ANNUAL REPORT 2018-2019

MERA GAON MERA GAURAV

ICAR-Agricultural Technology Application Research Institute Ludhiana-141004, Punjab

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Institute Ludhiana-141004, Punjab

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FOREWORD

"Mera Gaon Mera Gaurav" scheme has been conceptualized by Government of India to link scientists of the National Agricultural Research System (NARS) with the farmers. It is a unique flagship programme to promote direct interface between scientists and farmers of the country. Under this scheme, the scientific community of NARS directly delivers latest farm information, technologies, etc to the farmers on regular basis by adopting villages. Through this scheme, in addition to the generation of new technologies, ICAR Institutes and State Agricultural Universities of Zone-I formed multidisciplinary teams of scientists and providing information to farmers regarding beneficial technologies and practices in agriculture and allied sector for the enhancement of productivity and profitability of farm. Further, scientists also created awareness amongst farmers about various central and state government schemes. It is envisaged that due to direct interface between farmers and scientists might have enhance the confidence level of both as scientist gets firsthand feedback directly from farmers about performance of technology and farmers also gets latest know-how from scientist directly. I hope this MGMG scheme has helped in enhancing the productivity of all the agricultural enterprises including farming, dairy, fisheries, poultry, etc and overall income of farmers. I appreciate the efforts of team ICAR- ATARI, Ludhiana for bringing out this report. I also thank all the Nodal Officers, Co-Nodal officers, Multi-disciplinary teams of scientists of the ICAR Institutes and State Agricultural Universities of Zone-I as this document is outcome of the efforts put by them under MGMG scheme.

Rajbir Singh

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INTRODUCTION

The Mera Gaon Mera Gaurav-MGMG (My Village My Pride) scheme was launched by the Hon'ble Prime minister on 25 July, 2015 on the occasion of the 87th Foundation Day of ICAR and 9th National Conference of KVKs at Patna. It is an innovative initiative, which was planned to promote the direct interface of scientists with the farmers to speed-up the lab to land process. The participation of small and marginal farmers in Indian agriculture is very important as small and marginal holdings together, constitute 85 percent in terms of number of operational holdings and 44 percent of the cultivated area in the country during 2010-11. Small farmers put forth their desire on various forums to have timely information on investment in agriculture, loans, availability of the basic amenities, market rates, extension activities and facilities provided by different agencies, new research findings and technologies, etc.

Presently, various agencies are working in agriculture and farmers are keen to know about the services provided by them. The technologies developed and refined by research institutes, agricultural universities, private and other organizations are accepted and adopted to varied extent by farming community. Therefore, the awareness among farmers about these organizations and their programmes need to be created on regular basis.

Objective

The overall objective of this scheme is to provide farmers with required information, knowledge and advisories on regular basis by adopting villages. Under this scheme, scientists of National Agricultural Research and Education Systems (NARES) are working by selecting villages and remain in touch with the selected villages to provide information to the farmers on technical and other related aspects in a time frame through personnel visits and other means. At Institute/University level, many groups of multidisciplinary scientists work and one group normally consists of four scientists who adopt 4-5 villages.

Implementation

Under this scheme, scientists have selected villages as per their convenience and remain in touch with the selected villages and provide information to the farmers on technical and other related aspects in time frame through personal visits or on telephone. Being a resource person for the village, the scientists are also expected to monitor the process of adoption of agricultural technologies by the farmers. The scientists make use of community radio, local newspapers, mobile messages, video, exhibition and local media and make initiatives to have dialogue with the marketing intelligence, market trends, and information on various agricultural organizations for finding solutions to their agricultural related problems. Scientists also created awareness among farmers about the climatic change, other customized services, and protective measures and other issues of national and local importance. In this process of social transformation, scientists have local *Panchayats*, development agencies, NGOs and private organizations. In addition, scientists encouraged the ideology of clean and good agricultural techniques for producing good quality agricultural products and linked this to *Swachchh Bharat Abhiyan*.

Selection of villages

The group of four scientists at every Institute/University was decided to adopt villages within the radius of 50-100 km from their place of working. Scientists sought necessary cooperation from KVKs, *Panchayats* and other related departments at the local level in selected the villages. A format has been devised to analyze farming system, climate, social and economic condition of selected villages.

The ten tasks under MGMG

1. To identifies a village and strengthen interface with farmers.
2. To periodically update farmers about agricultural activities through phone and mobile messages.
3. To provide technology handout as per the agro-ecological conditions of the village.
4. To provide information to farmers about agricultural inputs, seed, fertilizer, chemical, agricultural machinery, climate, market, etc.
5. To educate farmers through newspapers, community radio etc.
6. To create awareness among farmers about the programmes being implemented by various organizations and institutions working at local level e.g. voluntary organizations, farmer's organization, ATMA, other Govt. departments.
7. To make farmers aware of the sensitive issues of national importance such as: *Swachchh Bharat Abhiyan*, climate change, water conservation, soil fertility etc.
8. To organize farmer's meet by visiting the selected villages as per need and facilitate the participation of specialists of the concerned institutes.
9. To identify technical problems at a village level and make use of those in prospective research programmes.
10. To generate technical, social and economic data related to village and to submit the quarterly report of work done.

Operational mechanisms

At national level, Assistant Director General (Agricultural Extension) principal Scientist, Division of Agricultural Extension, ICAR, New Delhi, is the nodal officer whereas at Zone level, Director, Agricultural technology Application Research Institute (Atari) is the Nodal Officer supported by one scientist of the institute. At Institute/Agricultural University level, a Principal Scientist/ Professor nominated as a nodal officer at institute /university level are responsible for the submission of their benchmark survey and reports to Director, ATARI who sends the consolidated report to Assistant Director General/ Principal Scientist (Agricultural Extension).

PROGRESS OF MERA GAON MERA GAURAV (MGMG) SCHEME

Punjab, Himachal Pradesh, Uttarakhand, Jammu & Kashmir and Ladakh are part of Zone-I. The MGMG scheme in this zone is being implemented by ICAR Institutes and SAUs. A total of 10 ICAR institutes and 06 State Agricultural Universities (SAUs) are working in this zone. All the ICAR Institutes and SAUs of this zone have nominated Nodal Officer at institute/university level (Annexure-I). Table 1 clearly depicts that 209 teams of scientists were formed comprising of 750 scientists from ICAR Institutes and SAUs who have adopted 678 villages under this scheme (Annexure-II).

Table 1: Summary of Zone-I

No. of ICAR Institutes/SAUs	No. of Total Teams Formed	No. of Total Scientists	No. of Total Villages Adopted
16	209	750	678

Table 2: Number of teams formed and villages selected by ICAR Institutes

S. No.	Name of ICAR Institutes	No. of Teams	No. of Scientists	No. of Villages
1.	ICAR-DMR, Solan	2	11	12
2.	ICAR-CPRI, Shimla	7	36	7
3.	ICAR-VPKAS, Almora	6	30	30
4.	ICAR-CITH, Srinagar	3	14	3
5.	ICAR-DCFR, Bhimtal	6	23	24
6.	ICAR-IISWC, Dehradun	24	92	117
7.	ICAR-ATARI, Ludhiana	1	6	7
8.	ICAR-CIPHET, Ludhiana	10	37	45
9.	ICAR-IIMR, Ludhiana	8	30	20
10.	ICAR-CPRS, Jalandhar	1	10	5
	Total (A)	**68**	**289**	**270**

Table 3: Number of teams formed and villages selected by SAUs

S. No.	Name of SAUs	No. of Teams	No. of Scientists	No. of Villages
1.	CSKHPKV, Palampur	11	42	15
2.	Dr. YSPUH&F, Solan	32	100	32
3.	SKUAST (J), Jammu	32	133	147
4.	GBPUA&T Pantnagar	27	108	135
5.	GADVASU, Ludhiana	2	5	5
6.	PAU, Ludhiana	37	73	74
	Total (B)	**141**	**461**	**408**
ICAR Institutes + SAUs	**Grand Total (A+B)**	**209**	**750**	**678**

Activities undertaken

Teams of scientists of various ICAR Institutes and SAUs working in Zone-I have conducted 1,242 visits to their respective adopted villages and contacted 24,388 farmers during 2018-2019. The teams also conducted 766 Interface meetings/*Gosthies* in which 16,943 farmers participated. In order to motivate farmers to adopt new agricultural technology/ good practices and to show the superiority, applicability, economic advantages of new technologies; scientists have conducted 2340.81 ha demonstrations at 5695 farmers' field on various crop and agricultural practices in their specialized area. Scientists of this zone also provided 1,808 agro-advisory services by sending 36,145 SMSs to farmers' mobile phones of adopted villages. Scientific literature developed by ICAR Institutes and SAUs on various aspects also provided to 21,844 farmers so that farmers can use it later. Under this scheme, scientists also created linkages with other departments and agencies for the benefit of farmers of their adopted villages. Awareness amongst 24,978 farmers was created on various agricultural technologies, practices, schemes of different developments departments, crop insurance, *Swachhata Abhiyan,* etc. (Table 4).

Table 4: Summary of activities organized by institutes/SAUs

S. No	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	1242	24388
2.	Interface meeting/ Goshthies	766	16943
3.	Training organized	559	10931
4.	Demonstrations conducted (ha)	2340.81	5695
5.	Mobile based advisories (No.)	1808	36145
6.	Literature support provided	2263	21844
7.	Awareness created	511	24978
8.	Linkages developed with other agencies (No.)	144	10828

To accelerate the adoption of technologies or good agricultural practices in the adopted villages under MGMG, scientists also provided critical inputs for conducting demonstrations at farmers' field besides regular technical advice during farmers-scientist interface. During 2018-19, ICAR-Institutes and SAUs also provided more than 11800 quintals seeds to 10938 farmers, approximately 32000 planting material to 1801 farmers, more than 42 quintals fertilizers to 383 farmers, 30,000 fish fry and fingerlings to 45 farmers and 7 quintals fish feed to 35 farmers as presented in Table 5.

Table 5: Input support provided in Zone-I

S. No.	Name of Activity	Quantity	No. of Farmers Benefitted
1.	Seeds (q)	11809.57	10938
2.	Planting material (No.)	32338	1801
3.	Fertilizers (q)	42.1	383
4.	Fish fry and fingerlings (No.)	30000	45
5.	Fish feed (q)	7	35

INSTITUTE WISE PROGRESS

1.ICAR –Directorate of Mushroom Research (DMR), Solan (H.P)

No. of teams formed

ICAR-DMR has formed two multidisciplinary teams of eleven scientists including one coordinator in each team. Although, one team consist of five scientists and other team have six scientists.

No. of villages selected

Both teams have selected 12 villages, which covers *Kandaghat* development block of Solan district of Himachal Pradesh. Bench mark survey of all villages was completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
2	11	12	1	1	12

Activities undertaken

Teams of DMR scientists have organized 11 visits to their respective selected villages and contacted 122 farmers. The teams also conducted thirteen interface meetings/*Goshthies* in which 182 farmers participated. Scientists also organized four training camps to 37 farmers. A total of twelve demonstrations were laid out on DMR technologies by the scientists at 157 farmers' field. Scientists provided 12 mobile based advisories to farmers of these villages in which 200 farmers participated. Scientific literature developed on various aspects also provided to 364 farmers. Awareness among 130 farmers was created by scientists of DMR about mushroom cultivation technology and nutritional and medicinal values of the mushrooms. Soil Expert from UHF, Nauni was invited to deliver lecture on Soil health Problems related to soil were also addressed to farmers.

Table 1: Activities organized by ICAR-DMR, Solan during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	11	122
2.	Interface meeting/ *Goshthies*	13	182
3.	Training	4	37
4.	Demonstrations	12	157
5.	Mobile based advisories (No.)	12	200
6.	Literature support provided	1	364
7.	Awareness created	9	130
8.	Linkages developed with other agencies (No.)	1	50

Teams of ICAR-DMR also provided critical inputs for conducting demonstrations at farmers' field besides regular technical advice during farmers-scientist interface. During 2018-19, 8 quintals seeds provided to 40 farmers as presented in Table 2.

Table 2: Input support provided

S. No.	Name of Input	Quantity (q)/No.	No. of Farmers Benefitted
1.	Seeds (q)	8	40

Demonstration of Oyster Mushroom

2.ICAR –Central Potato Research Institute (CPRI), Shimla (H.P)

No. of teams formed

ICAR-CPRI has formed seven multidisciplinary teams of 36 scientists. Six teams consist of five scientists whereas one team had six scientists including one coordinator in each team.

No. of villages selected

Each team has selected only one village and thus a total of seven villages were selected by all the teams of CPRI. The selected villages' covers single development block of Shimla district. Bench mark survey of all seven villages completed during 2018-19.

No. of Team of Scientists	No. of Scientists	No. of Villages	No. of Blocks	No of Districts	Bench Mark Survey Conducted (No. of Villages)
7	36	7	1	1	7

Activities undertaken

Teams of CPRI scientists have organized 12 visits to their respective selected villages and contacted 395 farmers. The teams also conducted three interface meetings/*Goshthies* in which 310 farmers participated. Scientists also organized one training camp benefitting to 30 farmers. A total of 20 demonstrations were laid out on CPRI technologies by the scientists at 20 farmers' field. Scientists provided twenty five mobile based advisories to 1950 farmers of these villages. Scientific literature developed on various aspects also provided to 180 farmers. Awareness among 2784farmers was created about cleanliness improved potato cultivation practices, soil testing by scientists of CPRI.

Table 3: Activities organized by CPRI during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	12	395
2.	Interface meeting/ *Goshthies*	3	310
3.	Training	1	30
4.	Demonstrations	0.5	20
5.	Mobile based advisories (No.)	25	1950
6.	Literature support provided	4	180
7.	Awareness created	33	2784
8.	Linkages developed with other agencies (No.)	6	450

During 2018-19, CPRI scientists provided 10 quintals seeds to 20 farmers as presented in Table 4.

Table 4: Input support provided

S. No.	Name of input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	10	0.5	20

Meetings and Trainings to Improve Potato Cultivation

3. ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan (VPKAS), Almora (Uttarakhand)

No. of teams formed

ICAR-VPKAS has formed 6 multi-disciplinary teams of 30 scientists including one co-ordinator in each team.

No. of villages selected

ICAR-VPKAS has selected a total of 30 villages under MGMG scheme which included 5 blocks and one district. Bench mark survey of all villages was also completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey conducted (No. of Villages)
6	30	30	5	1	30

Activities undertaken

Teams of VPKAS scientists have organized 30 visits to their respective selected villages and contacted 784 farmers. 18 Interface meetings/*Goshthies* were conducted in which 412 farmers participated. Scientists also organized three training camps to 71 farmers. A total of 290 demonstrations were laid out in 24 ha area at farmers' field. Scientists also provided 29 agro-advisory services by sending SMSs to farmers. Scientist also created awareness among 620 farmers about basic, strategic and adaptive research for improving productivity and quality of important hill crops with emphasis on conservation and efficient utilization of natural resources.

Table 5: Activities organized by VPKAS during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	30	784
2.	Interface meeting/ *Goshthies*	18	412
3.	Training	3	71
4.	Demonstrations	24	290
5.	Mobile based advisories (No.)	29	778
6.	Literature support provided	398	393
7.	Awareness created	20	620
8.	Linkages developed with other agencies (No.)	6	361

To ensure that farmers benefit from best farm practices by providing required information, knowledge and advisories on regular basis by adopting villages under MGMG, scientists also provided critical inputs for conducting demonstrations at farmers' field. During 2018-19, VPKAS provided 15 quintals seeds to 263 farmers, approximately 2000 planting material to 10 farmers and 10 quintals fertilizers benefitting 200 farmers as presented in Table 6.

Table 6: Input support provided

S. No.	Name of input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	15	32	263
2.	Planting material (No.)	2000	1	10
3.	Fertilizers (q)	10	20	200

Conducting Demonstrations at Farmer's Field

4.ICAR –Central Institute of Temperate Horticulture (CITH), Srinagar (J&K)

No. of teams formed

ICAR- CITH has formed three multi-disciplinary teams of 14 scientists including one coordinator in each team. Although, one team consist of 2 scientists but other two teams have 6 scientists in each.

No. of villages selected

Each Team of CITH scientists has selected one village. Thus a total of three villages were selected by CITH scientists under MGMG scheme. Bench mark survey of 2 villages was completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
3	14	3	3	3	2

Activities undertaken

Teams of CITH scientists have organized 26 visits to their respective selected villages and contacted 252 farmers. Only one interface meeting/*Goshthies* were conducted in which 18 farmers participated. A total of 27 demonstrations were laid out by the scientists at 225 farmers' field. Scientists also organized four training camps to 92 farmers. Scientists also provided 10 agro-advisory services by sending SMSs to farmers. Scientist also created awareness among 18 farmers about potential of new apple varieties, training and pruning, pollination management and horticultural crop production and protection.

Table 7: Activities organized by CITH during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	26	252
2.	Interface meeting/ *Goshthies*	1	18
3.	Training	4	92
4.	Demonstrations	27	225
5.	Mobile based advisories (No.)	10	10
6.	Literature support provided	2	70
7.	Awareness created	1	18
8.	Linkages developed with other agencies (No.)	2	25

CITH scientists also provided critical inputs for conducting demonstrations at farmers' field besides regular technical advice during farmers-scientist interface. During 2018-19, CITH provided 0.34 quintals seeds to 21 farmers and 4000 no. of planting material to 5 farmers as presented in Table 8.

Table 8: Input support provided

S. No.	Name of input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	0.34	0.023	21
2.	Planting material (No.)	4000	0.126	5

New Apple Varieties Awareness Camp

5.ICAR-Directorate of Cold Water Fisheries Research (DCFR), Bhimtal (Uttarakhand)

No. of teams formed

ICAR-DCFR has formed seven multi-disciplinary teams of 23 scientists including one coordinator in each team.

No. of villages selected

ICAR-DCFR has selected a total of 24 villages under MGMG scheme. Bench mark survey of 10 villages was completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
6	23	24	12	10	10

Activities undertaken

Teams of DCFR scientists have organized 41 visits to their respective selected villages and contacted 488 farmers. Eighteen interface meetings/*Goshthies* were conducted in which 640 farmers participated. A total of 27 demonstrations were laid out on 11.7 ha by the scientists at farmers' field. Scientists also organized ten training camps benefitting 419 farmers. Scientists also provided 71 agro-advisory services by sending SMSs to farmers. Scientist also created awareness among 992 farmers about potential of new apple varieties, training and pruning, pollination management and horticultural crop production and protection.

Table 9: Activities organized by DCFR during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	41	488
2.	Interface meeting/ *Goshthies*	18	640
3.	Training	10	419
4.	Demonstrations	11.7	321
5.	Mobile based advisories (No.)	71	181
6.	Literature support provided	23	940
7.	Awareness created	75	992
8.	Linkages developed with other agencies (No.)	08	275

During 2018-19, DCFR scientists provided approximately 30,000 no. of fish fry and fingerlings to 45 farmers and 7 quintals fish feed to 35 farmers as presented in Table 10.

Table 10: Input support provided

S. No.	Name of input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Fish fry and fingerlings	30,000	8.0	45
2.	Fish feed (q)	7.0	3.7	35

Awareness Fabricated on New Varieties of Apple

6.ICAR-Indian Institute of Soil and Water Conservation (IISWC), Dehradun (Uttarakhand)

No. of teams formed

ICAR-IISWC has formed 24 multi-disciplinary teams of 92 scientists including one coordinator in each team.

No. of villages selected

ICAR-IISWC has selected a total of 117 villages under MGMG scheme. Bench mark survey of 125 villages was completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
24	92	117	30	17	125

Activities undertaken

Teams of IISWC scientists have organized 88 visits to their respective selected villages and contacted 3708 farmers. Fifty one interface meetings/*Goshthies* were conducted in which 2519 farmers participated. Demonstrations on 44.23 ha were laid out by the scientists at 725 farmers' field. Scientists also organized 18 training camps to 637 farmers. Scientists also provided 21 agro-advisory services by sending 456 SMSs to farmers. Scientist also created awareness among 3648 farmers about the soil and water conservation techniques and methods.

Table 11: Activities organized by IISWC during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	88	3708
2.	Interface meeting/ *Goshthies*	51	2519
3.	Training	18	637
4.	Demonstrations	44.23	725
5.	Mobile based advisories (No.)	21	456
6.	Literature support provided	37	1892
7.	Awareness created	42	3648
8.	Linkages developed with other agencies (No.)	20	3235

Table 12 clearly showed that scientists also provided quality seeds for conducting demonstrations at farmers' field besides regular technical advice during farmers-scientists interface. During 2018-19, IISWC provided more than 44 quintals seeds to 401 farmers, approximately 2626 no. of planting materials to 26 farmers and 30 quintals fertilizers benefitting 105 farmers.

Table 12: Input support provided

S. No.	Name of input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	44.8	27.23	401
2.	Planting material (No.)	2626	2.5	26
3.	Fertilizer (q)	30	27	105

Soil and Water Conservation Camps

7.ICAR –Agricultural Technology Application Research Institute (ATARI), Ludhiana (Punjab)

No. of teams formed

ICAR-ATARI has formed one multidisciplinary team of four scientists including one coordinator.

No. of villages selected

The single team of ATARI scientists has selected five villages of Ludhiana district. Bench mark survey of all villages was completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
1	6	7	1	2	7

Activities Undertaken

Teams of ATARI scientists have organized 32 visits to their respective selected villages and contacted 530 farmers. Twenty seven interface meetings/*Goshthies* were conducted in which 290 farmers participated. A total of 219 demonstrations were laid out by the scientists at 219 farmers' field. Scientists also organized 28 training camps to 274 farmers. Scientists also provided 28 agro-advisory services by sending 1000 SMSs to farmers. Scientist also created awareness among 388 farmers about basic, strategic and adaptive research for improving productivity and quality of important crops with emphasis on conservation and efficient utilization of natural resources.

Table 13: Activities organized by ATARI during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	32	530
2.	Interface meeting/ *Goshthies*	27	290
3.	Training	28	274
4.	Demonstrations	219	219
5.	Mobile based advisories (No.)	28	1000
6.	Literature support provided	13	170
7.	Awareness created	12	388
8.	Linkages developed with other agencies (No.)	3	60

It is depicted in Table 14 that scientists also provided quality seeds for conducting demonstrations at farmers' field besides regular technical advice farmers-scientist interface. During 2018-19, ATARI provided 480 quintals seeds to 490 farmers and 500 no. of planting materials to 335 farmers.

Table 14: Input support provided

S. No.	Name of input	Quantity (q)/No.	No. of Farmers Benefitted
1.	Seeds (q)	480	490
2.	Planting material (No.)	500	335

Demonstrated Efficient Use of Natural Resources

8.ICAR –Central Institute of Post Harvest Engineering (CIPHET), Ludhiana (Punjab)

No. of teams formed

ICAR-CIPHET has formed 10 multidisciplinary teams consisting of 37 scientists including one coordinator.

No. of villages selected

The 10 teams of CIPHET scientist have selected 45 villages of from Punjab. Bench mark survey of 19 villages was conducted by scientists of CIPHET during 2018-19.

Progress of Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
10	37	45	6	5	19

Activities undertaken

Teams of CIPHET scientists have organized 10 visits to their respective selected villages and contacted 250 farmers. Ten interface meetings/*Goshthies* were conducted in which 210 farmers participated. Scientists also provided 1 agro-advisory services by sending SMSs to 25 farmers. Scientist also created awareness among 40 farmers about basic, strategic and adaptive research for improving productivity and quality of important crops with emphasis on conservation and efficient utilization of natural resources and 275 farmers were benefitted during 2018-19.

Table 15: Activities organized by CIPHET during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	10	250
2.	Interface meeting/ *Goshthies*	10	210
3.	Mobile based advisories (No.)	1	25
4.	Literature support provided	17	250
5.	Awareness created	40	275
6.	Linkages developed with other agencies (No.)	2	100


Explaining Importance of Natural Resources for Crops

9.ICAR –Indian Institute of Maize Research (IIMR), Ludhiana (Punjab)

No. of teams formed

ICAR-IIMR has formed eight multidisciplinary teams consisting of 30 scientists including one coordinator in each team.

No. of villages selected

The 8 teams of ICAR-IIMR scientist have selected 20 villages.

Progress of the Institute

No. of Team of Scientists	No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
8	30	20	11	6	--

Activities undertaken

Teams of ICAR-IIMR scientists have organized 5 visits to their respective selected villages and contacted 78 farmers. Only one Interface meetings/*Gosthies* were conducted in which 29 farmers participated. A total of 24 demonstrations were laid out by the scientists at

24 farmers' field. Scientists also provided 137 agro-advisory services by sending SMSs to 127 farmers. Scientist also created awareness among 172 farmers about basic, strategic and adaptive re search for improving productivity and quality of important crops with emphasis on conservation and efficient utilization of natural resources.

Table 16: Activities organized by IIMR during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	5	78
2.	Interface meeting/ *Goshthies*	1	29
3.	Training	2	50
4.	Demonstrations	24	24
5.	Mobile based advisories (No.)	137	127
6.	Literature support provided	59	65
7.	Awareness created	12	172
8.	Linkages developed with other agencies (No.)	5	123

During 2018-19, IIMR scientists provided 4 quintals seeds to 36 farmers as presented in Table 17.

Table 17: Input support provided

S. No.	Name of Input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	4	40	36


Strategic Illustration for Improving Productivity & Quality of Crops

10.ICAR –Central Potato Research Station (CPRS), Jalandhar (Punjab)

No. of teams formed

ICAR-CPRS has formed one team consisting of ten scientists including coordinator.

No. of villages selected

The team of ICAR-CPRS scientist had selected five villages. Bench mark survey of all vil lages was conducted by scientists of ICAR-CPRS during 2018-19.

Progress of the Institute

No. of Team of Scientists	No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
1	10	5	1	1	5

Activities undertaken

Teams of ICAR-CPRS scientists have organized 12 visits to their respective selected villages and contacted 210 farmers. Only 3 interface meetings/*Gosthies* were conducted in which 58 farmers participated. Scientists also provided 30 agro-advisory services by sending SMSs to 754 farmers. Scientist also created awareness among 46 farmers about maize production technologies, use of need based fertilizers and use of mask, goggles, hand gloves etc. at the time of spray of pesticides.

Table 18: Activities organized by CPRS during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	12	210
2.	Interface meeting/ *Goshthies*	3	58
3.	Mobile based advisories (No.)	30	754
4.	Awareness created	3	46
5.	Linkages developed with other agencies (No.)	2	98

During 2018-19, CPRS scientists also provided 9.5 quintals seeds to 9 farmers as presented in Table 19.

Table 19: Input support provided

S. No.	Name of input	Quantity (q)/No.	Area (ha)	No. of farmers benefitted
1.	Seeds (q)	9.5	2	9



Picturing Maize Production Technologies

UNIVERSITY WISE PROGRESS

1.Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya (CSKHPKV), Palampur (H.P)

No. of teams formed

CSKHPKV has formed eleven multidisciplinary teams of 42 scientists. Teams consist of 4-5 scientists including one coordinator.

No. of villages selected

These teams of scientists have selected 15 villages, which covers 13 development blocks and eight districts of Himachal Pradesh. Bench mark survey of 13 villages was completed.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
11	42	15	13	8	13

Activities undertaken

Team of scientists has organized 133 visits to their selected villages and contacted 2899 farmers. The teams also conducted 81 Interface meetings/ *Goshthies* in which 1604 farmers participated. There were 609 demonstrations laid out on agricultural technologies by scientists at 99.84 ha farmers' field. Scientists conducted 71 training camps for 2387 farmers. Mobile based 147 agro based advisories were sent to farmers of these villages. Scientific literature developed on various farming aspects were given to 1200 farmers. Scientists also created awareness about various agricultural aspects to 4378 farmers.

Table 1: Activities organized by CSKHPKV, Palampur during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	133	2899
2.	Interface meeting/ *Goshthies*	81	1604
3.	Training	71	2387
4.	Demonstrations	99.84	609
5.	Mobile based advisories (No.)	147	3302
6.	Literature support provided	42	1200
7.	Awareness created	12	4378
8.	Linkages developed with other agencies (No.)	10	1774

CSKHPKV scientists also provided critical inputs for conducting demonstrations at farmers' field besides regular technical advice during farmers-scientist interface. During 2018-19, scientists provided more than 150 quintals seeds to 456 farmers, approximately 100 no. of planting materials to 48 farmers and 0.10 quintals fertilizers to 22 farmers as presented in Table 2.

Table 2: Input support provided

S. No.	Name of Input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	150.11	80.73	456
2.	Planting material (No.)	100	0.26	48
3.	Fertilizers (q)	0.10	0.24	22

Demonstrations about Various Agricultural Aspects

2. Dr YS Parmar University of Horticulture and Forestry (Dr YSP UH&F), Solan (H.P)

No. of teams formed

Dr YSP UH&F has formed 32 multi-disciplinary teams of 100 scientists. Most of the teams consist of four scientists and one coordinator.

No. of villages selected

Each team of scientists has selected one village and a total of 32 villages were selected all the 32 teams of scientists. The selected villages cover five development blocks and two district of Himachal Pradesh. Bench mark survey of all selected villages was conducted during 2018-2019 .

Progress of the Institute

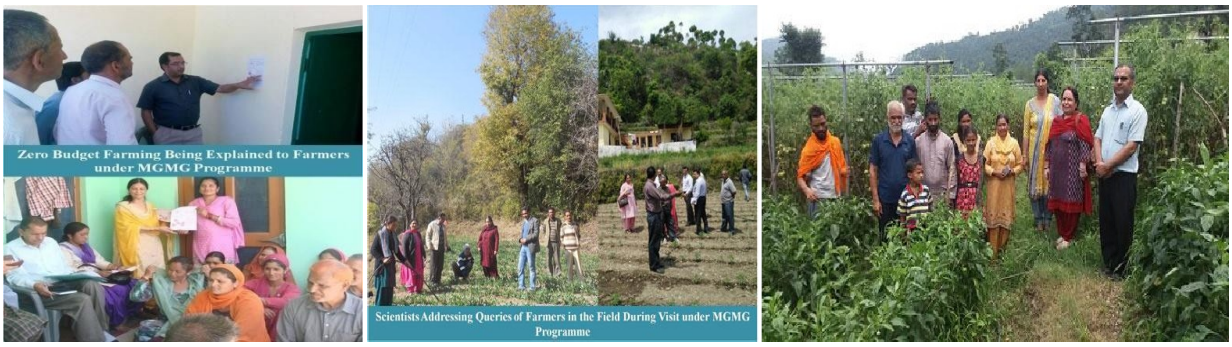
Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
32	100	32	5	2	32

Activities undertaken

Teams of scientists of Dr YSP UH&F have organized 128 visits to their respective villages and contacted 500 farmers. The teams also conducted 128 Interface meetings/*Goshthies* in which 500 farmers participated. Scientists also provided 250 mobile based agro advisories to farmers of these villages. Scientific literature developed on various aspects also provided to 50 farmers. Scientists also created awareness about various agricultural aspects to more than 500 farmers.

Table 3: Activities organized by Dr. YSPUH&F, Solan during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	128	500
2.	Interface meeting/ *Goshthies*	128	500
3.	Mobile based advisories (No.)	250	250
4.	Literature support provided	10	50
5.	Awareness created	32	500



Scientists Addressing Farmers in the Field

3.Shere-E-Kashmir University of Agricultural Sciences & Technology (SKUAST), Jammu

No. of teams formed

SKUAST-K has formed thirty two multidisciplinary teams of 133 scientists. Each team consists of 4-5 scientists including one coordinator.

No. of villages selected

A total of 147 villages were selected by the scientists. The selected villages cover North, Central and South Kashmir. Bench mark survey of all the selected villages was completed during 2018-2019.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
32	133	147	06	03	147

Activities undertaken

Team of scientists has organized 68 visits to their selected villages and contacted 950 farmers. The teams also conducted 77 Interface meetings/ *Gosthies* in which 626 farmers participated. There were 49 demonstrations laid out on agricultural technologies by scientists at 7.50 ha farmers' field. Scientists conducted 20 training camps for 555 farmers. Mobile-based 186 agro based advisories were sent to farmers of these villages. Scientific literature developed on various farming aspects were given to 494 farmers. Scientists also created awareness about various

agricultural aspects to 116 farmers.

Table 4: Activities organized by SKAUST-Jammu during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	68	950
2.	Interface meeting/ *Goshthies*	77	626
3.	Training	20	555
4.	Demonstrations	7.50	49
5.	Mobile based advisories (No.)	186	268
6.	Literature support provided	73	494
7.	Awareness created	55	116
8.	Linkages developed with other agencies (No.)	10	237

During 2018-19, SKUAST Jammu scientists also provided 0.875 quintals to one farmer as presented in Table 5.

Table 5: Input support provided

S. No.	Name of Input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Seeds (q)	0.875	1	1

Illustration of Important Farming Aspects

4.G.B. Pant University of Agriculture & Technology (GBPUA&T), Pantnagar (Uttarakhand)

No. of teams formed

GBPUA&T has formed 27 multidisciplinary teams of 108 scientists. Each team consists of four scientists including one coordinator.

No. of villages selected

Each team of scientists has selected five villages and a total of 135 villages were selected all the 27 teams of scientists.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
27	108	135	07	01	135

Activities undertaken

Teams of scientists of GBPUA&T have organized 146 visits to their respective villages and contacted 3008 farmers. The teams also conducted 86 Interface meetings/*Gosthies* in which 2473 farmers participated. Scientists also provided 120 mobile based agro advisories to farmers of these villages. Scientific literature developed on various aspects also provided to 969 farmers. Scientists also created awareness about various agricultural aspects to 1028 farmers.

Table 6: Activities organized by GBPUA&T, Pantnagar during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	146	3008
2.	Interface meeting/ *Goshthies*	86	2473
3.	Training	120	240
4.	Demonstrations	885	969
5.	Mobile based advisories (No.)	88	1028
6.	Literature support provided	93	409
7.	Awareness created	146	3008
8.	Linkages developed with other agencies (No.)	86	2473

Exposure to New Agricultural Techniques

5.Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana (Punjab)

No. of teams formed

GADVASU, Ludhiana has formed two teams of scientists comprising 5 scientists including one coordinator in each team.

No. Of villages selected

Teams of scientists have selected 5 villages, which covers one district of Punjab. Bench mark survey of five villages was completed during 2018-19.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of Villages)
2	5	5	1	1	5

Activities undertaken

Teams of scientists have organized 48 visits to their selected villages and contacted 1428 farmers. The teams also conducted 12 Interface meetings/*Gosthies* in which 624 farmers participated. There were 196 demonstrations laid out on agricultural technologies by scientists at 287 ha farmers' field. Scientists conducted 18 training camps for 834 farmers. Mobile based 19 agro based advisories were sent to farmers of these villages. Scientific literature developed on various farming aspects were given to 350 farmers. Scientists also created awareness about various agricultural aspects to 98 farmers.

Table 7: Activities organized by GADVASU Ludhiana during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	48	1428
2.	Interface meeting/ *Goshthies*	12	624
3.	Training	18	834
4.	Demonstrations	287	196
5.	Mobile based advisories (No.)	19	6880
6.	Literature support provided	10	350
7.	Awareness created	04	98
8.	Linkages developed with other agencies (No.)	05	>1000

During 2018-19, GADVASU scientists also provided 4000 no. of planting materials to 25 farmers and 2 quintals fertilizers to 56 farmers as presented in Table 8.

Table 8: Input support provided

S. No.	Name of Input	Quantity (q)/No.	Area (ha)	No. of Farmers Benefitted
1.	Planting material (No.)	4000	--	25
	Fertilizers (q)	2	24	56

Consequences of Crop Residue Burning Side

6.Punjab Agricultural University (PAU), Ludhiana (Punjab)

No. of teams formed

PAU, Ludhiana has formed 37 teams of scientists comprising 73 scientists including one coordinator in each team.

No. of villages selected

Teams of scientists have selected 74 villages, which covers 14 districts of Punjab. Bench mark survey of 70 villages was completed.

Progress of the Institute

Total No. of Team of Scientists	Total No. of Scientists	No. of Villages	No. of Blocks	No. of Districts	Bench Mark Survey Conducted (No. of
37	73	74	33	14	70

Activities undertaken

Teams of scientists have organized 452 visits to their selected villages and contacted 8786 farmers. The teams also conducted 237 Interface meetings/ *Goshthies* in which 6448 farmers participated. There were demonstrations laid out on agricultural technologies by scientists at 699.04 ha farmers' field. Scientists conducted 260 training camps for 5305 farmers. Mobile based 754 agro based advisories were sent to farmers of these villages. Scientific literature developed on various farming aspects were given to 15017 farmers. Scientists also created awareness about various agricultural aspects to 10813 farmers.

Table 9: Activities organized by PAU Ludhiana during 2018-19

S. No.	Name of Activity	No. of Activities Conducted	No. of Farmers Participated & Benefitted
1.	Visit to village by teams	452	8786
2.	Interface meeting/ *Goshthies*	237	6448
3.	Training	260	5305
4.	Demonstrations	699.04	1891
5.	Mobile based advisories (No.)	754	18936
6.	Literature support provided	1481	15017
7.	Awareness created	161	10813
8.	Linkages developed with other agencies (No.)	64	3040

During 2018-19, PAU provided more than 11000 quintals seeds to 9201 farmers and approximately 10072 no. of planting materials to 1310 farmers as presented in Table 10.

Table 10: Input support provided

S. No.	Name of Input	Quantity (q)/No.	No. of Farmers Benefitted
1.	Seeds (q)	11086.94	9201
2.	Planting material (No.)	10072	1310

Discussions on New Agricultural Technologies & Features

CASE STUDIES

Successful Management of *Tuta Absoluta*, One of the Serious Pests of Tomato Causing Extensive Damage in Many Countries

1.Background information:

Insect pests are always been a limiting factor for crop production. Besides many native insect pests affecting the crops, various exotic pests also cause serious damage time to time. The tomato pin worm, *Tuta absoluta* is one of the serious pests of tomato causing extensive damage in many countries. The larva mine between the epidermis of leaves and make irregular blotches. It also feeds on stem, buds, calyx and fruits. In fruits, they make pin holes and mine inside. It is reported in brinjal, potato, capsicum, etc. Adults are small brown moth (5-7 mm) with silvery and black spots and reportedly lay 250 eggs. The pest was first reported in India in 2014. It was noticed during May 2018 in Bhagartola in tomato crops grown under polyhouses.

2.Technological intervention:

Owing to the importance of the pest, ADG (Plant Protection), ICAR, New Delhi was consulted and the survey and management of the pest was carried out under his guidance. The state agricultural department was alerted, surveys and awareness programs were conducted along with them. A team of scientists along with Director, ICAR-VPKAS surveyed the village Bhagartola, Jageshwar on 29-05-18. The guidance of Director and scientists of ICAR- NBAIR, Bengaluru was also taken. Subsequently, pheromone traps and parasitoid, *Trichogramma achaea* were obtained from ICAR-NBAIR, Bengaluru for use against *T. obsoluta* in Uttarakhand. All the polyhouses of the MGMG cluster were surveyed and pest incidences of about 5-10% were noticed. The farmers of the area were made aware about the identification of the pest and the potential damage. Severely infested polyhouses were sprayed with the insecticide, chlorantraniliprole @ 0.3 ml/l.

3.Innovative extension methods used:

The incidence of the pest was noticed at the initial stage through routine field surveys by the extension staff and by the farmer's contact with the institute through toll free number. Upon identification of the pest, the state department of agriculture was alerted and took them along for every interventions made. An awareness program for the officials of the state department of Agriculture was conducted on the identification, biology and management of the pest at ICAR- VPKAS, Almora on 02.06.18. Surveys were conducted by the scientists of ICAR-VPKAS and the state functionaries. Since there is only one chemical insecticide available for the management, the pesticide shops were informed/ alerted to have the insecticide (Chlorantraniliprole) in stock, which was purchased by the institute, state department and farmers themselves for use in pest combat.

4.Linkage developed through Govt. sponsored schemes /spread/benefits:

Linkage with the state department of agriculture especially the Chief Agriculture/ Horticulture Officers and Plant Protection Officers were strengthened by conducting awareness campaigns and management programs along with scientist of ICAR-VPKAS, Almora All the KVKs of the state especially the KVKs at Uttarkashi and Bageshwar were advised to undertake surveys on pinworm damage in tomato and the situation was monitored.

5.Impact:

Early detection coupled with immediate warfoot action taken with proper guidance from experts has averted a greater damage which would have otherwise caused by tomato pinworm infestation in the region. Pinworm reportedly caused up to 50% damage in tomato even causing complete crop failures in rare cases. The damage by this exotic pest was halted because of combine action of the institute and the district administration especially the department of agriculture.

6.Lessons learned:

- Time to time survey on pests and diseases in farmer's field is necessary along with contact of progressive farmers who can inform field situations/ abnormalities in time.
- Immediate actions are helpful in combating pest like *Tuta obsoluta* which are usually fast spreading/ infestation in nature.
- Combined action of research institute along with different stakeholders like line departments (agriculture/ horticulture etc) yields more benefit in times of urgent needs.

Surveys Undertaken

Trainings Conducted

Awareness Campaign

Contribution: Om Chand Sharma
Jageshwar Cluster

ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan (VPKAS), Almora (Uttarakhand)

Advances in Potato Production

1.Background information:

Station is carrying out the research work on potato.

2.Technological intervention:

Station is in constant touch with the farmers and informs them about the newly developed technologies e.g. about new varieties, farm implements, chemicals for seed treatment and about post harvest utilization of potato etc.

3.Innovative extension methods used:

Demonstrations and mobile services.

4.Linkage developed through Govt. sponsored schemes /spread/benefits:

Through Krishi Vigyan Kendra (KVK), Nurmahal & Krishi Vigyan Kendra (KVK), Moga

5.Impact:

Farmers have become aware about the new techniques/methods. Awareness about the use of chemicals, insecticides, pesticides, fertilizers and soil health, has also been created.

6.Lessons learned:

General and agricultural problems faced by the farmers.

Heap Making of Potatoes

Manual Sorting and Grading of Potatoes

Contributions: Sunil Gulati
ICAR- Central Potato Research Station (CPRS), Jalandhar (Punjab)

Vegetable Nutrition Garden

1.Background information:

Development of Vegetable Nutrition Garden for a family of 4 persons, in order to fulfill the nutritional requirements of the entire family in Village Dhaul Kalan, Block Verka, Amritsar.

2.Technological intervention:

A vegetable nutrition garden of size 6m X 6m is established in which 27 different vegetables can be produced throughout the year which are sufficient to meet vitamins, minerals and protein requirements of a family comprising of 2 adults and 2 children.

3.Innovative extension methods used:

A model of Vegetable Nutrition garden was established in KVK premises and progressive women from nearby villages were invited to visit the model and understand the concept. Required vegetable seed kit was provided to them so that they can start with the Nutrition Garden development at household level.

4.Linkage developed through Govt. sponsored schemes /spread/benefits:

Department of Horticulture was involved in the program for its wider impact. Also seed kit was provided by Punjab Agricultural University.

5.Impact:

- Impact was seen in terms of monetary benefits as their vegetable requirements for kitchen was almost eighty per cent fulfilled from their own garden resulting in considerable savings. They were also able to get much wider variety of vegetables and fresh products were available to be used in household kitchen.
- Secondly they were able to grow pesticide free vegetables which helped in improvement of the nutritional status of the family.
- One or two fruit plants were also established near the kitchen garden like Lemon and Guava.
- The families expressed happiness at the satisfaction they received on eating vegetables grown on their own.

6.Lessons learned:

The participants of the program need to be provided a comprehensive training package for it to be effective in long run. They had to be informed about the importance of balanced nutrition for them to accept the idea of nutrition garden.

Demonstration of Nutrition Garden

Krishi Vigyan Kendra (KVK), Amritsar (Punjab)
Punjab Agricultural University (PAU), Ludhiana (Punjab)

Use of CRM Machinery by Farmers

1.Background information:

KVK Muktsar adopted 5 villages under MGMG, various activities i.e. kisan goshthies, training, awareness camps were organized. To update the knowledge of farmers various technological demonstrations has been conducted.

2.Technological intervention:

- Whitefly management by adopting PAU spray technology.
- Increase the area under recommended varieties through FLD
- Demonstrations Adoption of direct seeded of rice technology
- Spraying technology in DSR with tractor drown sprayer
- Adoption of happy seeder technology
- Promotion of CRM activities

3.Innovative extension methods used:

- Dissemination of new agriculture technology through WhatsApp group
- Dissemination of new agriculture technology through KVK Facebook page
- KVK website , KVK kisan portal

4.Linkage developed through Govt. sponsored schemes /spread/benefits:

- ATMA, IFCO,
- Dept. of Horticulture, Muktsar
- Dept. of Agriculture and Farmer welfare
- Muktsar, Dept. of Horticulture, Muktsar

5.Impact:

- Due to whitefly management in cotton the expenditure on insecticide has decreased.
- Yield of crops enhanced due to the increase in area under recommended varieties.
- DSR saved water and labor cost.
- Less residue burning in area leads to improvement in environment condition and expenditure on sowing of wheat crop.

6.Lessons learned:

KVK Muktsar made affords for development of custom hiring center in adopted villages and group of farmers has purchased of subsidized CRM machinery. Farmers were satisfied by using these machinery at their own and neighbors field.



On-Farm Scrutining

Krishi Vigyan Kendra(KVK), Mukatsar (Punjab)
Punjab Agricultural University (PAU), Ludhiana (Punjab)

Nutritional Counseling on Iron Deficiency for Women

1.Background information:

Anaemia is a public health problem that affects populations- the children, adolescent's girls, pregnant women, and lactating mothers throughout the countries. In Punjab, it is on the worrisome front, 80.2 per cent of the children in the age group of 6 month to 3 years, 38.4 per cent young women in the age group of 15-49 years and 41.6 per cent pregnant women are recorded as suffering from anaemia. Addressing anaemia is a huge medical, social and developmental challenge for the country. The most important cause for anaemia is inadequate dietary intake of iron. Currently, nations have tried three major strategies to improve iron nutrition: Supplementation that includes the provision of iron supplements, especially to those at risk, such as pregnant women and adolescent girls. Dietary diversification includes increase in the iron content of the diet. Fortification implies fortify common food staples with iron.

2.Technological intervention:

- Distribution of written material developed by Department of Food and Nutrition, PAU, Ludhiana entitled "A Completed guide to combat malnutrition Anaemia" among the home makers of the Village, Khattkaran Kalan.
- Different lectures on causes and symptoms of Iron Deficiency Anaemia (IDA) were organized. Moreover, role of dietary and lifestyle factors in eradicating Iron Deficiency Anaemia (IDA) was taught through the preparation of low-cost iron rich nutritious recipes like veg poha, veg dalia, sprouted salad and nutrtious ladoo etc during celebration of Breast Feeding Week and National Nutrition Week.
- Cooking Competition at block level on the "preparation of iron rich recipes" was also conducted during celebration of nutrition week to get more people aware about the Iron Deficiency Anaemia (IDA).

3.Innovative extension methods used:

Lectures, demonstration and cooking competition were organized to initiate their skills in the preparation of iron rich recipes for the family. Fortified iron rich food was also bought into notice through group-discussion methods.

4.Linkage developed through Govt. sponsored schemes /spread/benefits:

For conducting this work a contact with the Aganwari Worker, Aaganwari Supervisior and CDPO was established.

5.Impact:

Nutritional status of the homemakers was improved with this technological intervention in terms of improvement in dietary intake as nutritional counseling has helped the ladies to eat quality rich food and bring some modification in life style.

6.Lessons learned:

- Nutritional counseling
- Preparation of nutritious recipes
- Healthy life style

- Mental health

Awareness Camp on Iron Deficiency

Krishi Vigyan Kendra(KVK), SBS Nagar (Punjab)
Punjab Agricultural University (PAU), Ludhiana (Punjab)

Dissemination of Multiple Crop Treatment

1. Background Information:

Major farming systems/enterprises (based on the analysis made by the KVK):

S. No	Farming system/enterprise	
1.	Irrigated (bore well)	Wheat- paddy, wheat basmati, vegetable-basmati, berseem- maize (fodder)
2.	Irrigated (canal)	Wheat- paddy, wheat basmati, vegetable-basmati, berseem-maize(fodder)
3.	Tank Irrigated	--
4.	Rainfed	--
5.	Enterprises	Dairy Bee-Keeping Poultry Mushroom cultivation

Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography):

S. No	Agro-climatic Zone	Characteristics
1.	South- Western Zone	Annual rainfall from April 2016 to March 2017 was 27.27 mm in the district. Hot summer & cold winter prevails with alluvial soils and patches of saline and alkali soils and water logged soils.
2.	Agro ecological situation	Characteristics
	Semi arid- arid	Northern plain lands including, hot semi-arid eco-regions with alluvial soils and patches of saline and alkali soils.

Soil types:

S. No	Soil type	Characteristics	Area in ha
1.	Loamy sand to sandy loam	Soils are light to medium textured. However, even heavy textured clay soils are also found in some pockets of district. Soils are having low to high water permeability, low to medium in organic carbon, medium to high in phosphorus & high in available potash.	3258.78

Priority/thrust areas:

S. No	Crop/Enterprise	Thrust area
1.	Rice	Integrated Crop Management, Enhancing soil fertility through incorporation of straw.
2.	Wheat	Integrated Crop Management, Enhancing soil fertility through incorporation of straw.
3.	Paddy	Integrated Crop Management, Enhancing soil fertility through incorporation of straw.
4.	Potato	Disease Management
5.	Fodders	Quality Seed Production
6.	Crossbred Cattle	Repeat Breeding
7.	Buffalo	Anestrous Management
8.	Poultry	Balance Feeding
9.	Bee keeping	Summer and Winter Management

2. Technological intervention:

On farm trails:

- Effect of different mulching systems on yield and weed growth in bearing orchards,
- Effect of balanced feeding on milk production & reproduction in crossbred cattle
- Effect of proper seed and seedling treatment before sowing and transplanting on control of damping off chilly
- Improvement of Kinnow mandrin fruit productivity and quality by urea, boron, zinc foliar spray
- Diabetic management through diet (blood glucose range: fasting = 110-130mg/dl and random 130-185 mg/dl)
- Control of plant hopper in rice with non-chemical methods
- Evaluation of methods of preparation of garlic pickle
- Control of mustard aphid with cultural methods

Frontline demonstrations:

- Fruit fly traps in guava
- Summer moong variety SML-668
- Gobhi sarson var. GSC-7
- Chickpea var. PBG-7
- Onion variety Pb naroya
- Pea variety PB.89

3. Innovative extension methods used:

Transfer of technology through trainings, awareness camps, seminars, kisan Sammelan, goshties, group discussions, exhibitions, method demonstrations, surveys etc.

4. Linkage developed through Govt. sponsored schemes /spread/benefits:

- Promotion on Agricultural Mechanization for In-Situ Management of Crop Residue in the State of Punjab (District Ferozepur)" ICAR-120 (PC 2470)
- Krishi Kalyan Abhiyan Scheme

5. Impact:

- Area under recommended varieties of PAU: Due to campaigns launched by KVK, Ferozepur for popularization of recommended varieties, the area under varieties recommended by PAU increased significantly in the adopted villages.
- Adoption of non-burning of crop residue: The crop residue burning reduced as results of continuous campaign and awareness created by the Kendra.

6. Lessons learned:

Door to door outreach

View of Various Method's Demonstrated

Krishi Vigyan Kendra (KVK), Ferozepur (Punjab)
Punjab Agricultural University (PAU), Ludhiana (Punjab)

Annexure-I

List of ICAR Institutes and SAUs along with Nodal Officer

S. No.	Name of Institute/University	Name	Designation	Email Id	Contact No.
1	ICAR-DMR, Solan	Dr. Yogesh Gautam	Senior Scientist	ygautamdmr@gmail.com	9418026157
2	ICAR-CPRI, Shimla	Dr. N.K.Pandey	Head	nkpcpri@gmail.com	9418276362
3	ICAR-VPKAS, Almora	Dr. Nirmal Chandra	Principal Scientist	ncdiwan@yahoo.com	9456545549
4	ICAR-CITH, Srinagar	Dr Om Chand Sharma	Principal Scientist	ommandi@yahoo.com	9419243119
5	ICAR-DCFR,Bhimtal	Dr. S. Chandra	Principal Scientist	chandrasuresh037@gmail.com	7579054501
6	ICAR-IISWC,Dehradun	Dr. Lekh Chand	Senior Scientist	lekhchand1@gmail.com	8755308844
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8	ICAR-CIPHET, Ludhiana	Dr. Sandeep Mann	Principal Scientist	sandeep_mann76@yahoo.com	9463043396
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Annexure-II

List of Villages

1. ICAR-DMR Solan

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Himachal Pradesh	Solan	Kandaghat	AnjiSunara, Wakhna, Rawali, Bhodhan, Kashmari, Garoo, Anji, Dharot, Jyon, Lahog (Katal), Pati Chabyar, Sahalumna	12

2. ICAR-CPRI Shimla

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Himachal Pradesh	Shimla	Theog	Talai, Dhaleu (Dehna), Bhani, Jethai, Katudi, Chara, Domehar	7

3. ICAR-VPKAS Almora

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Uttarakhand	Almora	Tarikhet	Tipola, Chhapar, Baliyali Tunakot, Syalikhet	5
Uttarakhand	Almora	Dwarahat	Baralgaon, Pagsa, Aina, Kuwalui	4
Uttarakhand	Almora	Dhauladevi	Bhagartola, Papgad, Silangi, Nainigooth, Kadauri, Deengrigooth	6
Uttarakhand	Almora	Hawalbagh	Naula, SallaRautela, Balsa, Champa, Syahi Devi, Raun, Dal, Bimola, LatwalGaon, Naugaon	11
Uttarakhand	Almora	Chaukhutiya	Bageri, Godi, Bishtbakhli, Basbhida	4

4. ICAR-CITH Srinagar

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
J&K	Anantnag	Dachnipora	Hatigam	1
J&K	Badgam	Watrihal	Sholipora	1
UK	Nainital	Dhari	Sunkiya	1

5.ICAR- DCFR Bhimtal

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Uttarakhand	Almora	Dwarhat, Hawalbagh	Todera, Dudhauli, Jyurkafun,Manan	4
Uttarakhand	Pithoragarh	Munsyari	Sarmoli	1
Uttarakhand	U. S. Nagar	Sitarganj	Salmatta	1
Uttarakhand	Champawat	Champawat	Dudhpokhara, Mudyani, Chekuni Bora, Moradi, Khunari	5
Uttarakhand	Nainital	Bhimtal	Alchaunna, Hari Nagar, Berijala, Baheri Gaon, (Vinayak) Boherakun	5
Meghalaya	Ri-bhoi, East Khasi Hills,West Khasi Hills	Umshning, Pynhurslla, Laitkhrong, Myrang	Umshning, Pynhurslla, Laitkhrong, Myrang	4
Arunachal Pradesh	West Kameng Lower subansiri	Dirang, Zero	Chug, Hari, Changpa, Donglok	4

6. ICAR- IISWC Dehradun

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Uttarkhand	Dehradun	Raipur	Bhopalpani, Kalimati, Badasi, Soda Saroli, Soda Dwara	5
Uttarkhand	Dehradun	Kalsi	Jasau-Bhakro, Thateyo, Damta, Bamrad, Udapata, Kuroli, Khatasa, Bhori, Sahiya, Badnu, Datnu, Maletha, Barad, Patan,	14
Uttarkhand	Tehri Garhwal	Jaunpur	Mazhgaon, Kelwan, Maroda, Lamkande, Tegna	5
Uttarkhand	Dehradun	Kalsi	Phateu, Ichhla, Semalta, Pata, Kalsi-Johar	5
Uttarkhand	Dehradun Tehri Garhwal	Sahaspur Thatayur	Pawwala Soda, Shaspur, Swaran Dobri, Almas, Rotu ki beli	5
Uttarkhand	Dehradun	Raipur	Karligarh, Sahastradhara, Majhara, Kheri	4
Uttarkhand	Dehradun	Vikasnagar	Langha, Pasauli, Rudrapur, Godariya	4
Uttar Pradesh	Agra	Etmadpur	Nayabans, Garapur, Nagla Gangaram, Surehra, Chhirbari, Behrampur	6
Uttar Pradesh		Fatehbad	Garhi Udairaj, Sarangpur, Bilpura, Manikpura, Basai Gurjar	5
Karnataka	Citradurga	Molakalmuru	Hanumapura, Netranahalli, Vittalapura, Maramanahalli	4

Karnataka	Citradurga Bellary	Molakal muru Bellary	Karekal, Chellagurki, Joladarasi, K. Virapur	4
HP & Hary-ana	Panchkula Solan So-lan Panch-kula SAS Nagar	Kalka Nalagarh Nalagarh Pinjore Derabassi	Sukhomajri Mandhala Johranpur Kajiana Bhagwasi	5
Haryana	Panchkula	Pinjore Barwala	Mallah Janauli Bunga Jabrot Nolta	5
MP	Datia	Datia	Jigna, Imaliya, Tiwaripura, Chopra, Dang Karera, Sitapur, Nayagaon, Murera, Maheba	9
Odisha	Koraput Rayagada	Simligud a Pottangi Nandapur Tikiri	Jogiput Rosaiput Paknaput Pujariput Jharaput Rajput Rajbidai	7
Tamil Nadu	The Nilgiris	Ooty	Kuruthukuli, Madithurai	2
Tamil Nadu	The Nilgiris	Kothagiri	Anthiarai Kandipatti Mettukkal Kolikarai K.Pudur	5
Tamil Nadu	Coimbatore	Karamad ai	Oomapalayam Seen-guli Senguttaiyur	3
Gujarat	Anand Kheda Vadodara Panchmahal	Anand Kheda Vadodara Pavaghar	Rajupura Na-narampura Ryka Dodka Navad	5

7. ICAR-ATARI Ludhiana

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Punjab	Ludhiana	Samrala	Bhagwanpura, Diwala, Gharkhana, Gosalan, Kotala, Ghulal	6
Punjab	Ludhiana	Machhiwara	Powat	1

8. ICAR-CIPHET Ludhiana

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Punjab	Ludhiana	Ludhiana west	Issewal Rajjowal Malakpur Jhamat Singapur	5
Punjab	Ludhiana	Pratappur wala	Singapur	1
Punjab	Nawanshahr	Nawanshahr	Mahalon	1
Punjab	Nawanshahr	Nawanshahr	Rahon	1
Punjab	Firozepur	Abohar	Bhawal Basi Kera Khera Sucha Singh WariamKhera Singapura Modikhera Kalatibba (Chakra) Ramsra Bhagu Amarpura	10
Punjab	Firozepur	Makhu	Mehrana	1

9.ICAR-IIMR Ludhiana

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Haryana	Sonepat	Rai	Jakhouli, Jhundpur, Jagdishpur, Pabesara, Khurrampur	5
Uttar Pradesh	Baghpat	Bhagpat	Katha	1
Name of the State	**Name of district**	**Name of block**	**Name of Villages**	**No. of villages**
Telangana	RangaReddy	Shamshabad, Doma, Wargal, Amangal	Burjugadda, Thanda, Batlachandaram, Pamulaparthi, Dadapur, Polepalli	6
Bihar	Begusarai	Virpur	Virpur	1
Punjab	Hoshiarpur, S.B.S. Nagar	Garhshankar, Balachaur	Barapur, Shiwan, Kukar Suha, Adoana	4
Punjab	Hoshiarpur, S.B.S. Nagar	Garhshankar, Balachaur	Harman, Achalpur, Chandiani, Akliana	4

10. ICAR-CPRS Jalandhar

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Punjab	Jalandhar	Kartarpur	Chitti, Lallian Kalan, Rampur Lallian, Singhan, LallianKhurd	5

11. CSK HPKV Palampur

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Himachal Pradesh	Kangra	Baijnath	Sagoor	1
Himachal Pradesh	Bilaspur	Jhandutta	Bala	1
Himachal Pradesh	Hamirpur	Bhoranj	Jhinjhkari	1
Himachal Pradesh	Kangra	Nagrota Surian	Bagga	1
Himachal Pradesh	Lahaul & Spiti	Udaipur	Namu	1
Himachal Pradesh	Kullu	Kullu	Chhoel Gadauri , Jia	2
Himachal Pradesh	Mandi	Karsog, Sundernagar and Gohar	Gothra, Gharot ,Bhanwar, Phagla	4
Himachal Pradesh	Una	Una	Basal	1
Himachal Pradesh	Sirmaur	Pacchad Sangrah Paonta sahib	Panwa Khalakiyar Shivpur	3

12. Dr. YSPUH&F Solan

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Himachal Pradesh	Solan	Solan	Barog, Dharot, Jaunaji, Parag, Kothon, Shamti, Chewa, Saproon, Anji, Basal, Seri, Mashiwar, SerBanera, Sanhol, NauniMajhgaon, Top-ki-ber, Dhangri, Shamrod, Salogra, Oachghat	20
Himachal Pradesh	Solan	Kandaghat	Hinner	1
Himachal Pradesh	Solan	Dharampur	Dharampur, GarkhalSanawar	2
Himachal Pradesh	Sirmaur	Pachhad	DaroDevaria, Mangarh, NainaTikkar, Darabli, KotlaPanjola, Chamenji, Narag, Dilman, Wasni	9
Himachal Pradesh	Sirmaur	Rajgarh	Karganoo	1

13. SKAUST Jammu

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
J&K	Jammu	R.S. Pura	KarotanaKalan, Jogowal, SaiKalan, Ban Sultan Kothi Sheikh, Darsopur, Tutray, LangotianChakMohdYar, Musachak, Sunderpur, ChakBakhtawar, Maralia, Ghazia, Rattian, KotliMianFateh, KotliMerdian, Bhojpur, Rangpur Krotana, Sheikhupura, KotaliArun Singh, Kotali Shah Doulaha, Talabchak, Badyal , BrahiminaKatyal, Agra Chak new , Badila, HansuChak, Samaka, Toknali	106

			Khetper camp, KhetperBrahimna, GouperBasti Raipur, Choga, BegaBera, Liyan, ChanduChak Abdullian, Kothey Berger Singh, Agra Chak Old, Sidrey, Rangpur, Sandrey, Kotah Gala Bana, KotaliMirdian, Brasalpur, Baspur Bangla, RangpurMoulana, Langrial, PurabBhana RangpurBasti, KhanaChak, Banota, BuraeKothey Kothey Burger Singh, Agra Chak old, Sidrey Rangpur, Sadrey, Kotali Gala Bana, Satrian Satowal, TowanaTibba, Motey, Darian, Nari, Kheper GazipurKullian, NihalpurSimbal, Rattian BastiGulabGarh, Koushalpur, Abdal, KapoorPur SheikhaChak, FathuChak, HariPur, Mokhey, Satrian Camp, BadyalQazian, Musa Chak, Agwana, Makdoom, Bokari, Baja Chak, Seer, Bhalah, BowliChak, Magowali, Goundla, ChakMohdYaar Choulaha, AslamaChak, QutamNazam, Jindlehar Darsopur, Tutatae, Gazia, Chak Sian, Lagotian, Khour Mamaka, Kirpind, Tanda, BagaZana	
J&K	Jammu	Satwari	Sohanjana, Khandwal, Bhour Chatha Pind, Bhour Camp Brajala, Nandpur, Laliyal Kukdiyan da Kotha, Nandwal Khandwal Raipur Satwari, PhalanMandal, Hartal	14
J&K	Jammu	Bishnah	Chakbana, DabbarHarsa, Kothimore	03
J&K	Jammu	Marh	Barnai, Panjore, Akalpur, Gajansoo, Galwadeychak	11

J&K	Samba	Vijaypur	Sangrampur, Marh, Mishriwala, Kanhachak, Pounichak, Gajansoo Sapwal, Vijaypur, Nud, Badheri, Patti ChakBalotriyan, Rampur, GhoBrahmana	08
J&K	Kathua	Barnoti	Chatyal, Barnoti, Narayanpur Karekhar, Trehara	05

14. GBPUA&T Pantnagar

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Uttarakhand	U.S. Nagar	Bajpur	Chanakpur, Kelabandvari, Haripura, Barhaini, Bheekampuri, Sarkada, Bajpurgaon, Harlalpur, Jagannathpur, Rampurasakar, Chakarpur, Hajeera, Shivpuri, Dhantara, Lakhanpur, Ganeshpur, Ramnagar, Bhavvanagala, Sarkadi and Rampurakaji	20
Uttarakhand	U.S. Nagar	Khatima	Bankatiya, Nadanna, Bhoodakishni, Kuvankheda, Bhudiyatharu, Nausar, Bhagchuri, Bandiya, Haldi, Majhola, Pahainiya, Saboura, Pratappur, Sadasadiya, Poornapur, Nagalatarai, Mundeli, Chanda, Gausikuan and Bhudai	20
Uttarakhand	U.S. Nagar	Sitarganj	Nakuliya, Turkatisaur, Tharutisaur, Bamanpuri, Sisauna, Bijati, Malpura, Gauntha, Govindpur, Karghatiya, Magarsada, Dohara, Pachpeda, Vidaura, Viriya, Balkheda, Sunkharikala, Matiha, Sinha Navadiya, Devkali	20
Uttarakhand	U.S. Nagar	Rudrapur	Azadnagar, Dopahariya, Bandiya, Pateri, Khamiya	25

Uttarakhand	U.S. Nagar	Gadarpur	No.-4, Bakhpur, Gaughat, Sahdaura, Karthara, Bhanga, Saijana, Chhinki, Kuraiya, Kachchi Khamariya, Darau, Narayanpur, Anandpur, Rameshwarpur, Chukati, Inderpur, Matkota, Malsa, Faujimatkota, Bindukheda and Bham-Gumchaiya, Motiyapura, Bhaisiya, Lucknow, Rajpura No.-2, Khatola, Vijaynagar,	15
Uttarakhand	U.S. Nagar	Kashipur	Chandannagar, Kopakripali, Dhanpurvijaypur, Madnapur, Rafinagar and Jaganpuri Bhagwantpur, Kanakpur, Kachanalagaji, Manpur, Dhakiyakala, Barkhedi, Ramnagar-Kashipur, Bajawala, Sivlalpur Dallu, Banskhedakhurd, Dheemarkheda, Barkhedapandey, Paiga, Kataiya	15
Uttarakhand	U.S. Nagar	Jaspur	Lalpur, Basaee, Babarkheda, Kasampur, Surajpur, Murliwala, Khedaluxmipur, Meghawala, Ramnagarvan, Bahadurpur, Kalyanpur, Patrampur, Rajpur, Gulargoji, Pooranpur, Umarpur and Angadpur	20

15. GADVASU Ludhiana

Name of the State	Name of district	Name of block	Name of Villages	No. of villages
Punjab	Tarn taran	Chohla Sahib	Jauneke	1
Punjab	Tarn taran	Patti Bhikhiwind	Booh, Booh Havelian, Jindawala Mari Kamboke	3
Punjab	Tarn taran			1

16. PAU Ludhiana

Name of the State	Name of district	Name of block	Name of villages	No. of villages
Punjab	Amritsar	Verka	Dhaulkalan	1
Punjab	Bathinda	Bathinda	Kili Nihal Singh Wala Naruana Phus Mandi	3
Punjab	Bathinda	Sangat	Sukhladdi Fallad Pakka Nandgarh	4
Punjab	Bathinda	Rampura	Jaid	1
Punjab	Bathinda	Nathana	Bath Poohla	2
Punjab	Bathinda	Phool	Mehraj	1
Punjab	Bathinda	Talwandi Sabo	Bagha	1
Punjab	Fatehgarh Sahib	Sirhind	Pandrali, Badaushi Kalan, Chaurwala, Attapur	4
Punjab	Gurdaspur	Kalanaur	Bhangwan, Chhina Railwala	2
Punjab	Gurdaspur	Dera Baba Nanak	Masatkot, Fatupur	2
Punjab	Gurdaspur	Kahnuwan	Sallopur	1
Punjab	Gurdaspur	Dinanagar	Talibpur Pandori	1
Punjab	Gurdaspur	Gurdaspur	Bathwala	1
Punjab	Moga	Kot Ise Khan	Fatehgarh Korotana	1
Punjab	Moga	Moga I	Jhandewala, Kokri Kalan, Purane Wala	3
Punjab	Moga	Moga II	Nidhan Wala, Saffuwala	2
Punjab	Muktsar	Malout	Ratta Khera,	1
Punjab	Muktsar	Lambi	Maan,	1
Punjab	Muktsar	Giddarbaha	Gurri sangar, Chattiana,	2
Punjab	Muktsar	Muktsar	Goneana	1
Punjab	Patiala	Nabha	Mehas, Ajnauda, Kansuha	3
Punjab	Patiala	Rajpura	Kheri Gandian	1
Punjab	Patiala	Patran	Duggal & Burar	2
Punjab	Ludhiana	Samrala	Bhagwanpura, Diwala, Gharkhana, Gosalan, Kotala, Ghulal	6
Punjab	Ludhiana	Machhiwara	Powat	1
Punjab	SBS Nagar	Nawanshahr	Khatkar kalan	1
Punjab	Mansa	Jhunir	Kot Dharmu	1
Punjab	Ferozepur	Ghall Khurd	Gammewala	1
Punjab	Ferozepur	Ferozepur	Dheera Patra, Wahka Mour, Gammewala, Jhok Harihar, Bukan khan	5
Punjab	Ropar	Ropar	Chaunta, Jhallian	2
	Ropar	Chamkaur Sahib	Fatehgarh Viran, Rampur Fasse, Mohan majra, Rasidpur, Behrampur bet, Mahlan	6
Punjab	Sangrur	Sunam	Kanoi	5

			Bigarwal Kular Khurd Taranji Khera Chatha Nanhera	
Punjab	Kapurthala	Kapurthala	Bhagwanpur	01
Punjab	Kapurthala	Sultanpur Lodhi	Meripur, Swal, Boolpur	03
Punjab	Kapurthala	Dhilwan	Miani Bakarpur	01