Agriculture

Agriculture accounted for 20.9 percent of the Gross Domestic Product (GDP) in 2014-15 and is a source of livelihood of 43.5 percent of rural population. Increased agricultural production and high crops yield is essential for food security which make the farming systems less vulnerable to climate change. To make agriculture more effective in supporting sustainable higher economic growth trajectory and reducing poverty in Pakistan, a policy framework needs to be anchored coupled with favourable socio political climate, adequate governance, and sound macroeconomic fundamentals. The prime focus of the government is on high value agriculture including horticulture, livestock and fisheries. Concerted efforts are being made to improve farm level practices and developing linkages of farmers with markets and industry based on new technologies, ideas and future pathways for sustainable growth of agro industry.

Agriculture sector has traditionally sustained a satisfactory growth to ensure food security for our growing population. However, the major challenge faced has been low returns to farmers of their commodities because of higher costs of production. This calls for well-thought interventions to improve agriculture products value addition at the farm levels and industrial linkages, especially under the existing situation, when the agricultural commodities returns do not commensurate the increasing cost of production, a vibrant industrial sector understanding of these challenges may come forward to support the farm sector. The government is currently focusing to develop mechanisms for minimizing cost of production to increase farmers' interest in agriculture and livestock. As a policy, the government is committed to provide required infrastructure support to agro-processors with the aim to enhance value addition and job opportunities for growing young population.

Presently, the government is fully cognizant of the role of rural youth in developing services sector and entrepreneurship for value added growth of agriculture sector and its relevance to improvement in incomes as agriculture sector is a prime driver of agriculture-related industries and the rural nonfarm economy .The rural youth is being supported in acquiring the new skills for setting agro-based businesses for improving household livelihood. The Prime Minister's Youth Loan Programme, the areas like livestock, horticulture and fisheries as well as non farm sector would benefit and this would result in overall economic betterment of rural masses and generate raw material for our growing food industries.

Agricultural performance in Pakistan remained subdued. Major factors underlying this slow performance include slow rate of technological innovation, limited adoption of progressive farming techniques, problems with quality, quantity and timeliness of input supply, limited investment in construction and maintenance of infrastructure; marketing and trade restrictions, pest and livestock disease problems, and limited amounts of credit for agricultural production, processing and the lack of agriculture-specific financing.

Box-I: Vision 2025

"Pakistan Vision 2025" envisages seven priority areas of action termed as "Pillars" and the Pillar IV is titled as "Water, Energy and Food Security". It envisages vision and road map for future growth and development of Food and Agriculture sectors along with allied subsectors.

Energy, Water & Food Security

Pakistan Vision 2025 recognizes that sufficient, reliable, clean and cost-effective availability of energy, water and food – is indispensable in ensuring sustainable economic growth and development. These key sectors have suffered historically from severe failings of integrated policy and execution. Meeting this challenge has been further complicated due to the severe impact of ongoing climate change. However, we are proud to have a renewed national consensus on committing major new investments, through unprecedented public and private sector collaboration, to bridge very large gaps that threatened the wellbeing and progress of our country. While investments to ensure the needed additional supply are being made in creating and encouraging a culture of conservation and efficiency in the usage of energy and water.

Food Security:

Pakistan Vision 2025 seeks a Pakistan where "all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life". Pakistan Vision 2025 envisages food security in the context of the entire supply-chain from production, processing, storage and distribution to consumption.

Top 5 objectives for achieving food security are to:

1. Protect the most food-insecure segments of the population through effective relief measures, including long-term arrangements and adaptation mechanisms.
2. Create a modern, efficient and diversified agricultural sector – aligned with associated water and energy infrastructure – that can ensure a stable and adequate provision of basic food supplies for the country's population, and provide high quality products to its industries and for export.
3. Optimize production and supply mix in line with current and projected needs by leveraging our unique strengths.
4. Ensure that the entire supply-chain related to food security is geared towards provision of stable and affordable access to adequate, nutritious and safe food for a healthy life.
5. Use the resource base in an efficient and sustainable manner – with outcome based benchmarks agreed in line with regional and global standards.

Source: Ministry of Planning, Development and Reform

Recent Performance

During fiscal year 2014-15, the overall performance of agriculture sector recorded a growth of 2.9 percent compared to the growth of 2.7 percent during last year due to positive growth in all related agriculture sub sectors. Crops witnessed a growth of 1.0 percent, Livestock 4.1 percent, Forestry 3.2 percent and Fishing 5.8 percent. The agriculture's crop subsector component which includes important crops, other crops and cotton ginning showed growth of 0.3 percent, 1.1 percent and 7.4 percent, respectively. Important crops carry great significance by having a share of 25.6 percent in agricultural value added has experienced a meager growth of 0.3 percent in fiscal year 2014-15 against growth of 8.0 percent during the same period of last year on account of revised production estimates of wheat crop. The important crops performance remained weak as only cotton and rice production recorded positive growth of 9.5 percent and 3.0 percent, respectively while sugarcane, maize and wheat production recorded a negative growth of 7.1 percent, 5.0 percent and 1.9 percent, respectively with respect to last year estimates. Other crops contributed 11.1 percent in value addition of agriculture recorded an increase of 1.1 percent during 2014-15 against negative growth of 5.4 percent during the same period last year that is due to increase in production of pulses, vegetables and fruits which recorded positive growth of 13.0 percent, 2.5 percent and 0.9 percent, respectively against the negative

growth of pulses and vegetable by 35.9 percent and 8.8 percent, respectively, on account of better water availability, more fertilizer offtake and relief in the prices of agriculture inputs and enhanced availability of agriculture credit.

The Livestock sector which contributes 56.3 percent in the agriculture recorded a positive growth of 4.1 percent in 2014-15 against 2.8 percent growth during the same period last year. The Fishing sector contributed 2.1 percent in agriculture value addition recorded a growth of 5.8 percent as against last year's growth of 1.0 percent. Forestry sector posted a growth of 3.2 percent this year as compared to the negative growth of 6.7 percent last year. (Table 2.1)

Table 2.1: Agriculture Growth Percentages (Base=2005-06)

Sector	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 P
Agriculture	3.5	0.2	2.0	3.6	2.7	2.7	2.9
Crops	5.2	-4.2	1.0	3.2	1.5	3.2	1.0
i) Important Crops	8.4	-3.7	1.5	7.9	0.2	8.0	0.3
ii) Other Crops	0.5	-7.2	2.3	-7.5	5.6	-5.4	1.1
iii) Cotton Ginning	1.3	7.3	-8.5	13.8	-2.9	-1.3	7.4
Livestock	2.2	3.8	3.4	4.0	3.5	2.8	4.1
Forestry	2.6	-0.1	4.8	1.8	6.6	-6.7	3.2
Fishing	2.6	1.4	-15.2	3.8	0.7	1.0	5.8

Source: Pakistan Bureau of Statistics
P: Provisional

Pakistan has two crop seasons, "Kharif" being the first sowing season starting from April-June and harvested during October-December. Rice, sugarcane, cotton, maize, moong, mash, bajra and jowar are "Kharif" crops. "Rabi", the second sowing season, begins as on October-December and is harvested in April-May. Wheat, gram, lentil (masoor), tobacco, rapeseed, barley and mustard are "Rabi" crops. Pakistan's agricultural output is closely linked with the supply of irrigation water. During 2014-15, the availability of water for Kharif 2014 stood at 69.3 (MAF) showing an increase of 5.8 percent more than Kharif 2013 and 3.3 percent more than the normal supplies of 67.1 MAF. The water availability during Rabi season 2014-15 is estimated at 33.1 MAF, which is 1.8 percent higher than Rabi 2013-14 but 9.1 percent less than the normal availability of 36.4 MAF (Table 2.2).

Table 2.2: Actual Surface Water Availability (Million Acre Feet)

Period	Kharif	Rabi	Total	%age increase/decrease. over the Avg.
Average system usage	67.1	36.4	103.5	-
2006-07	63.1	31.2	94.3	- 8.9
2007-08	70.8	27.9	98.7	- 4.6
2008-09	66.9	24.9	91.8	-11.3
2009-10	67.3	25.0	92.3	-10.8
2010-11	53.4	34.6	88.0	-15.0
2011-12	60.4	29.4	89.8	-13.2
2012-13	57.7	31.9	89.6	-13.4
2013-14	65.5	32.5	98.0	-5.3
2014-15	69.3	33.1	102.4	-1.1

Source: Indus River System Authority

I. Crop Situation

Important crops, such as wheat, rice, sugarcane maize and cotton account for 25.6 percent of the value added in overall agriculture and 5.3 percent of GDP. The other crops account for 11.1 percent of the value added in overall agriculture and 2.3 percent of GDP. Livestock contributes 56.3 percent to agricultural value added much more than the combined contribution of important crops, other crops and cotton ginning (39.6 percent). The production performance of important crops is given in Table 2.3.

Table 2.3: Production of Important Crops (Thousand Tonnes)

Year	Cotton (000 bales)	Sugarcane	Rice	Maize	Wheat
2008-09	11,819	50,045	6,952	3,593	24,033
	-	-	-	-	-
2009-10	12,914	49,373	6,883	3,261	23,311
	(9.3)	(-1.3)	(-1.0)	(-9.2)	(-3.0)
2010-11	11,460	55,309	4,823	3,707	25,214
	(-11.3)	(12.0)	(-29.9)	(13.7)	(8.2)
2011-12	13,595	58,397	6,160	4,338	23,473
	(18.6)	(5.6)	(27.7)	(17.0)	(-6.9)
2012-13	13,031	63,750	5,536	4,220	24,211
	(-4.1)	(9.2)	(-10.1)	(-2.7)	(3.1)
2013-14	12,769	67,460	6,798	4,944	25,979
	(-2.0)	(5.8)	(22.8)	(17.2)	(7.3)
2014-15 (P)	13,983	62,652	7,005	4,695	25,478
	(9.5)	(-7.1)	(3.0)	(-5.0)	(-1.9)

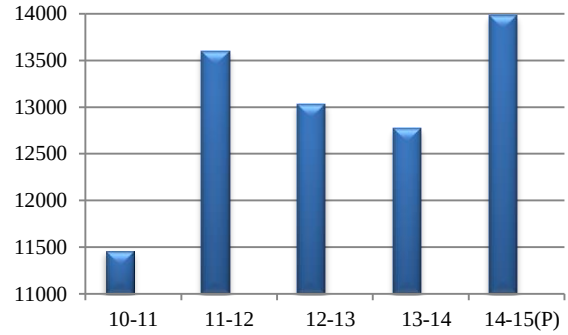
Source: Pakistan Bureau of Statistics
P: Provisional (July-March), Figures in parentheses are growth/decline rates

a) Important Crops

i) Cotton:

Cotton plays a major role in earning foreign exchange .The cotton crop production accounts for 1.5 percent in GDP and 7.1 percent in agriculture value addition. During July-March 2014-15, textile industry fetched foreign exchange of US$ 10.22 billion. During 2014-15, the cropped area of cotton stood at 2961 thousand hectares, showing an increase of 5.5 percent over last year's area of 2806 thousand hectares. Cotton production for the year 2014-15 stood at 13.983 million bales against 12.769 million bales last year showing an increase of 9.5 percent. The cotton production remained higher since 2004-05 on account of government's provision of aggressive farmer training for small farmers and extension services of PCCC, allowed Trading Corporation of Pakistan (TCP) to procure one million bales of cotton at the support price of Rs. 3000/- per 40 kg to benefit cotton growers and better economic returns received by the growers from the last year produce, it encouraged the grower to bring more area under cotton crop. The area, production and yield of cotton for the last five years are shown in Table 2.4 and Fig-1.

Fig-1: Cotton Production (000 bales)



Source: PBS

Table 2.4: Area, Production and Yield of Cotton

Year	Area		Production		Yield	
	(000 Hectare)	% Change	(000 bales)	% Change	(Kgs/Hec)	% Change
2010-11	2,689	-	11,460	-	725	-
2011-12	2,835	5.4	13,595	18.6	815	12.4
2012-13	2,879	1.6	13,031	-4.1	769	-5.6
2013-14	2,806	-2.5	12,769	-2.0	773	0.5
2014-15(P)	2,961	5.5	13,983	9.5	802	3.8

Source: Pakistan Bureau of Statistics
P: Provisional (July-March)

World Cotton Outlook

The production and consumption of major cotton growing countries are given in Table 2.5.

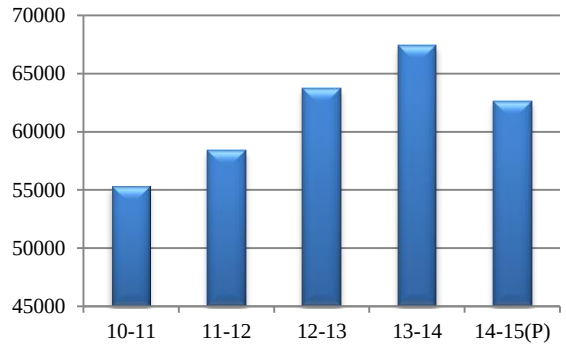
Table 2.5: Production and Consumption of Major Cotton Growing Countries			(Million Tonnes)
	2012-13 E	2013-14 E	2014-15 P
Production			
China	7.30	6.93	6.44
India	6.21	6.77	6.77
USA	3.77	2.81	3.50
Pakistan	2.00	2.08	2.30
Brazil	1.31	1.70	1.54
Uzbekistan	1.00	0.94	0.94
Others	5.09	5.05	4.86
World Total	26.68	26.28	26.35
Consumption			
China	8.29	7.53	7.91
India	4.82	5.04	5.24
Pakistan	2.42	2.27	2.31
East Asia/Australia	2.13	2.30	2.35
Europe & Turkey	1.55	1.61	1.52
Brazil	0.91	0.88	0.85
USA	0.76	0.77	0.79
Others	2.89	3.09	3.18
World Total	23.77	23.49	24.15

Source: Pakistan Central Cotton Committee, Ministry of Textile Industry
E: Estimated, P: Projected

ii) Sugarcane:

Sugarcane is an important cash crop of Pakistan. It is mainly cultivated for sugar and sugar-related production along with an input for paper and board industry. Sugarcane accounts for 3.1 percent in agriculture value addition and 0.6 percent in GDP. During July-March 2014-15, sugar export fetched foreign exchange of US$ 171.78 million. The cropped area for sugarcane stood at 1141 thousand hectares during 2014-15 against last year's area of 1173 thousand hectares showing a decrease of 2.7 percent. Sugarcane production for the year 2014-15 stood at 62.7 million tonnes against 67.5 million tonnes last year showing a decrease of 7.1 percent. The decrease in production is due to decrease in cropped area over last year as well competitive crop (rice and cotton) discouraged the growers to bring more area under cultivation and disposal problems of sugarcane and payments difficulties also restricted the acreage of sugarcane. The area, production and yield of sugarcane for the last five years are given in Table 2.6 and Fig-2.

Fig-2: Sugarcane Production (000 Tonnes)



Source: PBS

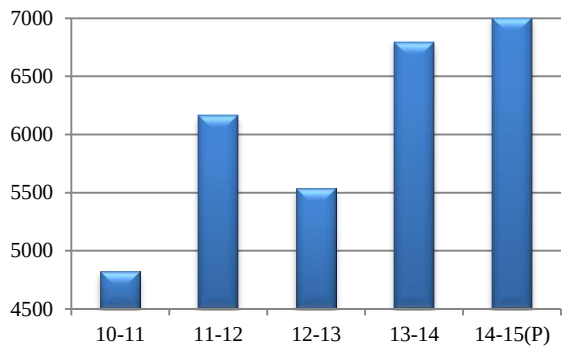
Table 2.6: Area, Production and Yield of Sugarcane						
Year	**Area**		**Production**		**Yield**	
	(000 Hectare)	**% Change**	**(000 Tonnes)**	**% Change**	**(Kgs/Hec.)**	**% Change**
2010-11	988	-	55,309	-	55,981	-
2011-12	1,058	7.1	58,397	5.6	55,196	-1.4
2012-13	1,129	6.7	63,750	9.2	56,466	2.3
2013-14	1,173	3.9	67,460	5.8	57,511	1.8
2014-15 (P)	1,141	-2.7	62,652	-7.1	54,910	-4.5

Source: Pakistan Bureau of Statistics
P: Provisional (July-March)

iii) Rice:

Rice is the second largest staple food crop and is also an exportable item. It accounts for 3.2 percent in the value added in agriculture and 0.7 percent of GDP. During July-March 2014-15, rice export earned foreign exchange of US$ 1.53 billion. During 2014-15, rice was sown on an area of 2891 thousand hectares showing an increase of 3.6 percent over last year's area of 2789 thousand hectares. Rice recorded highest ever production at 7005 thousand tonnes, showing a growth of 3.0 percent over corresponding period of last year's production which was 6798 thousand tonnes. Rice production increased due to more area brought under cultivation, timely availability of irrigation water and more acreage under high yielding Hybrid rice varieties. The area, production and yield of rice for the last five years are shown in Table 2.7 and Fig-3.

Fig -3: Rice Production (000 Tonnes)



Source: PBS

Table 2.7: Area, Production and Yield of Rice

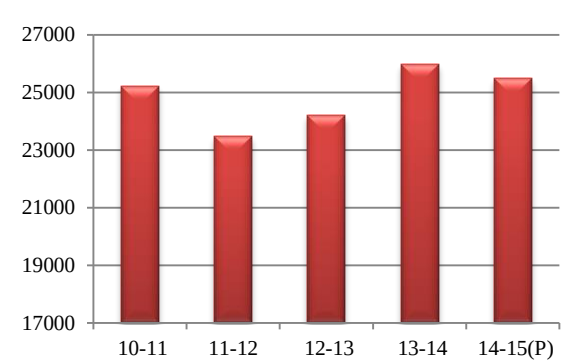
Year	Area		Production		Yield	
	(000 Hectare)	% Change	(000 Tonnes)	% Change	(Kgs/Hec.)	% Change
2010-11	2,365	-	4,823	-	2,039	-
2011-12	2,571	8.7	6,160	27.7	2,396	17.5
2012-13	2,309	-10.2	5,536	-10.1	2,398	0.1
2013-14	2,789	20.8	6,798	22.8	2,437	16.3
2014-15 (P)	2,891	3.6	7,005	3.0	2,423	-0.6

Source: Pakistan Bureau of Statistics
P: Provisional (July-March)

iv) Wheat:

Wheat is the leading food grain of Pakistan occupying the largest area under single crop. Wheat contributes 10.0 percent to the value added in agriculture and 2.1 percent to GDP. Area under wheat has decreased to 9180 thousand hectares in 2014-15 from last year's area of 9199 thousand hectares which shows a decrease of 0.2 percent. The production of wheat stood at 25.478 million tonnes during 2014-15, showing a decrease of 1.9 percent over the last year's production of 25.979 million tonnes. The production decreased due to prolonged winter season and unprecedented rains during April & May and caused damages to grain at harvesting time. The position is given in Table 2.8 and Fig-4.

Fig-4: Wheat Production (000 Tonnes)



Source: PBS

Table 2.8: Area, Production and Yield of Wheat

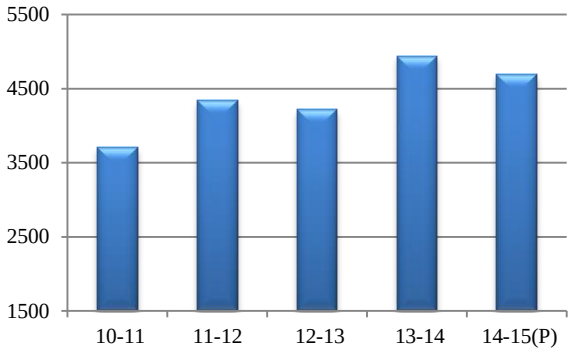
Year	Area		Production		Yield	
	(000 Hectares)	% Change	(000 Tonnes)	% Change	(Kgs /Hec.)	% Changes
2010-11	8,901	-	25,214	-	2833	-
2011-12	8,650	-2.8	23,473	-6.9	2714	-4.2
2012-13	8,660	0.1	24,211	3.1	2796	3.0
2013-14	9,199	6.2	25,979	7.3	2824	1.0
2014-15(P)	9,180	-0.2	25,478	-1.9	2775	-1.7

Source: Pakistan Bureau of Statistics
P:Provisional(July-March)

v) Maize:

Maize grain is an important food grain and produces an array of products as raw material for multi products and value additions. It contributes 2.1 percent to the value added in agriculture and 0.4 percent to GDP. Area under maize crop has decreased to 1130 thousand hectares in 2014-15, showing a decrease of 3.3 percent over last year's area of 1168 thousand hectares. The production of maize crop stood at 4.695 million tonnes during 2014-15, showing 5.0 percent decrease over the last year production of 4.944 million tonnes. The production decreased due to decrease in area sown. The position is presented in Table 2.9 and Fig-5.

Fig-5: Maize Production (000 Tonnes)



Source: PBS

Table 2.9: Area, Production and Yield of Maize

Year	Area		Production		Yield	
	(000 Hectares)	% Change	(000 Tonnes)	% Change	(Kgs /Hec.)	% Changes
2010-11	974	-	3,707	-	3,806	-
2011-12	1,087	11.6	4,338	17.0	3,991	4.9
2012-13	1,060	-2.5	4,220	-2.7	3,981	-0.3
2013-14	1,168	10.3	4,944	17.2	4,233	6.3
2014-15 (P)	1,130	-3.3	4,695	-5.0	4,155	-1.8

Source: Pakistan Bureau of Statistics
P:Provisional(July-March)

b) Other Crops

During 2014-15, the gram pulse, one of the major pulses grown in rainfed areas on marginal lands recorded production of 484 thousand tonnes against the production of 399 thousand tonnes during the same period last year, witnessed a growth of 21.3 percent due to increase in area and favorable weather condition. The production of Bajra, Jawar, Rapeseed & Mustard and Barley witnessed decrease in its production by 14.3 percent, 13.4 percent, 9.9 percent and 9.0 percent, respectively during 2014-15 as compared to the same period last year. The decrease in production is due to decrease in area sown. While the production of Tobacco remained same when compared to the production of same period last year. The area and production of other crops are given in Table 2.10.

Table 2.10: Area and Production of other Kharif and Rabi Crops

Crops	2013-14		2014-15 (P)		% Change in production over Last year
	Area (000 Hectares)	Production (000 Tonnes)	Area (000 Hectares)	Production (000 Tonnes)	
Bajra	475	301	408	258	-14.3
Jowar	198	119	171	103	-13.4
Gram	950	399	960	484	21.3
Barley	71	67	66	61	-9.0
Rapeseed & Mustard	220	203	198	183	-9.9
Tobacco	49	130	49	130	0.0

Source: Pakistan Bureau of Statistics
P: Provisional (July-March)

i) Oilseeds

The major oilseed crops grown in the country include Sunflower, Canola, Rapeseed/Mustard and Cotton. During 2013-14 total availability of edible oil was 3.20 million tonnes. Local production of edible oil contributed 0.573 million tonnes while import of edible

oil/oilseeds was 2.627 million tonnes. The edible oil import bill during 2013-14 was Rs. 246.895 billion (US$ 2.50 billion).

During 2014-15 (July-March), 1.789 million tonnes edible oil of value Rs. 139.344 (US$ 1.377 billion) has been imported showing an increase of 4.07 percent against the same period (July-March) 2013-14. Local production of edible oil during 2014-15 (July-March) is estimated at 0.546 million tonnes. Total availability of edible oil from all sources is provisionally estimated at 2.335 million tonnes during 2014-15 (July-March). The area and production of oilseed crops during 2013-14 and 2014-15 is given in Table 2.11.

Due to slump in international market of edible oil and oilseeds, the local traders offering Rs. 2,050/- to Rs. 2,100/- per 40 kg for canola crop produce in 2014-15. Low prices in local market discouraged the oilseeds growers resulting decline in edible oil production. Last year average price of oilseeds (Canola/sunflower) prevailed around Rs. 2,500/- to Rs. 2,800/- per 40 kg.

Table 2.11: Area and Production of Major Oilseed Crops

Crops	2013-14			2014-15 (P)		
	Area	Production		Area	Production	
	(000 Acres)	Seed (000 Tonnes)	Oil (000 Tonnes)	(000 Acres)	Seed (000 Tonnes)	Oil (000 Tonnes)
Cottonseed	6,700	3,592	431	7,579	3,450	414
Rapeseed/ Mustard	510	189	60	478	181	58
Sunflower	384	190	76	353	178	68
Canola	39	16	6	35	16	6
Total	7,633	3,987	573	8,445	3,825	546

Source: Pakistan Oilseed Development Board
P: Provisional/Targets (July-March)

During 2014-15, the production of Potatoes, Moong, Onions and Chillies recorded an increase of 6.3 percent, 6.2 percent, 1.3 percent and 0.3 percent, respectively, comparing to production of same period last year. The reason for increase in production is increase in area cultivated. However, the production of other pulses Mash and Masoor (Lentil) decreased by 12.7 and 5.8 percent, respectively. The area and production of other crops are given in Table 2.12.

Table 2.12: Area and Production of Other Crops

Crops	2013-14		2014-15(P)		% Change in Production
	Area (000 Hectares)	Production (000 Tonnes)	Area (000 Hectares)	Production (000 Tonnes)	
Masoor	18.2	8.6	17.1	8.1	-5.8
Moong	130.9	92.9	127.4	98.7	6.2
Mash	20.9	10.2	20.8	8.9	-12.7
Potatoes	159.8	2,901.1	169.8	3,084.3	6.3
Onions	133.9	1,740.2	135.1	1,763.0	1.3
Chillies	62.7	145.8	62.9	146.2	0.3

Source: Pakistan Bureau of Statistics
P: Provisional (July-March)

To overcome the production & consumption gap and removing price hike of pulses and other minor crops. A sub committee comprising Ministries of National Food Security & Research, Industries & Production, Commerce and Finance and other concerned Departments was constituted in a meeting of National Price Monitoring Committee (NPMC) to suggest measures for removing shortages and price hikes of pulses and other minor crops. Ministry of Food Security & Research is finalizing an Actionable Plan to remove disequilibrium between production & consumption on permanent basis and bring stability in prices of these items.

II. Farm Inputs

i) Fertilizers

Fertilizer is the most important and expensive agriculture input. Contribution of balanced use of fertilizers towards increased yield is from 30 to 50 percent in different crop production regions of the country. One kg of fertilizer nutrient produces about 8 kg of cereals (wheat, maize and rice), 2.5 kg of cotton and 114 kg of stripped sugarcane. Almost hundred percent soils in Pakistan are deficient in nitrogen; 80-90 percent are deficient in phosphorus and 30 percent in potassium. Widespread deficiencies of micronutrients are also appearing in different areas. Soil fertility is continuously depleting due to mining of the essential plant nutrients from the soils under intensive cultivation.

The domestic production of fertilizers during July-March 2014-15, increased slightly by 0.2 percent over the same period of last year. The imported supplies of fertilizer increased by 15.4 percent; hence, the total availability of fertilizer reduced by 4.4 percent during July-March 2014-15.Total offtake of fertilizer nutrients witnessed a small increase of 1.1 percent. Nitrogen offtake decreased by 0.5 percent while phosphate increased by 5.6 percent. Potash offtake recorded a significant increase of 33.8 percent during July-March 2014-15. Major reason for increase in offtake of phosphate fertilizer is stability in prices of DAP.

Kharif 2014 started with inventory of 386 thousand tonnes of urea. Total availability of urea (including 122 thousand tonnes of imported supplies and 2451 thousand tonnes of domestic production) was about 2959 thousand tonnes against the offtake of 2716 thousand tonnes, leaving an inventory of 184 thousand tonnes for Rabi 2014-15. Total availability of DAP during Kharif 2014 was 1023 thousand tonnes comprising 99 thousand tonnes of inventory, 524 thousand tonnes of imported supplies and 400 thousand tonnes of local production. DAP offtake was 586 thousand tonnes leaving closing balance of 430 thousand tonnes for coming Rabi 2014-15.

Rabi 2014-15 started with an opening balance of 184 thousand tonnes of urea. Domestic production during Rabi 2014-15 was estimated as 2493 thousand tonnes. Urea offtake during current Rabi 2014-15 is expected to be 3100 thousand tonnes, against 3253 thousand tonnes of total availability, leaving a closing balance of 151 thousand tonnes for next season. DAP availability in current season of Rabi is estimated as 1260 thousand tonnes, which included 430 thousand tonnes of inventory, 498 thousand tonnes of imported supplies and domestic production of 332 thousand tonnes. Offtake of DAP during current Rabi season was about 1140 thousand tonnes, leaving a balance of 118 thousand tonnes for next season. Detail of fertilizer situation is given in Table 2.13.

The total availability of urea during Kharif 2015 was estimated to be about 2740 thousand tonnes comprising of 151 thousand tonnes of opening stock, 39 thousand tonnes of imported supplied and 2550 thousand tonnes of domestic production. Urea offtake is expected to be around 2900 thousand tonnes, reflecting a shortfall of 160 thousand tonnes which will be covered through imports. Total availability of DAP will be 484 thousand tonnes against expected offtake of 600 thousand tonnes. Supply/ Demand gap in DAP will be met by imports through private sector during Kharif 2015.

Table 2.13: Fertilizer Situation (000 Tonnes)

Description	Kharif (Apr-Sep) 2014		Rabi (Oct-Mar) 2014-15		Kharif (Apr-Sep)* 2015	
	Urea	DAP	Urea	DAP	Urea	DAP
Opening stock	386	99	184	430	151	118
Imports	122	524	576	498	39	0
Domestic production	2,451	400	2,493	332	2,550	366
Total availability	2,959	1023	3,253	1260	2,740	484
Offtake/Demand	2,716	586	3,100	1140	2,900	600
Write on/off	-59	-7	-2	-2	0	0
Closing stock	184	430	151	118	-160	-116

Source: National Fertilizer Development Center
*: Outlook

ii) Improved Seed

Seed is a key input in crop production on which efficiency of other inputs largely depends. Improving availability of certified seed provides sound base for sustainable agricultural production and national food security. Federal Seed Certification and Registration Department (FSC&RD) has taken policy measures/steps during July-March 2014-15, for improvement and is briefly given below:

1. Seed Certification Services

a) The department took steps to revive the systematic cotton seed production and a cotton seed production plan 2015 was firmed up with inclusive participation of breeders, seed producers and other key cotton seed stakeholders from public and private sectors to integrate Bt. Cotton varieties in the system to ensure availability of certified cotton seed. A brochure for improvement of germination of Bt. Cotton varieties was jointly drafted by public and private cotton seed stakeholders. 6000 copies of this brochure were distributed among cotton seed growers by FSC&RD. As a result of all these efforts, 27 percent certified cotton seed is available for the cotton crop to be sown during 2015-16 against 2.4 percent availability of cotton seed in the previous year.

b) To improve production of certified seed of Potato and Maize, a strong collaboration has been established among different stakeholders involved in these important crops.

c) Accreditation with International Seed Testing Association (ISTA) will give international acceptability to the seed testing results issued by the Central Seed Testing Laboratory (CSTL), Islamabad, of FSC&RD. Assessments by Pakistan National Accreditation Council (PNAC) was carried out in this regard. The recommendations made by PNAC are being actively pursued. Six officers got hands on training in an ISTA accredited laboratory at Australia to speed up the accreditation process of CSTL.

2. Registration of Seed Companies and Plant Varieties

a. During the period under report, a total of 29 new Seed Companies have been granted one year provisional approval to do seed business. Evaluation of Seed Companies was carried out and de-registration cases of 225 inefficient/dormant seed companies has been submitted to the Ministry of National Food Security and Research for the forthcoming meeting of its Working Group.

b. 135 new candidate plant varieties have been studied for distinctness, uniformity and stability (DUS) trails during the period under reported.

c. One hundred and twenty five cases are filed in the court of law as the result of Seed Act Enforcement during the reported time period.

d. The department carried out field inspection of 218080 acres and seed testing of 446191 M.Tonnes of various crops during July-March 2014-15.

3. Seed Regulatory Framework

The Seed (Amendment) Bill, 2014 has been passed by the National Assembly and is currently tabled in the Senate of Pakistan for approval and promulgation. Similarly, Ministry of Nation Food Security and Research is striving for passage of Plant Breeder Rights law from the parliament as soon as possible. The passage of this law will usher in a new era of research and development and will also attract investment worth billion of rupees in the seed sector.

4. Fruit Plant Certification

FSC&RD is focusing on capacity building of its offices to render Fruit Plant Certification services to help tap the export potential of horticultural products as well as improve availability of disease free certified fruit plants including pome and stone fruits. Fifteen new fruit plant nurseries got registered after July 2014 making the total figure of 180 registered fruit plant nurseries in Pakistan.

5. FSC&RD Developmental Initiatives

The project "Strengthening of Seed Certification Services for Food Security in Gilgit Baltistan" was approved by the DDWP during 2013. However, due to lack of finances, the project could not be implemented. Efforts are being made to get the fund released and start implementation of this project at earliest.

"Standing Committee on National Food Security and Research" in principally have cleared the following development schemes of the department.

a) Strengthening of seed testing laboratory of FSC&RD Karachi.
b) Monitoring of seed potato quality for food security in Pakistan.
c) Up-gradation of seed certification services in Balochistan.
d) Monitoring of the Seed Quality in the Market.

6. International Collaboration

For Seed Sector Development in Pakistan, FSC&RD International Cooperation Section is in the process of collaborations through different cooperation proposals with the following countries; China, France, Bulgaria, SAARC, Korea, Australia, Spain, D-8, Turkey, Turkmenistan and Belarus.

FSC&RD organized National Seed Workshop for developing National Seed Policy Document under the FAO-ECO project "Seed Sector Development in ECO countries" in Islamabad in November 2014. Stakeholders from public and private sector participated in the workshop and gave their valuable inputs for the National Seed Policy. Working group is being established to finalize the National Seed Policy document. In the recently concluded Regional Seed Workshop in Turkey, it was decided that final Seed Policy workshop would be held in Pakistan.

During July-March, 2014-15, the department carried out field inspection of 218.1 thousand acres and seed testing of 446.2 thousand tonnes of various crops .The detail is given in Table 2.14.

Table 2.14: Seed Availability* (Metric Tonnes)

Crop	Area Inspected (Acres)	Local	Imported	Total
Wheat	0	375332	0	375332
Cotton	136511	28389	0	28389
Paddy	68618	37955	897	38852
Maize	10217	3114	13512	16626
Pulses	2081	1215	0	1215
Oilseeds	506	73	3016	3089
Fodders	147	113	5124	5237
Vegetables	0	0	16693	16693
Potatoes	0	0	18674	18674
Total	218080	446191	57916	504107

Source: Federal Seed Certification & Registration Department
* : Provisional (July-March 2014-15)

iii) Mechanization

During July-March 2014-15 a total number of 31,963 tractors were locally manufactured compared to the production of 25,186 during same period last year showing an increase of 26.9 percent. The production and price of locally manufactured tractors are given in Table 2.15.

Table 2.15: Price and Production of Locally Manufactured Tractors 2014-15 (July-March)

Tractors Model - Horse Power (HP)	Price/Unit Excluding GST (Rs.)	Price/Unit Including GST (Rs.)	Production (in Nos.)	Actual Sale (in Nos.)
M/s Al-Ghazi Tractors				
NH 480-S (55 HP)	642,000	706,200	3,630	3,819
NH 480-S with power (55 HP)	652,000	717,200	1,285	1,453
Ghazi (65 HP)	714,000	785,400	5,641	5,849
NH 640 (75 HP)	908,000	998,800	1,182	1,254
NH 640 WBD (75 HP)	918,000	1,009,800	67	69
NH 640-S (85 HP)	999,000	1,098,000	34	40
NH 640-S WBD (85 HP)	1,014,000	1,115,400	31	37
NH 55-56 (55 HP)	688,000	756,800	3	3
NH 60-56 (60 HP)	765,000	841,500	-	1

Table 2.15: Price and Production of Locally Manufactured Tractors 2014-15 (July-March)

Tractors Model - Horse Power (HP)	Price/Unit Excluding GST (Rs.)	Price/Unit Including GST (Rs.)	Production (in Nos.)	Actual Sale (in Nos.)
NH 70-56 (85 HP)	1,295,000	1,424,500	45	53
M/s Millat Tractors Ltd				
MF-240 (50 HP)	650,000	715,000	8,668	8,970
MF-350 Plus(50 HP)	692,000	761,200	50	44
MF-260 (60 HP)	772,000	794,000	4,104	4,024
MF-360 (60 HP)	745,000	819,500	920	916
MF-375-S (75 HP)	945,000	1,039,500	2,892	2,679
MF-385 (85 HP)	1,055,000	1,160,500	920	916
MF-385 4WD (85 HP)	1600,000	1,760,000	171	168
Total			**31,963**	**32,543**

Source: Tractor Manufacturer Association, Federal Water Management Cell
Note: GST on Tractors announce by 10 percent

iv) Irrigation

During the monsoon season (July-September) 2014, the normal average rainfall was 140.9 mm, while the actual rainfall received was 106.2 mm, indicating a decrease of 24.6 percent. During the post-monsoon season (October-December) 2014, the normal average rainfall was 26.4 mm, while the actual rainfall received was 17.8 mm, indicating a decrease of 32.6 percent. During winter season (January-March) 2015, normal average rainfall was 74.3 mm and the actual rainfall received was 89.3 mm, indicating an increase of 20.2 percent under the normal rainfall average. Rainfall recorded during the monsoon, post monsoon and winter season is given in Table 2.16.

Table 2.16: Rainfall* Recorded During 2014-15 (in Millimeters)

	Monsoon Rainfall (Jul-Sep) 2014	Post Monsoon Rainfall (Oct-Dec) 2014	Winter Rainfall (Jan-Mar) 2015
Normal**	140.9 mm	26.4 mm	74.3 mm
Actual	106.2 mm	17.8 mm	89.3 mm
Shortage (-)/excess (+)	(-) 34.7 mm	(-) 8.6 mm	(+) 15.0 mm
% Shortage (-)/excess (+)	(-) 24.6 %	(-) 32.6 %	(+) 20.2 %

Source: Pakistan Meteorological Department
*: Area weighted. **: Long Period Average (1961-2010)

Canal head withdrawals during Kharif (April-September) 2014, increased by 6 percent and stood at 69.3 million acre feet (MAF) as compared to 65.5 MAF during corresponding period last year. During Rabi (October-March) 2014-15, the canal head withdrawals increased by 2.0 percent and stood at 33.1 MAF, compared to 32.5 MAF corresponding period last year. The province-wise detail is shown in Table 2.17.

Table 2.17: Canal Head Withdrawals (Below Rim Station) Million Acre Feet (MAF)

Provinces	Kharif (Apr-Sep) 2013	Kharif (Apr-Sep) 2014	% Change in Kharif 2014 over 2013	Rabi (Oct-Mar) 2013-14	Rabi (Oct-Mar) 2014-15	% Change in Rabi 2014-15 Over 2013-14
Punjab	33.83	35.15	4	17.44	17.08	-2
Sindh	29.16	31.31	7	13.55	14.50	7
Khyber Pakhtunkhwa	0.94	0.92	-2	0.46	0.49	6
Balochistan	1.61	1.89	17	1.08	1.03	-5
Total	65.53	69.27	6	32.54	33.10	2

Source: Indus River System Authority

During 2014-15, major programmes and goals in the water sectors were planned by keeping in view Vision 2025 and 11th Five Year Plan. Major strategy adopted to overcome the water sector's issues and investments in the sector were **a)** augmentation measures by construction of water storage small/medium dams and rain water Harvesting, Hill Torrents Management, **b)** conservation measures (lining of irrigation channels, modernization/rehabilitation of existing irrigation system) and efficiency enhancement by rehabilitation & better operation of existing system, **c)** Protection of Agriculture land, abides and infrastructure from onslaught of floods and Water Logging & Salinity, **d)** Formulation of an effective implementation monitoring system and comprehensive set of measures for the development and efficient management of water resources.

An amount of Rs. 43.557 billion were allocated for the above mentioned water sector's strategies/programmes during the year 2014-15, out of which it is expected that about Rs. 38.445 billion (88 % of total allocated budget) will be released up to June, 2015. The major water sector projects under implementation are shown in Table 2.18.

Table 2.18: Major Water Sector Projects under Implementation

Projects	Location	Total App. cost (Rs. in million)	Live Storage (MAF)	Irrigated Area (Acres)	Latest Status
Gomal Zam Dam	Khyber Pakhtunkhwa	22,480	0.892	163,100	Substantially completed.
Rainee Canal	Sindh	17,643	-	412,400 (Phases-I)	82% Physically completed. (Phase-I)
Kachhi Canal	Balochistan	57,562	-	713,000 (Phases-I)	About 97% Physically completed. (Phase-I)
Darawat Dam	Sindh	9,300	89,192 (Ac.Ft)	25,000 (0.45 MW Power Gen.)	96 % Physically completed.
Nai Gaj Dam	Sindh	26,236	160,000 (Ac.Ft)	28,800 (4.2 MW Power Gen.)	40 % Physical work completed
Naulong Dam	Balochistan	18,027	200,000 (Ac.Ft)	47,000 (4.4 MW Power Gen.)	Work at initial stage.
Right Bank Outfall Drain (RBOD)					
RBOD-I	Sindh	14,707	-	542,500	89% Physically Completed.
RBOD-II	Sindh	29,014	-	3,000,000	80% Physically Completed.
RBOD-III	Balochistan	6,535	-	694,796	85 % Physically Completed.

Source: Ministry of Planning, Development and Reform

v) Agricultural Credit:

Agriculture bears the potential to stimulate sustainable/broad based industrial and economic growth. Therefore, in line with Government of Pakistan's priority for agriculture, State Bank of Pakistan (SBP) is striving to ensure availability of desired credit to farmers. In this endeavour, SBP has adopted a multipronged strategy for agriculture whereby all out efforts are being made for achieving the annual indicative agriculture disbursement targets which inter alia include; sensitizing banks to adopt agriculture financing as a viable business line and following up on indicative targets and performance with top management of banks and their agriculture credit heads.

For 2014-15, in line with the government priority for agriculture sector, SBP has allocated indicative agricultural credit disbursement targets of Rs. 500 billion to 20 commercial

banks, 2 specialized banks, 4 Islamic banks and 7 microfinance banks which are engaged in provision of production and development loans to farming community for agricultural activities. This indicative agriculture target is 31.5 percent higher than the last year's target of Rs. 380 billion and 28 percent higher than the actual disbursement of Rs. 391.4 billion for 2013-14. Out of the total target, Rs. 252.5 billion have been allocated to five major banks, Rs. 90.0 billion to ZTBL, Rs. 115.5 billion to 15 Domestic Private Banks, Rs. 11.5 billion to Punjab Provincial Cooperative Bank, Rs. 28.2 billion to 7 Microfinance Banks and Rs. 2.3 billion to 4 Islamic banks for 2014-15.

Agricultural Credit Disbursements Recent Trends

During July-March 2014-15, the banks have disbursed Rs. 326.0 billion which is 65.2 percent of the overall annual target of Rs. 500 billion and 27.5 percent higher than disbursement of Rs. 255.7 billion made during the corresponding period last year. The banks were able to achieve 65 percent of their annual indicative targets of Rs. 500 billion.

The outstanding portfolio of agriculture loans has also surged by Rs. 31.6 billion or 11.2 percent i.e. from Rs. 281.1 billion to Rs. 312.7 billion at end March 2015 as compared to same period last year. The increased in agriculture outstanding portfolio is mainly due to SBP's initiative of introduction of annual outstanding indicative targets for banks.

During July-March 2014-15, the five major commercial banks as a group have disbursed agriculture loans of Rs. 167.4 billion or 66.3 percent of their annual target which is higher by 25.4 percent from Rs. 133.5 billion during the corresponding period last year. Amongst the major banks, MCB has achieved 80.5 percent of its annual target; UBL achieved 76.7 percent, HBL 75.3 percent, NBP 55.3 percent while ABL could achieve only 45.2 percent of its individual annual target.

Under the specialized banks category, ZTBL disbursed Rs. 56.2 billion or 62.4 percent against its target of Rs. 90.0 billion while PPCBL disbursed Rs. 5.9 billion i.e. 50.9 percent against its target of Rs. 11.5 billion during July-March 2014-15.

Within Fifteen Domestic Private Banks, Bank of Khyber has achieved 90.4 percent, Faysal Bank achieved 81.1 percent , JS Bank 64.8 percent , NIB Bank 58.5 percent , Sindh Bank 56.3 percent , Bank Al Habib & Bank Alfalah 54.9 percent each, Soneri Bank 50.6 percent , Silk Bank 48.8 percent , Summit Bank 46.8 percent while Askari Bank and Bank of Punjab could achieve only 40.9 percent each of their annual targets during July-March 2014-15, however Standard Chartered Bank has already surpassed its annual target of Rs. 2.5 billion by disbursing Rs. 3.8 billion during July-March 2014-15.

Under Microfinance category, seven Microfinance banks as a group has disbursed Rs. 20.7 billion or 73.6 percent against their annual target of Rs. 28.2 billion while under Islamic Mode of Financing, 4 Islamic banks collectively disbursed Rs. 3.7 billion against their targets of Rs. 2.3 billion to agriculture borrowers. The actual disbursements of banks against the annual indicative targets during July-March 2014-15 is given in Table 2.19

Table 2.19 : Supply of Agricultural Credit by Institutions (Rs. in billion)

Banks	Target 2013-14	2013-14 (July-March)			Target 2014-15	2014-15 (July-March)		
		Flow	% age Achieved	% Share in Total		Flow	% age Achieved	% Share in Total
5 Major Commercial Banks	188.0	133.5	71.0	52.2	252.5	167.4	66.3	51.3
ZTBL	69.5	45.9	66.0	17.9	90.0	56.2	62.4	17.2
DPBs (15)	90.4	54.2	60.0	21.2	115.6	72.1	62.4	22.1
PPCBL	10.0	5.4	54.5	2.1	11.5	5.9	50.9	1.8
MFBs (7)	21.6	16.2	75.1	6.3	28.2	20.7	73.6	6.3
Islamic Banks (4)	0.5	0.5	94.6	0.2	2.3	3.7	162.2	1.1
Total	380.0	255.7	67.3	100	500.0	326.0	65.2	100.0

Source: State Bank of Pakistan

Box-II: Credit Disbursement to Farm and Non-Farm Sector

While analyzing the sector wise agriculture disbursement in depth, out of the total disbursement of Rs. 326.0 billion, the farm sector has received Rs. 170.0 billion while non farm sector absorbed Rs. 156.0 billion during July-March 2015. However, the share of farm sector has reduced from 54.4 percent to 52.1 percent while the share of non farm sector is gradually increasing from 45.6 percent to 47.9 percent as compared with the corresponding period last year. The continued increase in non-farm lending may be attributed as an outcome of SBP's successive pilot projects in selected districts across the country to encourage banks to diversify their agriculture credit portfolio.

Within farm sector disbursement of Rs. 170.0 billion, Rs. 94.1 billion or 55.4 percent were disbursed to subsistence holding, Rs. 41.0 billion or 24.1 percent to economic holding while Rs. 34.9 billion or 20.5 percent to above economic holding category. However, under non-farm sector disbursement of Rs. 156.0 billion, Rs. 102.2 billion or 65.5 percent were disbursed to large farm while Rs. 53.9 billion or 34.5 percent to small farm category. The comparison of farm and non-farm sector share is given in Table 2.20.

Table 2.20 : Credit Disbursement to Farm & Non-Farm Sectors (Rs. in billion)

Sector		2013-14 (July-March)		2014-15 (July-March)	
		Disbursement	% Share in Total	Disbursement	% Share in Total
A	**Farm Credit**	**139.0**	**54.4**	**170.0**	**52.1**
1	Subsistence Holding	80.6	31.5	94.1	28.9
2	Economic Holding	35.5	13.9	41.0	12.6
3	Above Economic Holding	23.0	9.0	34.9	10.7
B	**Non-Farm Credit**	**116.7**	**45.6**	**156.0**	**47.9**
1	Small Farms	39.4	15.4	53.9	16.5
2	Large Farms	77.4	30.2	102.0	31.3
	Total (A+B)	**255.7**	**100.0**	**326.0**	**100.0**

Source: State Bank of Pakistan

SBP Initiatives for the Promotion of Agriculture Financing during 2014-15

1. Issuance of Guidelines on Value Chain Contract Farmer Financing

State Bank of Pakistan issued Guidelines on Value Chain Contract Farmer Financing in October 2014 to encourage banks to extend credit to small and marginalized farmers by leveraging on the strengths of inter-relationships that exist in the agriculture value chain. The guidelines would benefit farmers in terms of enhanced productivity in variety of ways such as availing quality input facilities, adopting new technologies, insurance coverage for crop/non-crop activities and most importantly assurance of buyer in advance.

2. Credit Guarantee Scheme for Small and Marginalized Farmers (CGSSF)

SBP has finalized Credit Guarantee Scheme for Small and Marginalized Farmers (CGSSF) where SBP shares 40 percent of credit losses of lending banks on their loans to Small & Rural Enterprises. The scheme has been launched by the government to encourage banks to finance small farmers. The government through State Bank of Pakistan has ensured provision of guarantee to banks for up to 50 percent loss sharing which will benefit 300,000 farmers. The size of the total disbursement will be Rs. 30 billion.

3. SBP-FAO Technical Assistance Programme

SBP in collaboration with Food & Agriculture Organization (FAO) of United Nations arranged a programme on innovative agriculture and Value Chain financing to provide technical assistance to banks. This capacity building programme would enable banks to shift the business dynamics from conventional lending to innovative and globally acceptable value chain financing models.

4. Implementation of Livestock Loan Insurance Scheme

SBP has successfully implemented the Livestock Loan Insurance Scheme on the parameter announcements in the budget 2014-15. The scheme would safeguard the interest of farmers in case of loss of animals due to death

and provide banks with a risk mitigating tool, thus encouraging them to enhance the flow of credit to this highly potential and underserved sector.

5. Enhancing the Scope of Crop Loan Insurance Scheme

Crop insurance is a risk management mechanism designed to even out agricultural risks and blunt the consequences of natural disasters to make losses, especially to the marginalized farmers, more bearable. After the successful implementation of Crop Loan Insurance Scheme for small farmers of subsistence land holding, the scope of the scheme has recently been enhanced upto 25 acres and government is bearing the cost of premium on account of farmer's upto 2 percent per crop per season for five major crops.

III. Livestock and Poultry

a) Livestock

Livestock is an important sector of agriculture and occupies a unique position in the National Agenda of the economic development of the present government. The sector meets the domestic demand of milk, meat and eggs. It also provides net source of foreign earnings. More than 8.0 million rural families are involved in raising livestock. It is central to the livelihood of the rural poor in the country and can play an important role in poverty alleviation and can uplift the socioeconomic conditions of our rural masses.

Livestock contributed to agriculture value added stood at 56.3 percent while it contributes 11.8 percent to the national GDP during 2014-15 compared to 55.6 percent and 11.8 percent during the same period last year, respectively. Gross value addition of livestock has increased from Rs. 778.3 billion (2013-14) to Rs. 801.3 billion (2014-15), recorded an increase of 3.0 percent as compared to previous year. The livestock population for the last three years is given in Table 2.21.

Table 2.21: Livestock Population (Million Nos.)

Species	2012-13[1]	2013-14[1]	2014-15[1]
Cattle	38.3	39.7	41.2
Buffalo	33.7	34.6	35.6
Sheep	28.8	29.1	29.4
Goat	64.9	66.6	68.4
Camels	1.0	1.0	1.0
Horses	0.4	0.4	0.4
Asses	4.9	4.9	5.0
Mules	0.2	0.2	0.2

Source: Ministry of National Food Security & Research
1: Estimated Figure based on inter census growth rate of Livestock Census 1996 & 2006

The major products of livestock are milk and meat which for the last three years are given in Table 2.22.

Table:2.22 Milk and Meat Production (000 Tonnes)

Species	2012-13[1]	2013-14[1]	2014-15[1]
Milk (Gross Production)	**49,400**	**50,990**	**52,632**
Cow	17,372	18,027	18,706
Buffalo	30,350	31,252	32,180
Sheep[2]	37	38	38
Goat	801	822	845
Camel[2]	840	851	862
Milk (Human Consumption)[3]	**39,855**	**41,133**	**42,454**
Cow	13,897	14,421	14,965
Buffalo	24,280	25,001	25,744
Sheep	37	38	38
Goat	801	822	845
Camel	840	851	862

Table:2.22 Milk and Meat Production			(000 Tonnes)
Species	**2012-13[1]**	**2013-14[1]**	**2014-15[1]**
Meat[4]	**3,379**	**3,531**	**3,696**
Beef	1,829	1,887	1,951
Mutton	643	657	671
Poultry meat	907	987	1074

Source: Ministry of National Food Security & Research

1: The figures for milk and meat production for the indicated years are calculated by applying milk production parameters to the projected population of respective years based on the inter census growth rate of Livestock Census 1996 & 2006.

2: The figures for the milk production for the indicated years are calculated after adding the production of milk from camel and sheep to the figures reported in the Livestock Census 2006.

3: Milk for human consumption is derived by subtracting 20% (15% wastage in transportation and 5% in calving) of the gross milk production of cows and buffalo.

4: The figures for meat production are of red meat and do not include the edible offal's.

The production of other livestock products for the last three years is given in Table 2.23.

Table: 2.23 Estimated Livestock Products Production				
Species	**Units**	**2012-13[1]**	**2013-14[1]**	**2014-15[1]**
Eggs	Million Nos.	13,813	14,556	15,346
Hides	**000 Nos.**	**14,410**	**14,868**	**15368**
Cattle	000 Nos.	7,258	7,532	7,816
Buffalo	000 Nos.	7,050	7,232	7,447
Camels	000 Nos.	102	104	105
Skins	**000 Nos.**	**50,713**	**51,872**	**53,060**
Sheep Skin	000 Nos.	10,873	11,001	11,132
Goat Skin	000 Nos.	24,986	25,664	26,359
Fancy Skin	000 Nos.	14,854	15,207	15,569
Lamb skin	000 Nos.	3,229	3,268	3,306
Kid skin	000 Nos.	11,624	11,939	12,263
Wool	000 Tonnes	43.6	44.1	44.6
Hair	000 Tonnes	24.4	25.1	25.8
Edible Offal's	000 Tonnes	363	373	383
Blood	000 Tonnes	61.3	62.8	64.4
Guts	000 Nos.	51,232	52,403	53,603
Casings	000 Nos.	15,333	15,817	16,347
Horns & Hooves	000 Tonnes	52.5	54.0	55.5
Bones	000 Tonnes	780.5	802.9	827.2
Fats	000 Tonnes	248.8	255.8	263.3
Dung	000 Tonnes	1,104	1,136	1,171
Urine	000 Tonnes	338	348	358
Head & Trotters	000 Tonnes	226.3	232.3	238.8
Ducks, Drakes & Ducklings	Million Nos.	0.5	0.5	0.5

Source: Ministry of National Food Security & Research

1: The figures for livestock product for the indicated years were calculated by applying production parameters to the projected population of respective years.

The population growth, urbanization, increases in per capita income and export opportunities are few of the main factors to fuel the demand of livestock and livestock products in the country. The overall livestock development strategy revolves to foster "private sector-led development with public sector providing enabling environment through policy interventions and play capacity building role to improve livestock husbandry practices". The emphasis will be on improving per unit animal productivity and moving from subsistence to market oriented and then commercial livestock farming in the country to meet the domestic demand and surplus for export. The objective is to use livestock sector as engine for economic growth and food security for the country and further leading to rural socioeconomic uplift.

b) Poultry

Poultry sector is one of the organized and vibrant segments of agriculture industry of Pakistan. This sector generates employment (direct/indirect) and income for about 1.5 million people. Poultry meat contributes 28.0 percent of the total meat production in the country. The current investment in Poultry Industry is more than Rs. 200.00 billion. Poultry sector has shown a robust growth @ 8-10 percent annually which reflects its inherent potential. This sector has contributed 1.3 percent in GDP during 2014-15 while it's contribution in agriculture and livestock value added stood at 6.3 percent and 11.2 percent, respectively. The poultry value added at current factor cost has increased from Rs. 130.7 billion (2013-14) to 140.5 billion (2014-15) showing an increase of 7.5 percent as compared to previous year. The production of commercial and rural poultry and poultry products for the last three years is given in Table 2.24.

Table 2.24: Domestic/Rural & Commercial Poultry

Type	Units	2012-13[1]	2013-14[1]	2014-15[1]
Domestic Poultry	**Million Nos.**	**80.87**	**82.08**	**83.32**
Cocks	Million Nos.	10.38	10.66	10.95
Hens	Million Nos.	38.78	39.47	40.18
Chicken	Million Nos.	31.72	31.95	32.19
Eggs[2]	Million Nos.	3,878	3,947	4,018
Meat	000 Tonnes	108.62	110.79	112.99
Duck, Drake & Duckling	**Million Nos.**	**0.52**	**0.50**	**0.48**
Eggs[2]	Million Nos.	23.13	22.17	21.25
Meat	000 Tonnes	0.70	0.67	0.65
Commercial Poultry	**000 Tonnes**	**47.0**	**50.1**	**53.4**
Layers	Million Nos.	37.25	39.86	42.65
Broilers	Million Nos.	656.72	722.39	794.63
Breeding Stock	Million Nos.	9.71	10.19	10.70
Day Old Chicks	Million Nos.	685.94	754.54	829.99
Eggs[2]	Million No's	9,912	10,586	11,307
Meat	000 Tonnes	797.47	875.24	960.65
Total Poultry				
Day Old Chicks	Million Nos.	718	786	862
Poultry Birds	Million Nos.	785	855	932
Eggs	Million Nos.	13,813	14,556	15,346
Poultry Meat	000 Tonnes	907	987	1074

Source: Ministry of National Food Security & Research

1 : The figures for the indicated year is statistically calculated using the figures of 2005-06.

2 : The figures for Eggs (Desi) and Eggs (Farming) is calculated using the poultry parameters for egg production.

Government Policy Measure

Livestock Wing with its redefined role under 18th Constitutional Amendment continued regulatory measures that included allowing import of high yielding animals, semen and embryos for the genetic improvement of indigenous dairy animals, allowing import of high quality feed stuff/micro ingredients for improving the nutritional quality of animal & poultry feed and allowing duty free import of veterinary, dairy and livestock machinery / equipment in order to encourage establishment of value added industry in the country. Livestock insurance scheme for farmers having 10 animals or more have been introduced during 2014-15. Zero rating on processed valued added chicken products has been withdrawn.

Livestock Wing also provided facilitation for export of red meat. A total of 49.5 thousand tons of red meat was exported from July-March 2014-15. The export of meat fetched US$ 145.6 million. This meat was exported from 29 private sector slaughterhouses. During same period export facilitation was also provided for livestock by- products like animal casing, bones, horns and hooves, gelatin. Efforts are on way to access new markets like Russia, China, South Africa, and Indonesia for export of our meat and meat products.

Livestock Wing regulated import of superior quality semen and high yielding exotic dairy cattle of Holstein-Friesian & Jersey breeds for genetic improvement of indigenous dairy animals. During July-March 2014-15, 142.20 thousand doses of semen and 4,246 exotic dairy cows were imported. The exotic dairy cows added approximately 26,538 tonnes of milk per annum in the commercial milk chain/ system.

In order to facilitate dairy farmer, duty free import of calf milk replacer & cattle feed premix was allowed. During July-March 2014-15, 184.175 metric tonnes of calf milk replacer & 261.050 metric tonnes of cattle feed premix was imported. Similarly, to promote and encourage value added livestock processing industry in the country, duty free import of machinery for milk, beef, mutton & poultry processing was allowed.

During July-March 2014-15, the Animal Quarantine Department (AQD) provided quarantine services and issued 33,445 Health Certificates for the export of live animals, mutton, beef, eggs and other livestock products having value of US$ 340.518 million. The AQD generated non-tax revenue of Rs. 121.355 million during July-March 2014-15 as certificate / laboratory examination fee of animal and animal products exported during the year. The Animal Quarantine fee has been comprehensively revised after a period of 14 years on import and export of livestock and livestock products. Registration fee has been introduced on registration of livestock processing units with Animal Quarantine Department. This will help in increasing the revenue of Animal Quarantine Department. The Ministry will closely monitor increased fee impact on import and export of livestock and livestock products.

The National Veterinary Laboratory (NVL), Islamabad is a national institution for service and regulatory support to national livestock wealth with mission to promote greater productivity and profitability from the livestock industries in Pakistan. The surveillance and diagnostic at NVL remain unique and strategic facility designed to enable work to be conducted on highly contagious diseases of animals. NVL also houses National and Regional Projects on prevention and control of Transboundary Animal Diseases in Pakistan. During July - February 2014-15, 9282 samples were analyzed related to disease diagnosis, veterinary vaccines and residue testing. These samples arose from provincial livestock departments, development projects, ICT, AJK and FATA besides animal product exporters.

Livestock Wing also collaborated with international (Office International des Epizooties OIE, Food Agriculture Organization FAO) and regional organizations (South Asian Association for Regional Cooperation SAARC, Economic Cooperation Organization ECO, Animal Production & Health Commission for Asia APHCA, European Union EU) for Human Resource Development (HRD) and capacity building of national and provincial livestock institutions for diagnosis and control of animal diseases. Inter Provincial Coordination is being done by the Livestock Wing to implement the National Programme to Control Foot & Mouth Disease and Peste des Petits Ruminants (PPR) disease in Pakistan. Pakistan is progressing on OIE Foot and Mouth Disease (FMD) freedom pathway and moved to stage 02 of the 06 stage pathway. The Ministry, after consultation with provincial livestock departments, has endorsed "National Programme to Control Foot & Mouth Disease in Pakistan". This will help in improving animal health status of the country and assist in trade promotion of livestock and livestock products.

Ministry of National Food Security & Research made concerted efforts in order to lift ban on export of poultry and poultry products by Saudi Arabia. This was imposed on account of bird flu diseases in the country. Saudi Technical Delegation visited the country to inspect the processing facilities of some of the companies dealing with hatching eggs and day old chicks. The Saudi delegation, after inspection, allowed 11 Pakistani Companies for the export of hatching eggs and day old chicks to Saudi Arabia. Efforts are on way that UAE may also lift ban on import of poultry and poultry products from Pakistan.

Losses occurred to Livestock due to Flood

The flood hit the country in 2014. Punjab was the most affected area. Punjab Government took immediate measures to mitigate the losses in livestock sector. It established 642 emergency relief camps and 86 mobile dispensaries in the

flood hit areas. The emergency vaccinations were done to 13.5 million large / small ruminants and 5.5 million rural poultry. Prophylactic treatment was provided to 14.5 million livestock. Since flood destroyed crops in many of the areas thus more than one lac Kgs Vanda was distributed in the flood affected areas to meet day to day need of livestock feeding. The economical losses to livestock sector were estimated to be more than Rs. 350 million.

Future Plans

The future plans include Inter-Provincial Coordination for development of livestock sector, Coordination with private sector to promote value addition livestock industry and diversification of livestock products, Controlling Trans-boundary Animal Diseases of trade and economic importance through provincial participation (FMD, PPR, Zoonotic diseases) & Exploring new markets for export of beef & mutton and poultry meat.

IV. Fisheries

Fishery plays an important role in Pakistan's economy and is considered to be a source of livelihood for the coastal inhabitants. A part from marine fisheries, inland fisheries (based in rivers, lakes, ponds, dams etc.) is also very important activity throughout the country. Fisheries share in GDP although very little but it adds substantially to the national income through export earnings.

During 2014-15 (July-March), total marine and inland fish production was estimated 499,000 m. tonnes out of which 365,000 m. tonnes was marine production and the remaining catch came from inland waters. Whereas the production for the period 2013-14 (July-March), was estimated to be 494,000 m. tons in which 345,000 m. tons was for marine and the remaining was produced by inland fishery sector.

Pakistan's major buyers are China, Thailand, Malaysia, Middle East, Sri Lanka, Japan, etc. During 2014-15 (July-March), a total of 100,321 m.tonnes of fish and fishery products were exported earning US$ 253.625 million. Whereas the export for 2013-14 (July-March), was 102,967 m.tonnes of fish and fishery products were exported earning US$ 254.728 million. The export of fish & fishery products has been decreased by 2.57 percent in quantity and in value have been decreased by 0.43 percent during 2014-15 (July-March).

Government of Pakistan is taking a number of steps to improve fisheries sector which includes inter alia strengthening of extension services, introduction of new fishing methodologies, development of value added products, enhancement of per capita consumption of fish, up-gradation of socio-economic conditions of the fishermen's community.

i) Biological and Hydrological Research

During July-March 2014-15, sample of seawater collected from coastal areas were analyzed to determine parameters which affect fish distribution. Fish samples of different species were examined for study of length-weight relationship, sex ratio, maturity, food and feeding habit and fecundity etc. Monitoring for fish landing to determine stock position was also carried out at Karachi Fish Harbour.

ii) Quality Control Services

Marine Fisheries Department is responsible to regulate quality and promote export of fish and fishery products and to prevent export of substandard quality of seafood products and for matters connected therewith and ancillary thereto. During July-March 2014-15, the Quality Control Section of MFD has issued 12,555 certificates of Quality & Origin and health for seafood commodities exported from Pakistan.

iii) Accreditation of Quality Control Laboratories Under ISO / IEC-17025 International Standards

Two (02) laboratories (namely Microbiology and Chemical) of MFD achieved international accreditation under ISO / IEC -17025 international standards. Thus the MFD has fulfilled the requirements of EU and other importing countries and now, the test reports issued by these laboratories are acceptable all over the world.

iv) Extension in Accreditation of Testing Laboratories

The Biochemical laboratory of MFD is planned for achievements of accreditation under ISO/17025 International Standards.

v) Export of Fish and Fishery Products to the European Union (EU) Countries

After the period of about six (06) years, with the efforts of MFD, Ministry of Ports and Shipping and other stakeholders, the EU has allowed resumption of export of Fish & Fishery products from Pakistan to the EU countries. It is recalled that the fish processing plants were delisted by EU in April, 2007. Two fish processing plants have been enlisted by EU and case of enlistment of five plants is in process with EU.Since resumption of export to the EU countries total 62 consignments of cuttle fish, Shrimps and fish sent from one company to the EU have also successfully been cleared after 100 percent laboratory analysis at EU border.

In order to meet the requirement of EU and other importing countries, two (02) laboratories of MFD (i.e. Microbiology & Chemical) were accredited from Pakistan National Accreditation Council upto 2016.

vi) Renovation of other Landing Sites / Auction Halls

The administration of Gwadar Fish Harbour, and Karachi Fish Harbour Karachi, has been approached by MFD to renovate the Harbour facility as per requisite hygienic standards.

vii) Turtle Exclusion Device (TED) and Trials of TED by Local Fishermen

Marine Fisheries Department, Government of Pakistan, where around 36 fishermen, including representatives of the other organizations participated in the training for fishermen for using TED. The primary purpose of TED is to reduce the mortality of sea turtles in fishing nets, while safeguarding the livelihood of the local fishermen. The fishermen would benefit from installation of a TED in the trawl net due to higher catch values and reduction of large by-catch which damages the shrimp, shortens sorting times, lowers fuel costs due to reduced net drag as the cord end would fill more slowly, and yield higher catches of shrimp .The turtles' eggs was the best option, which could be implemented with awareness of the masses. United States used to be our largest buyer for shrimps, but now China and UAE have overtaken it. There are 18 countries in the world that use TED. In the past any fishing boats with 5 persons onboard did not require TED, but now it is mandatory for all the fishing boats Government of Pakistan has taken decision to emphatically implement the TED. The TED is mandatory in the World Trade Organization's environmental clauses. Pakistan is also a signatory to the FAO's Code of Conduct for responsible fishing. The federal and provincial governments have assigned the task to the Maritime Security Agency for ensuring compliance with the TED on all the fishing boats in the sea.

viii) Modernized the Fishing Fleets

The traditional fishing fleet will be modernized by providing high-power engines, navigational and communication equipment and improvement of deck facilities, in order to enhance their capability to fish in relatively deeper waters as per requirements of EU. As a result of introduction of modular boats by MFD, the boat owners have started modification of their boats on their own expenses. This is a success story which shows that the fishermen community has accepted the technology of lining of fish holds with fibreglass coating.

ix) Conservation and Management of Marine Resources

MFD in collaboration with fisheries department of Government of Sindh, Fishermen's Cooperative Society Ltd, Karachi Fisheries Harbour Authority and other stakeholders undertook research / experimental surveys to test different sizes of the cod-end of trawl-net being used by local fishermen. The optimal mesh size, on the basis of results of the surveys, will be selected and notified for implementation by the fishermen to ensure escapement of juveniles / undersized fish from the trawl-net.

x) The Vision is to Promote Fisheries to Ensure Food Security through Availability of Quality Products at Competitive Prices. The Priorities for Future Development of Fisheries Sector includes:

- Improvement of marketing infrastructure for fishermen along coastal line i.e. providing technical assistance / guidelines to stake holders / provinces for improvement of landing sides/auction halls at different fish harbours.

- Continuation of providing guidelines for up gradation of fishing boats according to international standards and marketing facilities.
- Increase capability for fishery planning and management based on the sound knowledge of the state of the fishery resources and exploitation of these resources.
- Provide guideline/technical assistance for value addition and aquaculture to boost production volume wise as well as value wise.
- Upgrade, accreditate and strengthen the quality control laboratories of Marine Fisheries Department by adding the new testing parameters for monitoring Environmental Contaminants in fish & fishery products to satisfy the requirements of importing countries.
- Continuation of training and development of fishermen and fisheries related personal.
- The fishing licenses against 100 vacant slots will be issued to Pakistani companies for operation of Deep Sea fishing vessels in the Exclusive Economic Zone (EEZ) of Pakistan subject to the availability of tuna and tuna like species in the region.

Conclusion

The government is making all efforts to make Agriculture Sector more vibrant and in this sector have initiated a number of initiatives and also focusing on Agro-base industries and strengthening linkages with the agricultural research and development to play a role in transfer of technology and knowledge to the farming community.