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*(Observations and Results are based on Field Survey)*

# Price Impact on Agriculture Production & Nutrition

[Focus in Market Development by regulating the Price factors on commodities to End Poverty and Food Insecurity]

In many countries, achieving food security is a primary concern in agriculture. Sustainable Intensification of agriculture production and higher fertilizer prices including prevention of inputs material in balance quantity are the key issues in agriculture crop producing countries, mainly in south Asian countries. Agriculture sector play an important role in the movement of economy's wheel of Pakistan. Pakistan as an agriculture country facing economic burden due to lack of technology and low production and rising inflation rate which is directly impacted to the country's GDP growth rate. However, 2017/18 growth rate showed that the economy provisionally grew up at a pace of 5.8% against last year's economic growth rate of 5.4%. Current GDP is the highest in 13 years, while it has been declined in 2015/16 by 4.7% growth rate against the set target of 5.7%, due to the low agriculture production in the country which has been recorded the significant declined of 6.25% in crop productions in the country i.e. worst in two and half decades of Pakistan agriculture history. Pakistan is rapidly adapting to a services economy from agriculture economy and at the official levels it has been observed that there is lack of attention to this crucial sector, while there is a need to reconsider the implementation of policy for agriculture sustainability in the country and R&D. Crops sector during the year 2017-18 has recorded 3.83% growth against last year's growth of 0.91%. By considering the historical data in economics terms, agriculture's shares of GDP and employment are likely to decline because the income elasticity of demand and higher cost of production are the major causes to make the negative impact on national GDP.

In national economy of Pakistan, agriculture supposed to be the backbone of the country by providing 42.3% employment out of total labour force, from farming to input material supply then to the food markets. Therefore, at the present circumstances country is facing severe issues under agriculture growth program, in which the main concern is low crop yield and demand of foods. Farmers are the key source to produce agriculture crops but still malnutrition ratios are increasing in rural areas due to the low consumption of foods and rising poverty. While they are unable to get the benefits of subsidy on inputs supply. That is ultimately making negative impacts on crop yield, for the last several years crop yield, specifically major crops has recorded lower than the average crop yield among the developing countries. The factors responsible for stagnant yield is high inputs cost, particularly fertilizers and pesticides prices are the major components in crop production of the country while the local farmers are getting low crop prices in the

market, which has discouraged the farmers to spend more for crop cultivation that causes in declining their profitability.

Approximately 30% - 50% contribution in crop yield performance is based on fertilizer nutrients as per the economic survey of Pakistan 2017/18 (2017-18) [*ESoP, Chapter\_16/2 Agriculture*]. In Pakistan, crop belts have recorded nutrient deficiency due to climatic changes and low availability of crop development resources i.e. essential for plant growths majorly nitrogen, phosphorous and potash are the required elements in terms of high yielding crop varieties. However, history proven the importance of fertilizer in agriculture production has amply demonstrated the direct impact on the economic growth of Pakistan by its balanced utilization and increased crop productivity and production. Despite the increasing demand of the fertilizers in last two decades, country has recorded continues declining in fertilizer consumption during the last 5 years i.e. approximately (-) 21.4% from 3861K-tons in 2011-12 to 3035K-tons in 2015-16, mainly due to the rising trend in fertilizer prices(2011-12) [*ESoP, Chapter\_12/02-Agriculture*].

Consequently, government intervened as major stakeholder in fertilizer price control by providing subsidies to increase fertilizer consumption and expand. Because of the high energy crises and oil market's price instability, policies under climatic impacts, transaction costs are the major key influences to evaluate the agriculture growth in the coming future due to the rising prices of inputs supply in the market, in which the prices of the fertilizer is estimated to be increased in next decades because of the highlighted issues around the world. Findings indicated that the selected variables to determine the impact of higher fertilizer price on rural development and livelihoods of the farmers are having strong relationship, while it is also observed that the agriculture growth/crop yield is declining due to the low consumption of fertilizer nutrients on time and the reason behind the case is high market prices and low income because of the lack of marketing system in rural areas for selling their produce in the market to cover the cost of production.

Commonly two types of fertilizer used in crop field i.e. Urea & Diammonium Phosphate [DAP] which is mostly recorded as import commodity in many countries, by this the price of these fertilizers are not stable and deferring very frequently due to the changes in market circumstances globally, that causes to decline the application of required quantity and nutrients appropriately. Also it has been observed and very common factor that due to devaluation of the currency the retail prices of fertilizer nutrients are triple-fold in comparison of world markets. The domestic trading cost is strongly relative with the import price and retails market prices. However, it will be beneficial to the economy if the import volume will reduce by utilizing inorganic and organic fertilizer components in required amount and minimum demand of chemical fertilizer will help to control the price.

Globally current economic circumstances indicating that the price of each commodity is needed to be reform by the regularity. Nutrient food consumptions demand around the world encouraging to produce more agriculture product to meet it at the maximum level. In this order the price of fertilizer is one of the major factor which should be modified to adjust the supply-side hurdles. Fertilizer price increases are relatively with economic factors which is not under the control of regularity while the scarcity of constantly reducing reserves for phosphorous is also one of the reason that the skyrocketing hike in prices at the world market in respect of current record price of oil and gas.

The dynamic fertilizer supply in the country is needed to adopt the strategic partnerships and fertilizer actors' capacity building to control the market price of fertilizer. Fertilizer as a major components in agriculture productivity is to be considered to harmonize its trade protocols for beneficiary of sub-sector involvement in agriculture development in the country. By involving international suppliers and importers to establish a strategic partnership with the concerned government institutions could be helpful to stabilize the price from world market to domestic distribution channel in respect of supporting farmers to produce more crop with balance use of required fertilizer nutrients and improve farmers' livelihoods and income. Also there can be a scheme to control the market price i.e. called "redeemable voucher". The redeemable voucher as to link with subsidized incentive, to improve the market efficiency by controlling retailers selling operations and options through policy reforms.

Policy Uncertainty & Domestic Market Powers - Fertilizer price gap shows that due to low infrastructure and involvement of market players in fertilizer distribution are the reason that prices are not under the control of policy makers. The price gap analysis is indicating two major functions of policy makers to control the market and prices:

- 1. To control the domestic market powers and*
- 2. Facilitate the fertilizer users by rapidly changes in policy.*

In Pakistan policy shifting can improve the market efficiency and distribution by controlling the prices comparative to the world market transmission cost and encourage market players to stabilize the market without creating unnatural monopoly. Supply chain networks would help to take their part being an important agents in fertilizer production because the stockholding at the end of the supply chains. The intervention of policy makers for Implementing the better marketing and price policy will positively impact the domestic market. Therefore, the fixed maximum prices on retail markets are not as much profitable as to encourage private organizations to invest on fertilizer supply chain management to improve the market more competitive in terms of price and stock.

To increase the agriculture productivity by using the appropriate nutrient contents for crops, there is a need to reform the agriculture policy to promote the farmers knowledge gaining program through capacity building, investment on agriculture research and development by introducing the latest technologies, agriculture innovative techniques which will help to secure the soil fertility of the land and improve the crop yield. On other hands, government loan program and subsidy on inputs by considering the world markets transmission impacts, will promote the industry and domestic farmers to generate more profitability that is not only reducing the cost of production but also improve the agriculture productivity in the country.

Environmental Protection - in Pakistan due to drought weather condition and low availability of irrigation system, farmers are preferably applying heavy chemical dozes for maintaining the crop size. Agriculture scientist and nutrition experts are taken the attention into the world's rising issue for health and polluting environmental hazards by excessive use of chemical fertilizer and pesticides which causes for degrading soil fertility of land in longtime that turned into barren-land. While it is highly recommended for growers to apply organic and inorganic nutrient based fertilizer for yield improvement. For the perspective of environmental issues and healthy livelihood, crop management program under the supply chain management would help to control these threats. In current scenario of the country, the cattle farm and poultry waste are the source to integrate it with the synthetic chemical fertilizer for balancing the required nutrient contents to make the efficient crop farming by reducing cost and saving energy. Through better crop practices, implementation of natural resource management and agriculture-ecosystem, the environmental degradation can be tackled appropriately. For having sustainable agriculture the main aspect is to adopt conservation agriculture system [CAS] and modern farming. The practices should be focused to use the locally available resources in the country to improve the GDP. These improvements will strength the agriculture sectors for long-terms by reducing poverty.

***"Believe in yourself and nothing is impossible  
Small ACTS, when multiplied by millions of  
people can transform the WORLD...so together  
WE can Change the WORLD"***

***#ShahlaSalah-YPARPak-CR***

# ANNEXURES

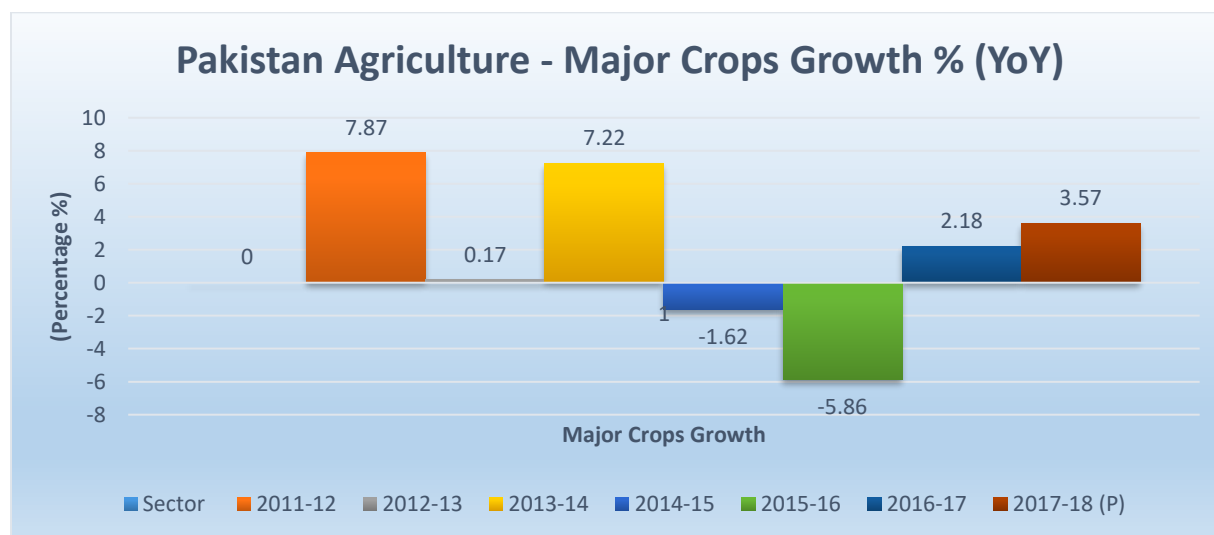
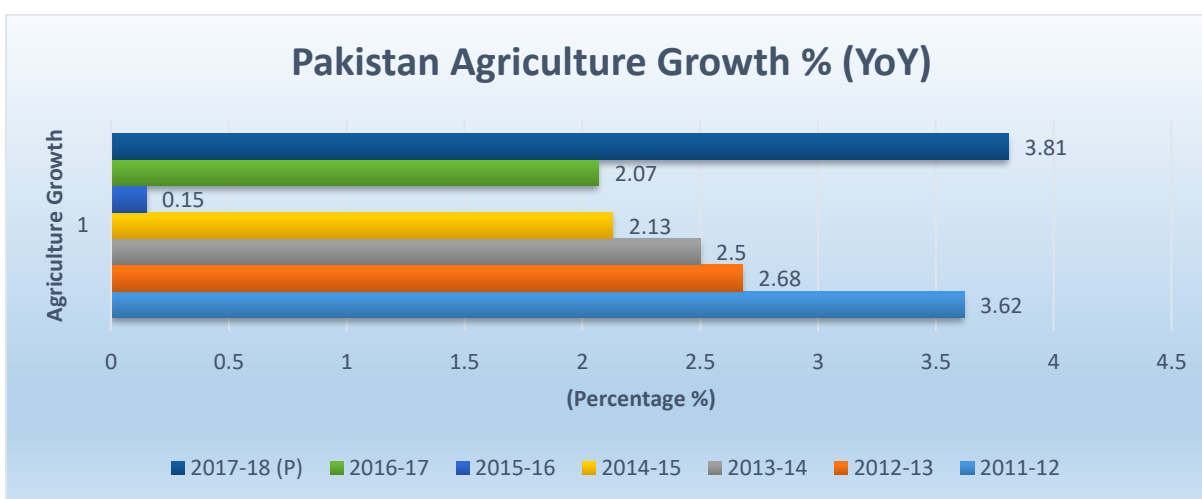
## Pakistan Agriculture Growth % YoY

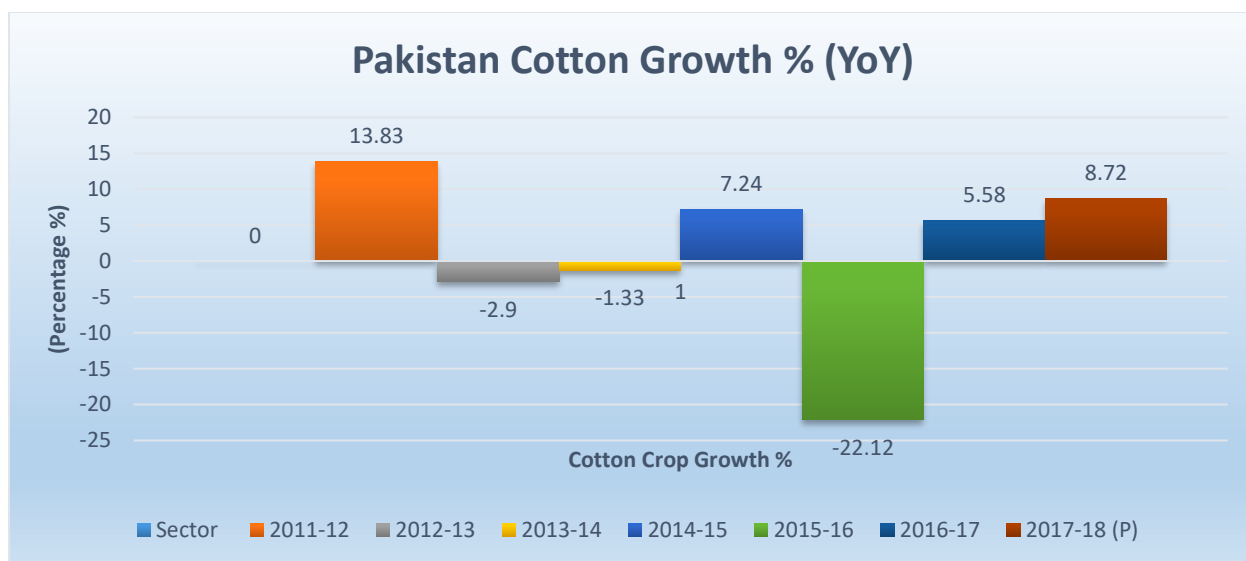
(Base = 2005-06)

Sector	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (P)
Agriculture	3.62	2.68	2.5	2.13	0.15	2.07	3.81
Crops	3.22	1.53	2.64	0.16	-5.27	0.91	3.83
Major Crops	7.87	0.17	7.22	-1.62	-5.86	2.18	3.57
Other Crops	-7.52	5.58	-571	2.51	0.4	-2.66	3.33
Cotton Ginning	13.83	-2.9	-1.33	7.24	-22.12	5.58	8.72
Livestock	3.99	3.45	2.48	3.99	3.36	2.99	3.76
Forestry	1.79	6.58	1.88	-12.45	14.31	-2.37	7.17
Fishing	3.77	0.65	0.98	5.75	3.25	1.23	1.63

\*\*Provisional (P)

Source: PBS





## Fertilizer Supply & Demand (Balance Sheet)

(000 Tonnes)

Description	Kharif (Apr-Sep) 2017		Rabi (Oct-Mar) 2017-18		Kharif (Apr-Sep) 2018	
	Urea	DAP	Urea	DAP	Urea	DAP
Opening Stock	1489	59	796	367	307	135
Imported Supplies	0	867	0	787	0	0
Domestic Production	2956	434	2698	377	2922	422
Total Availability	4445	1360	3494	1531	3229	557
Offtake/Demand	3234	992	3003	1403	2959	782
Export	422	0	184	0	0	0
Write on/off	7	-0.6	0	7	0	0
Closing Stock	796	367	307	135	270	-225

Source: NFDC

More Information:

<https://www.linkedin.com/pulse/price-impact-agriculture-production-nutrition-shahla-salah/>