

MONITORING REPORT OF THE PROJECT “PROMOTION OF PULSES CULTIVATION IN PUNJAB”.



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Preface

There is dire need to increase the production of cereals, pulses, fruits and vegetables to meet the food requirement of increasing population. The production of all agricultural commodities except pulses has increased due to efforts of Agriculture Department.

The pluses make the meal delicious and nutritious. Major pulses are Lentil, Gram, Moong and Mash. Pulses are substitutes of other costly sources of protein e.g. meat and fish for poor masses. The pulses are grown on 5% of the country's total cultivated area. Pulses need less irrigation water and nitrogenous fertilizer.

Agriculture is extremely vulnerable to climate change. Production of pulses has also been effected by climatic changes. In severe drought season production of Gram and Lentil is badly affected. Similarly other climatic changes like floods, untimely and heavy rains affect the production of Moong and Mash crops. Fluctuation in prices, no support prices from the government for the pulses, better production of cotton, wheat and rice crops fetching reasonable prices, growing of mango, citrus and guava orchards, shifting of area towards vegetables due to provision of better production technologies by government such as tunnel technology and improved methods of production enhanced profits which compelled the farmers to reduce the area under pulses.

Keeping in view low production of pulses and to save the country from pressure of foreign exchange due to increased imports, Government of the Punjab; Agriculture Department designed a project "Promotion of Pulses Cultivation in Punjab" under the instructions enunciated by the Chief Minister Punjab. The cost of project is Rs.127.260 million and its period is 4 years. The project came on road on 01-01-2014. The main activities of the project are provision of certified seed, transfer of latest production technology through demonstration plots, general training of farmers through meetings, seminar/farmers day, supply of seed drills and threshers for demonstration purposes.

Director General Agriculture (Ext. & A.R.) Punjab is the overall operational head of the project activities both for financial and administrative matters. The activities related to Extensions Wing are to be implemented through District Agriculture Services. For research activities the Director Pulses Research Institute

Faisalabad and for certified seed production and multiplication Punjab Seed Corporation are involved. Bench mark survey, monitoring and evaluation are to be conducted by the Planning & Evaluation Cell.

Bench mark survey states the position of indicators before the start of project. Monitoring looks at the activities of implementing agencies of the project during the project period while evaluation is seen in terms of impact/benefits of the project. For under taking bench mark survey the survey of the project was started in December 2014 and was completed in mid-January 2015 while data of Moong & Mash for Kharif 2013 and Gram & Lentil for Rabi 2013-14 was collected through a questionnaire for each pulse. There were some districts where respondents of only one or two pulses were available. In total 304, 146, 51 and 161 respondents were interviewed in 36 districts of Punjab for Gram, Lentil, Mash and Moong respectively. While taking bench mark survey some questions were asked from the respondents about the activities of the extension wing which they have to perform and the response of the farmers has also been analyzed.

The report in hand is monitoring of the project which reveals the level of activities performed by the extension wing at farmers' level to make the project successful.

It is hoped that this report will help in course correction and in streamlining the activities of field formation of Agriculture Department.

Chief
Planning & Evaluation Cell

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CHAPTER - 1

Introduction

1. The population of Pakistan is increasing rapidly; therefore, it is need of time to increase the production as well as yield of food grains and other agricultural commodities such as pulses, vegetables and fruits to meet the increasing need for human consumption.
2. Agriculture sector provides food, fiber and shelter to human beings. The masses consume a considerable quantity of pluses along with cereals which makes the meal delicious and nutritious in addition to energy for the daily economic activities.
3. Major pulses include Lentil, Gram, Moong and Mash. These pulses are rich source of protein obtained from plants (Bio source). Pulses are substitutes of other costly sources of protein for poor masses of Pakistan e.g. meat and fish. Gram provides 24% protein and 3.5% minor elements. Similarly other pulses contain protein up to 30%. The pulses have been grown on 5% of the country's total cultivated area. Pulses need less amount of irrigation water. It can easily be grown in arid areas of Punjab.
4. Pulses belong to legume family of plants. Nitrogen fixing bacteria in the roots of pulses fix the nitrogen of atmosphere in the soil in the form of Ammonium (NH₄⁺) or Nitrogen Dioxide (NO₂) which enhance the fertility of soil naturally. Therefore, it has little nitrogenous fertilizer requirement. Only the application of phosphorous fertilizer is recommended at the time of sowing.
5. Agriculture is extremely vulnerable to climate change. Pakistan is most likely one of the worst hit countries due to adverse effects of climate change. Production of pulses has also been effected by climatic changes. In severe drought season production of gram and lentil is badly effected and similarly other climatic changes like floods, untimely and heavy rains have badly effect the production of moong and mash crops. Fluctuation in prices, no support prices from the government for the pulses, better production of cotton, wheat and rice crops fetching reasonable prices, growing of mangoes, citrus and guava orchards, shifting of trends towards vegetables due to provision of better production technologies by government such as tunnel technology and improved methods of production and dissemination to the farmers resulted to enhance profits which compelled the farmers to reduce the area under pulses.
6. Area, production and average yield of different pulses are given as under:

Moong

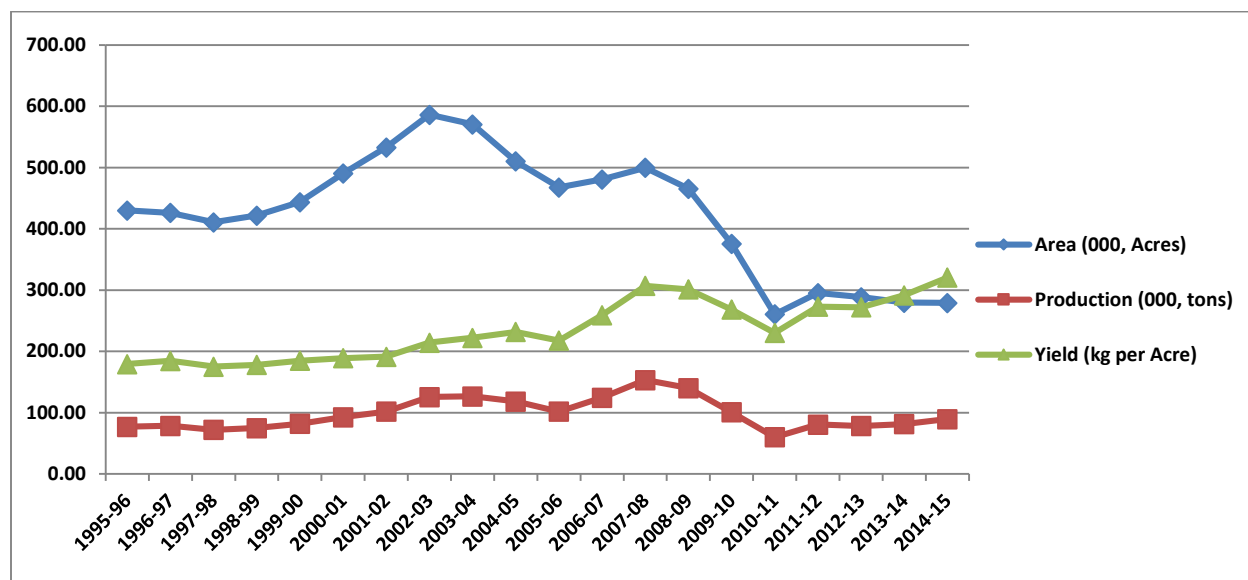
7. Moong is a Kharif crop but it can be grown in both seasons i.e February, March (Bharia) and June, July. Bharia crop is less prone to insects and pests. In rice area, where sowing of wheat is not possible it can be grown successfully. After wheat crop before sowing of rice it can also be grown successfully. The Punjab province contributes about 90% in production and is grown in irrigated areas of Punjab. There is less need of nitrogenous fertilizer as it has nodules in its roots which prepares nitrogen itself. Area, production and yield of Moong of Punjab is given as under

Table I: Area, Production and Yield of Moong in Punjab

Year	Area (000, Acres)	Production (000, tons)	Yield (kg per Acre)
1995-96	430.03	77.20	179.52
1996-97	426.08	78.70	184.71
1997-98	410.76	72.00	175.28
1998-99	421.63	75.10	178.12
1999-00	443.61	82.00	184.85
2000-01	490.30	92.70	189.07
2001-02	533.03	102.00	191.36
2002-03	586.13	125.70	214.46
2003-04	570.57	126.80	222.23
2004-05	510.30	118.30	231.82
2005-06	467.57	101.80	217.72
2006-07	480.66	124.60	259.23
2007-08	499.68	153.40	307.00
2008-09	465.60	140.30	301.33
2009-10	375.69	100.90	268.57
2010-11	260.59	60.00	230.25
2011-12	295.41	80.70	273.18
2012-13	288.50	78.50	272.10
2013-14	279.59	81.55	291.68
2014-15	279.30	89.58	320.74

Source: Crop Reporting Service

Figure 1: Area, Production and Yield of Moong in Punjab



8. Tables & Graphs reveals that:

- Area under Moong cultivation has declining trend in Punjab.
- Production of Moong was higher in year 2001-02 to 2008-09 and then has decreasing trend.
- Per acre Yield of Moong remained higher up to 2008-09 and then it has decreasing trend.

Mash

9. Mash is a Kharif crop and it is sown in June and July. It has also nodules in its roots due to which it needs less nitrogenous fertilizer. The share of Punjab in Mash production is 82.7%. It is also grown in irrigated area of Punjab. Area, production and yield of Mash of Punjab are given as under:

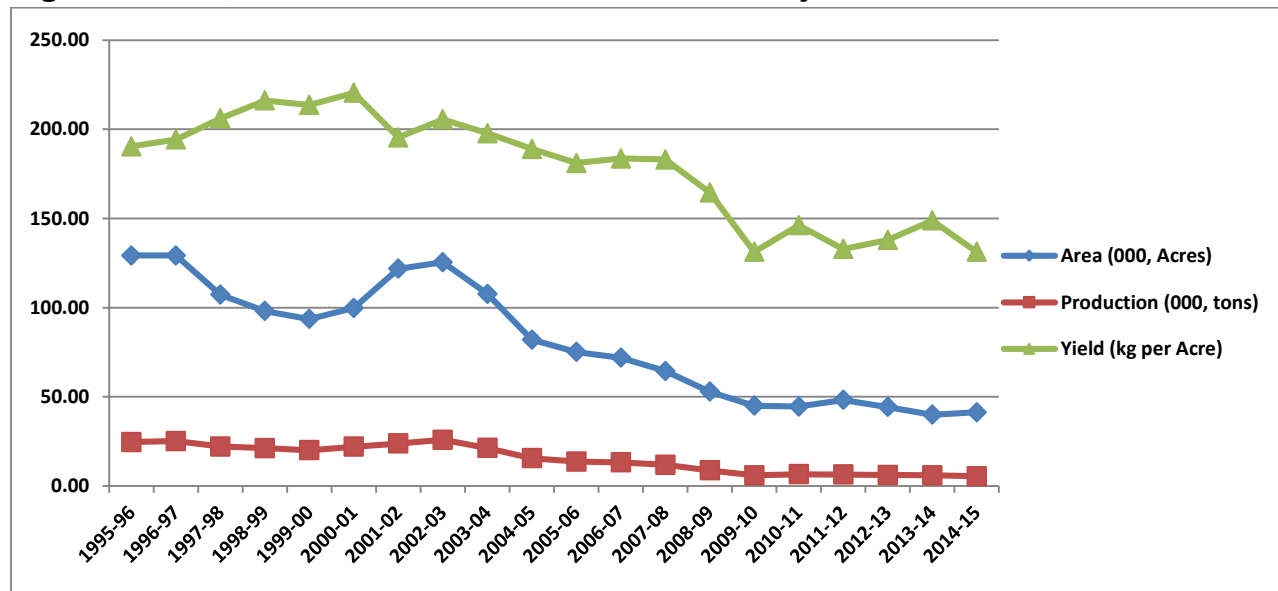
Table II: Area, Production and Yield of Mash in Punjab

Year	Area (000, Acres)	Production (000, tons)	Yield (kg per Acre)
1995-96	129.18	24.60	190.43
1996-97	129.18	25.10	194.30
1997-98	107.20	22.10	206.16
1998-99	98.06	21.20	216.20
1999-00	93.61	20.00	213.65

Year	Area (000, Acres)	Production (000, tons)	Yield (kg per Acre)
2000-01	99.79	22.00	220.47
2001-02	121.77	23.80	195.45
2002-03	125.48	25.80	205.62
2003-04	107.69	21.30	197.79
2004-05	82.00	15.50	189.02
2005-06	75.09	13.60	181.12
2006-07	71.88	13.20	183.65
2007-08	64.47	11.80	183.04
2008-09	52.86	8.70	164.59
2009-10	44.95	5.90	131.25
2010-11	44.46	6.50	146.20
2011-12	48.17	6.40	132.88
2012-13	44.21	6.10	137.97
2013-14	39.89	5.94	148.86
2014-15	41.23	5.42	131.33

Source: Crop Reporting Service

Figure 2: Area, Production and Yield of Mash in Punjab



10. Tables & Graphs reveals that:

- Area of Mash has declining trend in Punjab.
- Production of Mash has declining trend.
- Yield of Mash has declining trend.

Gram

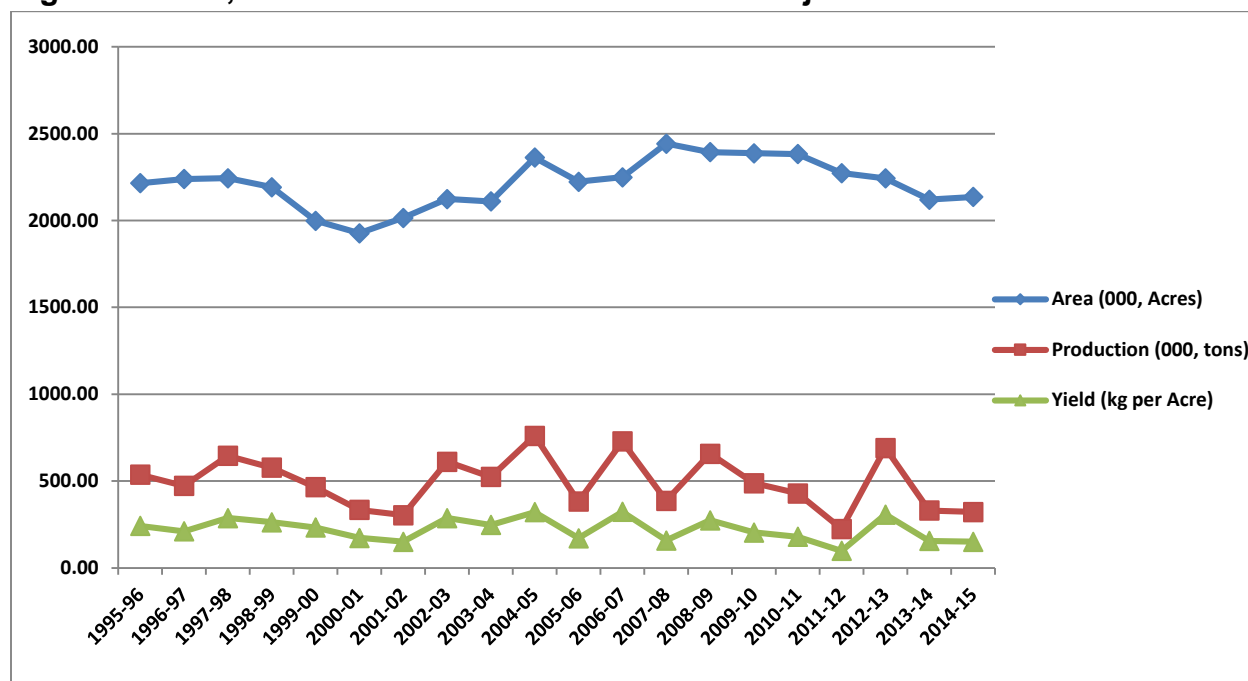
11. Gram is a Rabi crop. Punjab contributes 80% in total production of the pulses in the country and occupies 5% of the total cropped area. It is grown in rain-fed (barani) areas of Punjab i.e. Bhakkar, Khushab, Layyah, Mianwali and Jhung. It is sown in September and October. It needs less quantity of water and its cultivation depends on rain water. It can be sown on unlevelled lands i.e dunes and semi-dunes lands. It can be said that the production of Gram is directly proportional to rains. Area, production and yield of Gram in Punjab is given as under

Table III: Area, Production and Yield of Gram in Punjab

Year	Area (000, Acres)	Production (000, tons)	Yield (kg per Acre)
1995-96	2214.60	537.50	242.71
1996-97	2238.81	472.60	211.09
1997-98	2243.50	646.20	288.03
1998-99	2192.37	577.70	263.50
1999-00	1998.72	465.50	232.90
2000-01	1926.85	334.80	173.76
2001-02	2015.52	304.20	150.93
2002-03	2124.20	611.50	287.87
2003-04	2110.37	524.00	248.30
2004-05	2362.31	760.60	321.97
2005-06	2223.25	382.50	172.05
2006-07	2249.43	728.30	323.77
2007-08	2442.83	387.50	158.63
2008-09	2393.68	658.20	274.97
2009-10	2387.50	488.00	204.40
2010-11	2382.56	429.10	180.10
2011-12	2272.65	224.70	98.87
2012-13	2243.01	691.00	308.07
2013-14	2119.84	330.70	156.00
2014-15	2135.90	322.40	150.94

Source: Crop Reporting Service

Figure 3: Area, Production and Yield of Gram in Punjab



12. Tables & Graphs reveals that:

- Area of Gram shows less variation in Punjab.
- There is frequent variation i.e. ups & downs in production of Gram.
- There is also frequent variation i.e. ups & downs in the yield of Gram.

Lentil

13. Lentil is a Rabi crop. It is sown in September and October and now it is known that it can be sown in November and September with Sugarcane (Inter cropping). Punjab contributes 56.5% of country's overall production. Area, production and yield of Lentil of Punjab are given as under:

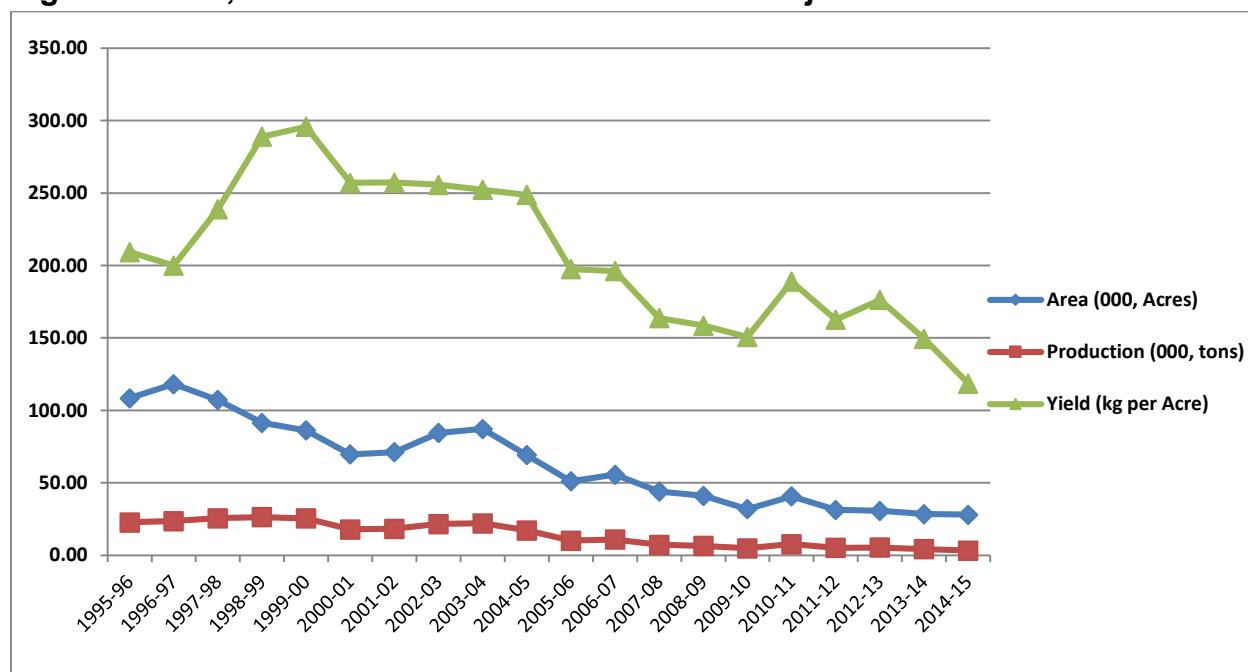
Table IV: Area, Production and Yield of Lentil in Punjab

Year	Area (000, Acres)	Production (000, tons)	Yield (kg per Acre)
1995-96	108.43	22.70	209.35
1996-97	118.07	23.60	199.89
1997-98	107.20	25.60	238.81
1998-99	91.39	26.40	288.87
1999-00	86.20	25.50	295.81
2000-01	69.65	17.90	256.98

Year	Area (000, Acres)	Production (000, tons)	Yield (kg per Acre)
2001-02	71.14	18.30	257.25
2002-03	84.47	21.60	255.70
2003-04	87.19	22.00	252.32
2004-05	69.16	17.20	248.70
2005-06	51.13	10.10	197.54
2006-07	55.58	10.90	196.13
2007-08	43.97	7.20	163.76
2008-09	41.00	6.50	158.53
2009-10	31.86	4.80	150.64
2010-11	40.76	7.70	188.93
2011-12	31.37	5.10	162.58
2012-13	30.63	5.40	176.31
2013-14	28.40	4.25	149.51
2014-15	28.03	3.32	118.57

Source: Crop Reporting Service

Figure 4: Area, Production and Yield of Lentil in Punjab



14. Tables & Graphs reveals that:

- Area of Lentil shows decreasing trend in Punjab.
- Production of Lentil shows decreasing trend.
- Yield of Lentil shows decreasing trend over time.

15. In general, it is seen that area, production & yield of Mash and Lentil has decreasing trend and more efforts are required for these pulses, whereas for Moong and gram little efforts are required. The area of pulses has been occupied by more profitable crops such as Cotton, Wheat and Rice. The intermittent production of Gram and Lentil can also be attributed to moisture and adversaries of frost.

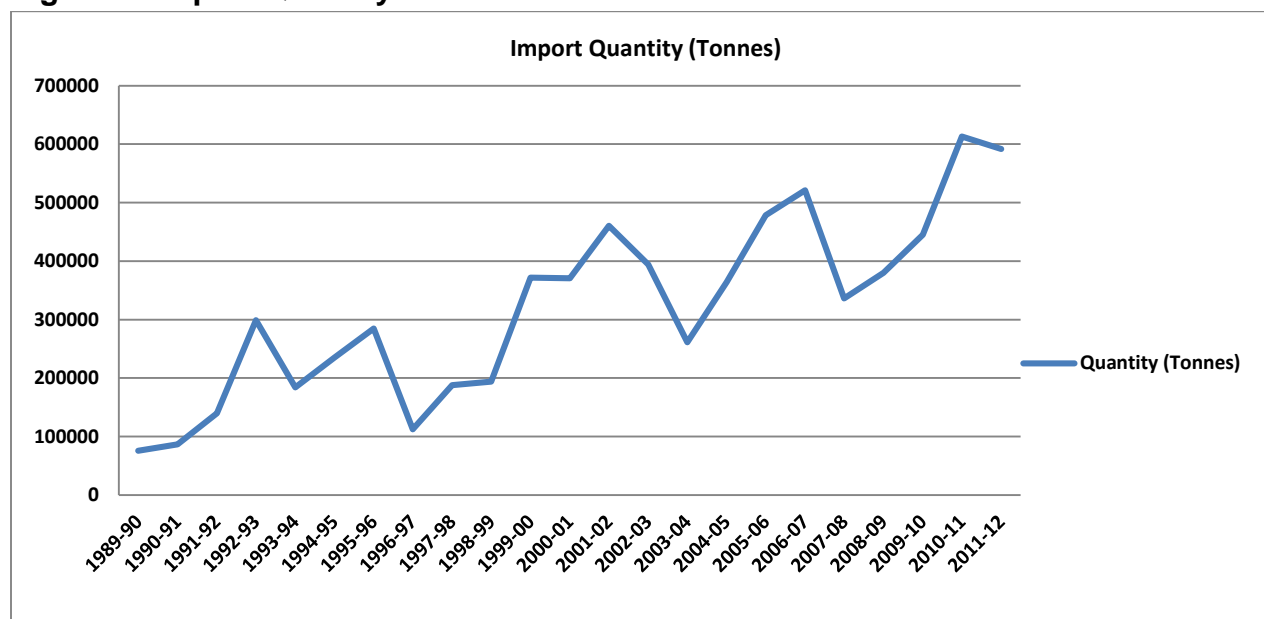
16. Shortfall in production and consumption of pulses is met through imports from Myanmar (Burma), Malaysia, Singapore and Canada. Year wise quantity of import of all pulses is as under:

Table V: Import Quantity of Pulses of Pakistan

Year	Import Quantity (Tonnes)
1989-90	75653
1990-91	86478
1991-92	139991
1992-93	298791
1993-94	184197
1994-95	235033
1995-96	284993
1996-97	112269
1997-98	187902
1998-99	194246
1999-00	371756
2000-01	370830
2001-02	460399
2002-03	394407
2003-04	261449
2004-05	364020
2005-06	478679
2006-07	520923
2007-08	336015
2008-09	379812
2009-10	444976
2010-11	613248
2011-12	591992

Source: FAOSTAT

Figure 5: Import Quantity of Pulses of Pakistan



Pakistan also exports pulses. Year wise quantity of exports of all pulses is as under:

Table VI: Export Quantity of Pulses of Pakistan

Year	Export Quantity (Tonnes)
1989-90	10224
1990-91	4620
1991-92	466
1992-93	3539
1993-94	794
1994-95	307
1995-96	722
1996-97	1408
1997-98	1827
1998-99	2259
1999-00	28052
2000-01	39646
2001-02	28304
2002-03	110038
2003-04	102109
2004-05	86764
2005-06	199098
2006-07	19230
2007-08	4066
2008-09	3773
2009-10	42
2010-11	4660

Year	Export Quantity (Tonnes)
2011-12	8328

Source: FAOSTAT

Figure 6: Export Quantity of Pulses of Pakistan



17. To strengthen the food security position of people of Pakistan and keeping in view low production of pulses and save the country from pressure of foreign exchange due to increased imports, Government of the Punjab, Agriculture Department designed a project under the instructions enunciated by the Chief Minister Punjab to promote cultivation of Pulses to make the country and province self-sufficient in the production. The cost of project is Rs.127.260 million and its period is 4 years i.e. 2013-14 to 2016-17. The project came on road on 01-01-2014. The detail of the project is as under.

Objectives of the Project

- i. Development of Basic seed of high yielding varieties of pulses.
- ii. Promotion of certified seed of Lentil, Moong and Mash by its distribution among farmers at subsidized rates.
- iii. Transfer of modern production technology through farmer training program and Print & Electronic Media.
- iv. Demonstration of modern production technology for pulses including Lentil, Moong, Mash & Gram at farmer's fields.

- v. Promotion of pulses in association of other crops in irrigated areas.
- vi. Holding of farmers' day and use of other extension tools to lure farmers on adoption of pulses cultivation.

Project implementation and interventions

18. Director General Agriculture (Ext. & A.R.) Punjab is the overall operational head of the project activities both for financial and administrative matters. The activities related to Extensions Wing are to be implemented through District Agriculture Services. For research activities the Director Pulses Research Institute Faisalabad and for certified seed production and multiplication Punjab Seed Corporation are involved. Monitoring/Evaluation are to be conducted by the Planning & Evaluation Cell.

19. The expenditures at District level are being dealt through Account-iv of District Government. The funds required for distribution of seed to farmers on 50% subsidy for 2014-15 and 33% in 2015-16 have been placed at the disposal of Director General Agriculture (Ext. & A.R) at Provincial Level in Account-1. The payment of project share for certified seed distribution to farmers is to be made to PSC through this Account. Funds required by Director Pulses Research Institute have been placed at his disposal and are debit able to Provincial Account-I. The amount of 50% and 67% share of the farmers for cost of certified seed is to be paid by farmers to Punjab Seed Corporation at the time of receipt of seed.

Project interventions

1. Development of basic seed of high yielding varieties of pulses

20. Basic seed of pulses i.e. Gram, Lentil, Moong and Mash is to be produced by Director Pulses AARI Faisalabad, Director AZRI Bhakkar & Director BARI Chakwal for its multiplication and production of certified seed by Punjab Seed Corporation.

2. Weed Control in Pulses

21. Weeds are major problem in Pulses which reduce per acre yield of pulses by competing with the crop for nutrition, moisture and light and grow faster than the main crop. Since no post emergence weedicide is available for pulses as per report of Director Agronomy AARI Faisalabad, therefore, recommended pre-emergence weedicide is to be promoted and demonstrated for weed control in pulses only.

3. Promotion of certified seed of Lentil, Moong and Mash by its distribution among farmers at subsidized rates

22. Punjab Seed Corporation has to provide certified seed of pulses i.e. Lentil, Moong & Mash during 2nd & 3rd year of the project to the farmers on 50% (2014-15) &

33% (2015-16) cost sharing basis respectively through District Officers Agriculture (Ext.) in the districts.

3. Dissemination of improved technology

23. The proven packages of technology related to best agriculture practices is to be disseminated to the farmers by various methods including training of farmers or visits, use of electronic media (Radio and TV), video tapes, posters, handouts and demonstration plots etc.

4. Training of Farmers

24. The extension staff has to hold training of farmers in selected villages of all project districts during Rabi and Kharif season in each year to transfer latest production technology of pulses i.e. Lentil, Gram, Moong and Mash. However, general awareness for promotion of production technology for pulses has to be made in all the villages of Punjab. The farmers in Barani area have also to be motivated to apply for high efficiency irrigation system under Punjab Irrigated-Agriculture Productivity Improvement Project (PIPIP) at district level for application of water through sprinkler irrigation in stress condition to Gram crop.

5. Pulses Drill for Line sowing

25. As reported by Director AMRI Multan, the modification of Rabi drill is made. In modified drill, metering device is attached for calibration and space for sowing of pulses is also adjusted at proper distance. Its price is Rs.80,000. During 2nd and 3rd year of project, 1 drill per tehsil is to be provided to farmers on 50% & 33% subsidy during 2014-15 & 2015-16 respectively with the total of 272 drills during the project period.

6. Multiple Crop Thresher (for Pulses)

26. As reported by Director AMRI Multan, the modification in Wheat Thresher is made and sieves, belt and PTO Shaft/ Pully of different sizes for Lentil and Gram are available for threshing of pulses. Moong and Mash are threshed in the thresher with Wheat Sieves. It's price is Rs.520,000/- per item. In total 5 threshers are to be given to Adaptive Research Farms for one time to be used for demonstration purposes at the demonstration plots in clusters.

7. Pulses Cluster Development

27. It is proven fact that an organization may achieve more targets and gain benefits in the cluster form than the individuals. To keep this universal truth, pulses growers in the project districts with maximum area are to be grouped to form clusters.

Growers of these clusters are to be educated through farmer training program. Each cluster has to comprise 5 to 7 or even more villages having a reasonable area of pulses. The database of cluster group will be maintained having parameters i.e. name of farmer with address, total land holding, area sown under pulses, yield per acre of crop, mode of sale (Direct selling or through middle man). The technology package is to be communicated to farmers through farmer training program and demonstrations plots are to be laid out in these cluster areas. Farmers' day will also be conducted in these clusters. Efforts are to be made to enhance area and production of pulses in these clusters. The growers of clusters are also to be motivated to sell their produce at competitive rates.

8. Promotion of Pulses in Association of other Crops in Irrigated Areas

28. The cultivation of pulses i.e. Gram, Lentil, Moong and Mash will be promoted in association of other crops in irrigated areas. The demonstrations on sowing of pulses as sole crop, inter crop, intervening crop and catch crop with the dedicated demonstration targets is to be made.

9. Holding of Farmers Days and use of other Extension Tools To Lure Farmers on Adoption of Pulses Cultivation

29. Seminars at markaz and Tehsil level are to be arranged to create awareness about crop production technology as proven packages of technology needs to be disseminated to the farmers by various methods including on-farm visits, demonstration plots and training of farmers. Funds have been proposed to arrange gatherings for maximum awareness to the farmers and to create a ripple out effect through mega gatherings with the participation of notables of the society and progressive farmers. The knowledge of extension staff including the Field Assistants and Agriculture Officers is also to be updated by holding periodic meetings and seminars. Farmer gatherings/ farmers' day are to be held at demonstration sites for exhibition of the technologies to the farmers for adoption as seeing is believing. At the harvest of the crop, a farmer day is also to be conducted on demonstration site to offer the participants to witness the difference between and ordinary crop and demonstration unit. On an average one farmer day is to be conducted on three demonstration Plots.

10. Processing and Grading

30. By promoting the processing and grading practices, the value and quality of pulses can be enhanced a lot, therefore pulses growers will be educated through farmer training program / farmers' day for the proper harvesting, processing and grading of Pulses crops in the fields for its proper transportation and fetching good price in the markets.

11. Announcement of Procurement Price and Purchase of Produce by Public Sector

31. It has been proposed in PC-I that if the production and supplies of pulses are to be increased on sustainable basis, Government/Competent authority may be approached to announce the procurement price and purchase mechanism for farmers through public sector i.e. PASSCO and Punjab Food Department. This proposal should be scrutinized/considered by the Project Steering Committee.

Physical Targets and Achievements of Interventions

32. Overall targets and achievements of the project as reported by DGA Ext. & AR are given in table

Table VII: Year Wise / Component Wise Physical Targets & Achievement of Project Interventions

Item	Unit	2013-14		2014-15	
		Targets	Achievements	Targets	Achievements
Production of Basic seed					
i. Moong	Kg.	20	20	10,340	10,340
ii. Mash		-	-	2252	400
iii. Gram		-	-	1080	1,080
iv. Lentil		-	-	1542	1,542
Total =		-	-	15,214	13,322
Production & Multiplication of certified seed by Punjab Seed Corporation					
i. Moong	Kg.	500	500	289500	289500
ii. Mash		-	-	45040	-
iii. Gram		-	-	7200	7,200
iv. Lentil		-	-	30840	-
Total =		500	500	372580	296,700
Purchase of Seed from PSC by the project					
i. Moong	Kg.	500	500	289500	289500
ii. Mash		-	-	-	-
iii. Gram		-	-	7200	7,200
iv. Lentil		-	-	-	-
Total =		500	500	296,700	296,700
Distribution of seed on 50% subsidy for 2014-15 to farmers					
i. Moong	Kg.	-	-	288,560	288,560
ii. Mash		-	-	-	-
iii. Gram		-	-	-	-
iv. Lentil		-	-	-	-
Total =		-	-	288,560	288,560
Distribution of pulses drill on 50% subsidy for 2014-15 to farmers	No.	-	-	136	135

Item	Unit	2013-14		2014-15	
		Targets	Achievements	Targets	Achievements
Farmer Trainings					
i. Moong	No.	-	-	-	-
ii. Mash		-	-	-	-
iii. Gram		-	-	-	-
iv. Lentil		-	-	-	-
Total =		900	900	3,000	3,000
Multiple crop threshers for pulses to AR Farm	No.	-	-	5	5
Demonstration Plots					
i. Moong	No.	-	-	95	85
ii. Mash		-	-	91	81
iii. Gram		-	-	225	200
iv. Lentil		-	-	85	80
Total =		-	-	496	446
Farmers' Day & Seminars					
i. Moong	No.	-	-	-	-
ii. Mash		-	-	-	-
iii. Gram		-	-	-	-
iv. Lentil		-	-	-	-
Total =		25	-	150	135
Printing of Literature					
i. Moong	No.	-	-	-	-
ii. Mash		-	-	-	-
iii. Gram		-	-	-	-
iv. Lentil		-	-	-	-
Total =		1000	-	31,200	77,700

33. From above table it is concluded that:

- Targets for preparation of basic seed of Moong, Lentil and Gram were achieved in year 2014-15.
- Target for the preparation of basic seed of Mash was not achieved. The difference was of 1852 kg.
- PSC multiplied only seed of Moong and Gram, whereas seed of Lentil and Mash were not developed due to floods and rains in Narowal district in year 2014-15.
- Agriculture department purchased certified seed of only Moong and Gram as per targets from PSC for the year 2014-15.
- PSC supplied seed of Moong in February 2015 when the main Kharif Moong crop of 2014 has been harvested.
- It is further revealed that agriculture department did not distribute certified seed of Moong, Mash, Gram and Lentil on 50% subsidy for the year 2014-15.
- The targets of seed drill distribution, farmers training, threshers' distribution, demonstration plots, farmers' day/seminars and printing of literature were achieved for the year 2014-15.

Financial Allocation & Utilization

34. DGA (Ext. & AR) was also requested to supply the information regarding financial allocation and utilization. The information supplied by said office is as under:

Table VIII: Year Wise/Component Wise Financial Phasing & Utilization for the Scheme "Promotion of Pulses Cultivation in Punjab"

Item	2013-14		2014-15		
	Allocation	Utilization	Allocation As Per Original PC-I	Revised Budget	Utilization
A) Director General Agriculture (Ext.&AR),Punjab,Lahore.					
Distribution of certified seed to farmers on 50% cost sharing basis	0.000	0.000	24.506	19.346	19.580
Seed, Inoculums and weedicide for Demonstration Plots	0.000	0.000	1.114	1.248	1.114
Farmers' day / Seminars @ Rs. 5000/- per farmer day/ seminar	0.000	0.000	7.500	7.500	7.500
Media Campaign	0.000	0.000	1.000	1.000	1.000
Publicity through Burjies, Banners etc.	0.000	0.000	0.500	0.500	0.500
Printing of Literature	0.000	0.000	1.000	1.000	0.999
TA	0.000	0.000	5.000	5.000	5.000
POL	0.000	0.000	10.000	10.000	10.000
Purchase of Machinery & Equipment	0.000	0.000	8.040	7.230	7.253
Repair & Maintenance of (i) Transport, (ii) Machinery & Equipment	0.000	0.000	1.000	1.000	1.000
Stationary	0.000	0.000	0.250	0.250	0.250
Total of Agri. Extension	0.000	0.000	59.910	54.074	54.196
B) Director,Pulses Research Institute,Faisalabad					
Budget required for seed development by VRI, FSD.	0.000	0.000	14.520	2.725	2.200
C) Chief,Planning & Evaluation Cell,Agriculture Department,Lahore.					
Bench Mark Survey and M&E by P&E Cell	0.000	0.000	1.000	1.000	0.697
Grand Total	0.000	0.000	75.430	57.799	57.093

35. From above table it is revealed that all project partners have received funds in year 2014-15 which have been utilized. For the year 2013-14 funds were not released by the Finance Department.

CHAPTER-2

Methodology

36. The survey of the project was started in December 2014 and was completed in mid-January 2015. Two teams having two Assistant Research Officers were constituted for the survey of whole Punjab. At one time one team was deputed in Northern areas and one for Southern areas of Punjab. Each team has to survey eight pulses respondents per day, two for each pulses. The number of days to survey a district was based on the area of different pulses in that district. Team stayed for maximum three days where the district area of pulses was more. Maximum 24 farmers were to be surveyed in a district but in some districts number of respondents interviewed were more than this. There were some districts where only one or two pulses were grown and other pulses respondents were not available. In such cases number of respondents per pulses was increased for other pulses. In total 304, 146, 51 and 161 respondents were interviewed for Gram, Lentil, Mash and Moong respectively. While taking bench mark survey some questions were asked from the respondents about the activities of the extension wing from 01-01-2014 to onward. The response of the farmers has also been analyzed which may be termed as monitoring. District wise sample size of pulses respondents is as under

Table IX: District Wise Sample Size of Pulses Respondents

District	Gram	Lentil	Mash	Moong	Total
	No.	No.	No.	No.	
Attock	6	5	1	4	16
Bahawalnagar	15	6	0	2	23
Bahawalpur	7	4	1	11	23
Bhakkar	20	4	0	11	35
Chakwal	13	5	0	0	18
Chiniot	13	13	0	7	33
DG Khan	17	1	0	0	18
Faisalabad	6	4	0	1	11
Gujranwala	7	3	0	2	12
Gujrat	8	9	7	5	29
Hafizabad	8	4	0	3	15
Jehlum	4	8	4	3	19
Jhang	19	8	1	2	30

District	Gram	Lentil	Mash	Moong	Total
	No.	No.	No.	No.	
Kasur	0	0	0	5	5
Khanewal	4	4	4	4	16
Khushab	14	2	0	1	17
Lahore	4	0	0	1	5
Layyah	9	4	0	5	18
Lodhran	2	0	1	5	8
Mandi Bahuddin	6	5	1	0	12
Mianwali	14	3	1	8	26
Multan	4	2	3	7	16
Muzaffar garh	21	3	0	3	27
Nankana	1	1	1	2	5
Narowal	2	9	2	0	13
Okara	7	2	5	9	23
Pakpattan	6	6	6	6	24
Rahim Yar Khan	12	4	0	12	28
Rajan pur	9	3	0	8	20
Rawalpindi	6	9	4	4	23
Sahiwal	5	4	3	4	16
Sargodha	12	3	0	8	23
Shaikhupura	1	1	1	1	4
Sialkot	5	2	4	0	11
T.T.Singh	10	3	1	10	24
Vehari	7	2	0	7	16
Total	304	146	51	161	662

37. Separate questionnaires were designed for each pulses and one questionnaire was designed for District Officer Agriculture, Extension for getting secondary data consisting of project activities. Questionnaires for pulses respondents were well designed covering monitoring indicators.

38. Data collected through these questionnaires were entered in MS Excel and then converted into Statistical Package for Social Sciences (SPSS) for data analysis. Some data inconsistencies were removed during data cleaning process. District wise percentages and averages (Descriptive analysis) were used to analyze the data and to bring the data in presentable shape. Percentages and averages for Punjab are also calculated.

Results & Discussion

39. During survey time i.e. December 2014 to January 2015 as project has been started and the Agriculture Extension Wing has to perform some activities to achieve the objectives of project in project area. So monitoring of project was done to see whether field offices have taken initiatives to make the project successful. The report in hand covers response of farmers about project activities regarding Moong and Mash of Kharif 2014 and Lentil and Gram of Rabi 2014-15 upto December 2014. This chapter will discuss results of monitoring indicators.

Monitoring Report (Moong)

39.1. In five district i.e. Chakwal, D. G. Khan, Mandi Bahauddin, Narowal & Sialkot District Moong respondents were not available/interviewed (Table-IX).

Training Programs/Farmers' Day/Seminar Arranged By Agriculture Extension Department for Moong Cultivation

a. Training Programs

39.2. About 53.4 percent of Moong respondents reported that extension department imparted trainings to teach production technology of Moong pulses (Table-1).

39.3. About 5.8, 12.8, 1.2, 7.0, 10.5, 14.0, 5.8, 4.7, 9.3, 20.9 and 8.1 percent Moong respondents reported that training was started in January, March, April, May, June, July, August, September, October, November and December respectively during year 2014. It reveals that some offices of extension wing started trainings just after the start of the project i.e. in January 2014 and some started just before the start of season and during season (Table-2 & 2a).

39.4. Average number of trainings of Moong reported by farmers was 1.33. In total, number of trainings came as only 41 in 31 districts (Table-3). Through a proforma DOA's have to provide number of trainings imparted but most of the DOA's has replied as zero number of trainings. It reveals that number of trainings imparted by department regarding Moong crop were very low.

b. Literature Distribution

39.5. About 34.8 percent of Moong respondents reported that Moong literature was distributed during training programs to them (Table-4).

c. Farmers' Day/Seminars

39.6. The average number of farmers' day/seminars reported by Moong respondents was 0.67. While number reported by DOA's was 0.68. In total these came as 21 (Table-5).

Support/Facilities Provided By Agriculture Extension Department For Moong Cultivation

a. Provision of Seed Drill

39.7. One seed drill was to be distributed at tehsil level on 50% subsidy during the year 2014-15 but 100 percent Moong respondents reported that these were not provided. DOA's have reported same thing (Table-6).

b. Provision of Certified Seed of Moong on 50% Subsidy

39.8. Certified Moong seed was to be provided to selective farmers on 50% subsidy in year 2014-15 but 100 percent Moong respondents reported that it was not given. DOA's have also reported same thing (Table-7).

c. Provision of Information Regarding Moong Cultivation Through Electronic Media

39.9. Mass media publicity and programs were to be delivered on Radio and TV but only 25.5 percent Moong respondents reported that they heard programs on Radio / TV (Table-8).

39.10. The average number of times program were heard/seen on TV came as 1 (Table-9).

District Wise Area of Moong Reported By DOA's and CRS For Year 2013-14

39.11. The district area under Moong reported by DOA's and Crop Reporting Services is different, especially in Bhakkar, DOA has reported 2 acres while data of Crop Reporting Services shows that area under Moong was 140,000 acres in Year 2013-14 (Table-10).

Demonstration Plots of Moong

39.12. At least 2 demonstration plots of Moong were to be laid out in each district. As per reports of DOA's total 49 Demonstration Plots were laid out in 36 districts in kharif 2014. About 12.5 percent Moong respondents have the knowledge of laying out of demonstration plots in surrounding areas (Table-11).

39.13. Out of 12.5 percent respondents who have the knowledge of laying out of demonstration plots, about 83.3 percent Moong respondents have themselves seen the demonstration plots (Table-12).

39.14. Out of 83.3 percent respondents who have themselves seen the demonstration plots, about 58.3 percent Moong respondent reported that demonstration plots have been laid out on their land (Table-13).

Inputs Provided Free of Cost By Government For the Demonstration Plots

a. Provision of Seed

39.15. About 100 percent Moong respondents having demonstration plots reported that seed was provided by Department (Table-14).

b. Provision of Weedicide

39.16. About 35.7 percent Moong respondents having demonstration plots informed that weedicide was provided by Department (Table-15).

c. Provision of Inoculum

39.17. About 57.1 percent Moong respondents having demonstration plots responded that inoculum injection was provided by Department (Table-16).

Difference Between Traditional Sowing Method and Sowing Method of Demonstration Plots

39.18. The difference between traditional sowing method and sowing method of demonstration plots reported by Moong respondents were drill sowing, proper seed rate, good quality seed and use of inoculum by 14.3, 7.1, 57.1 and 21.4 percent respectively (Table-17).

Yield of Demonstration Plots

39.19. Average production of demonstration plots reported by Moong respondents was 13.3 maunds per acre (Table-18).

Farmers' Day Arranged By Extension Department at Demonstration Plots

39.20. About 57.1 Moong respondents reported that farmers' day were arranged at demonstration plots (Table-19).

39.21. On an average 21 Moong respondents reported that they attended the farmers' day (Table-20).

39.22. About 40 and 60.0 percent Moong respondents reported that farmers' day at demonstration plots were arranged at flowering and podding stage respectively (Table-21).

Monitoring Report (Mash)

39.23. In seventeen (17) districts Mash respondents were not available/interviewed (Table-IX).

Training Programs/Farmers' Day/Seminar Arranged By Agriculture Extension Department for Mash Cultivation

a. Training Programs

39.24. About 56.9 percent of Mash respondents reported that Extension Department imparted trainings to teach production technology of Mash pulses (Table-22).

39.25. About 3.8, 3.8, 3.8, 11.5, 34.6, 15.4, 15.4 7.7 and 3.8 percent Mash respondents reported that training was started in February, March, April, June, July, August, September, October and November respectively (Table-23 & 23a).

39.26. Average number of trainings of Mash reported by farmers was 1.3 (Table-24).

b. Literature Distribution

39.27. About 30.6 percent of Mash respondents reported that Mash literature was distributed during training programs (Table-25).

c. Farmers' Day/Seminars

39.28. The average number of farmers' day/seminars reported by Mash respondents was 0.42. While number reported by DOA's was 1.3. In total these came as 25 in 15 districts (Table-26).

Support/Facilities Provided By Agriculture Extension Department For Mash Cultivation

a. Provision of Seed Drill

39.29. One seed drill was to be distributed at tehsil level on 50% subsidy during the year 2014-15 but 100 percent Mash respondents reported that these were not provided. DOA's have reported same thing (Table-27).

b. Provision of Certified Seed of Mash on 50% Subsidy

39.30. Certified Mash seed was to be provided to selective farmers on 50% subsidy in year 2014-15 but 100 percent Mash respondents reported that it was not given. DOA's have also reported same thing (Table-28).

c. Provision of Information Regarding Mash Cultivation Through Electronic Media

39.31. Mass media publicity and programs were to be delivered on radio and TV but only 13.9 percent of Mash respondent reported that they heard/seen programs on Radio/TV (Table-29).

39.32. The average number of times program were heard/seen on Radio/TV came as 0.4 (Table-30).

District Wise Area of Mash Reported By DOA's and CRS For Year 2013-14

39.33. The district area under Mash reported by DOA's and Crop Reporting Services is different (Table-31).

Demonstration Plots of Mash

39.34. At least 2 demonstration plots of Mash were to be laid out in each district. As per reports of DOA's total 43 demonstration plots were laid out in 36 districts in kharif 2014. About 42.4 percent Mash respondents have the knowledge of laying out of demonstration plots in surrounding areas (Table-32).

39.35. Out of 42.4 percent respondents who have the knowledge of laying out of demonstration plots, about 46.7 percent Mash respondents have themselves seen the demonstration plots (Table-33).

39.36. Out of 46.7 percent respondents who have themselves seen the demonstration plots, about 36.7 percent Mash respondent reported that demonstration plots have been laid out on their land (Table-34).

Inputs Provided Free of Cost By Government For the Demonstration Plots

a. Provision of Seed

39.37. About 100 percent Mash respondents having demonstration plots reported that seed was provided by Department (Table-35).

b. Provision of Weedicide

39.38. About 25 percent Mash respondents having demonstration plots informed that weedicide was provided by Department (Table-36).

c. Provision of Inoculum

39.39. About 21.4 percent Mash respondents having demonstration plots responded that inoculum injection was provided by Department (Table-37).

Difference Between Traditional Sowing Method and Sowing Method of Demonstration Plots

39.40. The difference between traditional sowing method and sowing method of demonstration plots reported by Mash respondents were drill sowing, proper seed rate, good quality seed, good field preparation, use of inoculum and use of fertilizer by 9.1, 9.1, 27.3, 9.1, 18.2 & 27.3 percent respectively (Table-38).

Yield of Demonstration Plots

39.41. Average yield of demonstration plots reported by Mash respondents was 7.1 maunds per acre (Table-39).

Farmers' Day Arranged By Extension Department at Demonstration Plots

39.42. About 41.4 Mash respondents reported that farmers' day were arranged at demonstration plots (Table-40).

39.43. Average number of farmers attended the farmers' day came as 49.6 (Table-41).

39.44. About 30, 30 and 40 percent Mash respondents reported that stage of Mash pulses at the time of farmers' day was flowering, podding and harvesting respectively (Table-42).

Monitoring Report (Gram)

39.45. In Kasur districts Gram respondents were not available/interviewed (Table-IX).

Training Programs/Farmers' Day/Seminar Arranged By Agriculture Extension Department for Gram Cultivation

a. Training Programs

39.46. About 60.2 percent of Gram respondents reported that Extension Department imparted trainings to teach production technology of Gram pulses (Table-43).

39.47. About 30.6, 37.7, 27.9 and 3.8 percent Gram respondents reported that training was started in September, October, November, and December respectively (Table-44).

39.48. Average number of trainings of Gram reported by farmers was 1.6 (Table-45).

b. Literature Distribution

39.49. About 37.5 percent of Gram respondents reported that literature was distributed during training programs (Table-46).

c. Farmers' Day/Seminars

39.50. The average number of farmers' day/seminars reported by Gram respondents was 0.9. While number reported by DOA's was 0.7. In total these came as 24 in 35 districts (Table 47).

Support/Facilities Provided By Agriculture Extension Department For Mash Cultivation

a. Provision of Seed Drill

39.51. One seed drill was to be distributed at tehsil level on 50% subsidy during the year 2014-15 but 100 percent Gram respondents reported that these were not provided. DOA's have reported same thing (Table-48).

b. Provision of Certified Seed of Gram on 50% Subsidy

39.52. Certified Gram seed was to be provided to selective farmers on 50% subsidy in year 2014-15 but 100 percent Gram respondents reported that it was not given. DOA's have also reported same thing (Table-49).

c. Provision of Information Regarding Gram Cultivation Through Electronic Media

39.53. Mass media publicity and programs were to be delivered on radio and TV but only 34.9 percent of Gram respondents reported that they heard/seen programs on Radio/TV (Table-50).

39.54. The average number of times program were heard/seen on Radio/TV came as 1.2 (Table-51).

District Wise Area of Gram Reported By DOA's and CRS For Year 2013-14

39.55. The district area under Gram reported by DOA's and Crop Reporting Services is different (Table-52).

Demonstration Plots of Gram

- 39.56. At least 2 demonstration plots of Gram were to be laid out in each district. As per reports of DOA's total 225 demonstration plots were laid out in 36 districts in Rabi 2014-15. About 55.3 percent Gram respondents have the knowledge of laying out of demonstration plots in surrounding areas (Table-53).
- 39.57. Out of 55.3 percent respondents who have the knowledge of laying out of demonstration plots, about 94.0 percent Gram respondents have themselves seen the demonstration plots (Table-54).
- 39.58. Out of 94.0 percent respondents who have themselves seen the demonstration plots, about 64.8 percent Gram respondent reported that demonstration plots have been laid out on their land (Table-55).

Inputs Provided Free of Cost By Government For the Demonstration Plots

a. Provision of Seed

- 39.59. About 100 percent Gram respondents having demonstration plots reported that seed was provided by Department (Table-56).

b. Provision of Weedicide

- 39.60. About 11.7 percent Gram respondents having demonstration plots informed that weedicide was provided by Department (Table-57).

c. Provision of Inoculum

- 39.61. About 78.6 percent Gram respondents having demonstration plots responded that inoculum injection was provided by Department (Table-58).

Difference Between Traditional Sowing Method and Sowing Method of Demonstration Plots

- 39.62. The difference between traditional sowing method and sowing method of Demonstration Plots reported by Gram respondents were drill sowing, proper seed rate, good quality seed, good field preparation, use of inoculum and use of fertilizer by 23.1, 13.6, 39.8, 3.9, 17.5 and 1.0 percent respectively (Table-59).

Farmers' Day Arranged By Extension Department at Demonstration Plots

- 39.63. About 24.5 Gram respondents reported that farmers' day were arranged at demonstration plots (Table-60).
- 39.64. Average number of farmers attended the farmers' day came as 18.5 (Table-61).

Monitoring Report (Lentil)

39.65. In three (3) districts Lentil respondents were not available (Table-IX).

Training Programs/Farmers' Day/Seminar Arranged By Agriculture Extension Department for Lentil Cultivation

a. Training Programs

39.66. About 48.3 percent of Lentil respondents reported that Extension Department imparted trainings to teach production technology of Lentil pulses (Table-62)

39.67. About 30.0, 24.3, 37.1 and 8.6 percent Lentil respondents reported that training was started in September, October, November and December respectively (Table-63).

39.68. Average number of trainings of Lentil reported by farmers was 1.8 (Table-64).

b. Literature Distribution

39.69. About 52.9 percent of Lentil respondents reported that literature was distributed during training programs (Table-65).

c. Farmers' Day/Seminars

39.70. The average number of farmers' day/seminars reported by Lentil respondents was 0.9. While number reported by DOA's was only 0.4. In total these came as 14 in 33 districts (Table-66).

Support/Facilities Provided By Agriculture Extension Department For Lentil Cultivation

a. Provision of Seed Drill

39.71. One seed drill was to be distributed at tehsil level on 50% subsidy during the year 2014-15 but 100 percent Lentil respondents reported that these were not provided. DOA's have reported same thing (Table-67).

b. Provision of Certified Seed of Lentil on 50% Subsidy

39.72. Certified Lentil seed was to be provided to selective farmers on 50% subsidy in year 2014-15 but 100 percent Lentil respondents reported that it was not given. DOA's have also reported same thing (Table-68).

c. Provision of Information Regarding Lentil Cultivation Through Electronic Media.

39.73. Mass media publicity and programs were to be delivered on Radio and TV but only 20.7 percent of Lentil respondent reported that they heard/seen programs on Radio/TV (Table-69).

39.74. The average number of times program were heard/seen on Radio/TV came as 2 (Table-70).

District Wise Area of Lentil Reported By DOA's and CRS For Year 2013-14

39.75. The district area under Lentil reported by DOA's and Crop Reporting Services is different (Table-71).

Demonstration Plots of Lentil

39.76. At least 2 demonstration plots of Lentil were to be laid out in each district. As per reports of DOA's total 85 demonstration plots were laid out in 36 districts in Rabi 2013-14. About 50.3 percent Lentil respondents have the knowledge of laying out of demonstration plots in surrounding areas (Table-72)

39.77. Out of 50.3 percent respondents who have the knowledge of laying out of demonstration plots, about 94.5 percent Lentil respondents have seen the demonstration plots (Table-73).

39.78. Out of 94.5 percent respondents who have themselves seen the demonstration plots, about 73.9 percent Lentil respondent reported that demonstration plots have been laid out on their land (Table-74).

Inputs Provided Free of Cost By Government For the Demonstration Plots

a. Provision of Seed

39.79. About 100 percent Lentil respondents having demonstration plots reported that seed was provided by Department (Table-75).

b. Provision of Weedicide

39.80. About 19.6 percent Lentil respondents having demonstration plots informed that weedicide was provided by Department (Table-76).

c. Provision of Inoculum

39.81. About 70.6 percent Lentil respondents having demonstration plots responded that inoculum injection was provided by Department (Table-77).

Difference Between Traditional Sowing Method and Sowing Method of Demonstration Plots

39.82. The difference between traditional sowing method and sowing method of demonstration plots reported by Lentil respondents were drill sowing, proper seed rate, good quality seed, good field preparation, use of inoculum and use of fertilizer by 33.3, 17.9, 28.2, 10.3, 7.7 & 2.6 percent respectively (Table-78).

Farmers' Day Arranged By Extension Department at Demonstration Plots

39.83. About 15.7 percent Lentil respondents reported that farmers' day were arranged at demonstration plots (Table-79).

39.84. Average number of farmers attended the farmers' day came as 9.1 (Table-80).

CHAPTER-4

Recommendations

40. Pockets/areas of pulses sowing in each district should be explored fully where topography and agro climatic conditions do not suit to major crops. Moreover, process of cluster formation especially only for pulses should be strengthened. Farmers should be enlisted who grow pulses and separate trainings should be given. In this way performance of Extension Wing will improve by dealing respondents in closed circles. The work on Mash pulses needs more attention as there were 17 districts where respondents were not available for interview.

40.1. Only 19 DOA's have supplied the list of farmers whom they have imparted trainings. Some DOA's have sent the list of wheat and Cotton training programs. DOA's who have not provided the list of pulses farmers is as Bahawalpur, Bahawal Nagar, Rahim Yar Khan, Chiniot, Faisalabad, Jhang, Mandi Bahauddin, Sialkot, Narowal, Hafizabad, Nankana, Sahiwal, Pakpattan, Khanewal, Lodhran and Kasur. The list of farmers whom training has been imparted may be properly prepared for each pulses separately.

41. Supply of certified seed on 50% subsidy of Moong, Mash and Lentil was a big activity. Director pulses AARI has not achieved the target of production of basic seed of Mash during year 2014-15. PSC did not supply the certified seed of any pulses during year 2014-2015. PSC supplied seed of Moong in February 2015 when the main Kharif Moong crop of 2014 has been harvested. Due to this reason project has been extended for one year. In future proper care may be taken for preparation of basic certified seed and it is not damaged due to floods and rains.

42. Training programs of extension wing to pulses farmers was weak as only 53.4%, 56.9%, 60.2% and 48.3% farmers of Moong, Mash, Gram and Lentil respectively reported that training has been imparted. This aspect needs attention and in future efforts may be made to train 100% farmers.

43. Training programs may be planned just before the start and during the season.

44. The number of trainings was also poor. It was just 1.3, 1.3, 1.6 and 1.8 for Moong, Mash, Gram and Lentil farmers respectively. The number of training programs may be increased as farmers have little memory and do not listen carefully.

45. Literature distribution was also poor. Only 34.8%, 30.6%, 37.5% and 52.9% of Moong, Mash, Gram and Lentil farmers respectively reported that literature was distributed during trainings to them. Literature may be distributed to each farmer who attends the trainings.

46. Number of farmers' day/seminars arranged for pulses farmers were also poor. These came as 0.67, 0.42, 0.9 and 0.9 for Moong, Mash, Gram and Lentil farmers respectively. Number of farmers' day/seminars may be improved.
47. Seed drills on 50% subsidy have also not been provided during year 2014-15 upto survey times. The next phase of distribution of seed drills that is in year 2015-16 may be started at the earliest.
48. The number of mass media publicity programs on TV/Radio may be increased.
49. The area reported by DOA,s for different pulses do not match with the area reported by the CRS. A fresh survey may be made as it is very important to forecast the production levels and to take import decisions in time.
50. Demonstration plots for all pulses have not been laid out in each district. Efforts may be made to lay out demonstration plots in identified suitable areas in clusters where number of pulses farmers is more in each district. Demonstration plots to demonstrate intercropping, intervening crop and catch crop may also be laid out.
51. Seed for demonstration plots were distributed free of cost for all pulses but it is apprehended that it was not certified. Efforts may be made to distribute the certified seed in future.
52. Weedicide was also to be provided free of cost for demonstration plots but only 35.7%, 25.0% 11.7% and 19.6% farmers having demonstration plots of Moong, Mash, Gram and Lentil respectively reported that weedicide was provided. Efforts may be made so that weedicide may be provided for each demonstration plots in future.
53. Inoculum was also to be provided free of cost for demonstration plots but only 57.1%, 21.4%, 78.6% and 70.6 % farmers having demonstration plots of Moong, Mash, Gram and Lentil respectively reported that inoculum was provided. Efforts may be made so that inoculum may be provided for each demonstration plots in future.
54. Yield of demonstration plots was reported as 13.3, 7.1 maunds/acre for Moong and Mash respectively. There is little difference between the yield of general farmers as it was 10.9 and 6.1 maunds/acre for Moong and Mash respectively for the Kharif 2013. There is dire need to provide the certified seed, weedicide, inoculum and farmers apply DAP fertilizer so that yield of demonstration plots is increased to have a positive impact.
55. Farmers were of the view that import of pulses may be finished so that prices of pulses are increased to have a reasonable profit for sowing of pulses. When farmers are motivated and sowing area is increased, automatically prices will reach at a point where it will not be felt by the consumers. Alternative proposal of farmers was to announce support price of pulses. This proposal has also been indicated in PC-I so the matter may be brought before the Project Steering Committee.

Monitoring Report of Moong

Table 1: Response of Moong Farmers' Regarding Trainings of Moong Arranged by Extension Department (Percentage)

District	Yes	No
Attock	25.0	75.0
Bahawal nagar	100.0	0.0
Bahawal pur	90.9	9.1
Bhakkar	36.4	63.6
Chiniot	57.1	42.9
Faisalabad	100.0	0.0
Gujranwala	0.0	100.0
Gujrat	20.0	80.0
Hafizabad	0.0	100.0
Jhelum	66.7	33.3
Jhang	100.0	0.0
Kasur	0.0	100.0
Khanewal	25.0	75.0
Khushab	0.0	100.0
Lahore	0.0	100.0
Layyah	40.0	60.0
Lodhran	80.0	20.0
Mianwali	50.0	50.0
Multan	85.7	14.3
Muzaffar garh	100.0	0.0
Nankana	0.0	100.0
Okara	33.3	66.7
Pakpattan	83.3	16.7
Rahim yar khan	91.7	8.3
Rajan pur	50.0	50.0
Rawalpindi	50.0	50.0
Sahiwal	25.0	75.0
Sargodha	0.0	100.0
Sheikhupura	0.0	100.0
T.T. Singh	80.0	20.0
Vehari	71.4	28.6
Total	53.4	46.6

Table 2: Training's Starting Month of Moong (Percentage)

District	January	February	March	April	May	June
Attock	0.0	0.0	0.0	0.0	0.0	0.0
Bahawal nagar	0.0	0.0	0.0	0.0	0.0	0.0
Bahawal pur	0.0	0.0	0.0	0.0	30.0	10.0
Bhakkar	0.0	0.0	0.0	0.0	25.0	0.0
Chiniot	0.0	0.0	0.0	0.0	0.0	0.0
Faisalabad	0.0	0.0	0.0	0.0	0.0	0.0
Gujranwala	–	–	–	–	–	–
Gujrat	0.0	0.0	0.0	0.0	0.0	0.0
Hafizabad	–	–	–	–	–	–
Jehlum	0.0	0.0	0.0	0.0	0.0	0.0
Jhang	0.0	0.0	0.0	0.0	0.0	0.0
Kasur	0.0	0.0	0.0	0.0	0.0	0.0
Khanewal	0.0	0.0	0.0	0.0	0.0	0.0
Khushab	–	–	–	–	–	–
Lahore	–	–	–	–	–	–
Layyah	50.0	0.0	0.0	0.0	0.0	0.0
Lodhran	0.0	0.0	25.0	25.0	0.0	25
Mianwali	0.0	0.0	0.0	0.0	0.0	50
Multan	0.0	0.0	33.3	0.0	16.7	16.7
Muzaffar garh	0.0	0.0	66.7	0.0	0.0	0.0
Nankana	–	–	–	–	–	–
Okara	0.0	0.0	0.0	0.0	0.0	0.0
Pakpattan	0.0	0.0	60.0	0.0	0.0	40
Rahim yar khan	36.4	0.0	9.1	0.0	0.0	0.0
Rajan pur	0.0	0.0	0.0	0.0	0.0	50
Rawalpindi	0.0	0.0	0.0	0.0	0.0	0.0
Sahiwal	0.0	0.0	0.0	0.0	0.0	0.0
Sargodha	–	–	–	–	–	–
Sheikhupura	–	–	–	–	–	–
T.T. Singh	0.0	0.0	0.0	0.0	0.0	0.0
Vehari	0.0	0.0	40.0	0.0	20.0	0.0
Total	5.8	0.0	12.8	1.2	7.0	10.5

Table 2a: Training's Starting Month of Moong (Percentage)

District	July	August	September	October	November	December
Attock	0.0	100.0	0.0	0.0	0.0	0.0
Bahawal nagar	0.0	0.0	0.0	0.0	50.0	50.0
Bahawal pur	0.0	0.0	0.0	10	20.0	30.0
Bhakkar	75.0	0.0	0.0	0.0	0.0	0.0
Chiniot	0.0	0.0	0.0	25	75.0	0.0
Faisalabad	0.0	0.0	0.0	100	0.0	0.0
Gujranwala	–	–	–	–	–	–
Gujrat	100.0	0.0	0.0	0.0	0.0	0.0
Hafizabad	–	–	–	–	–	–
Jhelum	0.0	100.0	0.0	0.0	0.0	0.0
Jhang	50.0	0.0	50.0	0.0	0.0	0.0
Kasur	0.0	0.0	0.0	0.0	0.0	0.0
Khanewal	0.0	0.0	100.0	0.0	0.0	0.0
Khushab	–	–	–	–	–	–
Lahore	–	–	–	–	–	–
Layyah	50.0	0.0	0.0	0.0	0.0	0.0
Lodhran	25	0.0	0.0	0.0	0.0	0.0
Mianwali	50	0.0	0.0	0.0	0.0	0.0
Multan	0.0	16.7	0.0	0.0	16.7	0.0
Muzaffar garh	0.0	0.0	0.0	0.0	33.3	0.0
Nankana	–	–	–	–	–	–
Okara	0.0	0.0	66.7	0.0	33.3	0.0
Pakpattan	0.0	0.0	0.0	0.0	0.0	0.0
Rahim yar khan	0.0	9.1	0.0	0.0	27.3	18.2
Rajan pur	0.0	0.0	0.0	0.0	50.0	0.0
Rawalpindi	100.0	0.0	0.0	0.0	0.0	0.0
Sahiwal	0.0	0.0	0.0	0.0	100.0	0.0
Sargodha	–	–	–	–	–	–
Sheikhupura	–	–	–	–	–	–
T.T. Singh	0.0	0.0	0.0	50.0	37.5	12.5
Vehari	20.0	0.0	0.0	20.0	0.0	0.0
Total	14.0	5.8	4.7	9.3	20.9	8.1

Table 3: Average No. of Trainings of Moong

District	No. of Trainings Reported by Farmers
Attock	3
Bahawal nagar	1
Bahawal pur	6
Bhakkar	2
Chiniot	1
Faisalabad	1
Gujranwala	0
Gujrat	1
Hafizabad	0
Jehlum	2
Jhang	2
Kasur	0
Khanewal	1
Khushab	0
Lahore	0
Layyah	2
Lodhran	2
Mianwali	2
Multan	2
Muzaffar garh	1
Nankana	0
Okara	1
Pakpattan	1
Rahim yar khan	3
Rajan pur	1
Rawalpindi	2
Sahiwal	1
Sargodha	0
Sheikhupura	0
T.T. Singh	2
Vehari	1
Total	1.33

Table 4: Literature of Moong Distributed during trainings to Farmers (Percentage)

District	Yes	No
Attock	25.0	75.0
Bahawal nagar	50.0	50.0
Bahawal pur	100.0	0.0
Bhakkar	18.2	81.8
Chiniot	0.0	100.0
Faisalabad	0.0	100.0
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jehlum	66.7	33.3
Jhang	50.0	50.0
Kasur	0.0	100.0
Khanewal	0.0	100.0
Khushab	0.0	100.0
Lahore	100.0	0.0
Layyah	40.0	60.0
Lodhran	80.0	20.0
Mianwali	0.0	100.0
Multan	14.3	85.7
Muzaffar garh	33.3	66.7
Nankana	0.0	100.0
Okara	11.1	88.9
Pakpattan	50.0	50.0
Rahim yar khan	100.0	0.0
Rajan pur	37.5	62.5
Rawalpindi	25.0	75.0
Sahiwal	0.0	100.0
Sargodha	0.0	100.0
Sheikhupura	0.0	100.0
T.T. Singh	50.0	50.0
Vehari	57.1	42.9
Total	34.8	65.2

Table 5: Average No. of Farmers' Day/Seminars of Moong

District	Farmers' Day/Seminar Reported by Farmers	Farmers' Day/Seminar Reported by DOA's
Attock	0	0
Bahawal nagar	1	0
Bahawal pur	2	0
Bhakkar	1	2
Chiniot	0	0
Faisalabad	0	0
Gujranwala	0	0
Gujrat	0	0
Hafizabad	0	0
Jhelum	0	1
Jhang	3	0
Kasur	0	2
Khanewal	0	0
Khushab	0	0
Lahore	0	0
Layyah	1	0
Lodhran	1	0
Mianwali	2	0
Multan	1	0
Muzaffar garh	2	0
Nankana	0	1
Okara	1	0
Pakpattan	0	0
Rahim yar khan	2	0
Rajan pur	1	10
Rawalpindi	0	0
Sahiwal	0	1
Sargodha	0	2
Sheikhupura	0	0
T.T. Singh	2	0
Vehari	1	2
Total	0.67	0.68

Table 6: Seed Drill Provided By Extension Department for Moong

District	Farmers' Response		Seed Drill Provided and reported by DOA's No= 0 Yes=1
	Yes	No	
Attock	0.0	100.0	0.0
Bahawal nagar	0.0	100.0	0.0
Bahawal pur	0.0	100.0	0.0
Bhakkar	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
Faisalabad	0.0	100.0	0.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jehlum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Kasur	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Khushab	0.0	100.0	0.0
Lahore	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim yar khan	0.0	100.0	0.0
Rajan pur	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0
Sheikhupura	0.0	100.0	0.0
T.T. Singh	0.0	100.0	0.0
Vehari	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 7: Seed of Moong Provided By Extension Department on 50% Subsidy

District	Farmers' Response		Seed Provided by DOA's on 50 % Subsidy (kg) No= 0 Yes=1
	Yes	No	
Attock	0.0	100.0	0.0
Bahawal nagar	0.0	100.0	0.0
Bahawal pur	0.0	100.0	0.0
Bhakkar	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
Faisalabad	0.0	100.0	0.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jhelum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Kasur	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Khushab	0.0	100.0	0.0
Lahore	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim yar khan	0.0	100.0	0.0
Rajan pur	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0
Sheikhupura	0.0	100.0	0.0
T.T. Singh	0.0	100.0	0.0
Vehari	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 8: Heard/Seen Moong Sowing Technique on Radio/TV (Percentage)

District	Yes	No
Attock	25.0	75.0
Bahawal nagar	100.0	0.0
Bahawal pur	72.7	27.3
Bhakkar	9.1	90.9
Chiniot	0.0	100.0
Faisalabad	0.0	100.0
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jehlum	33.3	66.7
Jhang	0.0	100.0
Kasur	0.0	100.0
Khanewal	0.0	100.0
Khushab	0.0	100.0
Lahore	0.0	100.0
Layyah	40.0	60.0
Lodhran	20.0	80.0
Mianwali	50.0	50.0
Multan	0.0	100.0
Muzaffar garh	100.0	0.0
Nankana	0.0	100.0
Okara	22.2	77.8
Pakpattan	0.0	100.0
Rahim yar khan	66.7	33.3
Rajan pur	37.5	62.5
Rawalpindi	25.0	75.0
Sahiwal	0.0	100.0
Sargodha	25.0	75.0
Sheikhupura	0.0	100.0
T.T. Singh	10.0	90.0
Vehari	14.3	85.7
Total	25.5	74.5

Table 9: Average No. of Programs of Moong Heard/Seen on Radio/TV

District	No. of times programs heard/seen on radio/tv
Attock	1
Bahawal nagar	2
Bahawal pur	2
Bhakkar	1
Chiniot	0
Faisalabad	0
Gujranwala	0
Gujrat	0
Hafizabad	0
Jehlum	5
Jhang	0
Kasur	0
Khanewal	0
Khushab	0
Lahore	0
Layyah	3
Lodhran	1
Mianwali	3
Multan	0
Muzaffar garh	1
Nankana	0
Okara	1
Pakpattan	0
Rahim yar khan	2
Rajan pur	1
Rawalpindi	3
Sahiwal	0
Sargodha	3
Sheikhupura	0
T.T. Singh	3
Vehari	1
Total	1

Table 10: Comparison of Area of Moong Reported by DOA's and CRS For the Year 2013-14

Districts	Moong Area Reported by DOA's (Acres)	Moong Area Reported by CRS (Acres)	Difference in Area of Moong (Acres)
Attock	94	426	-332
Bahawalnagar	1500	2181	-681
Bahawalpur	N/A*	1907	-1907
Bhakkar	2	140000	-139998
Chakwal	2150	2584	-434
Chiniot	2674	2218	456
DG Khan	1461	1060	401
Faisalabad	73	246	-173
Gujranwala	43	N/A*	43
Gujrat	1755	1827	-72
Hafizabad	33	1	32
Jhelum	3215	3430	-215
Jhang	141	4185	-4044
Kasur	175	197	-22
Khanewal	150	1504	-1354
Khushab	4950	3163	1787
Lahore	N/A*	1	-1
Layyah	39725	41491	-1766
Lodhran	64	144	-80
M Baha uddin	30	5	25
Mianwali	45550	48868	-3318
Multan	1225	1225	0
Muzaffar Garh	7900	8541	-641
Nankana Sahib	59	57	2
Narowal	40	82	-42
Okara	3400	1353	2047
Pakpattan	1134	1589	-455
Rahim Yar Khan	908	735	173
Rajanpur	9908	2000	7908
Rawalpindi	434	1852	-1418
Sahiwal	905	806	99
Sargodha	2	3282	-3280
Sheikhupura	12	12	0
Sialkot	25	18	7
T.T.Singh	1770	1394	376
Vehari	75	1131	-1056

*N/A =Not Available

Table 11: Demonstration Plots of Moong Reported by DOA's and Knowledge of Respondents (percentage)

District	No. of Demonstration plots of Moong Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in your Area	
		yes	No
Attock	0	0	100
Bahawal nagar	0	0	100
Bahawal pur	0	0	100
Bhakkar	1	0	100
Chakwal	0	–	–
Chiniot	2	57.1	42.9
DG Khan	0	–	–
Faisalabad	2	0	100
Gujranwala	2	0	100
Gujrat	1	0	100
Hafizabad	2	0	100
Jhelum	0	0	100
Jhang	1	0	100
Kasur	2	0	100
Khanewal	2	0	100
Khushab	0	0	100
Lahore	2	100	0
Layyah	2	20	80
Lodhran	2	60	40
Mandi Bahuddin	2	–	–
Mianwali	2	37.5	62.5
Multan	2	14.3	85.7
Muzaffar garh	2	0	100
Nankana	2	0	100
Narowal	2	–	–
Okara	2	0	100
Pakpattan	2	16.7	83.3
Rahim yar khan	0	0	100
Rajan pur	0	0	100
Rawalpindi	0	0	100
Sahiwal	2	0	100
Sargodha	2	12.5	87.5
Sheikhupura	2	0	100
Sialkot	2	–	–
T.T. Singh	2	30	70
Vehari	2	28.6	71.4
Total	49	12.5	87.5

Table 12: Demonstration Plots Seen by Moong Respondents (Percentage)

District	Kharif 2014		Rabi 2014_15	
	Yes	No	Yes	No
Attock	–	–	–	–
Bahawal nagar	–	–	–	–
Bahawal pur	–	–	–	–
Bhakkar	–	–	–	–
Chiniot	75.0	25.0	–	–
Faisalabad	–	–	–	–
Gujranwala	–	–	–	–
Gujrat	–	–	–	–
Hafizabad	–	–	–	–
Jhelum	–	–	–	–
Jhang	–	–	–	–
Kasur	–	–	–	–
Khanewal	–	–	–	–
Khushab	–	–	–	–
Lahore	100.0	0.0	–	–
Layyah	100.0	0.0	–	–
Lodhran	66.7	33.3	–	–
Mianwali	100.0	0.0	–	–
Multan	100.0	0.0	–	–
Muzaffar garh	–	–	–	–
Nankana	–	–	–	–
Okara	–	–	–	–
Pakpattan	100.0	0.0	–	–
Rahim yar khan	–	–	–	–
Rajan pur	–	–	–	–
Rawalpindi	–	–	–	–
Sahiwal	–	–	–	–
Sargodha	100.0	0.0	–	–
Sheikhupura	–	–	–	–
T.T. Singh	66.7	33.3	–	–
Vehari	100.0	0.0	–	–
Total	83.3	16.7	–	–

**Table 13: Demonstration Plots of Moong Laid Out on Land of Moong Respondents
(Percentage)**

District	Kharif 2014		Rabi 2014_15	
	Yes	No	Yes	No
Attock	–	–	–	–
Bahawal nagar	–	–	–	–
Bahawal pur	–	–	–	–
Bhakkar	–	–	–	–
Chiniot	0.0	100.0	–	–
Faisalabad	–	–	–	–
Gujranwala	–	–	–	–
Gujrat	–	–	–	–
Hafizabad	–	–	–	–
Jhelum	–	–	–	–
Jhang	–	–	–	–
Kasur	–	–	–	–
Khanewal	–	–	–	–
Khushab	–	–	–	–
Lahore	100.0	0.0	–	–
Layyah	100.0	0.0	–	–
Lodhran	33.3	66.7	–	–
Mianwali	66.7	33.3	–	–
Multan	100.0	0.0	–	–
Muzaffar garh	–	–	–	–
Nankana	–	–	–	–
Okara	–	–	–	–
Pakpattan	100.0	0.0	–	–
Rahim yar khan	–	–	–	–
Rajan pur	–	–	–	–
Rawalpindi	–	–	–	–
Sahiwal	–	–	–	–
Sargodha	0.0	100.0	–	–
Sheikhupura	–	–	–	–
T.T. Singh	66.7	33.3	–	–
Vehari	100.0	0.0	–	–
Total	58.3	41.7	–	–

Table 14: Moong Seed Provided by DOA's for Demonstration Plots and Acknowledgement by Respondents (percentage)

District	Kharif 2014		Moong Seed Distributed by DOA,s
	Yes	No	(Kg)
Attock	–	–	0.0
Bahawal nagar	–	–	0.0
Bahawal pur	–	–	0.0
Bhakkar	–	–	12.0
Chiniot	–	–	20.0
Faisalabad	–	–	20.0
Gujranwala	–	–	20.0
Gujrat	–	–	10.0
Hafizabad	–	–	20.0
Jehlum	–	–	0.0
Jhang	–	–	10.0
Kasur	–	–	20.0
Khanewal	–	–	20.0
Khushab	–	–	0.0
Lahore	100.0	0.0	20.0
Layyah	100.0	0.0	20.0
Lodhran	100.0	0.0	20.0
Mianwali	100.0	0.0	20.0
Multan	100.0	0.0	20.0
Muzaffar garh	–	–	20.0
Nankana	–	–	20.0
Okara	–	–	20.0
Pakpattan	100.0	0.0	20.0
Rahim yar khan	–	–	0.0
Rajan pur	–	–	0.0
Rawalpindi	–	–	–
Sahiwal	–	–	20.0
Sargodha	–	–	20.0
Sheikhupura	–	–	20.0
T.T. Singh	100.0	0.0	20.0
Vehari	100.0	0.0	20.0
Total	100.0	0.0	14 (Average)

Table 15: Weedicide Provided by DOA's for Demonstration Plots of Moong Acknowledgement by Respondents (percentage)

District	Kharif 2014		Weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Attock	–	–	0.0
Bahawal nagar	–	–	0.0
Bahawal pur	–	–	0.0
Bhakkar	–	–	0.0
Chiniot	–	–	0.0
Faisalabad	–	–	2.0
Gujranwala	–	–	0.0
Gujrat	–	–	0.0
Hafizabad	–	–	0.0
Jhelum	–	–	0.0
Jhang	–	–	0.0
Kasur	–	–	2.0
Khanewal	–	–	0.0
Khushab	–	–	0.0
Lahore	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mianwali	100.0	0.0	0.0
Multan	0.0	100.0	1.6
Muzaffar garh	–	–	1.0
Nankana	–	–	2.0
Okara	–	–	0.0
Pakpattan	0.0	100.0	0.0
Rahim yar khan	–	–	0.0
Rajan pur	–	–	0.0
Rawalpindi	–	–	–
Sahiwal	–	–	0.0
Sargodha	–	–	0.0
Sheikhupura	–	–	0.0
T.T. Singh	0.0	100.0	0.0
Vehari	100.0	0.0	0.0
Total	35.7	64.3	0.28 (Average)

Table 16: Inoculum Provided by DOA's for Demonstration Plots of Moong and Acknowledgement by Respondents (percentage)

District	Kharif 2014	
	Yes	No
Attock	–	–
Bahawal nagar	–	–
Bahawal pur	–	–
Bhakkar	–	–
Chiniot	–	–
Faisalabad	–	–
Gujranwala	–	–
Gujrat	–	–
Hafizabad	–	–
Jehlum	–	–
Jhang	–	–
Kasur	–	–
Khanewal	–	–
Khushab	–	–
Lahore	100.0	0.0
Layyah	0.0	100.0
Lodhran	0.0	100.0
Mianwali	100.0	0.0
Multan	0.0	100.0
Muzaffar garh	–	–
Nankana	–	–
Okara	–	–
Pakpattan	0.0	100.0
Rahim yar khan	–	–
Rajan pur	–	–
Rawalpindi	–	–
Sahiwal	–	–
Sargodha	–	–
Sheikhupura	–	–
T.T. Singh	100.0	0.0
Vehari	50.0	50.0
Total	57.1	42.9

Table 17: Difference between Traditional Sowing Method and Sowing Method of Demonstration Plots of Moong

District	Drill sowing	Proper seed rate	Good quality seed	Use of inoculum
Attock	–	–	–	–
Bahawal nagar	–	–	–	–
Bahawal pur	–	–	–	–
Bhakkar	–	–	–	–
Chiniot	–	–	–	–
Faisalabad	–	–	–	–
Gujranwala	–	–	–	–
Gujrat	–	–	–	–
Hafizabad	–	–	–	–
Jhelum	–	–	–	–
Jhang	–	–	–	–
Kasur	–	–	–	–
Khanewal	–	–	–	–
Khushab	–	–	–	–
Lahore	0.0	0.0	100.0	0.0
Layyah	0.0	66.7	33.3	0.0
Lodhran	0.0	0.0	100.0	0.0
Mianwali	0.0	0.0	100.0	0.0
Multan	100.0	0.0	0.0	0.0
Muzaffar garh	–	–	–	–
Nankana	–	–	–	–
Okara	–	–	–	–
Pakpattan	0.0	0.0	100	0.0
Rahim yar khan	–	–	–	–
Rajan pur	–	–	–	–
Rawalpindi	–	–	–	–
Sahiwal	–	–	–	–
Sargodha	–	–	–	–
Sheikhupura	–	–	–	–
T.T. Singh	0.0	0.0	0.0	100.0
Vehari	0.0	0.0	50	50.0
Total	14.3	7.1	57.1	21.4

Table 18: Average Yield of Demonstration Plots of Moong Reported by Moong Respondent

District	Average yield (Maunds Per Acre)
Attock	–
Bahawal nagar	–
Bahawal pur	–
Bhakkar	–
Chiniot	–
Faisalabad	–
Gujranwala	–
Gujrat	–
Hafizabad	–
Jehlum	–
Jhang	–
Kasur	–
Khanewal	–
Khushab	–
Lahore	14.0
Layyah	12.0
Lodhran	15.5
Mianwali	11.3
Multan	15.0
Muzaffar garh	–
Nankana	–
Okara	–
Pakpattan	16.0
Rahim yar khan	–
Rajan pur	–
Rawalpindi	–
Sahiwal	–
Sargodha	–
Sheikhupura	–
T.T. Singh	11.0
Vehari	13.0
Total	13.3

Table 19: Farmers' Day Arranged at Demonstration Plots of Moong by Extension Department

District	Farmers' Response	
	Yes	No
Attock	–	–
Bahawal nagar	–	–
Bahawal pur	–	–
Bhakkar	–	–
Chiniot	–	–
Faisalabad	–	–
Gujranwala	–	–
Gujrat	–	–
Hafizabad	–	–
Jehlum	–	–
Jhang	–	–
Kasur	–	–
Khanewal	–	–
Khushab	–	–
Lahore	0.0	100.0
Layyah	0.0	100.0
Lodhran	100.0	0.0
Mianwali	100.0	0.0
Multan	100.0	0.0
Muzaffar garh	–	–
Nankana	–	–
Okara	–	–
Pakpattan	0.0	100.0
Rahim yar khan	–	–
Rajan pur	–	–
Rawalpindi	–	–
Sahiwal	–	–
Sargodha	–	–
Sheikhupura	–	–
T.T. Singh	0.0	100.0
Vehari	100.0	0.0
Total	57.1	42.9

Table 20: Average No. of Farmers Attended the Farmers' day Arranged at Demonstration Plots of Moong

District	No. of Farmers
Attock	–
Bahawal nagar	–
Bahawal pur	–
Bhakkar	–
Chiniot	–
Faisalabad	–
Gujranwala	–
Gujrat	–
Hafizabad	–
Jehlum	–
Jhang	–
Kasur	–
Khanewal	–
Khushab	–
Lahore	–
Layyah	–
Lodhran	35
Mianwali	13
Multan	15
Muzaffar garh	–
Nankana	–
Okara	–
Pakpattan	–
Rahim yar khan	–
Rajan pur	–
Rawalpindi	–
Sahiwal	–
Sargodha	–
Sheikhupura	–
T.T. Singh	–
Vehari	23
Total	21

Table 21: Stage of Moong Pulse at Farmers' Day (Percentage)

District	Flowering Stage	Podding Stage	Harvesting Stage
Attock	–	–	–
Bahawal nagar	–	–	–
Bahawal pur	–	–	–
Bhakkar	–	–	–
Chiniot	–	–	–
Faisalabad	–	–	–
Gujranwala	–	–	–
Gujrat	–	–	–
Hafizabad	–	–	–
Jehlum	–	–	–
Jhang	–	–	–
Kasur	–	–	–
Khanewal	–	–	–
Khushab	–	–	–
Lahore	–	–	–
Layyah	–	–	–
Lodhran	0.0	100.0	0.0
Mianwali	100.0	0.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	–	–	–
Nankana	–	–	–
Okara	–	–	–
Pakpattan	–	–	–
Rahim yar khan	–	–	–
Rajan pur	–	–	–
Rawalpindi	–	–	–
Sahiwal	–	–	–
Sargodha	–	–	–
Sheikhupura	–	–	–
T.T. Singh	–	–	–
Vehari	0.0	100.0	0.0
Total	40.0	60.0	0.0

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Table 22: Response of Mash Farmers' Regarding Trainings of Mash Arranged by Extension Department (Percentage)

District	Yes	No
Attock	100.0	0.0
Gujrat	42.9	57.1
Jhelum	100.0	0.0
Jhang	0.0	100.0
Khanewal	25.0	75.0
Lodhran	100.0	0.0
Mandi Bahauddin	100.0	0.0
Mianwali	0.0	100.0
Multan	33.3	66.7
Nankana	100.0	0.0
Narowal	50.0	50.0
Okara	0.0	100.0
Pakpattan	66.7	33.3
Rahim Yar Khan	100.0	0.0
Rawalpindi	75.0	25.0
Sahiwal	33.3	66.7
Sheikhupura	100.0	0.0
Sialkot	50.0	50.0
T.T. Singh	100.0	0.0
Total	56.9	43.1

Table 23: Training's Starting Month of Mash from January to June (Percentage)

District	January	February	March	April	May	June
Attock	0.0	0.0	0.0	0.0	0.0	0.0
Gujrat	0.0	0.0	0.0	0.0	0.0	33.3
Jhelum	0.0	0.0	0.0	0.0	0.0	0.0
Jhang	–	–	–	–	–	–

District	January	February	March	April	May	June
Khanewal	0.0	0.0	0.0	0.0	0.0	0.0
Lodhran	0.0	0.0	0.0	0.0	0.0	0.0
Mandi Bahauddin	0.0	0.0	100.0	0.0	0.0	0.0
Mianwali	–	–	–	–	–	–
Multan	0.0	0.0	0.0	0.0	0.0	0.0
Nankana	0.0	0.0	0.0	0.0	0.0	0.0
Narowal	0.0	0.0	0.0	0.0	0.0	0.0
Okara	–	–	–	–	–	–
Pakpattan	0.0	0.0	0.0	0.0	0.0	50.0
Rahim Yar Khan	0.0	0.0	0.0	0.0	0.0	0.0
Rawalpindi	0.0	0.0	0.0	0.0	0.0	0.0
Sahiwal	0.0	0.0	0.0	100.0		0.0
Sheikhupura	–	–	–	–	–	–
Sialkot	0.0	0.0	0.0	0.0	0.0	0.0
T.T. Singh	0.0	100.0	0.0	0.0	0.0	0.0
Total	0.0	3.8	3.8	3.8	0.0	11.5

Table 23a: Training's Starting Month from July to December (Percentage)

District	July	August	September	October	November	December
Attock	100.0	0.0	0.0	0.0	0.0	0.0
Gujrat	0.0	0.0	0.0	66.7	0.0	0.0
Jhelum	25.0	75.0	0.0	0.0	0.0	0.0
Jhang	–	–	–	–	–	–
Khanewal	0.0	0.0	100.0	0.0	0.0	0.0
Lodhran	0.0	0.0	100.0	0.0	0.0	0.0
Mandi Bahauddin	0.0	0.0	0.0	0.0	0.0	0.0
Mianwali	–	–	–	–	–	–
Multan	0.0	0.0	100.0	0.0	0.0	0.0
Nankana	0.0	0.0	100.0	0.0	0.0	0.0
Narowal	100.0	0.0	0.0	0.0	0.0	0.0
Okara	–	–	–	–	–	–

District	July	August	September	October	November	December
Pakpattan	25.0	25.0	0.0	0.0	0.0	0.0
Rahim Yar Khan	0.0	0.0	0.0	0.0	100.0	0.0
Rawalpindi	100.0	0.0	0.0	0.0	0.0	0.0
Sahiwal	0.0	0.0	0.0	0.0	0.0	0.0
Sheikhupura	–	–	–	–	–	–
Sialkot	100.0	0.0	0.0	0.0	0.0	0.0
T.T. Singh	0.0	0.0	0.0	0.0	0.0	0.0
Total	34.6	15.4	15.4	7.7	3.8	0.0

Table 24: Average No. of Trainings of Mash Reported by Mash Farmers

District	No. of Trainings Reported by Farmers
Attock	0
Gujrat	2
Jehlum	2
Jhang	0
Khanewal	1
Lodhran	2
Mandi Bahauddin	1
Mianwali	0
Multan	1
Nankana	2
Narowal	1
Okara	0
Pakpattan	2
Rahim Yar Khan	3
Rawalpindi	3
Sahiwal	1
Sheikhupura	0
Sialkot	1
T.T. Singh	3

District	No. of Trainings Reported by Farmers
Total	1.3

Table 25: Literature of Mash Distributed during trainings to Farmers (Percentage)

District	Yes	No
Attock	0.0	100.0
Gujrat	0.0	100.0
Jhelum	75.0	25.0
Jhang	0.0	100.0
Khanewal	25.0	75.0
Lodhran	100.0	0.0
Mandi Bahauddin	0.0	100.0
Mianwali	0.0	100.0
Multan	66.7	33.3
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	0.0	100.0
Pakpattan	66.7	33.3
Rahim Yar Khan	100.0	0.0
Rawalpindi	75.0	25.0
Sahiwal	33.3	66.7
Sheikhupura	0.0	100.0
Sialkot	0.0	100.0
T.T. Singh	0.0	100.0
Total	30.6	69.3

Table 26: Average No. of Farmers days/Seminars of Mash Reported by DOA's and Farmers

District	No. of Farmers Day/seminar Reported by Farmers	No. of Farmers Day/Seminars Reported by DOA's
Attock	2	2
Gujrat	0	1
Jehlum	1	4
Jhang	0	0
Khanewal	0	0
Lodhran	0	2
Mandi Bahauddin	0	0
Mianwali	0	2
Multan	0	1
Nankana	0	1
Narowal	0	3
Okara	0	1
Pakpattan	1	1
Rahim Yar Khan	0	1
Rawalpindi	1	3
Sahiwal	0	1
Sheikhupura	1	1
Sialkot	0	0
T.T. Singh	2	1
Total	0.42	1.3

Table 27: Seed Drill Provided By Extension Department for Mash

District	Farmers' Response		Seed Drill Provided and Reported by DOA's
	Yes	No	No=0 Yes= 1
Attock	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Jehlum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mandi Bahauddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim Yar Khan	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sheikhupura	0.0	100.0	0.0
Sialkot	0.0	100.0	0.0
T.T. Singh	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 28: Seed of Mash Provided By Extension Department on 50% Subsidy

District	Farmers' Response		Seed Provided by DOA's on 50% Subsidy (Kg)
	Yes	No	
Attock	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Jehlum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mandi Bahauddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim Yar Khan	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sheikhupura	0.0	100.0	0.0
Sialkot	0.0	100.0	0.0
T.T. Singh	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 29: Mash Farmers Heard/Seen Mash Sowing Technique on Radio/TV

District	Yes	No
Attock	0.0	100.0
Gujrat	0.0	100.0
Jhelum	25.0	75.0
Jhang	0.0	100.0
Khanewal	0.0	100.0
Lodhran	0.0	100.0
Mandi Bahauddin	0.0	100.0
Mianwali	0.0	100.0
Multan	0.0	100.0
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	20.0	80.0
Pakpattan	0.0	100.0
Rahim Yar Khan	100.0	0.0
Rawalpindi	50.0	50.0
Sahiwal	0.0	100.0
Sheikhupura	0.0	100.0
Sialkot	0.0	100.0
T.T. Singh	0.0	100.0
Total	13.9	86.1

Table 30: Average No. of Programs of Mash Heard/Seen on Radio/TV by Mash Farmers

District	No. of times programs heard/seen on radio/tv
Attock	0
Gujrat	0
Jhelum	3
Jhang	0
Khanewal	0
Lodhran	0

District	No. of times programs heard/seen on radio/tv
Mandi Bahauddin	0
Mianwali	0
Multan	0
Nankana	0
Narowal	0
Okara	1
Pakpattan	0
Rahim Yar Khan	2
Rawalpindi	1.5
Sahiwal	0
Sheikhupura	0
Sialkot	0
T.T. Singh	0
Total	0.4

Table 31: Comparison of Area of Mash Reported by DOA's and CRS For the Year 2013-14

Districts	Mash Area Reported by DOA's (Acres)	Mash Area Reported by CRS (Acres)	Difference in Area of Mash (Acres)
Attock	142	158	-16
Bahawalnagar	4	78	-74
Bahawalpur	N/A*	41	-41
Bhakkar	0	5	-5
Chakwal	1390	2205	-815
Chiniot	7	136	-129
DG Khan	1060	1461	-401
Faisalabad	20	3	17
Gujranwala	3	N/A*	3
Gujrat	2376	2450	-74
Hafizabad	4	N/A*	4
Jehlum	2042	2101	-59
Jhang	31	181	-150

Districts	Mash Area Reported by DOA's (Acres)	Mash Area Reported by CRS (Acres)	Difference in Area of Mash (Acres)
Kasur	64	66	-2
Khanewal	80	65	15
Khushab	33	N/A*	33
Lahore	N/A*	N/A*	-
Layyah	110	207	-97
Lodhran	3	5	-2
M Baha uddin	35	13	22
Mianwali	17	15	2
Multan	3	3	0
Muzaffar Garh	80	80	0
Nankana Sahib	68	N/A*	68
Narowal	18300	14269	4031
Okara	80	67	13
Pakpattan	18	2	16
Rahim Yar Khan	32	25	7
Rajanpur	61	2	59
Rawalpindi	8610	6445	2165
Sahiwal	56	25	31
Sargodha	2	102	-100
Sheikhupura	1	1	0
Sialkot	955	9520	-8565
T.T.Singh	16	20	-4
Vehari	4	15	-11
Total	35707	39766	-4059

*N/A =Not Available

Table 32: Demonstration Plots of Mash Reported by DOA's and Knowledge of Respondents (percentage)

District	No. of Demonstration plots of Mash Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in Surrounding Area	
		Yes	No
Attock	1	100	0
Bahawal nagar	1	–	–
Bahawal pur	2	–	–
Bhakkar	1	–	–
Chakwal	1	–	–
Chiniot	1	–	–
DG Khan	1	–	–
Faisalabad	2	–	–
Gujranwala	0	–	–
Gujrat	1	14.3	85.7
Hafizabad	1	–	–
Jhelum	1	50	50
Jhang	0	0	100
Kasur	1	–	–
Khanewal	1	0	100
Khushab	1	–	–
Lahore	1	–	–
Layyah	1	–	–
Lodhran	1	100	0
Mandi Bahuddin	1	0	100
Mianwali	1	100	0
Multan	2	66.7	33.3
Muzaffar garh	1	–	–
Nankana	2	100	0
Narowal	2	0	100
Okara	1	0	100
Pakpattan	1	16.7	83.3

District	No. of Demonstration plots of Mash Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in Surrounding Area	
		Yes	No
Rahim yar khan	1	0	100
Rajan pur	1	–	–
Rawalpindi	2	50	50
Sahiwal	2	33.3	66.7
Sargodha	2	–	–
Sheikhupura	1	100	0
Sialkot	1	0	100
T.T. Singh	2	0	100
Vehari	1	–	–
Total	43	42.4	57.6

Table 33: Demonstration Plots Seen by Mash Respondents (Percentage)

District	Yes	No
Attock	100	0
Gujrat	14.3	85.7
Jhelum	100	0
Jhang	–	–
Khanewal	–	–
Lodhran	100	0
Mandi Bahauddin	–	–
Mianwali	100	0
Multan	100	0
Nankana	100	0
Narowal	–	–
Okara	–	–
Pakpattan	100	0
Rahim Yar Khan	–	–
Rawalpindi	100	0

District	Yes	No
Sahiwal	100	0
Sheikhupura	100	0
Sialkot	–	–
T.T. Singh	0	100
Total	46.7	53.3

Table 34: Demonstration Plots of Mash Laid out on Land of Mash Respondents (Percentage)

District	Yes	No
Attock	100.0	0.0
Gujrat	0.0	100.0
Jhelum	50.0	50.0
Jhang	–	–
Khanewal	–	–
Lodhran	100.0	0.0
Mandi Bahauddin	–	–
Mianwali	100.0	0.0
Multan	100.0	0.0
Nankana	0.0	100.0
Narowal	–	–
Okara	–	–
Pakpattan	100.0	0.0
Rahim Yar Khan	–	–
Rawalpindi	100.0	0.0
Sahiwal	100.0	0.0
Sheikhupura	0.0	100.0
Sialkot	–	–
T.T. Singh	–	–
Total	36.7	63.3

Table 35: Mash Seed Provided by DOA's for Demonstration Plots and Acknowledgement by Respondents (percentage)

District	Farmers Response		Mash Seed Distributed by DOA's in Kharif 2014 (Kg)
	Yes	No	
Attock	100.0	0.0	10.0
Gujrat	–	–	10.0
Jehlum	100.0	0.0	10.0
Jhang	–	–	0.0
Khanewal	–	–	10.0
Lodhran	100.0	0.0	10.0
Mandi Bahauddin	–	–	10.0
Mianwali	100.0	0.0	10.0
Multan	100.0	0.0	20.0
Nankana	–	–	20.0
Narowal	–	–	20.0
Okara	–	–	10.0
Pakpattan	100.0	0.0	10.0
Rahim Yar Khan	–	–	10.0
Rawalpindi	100.0	0.0	20.0
Sahiwal	100.0	0.0	20.0
Sheikhupura	–	–	10.0
Sialkot	–	–	10.0
T.T. Singh	–	–	20.0
Total	100.0	0.0	12 (Average)

Table 36: Weedicide Provided by Government for Demonstration Plot of Mash

District	Farmers Response		weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Attock	0.0	100.0	0.0
Gujrat	–	–	0.0
Jehlum	100.0	0.0	0.8

District	Farmers Response		weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Jhang	–	–	0.0
Khanewal	–	–	0.0
Lodhran	100.0	0.0	0.0
Mandi Bahauddin	–	–	0.0
Mianwali	0.0	100.0	0.0
Multan	100.0	0.0	1.6
Nankana	–	–	2.0
Narowal	–	–	0.0
Okara	–	–	0.0
Pakpattan	100.0	0.0	0.0
Rahim Yar Khan	–	–	0.0
Rawalpindi	100.0	0.0	0.0
Sahiwal	0.0	100.0	0.0
Sheikhupura	–	–	0.0
Sialkot	–	–	0.0
T.T. Singh	–	–	0.0
Total	25.0	75.0	0.3 (Average)

Table 37: Inoculum Provided by Government for Demonstration Plots of Mash

District	Farmers Response	
	Yes	No
Attock	0.0	100.0
Gujrat	–	–
Jehlum	100.0	0.0
Jhang	–	–
Khanewal	–	–
Lodhran	100.0	0.0
Mandi Bahauddin	–	–
Mianwali	0.0	100.0
Multan	100.0	0.0

District	Farmers Response	
	Yes	No
Nankana	–	–
Narowal	–	–
Okara	–	–
Pakpattan	100.0	0.0
Rahim Yar Khan	–	–
Rawalpindi	100.0	0.0
Sahiwal	0.0	100.0
Sheikhupura	–	–
Sialkot	–	–
T.T. Singh	–	–
Total	21.4	78.6

Table 38: Difference between Traditional Sowing Method and Sowing Method of Demonstration Plots of Mash

District	Drill sowing	Proper seed rate	Good quality seed	Good field preparation	Use of inoculum	Use of fertilizer
Attock	0.0	0.0	0.0	0.0	0.0	100.0
Gujrat	–	–	–	–	–	–
Jhelum	0.0	0.0	0.0	0.0	100.0	0.0
Jhang	–	–	–	–	–	–
Khanewal	–	–	–	–	–	–
Lodhran	0.0	0.0	0.0	0.0	0.0	100.0
Mandi Bahauddin	–	–	–	–	–	–
Mianwali	0.0	0.0	100.0	0.0	0.0	0.0
Multan	0.0	0.0	0.0	0.0	100.0	0.0
Nankana	–	–	–	–	–	–
Narowal	–	–	–	–	–	–
Okara	–	–	–	–	–	–
Pakpattan	100.0	0.0	0.0	0.0	0.0	0.0
Rahim Yar Khan	0.0	100.0	0.0	0.0	0.0	0.0

District	Drill sowing	Proper seed rate	Good quality seed	Good field preparation	Use of inoculum	Use of fertilizer
Rawalpindi	0.0	0.0	100.0	0.0	0.0	0.0
Sahiwal	0.0	0.0	0.0	0.0	0.0	100.0
Sheikhupura	–	–	–	–	–	–
Sialkot	–	–	–	–	–	–
T.T. Singh	0.0	0.0	0.0	100.0	0.0	0.0
Total	9.1	9.1	27.3	9.1	18.2	27.3

Table 39: Average Yield of Demonstration Plots of Mash Reported by Mash Respondents

District	Average Yield (Maunds/Acre)
Attock	12.5
Gujrat	–
Jehlum	9.5
Jhang	–
Khanewal	–
Lodhran	9.0
Mandi Bahauddin	–
Mianwali	7.5
Multan	6.2
Nankana	–
Narowal	–
Okara	–
Pakpattan	9.5
Rahim Yar Khan	–
Rawalpindi	17.0
Sahiwal	0.0
Sheikhupura	–
Sialkot	–
T.T. Singh	–
Total	7.1

Table 40: Farmers' Day Arranged at Demonstration Plot of Mash by Extension Department

District	Farmers' Response	
	Yes	No
Attock	100.0	0.0
Gujrat	14.3	85.7
Jehlum	100.0	0.0
Jhang	0.0	100.0
Khanewal	–	–
Lodhran	100.0	0.0
Mandi Bahauddin	0.0	100.0
Mianwali	100.0	0.0
Multan	100.0	0.0
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	–	–
Pakpattan	100.0	0.0
Rahim Yar Khan	–	–
Rawalpindi	100.0	0.0
Sahiwal	0.0	100.0
Sheikhupura	–	–
Sialkot	–	–
T.T. Singh	–	–
Total	41.4	58.6

Table 41: Average No. of Farmers Attended the Farmers' day Arranged at Demonstration Plots of Mash

District	No. of Farmers
Attock	120
Gujrat	24
Jehlum	50
Jhang	–

Khanewal	-
Lodhran	75
Mandi Bahauddin	-
Mianwali	30
Multan	162
Nankana	-
Narowal	-
Okara	-
Pakpattan	75
Rahim Yar Khan	-
Rawalpindi	110
Sahiwal	-
Sheikhupura	-
Sialkot	-
T.T. Singh	-
Total	81

Table 42: Stage of Mash Pulse at Farmers' Day (Percentage)

District	Flowering Stage	Podding Stage	Harvesting Stage
Attock	100.0	0.0	0.0
Gujrat	-	-	-
Jhelum	0.0	0.0	100.0
Jhang	-	-	-
Khanewal	-	-	-
Lodhran	0.0	100.0	0.0
Mandi Bahauddin	-	-	-
Mianwali	0.0	100.0	0.0
Multan	50.0	0.0	50.0
Nankana	-	-	-
Narowal	-	-	-
Okara	-	-	-

District	Flowering Stage	Podding Stage	Harvesting Stage
Pakpattan	0.0	0.0	100.0
Rahim Yar Khan	–	–	–
Rawalpindi	0.0	50.0	50.0
Sahiwal	–	–	–
Sheikhupura	–	–	–
Sialkot	–	–	–
T.T. Singh	100.0	0.0	0.0
Total	30.0	30.0	40.0

Monitoring Report of Gram

Table 43: Response of Gram Farmers' Regarding Trainings of Gram Arranged by Extension Department (Percentage)

District	Yes	No
Attock	50.0	50.0
Bahawalnagar	100.0	0.0
Bahawalpur	100.0	0.0
Bhakkar	65.0	35.0
Chakwal	30.8	69.2
Chiniot	61.5	38.5
DG Khan	100.0	0.0
Faisalabad	83.3	16.7
Gujranwala	66.7	33.3
Gujrat	25.0	75.0
Hafizabad	0.0	100.0
Jehlum	75.0	25.0
Jhang	47.4	52.6
Khanewal	25.0	75.0
Khushab	57.1	42.9
Lahore	50.0	50.0
Layyah	77.8	22.2
Lodhran	50.0	50.0
Mandi Bahuddin	33.3	66.7
Mianwali	64.3	35.7
Multan	0.0	100.0
Muzaffar garh	85.7	14.3
Nankana	100.0	0.0
Narowal	66.7	33.3
Okara	28.6	71.4
Pakpattan	16.7	83.3
Rahim Yar Khan	100.0	0.0
Rajan pur	100.0	0.0
Rawalpindi	50.0	50.0
Sahiwal	0.0	100.0
Sargodha	8.3	91.7
Shaikhupura	0.0	100.0
Sialkot	40.0	60.0
T.T.Singh	90.0	10.0
Vehari	42.9	57.1
Total	60.2	39.8

Table 44: Training's Starting Month of Gram (Percentage)

District	September	October	November	December
Attock	66.7	33.3	0.0	0.0
Bahawalnagar	60.0	26.7	13.3	0.0
Bahawalpur	14.3	71.4	14.3	0.0
Bhakkar	23.1	76.9	0.0	0.0
Chakwal	50.0	50.0	0.0	0.0
Chiniot	0.0	25.0	75.0	0.0
DG Khan	0.0	52.9	41.2	5.9
Faisalabad	0.0	20.0	80.0	0.0
Gujranwala	0.0	0.0	100.0	0.0
Gujrat	0.0	0.0	50.0	50.0
Hafizabad	–	–	–	–
Jhelum	33.3	66.7	0.0	0.0
Jhang	22.2	44.4	22.2	11.1
Khanewal	100.0	0.0	0.0	0.0
Khushab	87.5	0.0	12.5	0.0
Lahore	0.0	100.0	0.0	0.0
Layyah	28.6	42.9	28.6	0.0
Lodhran	0.0	0.0	100.0	0.0
Mandi Bahuddin	0.0	100.0	0.0	0.0
Mianwali	44.4	55.6	0.0	0.0
Multan	–	–	–	–
Muzaffar garh	72.2	5.6	22.2	0.0
Nankana	0.0	0.0	100.0	0.0
Narowal	0.0	50.0	50.0	0.0
Okara	0.0	0.0	100.0	0.0
Pakpattan	0.0	0.0	0.0	100.0
Rahim Yar Khan	58.3	16.7	16.7	8.3
Rajan pur	0.0	66.7	33.3	0.0
Rawalpindi	0.0	66.7	33.3	0.0
Sahiwal	–	–	–	–
Sargodha	0.0	100.0	0.0	0.0
Shaikhupura	–	–	–	–
Sialkot	0.0	100.0	0.0	0.0
T.T.Singh	0.0	22.2	55.6	22.2
Vehari	66.7	0.0	33.3	0.0
Total	30.6	37.7	27.9	3.8

Table 45: Average No. of Trainings of Gram Reported by Farmers

District	No. of Trainings Reported by Farmers
Attock	2
Bahawalnagar	2
Bahawalpur	2
Bhakkar	2
Chakwal	3
chiniot	1
DG Khan	3
Faisalabad	1
Gujranwala	1
Gujrat	2
Hafizabad	0
Jhelum	1
Jhang	1
Khanewal	3
Khushab	2
Lahore	3
Layyah	1
Lodhran	1
Mandi Bahuddin	2
Mianwali	2
Multan	0
Muzaffar garh	2
Nankana	2
Narowal	2
Okara	1
Pakpattan	2
Rahim Yar Khan	2
Rajan pur	2
Rawalpindi	2
Sahiwal	0
Sargodha	2
Shaikhupura	0
Sialkot	2
T.T.Singh	3
Vehari	1
Total	1.6

Table 46: Literature of Gram Distributed during trainings to Farmers (Percentage)

District	Yes	No
Attock	33.3	66.7
Bahawalnagar	60.0	40.0
Bahawalpur	100.0	0.0
Bhakkar	40.0	60.0
Chakwal	23.1	76.9
Chiniot	15.4	84.6
DG Khan	35.3	64.7
Faisalabad	83.3	16.7
Gujranwala	16.7	83.3
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jhelum	50.0	50.0
Jhang	15.4	84.6
Khanewal	25.0	75.0
Khushab	14.3	85.7
Lahore	25.0	75.0
Layyah	66.7	33.3
Lodhran	50.0	50.0
Mandi Bahuddin	0.0	100.0
Mianwali	57.1	42.9
Multan	0.0	100.0
Muzaffar garh	81.0	19.1
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	28.6	71.4
Pakpattan	16.7	83.3
Rahim Yar Khan	91.7	8.3
Rajan pur	88.9	11.1
Rawalpindi	16.7	83.3
Sahiwal	0.0	100.0
Sargodha	8.3	91.7
Shaikhupura	0.0	100.0
Sialkot	20.0	80.0
T.T.Singh	50.0	50.0
Vehari	0.0	100.0
Total	37.5	62.5

Table 47: Average No. of Farmers' Days/Seminars of Gram Reported by DOA's and Farmers

District	No. of Farmers' Days/seminar Reported by Farmers	Farmers' Day/Seminars Reported by DOA's (No.)
Attock	2	0
Bahawalnagar	1	0
Bahawalpur	2	0
Bhakkar	1	8
Chakwal	1	0
Chiniot	0	1
DG Khan	2	0
Faisalabad	1	0
Gujranwala	0	5
Gujrat	1	0
Hafizabad	0	0
Jhelum	1	0
Jhang	1	0
Khanewal	0	0
Khushab	1	0
Lahore	0	0
Layyah	2	0
Lodhran	0	0
Mandi Bahuddin	2	0
Mianwali	3	0
Multan	0	0
Muzaffar garh	2	0
Nankana	0	1
Narowal	0	1
Okara	0	0
Pakpattan	0	0
Rahim Yar Khan	2	8
Rajan pur	2	0
Rawalpindi	1	0
Sahiwal	0	0
Sargodha	1	0
Shaikhupura	0	0
Sialkot	1	0
T.T.Singh	0	0
Vehari	1	0
Total	0.9	0.7

Table 48: Seed Drill Provided By Extension Department for Gram

District	Yes	No	Seed Drill Provided and Reported by DOA's No= 0 Yes= 1
Attock	0.0	100.0	0.0
Bahawalnagar	0.0	100.0	0.0
Bahawalpur	0.0	100.0	0.0
Bhakkar	0.0	100.0	0.0
Chakwal	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
DG Khan	0.0	100.0	0.0
Faisalabad	0.0	100.0	0.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jhelum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Khushab	0.0	100.0	0.0
Lahore	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mandi Bahuddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim Yar Khan	0.0	100.0	0.0
Rajan pur	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0
Shaikhupura	0.0	100.0	0.0
Sialkot	0.0	100.0	0.0
T.T.Singh	0.0	100.0	0.0
Vehari	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 49: Gram Seed Provided By Extension Department on 50% Subsidy

District	Farmers' Response		Seed Provided by DOA's on 50% Subsidy (Kg)
	Yes	No	
Attock	0.0	100.0	0.0
Bahawalnagar	0.0	100.0	0.0
Bahawalpur	0.0	100.0	0.0
Bhakkar	0.0	100.0	0.0
Chakwal	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
DG Khan	0.0	100.0	0.0
Faisalabad	0.0	100.0	0.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jhelum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Khushab	0.0	100.0	0.0
Lahore	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Lodhran	0.0	100.0	0.0
Mandi Bahuddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim Yar Khan	0.0	100.0	0.0
Rajan pur	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0
Shaikhupura	0.0	100.0	0.0
Sialkot	0.0	100.0	0.0
T.T.Singh	0.0	100.0	0.0
Vehari	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 50: Gram Farmers Heard/Seen Gram Sowing Technique on Radio/TV

District	Yes	No
Attock	16.7	83.3
Bahawalnagar	86.7	13.3
Bahawalpur	85.7	14.3
Bhakkar	30.0	70.0
Chakwal	7.7	92.3
Chiniot	7.7	92.3
DG Khan	76.5	23.5
Faisalabad	0.0	100.0
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jhelum	50.0	50.0
Jhang	5.3	94.7
Khanewal	0.0	100.0
Khushab	35.7	64.3
Lahore	0.0	100.0
Layyah	77.8	22.2
Lodhran	0.0	100.0
Mandi Bahuddin	0.0	100.0
Mianwali	57.1	42.9
Multan	0.0	100.0
Muzaffar garh	85.7	14.3
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	28.6	71.4
Pakpattan	0.0	100.0
Rahim Yar Khan	100.0	0.0
Rajan pur	44.4	55.6
Rawalpindi	33.3	66.7
Sahiwal	0.0	100.0
Sargodha	8.3	91.7
Shaikhupura	0.0	100.0
Sialkot	0.0	100.0
T.T.Singh	20.0	80.0
Vehari	14.3	85.7
Total	34.9	65.1

Table 51: Average No. of Programs of Gram Heard/Seen on Radio/TV by Gram Farmers

District	No. of times programs heard/seen on radio/tv
Attock	1
Bahawalnagar	1
Bahawalpur	2
Bhakkar	2
Chakwal	2
chiniot	4
DG Khan	2
Faisalabad	0
Gujranwala	0
Gujrat	0
Hafizabad	0
Jehlum	2
Jhang	2
Khanewal	0
Khushab	3
Lahore	0
Layyah	2
Lodhran	0
Mandi Bahuddin	0
Mianwali	2
Multan	0
Muzaffar garh	1
Nankana	0
Narowal	0
Okara	2
Pakpattan	0
Rahim Yar Khan	1
Rajan pur	2
Rawalpindi	2
Sahiwal	0
Sargodha	4
Shaikhupura	0
Sialkot	0
T.T.Singh	4
Vehari	2
Total	1.2

Table 52: Comparison of Area of Gram Reported by DOA's and CRS For the Year 2013-14

Districts	Gram Area Reported by DOA's (Acres)	Gram Area Reported by CRS (Acres)	Difference in Area of Gram (Acres)
Attock	10584	7000	3584
Bahawalnagar	27168	22000	5168
Bahawalpur	N/A*	690	-690
Bhakkar	1006000	1035000	-29000
Chakwal	26800	18000	8800
Chiniot	769	570	199
DG Khan	15009	12000	3009
Faisalabad	95	370	-275
Gujranwala	40	260	-220
Gujrat	400	380	20
Hafizabad	190	740	-550
Jhelum	596	500	96
Jhang	228381	188910	39471
Kasur	800	710	90
Khanewal	300	600	-300
Khushab	618000	574000	44000
Lahore	N/A*	N/A*	-
Layyah	230187	252660	-22473
Lodhran	6	10	-4
M Baha uddin	600	500	100
Mianwali	58000	63000	-5000
Multan	0	30	-30
Muzaffar Garh	4900	2660	2240
Nankana Sahib	295	270	25
Narowal	179	150	29
Okara	421	370	51
Pakpattan	225	470	-245
Rahim Yar Khan	578	220	358
Rajapur	164	2600	-2436
Rawalpindi	2292	1500	792
Sahiwal	115	680	-565
Sargodha	7	1550	-1543
Sheikhupura	170	180	-10
Sialkot	175	80	95
T.T.Singh	750	650	100
Vehari	478	260	218

*N/A =Not Available

Table 53: Demonstration Plots of Gram Reported by DOA's and Knowledge of Respondents (percentage)

District	No. of Demonstration plots of Gram Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in Surrounding Area	
		Yes	No
Attock	2	66.7	33.3
Bahawal nagar	8	66.7	33.3
Bahawal pur	8	85.7	14.3
Bhakkar	8	75	25
Chakwal	5	61.5	38.5
Chiniot	6	76.9	23.1
DG Khan	6	41.2	58.8
Faisalabad	8	66.7	33.3
Gujranwala	6	66.7	33.3
Gujrat	4	50	50
Hafizabad	4	87.5	12.5
Jhelum	2	50	50
Jhang	8	57.9	42.1
Kasur	6	–	–
Khanewal	6	0	100
Khushab	5	100	0
Lahore	6	0	100
Layyah	10	33.3	66.7
Lodhran	6	0	100
Mandi Bahuddin	4	66.7	33.3
Mianwali	6	78.6	21.4
Multan	8	0	100
Muzaffar garh	8	23.8	76.2
Nankana	8	100	0
Narowal	6	66.7	33.3
Okara	6	42.9	57.1
Pakpattan	6	0	100
Rahim yar khan	8	58.3	41.7
Rajan pur	6	33.3	66.7
Rawalpindi	2	33.3	66.7
Sahiwal	8	0	100
Sargodha	7	66.7	33.3
Sheikhupura	8	0	100
Sialkot	6	60	40
T.T. Singh	6	100	0

District	No. of Demonstration plots of Gram Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in Surrounding Area	
		Yes	No
Vehari	8	0	100
Total	225	55.3	44.7

Table 54: Demonstration Plots Seen by Gram Respondents (Percentage)

District	Yes	No
Attock	75.0	25.0
Bahawalnagar	90.0	10.0
Bahawalpur	100.0	0.0
Bhakkar	100.0	0.0
Chakwal	100.0	0.0
Chiniot	100.0	0.0
DG Khan	57.1	42.9
Faisalabad	100.0	0.0
Gujranwala	75.0	25.0
Gujrat	75.0	25.0
Hafizabad	85.7	14.3
Jhelum	100.0	0.0
Jhang	100.0	0.0
Khanewal	–	–
Khushab	100.0	0.0
Lahore	–	–
Layyah	100.0	0.0
Lodhran	–	–
Mandi Bahuddin	75.0	25.0
Mianwali	100.0	0.0
Multan	–	–
Muzaffar garh	100.0	0.0
Nankana	100.0	0.0
Narowal	100.0	0.0
Okara	66.7	33.3
Pakpattan	–	–
Rahim Yar Khan	100.0	0.0
Rajan pur	100.0	0.0
Rawalpindi	100.0	0.0
Sahiwal	–	–
Sargodha	100.0	0.0
Shaikhupura	–	–

District	Yes	No
Sialkot	100.0	0.0
T.T.Singh	100.0	0.0
Vehari	–	–
Total	94.0	6.0

Table 55: Demonstration Plots of Gram Laid out on land of Gram Respondents (Percentage)

District	Yes	No
Attock	50.0	50.0
Bahawalnagar	77.8	22.2
Bahawalpur	100.0	0.0
Bhakkar	53.3	46.7
Chakwal	62.5	37.5
Chiniot	60.0	40.0
DG Khan	50.0	50.0
Faisalabad	75.0	25.0
Gujranwala	100.0	0.0
Gujrat	100.0	0.0
Hafizabad	66.7	33.3
Jhelum	100.0	0.0
Jhang	36.4	63.6
Khanewal	–	–
Khushab	35.7	64.3
Lahore	–	–
Layyah	33.3	66.7
Lodhran	–	–
Mandi Bahuddin	66.7	33.3
Mianwali	54.5	45.5
Multan	–	–
Muzaffar garh	40.0	60.0
Nankana	100.0	0.0
Narowal	100.0	0.0
Okara	100.0	0.0
Pakpattan	–	–
Rahim Yar Khan	85.7	14.3
Rajan pur	100.0	0.0
Rawalpindi	100.0	0.0
Sahiwal	–	–
Sargodha	87.5	12.5
Shaikhupura	–	–
Sialkot	100.0	0.0
T.T.Singh	60.0	40.0

District	Yes	No
Vehari	–	–
Total	64.8	35.2

Table 56: Gram Seed Provided by DOA's for Demonstration Plots and Acknowledgement by Respondents

District	Farmers' Response		Gram Seed Distributed by DOA's (Kg)
	Yes	No	
Attock	100.0	0.0	64.0
Bahawalnagar	100.0	0.0	256.0
Bahawalpur	100.0	0.0	256.0
Bhakkar	100.0	0.0	256.0
Chakwal	100.0	0.0	160.0
Chiniot	100.0	0.0	192.0
DG Khan	100.0	0.0	192.0
Faisalabad	100.0	0.0	256.0
Gujranwala	100.0	0.0	192.0
Gujrat	100.0	0.0	128.0
Hafizabad	100.0	0.0	128.0
Jhelum	100.0	0.0	64.0
Jhang	100.0	0.0	256.0
Khanewal	–	–	192.0
Khushab	100.0	0.0	160.0
Lahore	–	–	192.0
Layyah	100.0	0.0	320.0
Lodhran	–	–	192.0
Mandi Bahuddin	100.0	0.0	128.0
Mianwali	100.0	0.0	192.0
Multan	–	–	256.0
Muzaffar garh	100.0	0.0	256.0
Nankana	100.0	0.0	256.0
Narowal	100.0	0.0	192.0
Okara	100.0	0.0	192.0
Pakpattan	–	–	192.0
Rahim Yar Khan	100.0	0.0	256.0
Rajan pur	100.0	0.0	192.0
Rawalpindi	100.0	0.0	64.0
Sahiwal	–	–	256.0
Sargodha	100.0	0.0	224.0

District	Farmers' Response		Gram Seed Distributed by DOA's (Kg)
	Yes	No	
Shaikhupura	–	–	256.0
Sialkot	100.0	0.0	192.0
T.T.Singh	100.0	0.0	192.0
Vehari	–	–	256.0
Total	100.0	0.0	200.0 (Average)

Table 57: Weedicide Provided by DOA's for Demonstration Plots of Gram and Acknowledgement by Respondents

District	Farmers' Response		weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Attock	0.0	100.0	0.0
Bahawalnagar	0.0	100.0	0.0
Bahawalpur	67.0	33.0	8.0
Bhakkar	0.0	100.0	0.0
Chakwal	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
DG Khan	50.0	50.0	0.0
Faisalabad	0.0	100.0	8.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jehlum	0.0	100.0	1.6
Jhang	0.0	100.0	0.0
Khanewal	–	–	10.0
Khushab	0.0	100.0	0.0
Lahore	–	–	0.0
Layyah	0.0	100.0	0.0
Lodhran	–	–	0.0
Mandi Bahuddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	–	–	10.0
Muzaffar garh	100.0	0.0	8.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	100.0	0.0	0.0
Pakpattan	–	–	10.0

District	Farmers' Response		weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Rahim Yar Khan	0.0	100.0	0.0
Rajan pur	67.0	33.0	6.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	–	–	0.0
Sargodha	0.0	100.0	0.0
Shaikhupura	–	–	0.0
Sialkot	33.0	67.0	0.0
T.T.Singh	0.0	100.0	0.0
Vehari	–	–	0.0
Total	11.7	88.3	1.8 (Average)

Table 58: Inoculum Provided by DOA's for Demonstration Plot of Gram and Acknowledgement by Respondents

District	Farmers' response	
	Yes	No
Attock	0.0	100.0
Bahawalnagar	85.7	14.3
Bahawalpur	83.3	16.7
Bhakkar	87.5	12.5
Chakwal	80.0	20.0
Chiniot	100.0	0.0
DG Khan	50.0	50.0
Faisalabad	100.0	0.0
Gujranwala	100.0	0.0
Gujrat	66.7	33.3
Hafizabad	100.0	0.0
Jehlum	50.0	50.0
Jhang	75.0	25.0
Khanewal	–	–
Khushab	100.0	0.0
Lahore	–	–
Layyah	0.0	100.0
Lodhran	–	–
Mandi Bahuddin	50.0	50.0
Mianwali	100.0	0.0
Multan	–	–
Muzaffar garh	100.0	0.0
Nankana	0.0	100.0

District	Farmers' response	
	Yes	No
Narowal	100.0	0.0
Okara	100.0	0.0
Pakpattan	—	—
Rahim Yar Khan	50.0	50.0
Rajan pur	66.7	33.3
Rawalpindi	50.0	50.0
Sahiwal	—	—
Sargodha	100.0	0.0
Shaikhupura	—	—
Sialkot	0.0	100.0
T.T.Singh	83.3	16.7
Vehari	—	—
Total	78.6	21.4

Table 59: Difference between Traditional Sowing Method and Sowing Method of Demonstration Plots of Gram

District	Drill sowing	Proper seed rate	Good quality seed	Good field preparation	Howing at proper time	Use of inoculum	Use of fertilizer
Attock	0.0	50.0	50.0	0.0	0.0	0.0	0.0
Bahawalnagar	28.6	14.3	28.6	14.3	0.0	14.3	0.0
Bahawalpur	66.7	16.7	0.0	0.0	0.0	16.7	0.0
Bhakkar	12.5	0.0	50.0	0.0	12.5	25.0	0.0
Chakwal	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Chiniot	16.7	0.0	33.3	0.0	0.0	50.0	0.0
DG Khan	0.0	0.0	50.0	0.0	0.0	50.0	0.0
Faisalabad	0.0	66.7	0.0	0.0	0.0	33.3	0.0
Gujranwala	33.3	66.7	0.0	0.0	0.0	0.0	0.0
Gujrat	0.0	33.3	33.3	0.0	0.0	33.3	0.0
Hafizabad	0.0	50.0	25.0	25.0	0.0	0.0	0.0
Jehlum	50.0	0.0	50.0	0.0	0.0	0.0	0.0
Jhang	25.0	25.0	50.0	0.0	0.0	0.0	0.0
Khanewal	—	—	—	—	—	—	—
Khushab	20.0	0.0	80.0	0.0	0.0	0.0	0.0
Lahore	—	—	—	—	—	—	—
Layyah	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Lodhran	—	—	—	—	—	—	—
Mandi Bahuddin	50.0	0.0	50.0	0.0	0.0	0.0	0.0
Mianwali	0.0	0.0	33.3	33.3	0.0	33.3	0.0
Multan	—	—	—	—	—	—	—

District	Drill sowing	Proper seed rate	Good quality seed	Good field preparation	Howing at proper time	Use of inoculum	Use of fertilizer
Muzaffar garh	50.0	0.0	0.0	0.0	0.0	50.0	0.0
Nankana	0.0	0.0	0.0	0.0	0.0	100.0	0.0
Narowal	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Okara	50.0	0.0	50.0	0.0	0.0	0.0	0.0
Pakpattan	—	—	—	—	—	—	—
Rahim Yar Khan	16.7	16.7	33.3	0.0	0.0	33.3	0.0
Rajan pur	33.3	33.3	0.0	0.0	0.0	33.3	0.0
Rawalpindi	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Sahiwal	—	—	—	—	—	—	—
Sargodha	28.6	14.3	57.1	0.0	0.0	0.0	0.0
Shaikhupura	—	—	—	—	—	—	—
Sialkot	0.0	33.3	66.7	0.0	0.0	0.0	0.0
T.T.Singh	0.0	0.0	66.7	0.0	0.0	16.7	16.7
Vehari	—	—	—	—	—	—	—
Total	23.3	13.6	39.8	3.9	1.0	17.5	1.0

Table 60: Farmers' Day Arranged at Demonstration Plots of Gram by Extension Department

District	Yes	No
Attock	0.0	100.0
Bahawalnagar	0.0	100.0
Bahawalpur	33.3	66.7
Bhakkar	25.0	75.0
Chakwal	20.0	80.0
Chiniot	33.3	66.7
DG Khan	0.0	100.0
Faisalabad	66.7	33.3
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jhelum	100.0	0.0
Jhang	0.0	100.0
Khanewal	—	—
Khushab	20.0	80.0
Lahore	—	—
Layyah	0.0	100.0
Lodhran	—	—

District	Yes	No
Mandi Bahuddin	0.0	100.0
Mianwali	40.0	60.0
Multan	–	–
Muzaffar garh	0.0	100.0
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	50.0	50.0
Pakpattan	–	–
Rahim Yar Khan	16.7	83.3
Rajan pur	33.3	66.7
Rawalpindi	100.0	0.0
Sahiwal	–	–
Sargodha	28.6	71.4
Shaikhupura	–	–
Sialkot	33.3	66.7
T.T.Singh	60.0	40.0
Vehari	–	–
Total	24.5	75.5

Table 61: Average No. of Farmers Attended the Farmers' day Arranged at Demonstration Plots of Gram

District	No. of Farmers
Attock	–
Bahawalnagar	–
Bahawalpur	22
Bhakkar	13
Chakwal	50
chiniot	90
DG Khan	–
Faisalabad	19
Gujranwala	–
Gujrat	–
Hafizabad	–
Jehlum	25
Jhang	–
Khanewal	–
Khushab	10

Lahore	—
Layyah	—
Lodhran	—
Mandi Bahuddin	—
Mianwali	16
Multan	—
Muzaffar garh	—
Nankana	—
Narowal	—
Okara	28
Pakpattan	—
Rahim Yar Khan	40
Rajan pur	50
Rawalpindi	19
Sahiwal	—
Sargodha	24
Shaikhupura	—
Sialkot	50
T.T.Singh	44
Vehari	—
Total	33

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Table 62: Response of Lentil Farmers' Regarding Trainings of Lentil Arranged by Extension Department (Percentage)

District	Yes	No
Attock	20.0	80.0
Bahawal nagar	100.0	0.0
Bahawal pur	100.0	0.0
Bhakkar	25.0	75.0
Chakwal	40.0	60.0
Chiniot	15.4	84.6
D.G.Khan	100.0	0.0
Faisalabad	75.0	25.0
Gujranwala	33.3	66.7
Gujrat	22.2	77.8
Hafizabad	100.0	0.0
Jhelum	25.0	75.0
Jhang	25.0	75.0
Khanewal	50.0	50.0
Khushab	0.0	100.0
Layyah	75.0	25.0
Mandi Bahuddin	80.0	20.0
Mianwali	33.3	66.7
Multan	0.0	100.0
Muzaffar garh	100.0	0.0
Nankana	100.0	0.0
Narowal	33.3	66.7
Okara	0.0	100.0
Pakpattan	83.3	16.7
Rahim yar khan	100.0	0.0
Rajan pur	66.7	33.3
Rawalpindi	55.6	44.4
Sahiwal	75.0	25.0
Sargodha	33.3	66.7
Sheikhupura	0.0	100.0
Sialkot	0.0	100.0
T.T. Singh	33.3	66.7
Vehari	100.0	0.0
Total	48.3	51.7

Table 63: Training's Starting Month of Lentil (Percentage)

District	September	October	November	December
Attock	0.0	0.0	100.0	0.0
Bahawal nagar	33.3	0.0	16.7	50.0
Bahawal pur	0.0	0.0	75.0	25.0
Bhakkar	100.0	0.0	0.0	0.0
Chakwal	50.0	50.0	0.0	0.0
Chiniot	0.0	50.0	50.0	0.0
D.G.Khan	100.0	0.0	0.0	0.0
Faisalabad	0.0	66.7	33.3	0.0
Gujranwala	0.0	100.0	0.0	0.0
Gujrat	50.0	0.0	50.0	0.0
Hafizabad	0.0	33.3	66.7	0.0
Jhelum	50.0	0.0	50.0	0.0
Jhang	50.0	0.0	50.0	0.0
Khanewal	100.0	0.0	0.0	0.0
Khushab	–	–	–	–
Layyah	0.0	33.3	0.0	66.7
Mandi Bahuddin	25.0	75.0	0.0	0.0
Mianwali	0.0	100.0	0.0	0.0
Multan	–			
Muzaffar garh	0.0	0.0	100.0	0.0
Nankana	100.0	0.0	0.0	0.0
Narowal	0.0	33.3	66.7	0.0
Okara	–	–	–	–
Pakpattan	100.0	0.0	0.0	0.0
Rahim yar khan	0.0	0.0	100.0	0.0
Rajan pur	0.0	0.0	0.0	100.0
Rawalpindi	20.0	60.0	20.0	0.0
Sahiwal	100.0	0.0	0.0	0.0
Sargodha	0.0	0.0	100.0	0.0
Sheikhupura	–	–	–	–
Sialkot	–	–	–	–
T.T. Singh	0.0	100.0	0.0	0.0
Vehari	0.0	50.0	50.0	0.0
Total	30.0	24.3	37.1	8.6

Table 64: Average No. of Trainings of Lentil Reported by Farmers

District	No. of Trainings Reported by Farmers
Attock	2
Bahawal nagar	2
Bahawal pur	3
Bhakkar	8
Chakwal	3
Chiniot	1
D.G.Khan	2
Faisalabad	2
Gujranwala	4
Gujrat	2
Hafizabad	1
Jhelum	3
Jhang	3
Khanewal	1
Khushab	0
Layyah	2
Mandi Bahuddin	1
Mianwali	2
Multan	0
Muzaffar garh	2
Nankana	1
Narowal	1
Okara	0
Pakpattan	1
Rahim yar khan	3
Rajan pur	2
Rawalpindi	3
Sahiwal	1
Sargodha	2
Sheikhupura	0
Sialkot	0
T.T. Singh	1
Vehari	2
Total	1.8

Table 65: Literature of Lentil Distributed during trainings to Farmers (Percentage)

District	Yes	No
Attock	100.0	0.0
Bahawal nagar	66.7	33.3
Bahawal pur	100.0	0.0
Bhakkar	100.0	0.0
Chakwal	100.0	0.0
Chiniot	0.0	100.0
D.G.Khan	0.0	100.0
Faisalabad	0.0	100.0
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jehlum	50.0	50.0
Jhang	0.0	100.0
Khanewal	50.0	50.0
Khushab	–	–
Layyah	66.7	33.3
Mandi Bahuddin	0.0	100.0
Mianwali	100.0	0.0
Multan	–	–
Muzaffar garh	100.0	0.0
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	–	–
Pakpattan	80.0	20.0
Rahim yar khan	75.0	25.0
Rajan pur	100.0	0.0
Rawalpindi	60.0	40.0
Sahiwal	100.0	0.0
Sargodha	0.0	100.0
Sheikhupura	–	–
Sialkot	–	–
T.T. Singh	0.0	100.0
Vehari	100.0	0.0
Total	52.9	47.1

Table 66: Average No. of Farmers' day/Seminars of Lentil Reported by DOA's and Farmers

District	No. of Farmers' Days/seminar Reported by Farmers	Farmers' Day/Seminars Reported by DOA's (No.)
Attock	2.0	0.0
Bahawal nagar	2.0	0.0
Bahawal pur	3.0	0.0
Bhakkar	0.0	3.0
Chakwal	0.0	0.0
Chiniot	1.0	1.0
D.G.Khan	0.0	0.0
Faisalabad	1.0	0.0
Gujranwala	4.0	5.0
Gujrat	2.0	0.0
Hafizabad	2.0	0.0
Jhelum	2.0	2.0
Jhang	0.0	0.0
Khanewal	0.0	0.0
Khushab	–	0.0
Layyah	2.0	0.0
Mandi Bahuddin	0.0	0.0
Mianwali	0.0	0.0
Multan	–	0.0
Muzaffar garh	0.0	0.0
Nankana	0.0	0.0
Narowal	2.0	1.0
Okara	–	0.0
Pakpattan	0.0	0.0
Rahim yar khan	2.0	2.0
Rajan pur	0.0	0.0
Rawalpindi	0.0	0.0
Sahiwal	0.0	0.0
Sargodha	0.0	0.0
Sheikhupura	–	0.0
Sialkot	–	0.0
T.T. Singh	0.0	0.0
Vehari	0.0	0.0
Total	0.9	0.4

Table 67: Seed Drill Provided By Extension Department for Lentil

District	Farmers' Response		Seed Drill Provided and Reported by DOA's N0= 0 Yes=1
	Yes	No	
Attock	0.0	100.0	0.0
Bahawal nagar	0.0	100.0	0.0
Bahawal pur	0.0	100.0	0.0
Bhakkar	0.0	100.0	0.0
Chakwal	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
D.G.Khan	0.0	100.0	0.0
Faisalabad	0.0	100.0	0.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jhelum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Khushab	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Mandi Bahuddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim yar khan	0.0	100.0	0.0
Rajan pur	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0
Sheikhupura	0.0	100.0	0.0
Sialkot	0.0	100.0	0.0
T.T. Singh	0.0	100.0	0.0
Vehari	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 68: Lentil Seed Provided By Extension Department on 50% Subsidy

District	Farmers' Response		Seed Provided by DOA's on 50% Subsidy (Kg)
	Yes	No	
Attock	0.0	100.0	0.0
Bahawal nagar	0.0	100.0	0.0
Bahawal pur	0.0	100.0	0.0
Bhakkar	0.0	100.0	0.0
Chakwal	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
D.G.Khan	0.0	100.0	0.0
Faisalabad	0.0	100.0	0.0
Gujranwala	0.0	100.0	0.0
Gujrat	0.0	100.0	0.0
Hafizabad	0.0	100.0	0.0
Jhelum	0.0	100.0	0.0
Jhang	0.0	100.0	0.0
Khanewal	0.0	100.0	0.0
Khushab	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Mandi Bahuddin	0.0	100.0	0.0
Mianwali	0.0	100.0	0.0
Multan	0.0	100.0	0.0
Muzaffar garh	0.0	100.0	0.0
Nankana	0.0	100.0	0.0
Narowal	0.0	100.0	0.0
Okara	0.0	100.0	0.0
Pakpattan	0.0	100.0	0.0
Rahim yar khan	0.0	100.0	0.0
Rajan pur	0.0	100.0	0.0
Rawalpindi	0.0	100.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0
Sheikhupura	0.0	100.0	0.0
Sialkot	0.0	100.0	0.0
T.T. Singh	0.0	100.0	0.0
Vehari	0.0	100.0	0.0
Total	0.0	100.0	0.0

Table 69: Lentil Farmers Heard/Seen Lentil Sowing Techniques on Radio/TV

District	Yes	No
Attock	20.0	80.0
Bahawal nagar	66.7	33.3
Bahawal pur	100.0	0.0
Bhakkar	0.0	100.0
Chakwal	20.0	80.0
Chiniot	0.0	100.0
D.G.Khan	100.0	0.0
Faisalabad	25.0	75.0
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jehlum	25.0	75.0
Jhang	0.0	100.0
Khanewal	0.0	100.0
Khushab	0.0	100.0
Layyah	50.0	50.0
Mandi Bahuddin	0.0	100.0
Mianwali	100.0	0.0
Multan	0.0	100.0
Muzaffar garh	100.0	0.0
Nankana	0.0	100.0
Narowal	0.0	100.0
Okara	0.0	100.0
Pakpattan	0.0	100.0
Rahim yar khan	100.0	0.0
Rajan pur	66.7	33.3
Rawalpindi	22.2	77.8
Sahiwal	0.0	100.0
Sargodha	0.0	100.0
Sheikhupura	0.0	100.0
Sialkot	0.0	100.0
T.T. Singh	0.0	100.0
Vehari	0.0	100.0
Total	20.7	79.3

Table 70: Average No. of Programs of Lentil Heard/Seen on Radio/TV by Lentil Farmers

District	No. of times programs Heard/Seen on Radio/Tv
Attock	2
Bahawal nagar	2
Bahawal pur	2
Bhakkar	0
Chakwal	1
Chiniot	0
D.G.Khan	3
Faisalabad	2
Gujranwala	0
Gujrat	0
Hafizabad	0
Jehlum	2
Jhang	0
Khanewal	0
Khushab	0
Layyah	3
Mandi Bahuddin	0
Mianwali	1
Multan	0
Muzaffar garh	2
Nankana	0
Narowal	0
Okara	0
Pakpattan	0
Rahim yar khan	2
Rajan pur	1
Rawalpindi	2
Sahiwal	0
Sargodha	0
Sheikhupura	0
Sialkot	0
T.T. Singh	0
Vehari	0
Total	0.7

Table 71: Comparison of Area of Lentil Reported by DOA's and CRS

Districts	Lentil Area Reported by DOA (Acres)	Lentil Area Reported by CRS (Acres)	Difference in Area of Lentil (Acres)
Attock	118	550	-432
Bahawalnagar	180	322	-142
Bahawalpur	N/A*	70	-70
Bhakkar	0	335	-335
Chakwal	8290	5170	3120
Chiniot	207	350	-143
DG Khan	38	170	-132
Faisalabad	17	17	0
Gujranwala	235	402	-167
Gujrat	3460	1592	1868
Hafizabad	73	140	-67
Jhelum	3450	2550	900
Jhang	500	656	-156
Kasur	130	50	80
Khanewal	50	60	-10
Khushab	54	65	-11
Lahore	N/A*	N/A*	-
Layyah	210	960	-750
Lodhran	2	N/A*	2
Mandi Bahuddin	600	603	-3
Mianwali	80	280	-200
Multan	80	37	43
Muzaffar Garh	530	460	70
Nankana Sahib	4	3	1
Narowal	3770	3736	34
Okara	38	50	-12
Pakpattan	17	16	1
Rahim Yar Khan	165	78	87
Rajanpur	298	110	188
Rawalpindi	1032	5870	-4838
Sahiwal	21	68	-47
Sargodha	4	450	-446
Sheikhupura	144	150	-6
Sialkot	700	967	-267
T.T.Singh	215	175	40
Vehari	25	16	9

*N/A =Not Available

Table 72: Demonstration Plots of Lentil Reported by DOA's and Knowledge of Respondents (percentage)

District	No. of Demonstration plots of Lentil Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in Surrounding Area	
		Yes	No
Attock	4	80	20
Bahawal nagar	2	33.3	66.7
Bahawal pur	2	50	50
Bhakkar	3	75	25
Chakwal	4	80	20
Chiniot	3	53.8	46.2
DG Khan	1	100	0
Faisalabad	3	75	25
Gujranwala	2	33.3	66.7
Gujrat	2	33.3	66.7
Hafizabad	2	100	0
Jhelum	4	75	25
Jhang	3	25	75
Kasur	2	–	–
Khanewal	1	25	75
Khushab	2	100	0
Lahore	2	–	–
Layyah	2	25	75
Lodhran	1	–	–
Mandi Bahuddin	2	80	20
Mianwali	3	100	0
Multan	2	0	100
Muzaffar garh	1	100	0
Nankana	2	0	100
Narowal	3	33.3	66.7
Okara	2	0	100
Pakpattan	2	0	100
Rahim yar khan	2	50	50
Rajan pur	1	0	100
Rawalpindi	4	55.6	44.4
Sahiwal	2	25	75
Sargodha	4	100	0
Sheikhupura	2	0	100
Sialkot	3	50	50

District	No. of Demonstration plots of Lentil Reported by DOA's	Knowledge of Respondents about laying out of Demonstration Plots in Surrounding Area	
		Yes	No
T.T. Singh	3	66.7	33.3
Vehari	2	50	50
Total	85	50.3	49.7

Table 73: Demonstration Plots Seen by Lentil Respondents (Percentage)

District	Yes	No
Attock	100.0	0.0
Bahawal nagar	50.0	50.0
Bahawal pur	50.0	50.0
Bhakkar	100.0	0.0
Chakwal	100.0	0.0
Chiniot	71.3	28.7
D.G.Khan	100.0	0.0
Faisalabad	100.0	0.0
Gujranwala	100.0	0.0
Gujrat	100.0	0.0
Hafizabad	100.0	0.0
Jhelum	100.0	0.0
Jhang	100.0	0.0
Khanewal	100.0	0.0
Khushab	100.0	0.0
Layyah	100.0	0.0
Mandi Bahauddin	100.0	0.0
Mianwali	100.0	0.0
Multan	–	–
Muzaffar garh	100.0	0.0
Nankana	–	–
Narowal	100.0	0.0
Okara	–	–
Pakpattan	–	–
Rahim yar khan	100.0	0.0
Rajan pur	–	–
Rawalpindi	100.0	0.0
Sahiwal	100.0	0.0
Sargodha	100.0	0.0
Sheikhupura	–	–
Sialkot	100.0	0.0

District	Yes	No
T.T. Singh	100.0	0.0
Vehari	100.0	0.0
Total	94.5	5.5

Table 74: Demonstration Plots of Lentil Laid out on land of Lentil Respondents (Percentage)

District	Yes	No
Attock	100.0	0.0
Bahawal nagar	100.0	0.0
Bahawal pur	100.0	0.0
Bhakkar	100.0	0.0
Chakwal	75.0	25.0
Chiniot	60.0	40.0
D.G.Khan	100.0	0.0
Faisalabad	33.3	66.7
Gujranwala	0.0	100.0
Gujrat	66.7	33.3
Hafizabad	66.7	33.3
Jhelum	50.0	50.0
Jhang	50.0	50.0
Khanewal	100.0	0.0
Khushab	100.0	0.0
Layyah	100.0	0.0
Mandi Bahauddin	50.0	50.0
Mianwali	100.0	0.0
Multan	–	–
Muzaffar garh	33.3	66.7
Nankana	–	–
Narowal	100.0	0.0
Okara	–	–
Pakpattan	–	–
Rahim yar khan	100.0	0.0
Rajan pur	–	–
Rawalpindi	100.0	0.0
Sahiwal	100.0	0.0
Sargodha	100.0	0.0
Sheikhupura	–	–
Sialkot	100.0	0.0
T.T. Singh	0.0	100.0
Vehari	100.0	0.0

District	Yes	No
Total	73.9	26.1

Table 75: Lentil Seed Provided by DOA's for Demonstration Plots and Acknowledgement by Respondents

District	Farmers' Response		Lentil Seed Distributed by DOA's (Kg)
	Yes	No	
Attock	100.0	0.0	40.0
Bahawal nagar	100.0	0.0	20.0
Bahawal pur	100.0	0.0	20.0
Bhakkar	100.0	0.0	30.0
Chakwal	100.0	0.0	40.0
Chiniot	100.0	0.0	30.0
D.G.Khan	100.0	0.0	10.0
Faisalabad	100.0	0.0	30.0
Gujranwala	–	–	20.0
Gujrat	100.0	0.0	20.0
Hafizabad	100.0	0.0	20.0
Jehlum	100.0	0.0	40.0
Jhang	100.0	0.0	30.0
Khanewal	100.0	0.0	10.0
Khushab	100.0	0.0	20.0
Layyah	100.0	0.0	20.0
Mandi Bahauddin	100.0	0.0	20.0
Mianwali	100.0	0.0	30.0
Multan	–	–	20.0
Muzaffar garh	100.0	0.0	10.0
Nankana	–	–	20.0
Narowal	100.0	0.0	30.0
Okara	–	–	20.0
Pakpattan	–	–	20.0
Rahim yar khan	100.0	0.0	20.0
Rajan pur	–	–	10.0
Rawalpindi	100.0	0.0	40.0
Sahiwal	100.0	0.0	20.0
Sargodha	100.0	0.0	40.0
Sheikhupura	–	–	20.0
Sialkot	100.0	0.0	30.0
T.T. Singh	–	–	30.0

District	Farmers' Response		Lentil Seed Distributed by DOA's (Kg)
	Yes	No	
Vehari	100.0	0.0	20.0
Total	100.0	0.0	24.0 (Average)

Table 76: Weedicide Provided by DOA's for Demonstration Plots of Lentil and Acknowledgement by Respondents

District	Farmers' Response		Weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Attock	0.0	100.0	0.0
Bahawal nagar	0.0	100.0	0.0
Bahawal pur	0.0	100.0	2.0
Bhakkar	33.3	66.7	0.0
Chakwal	0.0	100.0	0.0
Chiniot	0.0	100.0	0.0
D.G.Khan	0.0	100.0	0.0
Faisalabad	0.0	100.0	3.0
Gujranwala	–	–	0.0
Gujrat	100.0	0.0	0.0
Hafizabad	0.0	100.0	0.0
Jehlum	33.3	66.7	3.2
Jhang	100.0	0.0	0.0
Khanewal	100.0	0.0	0.0
Khushab	0.0	100.0	0.0
Layyah	0.0	100.0	0.0
Mandi Bahauddin	0.0	100.0	0.0
Mianwali	100.0	0.0	0.0
Multan	–	–	2.0
Muzaffar garh	0.0	100.0	1.0
Nankana	–	–	0.0
Narowal	0.0	100.0	0.0
Okara	–	–	0.0
Pakpattan	–	–	2.0
Rahim yar khan	0.0	100.0	0.0
Rajan pur	–	–	1.0
Rawalpindi	20.0	80.0	0.0
Sahiwal	0.0	100.0	0.0
Sargodha	0.0	100.0	0.0

District	Farmers' Response		Weedicide Provided by DOA's (Liter/Kg per Acre)
	Yes	No	
Sheikhupura	–	–	0.0
Sialkot	0.0	100.0	0.0
T.T. Singh	–	–	0.0
Vehari	0.0	100.0	0.0
Total	19.6	80.4	0.4 (Average)

Table 77: Inoculum Provided by DOA's for Demonstration Plots of Lentil and Acknowledgement by Respondents

District	Farmers' Response	
	Yes	No
Attock	0.0	100.0
Bahawal nagar	100.0	0.0
Bahawal pur	100.0	0.0
Bhakkar	100.0	0.0
Chakwal	100.0	0.0
Chiniot	66.7	33.3
D.G.Khan	100.0	0.0
Faisalabad	100.0	0.0
Gujranwala	–	–
Gujrat	0.0	100.0
Hafizabad	100.0	0.0
Jehlum	66.7	33.3
Jhang	100.0	0.0
Khanewal	100.0	0.0
Khushab	50.0	50.0
Layyah	100.0	0.0
Mandi Bahauddin	100.0	0.0
Mianwali	100.0	0.0
Multan	–	–
Muzaffar garh	100.0	0.0
Nankana	–	–
Narowal	100.0	0.0
Okara	–	–
Pakpattan	–	–
Rahim yar khan	50.0	50.0
Rajan pur	–	–

District	Farmers' Response	
	Yes	No
Rawalpindi	60.0	40.0
Sahiwal	100.0	0.0
Sargodha	33.3	66.7
Sheikhupura	–	–
Sialkot	0.0	100.0
T.T. Singh	–	–
Vehari	100.0	0.0
Total	70.6	29.4

Table 78: Difference between Traditional Sowing Method and Sowing Method of Demonstration Plot of Lentil

District	Drill sowing	Proper seed rate	Good quality seed	Good field preparation	Use of inoculum	Use of fertilizer
Attock	25.0	25.0	25.0	0.0	0.0	25.0
Bahawal nagar	100.0	0.0	0.0	0.0	0.0	0.0
Bahawal pur	100.0	0.0	0.0	0.0	0.0	0.0
Bhakkar	33.3	0.0	66.7	0.0	0.0	0.0
Chakwal	0.0	0.0	0.0	66.7	33.3	0.0
Chiniot	0.0	66.7	33.3	0.0	0.0	0.0
D.G.Khan	100.0	0.0	0.0	0.0	0.0	0.0
Faisalabad	100.0	0.0	0.0	0.0	0.0	0.0
Gujranwala	0.0	0.0	0.0	0.0	0.0	0.0
Gujrat	50.0	50.0	0.0	0.0	0.0	0.0
Hafizabad	50.0	0.0	0.0	0.0	50	0.0
Jhelum	0.0	33.3	33.3	33.3	0.0	0.0
Jhang	100.0	0.0	0.0	0.0	0.0	0.0
Khanewal	100.0	0.0	0.0	0.0	0.0	0.0
Khushab	50.0	0.0	50.0	0.0	0.0	0.0
Layyah	0.0	100.0	0.0	0.0	0.0	0.0
Mandi Bahauddin	0.0	100.0	0.0	0.0	0.0	0.0
Mianwali	0.0	0.0	66.7	0.0	33.30	0.0
Multan	–	–	–	–	–	–
Muzaffar garh	100.0	0.0	0.0	0.0	0.0	0.0
Nankana	–	–	–	–	–	–
Narowal	33.3	33.3	33.3	0.0	0.0	0.0
Okara	–	–	–	–	–	–
Pakpattan	–	–	–	–	–	–
Rahim yar khan	50.0	50.0	0.0	0.0	0.0	0.0

District	Drill sowing	Proper seed rate	Good quality seed	Good field preparation	Use of inoculum	Use of fertilizer
Rajan pur	–	–	–	–	–	–
Rawalpindi	40.0	20.0	40.0	0.0	0.0	0.0
Sahiwal	0.0	0.0	0.0	0.0	100.0	0.0
Sargodha	33.3	0.0	33.3	33.3	0.0	0.0
Sheikhupura	–	–	–	–	–	–
Sialkot	0.0	0.0	100.0	0.0	0.0	0.0
T.T. Singh	–	–	–	–	–	–
Vehari	100.0	0.0	0.0	0.0	0.0	0.0
Total	33.3	17.9	28.2	10.3	7.7	2.6

Table 79: Farmers' Day Arranged at Demonstration Plots of Lentil by Extension Department

District	Yes	No
Attock	25.0	75.0
Bahawal nagar	0.0	100.0
Bahawal pur	50.0	50.0
Bhakkar	0.0	100.0
Chakwal	0.0	100.0
Chiniot	28.6	71.4
D.G.Khan	0.0	100.0
Faisalabad	33.3	66.7
Gujranwala	0.0	100.0
Gujrat	0.0	100.0
Hafizabad	0.0	100.0
Jhelum	25.0	75.0
Jhang	0.0	100.0
Khanewal	100.0	0.0
Khushab	0.0	100.0
Layyah	0.0	100.0
Mandi Bahauddin	0.0	100.0
Mianwali	0.0	100.0
Multan	–	–
Muzaffar garh	0.0	100.0
Nankana	–	–
Narowal	66.7	33.3
Okara	–	–
Pakpattan	–	–
Rahim yar khan	50.0	50.0
Rajan pur	–	–

District	Yes	No
Rawalpindi	20.0	80.0
Sahiwal	0.0	100.0
Sargodha	0.0	100.0
Sheikhupura	–	–
Sialkot	0.0	100.0
T.T. Singh	0.0	100.0
Vehari	–	–
Total	15.7	84.3

Table 80: Average No. of Farmers Attended the Farmers' day at Demonstration Plots of Lentil

District	No. of Farmers
Attock	12
Bahawal nagar	–
Bahawal pur	25
Bhakkar	–
Chakwal	–
Chiniot	37
D.G.Khan	–
Faisalabad	10
Gujranwala	–
Gujrat	–
Hafizabad	–
Jhelum	15
Jhang	–
Khanewal	25
Khushab	–
Layyah	–
Mandi Bahauddin	–
Mianwali	–
Multan	–
Muzaffar garh	–
Nankana	–
Narowal	15
Okara	–
Pakpattan	–
Rahim yar khan	50
Rajan pur	–
Rawalpindi	50
Sahiwal	–

District	No. of Farmers
Sargodha	–
Sheikhupura	–
Sialkot	–
T.T. Singh	–
Vehari	–
Total	26