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Taiwan

Grain and Feed Annual

Taiwan Grain and Feed Annual

Approved By:

Mark Petry

Prepared By:

Troy Lai and Andrew Anderson-Sprecher

Report Highlights:

Rice supply in Taiwan is forecast to continue to outstrip demand despite government efforts to reduce production and dispose of excess stocks. Rice stocks are reported to have reached 830,000 tons on a brown basis after harvest in December 2018. Corn imports and consumption are forecast to remain stable next year. New animal feed rules and biosecurity rules aimed at preventing the spread of African Swine Fever (ASF) have promoted the use of commercial feed over food scraps, balancing out downward pressure from lower pork production.

Wheat

Production

Taiwan grows a small amount of wheat with planting in November and harvest in March of the following year. MY2019/20 wheat production is forecast to increase 1,000 tons to 7,000 tons. The Council of Agriculture (COA) has set a target of increasing planted acreage by around 10 percent to 3,300 hectares in CY2019 to supply specialty producers using local wheat. MY2018/19 wheat production is forecasted to remain flat at 6,000 tons on 3,000 hectares. COA is providing rice farmers incentives to grow corn, wheat, soybeans and other specialty crops in rotation with rice to reduce import demand and lower rice acreage. However, the impact of these subsidies on overall imports is expected to be negligible due to Taiwan's limited arable land and semi-tropical climate.

COA has initiated a wheat breeding program to develop wheat varieties that can adapt to Taiwan's climate and soil. In February 2019, COA's Taichung Agricultural Research and Extension Station (TARES) announced Taichung #36, a medium protein white wheat variety with 12.4 percent protein content. Taichung #36 is resistant to powdery mildew and lodging. The main variety grown now is Taichung Choice #2, a medium protein hard red wheat variety that was initially bred three decades ago.

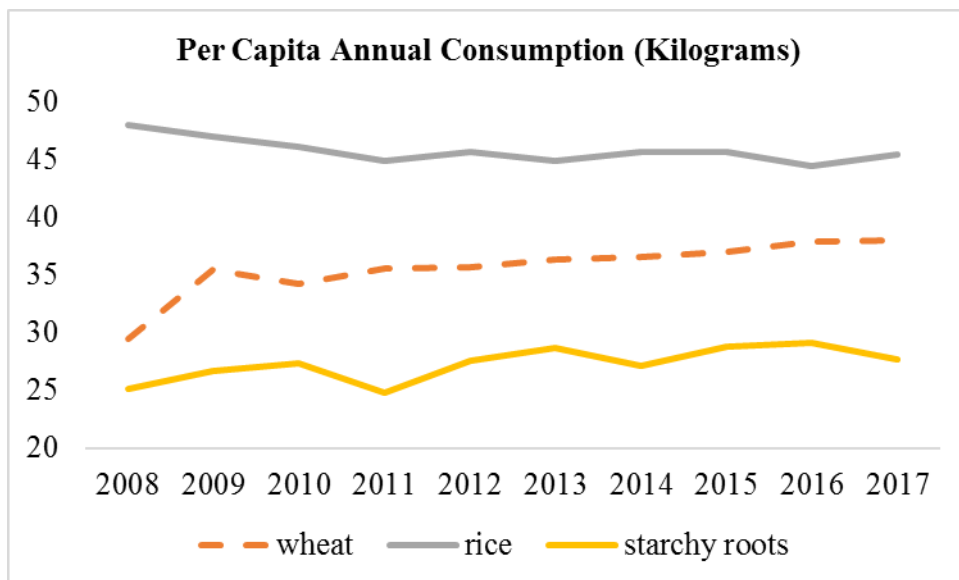
Consumption

MY2019/20 wheat consumption is forecast to remain stable at 1.37 million tons on stable demand. MY2018/19 wheat consumption is lowered 55,000 tons to 1.37 million tons based on COA statistics, Ministry of Economic Affairs (MOEA) flour production statistics and consumption trends. MY2017/18 wheat consumption is lowered 15,000 tons to 1.37 million tons based on COA statistics.

Per capita wheat consumption has been gradually growing in Taiwan as people have access to a diverse range of wheat-based products that meet consumer demands. Taiwan has a vibrant baking industry, and wheat noodles and buns are a popular part of local dishes. According to COA statistics, per capita annual wheat flour consumption increased 0.4 percent in 2017 to 38.05 kilograms. However, demographic trends are expected to offset any further increases in per capita consumption. Taiwan's population is rapidly aging and the total population is projected to start declining within the next few years.

MY2019/20 food, seed and industrial (FSI) consumption is forecast to remain flat at 1.295 million tons. Twenty-five thousands tons is used for food fermentation (e.g., soy sauce and brewery); most of the rest is milled into flour. According to market intelligence, approximately 30 percent of flour is used for noodles and around 40 percent of flour is used for baking and steamed buns. Taiwan's milling capacity is estimated at 2 million metric tons on a 24-hour-300-day operational basis. Current capacity utilization is estimated at 60 percent.

Feed and residual in MY2017/18 and MY2018/19 is raised 50,000 tons based on COA statistics to properly account for wheat feed use. FSI consumption is lowered for those years to subtract feed use and reflect current COA and MOEA flour production estimates.



Source: Council of Agriculture

Note: starchy roots includes potatoes, sweet potatoes, cassava, taro, yam and others

Trade

Taiwan relies on imports for over 99 percent of its wheat, so imports closely track consumption. MY2019/20 wheat imports are forecast to remain flat at 1.4 million tons. Forecast MY2018/19 imports are unchanged at 1.4 million tons based on COA statistics and import trends. MY2017/18 imports are increased 91,000 tons to 1.42 million tons based on custom statistics.

The Taiwan Flour Millers' Association (TFMA) uses group purchases to import U.S. wheat via bulk vessels. These purchases account for approximately 80 percent of imports. The remaining 20 percent mostly consists of containerized shipments from Australia and Canada. In 2018, 54 percent of U.S. wheat imported under group purchases was Dark Northern Spring, 32 percent was Hard Red Winter, and 14 percent was low protein wheat.

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. Flour and other processed wheat products account for only 4 percent of Taiwan wheat imports. All of Taiwan's wheat exports are flour or other processed products.

Stocks

Millers typically hold 1-2 months of stocks to avoid disruptions in operation. Stocks are forecast to stay stable at between 480,000 – 520,000 tons in MY2018/19 and MY2019/20.

Corn

Production

MY2019/20 corn production is forecast to remain stable at 80,000 tons based on COA estimates and production trend. MY2018/19 production is increased 2,000 tons to 80,000 tons based on COA production forecasts. COA is promoting its subsidy program for rice farmers who grow corn, wheat,

soy and other specialty crops in rotation with rice to reduce import demand and rice acreage. Based on this program, MY2018/19 planting acreage is forecast to increase by 500 hectares to 13,500 hectares. However, this program is not expected to significantly impact imports as Taiwan has limited arable land and other crops are generally more profitable.

Consumption

MY2019/20 total corn consumption is forecast to remain flat at 4.35 million tons. MY2018/19 total corn consumption is forecast at 4.35 million tons, lowered 100,000 tons from the MY2018/19 USDA number. Animal feed demand is expected to stay flat in CY2018 and CY2019, as animal production is forecast to remain at the same level. Corn consumption closely tracks total feed production in Taiwan. Total feed production is expected to remain flat in CY2019 and 2020. The small decline in pork production is expected to be offset by reduced use of food scraps for animal feed. Feed production in 2018 is estimated at 7.65 million tons based on COA preliminary hog production and poultry production numbers. According to COA 2017 statistics, poultry feed accounts for 48 percent of feed production, followed by hog feed at 42 percent. Dairy cows and aquaculture account for most of the remaining 10 percent.

Feed Production (million tons)

	2014	2015	2016	2017	2018*	2019*
Total Feed	7.46	7.38	7.52	7.62	7.65	7.65
Hog Feed	3.17	3.26	3.26	3.21	3.23	3.23
Poultry Feed	3.44	3.29	3.48	3.66	3.67	3.67
Others	0.85	0.83	0.78	0.75	0.75	0.75

Sources: Council of Agriculture (2014-2017). * Post estimates (2018-2019)

Poultry production increased by 11 million birds in 2018 according to COA preliminary poultry production estimates. Fried chicken is increasingly popular, particularly Korean style fried chicken. COA 2019 target production remains at the same level (389 million birds) as the 2018 preliminary. Growth in poultry production is expected to slow in 2019 and poultry feed demand is expected to remain generally flat in 2019/2020.

COA has set a target of stabilizing hog production at 8.05 million head in 2019. However, actual production will likely be lower. COA has taken measures to prevent the spread of ASF to Taiwan, including enhanced biosecurity rules and a new requirement that only farms with heating facilities can use the treated food scraps as pig feed. Some smaller pork producers are ill equipped to make the necessary changes or are reluctant to shoulder the increased costs. COA is offering subsidies to farmers to close down their operations if they are unable or unwilling to make the necessary changes. A National Animal Industry Foundation survey published in January 2019 found a record number of pig farms are considering stopping production. The preliminary estimate is one percent decrease in total number of pigs slaughtered each year.

Hog feed demand is forecast to remain stable in 2019 and 2020 despite lower total pork production. The National Animal Industry Foundation estimates that 10 percent of black pig operation have switched to commercial feed due to new heat treatment rules for food scraps. Black pigs account for 12 percent of the total hog population (5.44 million heads) based on the November 2018 COA hog

consensus. Most black pigs have traditionally been raised on food scraps. The island generated 550,000 tons of food waste in 2018 according to Taiwan’s Environmental Protection Agency; government sources report that two-thirds of that total was fed to black pigs. The preliminary forecast is that the increase in the share of pigs raised using commercial feed will balance out any near term negative impact on corn demand from declining herd sizes. As a result, corn consumption and imports are forecast to remain stable in MY2019/2020.

New COA biosecurity rules include the above-mentioned requirement for heat-treating food scraps, increasing biosecurity at commercial and backyard pig operations, and plans for GPS tracking of vehicles transporting live pigs and carcasses. The enhanced ASF prevention biosecurity rules will also likely help Taiwan’s foot and mouth disease (FMD) eradication program. Taiwan formally prohibited FMD vaccinations on July 1, 2018 as part of a comprehensive program to regain World Organization for Animal Health (OIE) recognized FMD-free status without vaccination. OIE recognition would help ongoing Taiwan efforts to reopen export markets for locally produced pork and pork products. Japan, for example, was a major export destination for Taiwan pork prior to the detection of FMD on the Island.

Pork and Poultry Production (Animals Slaughtered)

Year	Pork (1,000 head)	Poultry (million birds)
2013	8,720	347
2014	8,067	370
2015	8,200	357
2016	8,144	379
2017 (revised)	7,947	376
2018 (preliminary)	8,070	387
2019 (target)	8,050	389

Source: Council of Agriculture

Trade

MY2019/20 corn imports are forecast to remain flat at 4.1 million tons on stable demand. Forecast MY2018/19 imports are unchanged at 4.1 million tons, consistent with COA statistics and import trends. The import pace in MY2018/19 started out slow as feed mills sought to draw down existing stocks in case ASF spreads to Taiwan and hurts demand. However, imports are expected to pick up in 2019 as feed mills work through their stocks and import more to meet demand. The United States supplied roughly three quarters of Taiwan’s corn imports in 2018 with most of the rest coming from Brazil. About 24 percent of corn imports were shipped via container in 2018, and the majority of those came from the United States.

Corn faces some competition from other grains and feed products, such as dried distillers grains with solubles (DDGS) and corn gluten feed. The feed inclusion rates for corn substitutes varies year-to-year depending on relative prices. Sorghum imports increased by 17,000 tons in MY2017/18 to 65,000 tons, as China’s retaliatory tariffs caused cargoes to be diverted to Taiwan. DDGS imports dropped 51,000 tons in MY2017/18 to 204,000 tons due to inexpensive soybean meal and higher DDGS prices.

Imports of Other Feed Ingredients (in 1,000 tons)

Feed Ingredient/HS Code	MY2015/16	MY2016/17	MY2017/18
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1003: Barley	51	55	39
1007: Sorghum	74	48	65
2302.10: Bran, sharps & residues of maize (corn gluten feed)	18	20	21
2303.10: Corn gluten meal and feed	35	41	42
2303.30: DDGS	199	255	204
Total	377	419	371

Source: Taiwan Customs

Stocks

Feed mills and corn processors generally hold 1-2 months of stocks. Feed mills use smaller container shipments and joint purchases to help manage stock levels and reduce inventory costs. MY2019/20 ending stocks are forecast at 469,000 tons, down 26 percent from MY2018/19. Feed millers have been trying to draw down their corn stocks in case ASF spreads to Taiwan. MY2018/19 ending stocks are raised 19 percent to 639,000 tons based on estimated consumption and imports. Industry contacts also report that stocks were high in MY2018/19.

Rice

Production

Rice production is forecast to decline four percent in MY2019/20 (CY2020) to 1.136 million tons on reduced acreage. COA is offering subsidies to rice farmers to plant rotation crops or, in some cases, fallow their fields in order to reduce surplus rice production. MY2018/19 rice production is increased 43,000 tons to 1.181 million tons based on COA rice production forecasts. MY2017/18 rice production is raised to 1.362 million tons based on preliminary COA statistics. Yields were up 12 percent in MY2017/18 due to favorable weather. Acreage also increased 6.6 percent.

COA is working to revise its rice support policies to reduce excess production and stocks. However, farmers strongly oppose any change to direct government rice purchases. On February 5, 2018 COA issued an [Announcement on Application for Direct Payment](#). The announcement offered a NT\$13,500 per hectare direct payment for the first rice crop and NT\$10,000 for the second rice crop if farmers sell their crop commercially instead of to the government. As a result, rice farmers can now choose between receiving a direct payment a selling their rice to COA.

Consumption

MY2019/20 rice consumption is forecast to remain flat at 1.16 million tons. Taiwan's aging, and soon to be shrinking population limits any potential consumption growth. MY2018/19 rice consumption is forecast to lower 40,000 tons to 1.16 million tons based on COA production forecast and consumption trends.

COA, faced with gradually falling food consumption and strong production, is under pressure to reduce publicly held rice stocks through exports, food aid or feed use. COA is promoting domestic food consumption but this has had limited effect. In 2016, per capita rice consumption fell 2.6 percent to 44.5 kilograms, while in 2017 it bounced back two percent to 45.43 kilograms.

Trade

MY2019/20 and MY2018/19 rice imports are forecast at 126,000 tons, the full amount allowed under Taiwan's tariff rate quota (TRQ). MY2017/18 imports are estimated at 101,000 tons based on customs statistics. Out-of-quota imports are not commercially viable due to prohibitively high tariffs. The TRQ is divided into private sector imports (35 percent) and public sector imports (65 percent). Taiwan completed 95 percent of the 2018 country specific quota (CSQ) for U.S. rice, totaling 61,500 tons on a brown equivalent basis. The public sector quota is divided by country of origin and tender type.

MY2019/20 and MY2018/19 rice exports are forecast at 50,000 tons, including an expected 17,000 tons per year of food aid. Taiwan has exported rice in recent years to relieve the pressure of rising rice stocks. MY2017/18 exports are increased 7,000 tons to 57,000 tons based on customs statistics, including 17,000 tons of food aid.

Taiwan 2018 Food Aid Shipments

Recipient Destination	Tons
Haiti	7,000
Jordan	1,600
Philippines	1,780
El Salvador	800
Honduras	720
Pakistan	800
Guatemala	1000
South Africa	785
Sierra Leone, Rep. of	600
Other countries	1,747

Source: Council of Agriculture

Stocks

MY2019/20 ending stocks are forecast to reach 745,000 tons as supply continues to exceed demand. Forecast MY2018/19 ending stocks are raised to 693,000 tons based on supply and demand trends, as well as media and industry reports. According to media reports, rice stocks reached 830,000 tons on a brown basis after harvest in December 2018. Most stocks are government held and acquired through the domestic government procurement program or TRQ public tenders. COA is working to reduce stocks by encouraging farmers to grow less rice, providing rice as food aid, and using aging stocks for animal feed. According to feed millers, using rice in feed rations poses some challenges. They report a reluctance to use rice because rice has to be milled into broken rice, is difficult to store, and is an imperfect substitute for corn. COA is also researching other ways to use excess rice, including promoting the use of rice flour in baking. Despite these efforts, rice stocks will likely continue to grow unless Taiwan lowers subsidies for rice growers.

Wheat Market Begin Year	2017/2018		2018/2019		2019/2020	
	Jul 2017		Jul 2018		Jul 2019	
Taiwan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post

Area Harvested	3	3	3	3	0	3.3
Beginning Stocks	569	569	451	555	0	519
Production	6	6	6	6	0	7
MY Imports	1329	1420	1400	1400	0	1400
TY Imports	1329	1420	1400	1400	0	1400
TY Imp. from U.S.	1008	1103	0	0	0	0
Total Supply	1904	1995	1857	1961	0	1926
MY Exports	68	70	72	72	0	72
TY Exports	68	70	72	72	0	72
Feed and Residual	25	75	25	75	0	75
FSI Consumption	1360	1295	1400	1295	0	1295
Total Consumption	1385	1370	1425	1370	0	1370
Ending Stocks	451	555	360	519	0	484
Total Distribution	190	1995	1857	1961	0	1926
Yield	2	2	2	2	0	2.12
(1000 HA) ,(1000 MT) ,(MT/HA)						

Corn Market Begin Year Taiwan	2017/2018		2018/2019		2019/2020	
	Oct 2017		Oct 2018		Oct 2019	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	12	12	13	13.5	0	13.5
Beginning Stocks	678	678	809	809	0	639
Production	71	71	78	80	0	80
MY Imports	4410	4410	4100	4100	0	4100
TY Imports	4410	4410	4100	4100	0	4100
TY Imp. from U.S.	2422	2422	0	0	0	0
Total Supply	5159	5159	4987	4989	0	4819
MY Exports	0	0	0	0	0	0
TY Exports	0	0	0	0	0	0
Feed and Residual	4200	4200	4300	4200	0	4200
FSI Consumption	150	150	150	150	0	150
Total Consumption	4350	4350	4450	4350	0	4350
Ending Stocks	809	809	537	639	0	469
Total Distribution	5159	5159	4987	4989	0	4819
Yield	5.92	5.9167	6	5.925	0	5.925
(1000 HA) ,(1000 MT) ,(MT/HA)						

Rice, Milled Market Begin Year Taiwan	2017/2018		2018/2019		2019/2020	
	Jan 2018		Jan 2019		Jan 2020	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	256	273	256	260	0	250
Beginning Stocks	340	340	398	596	0	693
Milled Production	1138	1362	1138	1181	0	1136
Rough Production	1626	1946	1626	1688	0	1623
Milling Rate (.9999)	7000	7000	7000	7000	0	7000

MY Imports	120	101	120	126	0	126
TY Imports	120	101	120	126	0	126
TY Imp. from U.S.	0	54	0	0	0	0
Total Supply	1598	1803	1656	1903	0	1955
MY Exports	50	57	50	50	0	50
TY Exports	50	57	50	50	0	50
Consumption and Residual	1150	1150	1200	1160	0	1160
Ending Stocks	398	596	406	693	0	745
Total Distribution	1598	1803	1656	1903	0	1955
Yield (Rough)	6.35	7.13	6.35	6.4923	0	6.4923
(1000 HA) ,(1000 MT) ,(MT/HA)						