

Agricultural Sector: Status and its Role in Pakistani Economy

¹Hussain Ali, ²Asad Ali, ¹Ahmad Ali, ¹Syed Rashid Ali and ³Murad Ali

¹Department of Sociology, Abdul Wali Khan University, Mardan, Pakistan

²Institute of Plant Protection, Chinese Academy of Agriculture Sciences,
Haidian District, Beijing, PR China

³Deputy Forest Manager, Ministry of Forestry,
Environment and Wildlife Department, Khyber Pakhtunkhwa Province of Pakistan

Abstract: In Pakistan agricultural sector contributes 18.5 percent to country's Gross Domestic Product. Similarly agriculture sector provide employment opportunities to 38.5 percent of the total national labor force. The federal ministry of National Food Security and Research is mainly responsible for development and various initiatives of the agricultural sector in Pakistan. The main purpose of the study is to review the status of agriculture sector in Pakistan, to know about various government initiatives, programs and projects for agriculture sector development and agricultural sector role in Pakistani economy. In the present study secondary data was reviewed and analyzed from Pakistan Economic Survey Report 2018-19, Pakistan Bureau of Statistics Report-2019 and Pakistan Agricultural Council reports. The statistical results highlighted that despite the fact that Pakistan is an agricultural country the agriculture growth is not observed consistent and due to slow transformation pace in rural Pakistan various problems including food insecurity, unemployment, illiteracy, poor living standard and poverty are raised in the country. The reports mentioned that present setting government initiated various programs and projects for development of agriculture sector in the country.

Key words: Agriculture • Gross Domestic Product • Economy • Pakistan

INTRODUCTION

Agriculture sector development in any country plays a vital role in food security, employment, reduction of poverty, industrial revolution, availability of raw material for industries and overall economic growth of the country [1, 2]. Agricultural sector in Pakistan plays a central and important role in the economy of the country [3]. Agricultural sector in the country contribute 18.5 percent to the Gross Domestic Product (GDP) and 38.5 percent of the country total labor force are working in this sector. It is stated in various research studies that more than 60.0 percent rural population of the country is dependent on agricultural sector for their livelihood [4]. Beside the engagement of Pakistani labor force in agriculture sector this sector is one of the main source of foreign exchange and push the economic growth in other economic sectors [5]. The direct relationship between agriculture sector and economy can be seen in three main dimensions; provision

and fulfillment of the nation food need, as a main source of foreign exchange and one of the source of goods and services both in national and international market [6-8].

Pakistan is full of natural resources and comprised of various ecological and climatic zones [9]. According to the official report published by Pakistan Federal Bureau of Statistics (2015-16) agriculture sector fulfilling the need of three quarters of the country population, its employ the 38.5 percent of the total country labor force and as one of the major source of foreign exchange. Pakistani economy is mainly dependent on agriculture sector however 21.2 million out of 79.6 million hectares are cultivated with 23.8 million hectares as agriculture crops and 4.21 million hectares are forest covered land. According to Federal Bureau of Statistics (2012) in total agricultural cultivated land 80.0 percent are covered through irrigation [9].

In Pakistan there are mainly two cropping seasons namely "Kharif" this season is starting from April to June and the crop is harvested in October to December [10].

The major “Kharif” crops are included Sugarcane, Rice, Cotton, Maize, Mong, Bajra and Jowar. The second season of cropping is called “Rabi”. This season is beginning in October to December and the crop harvested in April to May. The major crops in “Rabi” are included Wheat, Tobacco and Gram [11, 12].

Government Initiatives for Agriculture Sector Development (Program and Projects): To acknowledge the importance and enhancement of agriculture sector the current government initiated various programs and projects. These programs and projects are included; The productivity enhancement of Sugarcane, Rice and Wheat crops, the enhancement program of oilseeds, construction and lining of water channel for the purpose to conserve the water, in Barani areas enhancement of command area for small and mini dams, in the province of Khyber Pakhtunkhwa conservation of water in Barani areas, shrimp farming, cage fish culture, in the northern areas of the country farming trout and backyard poultry program. The projects are included cost of wheat project of 19, 301 million rupees, a project for Rice of 11, 433 million rupees and 3, 912 million rupees project of Sugarcane for the period of five years. The five year project called National Oilseeds enhancement project of 10, 176 million rupees. The government started project of lining up 50.0 percent watercourse length and laser land levelers with the cost of 179, 705 million rupees over a period of 5 years. The project initiated on small and mini dams in Barani area for enhancement with the cost of 27, 700 million rupees. The time frame for the project is five years. The conservation of water project started in the province of Khyber Pakhtunkhwa with the cost of 13, 020 million rupees. The project total duration is five years. The project on shrimp farming is started which will be completed in five years. The total cost of the project is 4, 842.78 million rupees. The government initiated the project of trout fish farming in northern areas of the country with 2, 291.97 million rupees. The completion duration of the project is five years. One of the projects started by the government is called Backyard poultry. The total cost of the project is 329.13 million rupees and will be completed in 04 years. The project is mainly focused on provision of opportunities to landless farmers including women. The project will work on source of eggs and meat for the poor and support the people in nutrition. The government will reduce the poverty by poultry products. Despite the greater role of agriculture sector in Gross Domestic

Product (GDP) and various program and projects initiative of the current government the agriculture sector performance in 2018-19 remained subdued. In this time period the agriculture sector is only grew by 0.85 percent while the target set in the start of the year was 3.8 percent. One of the major causes reported is the irregular and insufficient availability of water in the agriculture sector [13]. Due to the insufficient availability of water the cultivated land is dropout in the year 2018-19. The recently reported Economic Survey of Pakistan (2018-19) indicated statistically negative growth of crop sector in the country [14]. The decline crops included Sugarcane, Cotton and Rice. Beside the decline of above crops the livestock maintained the growth, the Fishing sector add value to agriculture sector while the Forestry share in agriculture sector grew by 6.47 percent in the year 2018-19.

Objectives of the Study: The present study mainly focused on the following objectives;

- To analyze the agriculture sector status in Pakistan
- To study the government initiatives, programs and projects for agriculture sector development
- To study the role of agriculture sector in Pakistani economy

MATERIALS AND METHODS

The researchers reviewed the Pakistan Economic Survey Report 2018-19, Annual Budget Reports for the year 2017-18 & 2018-19, Pakistan Bureau of Statistics Report 2019, Pakistan Agricultural Research Council Reports as a secondary source of data. The Pakistan Economic Survey Report is the regular publication of Finance Division Government of Pakistan recently published in June, 2019. This report mainly focused on macro-economic indicators, sector wise progress and various government initiatives. The Economic Survey of Pakistan report mainly contains two parts namely analytical description and statistical data. This report is analyzing all sectors performance and trends in the economic growth. The researchers analyzed the agricultural sector development and its role in Pakistani economy. Other relevant research and government official reports are reviewed and analyzed. The researchers draw the findings of review in agriculture sector in statistical tabulation and graphs.

RESULTS

Table 1 shows the growth of agricultural sector in 2018-19. The Economic Survey of Pakistan (2018-19) highlighted that agriculture sector growth is subdued. The target set at the start of the year was 3.8 percent however the sector grew only 0.85 percent which shows very poor performance of the sector. In start of the year (2018-19) target for crop was 3.6 percent and a negative growth (-4.43 percent) is experienced against the target. The statistics shows a negative decline -6.55 percent in the important crops and -12.74 percent in cotton ginning decline with decrease in cotton crop production. Other crops show growth with 1.95 percent which contribute 11.21 percent in agriculture value and 2.08 percent in GDP. The target for livestock at the start of the year was 3.8 percent which is achieved with the growth of 4.0 percent. The livestock contribute 60.54 percent to agriculture and the addition to GDP is recorded 11.22 percent. The table indicates 6.47 percent increase in forestry with 2.10 percent value addition in agriculture sector (0.39% GDP). The Economic Survey Report (2018-19) indicated Fishing share 2.10 percent in the agriculture value with 0.39 percent GDP.

Table 2 shows the production of important crops in agriculture sector. The important crops are included wheat, rice, sugarcane, maize and cotton. All the crops contribute 21.90 percent value addition to agriculture sector with addition 4.06 percent in GDP. The table shows the cotton production negatively grew with -17.5 percent. The target set at the start of the year was 14.4 million bales however the cotton production achieved only 31.5 percent against the target. The second important sugarcane crop also negatively grew with -19.4 percent. The sugarcane production decline due to decrease in the cultivated land for sugarcane. The statistic shows that rice as an important crop decreased in the year 2018-19 with negative grew -3.3 percent. It is recorded that decline in the production of rice is due to decrease in the cultivated land, insufficient water and dry weather in the country. The above table shows the important of wheat crop production which is statistically increased with 0.5 percent however the target set in the start of the year was 4.9 percent which is not achieved in the year. The survey report indicated that maize crop production increased with 6.9 percent in the year of 2018-19. It is found that increased in the maize crop due to farmer's production of the crop and decrease in the cultivation of sugarcane and wheat.

The above Table 3 and figure 1 shows the area and production of cotton. The cotton plays its important role in the Pakistani economy. The cotton crop share 0.8 percent in the GDP and 4.5 percent value addition in the agriculture sector in Pakistan. It is shown that cotton crop recorded as moderate with 9.861 million bales and found decreased with 17.5 percent in the last five years (11.946 million bales). The decrease is found in the cotton crop due to less economic attraction for farmers in the cultivation of cotton crop. The cultivated land decreased from 2,700 thousand hectares to 2,373 thousand hectares (12.1 percent). The agriculture survey reports indicated that decrease in the production of the cotton crop is not only due to less cultivated land rather the hot weather and climate change is also responsible for decrease in the crop production. In addition, stunting of crop, attack of whitefly, pink bollworm and other pests/insects also hampered crop output.

Table 4 and Figure 2 show the sugarcane crop land of production and yield. Sugarcane is the high cash value crop in Pakistan. This crop adds value of 2.9 percent to the agriculture sector and 0.5 percent to the country GDP. Like other decreased crop in the year 2018-19 the sugarcane crop also recorded decreased in the production and area of yielding. The target set for cultivation of sugarcane was 1,343 thousand hectares which is declined to 1,102 thousand hectares with 17.9 percent. The sugarcane production recorded lower this year as 67.174 million tonnes as compare to the production 83.333 million tonnes last year. The causes of lower production of sugarcane are low economic benefits; insufficient water and delay problem in payment of price by sugar mill the farmers with low price per kg of sugarcane.

Table 5 and figure 3 show the wheat crop area of production and yield. Most of the rural population is dependent on wheat production for their daily food. Wheat crop added 8.9 percent of agriculture value and the contribution of wheat is recorded 1.6 percent of GDP. The target for wheat crop at the start of the year was 4.9 percent which is not achieved however the production is increased as compare to other years with 0.5 percent. The production is recorded 25.195 million tonnes in the country. Same like the cotton and sugarcane cultivation land the wheat cultivation land is declined as 0.6 percent (8,740 thousand hectares as compare to the last year's 8,797 thousand hectares). The factors responsible for decrease of wheat cultivation land is recorded as shifting of the wheat cultivated land to other crops production demanded in market i.e. oilseed.

Table 1: Agriculture Growth Percentages (Base=2005-06)

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)
Agriculture	2.68	2.50	2.13	0.15	2.18	3.94	0.85
Crops	1.53	2.64	0.16	-5.27	1.22	4.66	-4.43
i) Important Crops	0.17	7.22	-1.62	-5.86	2.60	3.56	-6.55
ii) Other Crops	5.58	-5.71	2.51	0.40	-2.51	6.15	1.95
iii) Cotton Ginning	-2.90	-1.33	7.24	-22.12	5.58	8.80	-12.74
Livestock	3.45	2.48	3.99	3.36	2.99	3.62	4.00
Forestry	6.58	1.88	-12.45	14.31	-2.33	2.58	6.47
Fishing	0.65	0.98	5.75	3.25	1.23	1.63	0.79

P: Provisional

Source: Pakistan Bureau of Statistics-2019 and Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan

Table 2: Production of Important Crops (Tonnes)

Year	Cotton (000 bales)	Sugarcane	Rice	Maize	Wheat
2012-13	13, 031	63, 750	5, 536	4, 220	24, 211
2013-14	12, 769 (-2.0)	67, 460 (5.8)	6, 798 (22.8)	4, 944 (17.2)	25, 979 (7.3)
2014-15	13, 960 (9.3)	62, 826 (-6.9)	7, 003 (3.0)	4, 937 (-0.1)	25, 086 (-3.4)
2015-16	9, 917 (-29.0)	65, 482 (4.2)	6, 801 (-2.9)	5, 271 (6.8)	25, 633 (2.2)
2016-17	10, 671 (7.6)	75, 482 (15.3)	6, 849 (0.7)	6, 134 (16.4)	26, 674 (4.1)
2017-18	11, 946 (11.9)	83, 333 (10.4)	7, 450 (8.8)	5, 902 (-3.8)	25, 076 (-6.0)
2018-19 (P)	9, 861 (-17.5)	67, 174 (-19.4)	7, 202 (-3.3)	6, 309 (6.9)	25, 195 (0.5)

P: Provisional

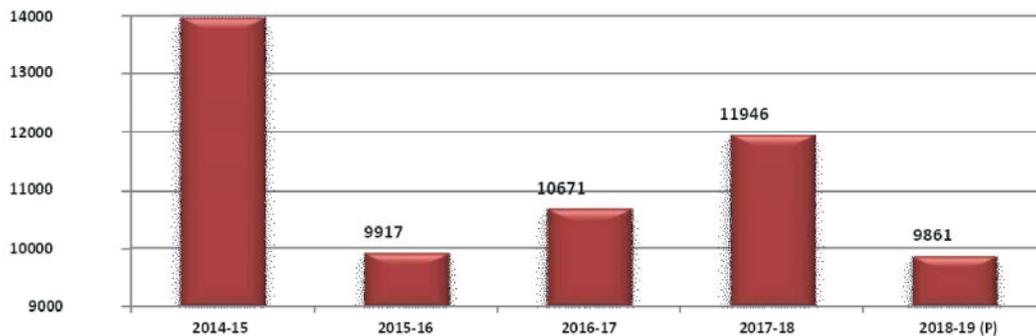
Source: Pakistan Bureau of Statistics-2019 and Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan

Table 3: Area, Production and Yield of Cotton

Year	Area		Production		Yield	
	(000 Hectare)	% Change	(000 Bales)	% Change	(Kgs/Hec)	% Change
2014-15	2, 961	-	13, 960	-	802	-
2015-16	2, 902	-2.0	9, 917	-29.0	582	-27.4
2016-17	2, 489	-14.2	10, 671	7.6	730	25.3
2017-18	2, 700	8.5	11, 946	11.9	753	3.1
2018-19(P)	2, 373	-12.1	9, 861	-17.5	707	-6.1

P: Provisional

Source: Pakistan Bureau of Statistics-2019 and Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan



Source: Pakistan Bureau of Statistics Report 2019

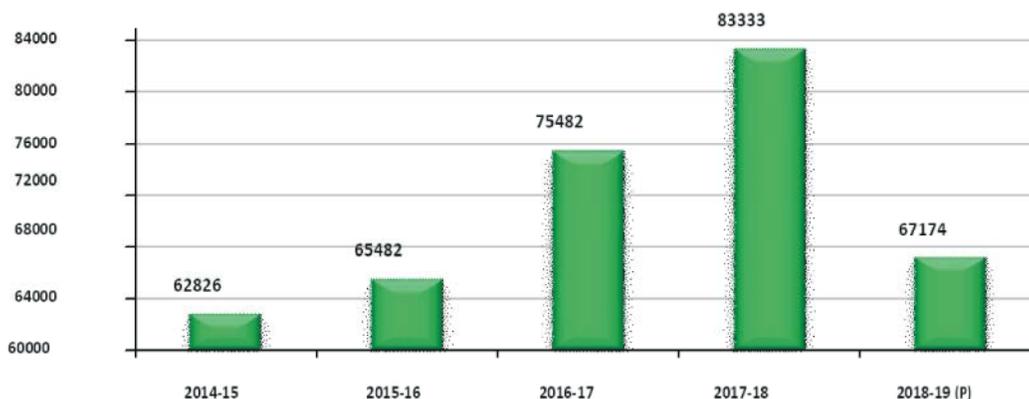
Fig. 1: Cotton Production (000 bales)

Table 4: Area, Production and Yield of Sugarcane

Year	Area		Production		Yield	
	(000 Hectare)	% Change	(000 Tonnes)	% Change	(Kgs/Hec.)	% Change
2014-15	1, 141	-	62, 826	-	55, 062	-
2015-16	1, 131	-0.9	65, 482	4.2	57, 897	5.1
2016-17	1, 218	7.7	75, 482	15.3	61, 972	7.0
2017-18	1, 343	10.3	83, 333	10.4	62, 050	0.1
2018-19 (P)	1, 102	-17.9	67, 174	-19.4	60, 956	-1.8

P: Provisional

Source: Pakistan Bureau of Statistics-2019 and Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan



Source: Source: Pakistan Bureau of Statistics Report 2019

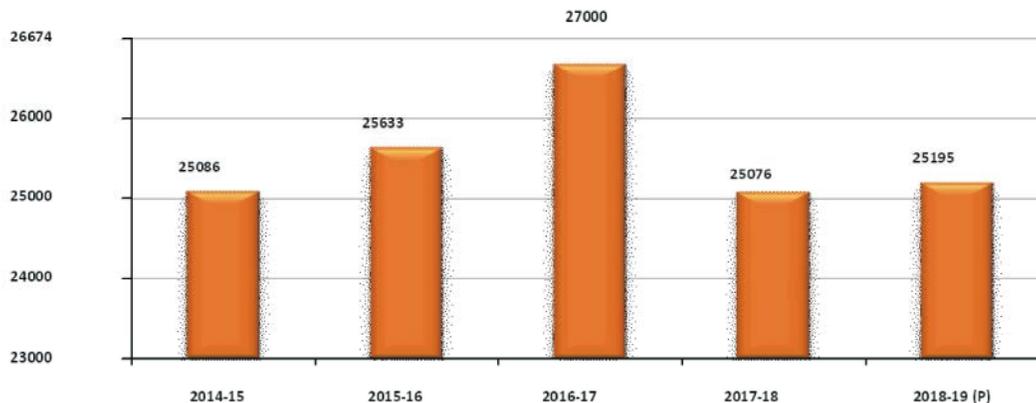
Fig. 2: Sugarcane Production (000 Tonnes)

Table 5: Area, Production and Yield of Wheat

Year	Area		Production		Yield	
	(000 Hectares)	% Change	(000 Tonnes)	% Change	(Kgs /Hec.)	% Change
2014-15	9, 204	-	25, 086	-	2, 726	-
2015-16	9, 224	0.2	25, 633	2.2	2, 779	1.9
2016-17	8, 972	-2.7	26, 674	4.1	2, 973	7.0
2017-18	8, 797	-1.9	25, 076	-6.0	2, 851	-4.1
2018-19(P)	8, 740	-0.6	25, 195	0.5	2, 883	1.1

P: Provisional

Source: Pakistan Bureau of Statistics-2019 and Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan



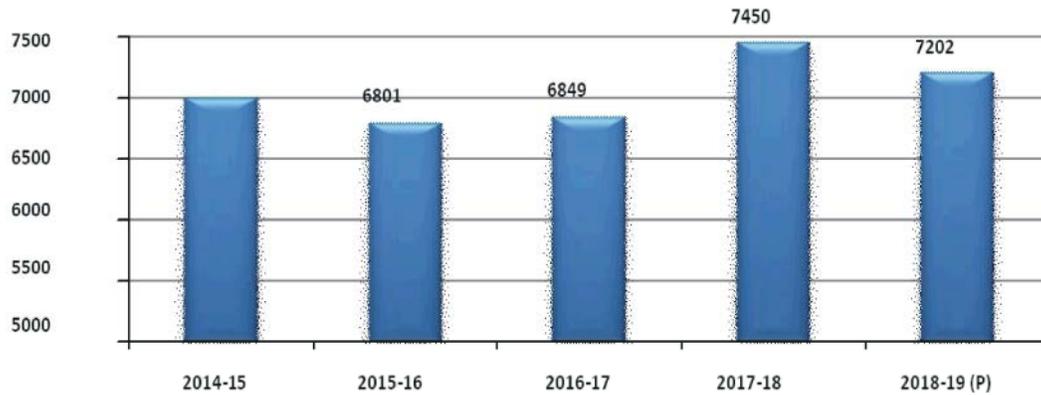
Source: Pakistan Bureau of Statistics Report 2019

Fig. 3: Wheat Production (000 Tonnes)

Table 6: Area, Production and Yield of Rice

Year	Area		Production		Yield	
	(000 Hectare)	% Change	(000 Tonnes)	% Change	(Kgs/Hec.)	% Change
2014-15	2,891	-	7,003	-	2,422	-
2015-16	2,739	-5.3	6,801	-2.9	2,483	2.5
2016-17	2,724	-0.5	6,849	0.7	2,514	1.2
2017-18	2,901	6.5	7,450	8.8	2,568	2.1
2018-19(P)	2,810	-3.1	7,202	-3.3	2,562	-0.2

Source: Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan



Source: Pakistan Bureau of Statistics Report 2019

Fig. 4: Rice Production (000 Tonnes)

Table 7: Area and Production of other Kharif and Rabi Crops

Crops	2017-18		2018-19 (P)		% Change in production over Last year
	Area (000Hectares)	Production (000 Tonnes)	Area (000Hectares)	Production (000 Tonnes)	
Bajra	489	339	456	350	3.2
Jowar	255	153	242	149	-2.6
Gram	977	323	944	438	35.6
Barley	58	55	55	55	0.0
Rapeseed & Mustard	199	225	263	225	0.0
Tobacco	46	107	46	107	0.0

P: Provisional

Source: Pakistan Bureau of Statistics-2019 and Pakistan Economic Survey 2018-19, Ministry of Finance Pakistan

The Table 6 and Figure 4 shows the production and yield of rice crop in Pakistan. Rice crop is using by Pakistani people as a regular food item in their daily food. The rice is also considered as a cash crop in the country. Its contribution to agriculture value is 3.0 percent and to GDP is 0.6 percent. It is an alarming situation that like other major crops wheat, sugarcane and cotton the rice crop cultivation area is decreased as 3.1 percent. Last year the cultivation area for rice was 2,901 thousand hectares and this year (2018-19) it is decreased to 2,810 thousand hectares. The production of rice is recorded at 7,202 thousand tonnes while the set target for rice production was 7.0 million ones. It is found that rice production is less of 3.3 percent as compared to last year (7,450 thousand tonnes). The Pakistan economic survey report

highlighted that rice production is declined due to decline in cultivation area of rice, insufficient water and dry weather in the country.

Table 7 shows the other crops production. The production of other Kharif and Rabi crops are presented statistically in Economic Survey Report 2018-19. In the gram production increased is recorded in the year of 2018-19. The production is increased due to favorable weather during the sowing time period. The other crop Bajra production is also found increased by 3.2 percent. It is interesting that the other crops namely Barley, Rapeseed and Mustard and Tobacco are found constant in their production. It is recorded that only the Jowar crop production is declined by 2.6 percent.

DISCUSSION

In Pakistan agriculture sector is one of the important sectors not only fulfilling the food needs rather is the great source of employment generation and labor force engagement. Unfortunately the agricultural sector performance is declining due to various factors including shortage of water in cultivated land [15-16]. The share of agricultural sector to Gross Domestic Product (GDP) is statistically decreased [17]. In last decade it is observed that major crops production is decreased and the climate change with insufficient water recorded as serious challenges to agriculture sector in the country [18, 19]. In the year 2018-19 the set target for agriculture sector grew was 3.8 percent which is only grew up to 0.8 percent. The major crops in Pakistan are wheat, sugarcane, cotton, rice and maize [20].

Overall the crop sector grew negatively and -6.55 percent declines in important crops are recorded in the year 2018-19. The sugarcane crop decline by -19.4 percent, cotton crop production decline by -17.5 percent, rice production decline -3.3 percent however a little increase recorded in wheat by 0.5 percent and maize crop production increased 6.9 percent. Beside the decline in major crops the livestock maintained its growth and share 60.54 percent in agriculture sector. The fishing sector is found with increase of 0.79 percent and forestry grew with high 6.47 percent in agriculture sector [21]. Many research studies indicated that utilization of extensive inorganic fertilizers in agricultural sector badly affect the production of crops and soil quality [22-23].

CONCLUSION

The Economic Survey Report (2018-19) shows decline in the growth of agriculture sector. The major causes reported are insufficient water supply for agriculture land, hot weather, climate change and decline in agriculture land cultivation and drop in fertilizer off take. It is also found that less or no incentive is offered to farmers in case of natural disaster affect i.e. flood and heavy rain fall. Approximately, 1 million crops destroyed due to natural disasters and these disasters not only influenced the farmer's income but also affect the total crops production. The new government of Pakistan initiated various programs and projects for the uplift of agriculture sector. Budget is allocated for these new programs and projects. Conclusively it is stated that agriculture sector growth is continuously declining and its contribution to Pakistani economy is negatively associated.

Recommendations: The following recommendations are suggested to the concern authorities for improvement in the growth of agricultural sector.- Pakistan should construct new dams for water storage to cover the insufficient water supply to agricultural land:

- Government should construct roads for the purpose of agricultural product access to market.
- Government should start education for farmers about new methods of farming and seeds cultivation.
- Government should maintain the reasonable price of crops.
- Government should compensate the farmers in case of destruction and damages of farming field and crops.

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