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Taiwan

Grain and Feed Annual

Taiwan Grain Market Shows Resilience in Face of Avian Influenza and Typhoons

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Report Highlights:

Taiwan continues to be a top export market for U.S. grains. In 2016 Taiwan was the 5th largest export market for U.S. corn, 6th largest for wheat and 14th for rice. Corn demand was hurt in MY2016/17 by an avian influenza outbreak, but is expected to quickly rebound.

Executive Summary:

Rice is a traditional crop and is still widely grown across Taiwan. Production has remained stable in the face of falling demand and high production costs due to government subsidies and high tariffs. Taiwan's sub-tropical climate and mountainous terrain are poorly suited to growing wheat and corn. These crops are mostly grown as a rotational crop on rice paddies as a result of government subsidies, and production remains minimal. Rice, corn and wheat production are all forecast to remain relatively stable over the next two years.

Wheat consumption appears to be stabilizing after several decades of growth. Per capita wheat consumption growth has slowed and Taiwan's population is projected to have already peaked, leaving limited room for future growth. Avian influenza (AI) outbreaks in early 2017 are expected to hurt corn demand in MY2016/17, but demand is forecast to recover in MY2017/18 as the poultry sector rebuilds flocks. Government efforts to increase rice consumption appear to have helped stabilize demand for now, but per capita rice consumption remains historically low and is unlikely to significantly increase.

Taiwan continues to be a top export market for U.S. grains. In 2016 Taiwan was the 5th largest export market for U.S. corn, 6th largest for wheat and 14th for rice. Low prices and ample supply in the United States are expected to boost U.S. corn market share to 60 percent in MY2016/17, although it will likely fall back to a more traditional 50 percent share the following year. Wheat growers have developed close relationships with Taiwan millers over the past several decades and work with them closely to meet their individual needs. This has helped the United States maintain roughly three quarters of the wheat market, but trade contacts report that competition from Australia and Canada is growing. The rice market is heavily regulated and controlled by tariff rate quotas (TRQs). Quotas have been filled most years, but high tariffs make out-of-quota imports prohibitively expensive.

Wheat**Production**

Taiwan grows a minor amount of winter wheat with planting in November and harvest in March. Production for MY2017/18 and MY2016/17 is forecast at 6,000 tons on 3,100 acres. The Council of Agriculture (COA) has set a target for increasing wheat production in MY2016/17 to 7,000 tons, but it will likely take several years to achieve this production level. MY2015/16 production is lowered to 4,000 tons on 2,500 hectares based on preliminary COA statistics. Yields can vary widely year to year due to unfavorable weather conditions.

COA initiated a wheat breeding program in 2012 to breed wheat varieties that can adapt to Taiwan's climate and soil. Wheat was included in COA's list of recommended rice rotation crops beginning in 2013. Farmers can grow wheat as a rotational crop on fallow rice paddy fields and still receive a NT\$45,000 (US\$1,500) per hectare fallow land subsidy. This incentive program has caused domestic wheat production to gradually increase.

Consumption

Wheat consumption in MY2017/18 and MY2016/17 is forecast to remain flat at 1.3 million tons. Estimated MY2015/16 wheat consumption is lowered 50,000 tons to 1.3 million tons based on Ministry of Economic Affairs (MOEA) flour production statistics and estimated seed and industrial use. Of this total, 1.212 million tons is used for flour milling, 63,000 tons for brewing or other industrial uses, and 25,000 tons for feed.

Per capita wheat flour consumption reached 37 kilograms in 2015 according to COA statistics, up 16 percent from a decade ago. Wheat consumption has been boosted by the popularity of convenience foods, such as noodles and steamed buns. However, this trend is beginning to be offset by the aging of Taiwan's population and lack of population growth.

Taiwan's milling capacity is estimated at 2 million metric tons on a 24-hour-300-day operation basis. Current capacity utilization is estimated at 60 percent. Local millers can produce over one-hundred different specialty flours to meet unique specifications for different wheat-based food products. Flour mills are supporting baking contests to attract and promote new bakers. Mills have also started promoting smaller one-kilogram packs of flour to target consumers for at-home use.

Trade

Taiwan is almost entirely dependent on imports to meet wheat demand. MY2017/18 and MY2016/17 wheat imports are forecast at 1.36 million tons on stable demand. While shipping delays in the U.S. Pacific Northwest in early 2017 caused supply challenges for Taiwan flour mills, they are not expected to significantly impact overall MY2016/17 imports. Estimated MY2015/16 imports are lowered 135,000 tons to 1.357 million tons on import statistics. This includes imports of 60,000 tons of flour and related products on a wheat-equivalent basis.

The Taiwan Flour Millers' Association (TFMA) uses group purchases to import U.S. wheat via bulk vessels. Such purchases account for approximately 75 percent of Taiwan imports. The remaining 25 percent of imports mostly consists of containerized shipments from Australia and Canada. In 2016, 55 percent of U.S. wheat imported under group purchases was Dark Northern Spring, 32 percent was Hard Red Winter, and 13 percent was low protein wheat.

Taiwan's wheat flour and products trade remains small. MY2017/18 exports are forecast to remain flat at 65,000 tons on a wheat-equivalent basis. Exports mostly went to Hong Kong. Taiwan also imports a small amount of wheat flour and wheat products, mostly from Japan. The tariff on wheat is 6.5 percent, while the tariff on flour (HS 1101) is 17.5 percent in order to protect the domestic milling industry.

Stocks

Stocks are forecast to hover around 480,000 tons in MY2016/17 and MY2017/18. MY2015/16 stocks are lowered to 481,000 tons based on revised import statistics. Millers typically hold 1-2 months of stocks to avoid disruptions in operation. Wheat shipment delays caused by port congestion of U.S. Pacific Northwest in February and March 2017 created anxiety amongst Taiwan millers. These delays have mostly been resolved and grain vessels have been lining up to offload in April.

Corn

Production

Production and area are forecast to remain flat in MY2017/18 and MY2016/17 at 62,000 tons on 11,000 hectares. COA set the production target for these years at 64,000 tons, but these targets are unlikely to be met absent new policies or higher than average yields. MY2015/16 corn production and area are revised down to 62,000 tons on 11,000 hectares based on preliminary COA statistics.

Taiwan authorities added corn, wheat and soybeans to the list of rice rotation crops in 2013 to encourage production. The government has long hoped to raise Taiwan's overall food self-sufficiency rate, which currently stands at around 33 percent. However, domestic production of import-substitution crops, such as corn, is still small due to limited land area and an unsuitable climate. Corn yields in Taiwan have generally ranged between 4.5-5.3 tons per hectare, about half of yields in the United States.

Consumption

Total MY2017/18 corn demand is forecast to increase slightly to 4.3 million tons as poultry production recovers following AI outbreaks. Forecast MY2016/17 corn consumption is lowered 425,000 tons to 4.25 million tons on lower poultry production due to an AI outbreak in spring 2017. MY2015/16 corn consumption is lowered 55,000 tons to 4.32 million tons based on COA feed production statistics, import statistics, and industry reports.

Corn demand for wet milling has been negatively impacted by genetically engineered (GE) labeling requirements. A major beverage manufacturer in Taiwan decided to stop using high fructose corn syrup in its formulation after Taiwan revised its GE labeling requirements in December 2015. Demand by food manufacturers for corn starch has also been hurt by GE labeling. According to the local wet milling sector, wet milling dropped 25 percent in MY2015/16 to 170,000 tons. Corn use in wet milling is forecast to drop to 150,000 tons in MY2016/17 and MY2017/18 due to competition from tapioca from South Asia as well as falling demand for corn syrup.

Feed production continues to be the main driver of corn demand in Taiwan. Corn feed demand is forecast to recover slightly in MY2017/18 to reach 4.15 million tons. MY2016/17 forecast corn feed demand is lowered 350,000 tons to 4.1 million tons due to poultry AI outbreaks in early 2017. Pork production is forecast to remain stable in 2017 and 2018. Swine and poultry feed production accounted for 88 percent of total feed output in 2015 according to COA statistics, with dairy cows and aquaculture accounting for most of the remaining 12 percent. Corn consumption closely tracks total feed production in Taiwan. Total feed output for MY2016/17 and MY2017/18 is forecast at 7.3 million tons and 7.36 million tons respectively.

Taiwan Feed Production for Calendar Year 2014-2017 (million tons)

	2014	2015	2016 (estimate)	2017 (forecast)	2018 (forecast)
Total Feed	7.46	7.38	7.36	7.30	7.36
Hog Feed	3.17	3.26	3.24	3.24	3.24
Poultry Feed	3.44	3.29	3.29	3.23	3.29
Others	0.85	0.83	0.83	0.84	0.83
Source: Council of Agriculture (2013-2015) and post estimate and forecasts (2016-2018)					

Hog Sector

The 2016 hog population is 5.44 million head according to the November 2016 COA hog census, down one percent from the year before. The reduction was attributed to typhoon damage and sporadic Porcine Epidemic Diarrhea Virus (PEDv) cases during the second half of 2016. Pork production is expected to remain flat in 2017 and 2018. Domestic demand has been generally stable. Taiwan has not had any significant pork exports since foot and mouth disease (FMD) outbreaks in 1997 closed the Japan market.

Poultry Sector

Taiwan suffered a High Path Avian Influenza (HPAI) outbreak in February 2017. As of April 5, 2017, COA has confirmed detection of HPAI in 118 poultry farms throughout the Island this season and that over 1.1 million birds have been depopulated. The more virulent H5N6 strain has been detected on 12 of the 118 farms. The Minister of Agriculture announced that Taiwan's Animal Health Research Institute has been commissioned to produce AI vaccines for "emergency and preventive" use. As a result, post forecast's that poultry production in 2017 will be two percent lower than COA's target number of 357 million birds slaughtered. Production is expected to recover in 2018 absent new outbreaks. Equivalent poultry feed demand is estimated at 3.23 million tons for MY2016/17 and 3.28 million tons for MY2017/18.

Trade

MY2017/18 and MY2016/17 corn imports are forecast at 4.25 million tons based on forecast feed demand and an expected 150,000 ton demand for wet milling. MY2015/16 imports are lowered slightly to 4.483 million tons based on import statistics. U.S. market share is forecast to jump to 60 percent in MY2016/17 as a result of strong U.S. corn production and competitive prices. U.S. market share is expected to fall back down to 50 percent in MY2017/18 due to strong competition from Brazil. Only 13 percent of corn was imported via containers in 2016 due to a limited supply of backhaul containers.

Stocks

Feed mills and corn processors generally hold 1-2 months of stocks. MY2017/18 ending stocks are forecast at 541,000 tons based on forecast import and consumption trends. MY2016/17 ending stocks are lowered slightly to 529,000 tons based on smaller beginning stocks. MY2015/16 ending stocks are lowered to 467,000 tons based on import statistics and estimated consumption.

Rice

Production

Rice production is forecast to remain stable in MY2017/18 and MY2016/17 at 1.114 million tons. COA has set a realistic rice area target for these years of 260,000 hectares. Government support has kept rice production relatively stable despite high-production costs and falling demand. In 2015, 295,000 tons of rice was sold to the government under Taiwan's voluntary purchase program, accounting for 19 percent of total production.

MY2015/16 production is lowered slightly to 1.112 million tons on 274,000 hectares according to preliminary COA statistics. Typhoons damaged the second rice crop in MY2015/16, lowering yields and overall production despite an increase in acreage. The increase in area was caused by farmers returning fields to production in early 2016 following a draught the previous year.

Consumption

MY2017/18 consumption is forecast at 1.15 million tons. Consumption is not expected to grow due to falling per capita consumption and no population growth. Per capita consumption of rice has fallen five percent over the past decade to 45.7 kilograms per person in 2015. Forecast MY2016/17 consumption is lowered to 1.15 million tons for the same reasons. MY2015/16 consumption is lowered to 1.14 million tons based on COA statistics. COA has launched campaigns to increase domestic rice consumption, but these have so far met with limited success.

Trade

MY2016/17 and MY2017/18 rice imports are forecast at 126,000 tons, the full amount allowed under Taiwan's TRQ. Out-of-quota imports are not commercially viable due to prohibitively high tariffs. MY2015/16 rice imports are lowered slightly to 119,000 tons based on trade statistics, 60,000 tons of which came from the United States. Vietnam and Thailand were the second and third largest rice exporters to Taiwan in MY2015/16.

The TRQ is divided into private sector imports (35 percent) and public sector imports (65 percent). Taiwan completed the 2016 country specific quota (CSQ) for U.S. rice, totaling 56,000 tons (64,634 tons brown equivalent). As of March 20, 2017, Taiwan has completed tenders for 18,500 tons under the simultaneous-buy-sell system towards the 2017 quota. See Appendix 2 for details on the 2016 U.S. tenders and 2017 tender allotment. See the [2016 Grain and Feed Annual](#) for additional information on Taiwan's rice quota system.

MY2017/18 and MY16/17 rice exports are forecast at 50,000 tons, including a forecast 17,000 tons per year of food aid. Taiwan has become a rice exporter in recent years as a way to relieve the pressure of rising rice stocks. MY2015/16 rice exports are raised to 102,000 tons based on 85,000 tons of commercial sales and 17,300 tons of food aid (see appendix). This is the highest level of exports in over a decade. The largest commercial buyer was Papua New Guinea (65,000 tons) and the largest aid recipient was the Philippines (4,400 tons).

Taiwan 2016 Food Aid Shipments

Destination	Tons (milled)
Philippines	4,400
Haiti	3,980
Jordan	3,500
El Salvador	1,000
Other countries	4,320
Total	17,300
Source: Council of Agriculture (COA)	

Stocks

MY2017/18 rice stocks are forecast to rise to 383,000 tons due to stable domestic production and stagnant demand. MY2016/17 stocks are raised to 313,000 tons due to these same trends. Contacts report that the government is facing pressure from large rice stocks built up under the government's voluntary purchase program. The actual size of stocks is unclear as the government does not issue public statistics on rice stocks.

COA is exploring ways to reduce government rice stocks by offering farmers direct payments in lieu of government purchases. Beginning in 2018, rice farmers will be able to choose between: 1) selling the rice on the open market and receive a direct payment of NT\$13,500 (U.S. \$450) per hectare, or 2) sell the rice to the government under the current voluntary government purchase program at a maximum price of NT\$26 / kilogram for paddy rice. Rice farmed under contract with millers or other end users is eligible for an additional direct payment of NT\$1,500 per hectare (NT\$15,000 per hectare in total). This program is already being piloted in 20 townships in 2017.

Appendix 1: Production, Supply and Demand Tables

Wheat	2015/2016		2016/2017		2017/2018	
	Jul 2015		Jul 2016		Jul 2016	
Market Begin Year	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Taiwan						
Area Harvested	2	2	2	3	0	3
Beginning Stocks	485	485	567	481	0	482
Production	5	4	5	6	0	6
MY Imports	1492	1357	1450	1360	0	1360
TY Imports	1492	1357	1450	1360	0	1360
TY Imp. from U.S.	1181	1032	0	1035	0	1035
Total Supply	1982	1846	2022	1847	0	1848
MY Exports	65	65	65	65	0	65
TY Exports	65	65	65	65	0	65
Feed and Residual	25	25	25	25	0	25
FSI Consumption	1325	1275	1340	1275	0	1275
Total Consumption	1350	1300	1365	1300	0	1300
Ending Stocks	567	481	592	482	0	483
Total Distribution	1982	1846	2022	1847	0	1848

(1000 HA) ,(1000 MT)

Corn Market Begin Year Taiwan	2015/2016		2016/2017		2017/2018	
	Oct 2015		Oct 2016		Oct 2016	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	12	11	13	11	0	11
Beginning Stocks	242	242	595	467	0	529
Production	72	62	78	62	0	62
MY Imports	4656	4483	4600	4250	0	4250
TY Imports	4656	4483	4600	4250	0	4250
TY Imp. from U.S.	2320	2023	0	2550	0	2125
Total Supply	4970	4787	5273	4779	0	4841
MY Exports	0	0	0	0	0	0
TY Exports	0	0	0	0	0	0
Feed and Residual	4150	4150	4450	4100	0	4150
FSI Consumption	225	170	225	150	0	150
Total Consumption	4375	4320	4675	4250	0	4300
Ending Stocks	595	467	598	529	0	541
Total Distribution	4970	4787	5273	4779	0	4841
(1000 HA) ,(1000 MT)						

Rice, Milled Market Begin Year Taiwan	2015/2016		2016/2017		2017/2018	
	Jan 2016		Jan 2017		Jan 2017	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	260	274	260	260	0	260
Beginning Stocks	256	256	241	243	0	313
Milled Production	1144	1112	1144	1144	0	1144
Rough Production	1634	1588	1634	1634	0	1634
Milling Rate (.9999)	7000	7001	7000	7000	0	7000
MY Imports	126	119	126	126	0	126
TY Imports	126	119	126	126	0	126
TY Imp. from U.S.	0	60	0	56	0	56
Total Supply	1526	1487	1511	1513	0	1583
MY Exports	85	102	50	50	0	50
TY Exports	85	102	50	50	0	50
Consumption and Residual	1200	1142	1230	1150	0	1150
Ending Stocks	241	243	231	313	0	383
Total Distribution	1526	1487	1511	1513	0	1583
(1000 HA) ,(1000 MT)						

Appendix 2: Rice Quota Tables

2017 CSQ Allotments for Public Sector Imports (tons, brown basis)

Country	Simultaneous Buy Sell Tender			Normal Tender	Total CSQ
	1 st Tranche	2 nd Tranche	Total		
Egypt	0	0	0	2,500	2,500
Thailand	6,500	0	6,500	1,800	8,300
Australia	5,000	3,500	8,500	10,134	18,634
USA	18,500	13,100	31,609	33,034	64,634
Total	30,000	16,600	46,600	47,468	94,068

Source: Council of Agriculture (COA) announcements

2016 Private Rice Quota Allocation Schedule & Results

Product	Quota Amount (MT)	Quota Validity Duration	Date	Weighted Avg. Bid Price (per kg)	Max. Bid Price (per kg)	Minimum Bid Price (per kg)	# of Allocations
Rice	15,000	Jan. 1/ Sept. 15	Nov. 22	NT\$13.151	NT\$18.500	NT\$12.400	15
	20,652	Mar 1/Sept. 15	Feb. 22	NT\$7.826	NT\$16.500	NT\$12.577	46
	15,000	May 1/Sept. 15	Apr. 26 (4/28/2016)	TBD (NT\$9.321)	TBD (NT\$12.123)	TBD (NT\$10.189)	TBD (46)
Total	50,652 MT (44,067 MT milled equivalent)						

Note: The 3rd allocation results of 2015 are included in the parentheses