

DESK MONITORING REGARDING FARMERS FEEDBACK SURVEY OF PLANT CLINICS HELD DURING SEPTEMBER- NOVEMBER, 2018



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Contents

Preface.....	
Executive Summary and Conclusions & Recommendations.....	
CHAPTER NO. 1: Introduction.....	1-2
CHAPTER NO. 2: Methodology.....	3-4
CHAPTER NO. 3: Result & Discussion.....	5-17

List of Table	Page #
Table 1: District wise Distribution of Farmers who visited Plant Clinics 2018	10
Table 2: District wise Distribution of Selected Sample.....	11
Table 3: Overall implementation of Plant Clinics (Number and Percentages).....	12
Table 4: Clinic Type and Average Number of Visits (Number and Percentage).....	13
Table 5: Difference between Crops, Problems and Recommendations Mentioned in Lists and Reported by the Farmers (Number and Percentage).....	14
Table 6: Type of Samples Taken by Farmers to Plant Clinic (Number and Percentage).....	15
Table 7: District wise Presence of Staff and their Designation (Number and Percentage).....	16
Table 8: Usefulness of Recommendations Provided in Plant Clinics (Number and Percentage).....	17

PREFACE

Plant Clinic (Plant-wise) is a global program developed and led by Centre for Agriculture and Biosciences International (CABI). It is a latest approach adopted by Punjab Agriculture Extension Wing, to ensure food security and improve rural livelihoods by reducing crop losses.

Plant Clinic is established temporarily under an umbrella on a suitable/accessible place once a week in a village where farmers visit to get advice on the crops' pests and diseases.

In year 2012, a pilot project "Revamping Agriculture Extension Services in Punjab" for two years in Bahawalpur, Sheikhpura and Gujranwala Districts was launched. On success of this project, a new program was started in July 2017 in 24 districts and was extended to all districts (36) of the Punjab in 2018 however; data was provided for only 30 districts. Under this up-scaled initiative, the one-time cost of clinic establishment was shared equally by CABI and the Extension Wing. CABI was responsible for staff training, knowledge bank support and technical backstopping, whereas the provision of qualified staff including Project Coordinator, Plant Doctors, Data Entry Operators and Monitoring & Evaluation staff was the responsibility of Extension Wing.

During July-September, 2017, January-March, 2018 and September-November, 2018 this program worked in 24, 30 and 20 districts of the Punjab. The clinics were established at prominent locations once every week. The 1st & 2nd monitoring reports (July-September, 2017 and January-March, 2018) have already been shared with Secretary Agriculture as well as DGA (Ext. & AR) to get feedback. During September-November, 2018, the plant clinics were reported to serve 10737 cases. The district wise distribution is given in Table 1.

As per signed performance contract of Extension Wing for the financial year 2018-19, this office was entrusted the responsibility of undertaking farmer's feedback survey of plant clinics held during September-November, 2018. In this regard, the lists of beneficiary farmers along with their contact numbers were requested from DGA (Ext. & AR). The objective of the survey was to assess the overall implementation and to evaluate the benefit of this initiative. Desk monitoring approach using structured questionnaire was adopted for the purpose of data collection. The results are presented using descriptive analysis technique. It is noted that most of the respondents were found satisfied with advice of plant doctors. The detail of Plant Clinics program (introduction), methodology of desk monitoring, results, conclusions and recommendations are discussed in the report. The executive summary is also given.

The officers of this office completed the desk monitoring of the Plant Clinics keenly and wholeheartedly and I appreciate their effort. The results presented in this report will certainly be helpful to improve future plant clinics.

**Chief,
Planning & Evaluation Cell**

Executive Summary and Conclusions & Recommendations

Plant Clinic (Plant-wise) is a global program and is currently adopted by Punjab Agriculture Extension, to increase food security and improve rural livelihoods by reducing crop losses, developed and led by Centre for Agriculture and Biosciences International (CABI). Plant clinics give knowledge to farmers they need to lose less of their crops due to attack of pests and diseases. Plant Clinic is established temporarily under an umbrella on a suitable/accessible place once a week in a village where farmers visit to get advice on the crops.

A new program was started in July, 2017 in 24 districts and extended up to all 36 districts of the Punjab in 2018. Under this up-scaled initiative, the one-time cost of clinic establishment was shared equally by CABI and the Extension Wing. CABI was responsible for staff training, knowledge bank support and technical backstopping, whereas the provision of qualified staff including project coordinator, plant doctors, data entry operators and monitoring & evaluation staff was the responsibility of Extension Wing. During January-March, 2018 and September-November, 2018 this program worked in 30 and 20 districts of the Punjab. The clinics were established at prominent locations once every week. The 1st & 2nd monitoring reports (July-September, 2017 and January-March, 2018) have already been shared with Secretary Agriculture as well as DGA (Ext. & AR) to get feedback. During September-November, 2018, the plant clinics were reported to serve 10737 cases. The district wise distribution is given in Table 1. As per signed performance contract of Extension Wing for the financial year 2018-19, this office was entrusted the responsibility of undertaking farmer's feedback survey of plant clinics held during September-November, 2018.

The objective of the desk monitoring was to assess the overall implementation and to evaluate benefits of this initiative. Desk monitoring approach using structured questionnaire was adopted for the purpose of data collection. Main conclusions are as under:

Conclusions

- From total 10737 listed cases, contact numbers of 604 farmers (6%) were missing and total cases with incorrect contact numbers were 210 (2%). However, total 373 farmers were interviewed (4%) which is every 30th case from the provided list. The interview results indicated that out of 373 cases, 148 cases (40%) did not visit the clinic (**Table 3**).
- The respondents who visited plant clinics were asked regarding the type of visited clinic and about 215 i.e. 96% reported that clinics were established under umbrella and only 4% respondents said that the plant clinics were developed at either shops or deras of the farmers. The farmers were also inquired about total number of visits they made during September-November 2018 for any reason and 2 was the average number of visit per farmer (**Table 4**).
- The name of crop, identified problems and suggestions provided by plant clinic staff which were mentioned in the provided lists were cross matched by asking the farmers that for what problem of specified crop you visited plant clinic and what suggestions were given to you by plant doctor. Among total 225, 12 (5%) farmers responded differently in case of crop name, 22 (10%) reported different problems and 11(5%) reported different recommendations (**Table 5**).
- For a better diagnosis of the crop problems, farmers were to be emphasized to bring the crop samples i.e. leaf, plant, flower or fruit with them. Out of 225 respondents, about 19 (8%) farmers took leaf while they visit the clinic to describe their problem, 16 (7%) farmers took infected small plant sample, only 4 (2%) farmers took infected plant fruit as sample with them, and 154 (68%) cases discussed their crop problem verbally/no sample. Moreover, 32 (14%), reported that plant clinic doctor made visit at their field to identify the crop problems and gave them suggestions (**Table 6**).
- The respondents were also asked about presence of plant clinic staff and their designation. Among total of 225 cases who visited the clinics, 198 (88%) reported that Agriculture Officers (AO) were present in the clinic when they visited, 23 (10%) reported the presence of Field Assistant (FA) only

while 4 (2%) cases were those who did not know the designation of plant clinic staff (**Table 7**).

- To assess benefits of plant clinics, farmers were asked about the usefulness and implementation of the advice provided by the plant doctor. It was observed that in 214 (95%) cases recommendations were as per provided lists. Among total 225 cases, 203 (90%) responded that recommendation was useful for them and 214 (95%) implemented it in their farm (**Table 8**).

General Observations

- It was observed in provided beneficiaries list that recommended seed rate for the same crop for same district was different.
- Plant clinics were not being held regularly in some of the districts once in a week.
- Most of the clinics were established near Agro dealers/pesticide shops, which might be viewed with suspicion because of concern about biased recommendations.
- Plant clinics were not held in all districts of Punjab during September to November 2018.

Suggestions/Recommendations

1. There is need to improve and purify the beneficiary lists; only the true cases and phone numbers of relevant participants should be provided as there were issues of missing/incorrect numbers.
2. It was evaluated that majority of farmers did not attend the plant clinic, they were either those who were contacted by extension worker during field visit or fake entry to fulfil the number only. It is recommended that only demanded, only those farmers should be listed who actually visited plant clinics.
3. Only few farmers brought samples of infected plants to the plant clinics. Farmers should be encouraged to also bring photographs of pests and diseases with them. It can help to diagnose problems where no samples are available.

4. A plant clinic should be accessible, visible, and held at times that are convenient to farmers. Good publicity is essential for the venues of plant clinics.
5. Plant wise knowledge banks should be continuously updated in the context of Punjab Pakistan.
6. Plant Doctors may be provided refresher courses to keep their knowledge up to date once every crop season i.e. Rabi & Kahrif.
7. For future programs, there should be live monitoring of these clinics as well as beneficiaries to improve the working of these clinics.

CHAPTER NO. 1

Introduction

1. Centre for Agriculture and Biosciences International (CABI) is a not-for-profit organization that works to improve people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment. CABI works by providing information, skills and tools to the people. It operates in 48 countries through its scientific staff based in its regional centers. CABI was established in 1910, since then it has developed its expertise in four flagship areas including food security, environment, trade & commodities.

2. CABI's Centre in Pakistan was established in 1957 to coordinate CABI activities in Central and Western Asia including Pakistan, Afghanistan, Sri Lanka and other Central Republics. Main fields of CABI are yields improvement, improve the quality of crops and access markets in a sustainable and environmentally sensitive way. The center engages a large number of donors and other organizations in order to facilitate its work, including national and regional governments, private sector bodies, foundations, NGOs, and other experts in the field.

3. CABI is also running a global development cooperation program called Plant wise. This development program is currently working in 34 countries including Pakistan to help farmers to reduce their crop losses resulting from disease and insect/pest attack. Working closely with National Agricultural Advisory Services, CABI establishes and support networks of plant clinics, run by trained plant doctors, where farmers can find practical plant health advice. These clinics work similarly to clinics for human health: farmers visit with samples of their crops, plant doctors diagnose the problem and make science-based recommendations on ways to manage it.

4. Plant clinics are reinforced by the Plant wise Knowledge Bank which is a gateway to practical online and offline plant health information, including diagnostic resources, best-practice pest management advice and plant clinic data analysis for targeted crop protection. Together, these two unique resources are part of the Plant wise approach to strengthen national plant health systems from within.

5. CABI Pakistan encourages integrated crop management including managing agricultural pests and diseases through safe biological means. Regional plant clinics give farmers the information they need to lose less of their crops to pests and diseases. In the beginning of this initiative, an MOU was signed between CABI, DGA (Ext. & AR) and DGA (PW & QC) of the Punjab Agriculture Department in the year 2012 to implement a pilot project in Bahawalpur, Sheikhpura and Gujranwala Districts under the project "Revamping Agriculture Extension Services in Punjab" for a period of two years. This pilot project was implemented through a grant where there was no financial liability on the part of Government. A total of 38 Plant clinics

were established for which 76 officers/officials of Extension and Plant Protection Wings of Agriculture Department were trained and certified as plant doctors. The review report of pilot project indicated success of this initiative in inviting farmer's attention and gaining support from other stakeholders which led to the up-scaling of this initiative in eight other districts namely Sialkot, Hafizabad, Sargodha, Faisalabad, Multan, Layyah, D.G. Khan and Vehari.

6. During July-September, 2017, January-March, 2018 and September-November, 2018 this program worked in 24, 30 and 20 districts of the Punjab. Under this up-scaled initiative, the one-time cost of clinic establishment was shared equally by CABI and the Extension Wing. CABI was mainly responsible for staff training, knowledge bank support and technical backstopping, whereas the provision of qualified staff including project coordinator, plant doctors, data entry operators and monitoring & evaluation staff was the responsibility of Extension Wing. The clinics were established at prominent locations once every week. The 1st & 2nd monitoring reports (July-September, 2017 and January-March, 2018) have already been shared with Secretary Agriculture as well as DGA (Ext. & AR) to get feedback. During September-November, 2018, the plant clinics were reported to serve 10737 cases. The district wise distribution is given in Table 1.

7. As per the signed performance contract of Extension Wing for the financial year 2018-19, this office was entrusted the responsibility of undertaking farmer's feedback survey of plant clinics held during FY 2018-19. In this regard, the lists of beneficiary farmers along with their contact numbers who visited plant clinics during September – November 2018 were requested from DGA (Ext. & AR). The objective of the survey was to assess the overall implementation and to evaluate the benefit of this initiative. Desk monitoring approach using structured questionnaire was adopted for the purpose of data collection. The survey methodology is given in Chapter No. 2 and results are discussed in Chapter No. 3.

CHAPTER NO. 2

Methodology

8. During September-November, 2018, plant clinics were to be organized in all districts of the Punjab however, data was provided for 20 districts only i.e. 10737 cases were reported to be addressed. To monitor the performance of these plant clinics, the lists of beneficiary farmers along with their contact numbers were requested from DGA (Ext. & AR). Desk monitoring approach using a structured questionnaire was adopted to undertake farmers feedback survey. Data on key indicators regarding actual clinic visit, crop for which visit was made, clinic staff information, crop problems, recommendations of plant doctors, implementation of the recommendation & its usefulness and farmer's satisfaction with the doctor's recommendation etc. were collected. The purpose of including these variables in the survey was to assess the genuineness of the provided lists, frequently faced problems of the farmers, general administration of the plant clinic and the benefit of the clinics to the famers.

9. To collect adequate amount of feedback that can justify the survey findings, following formula was used to estimate sample size.

$$n = N / (1 + N * e^2)$$

Where,

n = Sample Size

N = Population Size (Number of Cases)

e^2 = Percentage of Expected Error

10. By considering an expected error of 5% for the population of 10737 queries/farmers, the estimated sample size was 373 comprising 3.5% of the total queries. This overall number was then divided among the individual districts with respect to their proportion in the overall population. A slightly higher number were interviewed where the sample size was too small. The district wise detail of interviewed farmers/sample is given in Table 2.

11. To evenly spread the selected sample over complete list of farmers, Systematic Random Sampling technique was applied where every 30th participant was to be interviewed. In situations where the contact number of the selected case was missing or wrong (short or long than the standard number), the case was replaced with the next valid entry. Feedback survey through telephone was undertaken during the month of April-May, 2019. To meet above-mentioned number of follow-ups, the non-responsive cases either due to wrong/powerd off/not accessible/not-listed number were replaced with the next case on the list.

12. The data was entered in MS Excel and analyzed using SPSS. Descriptive analysis including frequencies and cross tabulation to compute averages and percentages was undertaken. The detailed results are discussed in Chapter No. 3.

CHAPTER NO. 3

Results and Discussions

13. The data gathered from 373 survey participants was analyzed to evaluate the overall implementation as well as the benefit gained by farmers as a result of their visit to these plant clinics. Data on key indicators regarding actual clinic visit, crop for which visit was made, clinic staff information, crop problems, recommendations of plant doctors, implementation of the recommendation & its usefulness and farmer's satisfaction with the doctor's recommendation etc. were collected. The key findings are discussed in the following section.

3.1 Overall Implementations of Plant Clinics

14. The overall implementation of plant clinics in different districts i.e. No. of beneficiaries in the lists and its detail is given in Table 3.

3.1.1 Missing Contact Numbers

15. From 10737 total cases, contact numbers of 604 farmers (6%) were missing. This number was highest in Multan with 134 cases (9%), followed by Rajanpur with 62 cases (10%), Layyah with 55 cases (6%), Bhakkar with 51 cases (8%), Sialkot with 47 cases (3%), Muzaffargarh with 38 cases (18%), Bahawalpur with 36 cases (11%), Khushab with 33 cases (6%) and Narowal with 30 cases (4%). For remaining districts, number of cases with missing contact numbers were below 30.

3.1.2 Incorrect Contact Numbers

16 Total cases with incorrect contact numbers were 210 (2%). For all districts, this number was ranged between 0 to 5 percent.

3.1.3 Interviewed Cases out of Valid Numbers

17 The 373 (4%) farmers were interviewed out of total 10737 cases. While total valid cases were 9923 (92%) of all given cases. The percentage interviewed in all districts were ranged from 3.0 to 9.0 percent.

3.1.4 Farmers Who Did Not Visit Plant Clinics out of Interviewed Cases

18 The interview results indicated that 148 cases (40.0%) did not visit the clinic out of 373 cases and informed that they either had interacted with Extension agents by other means but not actually visited plant clinics i.e. extension agent visited their farm, participated in farmer field day or in other gatherings held by extension wing. The highest number of not visited cases were found in Sialkot followed by Layyah, Multan, Rajanpur and Rawalpindi with 25 (45.0%), 23 (66.0%), 19 (39.0%), 13 (62.0%) and 11 (52.0%) cases, respectively. In Chakwal and Toba Tek Singh, there was no case who reported that he did not visit the plant clinic. For other districts, number of not visited cases ranged between 1 to 10 cases comprising a different percentage district wise.

19 For most of the not visited cases, the farmers actually grew the listed crop and faced the listed problem, when asked about the source of information for that problem, they specified that either local field staff/extension agents or the pesticide company representative/dealer were consulted but they did not visit the plant clinic personally.

3.2 Clinic Type and Average Number of Visits

20 The respondent who visited the plant clinics were asked about the type of clinic and number of times they visited the clinic during the September-November, 2018. The results are explained in the following text and the details are given in Table 4.

3.2.1 Plant Clinics Under Umbrella or Other Place

21 Out of 225 farmers who visited plant clinics, 215 (96%) respondents reported that the plant clinics were established under an umbrella whereas, 10 (4%) respondents said that the plant clinics were developed either at shops or deras of the farmers.

3.2.2 Number of Visits to Plant Clinic

22 Average number of reported visits during September-November, 2018 varied from farmer to farmer with an overall of average 2 visits. When analyzed district wise, the highest number of visits were found in Khanewal followed by Narowal and Vehari with about 7, 5 and 4 visits, respectively. For remaining districts, the average number of visits ranged between 1-3.

3.3 Difference between Crops, Problems and Recommendations Mentioned in Lists and Reported by the Farmers

23 To evaluate the genuineness of the provided information, the respondents were asked to report the crop, problem and the provided recommendation, which was then compared with the information provided by the DGA (Ext. & AR) in the lists. The results are explained in the following text and the details are given in Table 5.

3.3.1 Difference of Crops

24 Number of cases who reported a different crop from the listed crop were 12 (5%) out of 225 cases. There was one (1) case each from Attock, Chakwal, Chiniot, Rajanpur, Rawalpindi and Sialkot respectively who reported a different crop than the listed one. In Khushab and Multan there were 2 & 4 cases respectively. For other districts, no difference was found between the reported and the listed crop.

3.3.2 Difference of Problems

25 Number of cases who reported a problem different from the listed problem were 22 (10%) out of 225 cases. Only one (1) case each from Attock, Bahawalpur, Chakwal, Chiniot, Khushab, Rajanpur, Rawalpindi, Sialkot and Toba Tek Singh reported a different problem than the listed one. While in Layyah and Multan there were 9 & 4 cases respectively. For other districts, no difference was found between the reported and the listed problem.

3.3.3 Difference of Recommendations

26 Number of cases who reported a recommendation different from the listed recommendation were 11 (5%) out of 225. Total 6 cases, 1 case each from Attock, Bahawalpur, Chakwal, Chiniot, Khushab and Rajanpur reported a different recommendation than the listed one. While in Multan and Sheikhpura there were 2 & 3 cases respectively. For other districts, no difference was found between the reported and the listed recommendation.

3.4 Type of Samples Taken by Farmers to Plant Clinics

27 For a better diagnosis of the crop problems, farmers were emphasized to bring the crop samples i.e. leaf, plant, fruit etc. During survey, farmers were asked about the type of sample they took along to the plant clinics. The gathered information was analyzed district wise. The results are explained in the following text and the details are given in Table 6.

3.4.1 Cases of Plant Leaf Samples

28 Out of 225 respondents, 19 (8%) farmers took the plant leaf along with them to the plant clinic. The highest number was found in Bahawalpur & Multan each with 4 comprising 40% and 13%, respectively. Similarly, in Sheikhpura and Sialkot each with 3 cases with 30% & 3% respectively who reported that they took leaf to the plant clinic. For remaining districts, the number of farmers who reported that they took leaf to the plant clinic was below 3.

3.4.2 Cases of Whole Plant as Sample

29 Total 16 i.e. 7% respondents took whole plant along with them to the plant clinic. Total 9 cases (29%) were reported in Sialkot. Districts Multan and Rawalpindi with 2 cases each having percentage 7% & 20% while, one case each from district Chakwal, Chiniot and Sheikhpura was reported. For remaining districts, the number of farmers who reported that they took whole plant to the plant clinic was zero.

3.4.3 Cases of Fruit as Sample

30 Only 4 respondents took fruit as a sample to the plant clinic comprising 2 percent of the total. These cases belong to districts Chakwal, Khanewal, Sheikhpura and Vehari with a single case each.

3.4.4 Visit of Plant Doctor to Farmer's Field

31 Total 32 respondents reported that their field was visited by the plant doctor which comprises 14% of the total. The highest number was found in Sialkot with 8 cases, followed by Sheikhpura with 4, Bahawalpur, Khanewal, Narowal and Vehari with 3 cases each. Similarly, Bhakkar & Khushab having 2 cases each and districts Chiniot, Layyah, Rawalpindi and Toba Tek Singh reported 1 case each while other districts had no such case who reported field visit by the plant doctor.

3.4.5 Visit of Plant Clinic without Sample

32 Total 154 respondents stated that they took no sample and verbally discussed their problem with plant doctor which comprises of 68.0 % of the total. The highest number was found in Multan with 24 cases, followed by Bhakkar, Jhang and Narowal with 16, 13 and 12 cases respectively. Districts Layyah and Sialkot had 11 cases each. For remaining districts, the number of farmers who reported that they took no sample along to the plant clinic ranged from 8 to 1.

3.5 District wise Presence of Staff and their Designation

33 As per the agreed TORs of the plant clinics, the Agri. Officers and Field Assistants were trained as plant doctors and they have to hold plant clinics. The gathered responses regarding staff designation were analyzed district wise. The results are explained in the following text below and the details are given in Table 7.

3.5.1 Overall Position of Presence of Doctors

34 Out of 225 respondents, 198 (88%) reported that the plant doctor was an Agri. Officer, 23 (10%) reported that plant doctor was Field Assistant. However, 4 (2%) respondents did not know the designation of the plant doctor.

3.6 Usefulness of Provided Recommendations

35 To assess the usefulness of plant clinics, farmers were asked about the usefulness and implementation of the advice of plant doctor. The district wise responses are given in Table 8 and are discussed in the text below.

3.6.1 Provision of Recommendations to Farmers

36 It was observed that in 214 (95%) cases recommendation against their described problem were as per mentioned lists while in remaining 11 cases recommendations were different.

3.6.2 Implementation of Recommendations

37 From the provided recommendation, 214 farmers (95%) implemented the recommendations in their farm.

3.6.3 Usefulness of Recommendations

38 Overall 203 (90%) respondents reported that recommendations remain useful for them. The percentage was 100 for Bahawalnagar, Bhakkar, Chiniot, Jhang, Layyah, Muzaffargarh, Narowal, Rajanpur, Rawalpindi, Sahiwal and Toba Tek Singh. The percentage was below 70% for district Attock, Chakwal, Khushab and Sheikhpura. For remaining districts, this percentage ranged from 94 to 70%.

Table 1: District wise Distribution of Farmers who visited Plant Clinics during September to November, 2018

Sr.	District	Month			Total
		September	October	November	
1	Attock	290	-	-	290
2	Bahawalnagar	92	-	-	92
3	Bahawalpur	-	329	-	329
4	Bhakkar	310	354	-	664
5	Chakwal	20	25	20	65
6	Chiniot	117	243	-	360
7	Jhang	570	-	-	570
8	Khanewal	211	-	-	211
9	Khushab	230	-	359	589
10	Layyah	354	390	243	987
11	Multan	445	486	548	1479
12	Muzzafargarh	-	-	210	210
13	Narowal	177	286	385	848
14	Rajanpur	206	221	173	600
15	Rawalpindi	496	-	122	618
16	Sahiwal	214	-	-	214
17	Sheikhupura	247	299	-	546
18	Sialkot	599	444	523	1566
19	TT Singh	120	-	-	120
20	Vehari	66	313	-	379
Total		4764	3390	2583	10737

Table No. 2: District wise Distribution of Selected Sample

Sr.	District	Total	Sample Size	
			No.	%
1	Attock	290	10	2.7
2	Bahawalnagar	92	3	0.8
3	Bahawalpur	329	11	2.9
4	Bhakkar	664	23	6.2
5	Chakwal	65	3	0.8
6	Chiniot	360	14	3.8
7	Jhang	570	20	5.4
8	Khanewal	211	18	4.8
9	Khushab	589	14	3.8
10	Layyah	987	35	9.4
11	Multan	1479	49	13.1
12	Muzzafargarh	210	7	1.9
13	Narowal	848	25	6.7
14	Rajanpur	600	21	5.6
15	Rawalpindi	618	21	5.6
16	Sahiwal	214	7	1.9
17	Sheikhupura	546	19	5.1
18	Sialkot	1566	56	15.0
19	TT Singh	120	4	1.1
20	Vehari	379	13	3.5
Total		10737	373	3.5

Table 3: Overall implementation of Plant Clinics (Number and Percentages)

Sr.	District	Total cases as per lists	Missing Cell Nos.		Incorrect Nos. (Digits more/less)		Total valid Nos.		Cases Interviewed		Clinics Visited		Clinics Not Visited	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Attock	290	7	2	3	1	280	97	10	4	6	60	4	40
2	Bahawalnagar	92	7	8	0	0	85	92	3	4	1	33	2	67
3	Bahawalpur	329	36	11	17	5	276	84	11	4	10	91	1	9
4	Bhakkar	664	51	8	20	3	593	89	23	4	19	83	4	17
5	Chakwal	65	0	0	1	2	64	98	3	5	3	100	0	0
6	Chiniot	360	11	3	10	3	339	94	14	4	10	71	4	29
7	Jhang	570	20	4	4	1	546	96	20	4	15	75	5	25
8	Khanewal	211	8	4	5	2	198	94	18	9	12	67	6	33
9	Khushab	589	33	6	7	1	549	93	14	3	8	57	6	43
10	Layyah	987	55	6	25	3	907	92	35	4	12	34	23	66
11	Multan	1479	134	9	10	1	1335	90	49	4	30	61	19	39
12	Muzzafargarh	210	38	18	7	3	165	79	7	4	4	57	3	43
13	Narowal	848	30	4	17	2	801	94	25	3	15	60	10	40
14	Rajanpur	600	62	10	19	3	519	87	21	4	8	38	13	62
15	Rawalpindi	618	9	1	3	0	606	98	21	3	10	48	11	52
16	Sahiwal	214	20	9	9	4	185	86	7	4	5	71	2	29
17	Sheikhupura	546	23	4	15	3	508	93	19	4	10	53	9	47
18	Sialkot	1566	47	3	25	2	1494	95	56	4	31	55	25	45
19	TT Singh	120	1	1	3	3	116	97	4	3	4	100	0	0
20	Vehari	379	12	3	10	3	357	94	13	4	12	92	1	8
Total		10737	604	6	210	2	9923	92	373	4	225	60	148	40

Table 4: Clinic Type and Average Number of Visits (Number and Percentage)

Sr.	District	No. of cases (who visited)	Clinic Type				Average No. of visits per farmer
			Umbrella		Shops/Deras of Farmers		
			No.	%	No.	%	
1	Attock	6	6	100	0	0	3
2	Bahawalnagar	1	1	100	0	0	1
3	Bahawalpur	10	9	90	1	1	3
4	Bhakkar	19	19	100	0	0	1
5	Chakwal	3	2	67	1	2	1
6	Chiniot	10	10	100	0	0	2
7	Jhang	15	15	100	0	0	1
8	Khanewal	12	12	100	0	0	7
9	Khushab	8	8	100	0	0	3
10	Layyah	12	12	100	0	0	1
11	Multan	30	30	100	0	0	1
12	Muzzafargarh	4	4	100	0	0	1
13	Narowal	15	15	100	0	0	5
14	Rajanpur	8	8	100	0	0	1
15	Rawalpindi	10	9	90	1	1	2
16	Sahiwal	5	5	100	0	0	1
17	Sheikhupura	10	7	70	3	4	2
18	Sialkot	31	28	90	3	3	2
19	TT Singh	4	4	100	0	0	1
20	Vehari	12	11	92	1	1	4
Total		225	215	96	10	4	2

Table 5: Difference between Crops, Problems and Recommendations Mentioned in Lists and Reported by the Farmers (Number and Percentage)

Sr .	District	No. of cases (who visited)	Crop different from list		Problem different from list		Recommendation different from list	
			No.	%	No .	%	No.	%
1	Attock	6	1	17	1	17	1	17
2	Bahawalnagar	1	0	0	0	0	0	0
3	Bahawalpur	10	0	0	1	10	1	10
4	Bhakkar	19	0	0	0	0	0	0
5	Chakwal	3	1	33	1	33	1	33
6	Chiniot	10	1	10	1	10	1	10
7	Jhang	15	0	0	0	0	0	0
8	Khanewal	12	0	0	0	0	0	0
9	Khushab	8	2	25	1	13	1	13
10	Layyah	12	0	0	9	75	0	0
11	Multan	30	4	13	4	13	2	7
12	Muzzafargarh	4	0	0	0	0	0	0
13	Narowal	15	0	0	0	0	0	0
14	Rajanpur	8	1	13	1	13	1	13
15	Rawalpindi	10	1	10	1	10	0	0
16	Sahiwal	5	0	0	0	0	0	0
17	Sheikhupura	10	0	0	0	0	3	30
18	Sialkot	31	1	3	1	3	0	0
19	TT Singh	4	0	0	1	25	0	0
20	Vehari	12	0	0	0	0	0	0
Total		225	12	5	22	10	11	5

Table 6: Type of Samples Taken by Farmers to Plant Clinic (Number and Percentage)

Sr.	District	No. of cases (who visited)	Leaf		Plant		Fruit/Flower		Field visit by Doc.		Verbal	
			No.	%	No.	%	No.	%	No.	%	No.	%
1	Attock	6	0	0	0	0	0	0	0	0	6	100
2	Bahawalnagar	1	0	0	0	0	0	0	0	0	1	100
3	Bahawalpur	10	4	40	0	0	0	0	3	30	3	30
4	Bhakkar	19	1	5	0	0	0	0	2	11	16	84
5	Chakwal	3	0	0	1	33	1	33	0	0	1	33
6	Chiniot	10	1	10	1	10	0	0	1	10	7	70
7	Jhang	15	2	13	0	0	0	0	0	0	13	87
8	Khanewal	12	0	0	0	0	1	8	3	25	8	67
9	Khushab	8	0	0	0	0	0	0	2	25	6	75
10	Layyah	12	0	0	0	0	0	0	1	8	11	92
11	Multan	30	4	13	2	7	0	0	0	0	24	80
12	Muzzafargarh	4	0	0	0	0	0	0	0	0	4	100
13	Narowal	15	0	0	0	0	0	0	3	20	12	80
14	Rajanpur	8	0	0	0	0	0	0	0	0	8	100
15	Rawalpindi	10	0	0	2	20	0	0	1	10	7	70
16	Sahiwal	5	0	0	0	0	0	0	0	0	5	100
17	Sheikhupura	10	3	30	1	10	1	10	4	40	1	10
18	Sialkot	31	3	10	9	29	0	0	8	26	11	35
19	TT Singh	4	0	0	0	0	0	0	1	25	3	75
20	Vehari	12	1	8	0	0	1	8	3	25	7	58
Total		225	19	8	16	7	4	2	32	14	154	68

Table 7: District wise Presence of Staff and their Designation (Number and Percentage)

Sr.	District	No. of cases (who visited)	Agi. Officer		Field Assistant		Don't know	
			No.	%	No.	%	No.	%
1	Attock	6	6	100	0	0	0	0
2	Bahawalnagar	1	1	100	0	0	0	0
3	Bahawalpur	10	10	100	0	0	0	0
4	Bhakkar	19	17	89	2	11	0	0
5	Chakwal	3	3	100	0	0	0	0
6	Chiniot	10	6	60	4	40	0	0
7	Jhang	15	15	100	0	0	0	0
8	Khanewal	12	12	100	0	0	0	0
9	Khushab	8	8	100	0	0	0	0
10	Layyah	12	12	100	0	0	0	0
11	Multan	30	30	100	0	0	0	0
12	Muzzafargarh	4	4	100	0	0	0	0
13	Narowal	15	15	100	0	0	0	0
14	Rajanpur	8	8	100	0	0	0	0
15	Rawalpindi	10	4	40	6	60	0	0
16	Sahiwal	5	5	100	0	0	0	0
17	Sheikhupura	10	8	80	2	20	0	0
18	Sialkot	31	18	58	9	29	4	13
19	TT Singh	4	4	100	0	0	0	0
20	Vehari	12	12	100	0	0	0	0
Total		225	198	88	23	10	4	2

Table 8: Usefulness of Recommendations Provided in Plant Clinics (Number and Percentage)

Sr	District	No. of cases (who visited)	Recommendation As per lists		Recommendation Implemented		Recommendation Useful	
			No.	%	No.	%	No.	%
1	Attock	6	5	83	5	83	3	50
2	Bahawalnagr	1	1	100	1	100	1	100
3	Bahawalpur	10	9	90	9	90	7	70
4	Bhakkar	19	19	100	19	100	19	100
5	Chakwal	3	2	67	2	67	2	67
6	Chiniot	10	9	90	9	90	10	100
7	Jhang	15	15	100	15	100	15	100
8	Khanewal	12	12	100	12	100	11	92
9	Khushab	8	7	88	7	88	5	63
10	Layyah	12	12	100	12	100	12	100
11	Multan	30	28	93	28	93	28	93
12	Muzzafargarh	4	4	100	4	100	4	100
13	Narowal	15	15	100	15	100	15	100
14	Rajanpur	8	7	88	7	88	8	100
15	Rawalpindi	10	10	100	10	100	8	80
16	Sahiwal	5	5	100	5	100	5	100
17	Sheikhupura	10	7	70	7	70	6	60
18	Sialkot	31	31	100	31	100	29	94
19	TT Singh	4	4	100	4	100	4	100
20	Vehari	12	12	100	12	100	11	92
Total		225	214	95	214	95	203	90