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# Pakistan

# Grain and Feed Annual

# Pakistan Grain and Feed Annual

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**Report Highlights:**
The Government of Pakistan announced on March 18, 2019, a $2 billion, five-year agricultural plan that focuses on crop production diversification, but there are no details yet. Pakistan's soon-to-be harvested 2019/20 wheat crop is forecast at 25.6 million metric tons, two percent higher than last year's forecast of 25.1 million metric tons. Pakistan's MY 2018/19 wheat exports are now estimated at 1.5 million metric tons while MY19/20 wheat exports are forecast down 33 percent at 1.0 million metric tons. Rice production in MY 2018/19 is estimated at 7.4 million metric tons. MY 2019/20 rice production is forecast at 7.5 million metric tons, reflecting expectations of continued strong yields. MY 2018/19 and 2019/20 rice exports are forecast to remain at 4.0 million metric tons. MY 2019/2020 corn production is forecast at a steady 6.1 million tons, unchanged from the 6.1 million tons for the current marketing year.

**Commodities:**
Wheat

**Production:**
Wheat is one of the four main agricultural crops in Pakistan (i.e., rice, cotton, and sugarcane), with 80 percent of farmers growing it on an area of around 9.0 million hectares (close to 40 percent of the country's total cultivated land) during the winter or "Rabi" season. Marketing year (MY) 2019/20 wheat production is forecast at 25.6 million metric tons, two percent higher than the revised wheat production of 25.1 million metric tons, a year ago mainly due to conducive weather conditions and appropriate rainfall during the growing season. Area is almost at par than the last years' figure. Overall urea fertilizer offtake increased marginally than last year while DAP fertilizer offtake decreased by 7 percent during planting. Weather conditions have generally been favorable with timely rains throughout the growing period, though some late season rains could lead to lodging, a factor that is included in this forecast. The Government maintained the wheat support price for the MY 2019/20 crop at last year's level of Rs.1300 per 40 kilogram ($310 per metric ton). Wheat production area by province is shown in Table 1.

**Table 1: Wheat Area by Province MY 2019/20**

| Province | Area (Million Hectares) | Percentage of Total Area |
|---|---|---|
| Punjab | 6.50 | 74 |
| Sindh | 1.16 | 13.2 |
| KPK | 0.75 | 8.5 |
| Baluchistan | 0.38 | 4.3 |
| Total | 8.79 | 100 |

About two-thirds of the country's water for irrigation is sourced from snow and glacier melts, with the balance supplied by seasonal monsoon rains. Stored water for irrigation is held mainly in two large reservoirs, Tarbela and Mangla, for use during the summer and during the Rabi/winter growing season. Since the completion of the nation's irrigation system in the 1970s, demand for water has increased by more than 50 percent, while storage capacity has decreased by about one-third due to silting. These water supply challenges, if not addressed, could affect wheat production in the future. Farmers typically supplement surface irrigation by pumping ground water. About 85 percent of Pakistan's wheat production is dependent upon irrigated water.

The effect of water shortages is traditionally more severe in the Sindh province than in Punjab. Many parts of Sindh's ground water are alkaline and not fit for irrigation, thereby necessitating a greater reliance on canal water.

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**Consumption:**

Wheat is Pakistan's dietary staple. Pakistan has a variety of traditional flat breads, often prepared in a traditional clay oven called a tandoor. The tandoori style of cooking is common throughout rural and urban Pakistan. Wheat flour currently contributes 72 percent of Pakistan's daily caloric intake with per capita wheat consumption of around 124 kg per year, one of the highest in the world. MY 2019/20 consumption is forecast at 25.4 million metric tons. As incomes increase and a stronger middle class emerges, consumers are gradually shifting towards more dairy, meat, and other higher-value food products in their diet. Over the long term, this shift to a more balanced diet has the potential to limit the pace of growth in wheat consumption. During 2018, domestic wheat prices increased by two percent as compared to 2017. Out of the total demand of 25.4 million metric tons, only five percent will be used in the feed industry, and the remaining 95 percent will be used for planting and human consumption.

Pakistan's wheat milling industry is privately owned. There are about 1,000 flour mills in Pakistan, which meet the consumption needs of about 40 percent of the population, with the balance met by on-farm consumption. The disbursement of government-owned wheat to flour mills is managed in an effort to ensure that sufficient wheat is available throughout the year.

In urban areas and among affluent consumers, consumer preference is shifting from higher whole grain to lower extraction flour and traditional flat bread to western-style, loaf bread. Traditional home-ground flour is also losing favor to commercially milled flour. Specialized products like cereals suited to the changing life styles in the urban areas are also gaining interest among consumers.

**Trade:**

Pakistan's MY 2018/19 wheat exports are now estimated to be around 1.5 million metric tons. Pakistan has so far exported about 900,000 tons of wheat during current marketing year excluding Afghanistan. The wheat is mainly going to Sri Lanka, Bangladesh, Gulf and some African countries. During early 2018, the GOP announced a $159 per metric ton subsidy on wheat exports, which technically expired on June 30, 2018. However, the subsidized wheat for which approval was taken before the subject date, continued to be shipped in the subsequent months. The Government of Pakistan (GOP) renewed subsidized wheat exports in November 2018 with a subsidy of $105 per ton. The subsidy on wheat exports was withdrawn in January 2019, as the continuing devaluation of Pakistan Rupee made the Pakistani wheat compatible with the world prices.

Pakistani wheat exports to Afghanistan continue to decline due to increased regulatory vigilance along the border. Pakistan is likely to export between 300,000 to 400,000 tons of wheat to Afghanistan during the current marketing year. Overall MY 2019/20 wheat exports are forecast at 1.0 million metric tons.

Pakistan supports the domestic wheat industry with a guaranteed wheat price purchase $310 per metric ton. While the government only procures about a quarter of the crop (half remains in villages and a quarter enters the "open" market directly), the procurement price effectively sets the market price of wheat in Pakistan. The domestic market is insulated from imports by a 60 percent regulatory duty. The tariff is well below Pakistan's bound tariff rate (the maximum tariff rate Pakistan can establish) for wheat of 150 percent. Consequently, Pakistan is not likely to import any significant quantity of wheat.

**Stocks:**

Respective MY 2019/20 and MY 2018/19 ending stocks are estimated at around 2.2 and 3.0 million metric tons. Wheat is procured and maintained through provincial food departments and the federal

agency known as the Pakistan Agricultural Storage and Services Corporation (PASSCO). In 2018, the GOP procured 5.9 million metric tons of wheat from the local harvest. Government purchases give a guaranteed return to the farmers who are able to sell to the government and provide a strong incentive for farmers to continue producing wheat during the Rabi (winter season), thereby supporting Pakistan's continued goal of wheat self-sufficiency. However, as global wheat prices have declined, wheat self-sufficiency through support prices has become increasingly costly.

Pakistan's 2019 domestic wheat procurement is again expected to be around 6 million metric tons, boosting public stock levels to around nine million tons shortly after the start of the marketing year. The GOP has come under pressure from international and domestic sectors to end its wheat procurement operations and let the markets and the private sector handle the efficient allocation of resources.

**Policy:**

Pakistan maintains a largely government controlled wheat marketing system and the government considers wheat as the key strategic commodity. The federal government sets a minimum guaranteed support price or procurement price and an issue price for wheat sold to flour mills. Through provincial food departments, the GOP procures wheat from farmers at the support price and then releases wheat to the flour mills at the government fixed issue price. The issue price is set at a rate that captures some of the cost of buying and storing the wheat, but there are significant implicit costs that are not fully captured. Wheat prices and the movement of wheat are controlled at the provincial and district levels. Grain stocks are procured and maintained by the provinces.

Farmers in Pakistan retain about 60 percent of their wheat production for seed, village and household food consumption. For wheat that is marketed, the government is the main buyer of farmers' wheat, with actual volumes of government procurement often reaching 25 to 30 percent of total production, driven by both food security and market intervention objectives. The remaining 15 percent of the harvest is purchased by the private sector. While food security is an important concern in Pakistan, high volumes of state wheat procurement make it harder to attract private sector trade and investment in the postharvest supply chain.

**Production, Supply and Demand Data Statistics:**

| **Wheat** | **2017/2018** | | **2018/2019** | | **2019/2020** | |
|---|---|---|---|---|---|---|
| **Market Begin Year** | **May 2017** | | **May 2018** | | **May 2019** | |
| **Pakistan** | **USDA Official** | **New Post** | **USDA Official** | **New Post** | **USDA Official** | **New Post** |
| **Area Harvested** | 8973 | 9050 | 8750 | 8800 | 0 | 8798 |
| **Beginning Stocks** | 4351 | 4351 | 4828 | 4681 | 0 | 2986 |
| **Production** | 26674 | 26600 | 25500 | 25100 | 0 | 25600 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **MY Imports** | 3 | 30 | 5 | 5 | 0 | 5 |
| **TY Imports** | 3 | 30 | 5 | 5 | 0 | 5 |
| **TY Imp. from U.S.** | 0 | 0 | 0 | 0 | 0 | 5 |
| **Total Supply** | 31028 | 30981 | 30333 | 29786 | 0 | 28591 |
| **MY Exports** | 1200 | 1200 | 1700 | 1500 | 0 | 1000 |
| **TY Exports** | 1200 | 1200 | 1300 | 1000 | 0 | 1000 |
| **Feed and Residual** | 1000 | 1100 | 1200 | 1200 | 0 | 1200 |
| **FSI Consumption** | 24000 | 24000 | 24100 | 24100 | 0 | 24200 |
| **Total Consumption** | 25000 | 25100 | 25300 | 25300 | 0 | 25400 |
| **Ending Stocks** | 4828 | 4681 | 3333 | 2986 | 0 | 2191 |
| **Total Distribution** | 31028 | 30981 | 30333 | 29786 | 0 | 28591 |
| **Yield** | 2.9727 | 2.9392 | 2.9143 | 2.8523 | 0 | 2.9098 |
| **(1000 HA) ,(1000 MT) ,(MT/HA)** | | | | | | |

**Commodities:**
Rice, Milled

**Production:**
Rice is Pakistan's third largest crop, after wheat and cotton, in terms of area sown. About 10 percent of Pakistan's total agricultural area is under rice during the summer or "Kharif" season. Pakistan is a leading producer and exporter of Basmati and IRRI rice (white long grain rice). Rice ranks second among the staple food grain crops in Pakistan and exports are a major source of foreign exchange earnings. Pakistan has two major rice-producing provinces, namely Punjab and Sindh. Both provinces account for nearly 90 percent of total rice production. Punjab, due to its agro-climatic and soil conditions, produces 100 percent of the Basmati rice in the country. Pakistan's "Kalar" bowl area, a local term that refers to a type of soil suitable for Basmati production, is famous for producing Basmati rice and is located between the Ravi and Chenab rivers in Punjab. IRRI rice is grown in both Punjab and Sindh.

MY 2018/19 production estimate is estimated at 7.4 million metric tons, in accordance of the official data. MY 2019/20 rice production is forecast at an aggressive 7.5 million metric tons, reflecting expectations of continued strong yields. Rice yields have grown steadily over the past decade as higher yielding basmati varieties and long grain hybrids have gained increasing acceptance among farmers. Hybrids have done especially well in Sindh where they account for 60 percent of planting, up from 35 percent just a few years ago. Better agronomic practices, more aggressive spraying, and resistant seed varieties have helped to reduce the incidence of bacterial leaf blight in recent years. More frequent flooding since 2010 has deposited nutrient rich soil in key growing areas, helping to further boost yields.

Rice Growing areas of Pakistan are broadly classified into the following four zones:

| | |
|---|---|
| Zone I | Northern high mountainous areas of Khyber Pakhtunkhwa (Swat and Khagan) with sub-humid climate, average rainfall of 750-1000 mm |
| Zone II | Lies between the Ravi and Chenab rivers in the central Punjab. Sub-humid, sub-tropical climate with average rainfall of 400-700mm. This is the famous premium zone and Basmati rice is exclusively produced in this zone along the Kalar tract consisting of Sailkot, Sheikhupura, Narowal, Gujranwala, Hafizabad and Lahore Districts |
| Zone III | West bank of Indus river in upper Sindh and Balochistan. Larkana, Jacobabad (Sindh), Nasirabad and Jaffarabad (Balochistan). High temperature and sub-tropical climate with average rainfall of 100 mm make it best suited for long grain rice. |
| Zone IV | Indus delta basin in Lower Sindh (Badin and Thatta Districts). Climate is arid tropical and is suited for coarse varieties. |

**Consumption:**

MY 2019/20 consumption is forecast at 3.6 million metric tons as compared to current year's revised consumption of 3.5 million metric tons. The increase in consumption is due to population growth in accordance with the latest census. Unlike many other Asian countries, rice is not considered a staple food crop in Pakistan. Traditionally, 40 to 45 percent of the crop is used for local consumption, with the balance exported. Pakistanis, in general, prefer the higher priced Basmati rice if they can afford it, if not they consume long grain IRRI rice, but wheat is the favored staple. According to trade sources an estimated 200,000 tons of 40-100 percent broken rice is used in poultry and animal feed annually.

**Trade:**

Pakistan, in the current marketing year, has so far exported 1.3 million metric tons of rice compared to 1.4 million metric tons during the same period a year ago. Total MY 2018/19 rice exports are projected at 4.0 million metric tons, 100,000 tons lower than the current USDA estimate. The continuing devaluation in the rupee is expected to support exports in the coming months. MY 2019/20 exports are projected at 4.0 million metric tons. Vietnam, Thailand and India are the main competitors of Pakistani rice. Pakistan's rice exports during the current marketing year are provided below in Table 2, this data may be subject to eventual revision. Pakistan imposes a tariff of 10 percent on rice imports.

**Table 2: Pakistan Rice Exports MY 2018/19 (Nov/October)**

| **Months** | **MY 17/18** | **MY 18/19** |
|---|---|---|
| November | 435,688 | 385,311 |
| December | 478,062 | 468,599 |
| January | 489,052 | 495,280 |
| **Total** | **1,402,802** | **1,349,190** |

Source: Pakistan Bureau of Statistics

Rice is a major Pakistani export to the United States. During 2018, Pakistan's rice exports to the United States increased by 15% and were valued at $31 million as compared to $27 million in 2017.

**Policy:**

Rice trade in Pakistan is carried out by the private sector with little or no intervention from the government. Since the publicly-run Rice Export Corporation of Pakistan was disbanded during 90's, Pakistan's rice traders have responded well to market liberalization and over the years have become major players in the world rice trade. The milling industry made significant investments in state-of-the-art processing machinery, but Pakistan exports most of its rice in bulk with no modern packaging and branding. Export companies could be doing more to develop brands and a more significant presence in foreign markets. However, the export industry is comprised of a large number of relatively small firms that are often family-run and accustomed to traditional trading practices. However, this practice is changing and Pakistan's rice exporters are becoming increasingly vocal for their industry and their trade interests. With time, the industry is expected to adopt more strategic and brand-based approaches to rice exporting.

**Production, Supply and Demand Data Statistics:**

| **Rice, Milled** | **2017/2018** | | **2018/2019** | | **2019/2020** | |
|---|---|---|---|---|---|---|
| **Market Begin Year** | **Nov 2017** | | **Nov 2018** | | **Nov 2019** | |
| **Pakistan** | **USDA Official** | **New Post** | **USDA Official** | **New Post** | **USDA Official** | **New Post** |
| **Area Harvested** | 2901 | 2800 | 2980 | 2880 | 0 | 2900 |
| **Beginning Stocks** | 1367 | 1367 | 1556 | 1467 | 0 | 1367 |
| **Milled Production** | 7450 | 7500 | 7540 | 7400 | 0 | 7500 |
| **Rough Production** | 11176 | 11251 | 11311 | 11101 | 0 | 11251 |
| **Milling Rate (.9999)** | 6666 | 6666 | 6666 | 6666 | 0 | 6666 |
| **MY Imports** | 0 | 0 | 0 | 0 | 0 | 0 |
| **TY Imports** | 0 | 0 | 0 | 0 | 0 | 0 |
| **TY Imp. from U.S.** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Supply** | 8817 | 8867 | 9096 | 8867 | 0 | 8867 |
| **MY Exports** | 4011 | 4000 | 4100 | 4000 | 0 | 4000 |
| **TY Exports** | 3950 | 3800 | 4100 | 3800 | 0 | 3800 |
| **Consumption and Residual** | 3250 | 3400 | 3400 | 3500 | 0 | 3600 |
| **Ending Stocks** | 1556 | 1467 | 1596 | 1367 | 0 | 1267 |
| **Total Distribution** | 8817 | 8867 | 9096 | 8867 | 0 | 8867 |
| **Yield (Rough)** | 3.8525 | 4.0182 | 3.7956 | 3.8545 | 0 | 3.8797 |
| (1000 HA) ,(1000 MT) ,(MT/HA) | | | | | | |

**Commodities:**
Corn

**Production:**

Corn is fast becoming a major crop in Pakistan and is the third most important cereal after wheat and rice. Though corn is mostly known as a Rabi (winter) crop, it is normally cultivated twice a year in Punjab and once a year in Khyber Pakhtunkhwa (KPK). The first cultivation season is known as spring (winter) season that normally starts in the middle of December in Punjab. The summer season begins in September and lasts until the start of December in both Punjab and KPK. The two provinces account for 99 percent of production. Yields are lower in Punjab due to the high temperatures, but conditions in KPK are optimal in the fall. Approximately 65 percent of the maize in Pakistan has access to irrigation; the remainder is farmed under rain-fed conditions.

MY 2019/2020 production is forecast at a steady 6.1 million tons at par with the revised record production of 6.1 million tons for the current marketing year. The increasing adoption of hybrid corn seed, both imported and domestically produced, which now accounts for 65 percent of planted area, is rapidly driving yields higher to meet demand from the poultry and livestock sectors. While it is unusual to forecast a record crop, the growing popularity of hybrids is expected to boost yields again. An estimated 50,000 hectares is used to produce corn silage.

**Table 3: Trends in Area Production and Yield of Maize in Pakistan**

| Years | Area (000 Ha) | Production (000 Tons) | Yield (Kg/ha) |
|---|---|---|---|
| 2001-02 | 941.6 | 1,664.4 | 1,768 |
| 2002-03 | 935.5 | 1,737.1 | 1,857 |
| 2003-04 | 947.1 | 1,897.4 | 2,003 |
| 2004-05 | 981.8 | 2,797.0 | 2,849 |
| 2005-06 | 1,042.0 | 3,109.6 | 2,984 |
| 2006-07 | 1,016.9 | 3,088.4 | 3,037 |
| 2007-08 | 1,051.7 | 3,604.7 | 3,427 |
| 2008-09 | 1,052.1 | 3,593.0 | 3,415 |
| 2009-10 | 935.1 | 3,261.5 | 3,488 |
| 2010-11 | 974.2 | 3,707.0 | 3,805 |
| 2011-12 | 1,087.3 | 4,338.3 | 3,990 |
| 2012-13 | 1,059.05 | 4,220.1 | 3,984 |
| 2013-14 | 1,168.5 | 4,944.2 | 4,231 |
| 2014-15 | 1,142.6 | 4,937.1 | 4,323 |
| 2015-16 | 1191.2 | 5,270.9 | 4,424 |
| 2016-17 | 1348.2 | 6,134.0 | 4.55 |

Source: Agricultural Statistics of Pakistan

**Consumption:** The poultry industry is the main buyer of corn, utilizing almost 65 percent of the production in poultry feed. Wet milling consumes about 15 percent and 10 percent is used to make dairy feed concentrate while the remaining production is used for human consumption in the form of bread made from the flour and, to a lesser extent, planting seed purposes. The poultry sector is one of the most modern and vibrant segments of Pakistani agriculture. There are approximately 165 feed mills for poultry feed in the country with an installed capacity of ten million metric tons of feed.

**Trade:**
The Government of Pakistan imposes a thirty percent regulatory duty and ten percent customs duty on imported corn, shielding producers from imports. The Pakistan Poultry Association has reportedly sought a tariff reduction, but without results thus far. The duty has resulted in no corn imports, in spite of the fact that Pakistan's domestic corn prices are much higher than international prices. The feed industry has experimented with imported sorghum and distiller dried grains as an alternative to corn, both attract lower tariffs and taxes than corn.

**Policy:**
Corn trade in Pakistan is carried out by the private sector with little or no intervention from the government. The government does not fix the procurement price for the commodity and is not involved in its procurement and marketing. Government efforts in corn are limited to some research and extension activities to increase the productivity of the crop.

The growth in corn has been led by the demand in the poultry and dairy feed sectors. Realizing the potential for immense growth, seed companies have led the way towards introducing hybrid corn varieties in Pakistan. The sales of corn hybrid seed vary according to seasons as 60 percent of total sales are realized in spring and 40 percent in autumn. The seed companies provide a comprehensive package to farmers including technology transfer and extension services. The field teams of the private seed companies have been pivotal in establishing corn as one of the rapidly growing grain crops in Pakistan. Corn farmers benefit from fertilizer, water, and power subsidies, a common fillip for most farmers in Pakistan.

**Production, Supply and Demand Data Statistics:**

| Corn | 2017/2018 | | 2018/2019 | | 2019/2020 | |
|---|---|---|---|---|---|---|
| Market Begin Year | Jul 2017 | | Jul 2018 | | Jul 2019 | |
| Pakistan | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Harvested | 1230 | 1230 | 1320 | 1320 | 0 | 1330 |
| Beginning Stocks | 1467 | 1467 | 963 | 963 | 0 | 878 |
| Production | 5701 | 5701 | 6300 | 6100 | 0 | 6100 |
| MY Imports | 25 | 25 | 25 | 25 | 0 | 25 |
| TY Imports | 26 | 26 | 20 | 20 | 0 | 20 |
| TY Imp. from U.S. | 12 | 12 | 0 | 5 | 0 | 5 |
| Total Supply | 7193 | 7193 | 7288 | 7088 | 0 | 7003 |
| MY Exports | 30 | 30 | 30 | 10 | 0 | 10 |
| TY Exports | 20 | 20 | 20 | 10 | 0 | 10 |
| Feed and Residual | 4700 | 4700 | 4800 | 4700 | 0 | 4800 |
| FSI Consumption | 1500 | 1500 | 1500 | 1500 | 0 | 1500 |
| Total Consumption | 6200 | 6200 | 6300 | 6200 | 0 | 6300 |
| Ending Stocks | 963 | 963 | 958 | 878 | 0 | 693 |
| Total Distribution | 7193 | 7193 | 7288 | 7088 | 0 | 7003 |
| Yield | 4.635 | 4.635 | 4.7727 | 4.6212 | 0 | 4.5865 |
| (1000 HA) ,(1000 MT) ,(MT/HA) | | | | | | |