

IMPACT OF NATIONAL FOOD SECURITY MISSION ON PULSES PRODUCTION IN UTTAR PRADESH

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Abstract: Agriculture is the mainstay of the economy due to high share in employment and livelihood generation. It is enmeshed in every aspect of this grand economy. Although, India is self-reliant in production of wheat and rice, the production and availability of pulses is still a question of great concern. The pulses production failed to attain spotlight under green-revolution which caused a diversion of farmers to produce wheat and paddy. The scarcity of resources and growing demand has compelled increase in prices of pulses. The simple demand-supply pay off is not the single cause of hike in prices, but there are also some technical, institutional and financial constraints which are responsible of low growth rate, less productivity and availability of inferior quality of pulses, provided to achieve the aim of nutritional food security. Along with this, less priority by policy makers play a crucial role in almost stagnant production of pulses. The major research and development issues identified for pulses are low genetic yield potential, poor and unstable yield, huge poor harvest losses, inadequate adoption of improved technology and low profitability, need to be tackled on top priority basis. In view of increasing production of pulses and reducing the import of pulses in order to ensure availability of pulses as per demand of increasing population, National Food Security Mission has been launched. The Mission has covered rice, wheat, pulses, coarse cereals with significant investment in production, farm inputs and technology development. The present paper examines the impact of National Food Security Mission in production of pulses crops in Uttar Pradesh.

INTRODUCTION

There has been significant growth in food production from about 80 million tonnes in 1965 to 250 million tons in 2015 (Bhattacharya et al., 2017). Although the improvement in self-sufficiency had a positive effect on food production, there has been a steady decline in per capita availability (Pal et al., 2014). The scenario in terms of pulses has become more dismal despite significant contributions to food and nutritional security (Bhattacharya et al. 2017). There has been a sharp decline in the per capita net availability of pulses in the country. (Jadhav et al, 2018). Demand for chickpea and pigeon pea is expected to increase (Jadhav et al., 2018). The estimated demand for pigeon pea (pigeon pea) compared to chick pea (gram) is probably due to the low productivity of pigeon pea due to soil moisture loss. It is mainly grown in dry land (Jadhav et al, 2018). As a result, due to the high demand for gram, the estimated reduction in supply will be 47.5 lakh tonnes by 2025 and 114.5 lakh tonnes by 2030. Similarly, for pigeon pea, the project shortfall would be around 211.6 lakhs

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tonnes by 2015 and it is expected to increase to 365.6 lakh ton by the end of 2030 (Jadhav et.al., 2018). Since the increase in production of pulses in India has not kept pace with the increase in population, which has led to a decrease in availability. The per capita net availability of pulses in the country was 70.3 g / day / per person in 1956, which decreased to 37.5 g / day / person in the year 1981 and later in the year 2003 it was dropped to 29.1 g / day / person (Ahlawat et al. 2016) However, especially with the increase in production of pulses in the recent decade, domestic production and imports have increased, with policy and programs mainly due to increasing yields, improving the availability of pulses in the country and currently reaching 47.2 grams / day / person (GoI,2016).The decline in per capita availability of pulses has been offset by increased imports of pulses. With decreasing production and rising prices, the per capita availability of pulses is continuously deteriorating. The decrease in per capita consumption of pulses has led to a decrease in importance as a source of protein in the diet (Dieton and Dreze, 2009).

It may be observed that over the period from 1971 to 2011, the net per capita per day availability of pulses has fallen from 106 gms to 26.67 gms in Uttar Pradesh. On the contrary, the daily per capita availability of pulses has registered a decrease from 51.20 gms to 43.01 gms during the same period. In this regard the region wise scenario has also shown decrease from 99.82 gms to 7.57 gms, 112.59 gms to 25.02 gms, 326.23 gms to 230.10 gms and 80.70 gms to 18.03 gms for Western, Central, Bundelkhand and Eastern Region, respectively, during the same period. Per day per capita availability of pigeon pea has gone down during 1971 to 2011 in all the regions as well as in the State. The Western, Central, Bundelkhand and Eastern regions has registered from 17.15 to 1.84 gms, 24.48 to 4.35 gms, 53.96 to 12.82 gms and 18.27 to 4.09gms during the last five decades. The State has been registered about 83% down fall i.e. 21.58 gms to 3.72gms during last fifty years. In case of chickpea the availability has also gone down as pigeon pea in all regions along with in the State. Per day per capita availability has varied from 46.88 to 0.70 gms for Western, from 64.66 to 8.86 gms for Central, from 249.49 to 82.63 gms for Bundelkhand and from 29.71 to 3.09 gms for Eastern Region. The State has been registered 87 % down fall i.e. varied from 53.76 to 7.09 gms during 1971 to 2011 (Sharma and Sisodia, 2018).

The NFSM continued during the Twelfth Five-Year Plan with a new set of targets. The objective of the scheme was the distribution of reconstituted technologies and agricultural management practices, thereby bridging the food gap. NFSM had two major strategies. First, it is to expand the area, and the second is to increase productivity by reducing the difference between actual and potential yield. However, field expansion was mainly limited to wheat and pulses (Manjunath and Kumar, 2015).To increase productivity, NFSM had adopted a number of measures, including (1) quality seed production; (2) Emphasis on integrated nutrient management and integrated pest management; (3) promotion of new technologies; (4) Restoring soil fertility; and(5) Advanced agricultural equipment etc. As a result, during the 11th Five Year Plan, a total of Rs. 6500 crores were spent under NFSM (Manjunath and Kumar, 2015). Other objectives of the scheme include restoring soil fertility and productivity at the individual agricultural level, creating employment opportunities, increasing agricultural

benefits, integration of advanced technologies such as improved nutrient management. Trends in area, production and yield of pulses in the state of Uttar Pradesh during the 9th, 10th and 11th Five-Year Plans suggest that the trend in pulses sector was negatively decreasing, but production and yield during the 9th Five-Year Plan. During the 10th Five Year Plan, the area of pulses, production and yield trends declined in the state. The trend in the area of pulses was decreasing negatively during the 11th Five Year Plan, but the trend in production and yield of pulses in the state of Uttar Pradesh had increased significantly (Roy, 2014).

Per capita availability of pulses in India is shown in Table 1. There has been increasing trend in per capita availability of pulses in India during 1995 to 2017. However, per capita net availability of pulses in terms of grams per day was reported much lower than the WHO norms. During 2017, per capita net availability of pulses in terms of kg per year was recorded 20 while per capita net availability of pulses in terms of gram per day was reported 55. As per WHO norms, per capita net availability of pulses in a day should be not less than 80 grams.

Table 1: Per Capita Availability of Pulses in India

Year	Per capita Net Availability of Pulses (K.G / Year)	Per capita Net Availability of Pulses (Gram / Day
1995	13.8	37.8
1996	12.0	32.7
1997	13.5	37.1
1998	12.0	32.8
1999	13.3	36.5
2000	11.6	31.8
2001	10.9	30.0
2002	12.9	35.4
2003	10.6	29.1
2004	13.1	35.8
2005	11.5	31.5
2006	11.8	32.5
2007	12.9	35.5
2008	15.3	41.8
2009	13.5	37.0
2010	12.9	35.4
2011	15.7	43.0
2012	15.2	41.7

2013	15.8	43.3
2014	16.9	46.4
2015	16.0	43.8
2016	15.7	43.0
2017	20.0	54.7

Source: Agricultural Statistics, India 2018

Availability and demand of pulses in India is shown in Table 2. There has been significant gap in demand and production of pulses in India during the period of 2006-07 to 2011-12. The demand has been higher than the production; however, availability of pulses has significantly increased due to imports of pulses.

Table 2: Availability and Demand of Pulses in India (Quantity in Million Tones)

Year	Production	Imports	Total Availability	Demand
2006-07	14.02	2.26	16.46	NA
2007-08	14.76	2.83	17.59	16.77
2008-09	14.57	2.48	17.05	17.51
2009-10	14.66	3.51	16.51	18.29
2010-11	18.24	2.69	20.93	19.08
2011-12	17.09	3.36	20.45	19.91
2012-13	18.34	3.84	22.18	-
2013-14	19.27	-	-	-

Source: Agricultural Statistics, India 2018

There has been increasing trend in demand of pulses while supply of pulses has shown declining trend over the period of 1981 to 2022. Thus, huge gap in demand and supply of pulses has been cause of concern. (Sachan et al, 2018) (Table 3).

Table 3: Demand and Supply of Pulses in Uttar Pradesh (80 gm/ day/ Person)

Year	Supply (Million tonnes)	Demand (Million tonnes)	Demand Supply Gap (Million tonnes)
1981	2.25	3.09	-0.84
1991	2.49	3.85	-1.36
2001	2.37	4.85	-2.48
2011	2.33	5.83	-3.50
2012	2.01*	5.93*	-4.02*
2013	1.88*	6.04*	-4.16*
2014	1.85*	6.15*	-4.3*
2015	1.82*	6.26*	-4.44*
2016	1.79*	6.38*	-4.59*
2017	1.77*	6.49*	-4.72*

2018	1.74*	6.61*	-4.87*
2019	1.71*	6.73*	-5.02*
2020	1.68*	6.86*	-5.18*
2021	1.66*	6.98*	-5.32*
2022	1.63*	7.12*	-5.49*

Note: * estimated value

Source: Sharad Sachan et al. (2018)

The Government of India came up with the concept of Minimum Support Price Scheme in 1966-67. The minimum support price or MSP continues to be an integral part of the country's price policy to protect farmers from shocks or instability in the food market. The MSP is decided based on the recommendations of the Commission for Agricultural Costs and Prices (CACP). The calculation of MSP is based largely on the cost of production based on variable costs, rental value of land, imputed value of family labor, and a 10 percent return on family labor. Currently, the scheme covers 24 crops, including seven grains; eight oilseeds; and pulse crops. The crops are procured by the Food Corporation of India (FCI) for issue through PDS. Other interventions such as market intervention schemes (MIS), various price support schemes (PSS) etc. are used to purchase crops that are not covered under the MSP scheme. MSP has increased for almost all crops. The MSP for Pigeon pea increased from Rs. 2300 per quintal in 2009-10 to Rs. 5675 per quintal in 2018-19. Similarly MSP for gram increased from Rs. 1760 in the year 2009-10 to Rs. 4620 in 2018-19 (Table 4

Table 4: Minimum Support Prices of Various Pulses (In Rs .Per Quintal)

Year/ Crops	Tur (Pigeon pea)	Moong	Urad	Gram (Chick pea)	Masur (Lentil)
2009-10	2300	2760	2520	1760	1870
2010-11	3000	3170	2900	2100	2250
2011-12	3200	3500	3300	2800	2800
2012-13	3850	4400	4300	3000	2900
2013-14	4300	4500	4300	3100	2950
2014-15	4350	4600	4350	3175	3075
2015-16	4625	4850	4625	3425	3325
2016-17	5050	5225	5000	4000	3950
2017-18	5450	5575	5400	4400	4250
2018-19	5675	6975	5600	4620	4475

Source: CACP

Procurement of pulses is shown in Table 5, There has been remarkable increase in procurement of pulses during the period of 2015-16 to 2017. In recent period, the quantity of procurement of gram, lentil and moong was also recorded high.

Table 5: Procurement of Pulses (Quantity in Metric Tonnes)

Pulses	2015-16	2016	2017
Pigeon pea	45504.68	907881.76	258076.04
Urad	4891.57	88359.97	-
Gram	-	60672.68	60272.29
Lentil	-	8564.26	27071.99
Moong	-	209837.26	-

Source: Agricultural Statistics, India 2018

The major organizations involved in the procurement of agricultural commodities are- National Agricultural Cooperative Marketing Federation of India (NAFED), National Cooperative Consumers Federation of India (NCCF), Small Farmers' Agri-Business Consortium (SFAC) and Central Warehousing Corporation (CWC). The procurement by the NAFED was the highest and SFAC was the lowest (Table 6).

Table 6: Procurement of Kharif Pulses (2016-17)

Pulses	FCI	NAFED	SFAC	Total
Moong	64737	128886	26225	219848
Urad	18235	59602	10746	88582
Tur	175299	919667	71079	1166045
Total	258271	1108155	108049	1474475

Source: FCI

The quantity of chickpea procured in 2014-15 was much higher than the previous year. Maharashtra, Andhra Pradesh and Karnataka were the major states for procurement. Whereas in the year 2014-15, Gujarat, Madhya Pradesh, Uttar Pradesh and Rajasthan were also added to the list. As far as the black gram (*urad*) is concerned the procurement was the highest in 2013-14. For pigeon pea (*arhar/tur*) the procurement was the highest in 2012-13. Maharashtra, Andhra Pradesh and Madhya Pradesh were the major states for procuring pigeon pea (*arhar/tur*). (Table 7).

Table 7: Procurement of Pulses under PDS by NAFED

Major States of Procurement	Year	Commodity	Quantity Procured (million Tons)	Rupees (Lakhs)
Maharashtra, AP, Karnataka	2013-14	BlackGram	34306	10736.57
Maharashtra, Gujarat, MP, UP, Rajasthan, Karnataka	2014-15		279611.125	94123.66
Rajasthan	2012-13	Urad	1.57	0.63
Maharashtra, AP, UP, MP, Gujarat, W.B., Rajasthan, Karnataka, Jharkhand	2013-14		77050.806	34543.75
Jharkhand, WB, AP, Maharashtra, UP	2014-15		7453.262	3611.45
Maharashtra	2015-16		6.70	6.56

Maharashtra, AP, MP	2012-13	Pigeon pea	16004.835	6328.15
Maharashtra, AP	2013-14		42693	18755.12
Maharashtra, AP	2014-15		1079.648	1069.87
Maharashtra & Karnataka	2016-17	Moong	8267.58	3968.43

Source: NAFED

DISCUSSION OF RESULTS

The National Food Security Mission (NFSM) and government policy initiatives that increase production through the Higher Minimum Support Price (MSP) played a positive role in encouraging production (Bhattacharya et. al, 2017). However, a breakthrough in technological innovations is needed to reduce crop losses and improve productivity. The National Food Security Mission (NFSM) was launched by the Government of India during 2007-08 at the beginning of the 11th Five-Year Plan. The main objective of the program was to address the issue of food security by targeted programs to increase production of 10, 8 and 2 million tonnes of rice, wheat and pulses respectively by the end of 11th Five Year Plan. The NFSM was initially implemented in 482 districts in 19 states, with 144 districts under rice in 16 states, 142 districts under wheat in 9 states and 468 districts under pulses in 16 states (Table 6.8).

Table 8: Districts Covered Under National Food Security Mission (2017-18)

S. No.	State	NFSM-Rice	NFSM-Wheat	NFSM-Pulses	NFSM-Coarse Cereals
1	Andhra Pradesh	5	-	13	6
2	Arunachal Pradesh	10	-	17	17
3	Assam	13	-	27	4
4	Bihar	15	10	38	11
5	Chhattisgarh	13	-	27	9
6	Goa	-	-	2	-
7	Gujarat	2	5	26	8
8	Haryana	-	7	21	5
9	Himachal Pradesh	2	11	12	12
10	Jammu & Kashmir	8	8	22	22
11	Jharkhand	4	-	24	11
12	Karnataka	7	-	30	11
13	Kerala	1	-	14	1
14	Madhya Pradesh	8	16	51	16
15	Maharashtra	8	3	33	8
16	Manipur	9	-	9	9
17	Meghalaya	7	-	11	11

18	Mizoram	6	-	8	8
19	Nagaland	11	-	11	11
20	Odisha	8	-	30	6
21	Punjab	-	12	22	3
22	Rajasthan	-	14	33	12
23	Sikkim	2	-	4	4
24	Tamil Nadu	8	-	30	10
25	Telangana	4	-	9	6
26	Tripura	8	-	8	8
27	Uttar Pradesh	23	31	75	20
28	Uttarakhand	5	9	13	13
29	West Bengal	7	-	18	3
Total		194	126	638	265

Source: Ready Beckoner, NFSM Cell, Crops Division , DAC & FW

The component-wise expenditure under NFSM since inception year 2007-08 to 2012-13 in Uttar Pradesh shows that during the initial year the total expenses incurred to total amount received from the government of India was accounted to 59 percent only which increased to 91 percent in the year 2010-11 and decreased to 80 percent till the year 2012-13. This evidently clarifies that most of the amount received under NFSM was spent to achieve the target (Table 9).

Table 9: Expenditure on NFSM during 11th Five Year Plan in Uttar Pradesh

Year	Amount Received For Pulses	Amount of Expenditure for Pulses	Amount Received For Total	Amount of Expenditure for Total
2007-08	841.03	314.83	8379.06	4964.13
2008-9	2596.26	1829.03	1835.28	12582.82
2009-10	5686.78	4264.83	2898100	22973.20
2010-11	4912.93	3982.77	20375.30	18638.60
2011-12	7768.77	5265.07	24812.02	20985.67
2012-13	7477.01	5384.41	23559.31	18889.01

Source:-Ramendu Roy (2014)

The district-wise outlay and expenditure on pulses for NFSM districts of Uttar Pradesh during 11th five year plan indicates that in all the districts of Uttar Pradesh the total outlay was done for Rs. 1593450.76 lakhs of which Rs.1286039.84 lakhs were spent till the end of the 11th five year plan. The district-wise outlay and expenditures incurred shows that the maximum outlay i.e.15.19 percent and the maximum expenditure i.e.19.13 percent were incurred in Jalaun district of Uttar Pradesh against the minimum outlay i.e. 0.10 percent and minimum expenditure i.e. 0.08 percent in Gautam Buddha Nagar of Uttar Pradesh. Thus, maximum outlay and expenditures were done in Jalaun district followed by Jhansi, Lalitpur

and Hamirpur districts of Uttar Pradesh during 11th five year plan under the NFSM Pulses programme in Uttar Pradesh (Roy,2014) (Table 10) .

Table 10: Outlay and Expenditure on Pulses for NFSM of Uttar Pradesh (During 11th Five Year Plan) (Rs. Lakh)

Sr. N0	District	Outlay	Expenditure
1	Badaun	20873.94	17733.88
2	Kanpur Dehat	29210.47	27927.38
3	Fatehpur	47991.53	2939000
4	Kaushambi	13766.71	10703.96
5	Jhansi	142327.66	125743.96
6	Lalitpur	122216.77	75236.40
7	Jalaun	241981.65	246033.26
8	Hamirpur	113988.94	82903.22
9	Mahoba	89871.69	66402.45
10	Banda	104553.24	71930.08
11	Chitrakut	58882.78	36277.32
12	Chandauli	18834.15	16132.58
13	Mirzapur	36098.21	30110.34
14	Ballia	20180.44	15915.74
15	Sitapur	31831.84	28536.30
16	Kheri	42232.29	42205.63
17	Barabanki	43820.11	43103.18
18	Balrampur	21486.62	14162.64
19	Bahraich	26055.32	21319.11

Source:-Ramendu Roy (2014)

District-wise area production and yield of total pulses under NFSM in Uttar Pradesh is shown in Table 11. Area of pulses was recorded significantly high in Lalitpur, Jhansi, Hamirpur, Mahoba and Banda while production of pulses was recorded high in Lalitpur, Jhansi, Mahoba and Hamirpur. However, yield of total pulses was recorded significantly high in Ballia followed by Mirzapur, Badaun, Lalitpur, Balrampur and LakhimpurKheri during 2014-15.

Table 11: District-wise Area Production and Yield of Total Pulses under NFSM in Uttar Pradesh (During 2014-15) (Area in Hectare, Production in Metric Tones Yield in Quintal/ Hectare)

Sl. No.	District	Area	Production	Yield
1	Sitapur	31379	18863	6.01
2	Fatehpur	70803	17070	2.41
3	Kaushambi	22646	10657	4.71
4	Kanpur Dehat	36583	14463	3.95
5	Budaun	29270	22098	7.55
6	Khiri	17626	11685	6.63
7	Barabanki	22720	12210	5.37
8	Bahraich	44785	30040	6.71
9	Balrampur	38602	28008	7.26
10	Ballia	21505	21711	10.10
11	Chandauli	14466	9988	6.90
12	Mirzapur	33421	31334	9.38
13	Jhansi	241509	105618	4.37
14	Lalitpur	248425	189415	7.62
15	Jalaun	154512	103396	6.69
16	Hamirpur	162846	42990	2.64
17	Mahoba	189583	51952	2.74
18	Banda	165167	31797	1.93
19	Chitrakut	63356	11644	1.84

Source:- Directorate of Agriculture, Government of Uttar Pradesh

The district-wise average AGR (absolute growth rate) in area, production and yield of pulses in NFSM districts of Uttar Pradesh during 11th five year plan in percentages analyzed in Table-2.6 which shows that on an overall the average AGRs in area, production and yield of pulses were estimated as 3.06 percent, 16.83 percent and 14.71 percent during the span of 11th five year plan. Thus, on the marginal growth in area of pulses the growth in production and yield of pulses was estimated as significant in NFSM districts till the end of 11th five year plan. The district-wise analysis indicates that average AGR in area, production and yield of pulses was maximum i.e. 9.69 per cent, 64.41 per cent and 52.53 per cent respectively in Mahoba district against the minimum average AGR i.e. 0.12 per cent in area of pulses in Banda district and minimum average AGRs i.e. 1.77 per cent and 0.12 per cent in production and yield respectively in Baharaich district of Uttar Pradesh. The average AGRs in production and yield of pulses were considerable in Banda district beyond the marginal growth in area of pulses during 11th five year plan. Thus, production and yield of pulses both have significant growth beyond the marginal growth in area of pulses in Mahoba and Banda districts of NFSM pulses districts of Uttar Pradesh during the span of 11th five year plan (Roy,2014) (Table 6.12).

Table 12: Average Annual Growth Rate in Area, Production and Yield of Pulses in NFSM of Uttar Pradesh (During 11th Five Year Plan)

Sr. N0	District	Area	Production	Yield
1	Badaun	1.55	9.67	7.00
2	Kanpur Dehat	-2.64	5.03	8.65
3	Fatehpur	-3.13	7.04	10.86
4	Kaushambi	-0.52	5.51	4.82
5	Jhansi	6.83	50.30	48.89
6	Lalitpur	8.64	15.75	6.91
7	Jalaun	6.83	4024	28.89
8	Hamirpur	4.35	27.37	21.22
9	Mahoba	9.69	64.41	53.22
10	Banda	0.12	25.53	28.02
11	Chitrakut	-076	25.12	26.21
12	Chandauli	-3.79	2.57	5.06
13	Mirzapur	-3.15	3.94	7.38
14	Ballia	2.59	6.73	3.82
15	Sitapur	-3.41	1.02	4.70
16	Kheri	0.15	-1.26	-0.40
17	Barabanki	-9.18	-11.18	-2.37
18	Balrampur	5.08	-2.01	-6.89
19	Bahraich	1.10	1.77	0.12
	Total NFSM Districts	3.06	16.83	14.71

Source:-Ramendu Roy (2014)

The Production of a crop is the product of its acreage shown and its productivity. Any change in its acreage or productivity or simultaneous changes in both would result in a change in production. To study the effect of these changes on differential production of different pulse crops and total pulses, the differential production during the first and second periods has been decomposed into three components viz. (i) the effect due to changes in acreage, (ii) effect due to changes in yield and (iii) interaction effect due to simultaneous change in acreage and productivity, using the methodology described in the chapter- III. The results are presented in Table 7.1 for each pulse crop separately.

Table 13 Source of Growth (%) In Production of Major Pulse Crops In Uttar Pradesh

Major growing states	Increase in Production	Area Effect	Yield Effect	Interaction Effect
	Triennium average 1996-97 over 2014-15			
Total Pulses	-15	104.63	-5.47	0.84
Chickpea	-30	133.47	-55.94	22.47
Pigeonpea	-46	88.05	20.04	-8.10
Urdbean	140	63.16	19.55	17.30
Moong bean	-33	94.59	7.87	-2.46
Pea	-105.79	-53.050	-0.118	6.235
Lentil	-12	54.51	48.65	-3.16
	Triennium ending average 1999-2000 over 2004-05			
Total Pulses	-3	26.48	74.15	-0.63
Chickpea	-3	335.53	-258.27	22.73
Pigeonpea	-26	57.19	50.25	-7.44
Urdbean	37	139.20	-25.99	-13.21
Moong bean	-31	103.44	-5.06	1.62
Pea	3	-248.52	377.45	-28.93
Lentil	22	53.04	42.05	4.90
	Triennium ending average 2004-05 over 2009-10			
Total Pulses	-16	97.61	2.82	-0.43
Chickpea	-35	82.85	24.26	-7.11
Pigeonpea	-27	41.09	66.41	-7.50
Urdbean	22	-38.52	151.08	-12.55
Moong bean	17	22.51	74.57	2.91
Pea	-31	79.21	27.63	-6.84
Lentil	-11	91.14	9.88	-1.03
	Triennium ending average 2009-10 over 2014-15			
Total Pulses	6	66.44	32.28	1.28
Chickpea	21	26.77	69.37	3.86
Pigeonpea	5	-198.59	328.15	-29.56
Urdbean	40	45.98	45.62	8.40
Moong bean	8	-11.30	112.26	-0.96
Pea	7	341.23	-196.99	-44.24
Lentil	-29	59.41	48.98	-8.38

Agriculture in India is the backbone of economy. A large segment of India's population is depend on agriculture and allied activities for their sustenance. India is leading country in production of a few agriculture commodities. It is largest producer of milk, cashew nuts, coconuts, tea, ginger, turmeric and black pepper. It also has also the largest livestock

population. It is the second largest producer of wheat, rice, sugar, groundnut and inland fish. It is the third largest producer of tobacco. It accounts for 10 per cent of world's fruit production. India has a comparative advantage in agriculture. There is considerable scope for raising farm income and employment through increasing agro-based exports without compromising the food security. Uttar Pradesh is characterized by abundant natural resources such as diverse agro-climatic conditions, varied soil type and abundance of rainfall which has immense scope for growing the varieties of pulses crops.

CONCLUSION

The area under pulses in the state has shown negative growth during the period of 1994-95 to 1999-2000 and 2005-06 to 2009-10 and 2010-11 to 2014-15. There has been negative growth in area under chickpea and pigeonpea during pre and post-reform period in the state. However, there has been significant growth in area under urad bean and moong bean during 1994-95 to 1999-2000 and 2005-06 to 2009-10. However, these crops witnessed negative growth during 2010-11 to 2014-15. There has been negative growth in area under total pulses in all the geographical regions except Bundelkhand region during the period of 1994-95 to 1999-2000 and 2001-02 to 2004-05. Except for the period of 2000-2001 to 2004-05, area under total pulses in the state has fallen down significant in all the periods. The analysis shows that state of Uttar Pradesh has favorable agro climate for the production of pulses. It has also significant share in food basket of India. However, productivity of pulses crops has been reported low. Moreover, the production of pulses in the state has been lower than the demand of pulses. At the same time, with the launch of National Food Security Mission, government policy intervention is showing positive results as growth trends during 11th and 12th plan were found satisfactory.

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