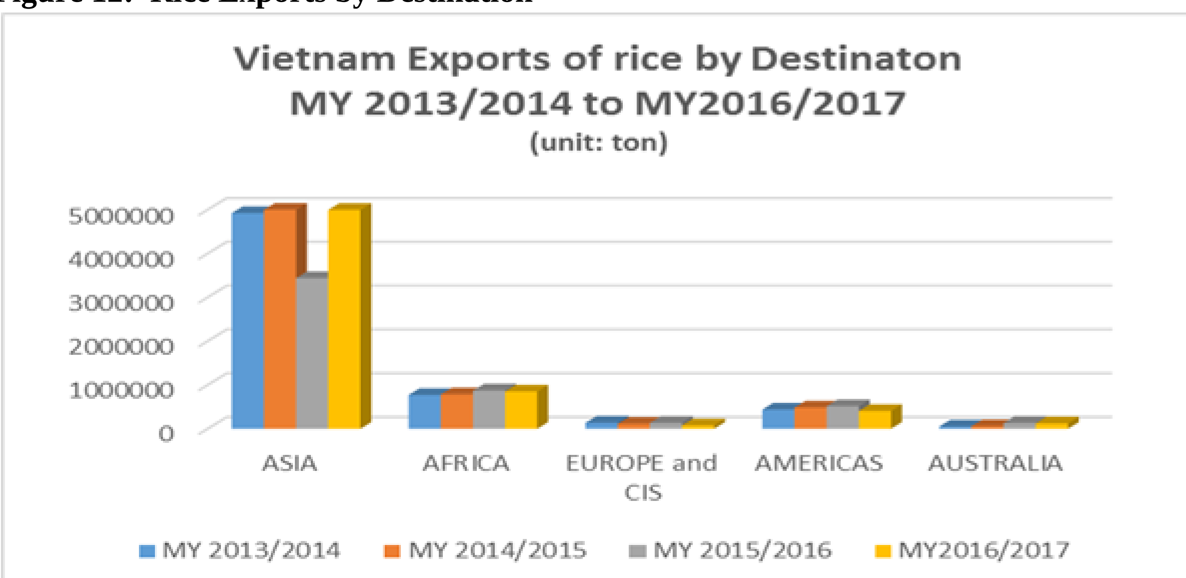
The Vietnam Food Association (VFA) maintains rice export registration requirements and the Minimum Export Price (MEP) based on Ordinance 109/2010/ND-CP.

Post estimates the MY 2017/18 export volume to be 6.7 MMT and forecasts a volume of 6.9 MMT for MY 2018/19, due to high demand from traditional importing countries in Southeast Asia, such as the Philippines, Indonesia, and Malaysia, as well as Bangladesh and Sri Lanka. Cuba and West Africa also remained strong importing markets.

Post estimates MY 2016/17 rice exports at 6.45 MMT, compared to 5.1 million tons in MY 2014/15, an increase of over 26 percent in volume over two years, due to increased export demand.

Asia remained the largest market for Vietnamese rice, receiving approximately 5.0 MMT in MY 2016/17. The proportion of exports going to different regions has remained unchanged in the past 4 years, except in MY 2015/16 when Vietnam's overall production dipped.

Figure 12: Rice Exports by Destination

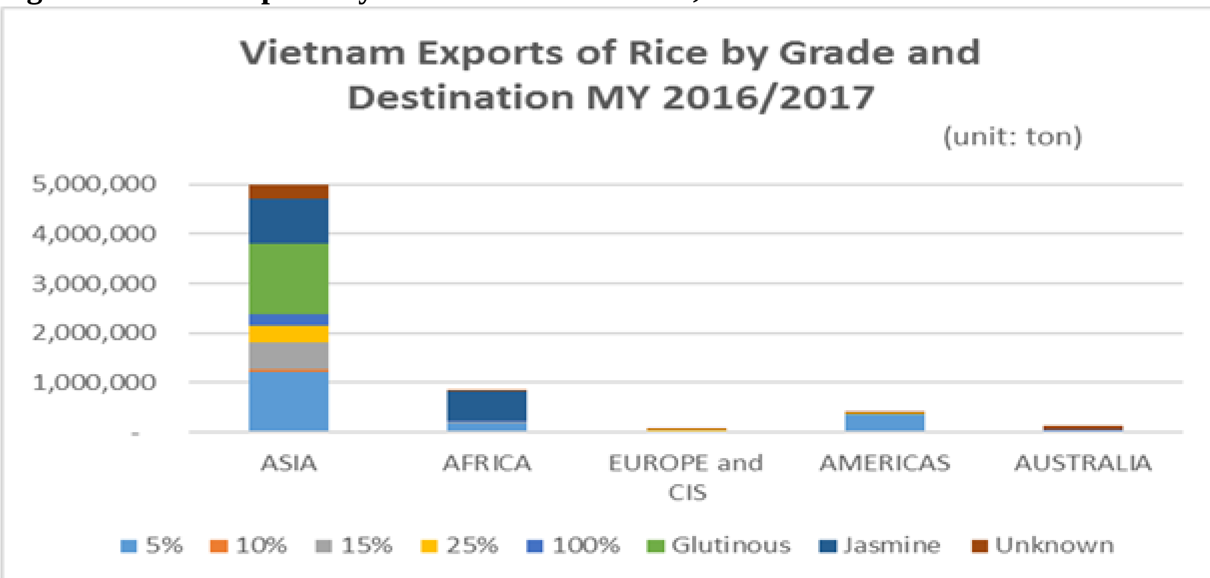


Source: Trade and Vietnam Customs

Within Asia, China remained the top importer of Vietnamese rice with nearly 2.4 MMT of milled rice in MY 2016/17, compared to 1.77 MMT in MY 2015/2016. The Philippines' imports rebounded to over 700,000 MT in MY 2016/17, from only 400,000 MT in MY 2015/16. The Philippines regular annual official import volume is about 1.1-1.2 MMT from all sources.

Vietnam's exports of milled rice to Africa were 851,000 MT in MY 2016/17, compared to 873,000 MT in MY 2015/16. The slight decrease was due to strong competition from India, Thailand, and Pakistan.

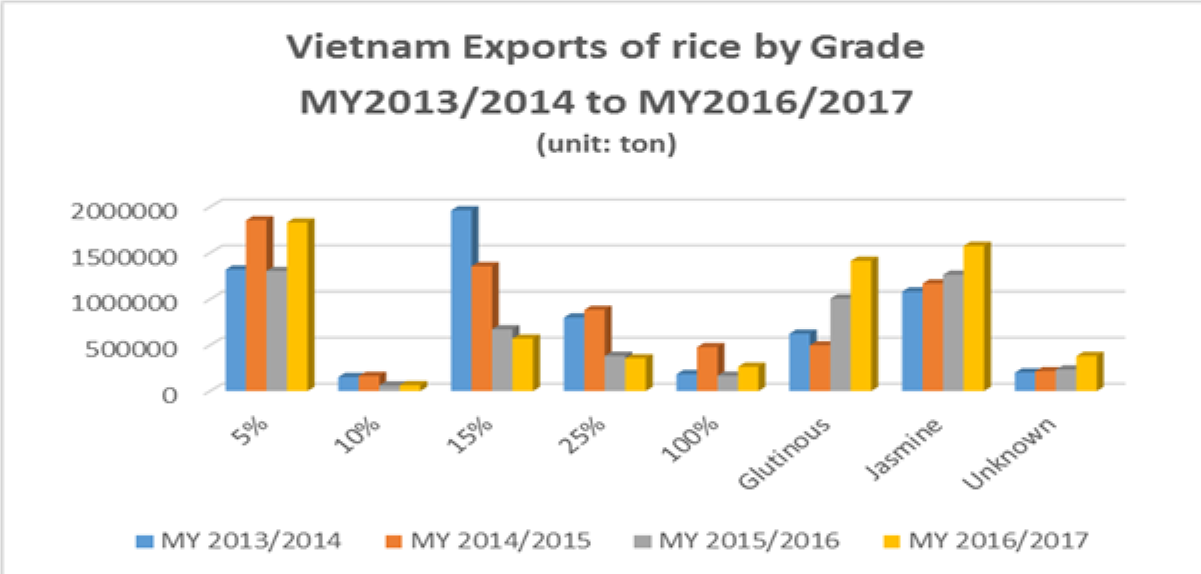
Figure 13: Rice Exports by Grade and Destination, MY 2016/17



Source: Trade and Vietnam Customs

In terms of quality, Vietnam shipped more high quality white rice (5 percent, glutinous, and especially jasmine) and less low quality rice (15 percent, 25 percent, 100 percent) in MY 2016/17, In particular, jasmine export volume increased from about 1.1 MMT in MY 2013/14 to more than 1.5 MMT in MY 2016/17. The same trend holds for glutinous rice, increasing from about 500,000 MT in MY 2013/14 to over 1.4 MMT in MY 2016/17. The increase reflects the Government of Vietnam's goal of increasing rice exports, especially of high value jasmine rice.

Figure 14: Rice Exports by Grade, MY 2013/14-MY 2016/17



Source: Trade and Vietnam Customs

In late December 2016, Vietnam's Plan Protection Department announced that 22 rice exporters were approved by the Chinese General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ). Those exporters could officially export rice into the Chinese market. However, in late 2017, three Vietnamese rice suppliers had their approval suspended due to phytosanitary issues. Vietnamese rice exports to the Chinese market are expected to remain strong in MY 2017/18 and MY 2018/19, reaching about 2.0 to 2.5 MMT, respectively.

Indonesia is coming back to the rice market and is expected to buy more than 1 MMT in MY 2017/18, of which 600,000 to 700,000 MT is likely to come from Vietnam. For Malaysia, Vietnam's market size is about 600,000 to 800,000 MT per year; the Philippines, about 1 MMT per year; African countries, 800,000 to 1 MMT; and, Cuba, about 500,000 MT.

Table 7: Vietnam Rice Export By Grade and Destination, January-December 2017

	5%	10%	15%	25%	100%	Glutinous	Jasmine	Unknown	Total
ASIA	**1,227,977**	**54,534**	**536,847**	**335,247**	**237,090**	**1,407,912**	**914,885**	**280,313**	**4,994,805**
Indonesia	1,083	-	250	-	15,750	-	130	-	17,213
Philippines	321,393	33,648	20,478	264,316	4,756	22,603	36,959	3,220	707,373
Malaysia	354,863	2,012	152,685	100	3,250	28,483	79,083	10,141	630,617
Singapore	41,557	-	2,314	2,005	5,642	10,026	69,764	9,644	140,952
East Timor	13,600	-	112,355	250	-	-	3,859	800	130,864
Iraq	10,471	-	-	-	-	-	180,296	96	190,863
Iran	692	-	-	-	-	-	309	25	1,026
Syria	22,150	-	-	-	-	-	-	-	22,150
Yemen	250	-	-	125	-	-	-	-	375

South/North Korea	3,062	-	-	1,800	-	522	293	87,506	93,183
Japan	316	-	-	-	100	-	177	70	663
Cambodia	-	-	-	-	-	-	-	132	132
Hong Kong	6,586	-	-	18,185	145	1,257	39,298	2,052	67,523
UAE	49,414	-	208	-	-	107	36,010	83,171	168,910
Taiwan	13,716	2,044	-	274	1,000	13,870	906	-	31,810
Bahrain	71	-	-	-	-	33	1,192	151	1,447
Bangladesh	26,077	-	200,700	-	-	3	103	23,319	250,202
Saudi Arabia	6,797	-	-	-	-	118	26,165	22,862	55,942
China	329,493	7,905	40,980	47,459	205,781	1,324,299	418,487	10,295	2,384,699
Brunei	3,325	8,925	6,775	-	-	1,745	4,406	72	25,248
others*	23,061	-	102	733	666	4,846	17,448	26,757	73,613
AFRICA	**180,485**	**540**	**19,618**	**652**	**24,060**	**323**	**614,725**	**10,689**	**851,092**
Tanzania	3,983	-	-	-	-	-	9,795	-	13,778
Senegal	-	-	-	-	23,550	-	1,364	-	24,914
Angola	15,608	-	1,910	-	-	54	48	14	17,634
Rwanda	-	-	-	-	-	-	-	-	-
Ghana	31,331	-	25	-	-	-	413,216	343	444,915
Uganda	-	-	-	-	-	-	-	-	-
Ivory coast	59,001	-	-	-	260	-	126,818	-	186,079
Reunion	238	-	-	-	-	-	6,674	25	6,937
West Africa	-	-	-	-	-	-	-	43	43
Mozambique	5,438	-	3,750	-	250	250	39,484	-	49,172
Yemen	-	-	-	-	-	-	-	-	-
Kenya	2,467	-	-	-	-	-	-	-	2,467
Congo	-	-	-	-	-	-	353	-	353
Libya	475	-	-	-	-	-	-	-	475
Algeria	33,736	540	13,840	-	-	-	77	950	49,143
Benin	-	-	-	-	-	-	597	-	597
Burkina Faso	-	-	-	-	-	-	-	-	-
Cameroon	12,024	-	-	-	-	-	1,671	17	13,712
Gambia	-	-	-	-	-	-	-	-	-
Guinea	-	-	-	-	-	-	-	-	-
Guinea Bissau	-	-	-	-	-	-	-	-	-

Madagascar	-	-	-	-	-	5	18	-	23
Mali	-	-	-	-	-	-	-	-	-
Mauritania	-	-	-	-	-	-	-	-	-
Nigeria	1,978	-	-	-	-	-	416	-	2,394
Sierra Leone	-	-	-	50	-	-	125	520	695
Somali	25	-	-	-	-	-	-	-	25
South Africa	1,000	-	-	-	-	11	2,615	4,254	7,880
Togo	1,403	-	44	50	-	-	2,467	-	3,964
Zambia	-	-	-	-	-	-	-	-	-
others*	11,778	-	49	552	-	3	8,987	4,523	25,892
EU and CIS	**31,517**	**5,562**	**2,452**	**3,129**	**1,246**	**2,017**	**15,643**	**16,519**	**78,085**
Russia	8,440	2,425	1,624	2,500	-	102	-	8,249	23,340
Ukraine	4,423	152	298	-	-	17	640	307	5,837
Poland	724	-	-	-	-	-	739	93	1,556
others*	17,930	2,985	530	629	1,246	1,898	14,264	7,870	47,352
AMERICAS	**354,759**	**1,551**	**8,750**	**16,400**	**-**	**1,520**	**19,847**	**4,594**	**407,421**
Cuba	320,099	1,400	8,750	-	-	-	-	58	330,307
Brazil	48	-	-	-	-	72	145	1,097	1,362
Haiti	18,050	-	-	-	-	-	19	-	18,069
Mexico	-	-	-	-	-	-	-	-	-
Chile	2,225	151	-	-	-	4	81	2,014	4,475
Puerto Rico	-	-	-	-	-	-	-	-	-
others*	14,337	-	-	16,400	-	1,444	19,602	1,425	53,208
AUSTRALIA	**35,347**	**1,021**	**3,203**	**-**	**2,648**	**766**	**10,440**	**69,644**	**123,069**
Australia	2,243	381	-	-	1,717	67	2,718	6,458	13,584
New Caledonia	-	-	-	-	-	2	45	22	69
New Zealand	1,726	-	30	-	299	15	1,093	7,751	10,914
others*	31,378	640	3,173	-	632	682	6,584	55,413	98,502
UNKNOWN									-
TOTAL	**1,830,085**	**63,208**	**570,870**	**355,428**	**265,044**	**1,412,538**	**1,575,540**	**381,759**	**6,454,472**

Source: Trade and Vietnam Customs

Imports

Vietnam imports rice mostly from Cambodia, and a small volume of sticky rice from Laos. Most of Cambodia's shipments occur around the beginning of the calendar year, immediately after its main crop is harvested. In Vietnam, imported paddy is used for local consumption after processing, since most of the rice grown in the MRD is purely for export. Vietnamese farmers also have paddy rice investments in Cambodia ensuring additional rice production, which is used mostly for local consumption in Vietnam.

In the absence of official data, Post estimates MY 2016/17 and MY 2017/18 rice imports from Cambodia at 400,000 MT.