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Report Highlights:

Taiwan's wheat market remains stable at one million metric tons a year. Taiwan's corn market has fallen from highs that once reached 6.5 million metric tons a year to 4.5 million metric tons estimated in 1999 and 4.2 million metric tons projected for 2000. Corn demand is down because Taiwan's pig sector shrank by one-third after the March 1997 Foot and Mouth Disease outbreak. Barley demand in 1999 and 2000 is expected to return to traditional levels, i.e., about 190,000 mt, after spiking to 264,000 mt in 1998 when the barley/corn price differential drove up the feed barley ration in Taiwan feed formulations.

Includes PSD changes: Yes
Includes Trade Matrix: Yes
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GENERAL SUMMARY

Taiwan's demand for wheat and barley are supplied 100 percent through imports. Corn demand is supplied nearly 100 percent by imports although small amounts are produced locally. The wheat import market is stable at approximately one million metric tons, with only small variations from year to year. The market is dominated by US wheat. In 1998, Taiwan imported 1,017,000 mt of wheat worth \$187 million, with US supplying 95 percent and Australia 5 percent. Increasing per capita consumption of wheat in baked and noodle products ensures stability and small growth in demand for wheat. Taiwan's corn imports are on the decline because the hog sector shrank by one-third after the Foot and Mouth Disease (FMD) outbreak in March 1997, and because of greater competition from US and third country meat imports. In 1998, compared to a year earlier, corn imports fell by nearly one million metric tons, or 12 percent, to 4,758,000 mt worth \$605 million. Projections for 1999 and 2000 call for continued declines in corn demand, and increased competition from low priced suppliers, including, potentially, the PRC. Annual variations in barley imports are primarily attributable to the differential between world barley and corn prices. Barley imports in 1998 were 226,000 mt, a 6 percent increase from a year ago, due mainly to low world market barley prices. On Taiwan, feed barley substitutes for feed corn when the price differential grows to \$5 to \$6 per mt. Because it is unlikely that barley prices will fall to 1998 levels again, Taiwan's barley imports for 1999 and 2000 are estimated at approximately 190,000 mt; 100,000 mt for feed; 70,000 mt for beer; and 20,000 mt for food use.

WHEAT

Situation and Outlook

Taiwan continues to import about 1,000,000 mt of wheat a year. Imports increased slightly in 1998, a year in which the market for bakery goods and instant noodles was particularly active. Because central authorities have decided to decrease wheat security stocks, wheat imports will decrease slightly in 1999 and 2000. US wheat imports continue to dominate the Taiwan wheat market accounting for 95 percent of share on average. Wheat consumption continues to grow by about one percent a year, the rate of growth of the population. Most growth is expected to show up in increased consumption of wheat noodles and baked goods.

Wheat Statistical Tables

Table 1. Wheat Production Supply and Demand.

PSD Table						
Country:	Taiwan					
Commodity:	Wheat					
		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1998		01/1999		01/2000
Area Harvested	0	0	0	0	0	0
Beginning Stocks	130	260	130	282	130	258
Production	0	0	0	0	0	0
TOTAL Mkt. Yr. Imports	1022	1017	1050	980	0	980
Jul-Jun Imports	1022	983	1050	980	0	980
Jul-Jun Import U.S.	991	956	0	912	0	930
TOTAL SUPPLY	1152	1277	1180	1262	130	1238
TOTAL Mkt. Yr. Exports	10	0	10	0	0	0
Jul-Jun Exports	10	0	10	0	0	0
Feed Dom. Consumption	45	0	45	0	0	0
TOTAL Dom. Consumption	1012	995	1040	1004	0	1014
Ending Stocks	130	282	130	258	130	224
TOTAL DISTRIBUTION	1152	1277	1180	1262	130	1238

Table 2. Import Trade Matrix for Wheat (Calendar Year).

Import Trade Matrix			
Country:		Units:	1,000 mt
Commodity:			
Time period:	01/1998		
Imports for	1997		1998
U.S.	898	U.S.	963
Others		Others	
Australia	32	Australia	54
Canada	36		
Total for Others	68		54
Others not listed			
Grand Total	966		1017

Table 3. Exchange Rates (NTD per \$1.00).

	1997	1998	1999
January	27.51	33.24	32.26
February	27.53	33.33	32.33
March	27.57	32.39	33.16
April	27.63	32.96	
May	27.75	33.19	
June	27.92	34.30	
July	27.94	34.49	
August	28.50	34.57	
September	28.70	34.71	
October	28.61	33.81	
November	30.76	32.75	
December	32.41	32.40	
Average	28.57	33.51	

The exchange rate on April 9, 1999 was: \$1=NT\$33

The average exchange rate for July 1997/June 1998 was: \$1=NTD 31.36

The average exchange rate for October 1997/September 1998 was: \$1=NTD 32.91

Production

Taiwan's climate is not suitable for growing wheat. The Taiwan Tobacco & Wine Board (TTWB), Taiwan's centrally-owned monopoly manufacturer and importer of tobacco, tobacco products and alcoholic beverages, used to contract with local farmers for the production of between 3,000 and 5,000 mt a year for beer. That wheat purchase price included a sizeable subsidy to farmers. As a requirement for membership in the WTO, the TTWB will be privatized in the near future. Therefore, beginning in 1996, TTWB stopped contracting for wheat from local farmers because it will no longer be able to pay subsidized prices for inputs after it is privatized. Since TTWB purchases of Taiwan wheat ended, Taiwan's wheat production has all but disappeared.

Consumption

Taiwan's demand for wheat is now entirely supplied by imports. In 1998, 95 percent came from the US. All wheat is ground into flour, except 3,000 mt that is used to make beer, and 15,000 mt that is used in the manufacture of soy sauce. Feed wheat figures reported in the past were derived from data for wheat flour used in fish rations. However, since Taiwan bans the importation of feed wheat, beginning with this report, PSD estimates for feed wheat will be reported as zero.

The Department of Statistics of the Ministry of Economic Affairs, in its monthly publication, *The Industrial Production Statistics Monthly*, puts yearly wheat consumption on Taiwan at about 1,000,000 mt a year, with

only small annual variations. The Council of Agriculture's *Taiwan Food Balance Sheet* puts recent annual per capita wheat flour consumption at approximately 30 kilos. Consumption is expected to grow at the same rate as the population, which is about one percent a year. Taiwan's population at the end of 1998 was 21,871,000 (Directorate General of the Budget, Accounting and Statistics, *Monthly Statistics of the Republic of China, January 1999*). Therefore, wheat consumption in 1999 and 2000 is projected at 1,004,000 mt and 1,014,000 mt, respectively.

Wheat flour is used almost exclusively for the manufacture of food. About 6 percent of the approximately 700,000 mt of locally milled flour is used to make wheat starch and wheat gluten products. In addition, small amounts are used in fish feed formulations, and for some non-food uses such as adhesives. (Note: the flour extraction rate used in this report is 0.75.)

Production of bakery goods and instant noodles are the two dominant uses of wheat in this market. The efforts of these two sectors to increase consumption of wheat products have led to a steady decline in rice consumption. In 1986 per capita annual rice consumption was 76.46 kilo. By 1996 it had dropped to 58.84 kilo. By comparison, per capita wheat consumption which was 27.50 kilos in 1986 and 29.57 kilos in 1996 (*1998 Taiwan Food Statistics Book*, Food Department—formerly the Food Bureau).

The baked goods industry is quite innovative. Last year it was quick to cash in on a craze for Portuguese egg tarts which led to an island-wide egg shortage. Early this year that vogue was replaced with Japanese style dome-shaped breads. It appears that bagels are now beginning to catch on and may soon replace the Japanese bread fad. Commercial bakeries are beginning to use more frozen dough for bake-off products as a way to cut labor costs.

Instant noodle manufacturers are also looking for ways to increase sales. They are searching for new instant noodle flavors and new "bite" characteristics to entice increased consumption. In early 1999 noodle manufacturers came out with two new-to-market wheat noodle products, a frozen instant noodle product and a Japanese-style instant noodle product called *wagamma*.

Price

Flour imports were liberalized in 1995 but wheat imports are still managed under the Wheat Stabilization Program. (The purpose of this program is to protect Taiwan from market destabilizing fluctuations in world wheat prices.) The *Wheat Base Price* (analogous to the landed price of imported wheat) remains at \$245 per mt. In 1998 the average CIF price for wheat was \$198 per mt. Therefore, in 1998 no monies were paid to wheat importers from the Wheat Stabilization Fund. Since importers are reimbursed from the Wheat Stabilization Fund when landed prices exceed \$245 per mt, the central authorities set a ceiling on wholesale prices for 22 kilo bags of flour. These ceilings remain at NTD 334, NTD 321, and NTD 315 for high, medium, and low protein flour respectively. (See TW6023 and TW8037). In 1998, market prices were always below these ceilings. The price for a 22 kilo bag ranged from NTD 280 to NTD 300 depending on the protein level.

In March 1999, the price of a 22 kilo bag of flour rose by an average of NTD 20. Millers said that they were forced to raise flour prices because the price of wheat bran, which was at NTD 5.6 per kilo in 1997, had fallen to NTD 4.5, and they needed to recoup lost income from bran by raising flour prices. Wheat bran on Taiwan is used primarily as an animal feed input. Bran prices fell due to sluggish demand for feed after cut backs in pig production beginning with the FMD outbreak in March 1997. According to wheat millers, wheat bran accounts

for about 20 percent, by weight, of the products extracted from ground wheat. The fact that the price of locally milled flour rose at a time when world wheat prices were falling, resulted in allegations of price fixing and may lead to increased interest in wheat flour imports in the future.

Trade and Stocks

Wheat Imports

Taiwan imported 983,000 mt of wheat, worth \$195 million between July 1997 and June 1998. The US supplied 97 percent and Australia 3 percent. Wheat imports in calendar year 1998 were 1,017,000 mt, worth \$187 million, up 5 percent from the previous year. The US had 95 percent of the import share and Australia had the rest. Local wheat millers blend small amounts of Australian Prime Hard Wheat or Canadian Western Red Spring Wheat into their flour formulations. Australian and Canadian wheat are stored separately from US wheat. Australian and Canadian wheat is not mixed. Therefore, because storage facilities for non-US wheat are limited, Taiwan only switches from Australian to Canadian, or vice-versa, when stocks of one or the other are nearly completely depleted. Therefore, Australian and Canadian compete between themselves for the non-US wheat market. Hard White Wheat, a new US variety, may provide competition for Australian Prime Hard Wheat.

As of April 1999, Taiwan had contracted for fourteen 34,000 mt shipments of wheat for delivery in the first half of 1999. Of these shipments, one is Canadian, the rest are US. The Taiwan Flour Millers Association (TFMA) puts the import estimate for 1999 at 980,000 mt. US wheat is expected to enjoy between 93 and 96 percent of the import share in 1999. Despite a small increase in wheat consumption, the forecast for wheat imports for 2000 remains at 1999 levels because strategic wheat stocks will be allowed to decline. In the past, as part of the Wheat Stabilization Program, Taiwan authorities required wheat millers to maintain wheat security stocks equal to a three months' supply. This requirement began to be relaxed in 1995, when, due to growing competition in the market, millers asked to be allowed to lower stocks to cut costs. The TFMA projects that by the year 2000 wheat stocks, which are currently 260,000 mt, will fall to 200,000 mt.

The remaining NTD 300 million (\$9.4 million) still in the Wheat Stabilization Fund will be used to subsidize wheat imports until they are gone. No new money is being added to the Fund. Therefore, when the current monies in the Fund have been depleted, the Fund will cease to exist. Monies from the fund are paid to importers to refund them the difference when wheat purchase prices exceed the base price of \$245 per mt. The base price has not changed since November 1995. Given recent low wheat prices, the Fund has not been used in recent months.

Taiwan flour mills import wheat through a collective buying system headed by the TFMA. The TFMA provides the Wheat Stabilization Fund with the calculation of the subsidies owed each mill. Collective buying also has the advantage of reducing wheat import transaction costs. It is uncertain if the collective buying system will remain intact after the Wheat Stabilization Fund disappears. TFMA is Taiwan's sole wheat importers/wheat miller representative organization, and is the most important contact for all wheat exporters who want to communicate with potential Taiwan wheat importers.

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Flour Imports

Taiwan's wheat flour imports have been increasing gradually since wheat flour imports were liberalized in 1995. Wheat flour imports in 1998, at 9,000 mt, worth \$2 million, were three times greater than a year earlier. Despite recent growth, wheat flour imports will remain minuscule when compared with the 700,000 milled locally, at least as long as the Wheat Stabilization Fund, which subsidizes wheat imports, is still in operation. (See TW5041.) Australia supplied 75 percent of 1998 flour imports, Japan 17 percent, and the remaining 8 percent came from Singapore and Thailand. The recently launched Taiwan-Japan joint venture, frozen, instant noodle manufacturer will likely import Japanese flour.

Australian wheat is admired for its lighter color, but disliked for its soft "bite." Australian flour is blended with locally milled flour in a 1-to-4 ratio to make whiter noodles without significant degradation of the desired bite. "Australian Golden Flour Noodles," a refrigerated, prepared, noodle product, made entirely from Australian wheat flour, was recently introduced into the market. In February 1999, a TFMA delegation visited Australian flour mills. The delegation found one mill that it identified as a potential supplier of flour to Taiwan. This may result in increased flour imports from Australia. However, Japanese style white noodles do not appear to be losing popularity or market share to the new product made from Australian flour, at least not yet.

The flour import estimate for 1999 is 12,000 mt, most of which will go to the production of white noodles. The CIF price of imported flour averaged NTD 8.34 (\$0.25) per kilo, and the retail price of imported flour averaged NTD 10.90 (\$0.33) per kilo. According to the TFMA, imported flour retailed at NTD 2.73 (\$0.08) per kilo less than locally milled flour.

National Wheat & Wheat Flour Standards

A proposal to amend wheat and wheat flour standards is still under discussion. TFMA proposed amended standards about two years ago. The amendment would require lower ash content in flour and less foreign material in wheat. (See TW5015 and TW6003). Wheat food manufacturers oppose amending the ash content standard because they regard it as a flour import barrier. It is unlikely that the amended standards will be adopted any time soon. However, in January 1998, maximum dockage in TFMA contract specifications was lowered to 0.5 percent from the previous 0.7 to 0.8 percent. Canadian and Australian wheat, with average dockage of 0.2 and 0.3 percent, respectively, is cleaner than US wheat. US wheat dockage levels range from 0.3 to 0.5 percent.

Tariffs

The tariff on wheat remains at 6.5 percent. In June 1998 Taiwan authorities cut the tariff on wheat flour from 30 percent to 20 percent.

Marketing

Market Competition in the Milling Industry

The total number of wheat mills remains unchanged at 32. However, as a result of one mill doubling its milling capacity last year, Taiwan's annual milling capacity is revised upward to 2.8 million metric tons a year (on a 24 hour-a-day, 365 days-a-year operational basis). The milling capacity of individual mills is relatively low on Taiwan, ranging from the largest mill, with an annual milling capacity of 110,000 mt, and the smallest, with an annual milling capacity of 4,000 mt. In order to increase competitiveness, the larger mills are engaged in efforts to enlarge the scale and breadth of their operations. They are investing in additional milling capacity and in upgrades of their flour mixing facilities. Some mills now provide up to 40 different types of flour. Other mills are investing in flour extraction rate monitoring systems so that they can adjust flour prices to reflect extraction rates. It is expected that these innovations will lead to consolidation of the milling industry on Taiwan and to the disappearance of smaller operations.

Market Channels

In the past, millers did not communicate directly with end-users, and wholesalers were largely responsible for supplying flour to food manufacturers. Nowadays, mills provide flour directly to food manufacturers meeting their individual specifications, providing individualized service, and preferred customer discounts. Due to the direct sales now taking place between mills and food manufacturers, former flour wholesalers are looking for new sources of flour and new markets. They are largely responsible for the importation of flour types that are not produced on Taiwan for niche markets, like the market for flour created by white noodle manufacturers. However, Taiwan millers are aware of the growing size of this niche market, and will probably begin producing a locally manufactured flour to compete with imports. Taiwan millers know that they must produce the specialty flours required by wheat food manufacturers in order to remain competitive with imported specialty flours.

CORN

Situation & Outlook

Taiwan's corn imports declined to 4,758,000 mt, worth \$605 million, in 1998, down 12 percent, or nearly one million metric tons from a year ago. The decrease of Taiwan's corn imports is attributable to the FMD outbreak in March 1997 and imports of previously banned US meat products provided for in Taiwan's WTO bilateral agreement with the US. The FMD outbreak has meant the loss of Taiwan's pork export market to Japan, which once absorbed one-in-three pigs grown on Taiwan. Poultry production has declined slightly, once again due to poultry imports negotiated in the US-Taiwan WTO bilateral agreement. In 1998, the US corn import share was 78 percent, a record low, with Argentina supplying most of the market that did not go to the US. The US lost market share last year because South America had a good crop and offered good prices. Taiwan corn importers have become increasingly price conscious since the 1997 FMD outbreak led to a significant downturn in the pig sector. Because little growth in demand for Taiwan pork and poultry is expected, and because Taiwan agreed to increase meat and poultry imports in its WTO bilateral agreement with the US, Taiwan corn imports are expected to continue to decline in 1999 and 2000, to 4.5 million and 4.2 million metric tons respectively.

Feed Corn Statistical Tables

Table 4. Feed Corn Production, Supply and Demand Table.

<i>PSD Table</i>						
<i>Country:</i>	<i>Taiwan</i>					
<i>Commodity:</i>	<i>Corn</i>					
		<i>1997</i>		<i>1998</i>		<i>1999</i>
	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>	<i>Old</i>	<i>New</i>
<i>Market Year Begin</i>		<i>01/1998</i>		<i>01/1999</i>		<i>01/2000</i>
<i>Area Harvested</i>	<i>34</i>	<i>26</i>	<i>24</i>	<i>19</i>	<i>0</i>	<i>5</i>
<i>Beginning Stocks</i>	<i>1600</i>	<i>1500</i>	<i>1500</i>	<i>1578</i>	<i>1300</i>	<i>1468</i>
<i>Production</i>	<i>163</i>	<i>120</i>	<i>115</i>	<i>90</i>	<i>0</i>	<i>24</i>
<i>TOTAL Mkt. Yr. Imports</i>	<i>4472</i>	<i>4758</i>	<i>4500</i>	<i>4500</i>	<i>0</i>	<i>4200</i>
<i>Oct-Sep Imports</i>	<i>4472</i>	<i>4781</i>	<i>4500</i>	<i>4500</i>	<i>0</i>	<i>4200</i>
<i>Oct-Sep Import U.S.</i>	<i>0</i>	<i>3737</i>	<i>0</i>	<i>4500</i>	<i>0</i>	<i>3780</i>
<i>TOTAL SUPPLY</i>	<i>6235</i>	<i>6378</i>	<i>6115</i>	<i>6168</i>	<i>1300</i>	<i>5692</i>
<i>TOTAL Mkt. Yr. Exports</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Oct-Sep Exports</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Feed Dom. Consumption</i>	<i>4472</i>	<i>4580</i>	<i>4524</i>	<i>4400</i>	<i>0</i>	<i>4200</i>
<i>TOTAL Dom. Consumption</i>	<i>4735</i>	<i>4800</i>	<i>4815</i>	<i>4700</i>	<i>0</i>	<i>4500</i>
<i>Ending Stocks</i>	<i>1500</i>	<i>1578</i>	<i>1300</i>	<i>1468</i>	<i>1300</i>	<i>1192</i>
<i>TOTAL DISTRIBUTION</i>	<i>6235</i>	<i>6378</i>	<i>6115</i>	<i>6168</i>	<i>1300</i>	<i>5692</i>

Table 5. Import Trade Matrix for Corn (Calendar Year).

Import Trade Matrix			
Country:		Units:	1,000 mt
Commodity:			
Time period:	01/1998		
Imports for	1997		1998
U.S.	5622	U.S.	3698
Others		Others	
Argentina	140	Argentina	1046
Thailand	13	Thailand	11
India	6	Australia	1
Vietnam	4		
Australia	1		
Total for Others	164		1058
Others not listed			2
Grand Total	5786		4758

Table 6. Wholesale Corn Prices.

Prices Table			
Country:	Taiwan		
Commodity:	Corn		
Year:	1998		
Prices in (currency)	NTD	per (uom)	100 kilogram
Year	1997	1998	% Change
Jan	663	537	-19.0%
Feb	675	560	-17.0%
Mar	602	558	-7.3%
Apr	583	549	-5.8%
May	569	564	-0.9%
Jun	509	555	9.0%
Jul	510	546	7.1%
Aug	514	549	6.8%
Sep	511	511	0.0%
Oct	513	503	-1.9%
Nov	527	491	-6.8%
Dec	559	483	-13.6%

Table 7. Feed Production Estimates for 1998 to 2000 (1,000 mt).

Feed Production	1997 (Revised)	1998 (estimate)	1999 (Forecast)	2000 (Forecast)
Hog	3,285	2,825	2,542	2,466
Poultry	4,248	4,205	4,162	4,162
Cattle	187	187	187	187
Fishery	530	530	530	530
Others	142	142	142	142
Total	8,392	7,889	7,563	7,487
Note: Feed production estimates for 1998, 1999 and 2000 are based on revised data for 1997. <i>Source: Data for 1997 feed production are official numbers from the Taiwan Provincial Department of Agriculture and Forestry</i>				

Table 8. Animal & Aquiculture Production.

Production	Pigs (1,000 heads)	Poultry (1,000 birds)	Cattle, Dairy & Beef (1,000 heads)	Aqua- & Marine- culture (1,000 mt)
1996	14,310 (+1%)	394,700 (+6)	163	272
1997	11,400 (-20%)	439,054 (+11%)	166	272
1998	9,800 (-14%)	433,630 (-1%)	166	270
1999	8,800 (-10%)	428,000 (-1%)	166	270
2000	8,500 (-3%)	428,000 (-0%)	166	270
Note: Poultry & Pigs numbers are slaughter figures. Cattle numbers are stock figures. <i>Source: 1998 Taiwan Agriculture Book by TPDAF</i>				

Production

Taiwan feed corn production in 1998 was 120,000 mt from 26,000 hectares, a 55 percent drop from the previous year. The feed corn production estimate for 1999 is 90,000 mt from 19,000 hectares. Production will continue to decline in 2000. Feed corn production is declining due to the implementation of the Rice Paddy Utilization

Adjustment Program in July 1997 which will run until June 2001. This program is designed to ensure compliance with WTO accession commitments to reduce domestic production subsidies. Under this program, beginning in July 1997, the guaranteed-purchase/guaranteed-price program for corn went from three-crop-a-year coverage to two-crop-a-year coverage. (In Taiwan it is possible to produce three corn crops a year.) The guaranteed purchase price for corn is NTD 15 per kilo and will remain at that level until the program ends. In July 1999, central authorities will review the corn guaranteed-purchase/guaranteed-price program to determine if they can continue to pay out subsidies under that program and still comply with their WTO preaccession commitment to cut Taiwan's aggregate measures of support for agricultural by over NTD 3.5 billion between 1995 and 2000. If it is determined that it is necessary to eliminate the program to comply with that commitment, it will be terminated soon after. If not then, it will certainly be eliminated in the not-too-distant future. At that point, corn production on Taiwan will likely disappear. The reason why is obvious if you compare the guaranteed purchase price of NTD 15 per kilo with the 1998 average wholesale price of corn at port of entry which was only NTD 5.34 per kilo.

Consumption

Taiwan's hog and poultry production in 1998 decreased 14 percent and 1 percent, respectively, from the previous year (*Taiwan Agricultural Yearbook*, 1999 edition, preliminary statistics). The hog census conducted in November 1998 indicated that the standing population declined to 6.5 million heads, from 10.7 million heads in March 1997, just before the FMD outbreak. Hog production in 1996, the last full year before the arrival of FMD, was 14.2 million head. Based on the November 1998 census, the current hog production estimate for 1999 is 8.8 million head. The hog production forecast for 2000 is 8.5 million head because of slow growth in demand for pork, no export demand for pork due to FMD problems, increased imports of pork due to WTO trade concessions, increased costs of production associated with stricter waste management measures, and falling numbers of hog producers due to buy-out programs. Poultry production will also decline, although not as much. Poultry production declines will reflect the impact of Taiwan's commitment to allow previously banned poultry imports, once again as part of Taiwan's WTO trade concession agreement with the US. This concession allows annual imports of 10,000 mt of US poultry until Taiwan enters the WTO, at which time the concession will be expanded and multilateralized. This 10,000 mt of poultry is equivalent to 1.3 percent of Taiwan's total 1997 poultry production of 738,000 mt. Taiwan poultry production is expected to decline in the same proportionately, as poultry consumption is not expected to increase appreciably. (See Tables 7 and 8 for animal feed and animal production figures.)

A buyout program, targeting small and inefficient livestock and poultry operations, was initiated in 1998 and will run through July 1999. Taiwan authorities predict that after the buyout program, most small producers will be gone. These more traditional operations usually mixed feed on-farm. Farm-processed feed accounted for 27 percent of total feed production in 1998. The exodus of small producers will lead to decreased on-farm feed production in the coming years. Because most feed on Taiwan is now being produced commercially, feed production is becoming increasingly efficient, and lowest cost formulations are being used. As a consequence, the average inclusion rate of corn in feed rations has declined to 0.58 from 0.65. Using 1997 as a baseline, feed production is estimated at 7.9, 7.6, and 7.5 million metric tons respectively for 1998, 1999 and 2000. Feed corn demand for the same three years is estimated at 4.6, 4.4, and 4.2 million metric tons respectively.

Taiwan produces about 155,000 mt of high fructose corn syrup annually, which requires wet milling between 200,000 and 300,000 mt of corn a year. The addition of this corn consumption to feed corn consumption, yields total corn consumption figures of 4,880,000 mt, 4,700,000 mt, and 4,500,000 mt for 1998, 1999, and 2000,

respectively.

Substitution

Another reason, not discussed above, that will lead to the lower corn use figure projected for 2000 is that in the year 2000 an estimated 150,000 mt of old rice will be substituted for corn in feed rations. The Taiwan Provincial Food Department (TPFT) targets about 150,000 mt of old rice for release from central stocks for feed use each year. However, given the recent low prices of corn, no old rice was used for feed in 1998, and none is expected to be used in 1999. Due to expectations of higher corn prices in 2000, it is projected that rice feed use will be 150,000 mt in that year. Taiwan imported 80,000 mt of sorghum in 1998, the same amount that was imported in 1997. The US supplied 1 percent of Taiwan's 1998 sorghum imports; Argentina 68 percent; the PRC 16 percent; Australia 13 percent; and Thailand 3 percent. Sorghum substitution for corn does not have a significant impact on Taiwan's demand for corn.

Stocks

Total feed production in 1997 was revised downward to 8.4 million metric tons (*1998 Taiwan Agricultural Yearbook*, Taiwan Provincial Department of Agriculture and Forestry). This downward reduction reflects the impact of the March 1997 FMD outbreak on feed demand. Therefore, corn consumption in feed use in 1997 was revised downward to 5,460,000 mt, and beginning stocks for 1998 was changed upward to 1,500,000 mt accordingly. However, stock numbers for 1999 and 2000 are projected to decline. Smaller inventories are forecast due to falling demand.

Trade

Corn imports in calendar year 1998 totaled 4,758,000 mt, worth \$605 million, down 12 percent, or about one million metric tons, as compared with a year earlier. (Taiwan imported 4,782,091 mt of corn worth \$635 million between October 1997 and September 1998.) As mentioned above, lower imports were the result of the 1997 FMD outbreak. In 1998 US corn had 78 percent of the market, a 19 percent drop from the previous year. Argentina supplied the remaining 22 percent. Taiwan's corn imports from South America increased 750 percent in 1998, as compared with 1997, because South America had a good crop and offered good prices. Taiwan corn importers have become more price conscious because the 1997 FMD outbreak brought economic hardship to the entire pig sector. Also, due to Taiwan's WTO meat import trade concessions, Taiwan meat producers are now exposed to greater competition with meat from foreign sources. To remain competitive, they must cut costs.

From January to April 1999, Taiwan contracted for approximately 854,000 mt of corn for January/June shipments. A year ago, January/July shipments totaled 1,370,000 mt. This year importers have postponed purchase decisions because of fluctuations in world corn prices and falling home market demand for corn. However, all contracted corn is US origin. According to local importers/feed millers, it is likely that all corn imports for 1999 will be US origin. No corn imports from South America are expected because the price discrepancy between US and South American corn is only \$2 to \$3 per metric ton. The critical price difference is \$5 to \$6 per metric ton. Taiwan hog producers prefer the US corn because, in general, South American corn is harder. South American corn is mostly used in poultry feed rations.

The corn import estimate for 1999 is 4,500,000 mt, down 5 percent from 1998 levels, but all will be sourced from the US. The corn import forecast for 2000 is 4,200,000 mt. US market share will most likely depend on

the world supply situation. Another factor leading to decreased importation are lower stock levels which are discussed above.

Potential Elimination of Ban on PRC Corn

On April 8, the Board of Foreign Trade (BOFT) announced that relevant Taiwan agencies recommended that the ban on imports from the PRC on 150 farm products, including corn, be eliminated. This recommendation must be approved by the Ministry of Economic Affairs (MOEA). The process of lifting bans on imports of PRC farm products began in 1988. This process has not generated much controversy until now. These 150 products can currently be imported from all sources except the PRC. BOFT usually consults with relevant private sector groups before making these announcements. The Taiwan Feed Industry Association (TFIA) was not included in discussions this time, an oversight that angered that group.

TFIA feels that usage of PRC corn would entail several disadvantages. First, the quality of PRC corn is unreliable and PRC corn is not as clean as US corn. Second, purchasing arrangements with PRC suppliers are complicated by the fact that imports must be indirect. Finally, TFIA fears that, because PRC corn supplies are undependable, reliance on PRC corn supplies would be destabilizing to the Taiwan animal feed market. Despite these disadvantages, TFIA fears that once cheap PRC corn is available in this market, sooner or later, all feed millers will be forced to use it in order to remain competitive. This is an adjustment TFIA's members would like to avoid.

TFIA has also reminded BOFT that, during a trip to Washington, D.C. in September 1998, TFIA representatives signed a nonbinding letter of intent committing the Taiwan feed industry to purchases of between 3.5 and 4.8 million tons of US corn during 1999. Removal of the ban on PRC corn may make it difficult to meet that moral, if not legal, commitment.

Some LY members are also opposed to the removal of the ban on PRC corn, probably because they feel that PRC corn imports, on top of US corn imports, would be detrimental to Taiwan farmers. However, it is common knowledge that, with or without PRC corn imports, Taiwan is not a competitive corn producer, and that corn production on Taiwan is on its way out. Given TFIA opposition and LY concerns, MOEA approval has been placed on hold. BOFT says that if it finds that the PRC subsidizes corn exports, the MOEA would probably not approve removal of the ban. Taiwan currently bans the import from the PRC of wheat, corn and soybeans. If the ban on corn is lifted, it will be the first grain of major commercial significance that can be imported from the PRC.

Tariff

The tariff rate for corn was temporarily lowered to 0.5 percent by the Ministry of Finance, effective December 31, 1998 through December 30, 1999 (refer to TW9007). If the Ministry does not renew the temporary tariff reduction, the tariff will go back to 1 percent in 2000. The tariff was temporarily reduced to lower the cost of feed for Taiwan's pig producers who were hard hit by the March 1997 FMD outbreak.

Marketing

Local feed millers/corn importers are increasingly willing to purchase cheap corn from US competitors who are

all aggressively competing with the US for the lucrative and sizeable Taiwan feed corn market. Promoting value-enhanced corn products, such as high oil corn for poultry feed rations, value-added corn grit for beer brewing, and non-traditional uses of corn in the manufacture of products such as biodegradable plastics and gasohol, could help the US retain market share in this changing market.

BARLEY

Situation and Outlook

Taiwan imports 100 percent of its barley needs. Total barley consumption in 1998 was estimated at 226,000 mt. Approximately 30,000 mt was for brewing beer, 20,000 mt for food, and the rest (176,000 mt) for feed. Last year, feed barley consumption was higher than normal because world prices for feed barley were much cheaper than feed corn. Taiwan used approximately 55,000 mt of barley malt for beer brewing in 1998, of which 11,000 mt came from Belgium and the rest was locally produced using imported Australian malting barley.

The barley consumption and import projections for both 1999 and 2000 is 190,000 mt, of which 20,000 mt is for food and 70,000 mt for beer, and the remaining 100,000 mt for feed. The decrease in projected feed barley demand is due to the current high world price for barley (approximately C&F \$140 per mt) as compared with the current world price for corn (C&F \$120 per mt). According to local millers, feed barley is not preferred to corn in feed rations due to higher processing costs and lower feed efficiency. However, it is economically efficient to substitute barley for corn in feed rations when the price of barley is \$5 per mt or more below the price of corn. The increased demand for malting barley is due to a decision by Taiwan's exclusive beer maker, the Taiwan Tobacco and Wine Board (TTWB) to begin producing all the barley malt it needs from imported malting barley in the coming years.

The tariff rate for barley was temporarily lowered to 0.8 percent by the Ministry of Finance, effective December 31, 1998 through December 30, 1999 (refer to TW9007). If this tariff reduction is not renewed, it will return to 1.5 percent in 2000. The tariff was temporarily reduced to lower the cost of feed for Taiwan's pig producers hard hit by the March 1997 FMD outbreak.

Taiwan barley imports are relatively small compared to other grain imports. Members of the Taiwan Barley Industry Association (TBIA) purchase feed barley collectively through one tender. Interested US barley suppliers should contact TBIA directly regarding product specifications, sample requirements, and price requirements. TTWB is the contact for both malting barley and barley malt. TTWB's Production Department is responsible for malting barley purchases. TTWB is soon to be privatized as a requirement for entry into the WTO.

Contact information for Taiwan's two barley purchasers is as follows:

Taiwan Barley Industry Association
6F-1, 21 Nanking E. Rd., Sec. 4
Taipei Taiwan
Tel: 886-2-2719-9060
Fax: 886-2-2717-6580

Production Section

Taiwan Tobacco & Wine Board
 4 Nanchang Road, Section 1,
 Taipei, Taiwan
 Tel: 886-2-2321-4567 ext.227
 Fax: 886-2-2394-5461

Barley Statistical Tables

Table 9. Barley Production Supply and Demand.

PSD Table						
Country:	Taiwan					
Commodity:	Barley					
		1997		1998		1999
	Old	New	Old	New	Old	New
Market Year Begin		01/1998		01/1999		01/2000
Area Harvested	0	0	0	0	0	0
Beginning Stocks	0	10	0	10	0	10
Production	0	0	0	0	0	0
TOTAL Mkt. Yr. Imports	211	226	150	190	0	190
Oct-Sep Imports	211	264	150	200	0	200
Oct-Sep Import U.S.	34	87	0	34	0	34
TOTAL SUPPLY	211	236	150	200	0	200
TOTAL Mkt. Yr. Exports	0	0	0	0	0	0
Oct-Sep Exports	0	0	0	0	0	0
Feed Dom. Consumption	75	176	75	100	0	100
TOTAL Dom. Consumption	211	226	150	190	0	190
Ending Stocks	0	10	0	10	0	10
TOTAL DISTRIBUTION	211	236	150	200	0	200

Table 10. Import Trade Matrix for Barley (Calendar Year).

Import Trade Matrix			
Country:	Taiwan	Units:	1,000 mt
Commodity:	Barley		
Time period:	1/1997		
Imports for	1997		1998
U.S.	90	U.S.	34
Others		Others	
Australia	123	Australia	192
Total for Others	123		192
Others not listed			
Grand Total	213		226

Table 11. Wholesale Barley Prices.

Prices Table					
Country:					
Commodity:					
Year:	1998				
Prices in (currency)	NTD	per (uom)	100 Kilogram		
Year	1997	1998	% Change		
Jan	807	738	-8.6%		
Feb	805	723	-10.2%		
Mar	797	736	-7.7%		
Apr	774	731	-5.6%		
May	774	728	-5.9%		
Jun	769	731	-4.9%		
Jul	765	716	-6.4%		
Aug	760	707	-7.0%		
Sep	771	722	-6.4%		
Oct	765	742	-3.0%		
Nov	765	734	-4.1%		
Dec	765	712	-6.9%		