Chapter-V

Impact of the Project in Reforming the Extension System

Demonstration on animal husbandry kit

Officials inspecting exhibition stalls

Chapter - V

IMPACT OF ATMA IN REFORMING THE EXTENSION SYSTEM

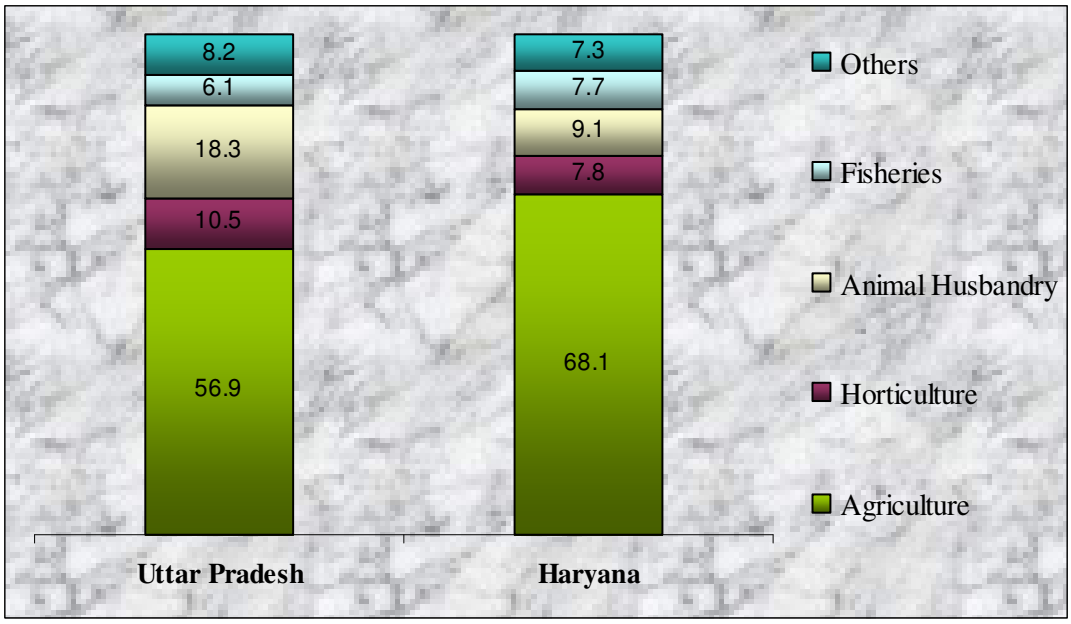
This chapter discusses the impact of ATMA programme on the extension system in terms of higher participation of farmers in farmer oriented activities like training, demonstrations, exposure visits, increased availability of farm information in village level meetings, kisan melas/fairs, print and electronic media and strengthening of linkage between scientists and farmers through meetings, kisan goshties, field days, etc. The impact assessment is discussed in terms of comparative improvement in availability of advice especially at the village level for use of various inputs, arrangements for supply and testing of inputs and additional facilities created and availed for diversification. All these information have been compiled from the primary data collected from the farmer beneficiaries under the ATMA programme. The chapter is presented in six sections namely, the sample farmers and their profile, organization of farmer oriented activities, dissemination of farm Information, programmes for strengthening of farmer-scientist interactions and the last two sections discuss the impact of the extension activities on farmers in terms of improvement in facilities/advices and inputs available to them especially near the farms.

I. PROFILE OF SAMPLE FARMERS

5.1 The impact assessment of the ATMA project in reforming the extension system is based on the feedback from a sample of 7875 beneficiary farmers from nine districts of Uttar Pradesh and two districts of Haryana. The district-wise break up of sample farmers benefited from different line departments under ATMA is given in Table 5.1.

Table 5.1 : **Distribution of the Sample Farmers by Sub-Sectors**

District	Agriculture	Horticulture	Animal Husbandry	Fisheries	Others	Total Respondents	Women (% age to total)
Uttar Pradesh	% age share to total respondents						
1.Jalaun	55.6	14.8	21.5	7.6	0.5	680	19.0
2.Lucknow	71.0	8.0	13.4	5.2	2.4	680	17.1
3.Saharanpur	75.3	4.0	9.7	0.5	10.5	680	8.7
4.Baghpat	39.1	13.5	18.5	10.0	18.8	680	2.7
5.Bareilly	44.7	0.0	32.9	8.2	14.1	680	1.0
6.Aligarh	53.5	29.4	11.1	2.5	3.5	680	12.1
7.Maharajganj	40.8	16.0	33.5	1.7	7.9	680	26.5
8.Allahabad	67.6	2.1	18.9	11.1	0.3	680	9.0
9.Barabanki	64.0	9.0	9.6	8.7	8.7	685	9.9
Total-A	**56.9**	**10.5**	**18.3**	**6.1**	**8.2**	**6125**	**11.7**
Haryana							
10.Sirsa	66.5	3.0	13.5	2.5	14.5	875	4.6
11.Sonepat	69.6	12.7	4.8	12.9	0.0	875	10.5
Total-B	**68.1**	**7.8**	**9.1**	**7.7**	**7.3**	**17500**	**7.9**
G. Total (A+B)	**59.4**	**10.1**	**16.7**	**6.5**	**7.3**	**78750**	**10.9**



As can be seen from the above table, the majority of sample farmers (59%) were from the list of beneficiaries of agriculture department and the remaining 41% were from other line departments viz. animal husbandry (17%), horticulture (10%), fisheries (7%) and other departments (7%). This sub sector-wise distribution of the sample farmers varied widely over the districts as shown in the table. The representation of horticulture department is the maximum 29% in Aligarh followed by Maharajganj (16%), Jalaun (14.8%) and Baghpat (13.5%). The representation of animal husbandry is the minimum about 5% in Sonepat while it is the maximum about 33% in Bareilly and Maharajganj. Similarly, the fish farmers are less than 1% in Saharanpur and the maximum about 13% in Sonepat. In others like floriculture, mushroom etc, the representation is the maximum about 19% from Baghpat and the minimum less than 1% from Jalaun and Sonepat districts. The data on sample farmers was collected on the basis of involvement of the department in ATMA programme as well as information provided by the departments at the time of study. At the State level for Uttar Pradesh and Haryana, the former has more share of beneficiaries in horticulture (1:0.48) and dairy (1:0.73) while the latter has a little higher share in fisheries (1:1.30).

WOMEN REPRESENTATION

5.2 Of the total 7875 sample farmers, women representation is 856, i.e. 10.9%. The district-wise representation of women respondents is given in the last column of Table 5.1. Uttar Pradesh with 11.7% representation of farm women fared better than Haryana (7.9%). UP recorded both the highest (27% in Maharajganj) and lowest (1% in Bareilly) representation of women in sampled farmers. Although the aggregate average (10.9%) for the two studied states indicated near satisfactory level, the

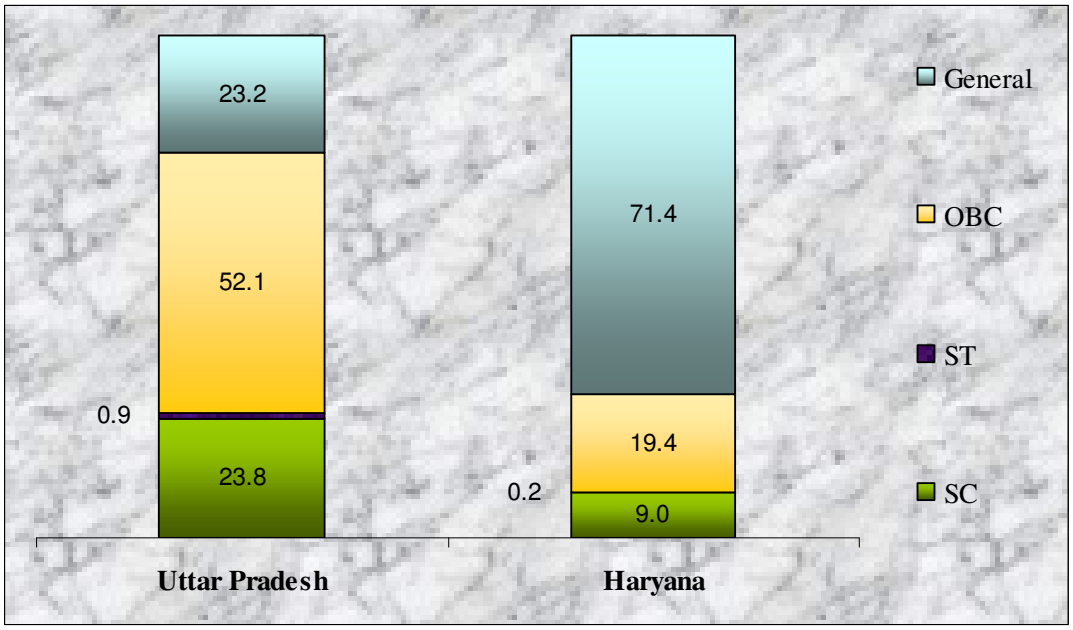
district-wise variation is still a concern. As women are the key, yet marginalized stakeholders in agricultural development, their active involvement is a necessity to ensure socially just development. Hence, concerted efforts need to be put for greater mobilization of women in ATMA scheme.

SOCIAL CATEGORY-WISE REPRESENTATION

5.3 The district-wise distribution of the sample farmers by social category is given in Table 5.2.

Table 5.2: Representation of Farmers by Social Category

District	SC (No.)	SC as %age to total	ST (No.)	ST as %age to total	OBC (No.)	OBC as %age to Total	General (No.)	General as %age to total	Total Respondents
Uttar Pradesh									
1. Jalaun	209	30.7	2	0.3	261	38.4	208	30.6	680
2.Lucknow	245	36	2	0.3	293	43.1	140	20.6	680
3.Saharanpur	129	19	37	5.5	256	37.6	258	37.9	680
4.Baghpat	85	12.5	1	0.2	321	47.2	273	40.1	680
5.Bareilly	89	13.1	5	0.7	503	74.0	83	12.2	680
6.Aligarh	124	18.2	1	0.3	363	53.3	192	28.2	680
7.Maharajganj	249	36.6	1	0.2	345	50.7	85	12.5	680
8.Allahabad	191	27.7	0	0.0	352	54.3	137	18.0	680
9.Barabanki	135	19.7	6	0.9	499	72.9	45	6.5	685
Total-A	**1456**	**23.77**	**55**	**0.9**	**3193**	**52.1**	**1421**	**23.2**	**6125**
Haryana									
10.Sirsa	110	11.1	0	0	209	27.2	556	61.7	875
11.Sonepat	48	5.2	3	0.3	130	13.5	694	81.0	875
Total-B	**158**	**9.03**	**3**	**0.17**	**339**	**19.4**	**1250**	**71.4**	**1750**
Grand Total (A+B)	**1614**	**20.5**	**58**	**0.7**	**3532**	**44.9**	**2671**	**33.9**	**7875**



Analysis of data on social category-wise representation revealed that at aggregate level maximum representation of 44.8% is from OBCs, followed by 33.9% from general category, 20.5% from SC category and just 0.7% from STs. State- wise, the OBC share is higher (52%) in UP as compared to Haryana (44%). It may be because of recent classification of Jats in OBCs. Across the districts, SCs are evenly distributed but relatively higher share than state average is seen in Maharajganj, Jalaun and Allahabad. Overall, the representation of STs is low possibly because of lower proportion in the population of sampled districts. OBCs share is more than state average in Bareilly and Barabanki in UP and Sirsa in Haryana.

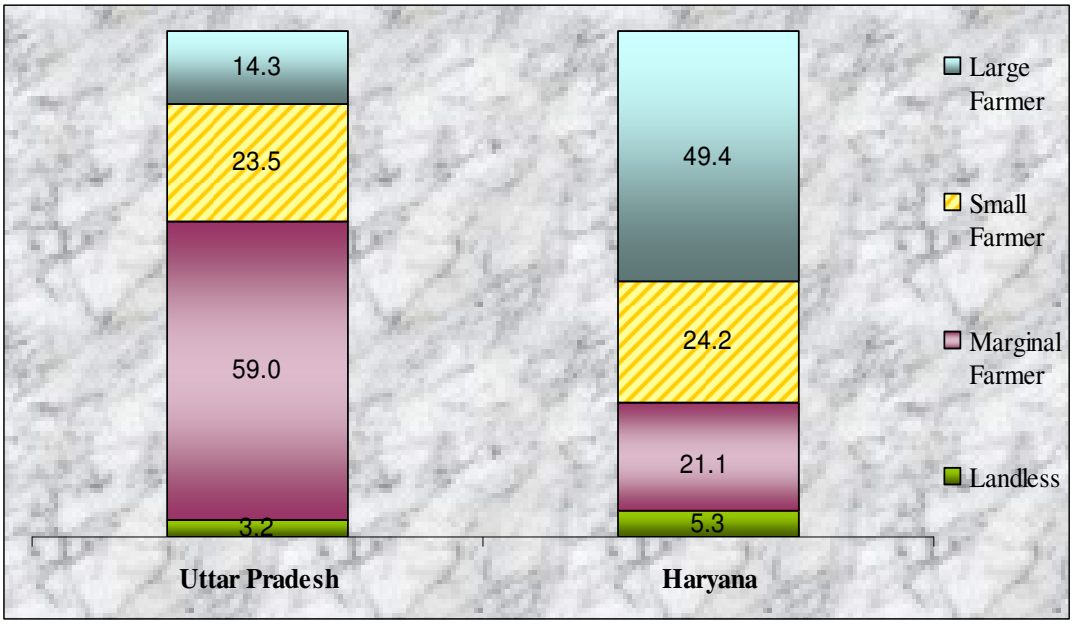
SAMPLE FARMERS BY SIZE OF LAND HOLDING

5.4 As per the size of land holding, more than half of (50.6%) the aggregate sample farmers of the two states were marginal farmers. However, share of landless (tenant) farmers was very low (3.67%). Small farmers accounted for nearly a quarter (23.6%) followed closely by large farmers (22.1%). The district-wise distribution by size of holdings is given in Table 5.3.

Table 5.3: Distribution of Respondents by Size of Land Holding

District	Landless		Marginal Farmer		Small Farmer		Large Farmer		Total	
Uttar Pradesh	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No**	%
1.Jalaun	26	3.8	298	43.8	173	25.4	183	26.9	680	100.0
2.Lucknow	45	6.5	470	69.2	106	15.6	59	8.7	680	100.0
3.Saharanpur	26	3.8	291	42.8	252	37.1	111	16.3	680	100.0
4.Baghpat	41	6.0	421	61.9	160	23.5	58	8.5	680	100.0
5.Bareilly	10	1.5	324	47.7	197	29.0	149	21.9	680	100.0
6.Aligarh	18	2.7	340	50.0	176	25.9	146	21.5	680	100.0
7.Maharajganj	1	0.3	539	79.2	104	15.2	36	5.3	680	100.0
8.Allahabad	0	0.0	457	66.2	141	21.4	82	12.4	680	100.0
9.Barabanki	30	4.4	473	69.1	128	18.7	54	7.9	685	100.0
Total-A	**197**	**3.2**	**3613**	**59.0**	**1437**	**23.5**	**878**	**14.3**	**6125**	**100.0**
Haryana										
10.Sirsa	75	8.6	114	13.0	177	20.2	509	58.2	875	100.0
11.Sonepat	17	1.9	256	29.3	246	28.1	356	40.7	875	100.0
Total-B	92	5.3	370	21.1	423	24.2	865	49.4	1750	100.0
G. Total	**289**	**3.7**	**3983**	**50.6**	**1860**	**23.6**	**1743**	**22.1**	**7875**	**100.0**

Comparative analysis of the two states revealed that share of marginal farmers is about 3 times in UP against Haryana and large farmers (having > 2 ha land) are 3.5 times more in Haryana. It indicates relatively large average size of holding in Haryana which is in accordance with the secondary data of land holdings.



However, the tenant farmers are more (5.26%) in Haryana as compared to UP (3.22%). Across the districts, share of marginal farmers is more against the state average in Maharajganj, Barabanki, Lucknow and Sonepat districts while large farmers are more in Jalaun, Bareilly and Sirsa.

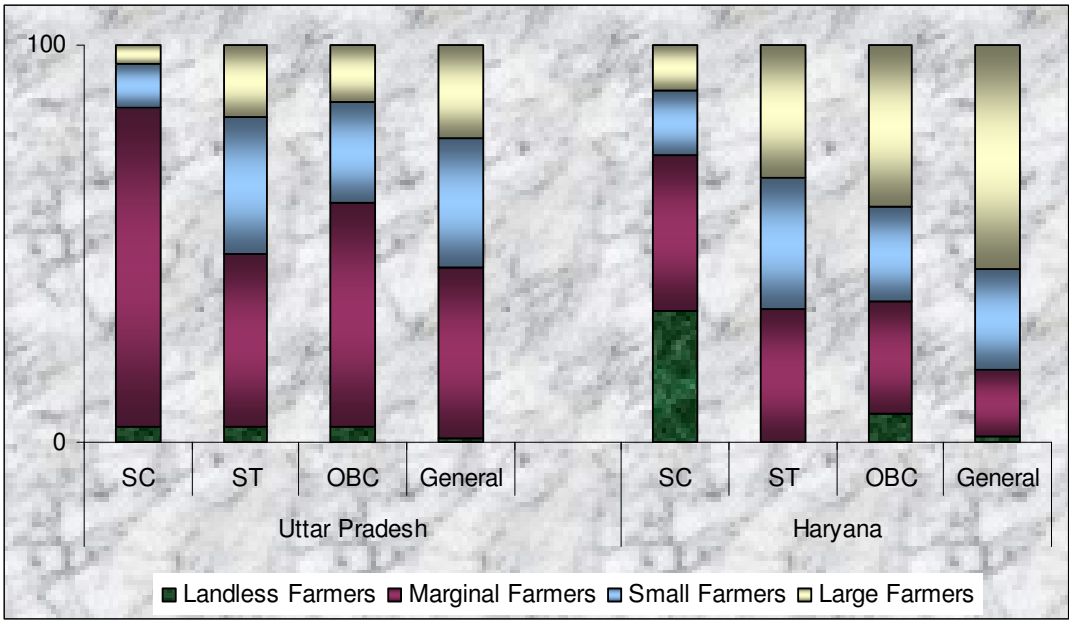
HOLDING SIZE OF THE SAMPLE ACROSS SOCIAL CATEGORIES

5.5 Comparative distribution of size-wise land holdings among social categories is also worked out in Table 5.4.

Table 5.4: Sample Farmers by Size of Holding across Social Categories

Land holding status	Social Category (% age of farmers by land holding size)				
	SC	ST	OBC	General	All
Uttar Pradesh					
Landless Farmers	3.91	3.63	3.88	0.98	3.22
Marginal Farmers	80.49	43.64	56.47	43.21	58.99
Small Farmers	10.85	34.54	25.15	32.16	23.46
Large Farmers	4.74	18.18	14.5	23.64	14.33
Haryana					
Landless Farmers	32.91	-	7.08	1.28	5.26
Marginal Farmers	39.24	33.33	28.32	16.88	21.14
Small Farmers	16.46	33.33	23.89	25.20	24.17
Large Farmers	11.39	33.33	40.71	56.64	49.43

The Table reveals that the marginal farmers are relatively more (80%) among the SC and OBC categories (56%) as against 43% in general category whereas the small farmers are more (32%) in the general category in both the states.



However, the landless/tenant farmers are mainly from the SCs in Haryana whereas they are almost equal from all social categories in UP. The observed results are in accordance with the general trend that farmers in weaker sections (SC & ST) continue to be small, marginal and landless tenants.

WOMEN FARMERS BY SIZE OF HOLDING

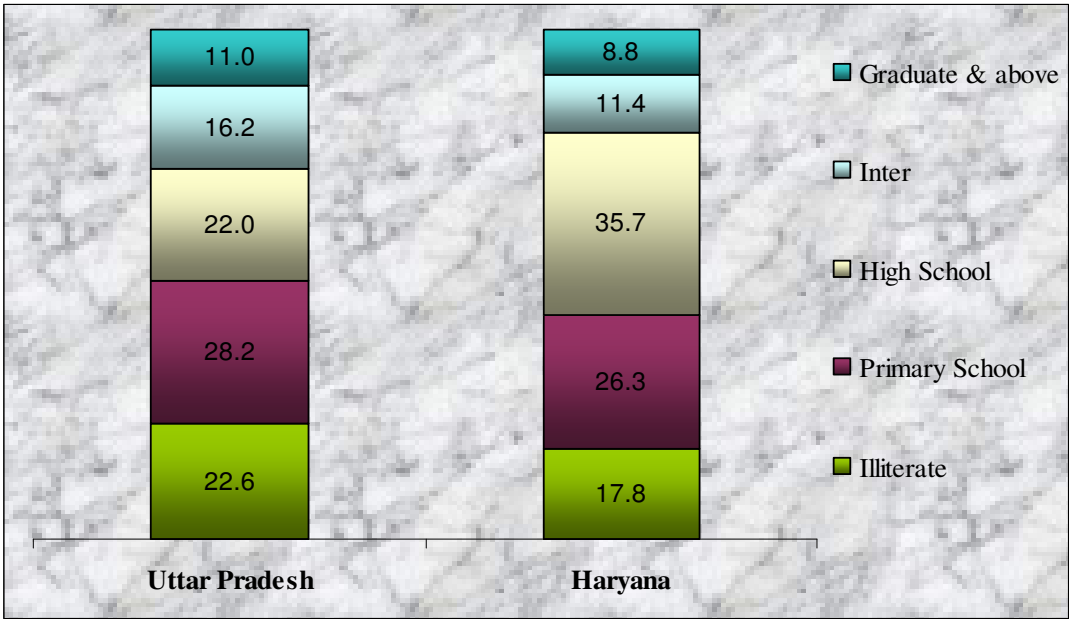
5.6 Of the total 856 women farmers in both the states, 5.6% were landless, 65.1% were marginal, 17.4% were small and 11.9% were having holding size of more than 2 ha. Hence, land less and marginal farmers are more from the categories of women than men. The women farmers were observed among all the social categories but the SC women farmers in UP were 72% as against 12% in Haryana. Out of SC women farmers, about 90% were marginal and landless in both the states. It indicates that the women farmers are the poorest and most of them are from SC.

EDUCATION LEVEL OF SAMPLE FARMERS

5.7 The overall education level of sample beneficiaries (Table 5.5) shows that about 28% are educated up to the primary school level followed by 25% who are educated up to high school level; 22% illiterates, 15.2% educated up to inter (+2) and 10.49% graduates. It is really heartening to note that over half of the aggregate sample farmers are educated to a decent level i.e., high school or above with over a quarter of them being matriculate. Yet, the fact that 22% are illiterates is an indication to intensify mass education programmes like 'sarva shiksha abhiyan' to achieve the goal of 100% literacy.

Table 5.5 : Education Level of Sample farmers

District	Total Respondents	Illiterate	Primary School	High School	Inter	Graduate & above
Uttar Pradesh		%	%	%	%	%
1.Jalaun	680	16.4	32.9	18.9	16.4	15.4
2.Lucknow	680	26.6	28.9	21	12.3	11.2
3.Saharanpur	680	29.6	27.7	19.6	15.6	7.5
4.Baghpat	680	8.9	26.6	24.3	23.5	16.7
5.Bareilly	680	12.7	22	24.8	20.1	20.4
6.Aligarh	680	21.0	22.3	29.3	16.6	10.8
7.Maharajganj	680	48.9	22.9	14	10.5	3.7
8.Allahabad	680	20.6	28.5	21.8	17.4	11.7
9.Barabanki	685	18.5	34.4	24.2	14.5	8.4
Total-A	**6125**	**22.6**	**28.2**	**22.0**	**16.2**	**11.0**
Haryana						
10.Sirsa	875	20.9	32.0	28.9	9.8	8.4
11.Sonepat	875	14.5	20.6	42.7	12.9	9.3
Total-B	**1750**	**17.8**	**26.3**	**35.7**	**11.4**	**8.8**
G. Total (A+B)	**7875**	**21.5**	**27.77**	**25.04**	**15.2**	**10.49**



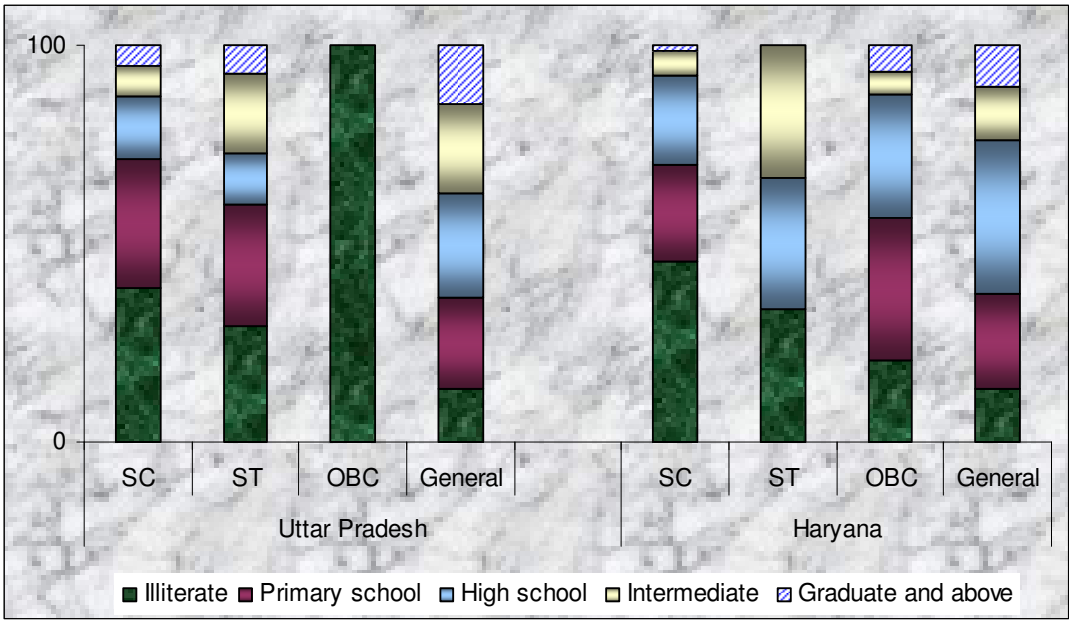
Evidently, the literate farmers are higher in Haryana (82%) as compared to UP (77%). This may reflect on the response rate to various extension programmes. The share of illiterate farmers is higher in Maharajganj (49%), Saharanpur (30%) and Lucknow (27%) where the graduates & above are the maximum while the share of Bareilly (20%) and Baghpat (17%) was low. The relationship between level of literacy and participation in the extension programmes has been examined in the later sections.

EDUCATION LEVEL ACROSS SOCIAL CATEGORIES

5.8 Education level is also compared across the social categories as per information worked out in Table 5.6.

Table 5.6: Education Level of Sample Farmers across Social Categories (%age)

Social category	Illiterate		Primary school		High school		Intermediate		Graduate and above	
	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR
SC	38.9	45.6	32.3	24.1	15.9	22.8	7.7	6.3	5.1	1.3
ST	29.1	33.3	30.9	-	12.7	33.3	20.0	33.3	7.3	-
OBC	100.0	20.6	-	35.7	-	31.3	-	5.9	-	6.5
General	13.6	13.36	22.7	24.1	26.2	38.6	22.6	13.4	14.8	10.5
Total	**22.6**	**17.72**	**28.2**	**26.3**	**22.0**	**35.8**	**16.3**	**11.4**	**10.9**	**8.9**



The table depicts that the maximum illiterates are from OBC in UP which indicates that the educated ones of this category may be seeking work other than agriculture. The maximum about 70% of illiterates and primary level educated farmers are from SCs in both the states. The high school levels are about 36% with the maximum from 'General' category who may have to stick to agriculture due to traditional ownership or absence of better alternative.

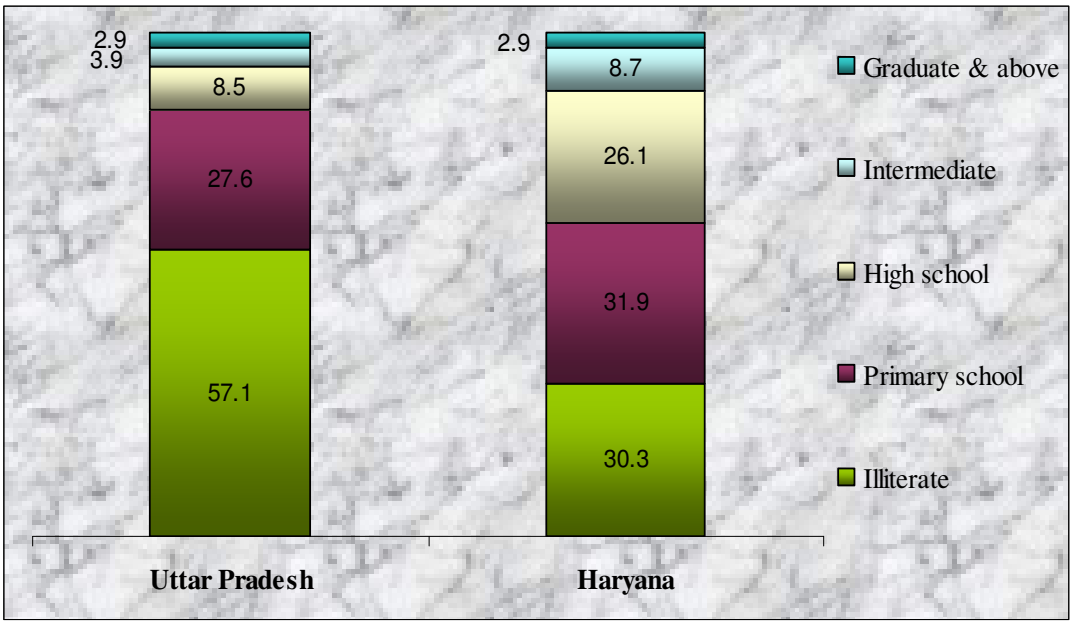
EDUCATION LEVEL OF WOMEN FARMERS

5.9 Of the total 856 women farmers (10.9% of the total sample), about 53% are illiterates, 28.3% are primary level and the rest are educated upto high school & above as given in Table 5.7:

Table 5.7 : Education Level of Women Farmers

State	Sample beneficiaries' education level					Total (No.)
	Illiterate	Primary school	High school	Intermediate	Graduate & above	
Uttar Pradesh	410 (57.1)	198 (27.6)	61 (8.5)	28 (3.9)	21 (2.9)	718
Haryana	42(30.3)	44(31.9)	36 (26.1)	12(8.7)	4(2.9)	138
Total	**452 (52.8)**	**242 (28.3)**	**97 (11.3)**	**40 (4.7)**	**25 (2.9)**	**856**

(Figures in parenthesis denote percentage)



The education level of women farmers in Haryana is 70% as against 43% in UP. Overall, illiterates in women farmers are more (53%) as compared to the total illiterates (22%) in the total sample. At the district level, education level of women farmers is relatively lower in Maharajganj, Jalaun and Barabanki districts. Educated women beneficiaries are much less as compared to male farmers.

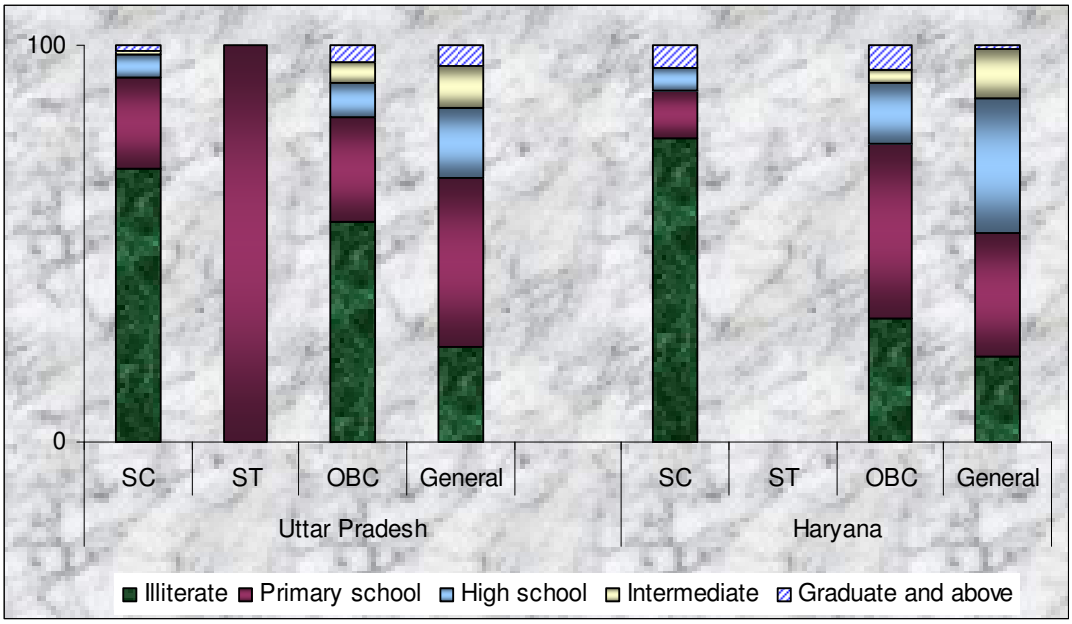
EDUCATION OF WOMEN FARMERS ACROSS SOCIAL CATEGORIES

5.10 The education level of women farmers across social categories presented in Table 5.8 shows that the illiterate women farmers are more (69%) in SC category followed by OBCs (56%) as compared to 24% in general category.

The above discussion brings out that most of the women farmers are marginal/landless tenants with much higher illiteracy which indicates that the farming by women may be due to compulsion of illiteracy, separation, helplessness, etc.

Table 5.8 : Education level of women farmers across Social Categories

Social category	Sample beneficiaries' education level									
	Illiterate		Primary school		High school		Intermediate		Graduate and above	
	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR
SC	68.8	76.5	23.3	11.8	5.7	5.9	0.8		1.4	5.9
ST	-	-	100.0	-	-	-	-	-	-	-
OBC	55.5	31.2	26.5	43.7	8.4	15.6	5.5	3.1	4.2	6.2
General	23.7	21.3	43.0	31.5	17.5	33.7	10.5	12.4	5.3	1.1
Total	**57.1**	**30.4**	**27.6**	**31.9**	**8.5**	**26.1**	**3.9**	**8.7**	**2.9**	**2.9**



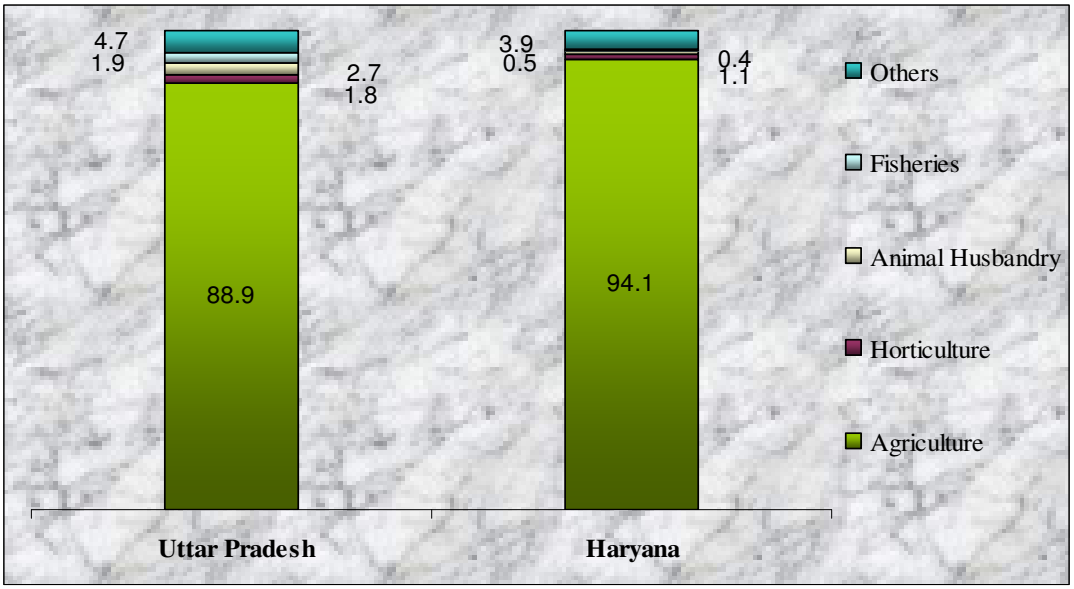
MAIN OCCUPATION-WISE DISTRIBUTION OF FARMERS

5.11 Different farming activities were considered for discussing the extent of diversification. Accordingly, the district-wise occupational data of sample farmers is presented in Table 5.9.

5.12 The Table 5.9 shows that cultivation of field crops is the main source of income for about 90% of the sample farmers. The second important source of income is 'other activities' like wage labour, supply of agricultural inputs/outputs, etc. to the extent of about 4%. However, the third important main activity is not the same in both the states. It is the horticulture for 2.66% in U P and animal husbandry for 1.7% in Haryana. The fourth main activity is fishery in both the states.

Table 5.9: Main Occupation-wise Distribution of Farmers

District	Agriculture %	Animal Husbandry %	Horticulture %	Fisheries %	Others %	Total	
						%	No.
Uttar Pradesh							
1.Jalaun	97.2	2.5	0.0	0.1	0.1	100.0	680
2.Lucknow	84.1	3.7	4.4	3.7	4.1	100.0	680
3.Saharanpur	95.1	2.9	1.6	0.0	0.3	100.0	680
4.Baghpat	87.5	1.2	0.1	3.5	7.6	100.0	680
5.Bareilly	92.1	0.0	0.4	5.4	2.1	100.0	680
6.Aligarh	85.6	2.4	11.6	0.1	0.3	100.0	680
7.Maharajganj	86.0	0.0	0.4	0.1	13.4	100.0	680
8.Allahabad	87.4	0.3	0.6	0.4	11.3	100.0	680
9.Barabanki	85.0	3.6	4.7	3.9	2.8	100.0	685
Total-A	**88.9**	**1.8**	**2.7**	**1.9**	**4.7**	**100.0**	**6125**
Haryana							
10.Sirsa	90.1	1.8	0.0	0.9	7.2	100.0	875
11.Sonepat	98.2	0.3	0.8	0.0	0.7	100.0	875
Total-B	**94.1**	**1.1**	**0.4**	**0.5**	**3.9**	**100.0**	**1750**
G. Total (A+B)	**90.0**	**1.7**	**2.2**	**1.6**	**4.5**	**100.0**	**7875**



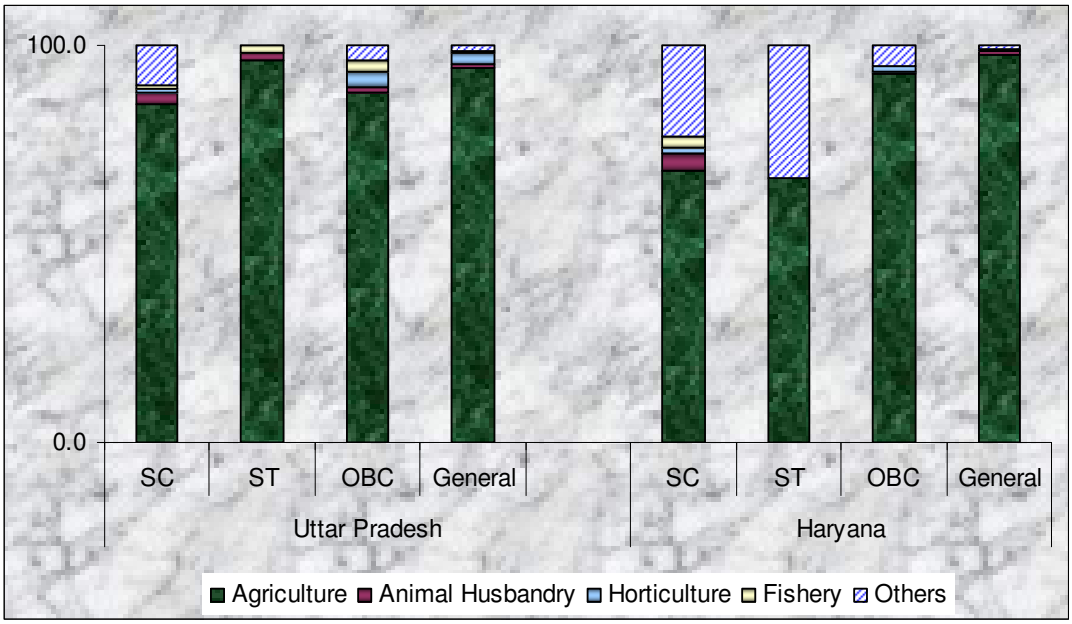
The overall diversification in main income activities of the farmers is relatively more in U.P than Haryana from the aggregated data. At district level, the maximum diversification is in Lucknow followed by Aligarh and Barabanki. Lucknow and Barabanki have more of all activities other than agriculture whereas the Aligarh sample has maximum horticulture.

MAIN OCCUPATION ACROSS SOCIAL CLASSES

5.12 Within each main activity, distribution by social categories was analyzed and aggregated at the state level as depicted in Table 5.10.

Table 5.10 : Sample Farmers as per main occupations across Social Categories
(in terms of %age to Total)

Social category	Social category-wise breakup of main occupation											
	Agriculture		Animal Husbandry		Horticulture		Fishery		Others		Total No	
	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR
SC	85.23	68.35	2.88	4.43	1.03	1.27	0.82	3.16	10.03	22.78	1456	158
ST	96.36	66.67	1.82	0	0.00	0	1.82	0	0.00	33.33	55	3
OBC	87.97	92.63	1.72	0.88	3.54	1.18	3.10	0	3.66	5.31	3193	339
General	94.37	97.84	1.06	0.72	2.46	0.08	0.49	0.24	1.62	1.12	1421	1250
Total	**88.88**	**94.11**	**1.84**	**1.09**	**2.66**	**0.40**	**1.94**	**0.46**	**4.67**	**3.94**	**6125**	**1750**



The above table shows high dependence on agriculture is almost same across social categories within a narrow range of 85 to 96 per cent. The other activities like wage labour and work in the unorganized sector, is especially high upto 23% and 10% for SC farmers of Haryana and UP. In UP, horticulture is third important source (2.66%) for all farmers but it is the dairy for SC farmers. The small size of land holding of SC may be the reason for less concentration in horticulture. In Haryana, the third main income activity is animal husbandry (1.09%) especially for SC farmers (4.43%) followed by fishery and horticulture. The above analysis indicates that the main activity of farmers may be largely influenced by size of holding as discussed elsewhere.

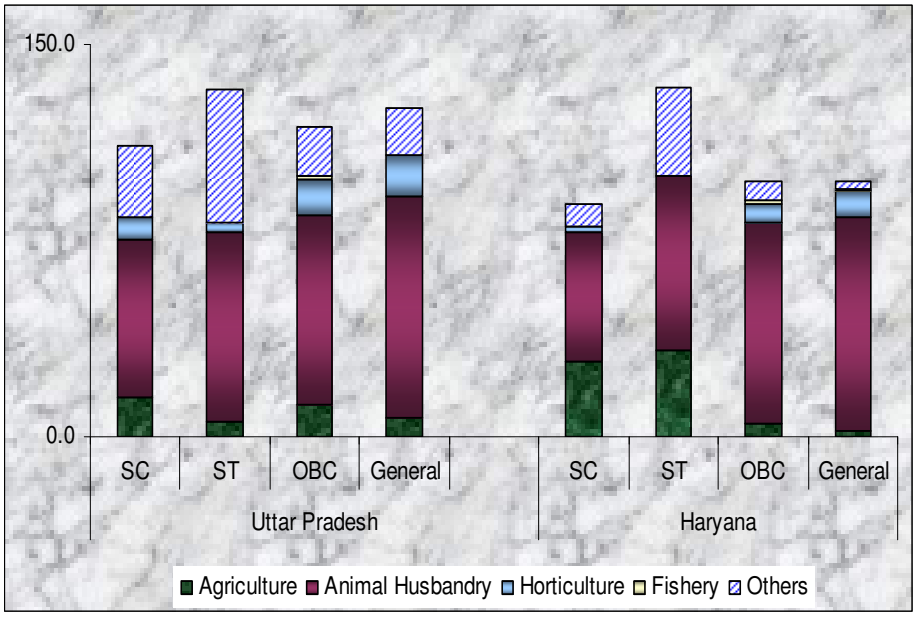
SUBSIDIARY OCCUPATION OF SAMPLE FARMERS

5.13 The subsidiary occupations for a farmer are those carried out along with the main income activity and these are not to be confused with the second or subsequent main occupations of sample farmers in general. Hence, the Table 5.11 has been worked out from the feed back instead of taking opposite of main occupation from the previous table.

Table 5.11 : Sample Farmers as per subsidiary occupations across Social categories (in terms of %age to Total)

Social category	Social category-wise breakup of subsidiary occupation											
	Agriculture		Animal Husbandry		Horticulture		Fishery		Others		Total No	
	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR
SC	15.2	28.5	60.5	50.0	08.1	01.9	0.5	0.0	27.1	08.8	1456	158
ST	05.4	33.3	72.7	66.7	03.6	00.0	0.0	0.0	50.9	33.3	55	3
OBC	12.4	05.3	72.0	76.4	13.6	07.4	1.9	1.5	18.4	07.1	3193	339
General	07.2	02.2	84.4	81.5	15.9	10.0	0.5	0.9	17.3	03.0	1421	1250
Total	**11.8**	**05.3**	**72.1**	**77.6**	**12.8**	**8.7**	**1.2**	**0.9**	**20.5**	**04.4**	**6125**	**1750**

Note: Total may not add up to 100 due to multiple responses by some and no response by few



Animal husbandry is the most important secondary occupation for about 72% of farmers in UP and 77% farmers in Haryana, ranging from 50 to 84% across social classes though it was the main occupation for about 2% of sample farmers only. The next important subsidiary occupation for about 21% farmers is 'others' in UP and horticulture including vegetables for 9% farmers in Haryana. Horticulture is the third

important subsidiary occupation for 13% farmers in UP while agriculture is the third important subsidiary for 5% in Haryana. Therefore, the thrust areas for extension programme are the same as envisaged under ATMA though allocation pattern may be reviewed in each as per the importance of main and subsidiary occupations.

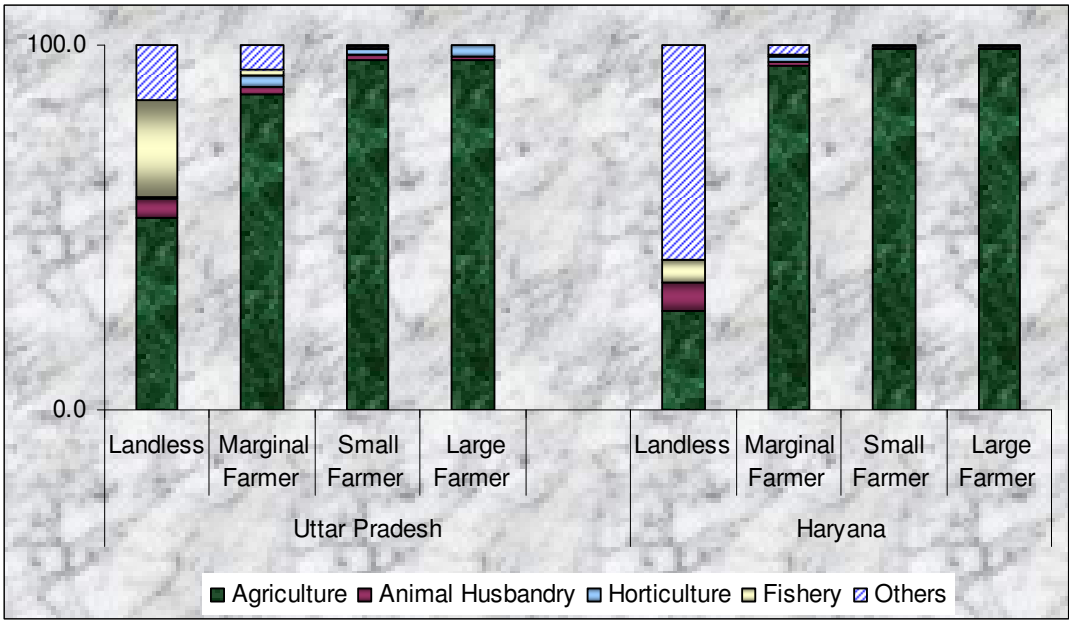
MAIN OCCUPATION BY SIZE OF LAND HOLDING

5.14 Size of land holding may be the main determinant for extent of diversification. The size-wise distribution of state level aggregated sample farmers among different main income activities is worked out in Table 5.12.

Table 5.12 : Land holding-wise main Occupation of sample farmers

Land holding category	Breakup of main occupations according to land holding category											
	Agriculture		Animal Husbandry		Horticulture		Fishery		Others		Total No	
	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR
Landless	52.8	27.2	5.1	7.6	0.5	0.0	26.4	6.5	15.2	58.7	215	92
Marginal Farmer	86.4	94.3	2.1	0.8	3.0	1.9	1.7	0.5	6.8	2.4	3558	370
Small Farmer	95.9	98.8	1.3	0.9	1.9	0.00	0.3	0	0.6	0.2	1475	423
Large Farmer	95.6	98.8	1.1	0.6	3.1	0.0	0.0	0	0.2	0.6	882	865
Total	**88.9**	**94.1**	**1.8**	**1.1**	**2.6**	**0.4**	**1.9**	**0.5**	**4.7**	**3.9**	**6130**	**1750**

(Figures in percentage)



Agriculture is the main income activity accounting for about 90%, ranging from 53% to 99% for all size classes of holdings including the landless except in Haryana

where about 59% of them are engaged in wage labour or other non-farm activities. In fact, the other activities have become second major source of income for all size classes taken together especially the marginal farmers whose holdings are no more viable. In the case of small (1-2 ha) and farmers above 2 ha, the second major income activity is horticulture in UP while it is animal husbandry in Haryana. Animal husbandry and fisheries is almost competing as the third major source of income in UP as well as Haryana (fisheries). To sum up, the landless and marginal farmers are augmenting their income from other activities while small and other farmers are taking up animal husbandry in Haryana and both animal husbandry and horticulture in UP to sustain their livelihoods.

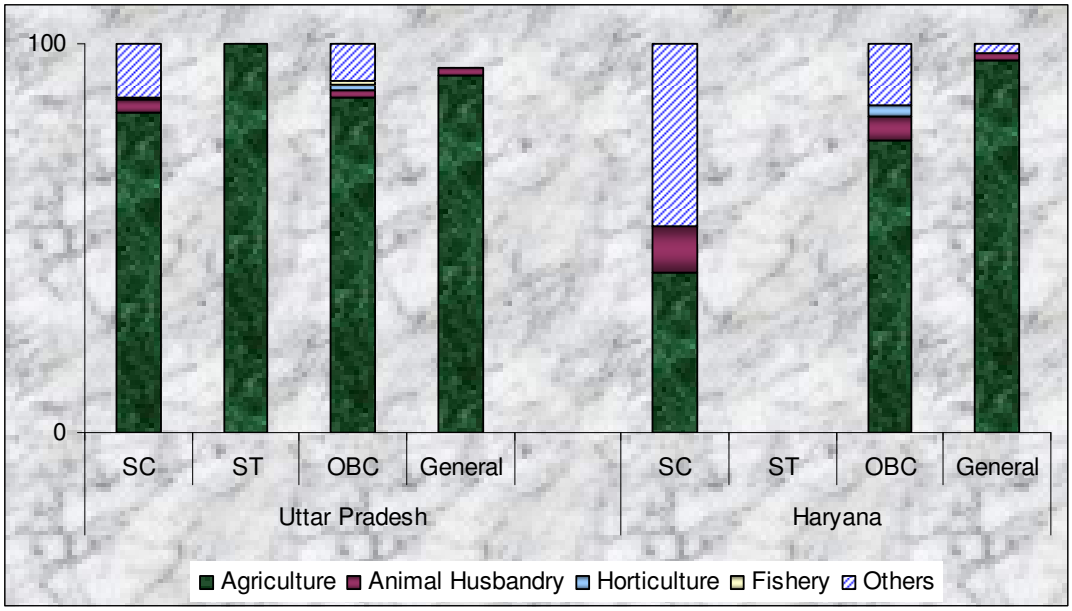
OCCUPATIONAL DISTRIBUTION OF WOMEN FARMERS

5.15 The occupational distribution of 856 sample women farmers across social categories is worked out in Table 5.13 for the states of UP and Haryana.

Table 5.13 : Women beneficiaries' main occupational Pattern

Social category	Breakup of main occupations according to land holding category											
	Agriculture		Animal Husbandry		Horticulture		Fishery		Others		Total (No.)	
	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR	UP	HR
SC	82.2	41.2	3.3	11.7	0.5	-	-	-	14.0	47.1	365	17
ST	100.0	-	-	-	-	-	-	-	-	-	1	0
OBC	86.1	75.0	1.7	06.2	1.7	3.1	0.8	-	09.7	15.6	238	32
General	92.1	95.5	1.7	02.2	-	-	-	-	-	02.3	114	89
Total	**85.1**	**84.1**	**2.1**	**04.3**	**0.8**	**0.7**	**-**	**-**	**11.3**	**10.9**	**718**	**138**

(Figures in percentage)



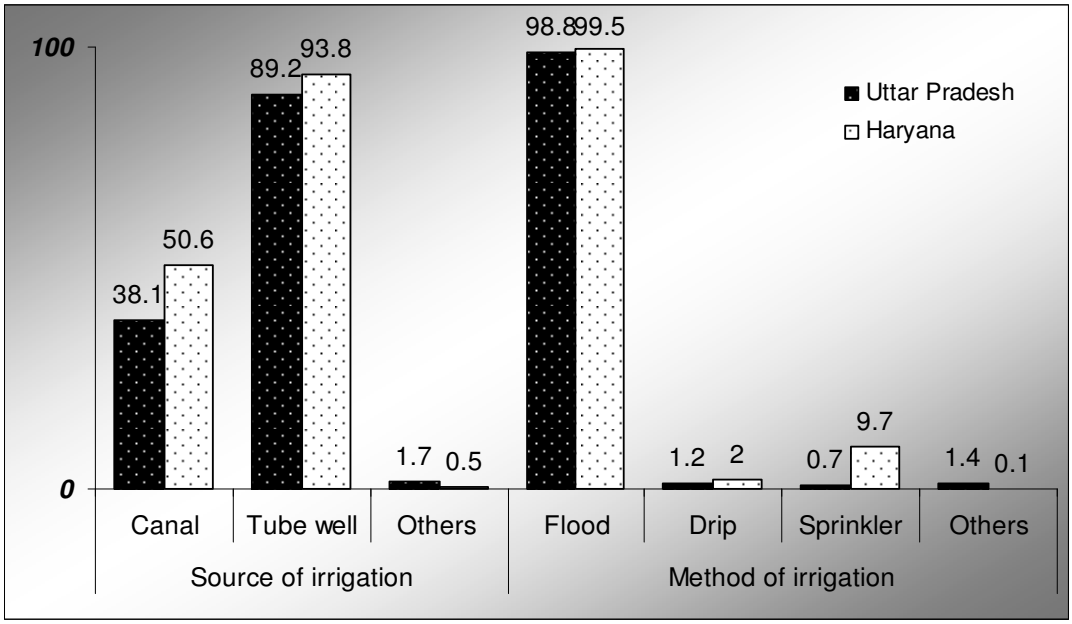
The table shows the first main income activity of women farmers is also agriculture to the extent of 85%, a little less than that of all farmers (male & female). The only exception is SC women farmers in Haryana, who have 'other activities' as the main income source, perhaps most of them are landless and marginal farmers as found in Table 5.7. The second major income activity is 'others' in both states except the general category in UP where women have more social restrictions to work outside house. The third major income activity is animal husbandry in both the states. The fourth activity is horticulture accounting for less than 1%. The main difference in occupational distribution of men and women is that animal husbandry especially dairy is taken up more by the women. This finding needs special attention in devising appropriate gender-specific extension strategies like training, exposure visits, etc.

SOURCES OF IRRIGATION

5.16 The district-wise sources and methods of irrigation adopted by the sample farmers are presented in Table 5.14. Analysis of data on sources and methods of irrigation as reported by sample farmers presented in the table revealed that canals and tube wells/wells are the major sources of irrigation in both the states. Comparatively, about 51 per cent of the beneficiaries in Haryana have canal source as against 38 per cent in Uttar Pradesh. Tube well/well was reported as irrigation source by 89.2 per cent and 93.7 per cent farmers in UP and Haryana, respectively. In both the states, tank and other sources are almost nil as per responses of farmers.

Table 5.14 : Sources of Irrigation and Method of Irrigation followed by Respondents

District	Source of irrigation				Method of irrigation			
	Total Sample	Canal	Tube well	Others	Flood	Drip	Sprinkler	Others
Uttar Pradesh		%	%	%	%	%	%	%
1.Jalaun	680	55.0	61.0	11.5	92.3	0.9	4.8	11.0
2.Lucknow	680	34.9	91.4	0.0	100.0	0.0	0.5	0.0
3.Saharanpur	680	44.4	98.7	0.4	99.5	5.8	0.3	0.0
4.Baghpat	680	30.4	96.6	1.8	97.9	2.7	0.3	3.5
5.Bareilly	680	32.1	98.7	0.1	99.8	0.9	0.0	0.0
6.Aligarh	680	19.9	98.4	0.6	99.8	0.3	0.0	0.0
7.Maharajganj	680	35.3	95.6	1.5	100.0	0.0	0.3	0.0
8.Allahabad	680	03.2	98.8	0.0	100.0	0.0	0.0	0.0
9.Barabanki	685	87.3	63.2	0.7	100.0	0.3	0.0	0.0
Total(1-9)-A	**6125**	38.1	89.2	1.7	98.8	1.2	0.7	1.4
Haryana								
10.Sirsa	875	45.7	94.2	0.7	99.4	3.3	182.2	0.0
11.Sonepat	875	55.4	93.4	0.3	99.5	0.7	1.2	0.0
Total(10-11)B	**1750**	50.6	93.8	0.5	99.5	2.0	9.7	0.1
G. Total (A+B)	**7875**	40.9	90.2	1.4	99.0	1.4	2.7	1.1



As regards methods of irrigation, flood irrigation is a universal mode, resorted to by almost all the beneficiaries (99%). Drip irrigation is sparingly used while sprinkler irrigation is used by more respondents in Haryana. In UP, the drip irrigation method was reported in Saharanpur (11.5%), Baghpat (2.7%), Jalaun and Bareilly districts. The use of sprinkler irrigation method ranged from 1 per cent to 5 per cent with the maximum in Dakor block of Jalaun district. In Haryana, the use of drip irrigation method ranged from less than 1 per cent to a maximum of 3.7 per cent while the responses on use of sprinkler irrigation method ranged from less than 1 per cent to a maximum of 33.3 per cent. To sum up, it is clear that flood irrigation is the universal mode though there is a good scope for drip and sprinkler methods especially in areas where tube well is the only mode of irrigation**.**

II. PARTICIPATION IN FARMER ORIENTED ACTIVITIES

5.17 One of the important objectives of the restructured extension mechanism in the form of ATMA is to empower farmers and improve their participation in technology dissemination process. ATMA aims to promote farmer-led extension through training and capacity building of farmers in agriculture and allied sectors, mobilizing and organizing them into commodity oriented Farmers' Interest Groups (FIGs) and Self Help Groups, conducting on-farm demonstrations in production technologies, farm implements and IPM/IRM. The improvement in the extension system on the basis of farmers' feed back on the above aspects is discussed in this section.

PARTICIPATION IN PROGRAMMES OF SUB-SECTOR

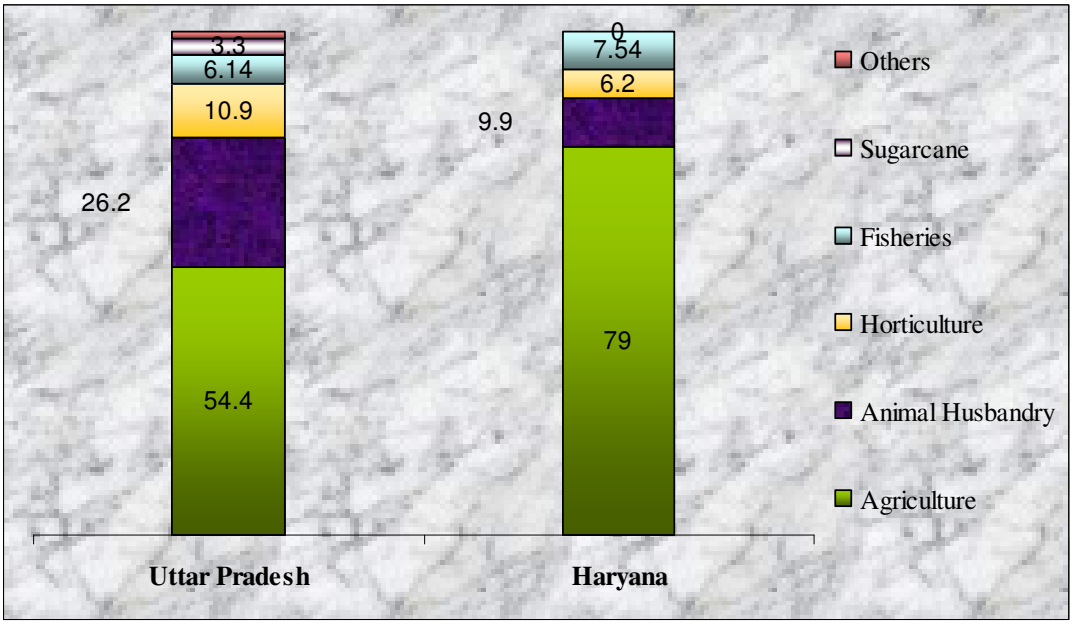
5.18 As all sample farmers are the beneficiaries of at least one extension activity of ATMA, some of them may have participated in more than one activity and their actual responses in the selected districts are presented in Table 5.15.

Table 5.15 : Participation of Sample farmers in the Sub-sector Programmes

District	Total Respondents	%age Respondents who attended programmes under						
		Agriculture	Animal Husbandry	Horticulture	Fisheries	Sugarcane	Others	Total
Uttar		%	%	%	%	%	%	%
1. Jalaun	680	60.1	22.6	14.3	7.3	0.0	0.0	104.9
2.Lucknow	680	75.4	13.3	7.7	4.8	0.0	0.0	101.5
3.Saharanpur	680	98.2	63.1	8.4	0.7	0.7	4.7	175.9
4.Baghpat	680	57.0	25.0	12.0	10.0	2.6	1.4	108.2
5.Bareilly	680	44.4	33.2	0.2	8	13.9	0	100.0
6.Aligarh	680	59.8	15.2	29.1	2.5	0.0	0.2	107.1
7.Maharajgan	680	50.4	34.1	16.6	1.6	3.0	4.8	110.7
8.Allahabad	680	68.2	19.1	2.2	10.8	0.0	0.0	100.4
9.Barabanki	685	66.1	9.9	7.0	8.7	9.4	0.0	101.3
Total-A	**6125**	**54.4**	**26.2**	**10.9**	**6.14**	**3.3**	**1.3**	**112.2**
Haryana								
10.Sirsa	875	84.4	11.6	3	2.5	0.0	0.0	101.7
11.Sonepat	875	73.6	2.1	13.3	12.5	0.0	0.0	107.7
Total-B	**1750**	**79.0**	**9.9**	**6.2**	**7.54**	**0.0**	**0.0**	**104.7**
Grand Total	**7875**	**67.7**	**15.7**	**10.3**	**6.5**	**2.6**	**1.0**	**110.5**

Note: Total may not add to 100 due to multiple responses

Table 5.16 shows that on an average two-thirds of sample farmers (68%) have attended extension programmes in agriculture, 16% in animal husbandry, 10% in horticulture, 6% in fisheries and 3% in sugarcane and 1% in joint programmes. The percentage total of more than 100 indicates participation of some of them in more than one programme. The responses of farmers varied widely over the districts with maximum in Saharanpur where a farmer on an average attended 1.75% programmes, followed by Maharajganj, Baghpat and Aligarh with 1.1% progammes. It is interesting to note that these districts with lower level of education and more of smaller holdings have higher rate of participation. Thus, the correlation between participation in programmes and illiteracy was found a positive (0.3) instead of expected negative. Perhaps, the field staff may be finding it easier to convince the illiterate farmers. The educated ones may be both already aware of information and knowledgeable or may not be active cultivators themselves.



WOMEN PARTICIPATION BY SUB SECTORS

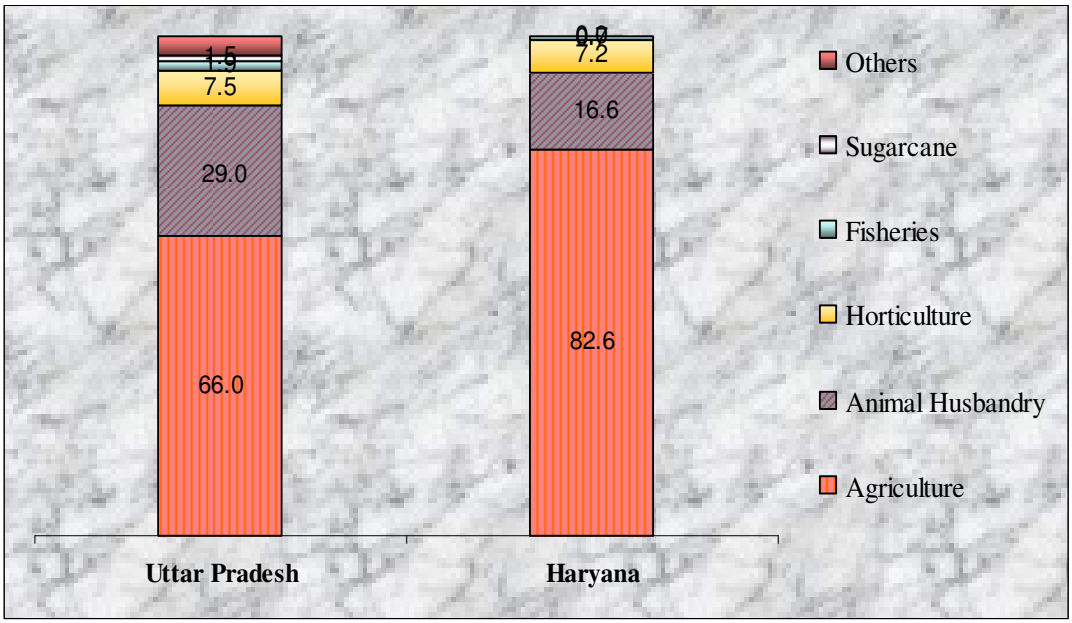
5.19 The participation of women farmers, worked on the basis of their actual responses in selected districts is presented in Table 5.16**.**

Table 5.16 : Sector-wise Participation of Women farmers in ATMA programmes

District/ State	Total Respondents	Women Respondents	%age of women who attended programmes under						
			Agriculture	Animal Husb.	Horticulture	Fisheries	Sugarcane	Others	Total
Uttar Pradesh									
1. Jalaun	680	129	46.5	35.6	23.2	0.7	0	0	106.2
2. Lucknow	680	116	83.6	19.0	1.7	0.9	0.0	0.0	105.2
3. Saharanpur	680	59	100.0	57.6	10.2	0.0	0.0	0.0	167.8
4. Baghpat	680	18	27.7	72.3	0.0	0.0	0.0	0.0	100.0
5. Bareilly	680	7	28.6	57.1	1.0	0.0	0.0	0.0	290.0
6. Aligarh	680	82	91.0	8.3	1.2	0.0	0.0	0.0	101.2
7. Maharajganj	680	180	45.0	40.5	6.7	0.0	0.0	16.6	108.9
8. Allahabad	680	59	79.6	5.1	9.0	0.0	0.0	0.0	110.5
9. Barabanki	685	68	70.6	8.8	4.4	1.5	16.2	0.0	101.5
Total-A	**6125**	**718**	**66.0**	**29.0**	**7.5**	**1.9**	**1.5**	**4.2**	**110.2**
Haryana									
10. Sirsa	875	44	72.7	20.4	6.8	0.0	0.0	0.0	100.0
11. Sonepat	875	94	87.2	14.9	7.4	1.1	0.0	0.0	110.6
Total-B	**1750**	**139**	**82.6**	**16.6**	**7.2**	**0.7**	**0.0**	**0.0**	106.5
Grand Total	**7875**	**856**	**68.7**	**27.0**	**7.5**	**1.8**	**1.3**	**3.5**	**109.6**

Of the total women farmers, the maximum, about 69% have participated in agricultural programmes followed by 27% in the dairy, 8% in the horticulture, 2% in

fisheries and about 5% in other programmes. It indicates that some of them have also participated in more than one programme.



Responses of women farmers too varied widely over the districts with maximum in Saharanpur where a woman beneficiary, on an average, attended 1.67 programmes, followed by Sonepat and Maharajganj with 1.1 progammes. In the districts of Bareilly and Allahabad, a few women farmers have not attended any programme. The overall participation brings out that men and women farmers have almost equally attended the programmes, with the latter a little more than men in aggregate but in two districts of UP, few women farmers have not participated at all.

The discussion in Tables 5.15 and 5.16 brings out that each of the sampled farmer has participated in at least one extension activity and about two-third of the programmes were on general agriculture. However, dairy programmes were attended more by the women than men. It may be due to higher dairy occupation of women than men as we have discussed earlier. Interestingly, the participation rate in extension activity was positively related with illiteracy instead of likely negative.

MEMBERSHIP OF FIGs

5.20 In keeping with the recommendations of the National Commission on Farmers, ATMA lays emphasis on group approach in extension through promotion of commodity based farmers' organization to combine the advantages of decentralized production and centralized services, post-harvest management, value addition and marketing. Membership of sample farmers in various types of FIGs after 3 years of ATMA implementation is presented in Table 5.17.

Table 5.17 : Membership in various types of FIGs and level of Satisfaction

District	Total Respon dents	Members of all type of FIGs	FIG members (in %age) associated with						Aware about Fin. Assist to FIGs (%)	Satisfied with working of FIGs (%)
			Agri. Mktg. Society	Cane Growers' Assoc.	Fruit & Veg. Growers' Assoc.	Fish Farmers' Assoc.	Dairy Dev. Society	Milk Process. Society		
Uttar Pradesh										
1.Jalaun	680	0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
2.Lucknow	680	22	0.0	0.0	0.0	3.2	0.0	0.0	0.0	1.5
3.Saharanpur	680	36	4.1	0.9	0.3	0	0	0	3.8	3.2
4.Baghpat	680	87	6.7	2.2	0.3	0.6	2.3	0.6	6.1	10.4
5.Bareilly	680	17	1	0.0	0.0	0.0	1.5	0	2.5	2.5
6.Aligarh	680	26	0	0	0.1	0.1	0	3.5	8.2	5.4
7.Maharajganj	680	114	4.2	0.1	2.8	0.3	4.8	4.4	4.8	4.0
8.Allahabad	680	21	0.7	0	3.1	0	2.9	0	1.6	0.6
9.Barabanki	685	41	0.0	0.0	0.0	0.0	0.3	5.7	4.8	5.4
Total-A	**6125**	364	**1.9**	**0.3**	**0.5**	**0.5**	**1.1**	**1.6**	**3.6**	**3.7**
Haryana										
10.Sirsa	875	6	0.0	0.4	0.1	0.0	0.0	0.1	0.4	0.4
11.Sonepat	875	7	0.4	0	0	0.0	0.2	0.1	0.4	0.2
Total-B	**1750**	13	**0.2**	**0.2**	**0.06**	**0.0**	**0.1**	**0.1**	**0.4**	**0.3**
Grand Total (A+B)	**7875**	377	**31.5**	**6.9**	**8.5**	**7.7**	**19.1**	**26.3**	**3.3**	**3.6**

It is disheartening to note that only 4.8 per cent of the sampled beneficiaries have taken the membership of different types of FIGs. Out of them, about 32% have taken the membership of agricultural marketing societies, 26% in milk processing & 19% for dairy development societies. The crop specific membership has been taken by 7% each in cane growers' associations and fisheries societies and about 9% in fruits and vegetables societies. Thus, the membership is still low and is restricted to mostly existing types of societies. The abysmally low level of awareness (3.3%) about financial assistance to FIGs and dismal performance of the existing FIGs as given in the last two columns may be reasons for low membership.

FORMATION OF SHGs

5.21 Formation of Self Help Group (SHG) was an alternative to FIG to organize small farmers, especially the women, to provide extension services through group approach. It makes extension cost effective and Self Help Groups (SHGs) can also inculcate the habit of thrift among the small, marginal and women farmers to meet their emergent credit needs from the pooled savings. The status of membership in SHGs from the sample farmers after 3 years of ATMA and before is presented in Table 5.18.

Table 5.18 : SHG Members in Sample Farmers/Women before & after ATMA

State / District	Total farmers		Women		Social category of total farmers					
	Before	After	Before	After	SC & ST		OBC		Gen.	
					Before	After	Before	After	Before	After
Uttar Pradesh										
Jalaun	38 (5.6)	79 (11.6)	26 (3.8)	34 (5.0)	31 (4.5)	45 (6.5)	4 (0.6)	23 (3.4)	3 (0.4)	11 (1.6)
Lucknow	9 (1.3)	42 (6.2)	5 (0.7)	13 (1.9)	5 (0.7)	17 (2.4)	4 (0.6)	21 (3.1)	-	4 (0.6)
Saharanpur	51 (7.5)	36 (5.3)	18 (2.6)	2 (0.3)	21 (3.1)	6 (0.8)	17 (2.5)	12 (1.8)	13 (1.9)	18 (2.6)
Baghpat	11 (1.6)	1 (0.1)	-	-	2 (0.3)	1 (0.1)	7 (1.3)	-	2 (0.3)	-
Bareilly	-	5 (0.5)	-	-	-	-	-	5 (0.7)	-	-
Aligarh	8 (1.2)	-	4 (0.6)	-	-	-	7 (1.3)	-	1 (0.1)	-
Maharajganj	13 (1.9)	-	5 (0.7)		9 (1.3)	-	3 (0.4)	-	1 (0.1)	-
Allahabad	-	12 (1.8)	-	5 (0.7)	-	8 (1.2)	-	4 (0.6)	-	-
Barabanki	1 (0.1)	-	-	-	-	-	1 (0.1)	-	-	-
Total	**131 (2.1)**	**175 (2.9)**	**58 (8.1)**	**54 (7.5)**	**68 (4.7)**	**77 (5.2)**	**43 (1.3)**	**65 (2.0)**	**20 (1.4)**	**33 (2.3)**
Haryana										
Sirsa	1 (0.1)	-	-	-	-	-	1 (0.1)	-	-	
Sonepat	9 (1.0)	-	8 (0.9)	-	-	-		-	9 (1.0)	
Total	**10 (0.6)**	**-**	**8 (0.4)**	**-**	**-**	**-**	**1 (0.05)**	**-**	**9 (0.5)**	
G. Total	**141 (1.79)**	**175 (2.85)**	**66 (0.84)**	**54 (0.69)**	**68 (0.86)**	**77 (0.95)**	**43 (0.55)**	**65 (0.85)**	**20 (0.26)**	**33 (0.42)**

(Figures in parenthesis denote percentage)

It is again disturbing to observe that even after three years of ATMA implementation, net addition of new members in SHGs is very low (4.3%). The new members of SHG were added in Jalaun and Lucknow while some farmers left their membership in Saharanpur and Baghpat districts. Even the total women members have decreased from 66 to 54. The SHG formation under ATMA is so dismal that there is no scope for further discussion. In fact, this aspect may be the acid test for ATMA, which requires some contribution from the members in the form of savings and that too for own use. Hence, there is need for renewed efforts to motivate farmers, particularly women to form SHGs, if extension services are to be made accessible to marginal and tenant farmers.

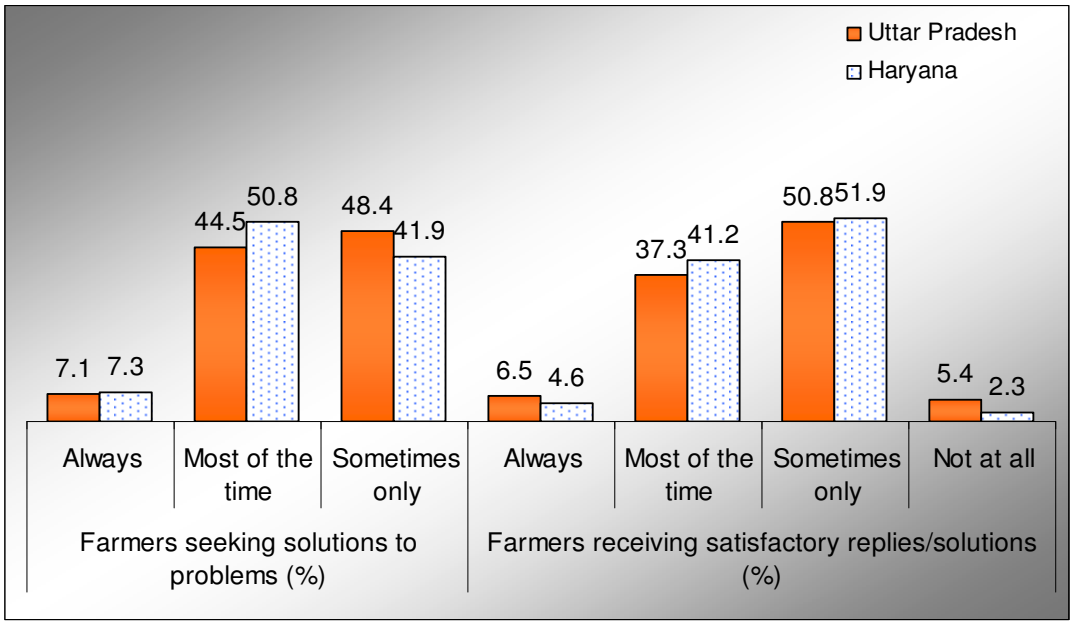
FARMERS IN NEED OF GUIDANCE

5.22 A question was asked from the farmer respondents to find out whether they were seeking solutions to their farm related problems from the extension officials, KVKs

etc. and if so, whether they could get satisfactory responses and redressal. The aim was to see the extension reach out to farmers in the recent times after the launch of ATMA programme. The feedback received in this regard is compiled in Table 5.19.

Table 5.19 : Farmers seeking solutions to problems & their Redressal

District	Total Respon dents	Farmers seeking solutions to problems (%)			Farmers receiving satisfactory replies/solutions (%)			
Uttar Pradesh		**Always**	**Most of the time**	**Sometimes only**	**Always**	**Most of the time**	**Sometimes only**	**Not at all**
1. Jalaun	**680**	3.1	25.0	71.9	0.3	15.1	68.0	16.6
2. Lucknow	**680**	10.9	58.3	30.8	16.0	40.5	32.3	11.2
3. Saharanpur	**680**	4.9	35.3	59.8	6.5	57.2	35.6	0.7
4. Baghpat	**680**	16.8	56.8	26.4	20.3	44.2	34.3	1.2
5. Bareilly	**680**	1.8	67.8	30.4	1.5	63.9	34.6	0.0
6. Aligarh	**680**	6.4	50.0	43.6	1.8	29.9	54.2	14.1
7 Maharajganj	**680**	4.1	29.1	66.8	2.3	20.1	76.7	0.9
8. Allahabad	**680**	6.9	38.4	54.7	2.8	32.8	63.9	0.5
9. Barabanki	**685**	7.4	23.2	69.4	7.1	15.9	74.3	2.7
Total-A	**6125**	**7.1**	**44.5**	**48.4**	**6.5**	**37.3**	**50.8**	**5.4**
Haryana								
10. Sirsa	875	7.2	45.1	47.7	6.8	35.3	54.8	3.1
11. Sonepat	875	7.4	56.3	36.3	2.4	46.9	49.1	1.6
Total-B	**1750**	7.3	50.8	41.9	4.6	41.2	51.9	2.3
G.Total A +B	**7875**	**7.1**	**45.9**	**47.0**	**6.1**	**38.2**	**51.0**	**4.7**



After three years of implementation of ATMA in 2007-08, about 47% of the farmers are farming with their own knowledge as they rarely seek solutions from outside agencies. Such farmers are slightly less (42%) in Haryana as against 48% in UP. Across the districts, the farmers who do not seek outside advice are maximum (72%) in Jalaun, followed by Barabanki (69%) and Maharajganj (67%). Of those 53% who

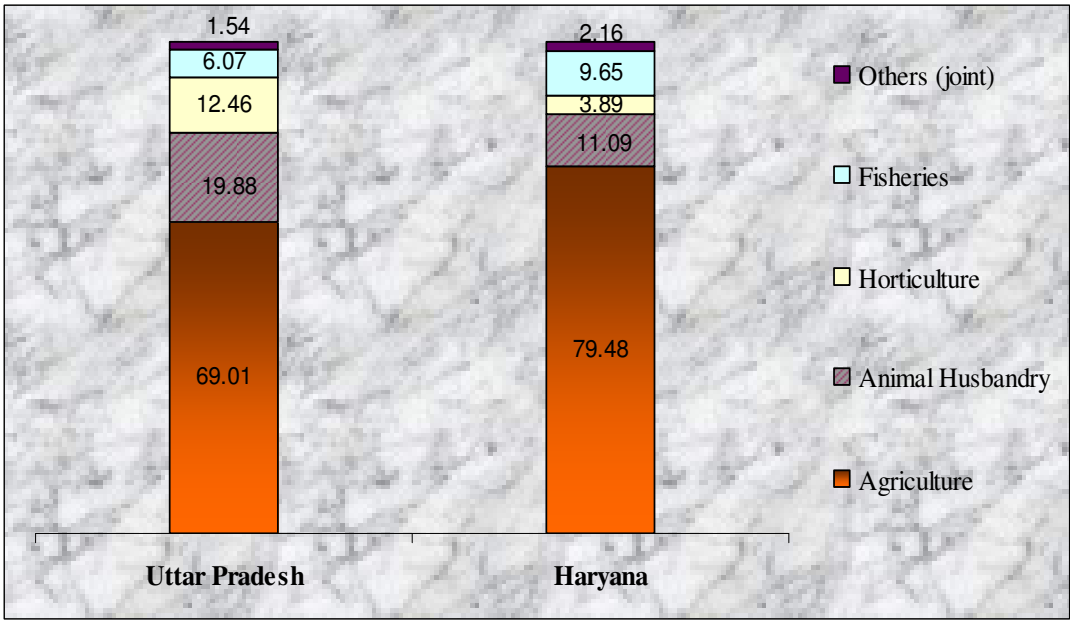
seek solutions, about 44% are getting timely responses from the extension departments and the remaining 56% are either receiving sometimes or not at all. The response is slightly better in Haryana though not much different. Across districts, the response rate is the maximum at 65% in Bareilly & Baghpat and 64% in Saharanpur. The least response rate is in Jalaun (15%), Maharajganj (22%) and Barabanki (23%) and this may be the reason that the farmers of these very districts seek least solution from government agencies. Therefore, more focus should be laid on increasing response rate which itself will increase number of farmers seeking solutions from government agencies. The response rate can be increased through increased training, demonstrations, exposure meets etc.

PARTICIPATION IN TRAININGS

5.23 The main objective of agriculture extension services is to transmit latest technical know-how to farmers. Trainings were, accordingly, organized in the sampled districts to disseminate the latest developments and technologies in agriculture and allied activities. The feedback obtained from the sample farmers in this regard is compiled in Table 5.20.

Table 5.20 : Sub-sector wise participation of farmers in Training Programmes

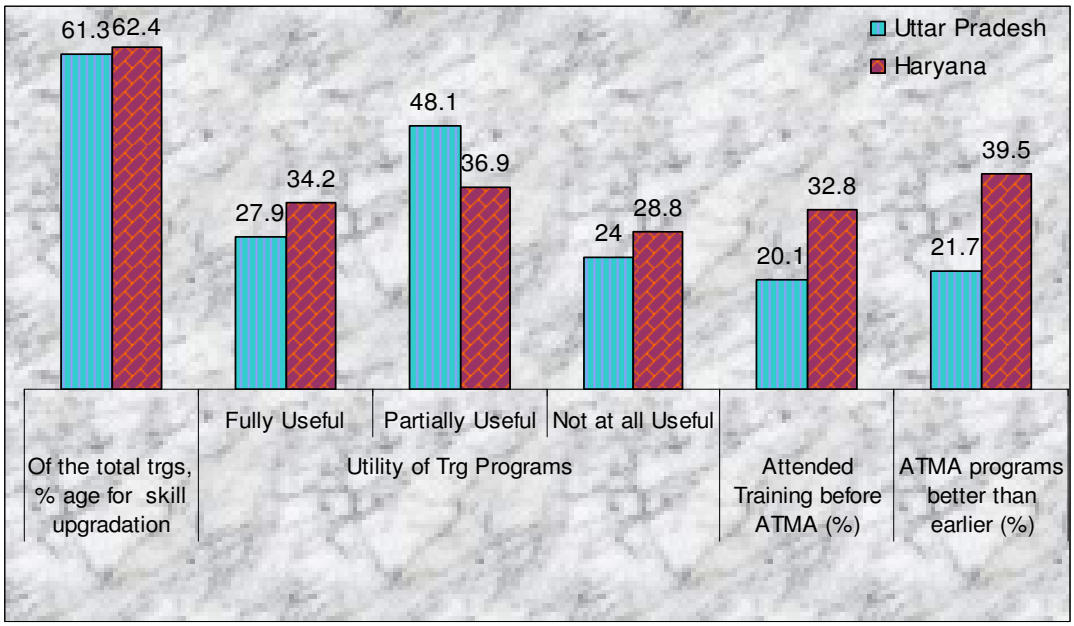
State District	Agriculture	Animal Husbandry	Horticulture	Fisheries	Others (joint)	Total Respondents (No.}	(7) as % age to total district sample
	%age to (7)	%age to (7)	%age to (7)	%age to (7)	%age to (7)		
1	2	3	4	5	6	7	8
Uttar Pradesh							
1. Jalaun	56.62	24.63	13.79	9.38	0.18	544	80.00
2. Lucknow	73.50	17.29	10.34	6.58	0.38	532	78.24
3. Saharanpur	93.59	8.84	6.24	0.69	1.91	577	84.85
4. Baghpat	63.41	26.13	11.50	8.54	4.88	574	84.41
5. Bareilly	69.70	37.88	0.19	7.01	0.00	528	77.65
6. Aligarh	69.60	8.79	33.04	1.76	1.58	569	83.68
7. Maharajganj	54.12	28.65	20.97	2.06	3.00	534	78.53
8. Allahabad	75.56	13.62	2.43	8.40	0.00	536	78.82
9. Barabanki	62.90	13.65	12.79	11.30	1.71	469	68.47
Total-A	69.01	19.88	12.46	6.07	1.54	**4863**	**79.40**
Haryana							
10. Sirsa	85.54	14.58	2.70	2.45	2.57	816	93.26
11. Sonepat	70.86	6.11	5.58	19.90	1.57	573	65.49
Total- B	79.48	11.09	3.89	9.65	2.16	**1389**	**79.37**
G. Total (A+B)	71.34	17.93	10.56	6.86	1.68	**6252**	**79.39**



Of the total sample farmers, about 80% have attended any one of the sub-sector programmes. Sub-sector wise, 71% of the farmers attended the training on general agriculture, 18% in animal husbandry, 11% in horticulture, 7% in fisheries and 1.7% in joint programmes. A few farmers may have attended more than two programmes too. Participation is better in Haryana in agriculture, fishery and joint programmes. In the other areas, participation is better in UP. Overall, training participation appears satisfactory.

Table 5.21 : Utility of Training Programmes

State / District	Of the total trgs, % age for skill upgradation	Utility of Trg. Programs			Attended Training before ATMA (%)	ATMA programs better than earlier (%)
		Fully Useful	Partially Useful	Not at all Useful		
Uttar Pradesh						
1.Jalaun	25.2%	6.8%	46.4%	46.8%	9.3%	10.1%
2.Lucknow	31.0%	33.2%	42.5%	24.3%	31.3%	36.8%
3.Saharanpur	74.4%	34.4%	62.0%	3.6%	30.7%	23.1%
4.Baghpat	69.0%	45.5%	37.9%	16.6%	34.7%	42.0%
5.Bareilly	90.0%	13.3%	72.7%	14.0%	4.1%	4.7%
6.Aligarh	51.1%	23.3%	47.0%	29.7%	36.2%	35.5%
7.Maharajganj	53.0%	40.4%	30.7%	28.8%	20.9%	23.4%
8.Allahabad	77.4%	31.0%	49.2%	19.8%	4.3%	3.9%
9.Barabanki	83.2%	22.2%	46.6%	31.2%	9.2%	11.9%
Total-A	**61.3%**	**27.9%**	**48.1%**	**24.0%**	**20.1%**	**21.7%**
Haryana						
10.Sirsa	62.7%	46.2%	23.9%	29.9%	44.3%	44.9%
11.Sonepat	62.0%	17.3%	55.4%	27.3%	21.3%	31.8%
Total-B	**62.4%**	**34.2%**	**36.9%**	**28.8%**	**32.8%**	**39.5%**
G. Total (A+B)	**61.6%**	**31.1%**	**42.5%**	**26.4%**	**26.5%**	**30.6%**



The utility of the training programmes undergone by the farmers was also ascertained from them and their feed back in this respect is presented in Table 5.21.

Of the total training programmes, about 62% were for skill up-gradation, though this feedback was just 25% and 30% in Jalaun and Lucknow. This is a satisfactory 'change' as before ATMA only 27% attended any training programme. But the quality of ATMA programmes was reported better than the previous ones by 30% of respondents only. As regards utility, 31% farmers found them fully useful and 26% did not find them useful at all while the remaining termed them as partially useful. It implies that the quality of the ATMA training needs a lot of improvement to be relevant and useful to farmers.

PARTICIPATION IN DEMONSTRATIONS

5.24 Demonstrations with an embedded philosophy of 'seeing is believing' are important extension programs to teach new knowledge and skills to farmers. Hence, they are widely promoted and arranged under ATMA and the response of sample farmers regarding their experiences in this respect and the utility of such demonstrations is presented in Table 5.22.

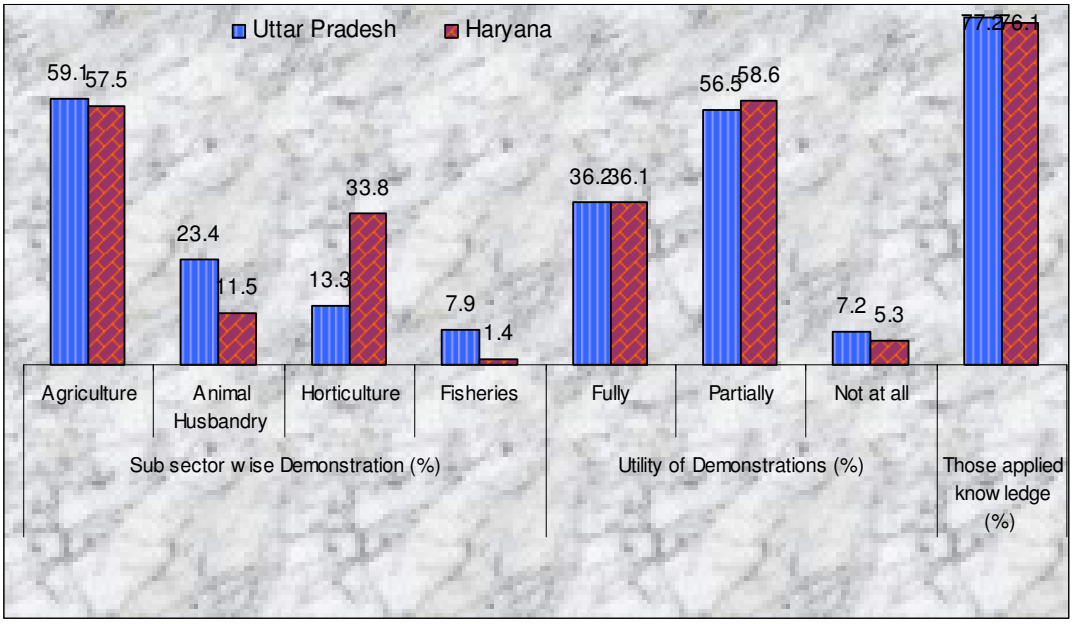
It is not a good sign that only about 18% sample farmers have participated in the demonstrations arranged for different sub sectors. Out of these participants, about 59% attended the demonstrations for agriculture in general, 21% for dairy, 18% for horticulture and 21% for fish farming. However, it is ominous that feedback to participation in demonstrations is convincing. Participation in demonstrations was

reported fully and partially useful by 36% and 57% participant farmers. On the whole, the demonstrations are reported useful by 93% as compared to training by 69%.

Table 5.22 : Demonstrations Attended by Farmers and their Utility

State/ District	Sub Sector-wise Demonstration				Total	Utility of Demonstrations (%)			Those Applied knowledge(%)
Uttar Pradesh	**Agricul Ture**	**Animal Husbandry**	**Horti culture**	**Fishe ries**		**Fully**	**Parti ally**	**Not at all**	
1. Jalaun	56.7	16.4	26.9	1.5	67	0.19	79.1	1.5	92.5
2.Lucknow	59.6	8.5	27.7	5.3	94	28.7	71.3	0.0	89.4
3.Saharanpur	87.3	18.2	17.3	0.0	110	80.9	18.2	0.9	87.3
4.Baghpat	42.2	12.2	24.5	25.2	147	52.7	45.2	2.1	81.5
5.Bareilly	76.9	6.8	0.0	18.8	117	31.6	68.4	0.0	100.0
6.Aligarh	66.3	7.2	28.9	0.0	83	22.9	63.9	13.3	67.5
7.Maharajganj	39.0	54.0	8.0	0.0	200	28.5	50.5	21.0	54.0
8.Allahabad	55.9	36.6	0.0	7.6	145	40.0	52.4	7.6	86.9
9.Barabanki	69.5	18.3	4.6	7.6	131	14.5	77.9	7.6	58.0
Total-A	**59.1**	**23.4**	**13.3**	**7.9**	**1,094**	**36.2**	**56.5**	**7.2**	**77.2**
Haryana									
10.Sirsa	74.0	17.3	13.4	2.4	127	40.2	49.6	10.2	56.7
11.Sonepat	44.4	6.9	50.0	0.6	160	32.9	65.8	1.3	91.8
Total-B	**57.5**	**11.5**	**33.8**	**1.4**	**287**	**36.1**	**58.6**	**5.3**	**76.1**
G. Total	**58.8**	**20.9**	**17.5**	**20.9**	**1,381**	**36.2**	**57.0**	**6.8**	**77.0**

Note: Percentages may not add to 100 due to multiple demonstrations attended by a few farmers



Moreover, 77% of the farmers have applied the knowledge in their farming. It is interesting to note that utility is reported high by all beneficiaries in the districts like Lucknow, Jalaun, Saharanpur, though the participants are the minimum from these districts in both demonstrations and trainings. It brings out the need to allot more

funds for demonstrations in view of their much higher utility than trainings and participation may be more inclusive across districts.

EXPOSURE VISITS

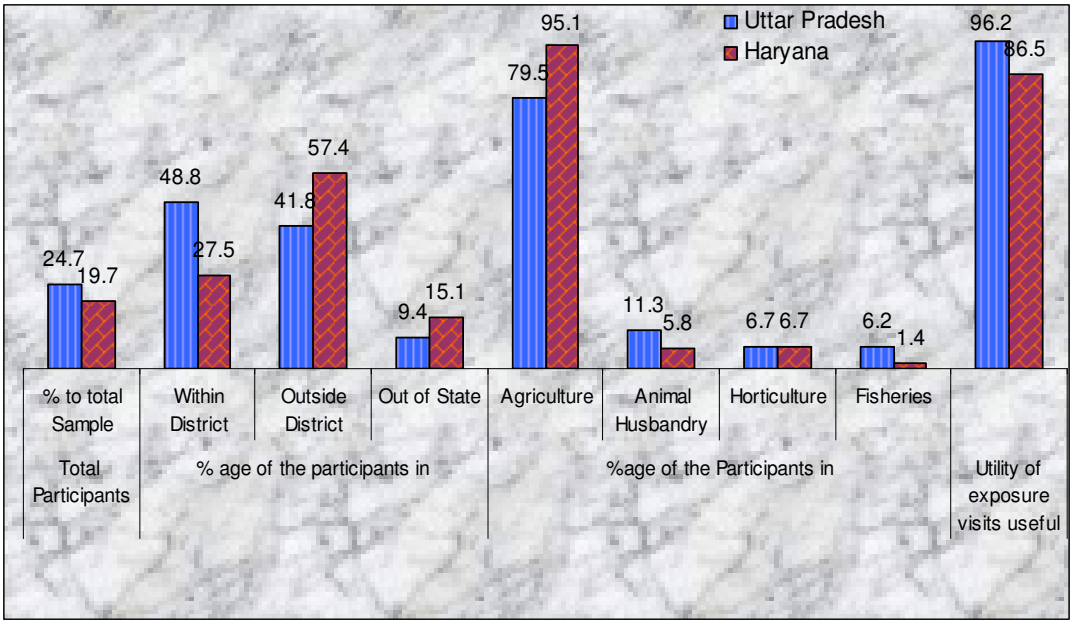
5.25 The exposure visits to exemplary farms either within the district, within state or outside the state and practical demonstrations in the farm fields therein is considered as the best form of learning of new farming practices and modern, scientific and innovative farm technologies. Travel and staying together with fellow farmers affords more time and is a good opportunity to share each others experiences and establish rapport, which can result in actual adoption. The feed back of sample farmers are compiled in Table 5.23.

Table 5.23 : Exposure Visits Undergone by Sample Farmers in Agriculture & allied Sectors

State / District	Total Participants		% age of the participants in			%age of the Participants, in				Utility of exposure visits useful (Yes %)
	No	% to total	Within District	Outside District	Out of State	Agri	A/H	Horti culture	Fisheries	
Uttar Pradesh										
1.Jalaun	149	21.9	21.5	73.8	4.7	75.8	20.8	14.1	2.7	98.2%
2.Lucknow	309	45.4	88.3	5.2	6.5	95.8	0.3	3.6	0.6	97.1%
3.Saharanpur	56	8.2	12.5	60.7	26.8	78.6	35.7	3.6	1.8	97.4%
4.Baghpat	186	27.4	22.0	65.1	12.9	45.7	28.0	21.5	10.2	94.5%
5.Bareilly	187	27.5	49.7	31.6	18.7	69.5	11.8	0.5	19.8	95.1%
6.Aligarh	130	19.1	22.3	60.0	17.7	62.3	26.9	6.9	6.9	94.2%
7.Maharajganj	155	22.8	73.5	24.5	1.9	92.9	3.9	5.8	1.3	90.4%
8.Allahabad	94	13.8	26.6	68.1	5.3	83.0	0.0	0.0	17.0	96.5%
9.Barabanki	245	35.8	50.2	45.7	4.1	93.9	1.2	3.3	1.6	96.2%
Total-A	**1511**	**24.7**	**48.8**	**41.8**	**9.4**	**79.5**	**11.3**	**6.7**	**6.2**	**96.2%**
Haryana										
10.Sirsa	131	15.0	28.2	45.8	26.0	90.8	12.2	13.0	2.3	91.9%
11.Sonepat	214	24.5	27.1	64.5	8.4	97.7	1.9	2.8	0.9	83.7%
Total-B	**345**	**19.7**	**27.5**	**57.4**	**15.1**	**95.1**	**5.8**	**6.7**	**1.4**	**86.5%**
G. Total	**1853**	**23.5**	**44.7**	**44.8**	**10.5**	**82.5**	**10.3**	**6.7**	**5.3**	**94.4%**

Overall, about 24% beneficiaries have participated in exposure visits, varying from the maximum in Lucknow (45%) to the minimum 8.2% in Saharanpur. Of the participants, 45% each attended within district and state whereas about 10% got chance for out of the state exposure visits.

The maximum out of the state visits were by the farmers of Sirsa and Saharanpur at 26% and the minimum in Maharajganj and Barabanki. The exposure visits were maximum 83% for general agriculture, 10 % for dairy, 7% for horticulture and 5% for fisheries including some repeaters. Utility of exposure visits was reported to the extent of 95% within a close range across the districts except Sonepat.



To sum up, as per the feed back of sample farmers / participants, among the farmers oriented programmes, the utility of exposure visits is the maximum (95%) followed by demonstration (93%) and the least (69%) of the trainings. The allocation of budget should, therefore, be decided keeping in view the utility of these extension activities.

III. FARM INFORMATION DISSEMINATION

5.26 ATMA envisages quick dissemination of new information and technology to farmers through all possible means. We have already discussed the problems faced and replies received in the reference year 2007-08 in Table 5.19. Dissemination of farm information is through village level meetings, agricultural exhibitions, printed materials and electronic media. Use of each of these activities is discussed in this section.

VILLAGE LEVEL MEETINGS

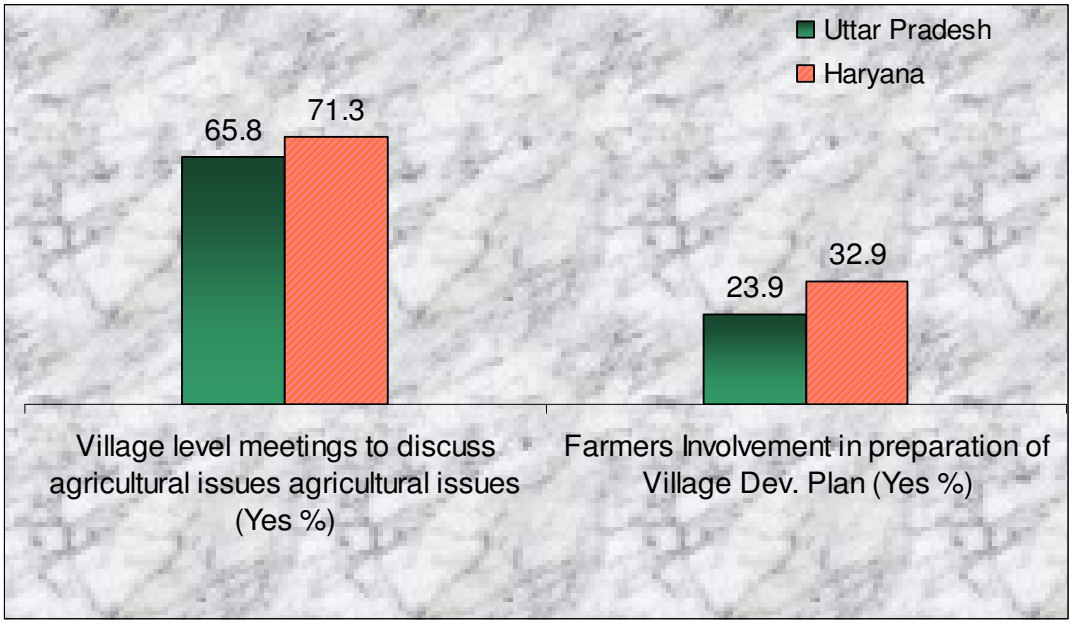
5.27 An important element of the ATMA model is adoption of bottom-up planning and participatory approach to make the technology dissemination farmer driven and farmer accountable. Farmers were, therefore, asked to indicate whether they were holding village level meetings to discuss agriculture issues, particularly cultivation related matters among themselves as also whether they were in any manner involved or participated in the preparation of village development plans. The feedback obtained from them in this regard is shown in Table 5.24.

Table 5.24 shows that 71% farmers reported holding of village meetings to discuss agriculture issues which can be taken as satisfactory. However, villagers' involvement in preparation of village development plan is only 33% with the

maximum 63% in Saharanpur and 40% in Bareilly while it was quite low in Jalaun (8%), Lucknow (15%) and Allahabad (2%) districts.

Table 5.24 : Village Level meetings on Agricultural issues and farmer involvement in preparation of village level plan

District	Total Respon dents	Village level meetings to discuss agricultural issues agricultural issues (Yes %)	Farmers Involvement in preparation of Village Dev. Plan (Yes %)
Uttar Pradesh			
1. Jalaun	680	55.1	8.2
2. Lucknow	680	63.2	15.0
3. Saharanpur	680	73.2	63.1
4. Baghpat	680	77.6	27.9
5. Bareilly	680	92.0	40.1
6. Aligarh	680	78.5	20.7
7. Maharajganj	680	44.8	14.3
8. Allahabad	680	77.8	1.8
9. Barabanki	685	30.2	23.6
Total-A	**6125**	**65.8**	**23.9**
Haryana			
10. Sirsa	875	65.2	43
11. Sonepat	875	77.2	22.8
Total-B	**1750**	**71.3**	**32.9**



The success of village level meetings should result from farmers' involvement which is not the case and, therefore, cannot be termed as satisfactory.

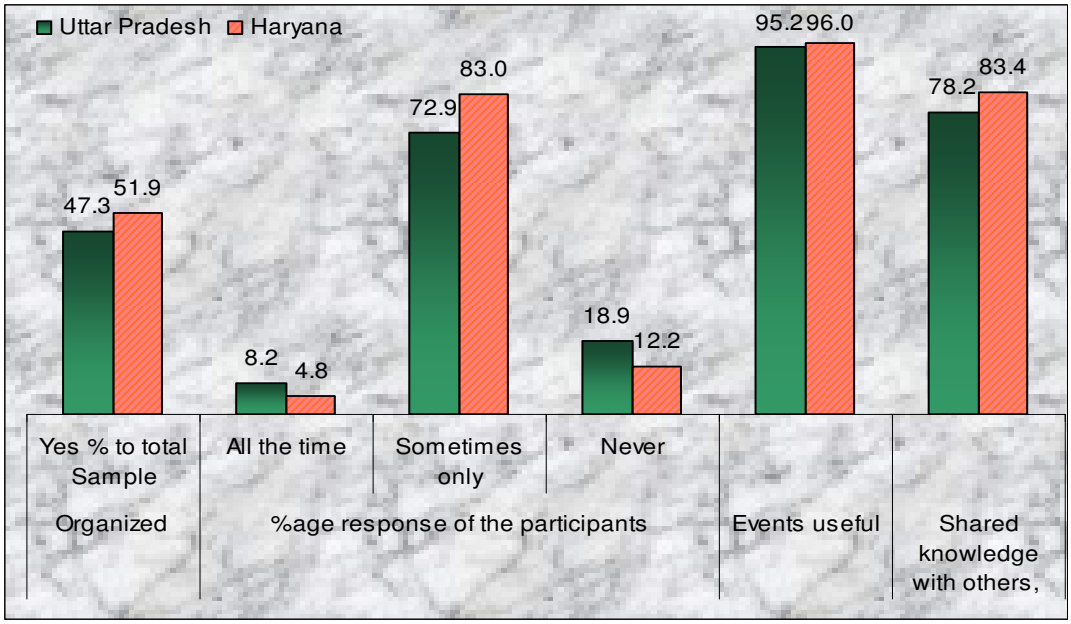
KISAN MELAS / FRUIT & VEGETABLE SHOWS

5.28 Kisan Mela, exhibitions and fruits & vegetable shows are considered as a good medium to disseminate latest farm related information and technologies to farmers besides providing backward & forward linkages and market access for produce. The details of the data collected in this regard from the sample farmers are contained in Table 5.25.

Table 5.25 : Organization of Kisan Melas / Exhibitions / Fruit & Vegetable Shows

State/ District	Organized	%age response of the participants			Events useful	Shared knowledge with others Yes (%)
	Yes % to total Sample	All the time	Sometimes only	Never		
Uttar Pradesh						
1.Jalaun	60.0	3.4	66.0	30.6	95.4	60.6
2.Lucknow	82.2	1.6	66.7	31.7	94.0	46.2
3.Saharanpur	49.7	13.5	80.9	5.6	97.5	75.4
4.Baghpat	49.4	23.7	71.0	5.3	92.2	76.9
5.Bareilly	26.6	13.3	86.7	0.0	100.0	93.9
6.Aligarh	71.6	2.3	60.8	37.0	90.6	63.2
7.Maharajganj	20.3	5.8	92.1	2.2	94.1	93.5
8.Allahabad	40.0	15.8	84.2	0.0	99.3	97.9
9.Barabanki	26.3	1.6	83.0	15.4	97.4	96.1
Total-A	**47.3**	**8.2**	**72.9**	**18.9**	**95.2**	**78.2**
Haryana						
10.Sirsa	54.6	4.6	77.6	17.8	93.4	82.2
11.Sonepat	49.1	5.1	89.1	5.8	98.5	84.7
Total-B	**51.9**	**4.8**	**83.0**	**12.2**	**96.0**	**83.4**
G. Total A+B	**48.3**	**7.4**	**75.6**	**17.4**	**95.4**	**79.4**

Overall 48% of sample farmers reported holding of exhibitions / fruit & vegetable shows in almost all the selected districts and the participation was to the extent of 83%, though regular visitors were only 7%. The participation above 90% was in the districts of Saharanpur, Baghpat, Bareilly, Maharajganj, Allahabad and Sonepat districts and it was less than 70% in Lucknow and Aligarh. The usefulness of such events was felt by about 95% of participants, ranging from 92% to 100% in the sample districts. Of the participants, about 79% have also shared their knowledge with fellow farmers.

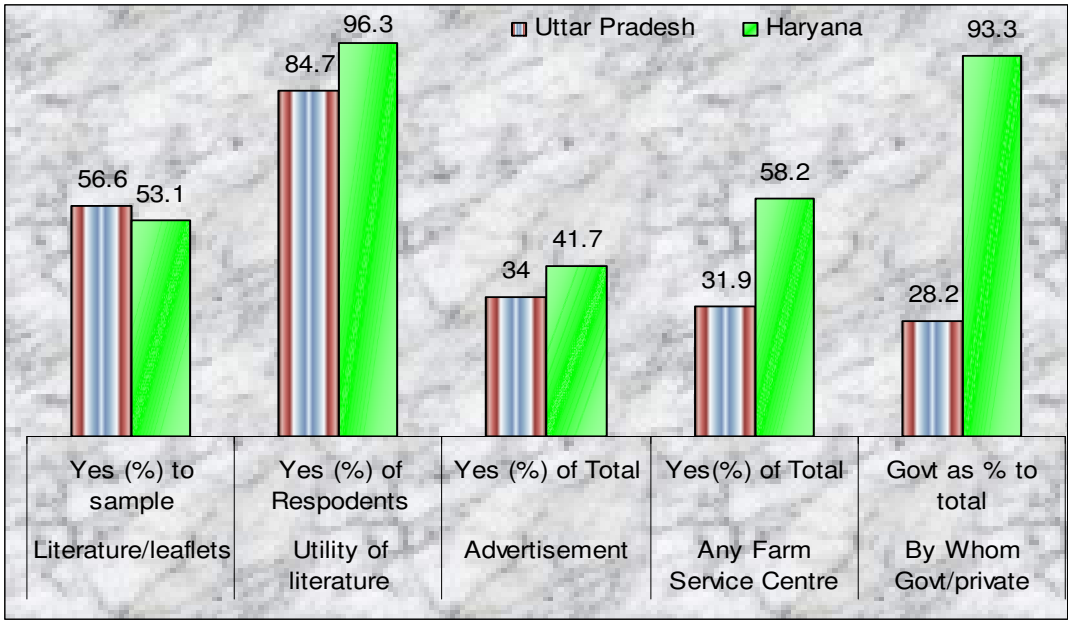


LITERATURE ON AGRICULTURAL PRACTICES AND TECHNOLOGY

5.29 Literature in the form of booklets, pamphlets, posters and print and electronic media are used for dissemination of farm related information. The feedback of sample farmers on these activities during ATMA period is compiled district-wise in Table 5.26.

Table 5.26 : Farm Literature and Farm Service Centre

State /District	Literatures/ leaflets	Utility of literature	Adver-tisement	Any Farm Service Centre	By Whom Govt./ Private
	Yes (%) to sample	Yes (%) of Respondents	Yes (%) of Total	Yes(%) of Total	Govt. as % to total
Uttar Pradesh					
1.Jalaun	60.7	80.1(413)	40.3	3.1 (680)	100.0(21)
2.Lucknow	41.8	91.2 (284)	25.1	28.1(680)	0.5 (191)
3.Saharanpur	72.5	47.6 (493)	50.0	69.9 (680)	21.3 (475)
4.Baghpat	67.1	95.2 (456)	60.6	35.4 (680)	77.2 (241)
5.Bareilly	71.6	88.9 (487)	42.8	4.1 (680)	53.6 (28)
6.Aligarh	40.3	90.9 (274)	39.7	21.0 (680)	19.6 (143)
7.Maharajganj	29.1	90.9 (198)	10.7	48.7 (680)	2.4 (331)
8.Allahabad	55.0	96.0 (374)	23.5	0.0 (680)	0.0(0)
9.Barabanki	72.5	93.4 (497)	13.7	76.5 (685)	36.5 (524)
Total-A	**56.6**	**84.7 (3476)**	**34.0**	**31.9**	**28.2 (1954)**
Haryana					
10.Sirsa	44.2	97.2 (387)	30.2	71 (875)	95.8
11.Sonepat	61.9	95.8 (542)	53.3	45.5 (875)	89.4
Total-B	**53.1**	**96.3 (929)**	**41.7**	**58.2**	**93.3**
G. Total A+B	**54.5**	**87.20(4205)**	**35.5**	**37.8(7875)**	**50.5**



Of the total sample farmers, about 55% reported availability of pamphlets; across the districts, the response was as high as 72% in Saharanpur & Barabanki to as low as 29% in Maharajganj. A large majority of respondents (87%) found the literature useful to them with the highest response (97%) in Sirsa and the lowest (48%) in Saharanpur which appears to be correlated with the level of education. The correlation coefficient between level of literature use and farmers above primary level is positive 0.28% as against that of negative -0.26 % of illiterate farmers.

USE OF PRINT MEDIA AND ELECTRONIC MEDIA

5.30 The secondary data collected for the sampled districts about increase in use/coverage in print and electronic media is presented in Table 5.27.

The coverage of agricultural extension in All India Radio per week was 90 minutes per week in the 11 districts before ATMA implementation and has increased to 810 minutes after three years thanks to almost four hours coverage from Allahabad and Barabanki, though it may not be directly attributed to ATMA. Doordarshan coverage has started for 120 minutes. Private channels are also giving coverage from Delhi and Lucknow. Brochures are main means adopted by ATMA and 2,66,856 leaflets were distributed as against 13500 before ATMA. The number of government advertisements has also risen to 51650 which was almost nil before. ATMA has definitely contributed to improvement in this aspect of the extension.

Table 5.27 : District-wise Electronic and Print Media Support utilized for Agricultural Extension

Electronic Media Per week coverage of agricultural extension(minutes) programme in Minutes)							Print Media (N0)					
	All India Radio		Door Darshan		Private channels		No. of leaflets & brochures printed		No of Advertisements in newspaper		Publications on agri. by Govt./pvt. Agencies(No)	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Jalaun	0	0	0	0	0	0	0	100691	0	20	0	3800
Lucknow	30	60	60	90	0	30	8000	20000	0	0	0	0
Saharanpur	0	0	0	0	0	0	0	0	0	0	0	0
Baghpat	0	0	0	0	0	0	0	20000	0	0	0	0
Bareilly	0	0	0	0	0	0	0	12350	0	14	0	0
Aligarh	0	30	0	30	0	0	0	14000	0	145	0	2800
Maharajganj	0	0	0	0	0	0	0	33815	0	15	0	0
Allahabad	0	360	0	180	0	0	500	6000	0	45	0	0
Barabanki	0	300	0	60	0	0	0	45000	0	3	0	45000
Total (A)	**30**	**750**	**60**	**360**	**0**	**30**	**8500**	**251856**	**0**	**242**	**0**	**51600**
Sirsa	0	0	0	0	0	0	0	0	0	0	0	0
Sonepat	60	60	210	120	0	60	5000	15000	0	15	8	50
Total (B)	60	60	210	120	0	60	5000	15000	0	15	8	50
G.Total (A+B)	**90**	**810**	**270**	**480**	**0**	**90**	**13500**	**266856**	**0**	**257**	**8**	**51650**

IV. RESEARCH EXTENSION FARMER (R-E-F) LINKAGE

5.31 The integration of research, extension, farmer and market linkages is an important agenda under ATMA. R-E-F linkage activities includes organizing farmer-scientist interactions at local level, organization of field days, kisan goshties, setting up of farm schools at block level, etc. Information was, therefore, sought from respondent farmers to ascertain whether kisan goshties, field days, farmer-scientist interactions etc. were being held in their area for the benefit of the farming community and, if so, whether they had participated in such events and also their utility.

KISAN GOSHTIES

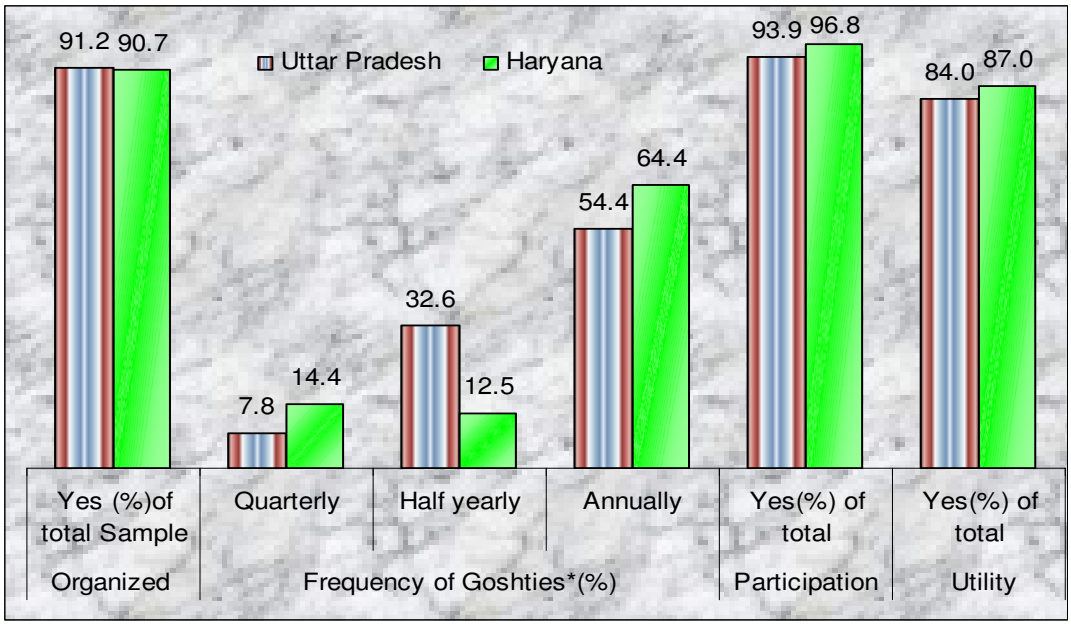
5.32 The feedback obtained from farmers on organization of Kisan Goshties is presented in Table 5.28**.**

On the whole, about 91% farmers reported that the 'Kisan Goshties' were held but it was an annual event as per 57% farmers. Quarterly Goshties were reported by about 20% farmers in Sonepat, Baghpat and Bareilly districts. The participation of farmers in discussions was very high upto 95% varying from 80% in Lucknow to 98% in Saharanpur & Bareilly. Of the participating farmers, about 85% found them useful**.** Across the districts**,** the maximum utility was reported in Bareilly (99%) and minimum in Jalaun (61%).

Table 5.28 : Organization of Kisan Goshties in the area

District	Organized	Frequency of Goshties*(%)				Participation	Utility
	Yes(%) total Sample	Quarterly	Half yearly	Annually	Total No.	Yes(%) of total	Yes(%) of total
Uttar Pradesh							
1.Jalaun	95.3 (680)	0.9	38.9	52.8	648	92.90	60.5 (602)
2.Lucknow	63.8 (680)	0.7	25.3	71.7	433	80.2	72.1 (348)
3.Saharanpur	95.3 (680)	15.5	67.4	13.7	650	98.2	98.1 (638)
4.Baghpat	88.2(680)	22.0	25.2	32.4	599	89.3	84.7 (536)
5.Bareilly	97.5 (680)	21.6	49.6	27.9	663	98.2	99.4 (651)
6.Aligarh	92.4 (680)	1.8	33.1	59.7	628	89.5	63.7 (562)
7.Maharajgan	96.9 (680)	0.3	7.3	91.0	659	97.7	91.6 (644)
8.Allahabad	98.9 (680)	2.2	40.3	57.0	673	97.5	78.5 (655)
9.Barabanki	92.4 (685)	3.3	1.9	88.3	632	96.2	99.2 (609)
Total-A	**91.2(6125)**	**7.8**	**32.6**	**54.4**	**5586**	**93.9**	**84.0 (5245)**
Haryana							
10.Sirsa	95.3 (875)	0.6	7.7	87.6	834	98.0	81.4 (817)
11.Sonepat	86.2 (875)	29.7	17.8	38.7	754	95.5	93.3 (720)
Total-B	**90.7(1750)(1**	**14.4**	**12.5**	**64.4**	**1588**	**96.8**	**87.0 (1537)**
G.Total A+B	**91.1(7875)**	**8.8**	**26.51**	**56.7**	**7174**	**94.6**	**84.7(602)**

(Note: In the total beneficiaries, 6.5 % reported frequency of more than one year and one percent less than a quarter which will make the total 100. It varied over the districts)



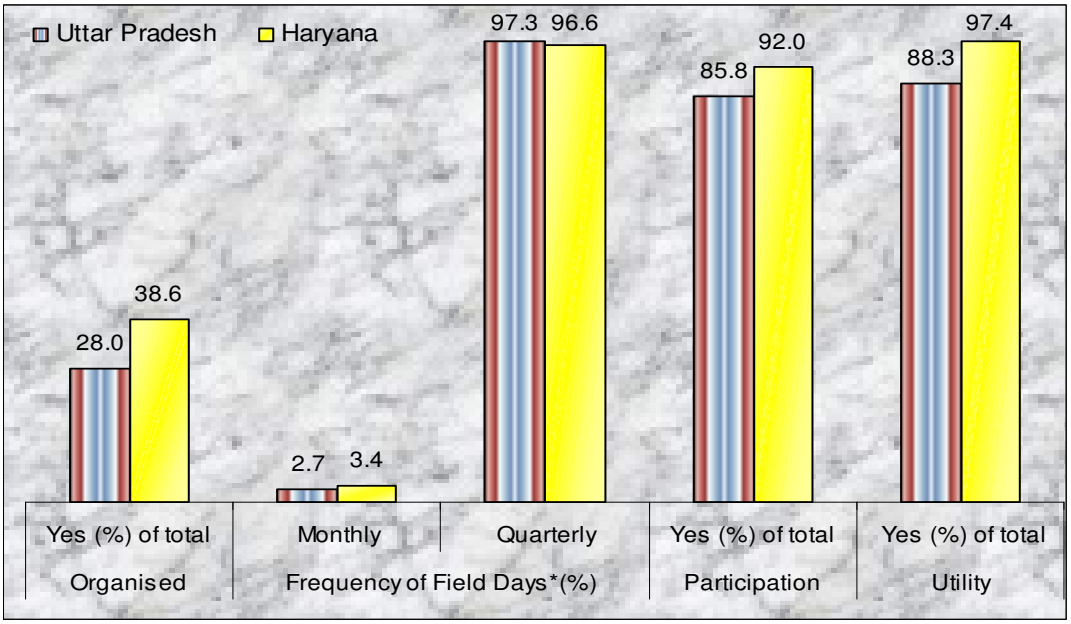
ORGANIZATION OF FIELD DAYS

5.33 Field days are organized in the identified farms for discussing problems of local farmers. The feedback obtained from farmers with regard to its organization, their participation and the utility is shown in Table 5.29.

Table 5.29: Organization of Field days in the districts

District	Total Responses	Organised Yes (%) of total	Frequency of Field Days*(%)		Participation Yes (%) of Total	Utility Yes (%) of total
			Monthly	Quarterly		
Jalaun	680	15.44	1.90	98.10	90.48	61.05
Lucknow	680	25.88	1.70	98.30	90.34	71.70
Saharanpur	680	52.79	1.95	98.05	74.65	96.64
Baghpat	680	45.88	7.37	92.63	75.32	81.70
Bareilly	680	44.56	1.65	98.35	99.67	100.00
Aligarh	680	17.50	0.84	99.16	69.75	72.29
Maharajganj	680	18.38	3.20	96.80	96.80	92.56
Allahabad	680	28.68	1.03	98.97	97.95	96.86
Barabanki	685	3.07	0.00	100.00	85.71	100.00
Total UP	**6125**	**28.00**	**2.74**	**97.26**	**85.83**	**88.32**
Sirsa	875	18.74	6.10	93.90	84.76	96.40
Sonepat	875	58.51	2.54	97.46	94.34	97.72
Total HR	**1750**	**38.63**	**3.40**	**96.60**	**92.01**	**97.43**
UP+HR	**7875**	**30.36**	**2.93**	**97.07**	**87.58**	**91.02**

* Quarterly includes those of more than quarter too which were about 50%



Of the total sample, only 30% confirmed the organization of Field Days and most of these (97%) are held once in a quarter. Across sample districts, the maximum farmers (59%) reported organization of field days in Sonepat, followed by Saharanpur (52 %) and Baghpat (46%). Participation as well as utility rate was reported higher in Bareilly, Maharajganj Allahabad and Sonepat. Overall, participation rate was as high as 88% and the field days were found useful by as many as 91% of participants.

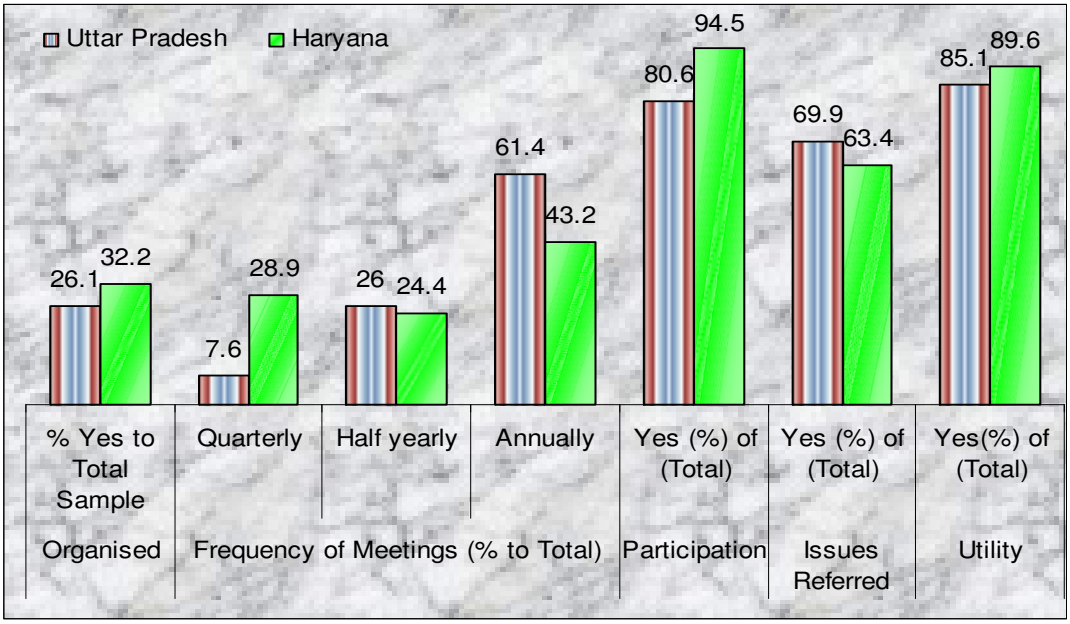
MEETING WITH SCIENTISTS

5.34 Direct interactions between scientists and farmers were arranged under ATMA to link research to fields. The feedback on frequency of such interface and outcome of these meetings is presented in Table 5.30.

Table 5.30 : **Organizing farmers' meeting with agricultural scientists in the district / area**

Districts	Organised	Frequency of Meetings (% to Total)				Partici pation	Issues Referred	Utility
	% Yes to Total	Quarterly	Half yearly	Ann ually	Total Respondents	Yes (%) of (Total)	Yes (%) of (Total)	Yes(%) of (Total)
Uttar Pradesh								
Jalaun	26.3	1.2	60.5	34.6	162	90.5	22.8(162)	24.3(37)
Lucknow	16.2	0.0	15.1	81.4	86	78.2	98.8 (86)	77.6(85)
Saharanp	52.4	1.4	10.7	84.1	214	60.1(356)	89.7(214)	93.8(192)
Baghpat	46.2	22.9	29.3	38.2	280	89.2(314)		87.6 (210)
Bareilly	13.1	5.8	17.4	72.1	86	96.6 (89)	54.7 (86)	97.9 (47)
Aligarh	28.4	8.4	29.0	54.8	131	67.9(193)	56.5(131)	45.9 (74)
Maharajg	15.4	7.1	20.2	65.7	99	94.3(105)	75.8 (99)	94.7 (75)
Allahabad	16.2	3.6	28.2	67.3	110	100.0	63.6(110)	100 (70)
Barabanki	20.4	1.7	11.8	86.6	119	85.0	92.4(119)	96.4 (110)
Total	**26.1**	**7.6**	**26.0**	**61.4**	**1287**	**80.6(1596**	**69.9(1287**	**85.1 (900)**
Haryana								
Sirsa	21.6	3.0	21.3	69.2	169	89.4(189)	73.4(169)	80.6 (124)
Sonepat	42.9	40.9	25.8	31.0	364	97.1(375)	58.8(364)	94.9 (214)
Total	**32.2**	**28.9**	**24.4**	**43.2**	**533**	**94.5(564)**	**63.4(533)**	**89.6 (138)**
G. Total	**27.5**	**13.7**	**25.7**	**55.6**	**1820**	**84.6**	**67.4**	**83.3**

(Note : About 6.5% reported the monthly meetings)



Of the total 7875 sample farmers in 11 districts, about 28% affirmed the holding of meetings with the scientists. Across the districts, meetings were reported by the maximum 52% farmers in Saharanpur and by the minimum 13% farmers in Bareilly**.** However, the meetings were attended by a large section (85%) of farmers, maximum being 100% in Allahabad and minimum 68%. The frequency of meetings was reported annual by 56% farmers, half yearly by 26% farmers and quarterly by 14% and the remaining 6% reported less than quarter. The maximum 60% reported half yearly meetings in Jalaun which is lagging in all other aspects. But the utility of these meeting is reported the least by 24% of the participants of Jalaun, perhaps it may be due to inadequate sample of 37 respondents as overall 83% respondents have reported the utility of these meetings. The issues raised in these meetings were reported by 67% participants as referred, to agricultural universities / departments. It indicates that the frequency of meetings is less as they are not held even in every crop season viz. kharif and Rabi season even though their participation and utility was rated as very high by sample farmers.

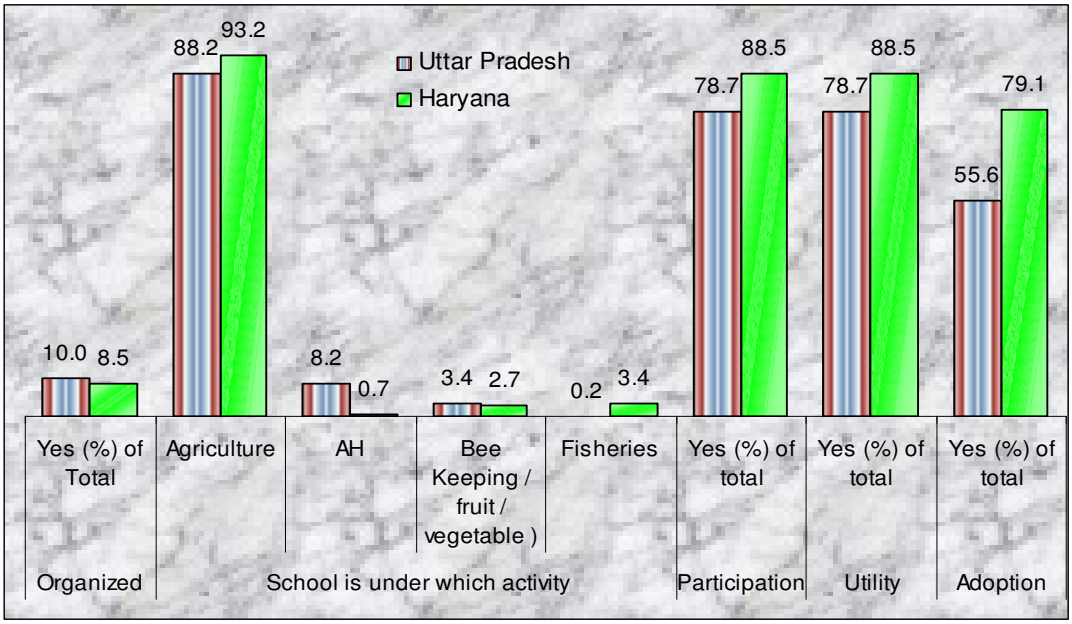
SETTING UP OF FARM SCHOOLS

5.35 An important means to upgrade the process of dissemination in crops and live stock is farmer-to-farmer approach, which is found to be very pertinent as indicated by National Commission on Farmers. The farmer-to-farmer learning and technology transfer is most frequent and considered very reliable and, therefore, ATMA envisages utilization of the services of innovative and progressive farmers as change agents to solve the acute problem of manpower shortage at field level through Farm Schools. The status of farm schools set up by farmers is given in Table 5.31.

Table 5.31 : Setting-up of Farm Schools for extension support

District	Organized Yes (%) of Total	School is under which activity					Partici pation Yes (%) of total	Utility Yes (%) of total	Adoption Yes (%) of total
		Agricult ure	Animal Husband ry	Bee Keeping / fruit / vegetable	Fishe ries	Total No.			
Uttar Pradesh									
Jalaun	5.1	100.0	0.0	0.0	0.0	35	37.1	34.3	28.6
Lucknow	6.8	100.0	0.0	0.0	0.0	46	78.3	78.3	78.3
Saharanpur	10.1	97.1	0.0	2.9	0.0	69	62.3	62.3	55.1
Baghpat	21.3	70.3	17.2	11.7	0.7	145	76.6	76.6	49.0
Bareilly	4.6	100.0	0.0	0.0	0.0	31	93.5	93.5	93.5
Aligarh	19.3	86.3	13.7	0.0	0.0	131	76.3	76..3	42.0
Maharajganj	12.8	90.8	6.9	2.3	0.0	87	96.6	96.6	58.6
Allahabad	6.3	100.0	0.0	0.0	0.0	43.	97.7	97.7	67.4
Barabanki	3.5	95.8	4.2	0.0	0.0	24	100.0	100.0	87.5
Total	**10.0**	**88.2**	**8.2**	**3.4**	**0.2**	**611**	**78.7**	**78.7**	**55.6**
Haryana									
Sirsa	0.9	100.0	0.0	0.0	0.0	8	62.5	62.5	62.5
Sonepat	16.0	92.9	0.7	2.9	3.6	140	90.0	90.0	80.0
Total	**8.5**	**93.2**	**0.7**	**2.7**	**3.4**	**148**	**88.5**	**88.5**	**79.1**
G. Total	**9.7**	**89.2**	**6.7**	**3.3**	**0.8**	**7.6**	**80.6**	**80.6**	**56.3**

Animal Husbandry = Dairy, Poultry etc.



Out of the total 7875 sample farmers, only about 10% reported setting up of Farm Schools in their villages. Activity-wise, 89% of these schools are for agriculture in general, 7% for dairy/poultry**,** 3% for horticultural activities like bee-keeping, fruits/vegetables etc., and 0.8% for fisheries. Participation in these schools and utility of the meetings, etc were affirmed by about 81% of the respondent farmers. The adoption of the learning from these schools was asserted by relatively less number (about 56%) of farmers.

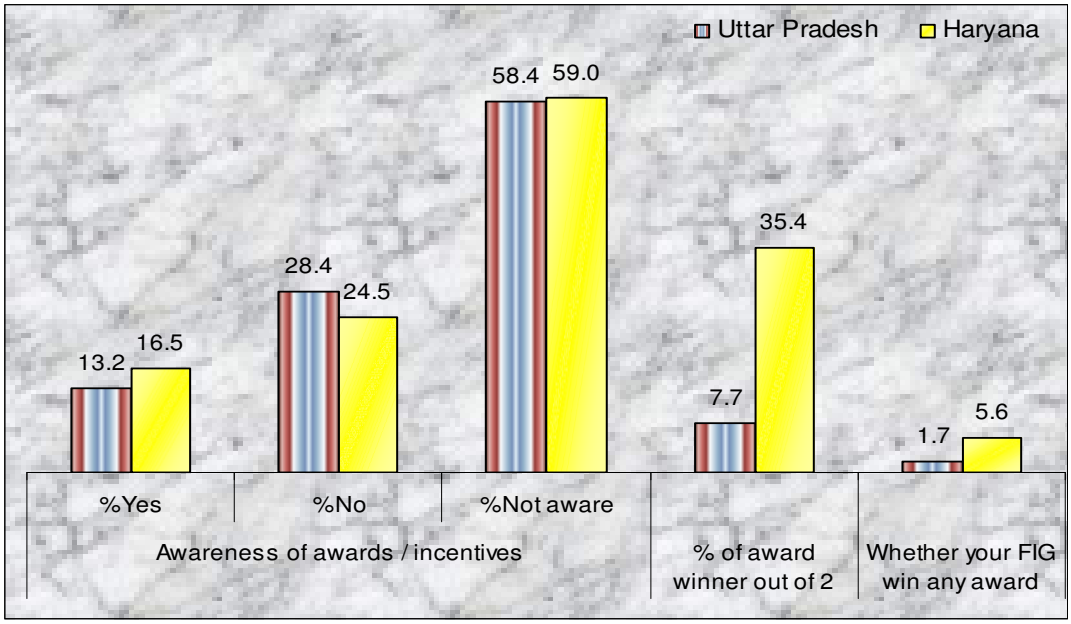
SYSTEM OF AWARDS/REWARDS

5.36 The ATMA programme has devised an in-built mechanism to recognize the services of progressive and outstanding farmers as also good Farmers' Interest Groups/Commodity Interest Groups. The aim is to encourage and motivate the achievers and to utilize their services in extension activities as role models for others. The feedback received from sample farmers in this regard is presented in Table 5.32.

Of the total sample about 14% only have reported awareness of any award scheme whereas the rest 86% were not aware. Among the 14% who were aware of the award, 15% have won the awards too and 2.7% reported winning by their FIGs. However, discussions with ATMA officials at the State and district level revealed that no award system has been introduced yet and farmers may have responded to some other scheme of the government.

Table 5.32: Introduction of the system of awards/incentives to Farmers / FIGs for good performance in agriculture/allied sector

District	Awareness of awards/incentives			Total	% of award winner out of 2	Whether your FIG won any award
	%Yes	%No	%Not aware			
1	2	3	4	5	6	7
Jalaun	10.7	10.4	78.8	680	1.4	0.0
Lucknow	20.9	17.2	61.9	680	3.5	0.0
Saharanpur	8.5	9.0	82.5	680	19.0	1.7
Baghpat	29.4	31.5	39.1	680	9.5	6.5
Bareilly	0.1	80.1	19.7	680	100.0	0.0
Aligarh	37.4	9.6	53.1	680	1.2	0.0
Maharajganj	3.1	7.9	89.0	680	19.0	0.0
Allahabad	0.0	49.0	51.0	680	0.0	0.0
Barabanki	8.5	40.7	50.8	685	31.0	0.0
Total	**13.2**	**28.4**	**58.4**	**6,125**	**7.7**	**1.7**
Sirsa	22.7	6.5	70.7	875	43.2	6.5
Sonepat	10.2	42.5	47.3	875	18.0	3.4
Total	**16.5**	**24.5**	**59.0**	**1,750**	**35.4**	**5.6**
G. Total	**13.9**	**27.5**	**58.6**	**7,875**	**15.0**	**2.7**



V. IMPACT OF ATMA ACTIVITIES IN REFORMING EXTENSION SYSTEM

5.37 The farmers were asked to indicate the position with regard to various extension services and facilities available or provided to them both pre-ATMA i.e. before launch of the programme in 2005-06 and after-ATMA i.e. the current position so as to ascertain the ground level impact of the extension reform programme. The related

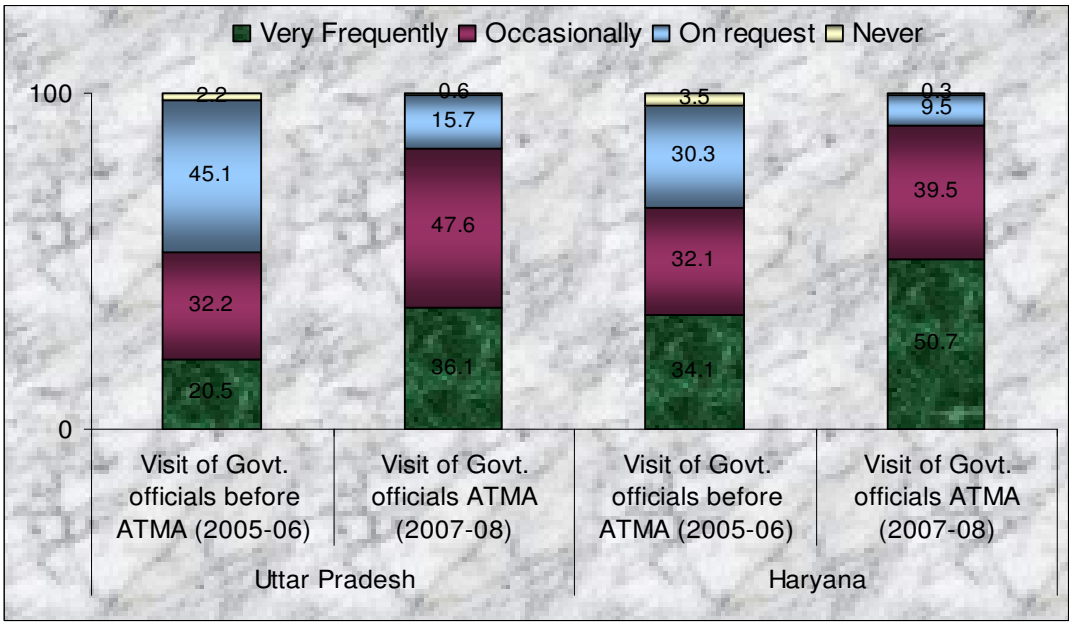
feedback received from the farmers has been combined for convenience of presentation and continuity of discussions.

INCREASE IN VISITS OF DEPARTMENT OFFICIALS

5.38 The officials of various line departments, scientists from KVKs and other experts from agriculture universities/research institutions have an onerous responsibility in providing farm advisory services, new technology dissemination and redressal of grievances of farmers through regular visits to the farm fields. The feedback provided by the sample beneficiaries for before and after ATMA situation was compiled as per Table 5.33.

Table 5.33: Visit of Govt. officials before and after ATMA

District	Visit of Govt. officials before ATMA (2005-06)				Total Respondents	Visit of Govt. officials after ATMA (2007-08)			
	Very Frequently	Occasionally	On request	Never		Very Frequently	Occasionally	On request	Never
Jalaun	9.1	24.7	65.7	0.4	680	17.2	65.9	16.9	0.0
Lucknow	16.8	56.3	25.9	1.0	680	34.7	54.9	10.4	0.0
Saharanpur	67.2	29.9	1.9	1.0	680	93.5	4.9	1.3	0.3
Baghpat	33.5	35.6	26.9	4.0	680	53.2	34.3	12.1	0.4
Bareilly	0.0	17.9	81.5	0.6	680	1.3	80.1	18.2	0.3
Aligarh	13.1	36.8	46.0	4.1	680	19.0	56.9	24.0	0.1
Maharajganj	22.6	33.1	43.5	0.7	680	27.6	58.1	13.7	0.6
Allahabad	0.0	12.5	80.0	7.5	680	2.9	49.3	44.1	3.7
Barabanki	22.5	43.1	34.3	0.1	685	75.5	24.1	0.4	0.0
Total UP	**20.5**	**32.2**	**45.1**	**2.2**	**680**	**36.1**	**47.6**	**15.7**	**0.6**
Sirsa	56.9	25.8	14.6	2.6	875	74.3	18.5	7.0	0.2
Sonepat	11.2	38.4	45.9	4.5	875	27.1	60.6	12.0	0.3
Total HR	**34.1**	**32.1**	**30.3**	**3.5**	**1,7**	**50.7**	**39.5**	**9.5**	**0.3**
G. Total	**23.5**	**32.2**	**41.8**	**2.5**	**7,8**	**39.4**	**45.8**	**14.3**	**0.5**



The visits of government officials in the category 'very frequently' has been a revelation for the ATMA scheme as there is significant increase in farmers reporting this after 3 years of ATMA compared to their before ATMA response. The 'occasional', 'on request' and especially the 'never responses have decreased over the period. The above change has occurred across all the sample districts of the two states but the very frequent visits have more than doubled after ATMA in Sonepat, Barabanki, Lucknow and Jalaun. The frequent visits are reported by less than 10% even after three years of ATMA in Allahabad and Bareilly. There may be some confusion in responding to frequent and occasional visits as after combining the two responses; the overall change is from about 56% to 85%. Before ATMA, the on request and never visits were reported more than 50% in five out of eleven (11) sample districts and 44% overall but after ATMA these responses are negligible in the eleven districts. Hence, it could be conclusively said that ATMA has definitely increased the frequency of visits by government officials.

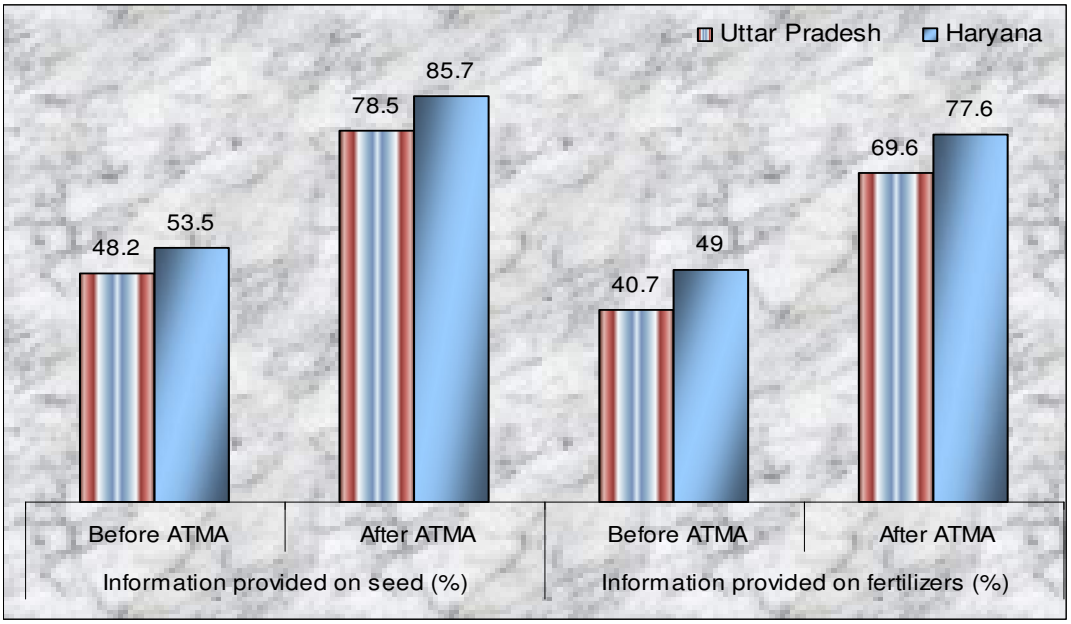
INFORMATION PROVIDED ON SEEDS AND FERTILIZERS

5.39 The comparative response of the farmers with regard to provision of information / advice on seeds and fertilizers is presented in Table 5.34.

Table 5.34 : Information Provided on Seeds and Fertilizers Before & After ATMA

State/ District	Information provided on seed (%)		Total Respondents	Information provided on fertilizers (%)	
	Before	After		Before	After
Jalaun	44.3	73.4	680	23.4	61.6
Lucknow	51.9	81.2	680	24.9	48.4
Saharanpur	85.1	89.6	680	84.4	86.5
Baghpat	60.3	92.2	680	51.8	82.6
Bareilly	20.6	86.3	680	20.6	84.7
Aligarh	49.0	82.8	680	33.8	62.4
Maharajganj	35.1	62.2	680	36.8	60.4
Allahabad	15.3	51.2	680	15.3	51.6
Barabanki	71.8	88.0	685	75.2	88.0
Total	**48.2**	**78.5**	**6,125**	**40.7**	**69.6**
Sirsa	73.5	92.2	875	67.5	82.1
Sonepat	33.5	79.1	875	30.4	73.1
Total	**53.5**	**85.7**	**1,750**	**49.0**	**77.6**
G. Total	**50.3**	**80.1**	**7,875**	**42.5**	**73.9**

Table 5.34 shows that information on seeds is available to 80% farmers after ATMA whereas only 50% were getting the same earlier. As regards fertilizers, about 74% farmers are getting advices after ATMA compared to about 43% earlier. Similar improvement trend is revealed in all sample districts and the maximum is reported in Sonepat, Allahabad and Bareilly. Only exception is Saharanpur which showed least level of improvement possibly because of already high level of information that existed before ATMA.

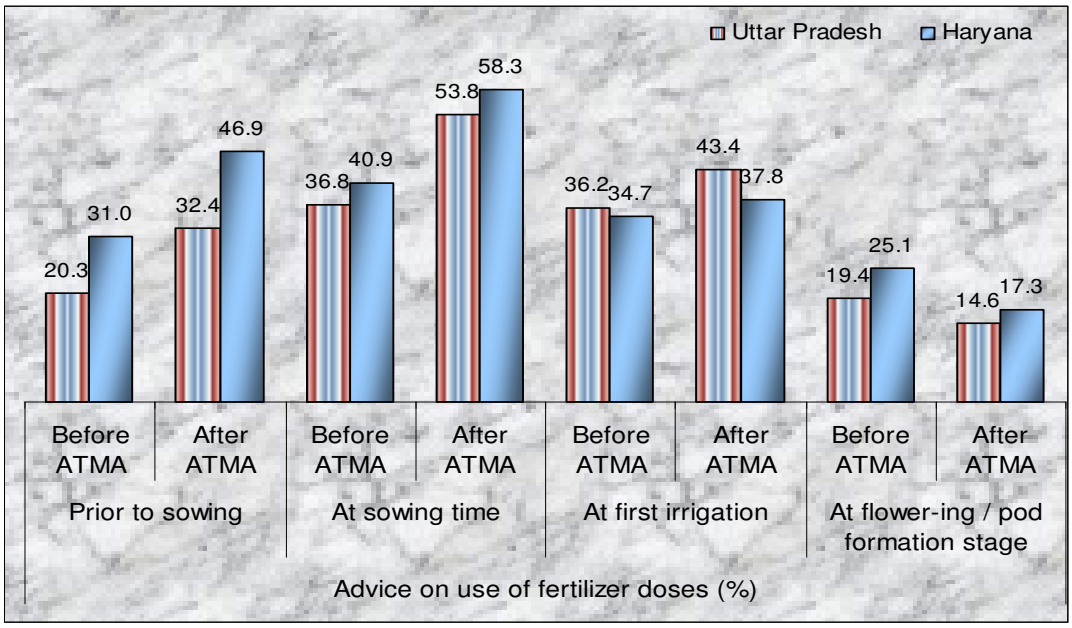


ADVICE ON USE OF FERTILIZERS

5.40 The details of responses received from farmers in the matter of fertilizer application before and after ATMA are contained in Table 5.35.

Table 5.35 : Advice on fertilizer use at various stages before & after ATMA

State/ District	Advice on use of fertilizer doses before ATMA (%)					Advice on use of fertilizer doses after ATMA (%)			
	Prior to sowing	At sowing time	At first irrigation	At flowering / pod formation stage	Total	Prior to sowing	At sowing time	At first irrigation	At flowering / pod formation stage
Uttar Pradesh									
Jalaun	1.3	33.5	51.0	21.2	680	9.6	46.8	59.0	17.8
Lucknow	3.4	16.3	35.3	29.6	680	19.6	42.4	45.6	24.6
Saharanpur	65.3	69.7	5.3	5.7	680	68.7	71.9	9.3	5.3
Baghpat	15.3	41.3	32.6	16.5	680	46.2	58.4	43.5	17.5
Bareilly	0.9	61.8	80.4	20.0	680	19.6	72.8	80.9	9.6
Aligarh	9.3	33.5	41.2	26.8	680	27.5	58.2	59.1	23.5
Maharajganj	22.4	23.4	18.8	15.7	680	27.6	31.8	20.6	8.1
Allahabad	1.5	16.0	50.9	34.9	680	12.2	34.6	52.5	17.9
Barabanki	63.5	35.3	10.1	4.8	685	60.6	67.0	20.4	7.2
Total	**15.8**	**28.5**	**28.1**	**15.1**	**6,125**	**32.4**	**53.8**	**43.4**	**14.6**
Haryana									
Sirsa	50.7	50.1	24.7	15.9	875	62.1	66.6	36.1	12.7
Sonepat	11.3	31.8	44.8	34.3	875	31.7	50.1	39.5	21.9
Total	**31.0**	**40.9**	**34.7**	**25.1**	**1750**	**46.9**	**58.3**	**37.8**	**17.3**
G. Total	**22.7**	**37.7**	**35.8**	**20.7**	**7875**	**35.6**	**54.8**	**42.2**	**15.2**



A perusal of last row of the Table 5.35 indicates that the fertilizer advice was available at all stages from crop cultivation to flowering though its availability was for about one third of farmers before ATMA which has increased to half of the farmers after ATMA. Stage-wise, prior to sowing stage, it increased from 23 to 36%, at sowing stage it increased from 38 to 55% and at first irrigation stage, it has increased from 36 to 42% but at flowering/pod formation stage it has decreased from 21 to 15%. Perhaps, those who get advice at earlier stages do not feel the necessity at the later stages. The districts which get the maximum advice especially in earlier stages are Saharanpur, Baghpat, Sirsa and Sonepat. At the time of first irrigation, the districts of Jalaun, Bareilly and Allahabad have the maximum coverage while minimum is Saharanpur and Barabanki districts.

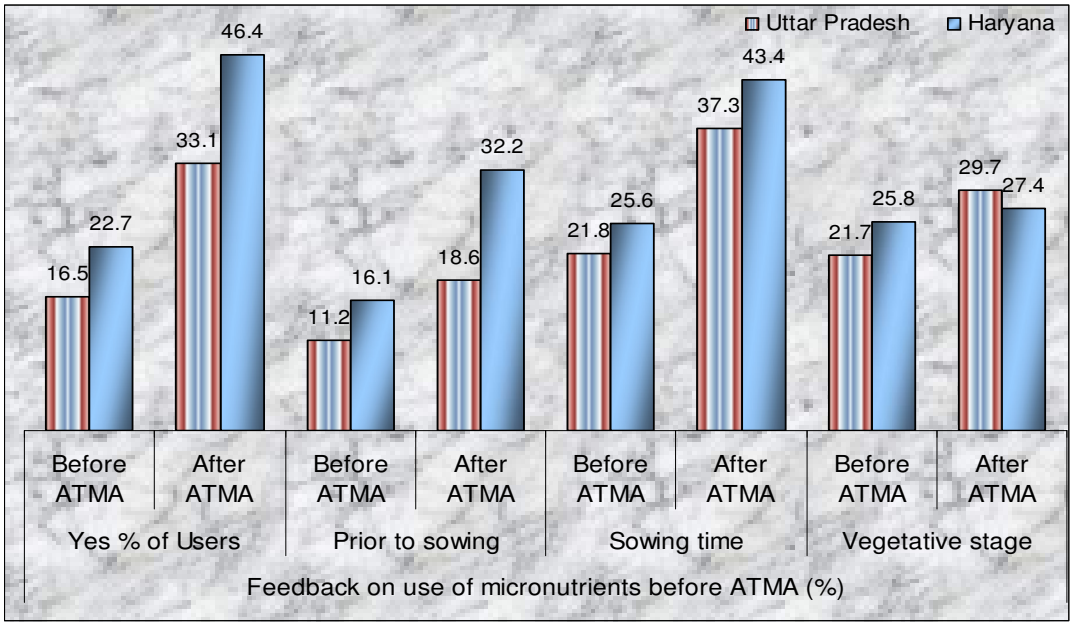
INCREASE IN USE OF MICRONUTRIENTS

5.41 The response of farmers regarding the transfer of information on the use of micronutrients, which is an emerging input, is presented in Table 5.36.

Of the total sample farmers, the users of micronutrients increased from about 18% before ATMA to 26% after ATMA which may be the result of advice under ATMA. Across the districts, the maximum users of micronutrients are in Baghpat (59%), Lucknow (57%), and Sonepat (52%) while minimum users are in Barabanki (8%), Bareilly (16%) and Jalaun (27%). To a large extent, the micronutrient use depended upon the cropping pattern especially the sugarcane, vegetables etc. As regards advice and use, there is 108% increase at prior to sowing stage, 70% at sowing stage and 29% at vegetative stage. It supports the general view that micronutrients are applied in the soil before sowing or just after sowing. Thus, the know-how of the farmers on the use of micronutrients has improved considerably after the project.

Table 5.36 : Use of micronutrients at various Stages before & after ATMA

District	Feedback on use of micronutrients before ATMA (%)						Information on use of micronutrients after ATMA (%)				
	Yes % of Users	Prior to sowing	Sowing time	Vegetative stage	None	Total	Yes % of Users	Prior to sowing	Sowing time	Vegetative stage	None
Jalaun	6.6	0.4	19.7	27.8	252.1	680	27.1	9.7	31.2	33.7	225.5
Lucknow	31.3	2.8	24.9	26.5	245.9	680	56.9	20.9	52.8	39.9	186.4
Saharanpur	43.5	49.0	50.9	2.2	197.9	680	47.9	52.6	54.6	3.7	189.1
Baghpat	26.8	10.1	27.8	17.4	244.7	680	58.8	47.6	49.4	33.1	169.9
Bareilly	1.2	0.7	20.0	32.6	246.6	680	16.2	17.8	27.1	32.8	222.4
Aligarh	22.9	5.1	14.9	19.7	260.3	680	41.8	18.4	40.7	45.7	195.1
Maharajganj	10.0	15.1	10.4	17.4	257.1	680	19.0	20.1	19.1	17.4	243.3
Allahabad	0.7	0.7	16.9	49.7	232.6	680	22.8	11.2	33.8	51.3	203.6
Barabanki	5.1	16.5	11.1	2.6	269.8	685	8.0	16.8	26.7	9.9	246.6
Total UP	**16.5**	**11.2**	**21.8**	**21.7**	**245.2**	**6125**	**33.1**	**18.6**	**37.3**	**29.7**	**209.1**
Sirsa	23.3	20.5	16.9	8.1	254.5	875	41.3	31.9	34.7	17.5	215.9
Sonepat	22.2	11.7	34.3	43.5	210.5	875	51.5	32.5	52.1	37.4	178.1
Total HR	22.7	16.1	25.6	25.8	232.5	1,750	46.4	32.2	43.4	27.4	197.0
G. Total	**17.9**	**12.3**	**22.7**	**22.7**	**242.4**	**7,875**	**36.9**	**25.7**	**38.6**	**29.2**	**206.4**

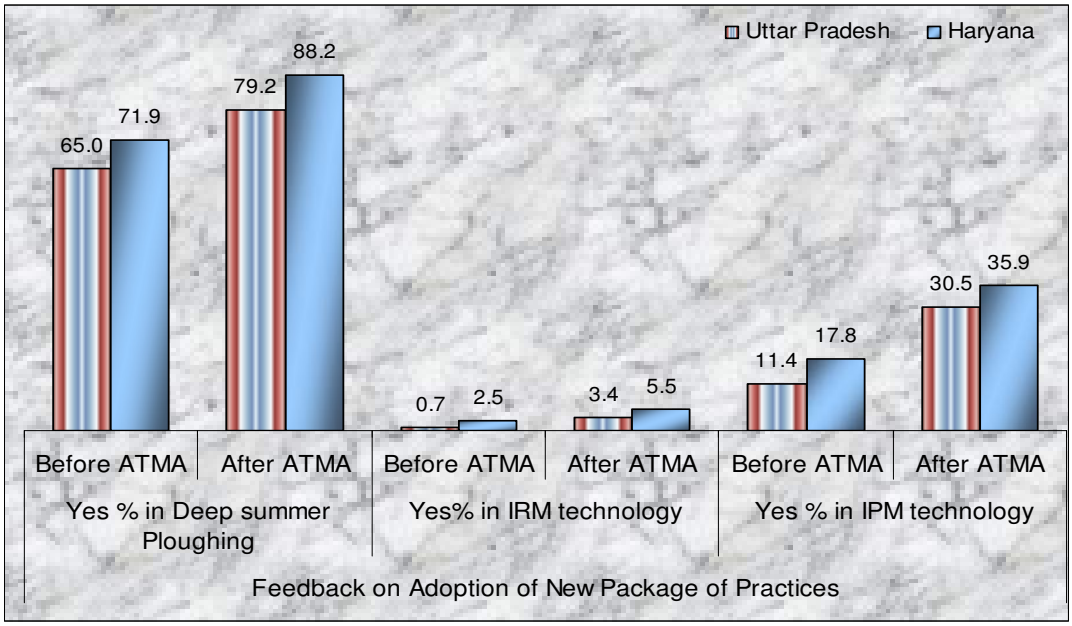


ADOPTION RATE IN NEW PACKAGES OF PRACTICES

5.42 In recent years, a number of new practices like deep summer ploughing, use of IRM / IPM technology etc. are emphasized to increase production and productivity of the crop. The response of the farmers as regards information and advice received from extension officials as also adoption thereof has been compiled and presented in Table 5.37.

Table 5.37 : Adoption of New Package of Practices

District	Before ATMA			After ATMA			
	Yes % in Deep summer Ploughing	Yes % in IRM technology	Yes % in IPM technology	Respon-dents	Yes % in Deep summer Ploughing	Yes % in IRM technology	Yes % in IPM technology
Jalaun	77.4	0.7	4.4	**680**	84.7	1.5	18.8
Lucknow	65.6	0.4	4.4	**680**	77.6	0.9	16.2
Saharanpur	65.4	1.6	50.7	**680**	73.5	5.6	58.5
Baghpat	37.1	0.6	8.8	**680**	66.3	14.9	39.1
Bareilly	45.7	1.2	26.6	**680**	89.4	5.6	74.6
Aligarh	70.9	0.4	2.4	**680**	81.0	0.4	19.0
Maharajganj	89.7	0.7	1.6	**680**	92.1	0.9	10.1
Allahabad	71.5	0.0	1.0	**680**	82.1	0.4	35.6
Barabanki	62.0	0.6	2.8	**685**	66.3	0.1	2.8
Total	**65.0**	**0.7**	**11.4**	**6,125**	**79.2**	**3.4**	**30.5**
Sirsa	78.5	0.7	28.7	**687**	87.0	1.0	39.7
Sonepat	65.3	4.3	6.9	**571**	89.4	9.9	32.2
Total	**71.9**	**2.5**	**17.8**	**1,258**	**88.2**	**5.5**	**35.9**
G. Total	**66.20**	**1.01**	**12.50**	**7,383**	**80.74**	**3.72**	**31.43**

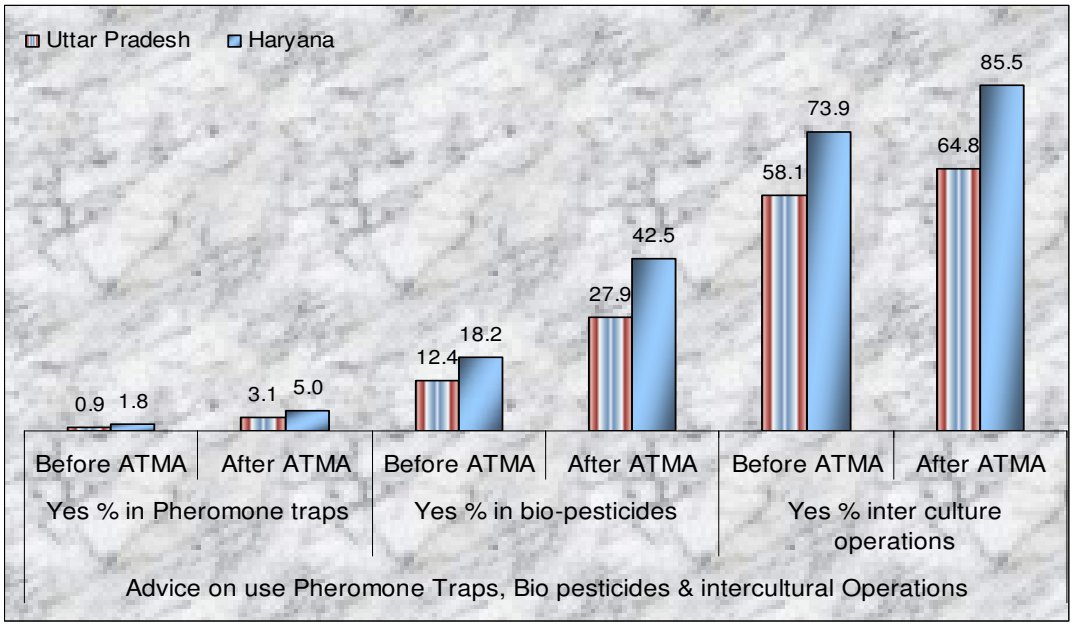


Deep summer ploughing is an age-old tradition but its adoption has increased after ATMA from 66% to about 81%. It is least in Baghpat and Bareilly districts, which may be due to non-availability of vacant land as more area is under sugarcane. Adoption of IRM is low and is about 4% only even after ATMA. The advice on integrated pest management (IPM) is reported by about 31% farmers as compared to 13% before ATMA.

The use of pheromone traps, light traps, bio-pesticides and intercultural operations, etc. are considered useful changes in farm technology. The views of the farmers on these practices are as given in Table 5.38.

Table 5.38 : Advice on use of Pheromone Traps, Bio-pesticides & Inter-cultural Operations

State/ District	Before ATMA				After ATMA		
	Yes % in pheromone traps	Yes % in bio-pesticides	Yes % inter culture operations	Total respondents	Yes % in pheromone traps	Yes % in bio-pesticides	Yes % inter culture operations
Jalaun	0.6	7.5	78.8	**680**	1.3	30.1	86.0
Lucknow	0.9	6.0	76.9	**680**	2.2	26.8	90.6
Saharanpur	3.5	30.9	69.3	**680**	7.8	36.3	69.3
Baghpat	1.0	13.1	64.6	**680**	9.0	44.1	79.7
Bareilly	1.0	29.0	45.0	**680**	2.8	36.8	46.3
Aligarh	0.3	7.6	76.5	**680**	3.5	30.6	88.4
Maharajganj	0.0	1.5	34.0	**680**	0.1	9.3	34.9
Allahabad	0.4	12.8	36.3	**680**	0.6	32.5	45.7
Barabanki	0.0	3.6	42.0	**685**	0.1	4.5	42.3
Total	**0.9**	**12.4**	58.1	**6,125**	**3.1**	**27.9**	64.8
Sirsa	1.0	15.2	82.9	**687**	3.3	31.2	88.2
Sonepat	2.6	21.3	65.0	**571**	6.6	53.7	82.9
Total	**1.8**	**18.2**	73.9	**1,258**	**5.0**	**42.5**	**85.5**
G Total	**1.03**	**13.43**	**60.83**	**7,383**	**3.38**	**30.36**	**68.32**



The use of pheromone traps is at initial stage as it is only 3% even after ATMA but the use of bio-pesticides has increased from 13% to 30% after ATMA. The maximum farmers reported about bio-pesticide advice in Sonepat, Baghpat and Bareilly level whereas it was the minimum in Barabanki and Maharajganj. Advice on intercultural operation has increased from 61 to 68% after ATMA. The above analysis reveals higher level of awareness after ATMA about the new practices / technologies.

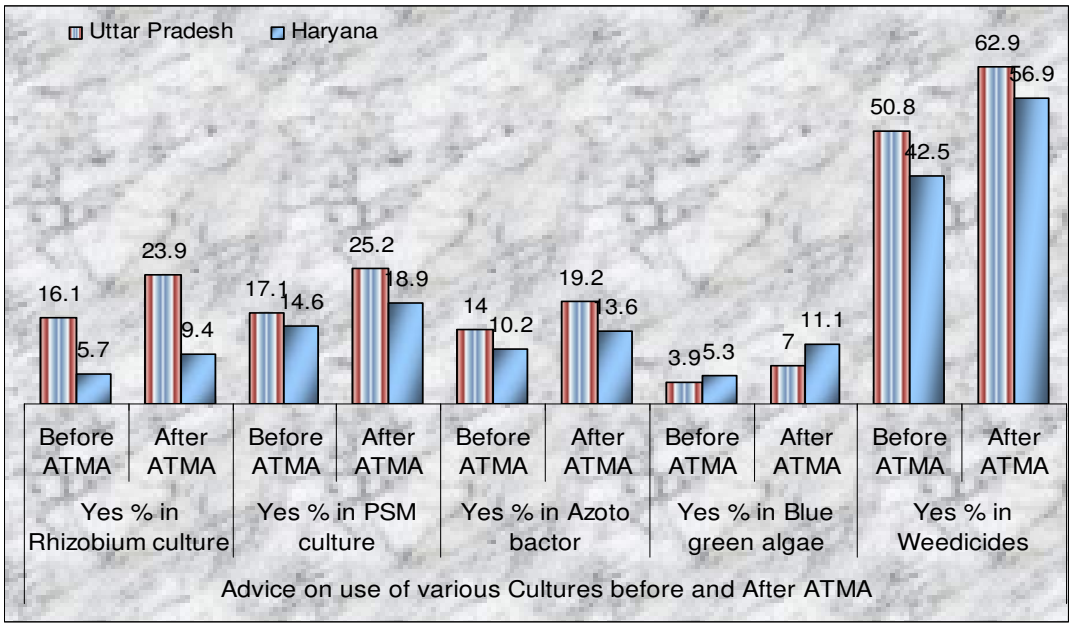
INTRODUCTION OF USE OF CULTURES

5.43 The feedback on advices received by farmers on use of various cultures is given in Table 5.39

Table 5.39 : Advice on use various cultures before and After ATMA

	Before ATMA						After ATMA				
State / District	**Yes % in Rhizobium culture**	**Yes % in PSM culture**	**Yes % in Azotobactor**	**Yes % in Blue green algae**	**Yes % in Weedicides**	**Total respondents**	**Yes % in Rhizobium cultur**	**Yes % in PSM culture**	**Yes % in Azotobactor**	**Yes % in Blue green algae**	**Yes % in Weedicides**
Uttar Pradesh											
Jalaun	28.4	21.3	2.2	0.0	13.7	680	56.9	40.1	2.5	0.4	47.5
Lucknow	8.1	12.5	22.8	0.4	25.9	680	16.9	18.5	27.1	0.9	36.2
Saharanpur	64.9	68.7	54.4	29.1	85.9	680	69.0	72.5	58.5	35.7	87.8
Baghpat	13.5	14.3	12.9	2.6	50.4	680	26.8	28.8	31.8	19.3	68.4
Bareilly	1.0	0.7	0.1	0.1	39.1	680	1.9	16.0	0.3	1.8	45.0
Aligarh	12.1	20.0	22.8	0.4	55.6	680	24.3	34.0	41.2	1.8	73.1
Maharajganj	11.3	13.7	8.2	1.2	66.8	680	11.8	13.7	8.8	1.5	74.4
Allahabad	0.1	0.0	0.0	0.0	28.5	680	1.2	0.0	0.0	0.6	42.6
Barabanki	5.3	3.1	2.8	1.5	90.7	685	6.1	3.4	2.9	1.5	90.8
Total	**16.1**	**17.1**	**14.0**	**3.9**	**50.8**	**6,125**	**23.9**	**25.2**	**19.2**	**7.0**	**62.9**
Haryana											
Sirsa	9.1	24.6	15.1	1.0	50.9	875	11.9	30.2	18.6	1.7	60.3
Sonepat	2.3	4.7	5.3	9.6	34.2	875	7.0	7.5	8.6	20.6	53.5
Total	**5.7**	**14.6**	**10.2**	**5.3**	**42.5**	**1,750**	**9.4**	**18.9**	**13.6**	**11.1**	**56.9**
G. Total	**13.77**	**16.57**	**13.17**	**4.24**	**48.93**	**7875**	**20.65**	**23.80**	**17.97**	**7.95**	**61.56**

After ATMA, the use of Rhizobium culture increased from about 14 to 21%, use of PSM culture from about 17 to 24%, blue green algae from 4 to 8% and weedicides from 49 to 62%. The increasing use of various cultures viz. Rhizobium, PSM, blue green algae etc. is indicative of the benefits of this technological information being propagated to the farmers under the scheme and thus substantiates the impact of ATMA.

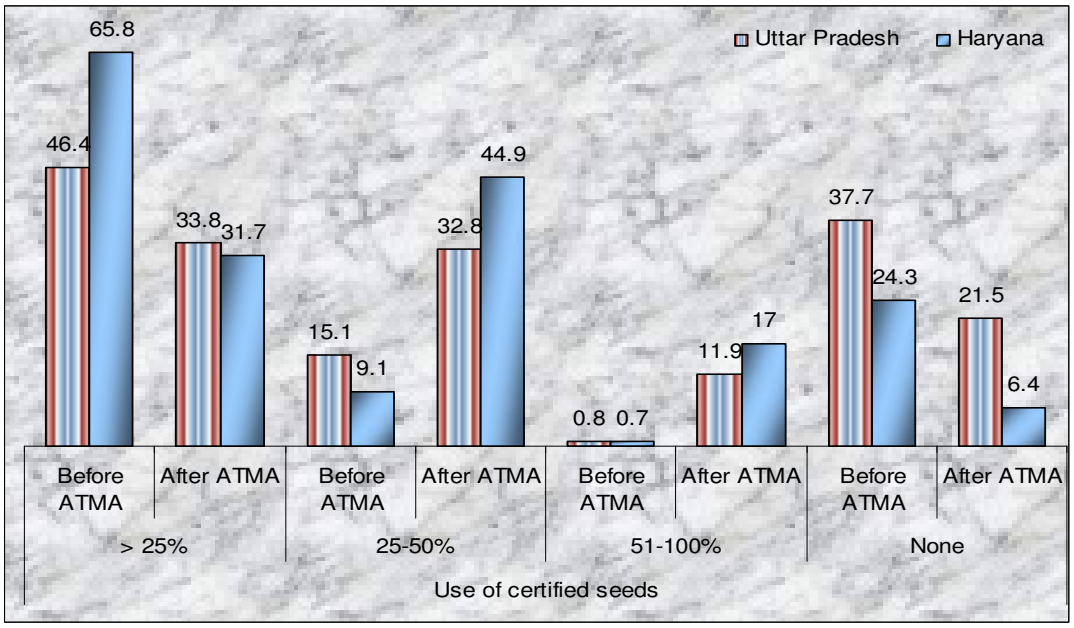


INCREASE IN USE OF CERTIFIED SEEDS

5.44 The use of certified seed is considered as a basic necessity for achieving higher yield. Thus, farmers were asked to indicate the position with regard to its use and the advice received from the extension system. The feedback received from the sample farmers on impact of ATMA is presented in Table 5.40.

Table 5.40 : Use of certified seeds before and after

State/ District	Use of certified seeds before ATMA				Total Respondents	Use of certified seeds after ATMA			
	> 25%	25-50%	51-100%	None		> 25%	25-50%	51-100%	None
Uttar Pradesh									
Jalaun	58.8	19.3	0.3	21.6	680	45.3	37.9	2.6	14.1
Lucknow	61.2	18.8	1.3	18.7	680	43.4	37.5	13.7	5.4
Saharanpur	35.0	64.6	0.4	0.0	680	7.8	29.6	62.7	0.0
Baghpat	55.4	18.2	4.1	22.2	680	36.6	38.2	21.9	3.2
Bareilly	33.2	2.1	0.0	64.7	680	64.1	28.8	0.1	6.9
Aligarh	45.7	7.8	0.2	46.2	680	50.6	30.9	2.1	16.5
Maharajganj	57.6	3.8	0.1	38.4	680	26.9	36.0	0.6	36.5
Allahabad	29.1	0.1	0.1	70.6	680	21.8	23.8	0.7	53.7
Barabanki	41.3	1.5	0.1	57.1	685	8.2	32.3	2.4	57.1
Total	**46.4**	**15.1**	**0.8**	**37.7**	**6,125**	**33.8**	**32.8**	**11.9**	**21.5**
Haryana									
Sirsa	78.7	11.8	0.7	8.8	875	15.9	57.5	20.7	5.9
Sonepat	52.9	6.5	0.7	39.9	875	47.5	32.3	13.2	6.9
Total	**65.8**	**9.1**	0.7	**24.3**	**1,750**	**31.7**	**44.9**	**17.0**	**6.4**
G. Total	**50.7**	**13.8**	**0.8**	**34.8**	**7,875**	**33.4**	**35.5**	**15.9**	**18.2**



The farmers using less than 25% certified seeds are only 33% after ATMA as against about 51% before ATMA. The districts where more than 50% are using less than 25% certified seeds even after ATMA are Bareilly and Aligarh. In fact, there is a reduction in use of certified seeds in the two districts compared to pre-ATMA position. The farmers using more than 50% of certified seeds were about 16% after ATMA as compared to just less than 1% before ATMA. In Saharanpur and Sirsa, about 63% and 21% are using more than 50% of certified seeds. The percentage of farmers not using certified seeds at all are about 18% after ATMA which was as high as 35% before ATMA. This is really a remarkable achievement but whether it is attributed to ATMA alone or to some other development also is to be explained.

IMPROVEMENT IN SOIL TESTING FACILITY

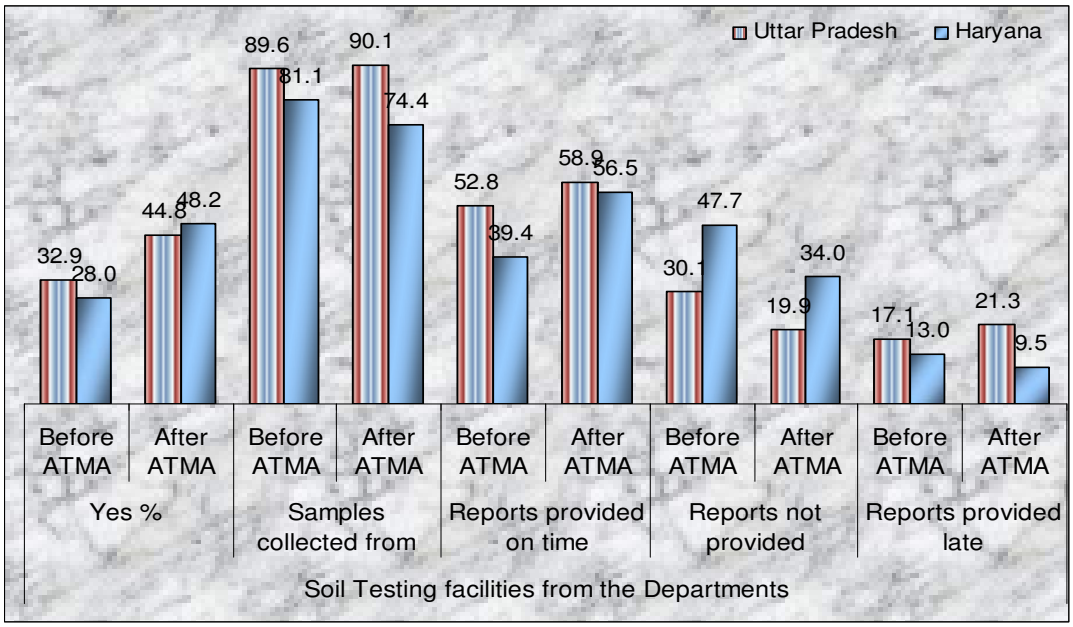
5.45 The information collected from farmers with regard to availability of the facility of soil testing in their area both before and after ATMA on soil is indicated in Table 5.41.

Table 5.41 : **Soil testing facilities before & after ATMA**

State/ District	Soil Testing Yes % before ATMA	If yes, indicate the following				Total	Soil Testing Yes % After ATMA	If Yes, indicate the following				Total
		Samples collected from fields	Reports provided on time	Reports not provided	Reports provided late			Samples being collected from fields	Reports provided on time	Reports not provided	Reports provided late	
Jalaun	16.3	88.3	27.0	45.9	27.0	111	26.9	88.0	55.7	23.0	28.4	183
Lucknow	14.1	45.3	70.5	13.7	15.8	96	43.8	68.0	69.0	9.1	21.9	297
Saharanpur	82.1	87.2	90.8	2.3	6.3	556	83.7	87.1	90.3	1.9	7.2	569
Baghpat	36.9	78.0	44.0	16.0	40.0	250	51.6	87.5	67.5	2.6	31.6	351
Bareilly	9.4	101.6	26.6	70.3	3.1	91	13.4	91	74.7	25.3	0	91
Aligarh	7.2	90.7	20.9	46.5	32.6	43	30.6	95.1	43.3	15.4	41.3	208
Maharajganj	29.4	97.5	18.3	70.6	11.2	197	39.4	97.8	23.2	54.7	22.5	268
Allahabad	8.8	100.0	1.7	75.0	23.3	128	18.8	100.0	58.3	29.9	11.8	128
Barabanki	91.4	98.4	44.9	37.7	17.4	624	94.5	98.6	41.2	34.1	23.8	647
Total	**2,015**	**1,791**	**1,055**	**601**	**342**	**1,998**	**2,743**	**2,472**	**1,616**	**547**	**585**	**2,743**
	32.9	**89.6**	**52.8**	**30.1**	**17.1**	**100.0**	**44.8**	**90.1**	**58.9**	**19.9**	**21.3**	**100.0**
Sirsa	43.3	84.9	44.8	41.1	15.1	377	51.0	85.0	46.4	39.7	18.4	446
Sonepat	12.7	73.4	22.9	73.4	4.6	109	45.5	62.6	67.8	27.6	4.5	398
Total	**490**	**400**	**194**	**235**	**64**	**493**	**844**	**628**	**477**	**287**	**80**	**844**
	28.0	**81.1**	**39.4**	**47.7**	**13.0**	**100.0**	**48.2**	**74.4**	**56.5**	**34.0**	**9.5**	**100.0**
	2,505	**2,191**	**1,249**	**835**	**414**	**2,483**	**3,587**	**3,100**	**2,093**	**834**	**690**	**3,587**
G. Total	**31.8**	**88.2**	**50.3**	**33.6**	**16.7**	**100.0**	**45.5**	**86.8**	**58.6**	**23.3**	**19.3**	**100.0**

(Note: due to multiple responses, the percentage is more than 100)

Soil testing facility is availed by about 46% farmers after ATMA as compared to 32% before ATMA. Among the reasons for this improvement, the sample collection from farmers' field has improved by just one percentage point but availability of reports in time has improved from 50 to 59%, non-availability of report has been reduced from 34% to 23.5% after ATMA. Perhaps, these improvements may have induced more farmers to go for soil testing.

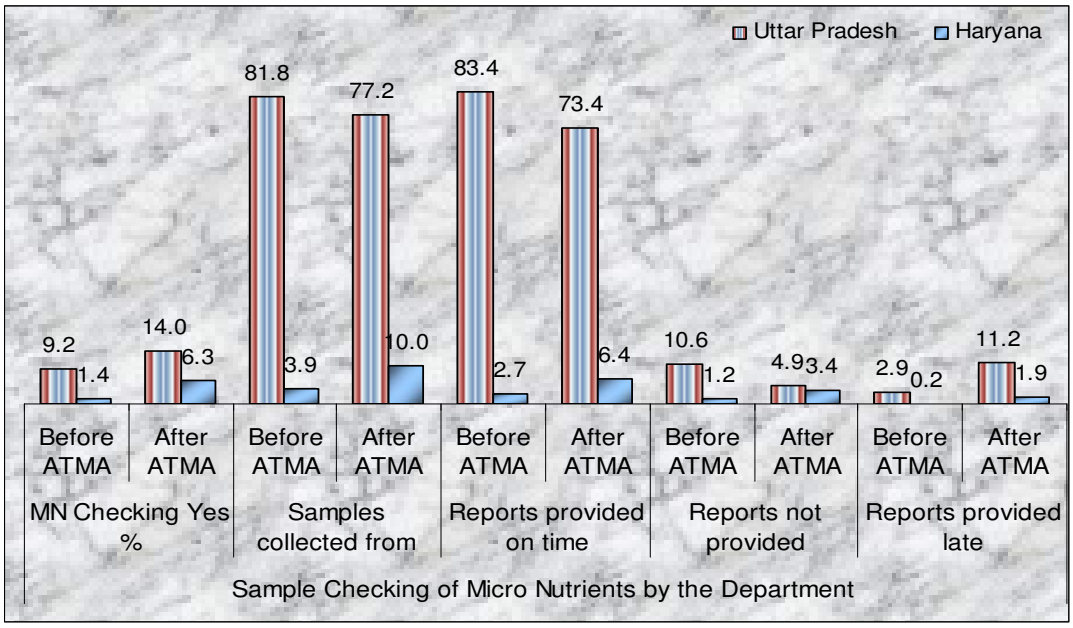


QUALITY CHECKING OF MICRONUTRIENTS

5.46 The micronutrients were to be checked on sample basis to protect farmers from spurious products. The feedback of the farmers is given in Table 5.42

Table 5.42 : Sample Checking of Micro Nutrients before and after ATMA

District	MN Checking	If yes, indicate the following				Total	MN checking	If Yes, indicate the following			
	Yes % before ATMA	Samples collected from the fields	Reports provided on time	Reports not provided	Reports provided late		Yes % After ATMA	Samples collected from the fields	Reports provided on time	Reports not provided	Reports provided late
Jalaun	0.1	100.0	100.0	0	0	1	0.3	100.0			100.0
Lucknow	6.8	63.6	90.9	4.5	4.5	44	23.1	80.0	83.2	6.5	10.3
Saharanpur	52.1	90.9	97.4	3.4	1.4	352	55.6	90.7	93.9	4.5	5.1
Baghpat	15.0	70.6	73.5	17.6	6.9	102	33.7	83.8	66.7	3.5	28.5
Bareilly	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Aligarh	0.0	0.0	0.0	0.0	0.0	0.0	1.2	100.0	25.0	37.5	37.5
Maharajganj	0.0	0.0	0.0	0.0	0.0	0.0	0.4	100.0	33.3	66.7	
Allahabad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Barabanki	8.9	93.3	45.0	50.0	5.0	60	11.4	94.7	86.8	9.2	3.9
Total	**9.2**	**81.8**	**83.4**	**10.6**	**2.9**	**559**	**14.0**	**77.2**	**73.4**	**4.9**	**11.2**
Sirsa	1.8	100.0	93.3	0.0	6.7	15	6.7	96.6	76.3	10.2	15.3
Sonepat	1.0	88.9	22.2	77.8	0.0	9	5.9	75.0	30.8	51.9	17.3
Total	**1.4**	**3.9**	**2.7**	**1.2**	**0.2**	**24**	**6.3**	**10.0**	**6.4**	**3.4**	**1.9**
G. Total	**7.48**	**85.8**	**86.1**	**11.8**	**3.1**	**583**	**12.3**	**87.3**	**79.7**	**8.4**	**13.0**



Micronutrients sample checking was reported by about 12% after ATMA which was only 7% before ATMA. The reasons for this improvement were more sample collection from farmers' field by about 2% and decrease in non-submission of reports. The submission was almost the same but delay was reported more after ATMA. In fact, the use of micronutrients itself is limited at present hence; it may not be possible to conclude much in this aspect.

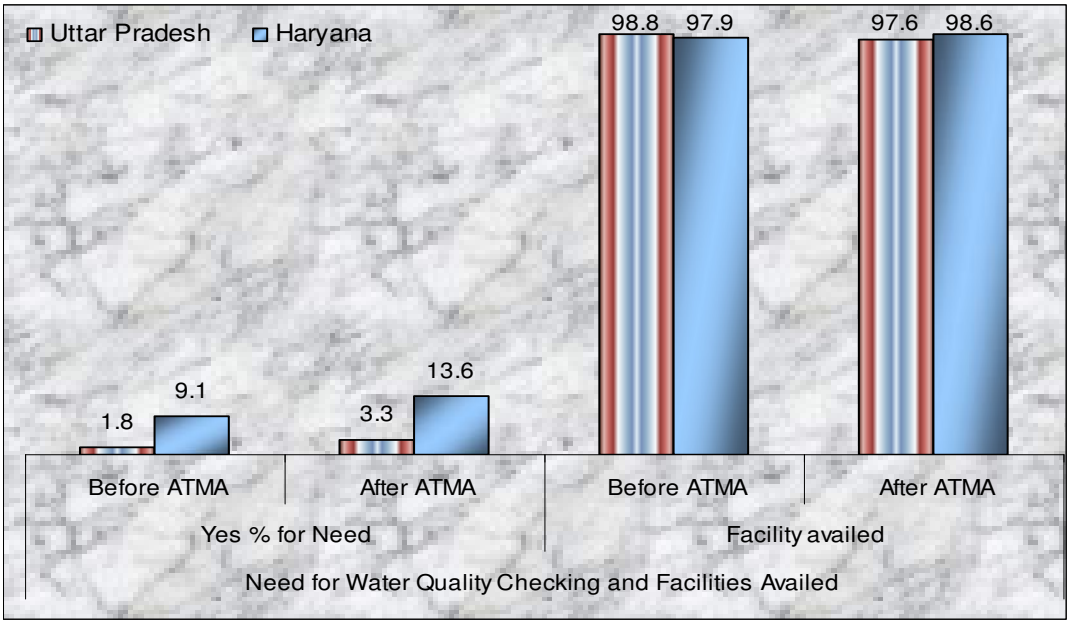
WATER QUALITY CHECKING

5.47 Views on need for checking of the water quality and facilities of checking already availed were ascertained from the sample farmers and these are presented in Table 5.43.

Need to check water quality was felt by 3% farmers only, especially in Sirsa (15%) and Baghpat (11%). It may be due to good quality of water in most of the sample districts which has already been got tested by almost cent percent farmers. Farmers need to be sensitized on the benefits of the checking of water quality under the new arrangements. The procedure for supply of test reports also needs to be streamlined to ensure that the reports are supplied to the concerned farmer promptly.

Table 5.43 : Need for water quality checking and facilities availed before and after ATMA

District	Before ATMA		Total	After ATMA	
	Yes % for Need	Facility availed		Yes % for Need	Facility availed
Uttar Pradesh					
Jalaun	0.1	100.0	680	0.1	100.0
Lucknow	0.3	99.9	680	0.3	99.9
Saharanpur	1.2	99.7	680	0.9	99.7
Baghpat	11.0	90.0	680	23.2	79.1
Bareilly	0.0	100.0	680	0.3	100.0
Aligarh	0.3	99.7	680	1.2	99.4
Maharajganj	0.1	100.0	680	0.9	99.9
Allahabad	0.0	100.0	680	0.0	100.0
Barabanki	2.9	100.0	685	2.9	100.0
Total	**1.8**	**98.8**	**6,125**	**3.3**	**97.6**
Haryana					
Sirsa	14.6	97.5	875	20.2	99.0
Sonepat	3.5	98.4	875	7.0	98.2
Total	**9.1**	**97.9**	**1,750**	**13.6**	**98.6**
G. Total	**3.4**	**98.6**	**7875**	**5.6**	**97.8**

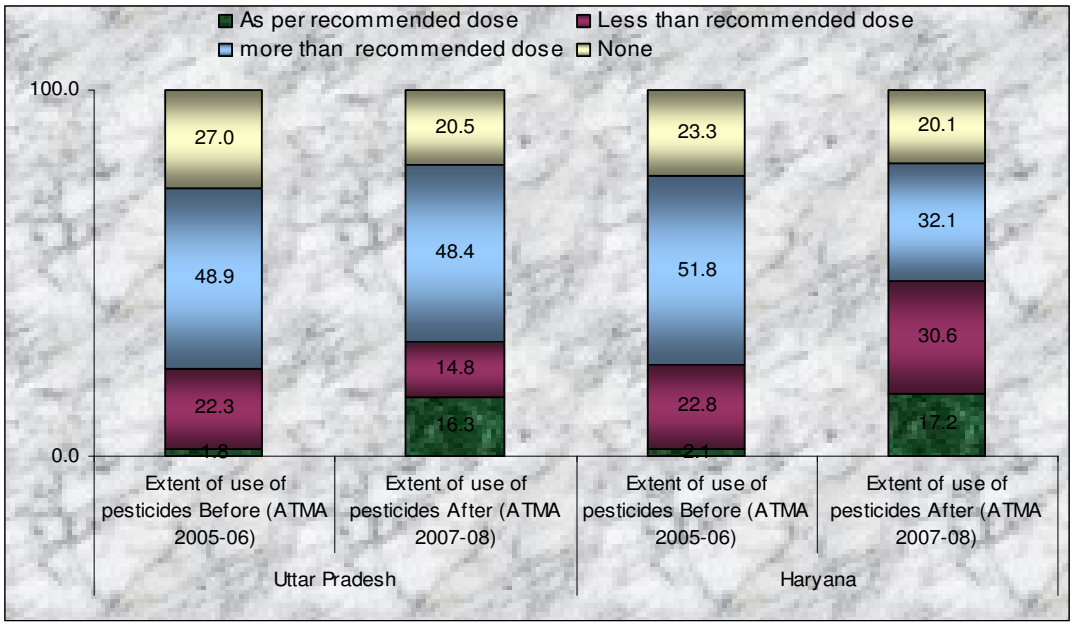


CHANGE IN USE PATTERN OF PESTICIDES

5.48 The impact of advice on use pattern of pesticides before and after ATMA by the sample farmers is presented in Table 5.44.

Table 5.44 : Extent of use of pesticides Before and After ATMA

District	Extent of use of pesticides Before ATMA				Extent of use of pesticides After ATMA			
	As per recommended dose	Less than recommended dose	more than recommended dose	None	As per recommended dose	Less than recommended dose	more than recommended dose	None
Jalaun	0.3	32.8	16.3	50.6	8.4	35.9	17.9	37.8
Lucknow	2.5	37.6	18.1	41.8	19.1	22.8	38.7	19.4
Saharanpur	3.1	6.2	79.7	11.0	3.5	6.3	79.4	10.7
Baghpat	2.8	35.6	37.6	24.0	23.2	14.3	44.7	17.8
Bareilly	0.3	3.7	80.0	16.0	32.4	3.4	48.8	15.4
Aligarh	0.4	26.8	53.1	19.7	10.3	11.5	68.8	9.4
Maharajganj	0.1	33.5	53.4	12.9	7.1	29.0	51.8	12.2
Allahabad	0.1	2.2	59.6	38.1	30.3	2.6	32.2	34.9
Barabanki	6.7	22.8	42.0	28.5	12.1	7.9	53.4	26.6
Total	**1.8**	**22.4**	**48.9**	**27.0**	**16.3**	**14.8**	**48.4**	**20.5**
Sirsa	2.3	34.2	57.6	5.9	10.1	47.8	37.5	4.7
Sonepat	1.9	11.4	46.1	40.6	24.3	13.4	26.7	35.5
Total	**2.1**	**22.8**	**51.8**	**23.3**	**17.2**	**30.6**	**32.1**	**20.1**
G. Total	**1.9**	**22.5**	**49.5**	**26.1**	**16.5**	**18.3**	**44.8**	**20.4**



The feedback shows that the farmers using pesticides as per recommendations of scientists were just 15% after ATMA and 2% before ATMA. Those using less than recommended quantity have decreased from about 23% to 18% and those using more than that have decreased from about 50% to 45%. It indicates that the pesticides are mostly used as per own wisdom or recommendation of the dealers.

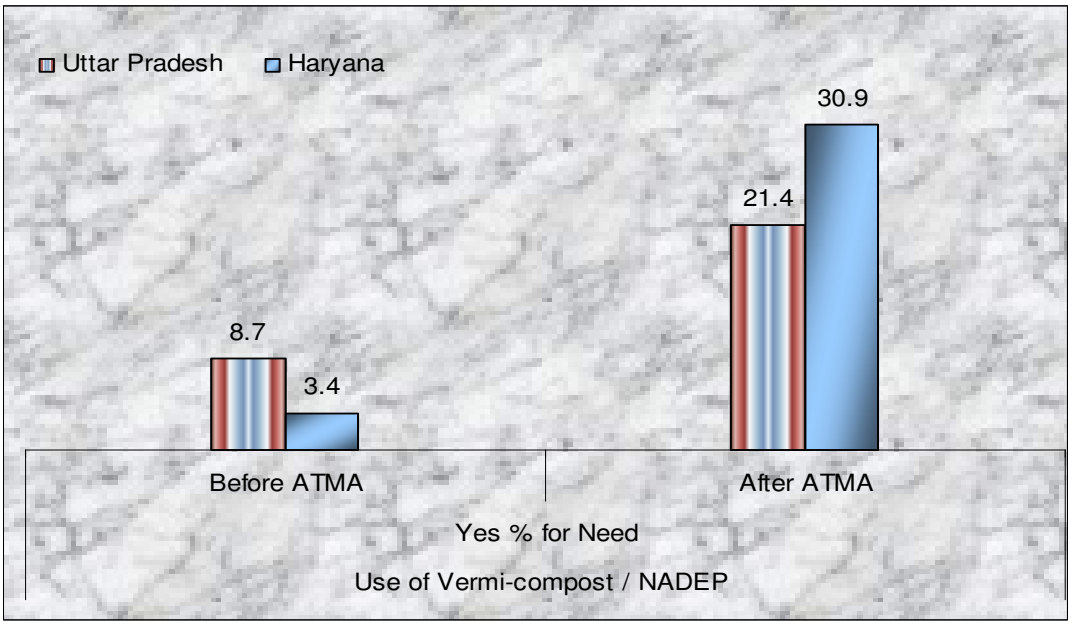
The level of awareness in general has increased after ATMA as even the percentage of those not knowing the doses has decreased from 26 % to 20%.

INTRODUCTION OF VERMI-COMPOST

5.49 The feedback obtained from the sample farmers on use of vermi compost is given in Table 5.45.

Table 5.45 : **Use of vermi-compost / NADEP before and after ATMA**

State/District	Yes % before ATMA	Total Respondents	Yes % after ATMA
Uttar Pradesh			
Jalaun	2.4	680	17.9
Lucknow	3.5	680	9.9
Saharanpur	55.1	680	60.3
Baghpat	2.8	680	42.1
Bareilly	0.9	680	30.3
Aligarh	0.1	680	6.9
Maharajganj	0.0	680	0.7
Allahabad	0.0	680	4.7
Barabanki	13.6	685	19.9
Total UP	**8.7**	**6,125**	**21.4**
Haryana			
Sirsa	4.2	875	30.2
Sonepat	2.5	875	31.5
Total HR	**3.4**	**1,750**	**30.9**
Grand Total	**7.5**	**7,875**	**23.5**



Use of vermi-compost has increased to 23.5% after ATMA from 7.5% before ATMA. Among the sample districts, Saharanpur is using maximum vermi-compost at 60% (earlier 55%) after ATMA. This is a significant impact within a period of two years.

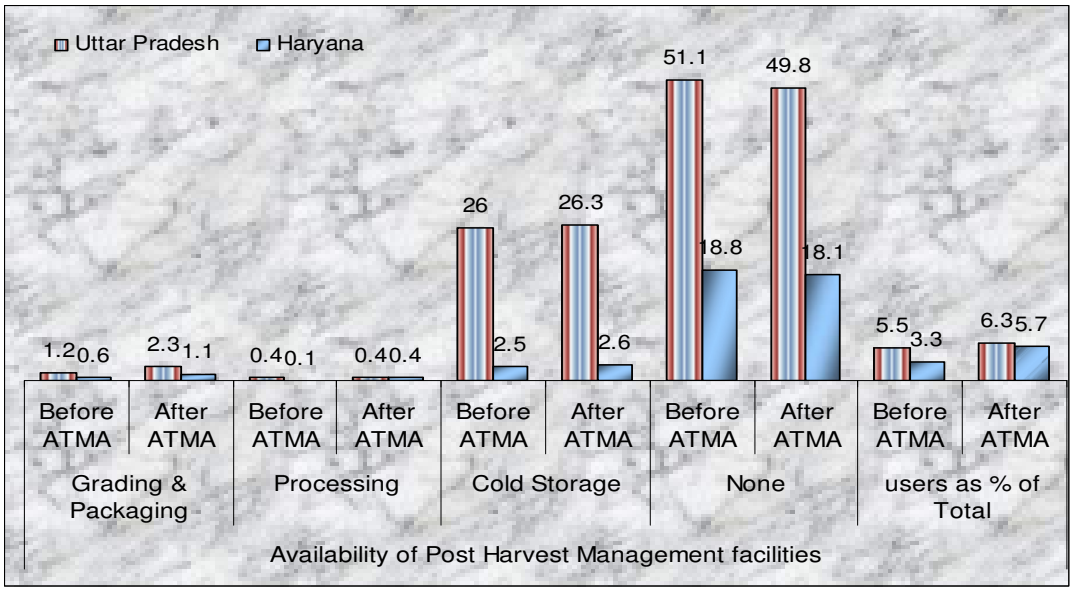
INCREASE IN USE OF POST HARVEST TECHNOLOGY

5.50 The availability of post harvest facilities was ascertained from the sample farmers in their area. The status and use level was compiled and it is given in Table 5.46.

Table 5.46: Availability of Post Harvest facilities before and after ATMA

	Availability of PH facilities before ATMA						Availability of PH facilities after ATMA				
District	**Grading & Packaging**	**Processing**	**Cold Storage**	**None**	**Total**	**Users as % of Total**	**Grading & Packaging**	**Processing**	**Cold Storage**	**None**	**Users as % of Total**
Jalaun	0.0	0.0	1.9	98.1	680	0.0	0.0	0.0	1.9	98.1	0.00
Lucknow	0.0	0.1	47.2	52.6	680	11.8	0.0	0.0	47.1	52.9	12.5
Saharanpur	1.2	0.6	59.2	39.5	680	3.5	1.3	0.4	60.9	38.1	3.8
Baghpat	12.8	0.7	22.4	70.7	679	9.4	23.2	0.7	23.4	59.7	11.8
Bareilly	0.0	1.6	4.1	95.6	680	1.0	0.1	1.6	4.0	95.6	1.0
Aligarh	0.1	0.3	90.7	9.0	680	23.4	0.9	1.3	91.4	7.7	26.8
Maharajganj	0.1	0.6	21.8	78.1	680	0.3	0.4	0.4	22.4	77.4	0.3
Allahabad	0.0	0.3	1.6	98.2	680	0.0	0	0.1	1.5	98.4	0.0
Barabanki	0.0	0.1	51.1	48.6	685	0.8	0.1	0.1	51.2	48.5	0.4
Total	**1.2**	**0.4**	**26.0**	**51.1**	**6122**	**5.5**	**2.3**	**0.4**	**26.3**	**49.8**	**6.3**
Sirsa	4.1	0.6	12.2	84.1	874	10.3	6.5	1.1	13.0	81.4	2.2
Sonepat	0.9	0.7	10.1	85.9	868	3.3	3.8	2.1	10.3	81.6	9.3
Total	**0.6**	**0.1**	**2.5**	**18.8**	**1742**	**3.3**	**1.1**	**0.4**	**2.6**	**18.1**	**5.7**
G. Total	**1.8**	**0.5**	**28.4**	**69.9**	**7864**	**5.0**	**3.4**	**0.8**	**28.8**	**67.9**	**6.2**

(Note: Availability of all facilities was responded by a few respondents only (0.6%)



Availability of the facility of grading & packaging was reported by only 3.4% after ATMA and just 1.8% earlier. Processing facility was reported by less than one per cent. Cold storage facility has remained static as reported by 28% farmers. About 70% have reported non-availability of all these facilities. The percentage of sample using these facilities was just 6.2% after ATMA whereas it was 5% before ATMA. The analysis indicates almost negligible change in availability of post harvest facilities due to ATMA.

ADVICE IN MARKETING/VALUE ADDITION

5.51 General questions were asked from farmers on the advice received by them in marketing of their produce and about value addition. The responses are presented in Table 5.47.

Table 5.47 : **Advice to Farmers in Marketing and value addition before and after ATMA**

District	Respondents	Advice before ATMA		Advise after ATMA	
		Yes % in Marketing	Yes % in Value addition	Yes % in Marketing	Yes % in Value addition
Uttar Pradesh					
Jalaun	680	0.0	0.0	2.8	2.5
Lucknow	680	0.3	0.1	0.7	0.3
Saharanpur	680	0.7	0.3	1.8	1.0
Baghpat	680	3.8	1.8	28.4	16.8
Bareilly	680	0.1	0.1	44.7	10.1
Aligarh	680	0.1	0.4	6.3	3.2
Maharajganj	680	0.3	0.0	2.2	1.5
Allahabad	680	0.0	0.0	4.1	4.3
Barabanki	685	0.0	0.0	0.0	0.0
Total	**6,125**	**0.6**	**0.3**	**10.1**	**4.4**
Haryana					
Sirsa	875	8.1	0.6	11.0	2.3
Sonepat	875	10.3	12.0	49.4	39.2
Total	**1,750**	**9.2**	**6.3**	**30.2**	**20.7**
G. Total	**7875**	**2.5**	**1.6**	**14.6**	**8.0**

The farmers' responded increase in availability of advice in general for marketing and value addition to about 2% of farmers before ATMA to 8 & 15% respectively after ATMA. But they could not specify the nature of advice. On specific questions like marketing channels adopted and adequacy of price, the responses were as given in Table 5.48.

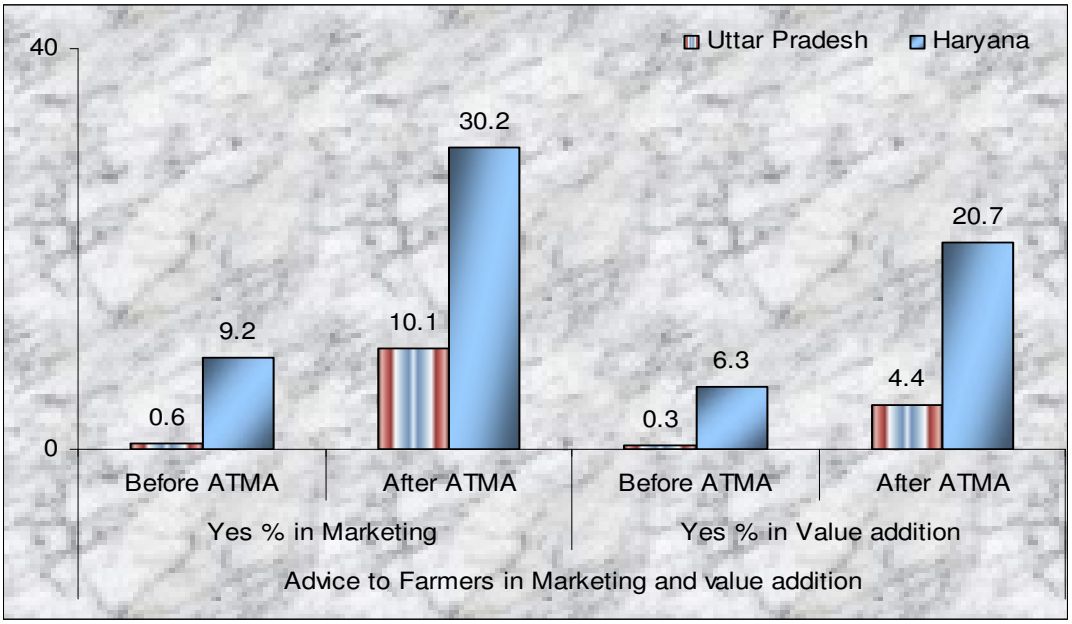
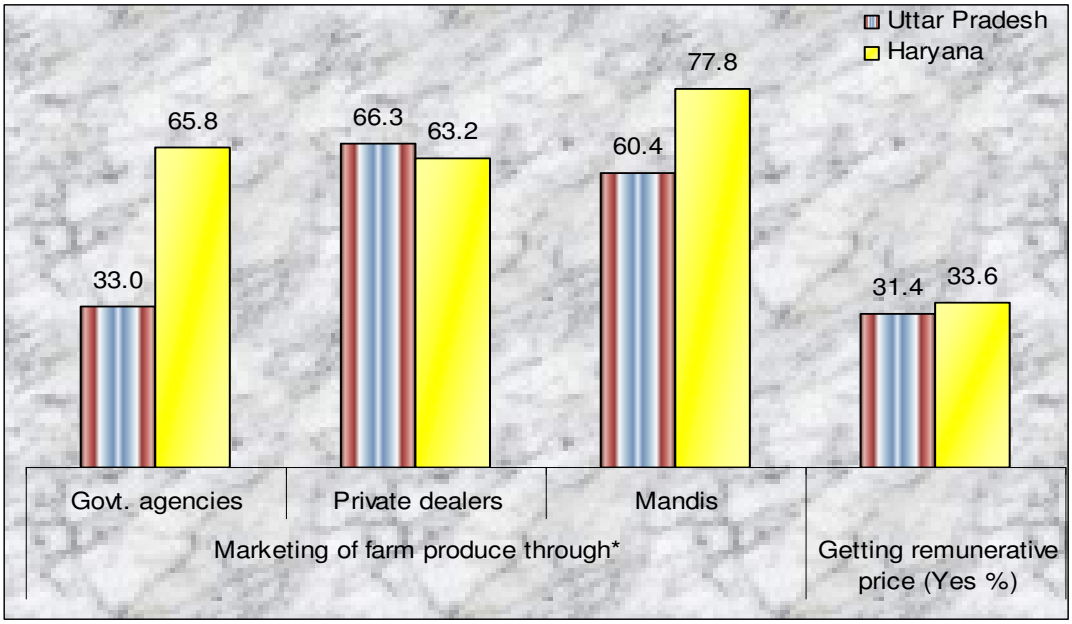


Table 5.48 : Channels of marketing and receipt of remunerative price

State District	Total respondents	Marketing of farm produce through*			Getting remunerative price (Yes %)
		Govt. agencies	Private dealers	Mandis	
Uttar Pradesh					
1. Jalaun	680	13.2	27.2	82.8	16.2
2. Lucknow	680	12.5	92.2	25	19.4
3. Saharanpur	680	33.4	92.8	74.8	64.1
4. Baghpat	680	32	79	66.3	41.9
5. Bareilly	680	81	74.1	28.8	55.3
6. Aligarh	680	35.4	12	97.8	34.5
7. Maharajganj	680	17.6	86	59.8	9.7
8. Allahabad	680	61.5	49.1	59.7	26.3
9. Barabanki	685	10.1	84.2	48.6	15.3
Total - A	**6125**	**33**	**66.3**	**60.4**	**31.4**
Haryana					
10. Sirsa	875	87.2	96.1	73.9	12.2
11. Sonepat	875	44.4	30.3	81.7	55.1
Total - B	**1750**	**65.8**	**63.2**	**77.8**	**33.6**
G.Total (A+B)	**7875**	**40.3**	**65.6**	**64.3**	**31.9**

*(Total may not add up to 100 due to multiple responses from some farmers)



Even after ATMA, the maximum, about 66% are selling through private dealers, followed by Mandis (64%) and Government agencies (40%). We have not gone into the reasons for adopting particular channel but only 32% were satisfied about the price they are getting. In fact, there may be a debate whether this activity is in the scope of extension or not.

VI. IMPROVEMENT IN SECTOR SPECIFIC EXTENSION

5.52 Diversification of agriculture towards allied sectors is advised as an alternate route for increasing the income of farmers. Therefore, departments of animal husbandry, horticulture, fisheries, etc. have been given specific focus and allocation of funds**.** The improvement of extension and support services is discussed in this section.

Extension Facilities for Animal Husbandry

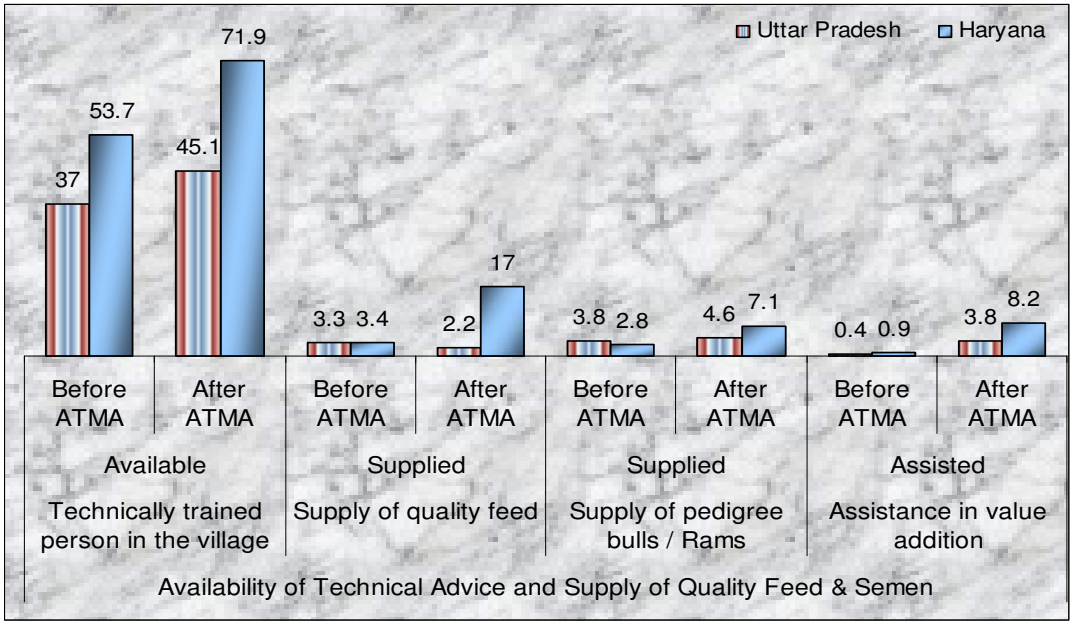
5.53 Animal husbandry especially dairy development is a thrust area to gainfully employ the small and marginal farmers. In this regard, availability of advice from a technically trained persons, supply of quality feed, quality seaman and training in value addition were ascertained from farmers and their feed back after compilation is presented in Table 5.49.

Table 5.49 shows that the availability of advice from a technically trained person was reported by 51% after ATMA as compared to 40% before it. Supply of quality feed and semen was reported by just 10% and 5% farmers respectively after ATMA which were around 3% before ATMA. Semen supply was relatively better in Baghpat and Saharanpur and Sonepat as reported by 26%, 10% and 9% respondents respectively. Feed supply was reported higher in Bareilly, Baghpat, Sonepat and Sirsa districts. It means these two important inputs are largely in private domain.

Quality semen is a vital input and its supply is necessary to be arranged under strict control of extension department to improve the conception rate which is the base of all dairy economics.

Table 5.50 : Availability of Technical Advice and Supply of Quality Feed & Semen before & after ATMA

Animal Husbandry facilities before ATMA (%)					Animal Husbandry facilities after ATMA (%)				
State/ District	Technically trained person in the village	Supply of quality feed	Supply of pedigree bulls / Rams	Assistance in value addition	Total sample	Technically trained person in the village	Supply of quality feed	Supply of pedigree bulls / Rams	Assistance in value addition
	Available	Supplied	Supplied	Assisted		Available	Supplied	Supplied	Assisted
Jalaun	17.1	0.3	0.0	0.0	680	20.4	2.2	0.0	7.2
Lucknow	34.0	2.6	3.2	0.0	680	34.1	2.8	3.7	0.1
Saharanpur	86.3	0.4	10.3	0.1	680	87.6	0.7	10.4	0.4
Baghpat	53.7	7.2	20.0	2.8	680	69.0	16.3	25.6	14.3
Bareilly	13.4	0.0	0.0	0.0	680	51.6	23.1	0.0	3.7
Aligarh	26.9	0.0	0.0	0.0	680	27.5	0.9	1.0	0.9
Maharaja	40.9	0.4	0.1	0.3	680	45.4	0.7	0.3	3.5
Allahabad	1.3	0.1	0.0	0.0	680	10.6	0.6	0.0	4.0
Barabanki	59.3	18.2	0.3	0.4	685	59.7	23.5	0.1	0.3
Total	**37.0**	**3.3**	**3.8**	**0.4**	**6,125**	**45.1**	**2.2**	**4.6**	**3.8**
Sirsa	75.1	1.3	3.5	0.1	875	79.1	31.9	4.9	0.6
Sonepat	32.2	5.6	2.1	1.6	875	64.7	34.5	9.4	15.8
Total	**53.7**	**3.4**	**2.8**	**0.9**	**1,750**	**71.9**	**17.0**	**7.1**	**8.2**
G. Total	**40.7**	**3.3**	**3.6**	**0.5**	**7,875**	**51.1**	**9.9**	**5.1**	**4.8**



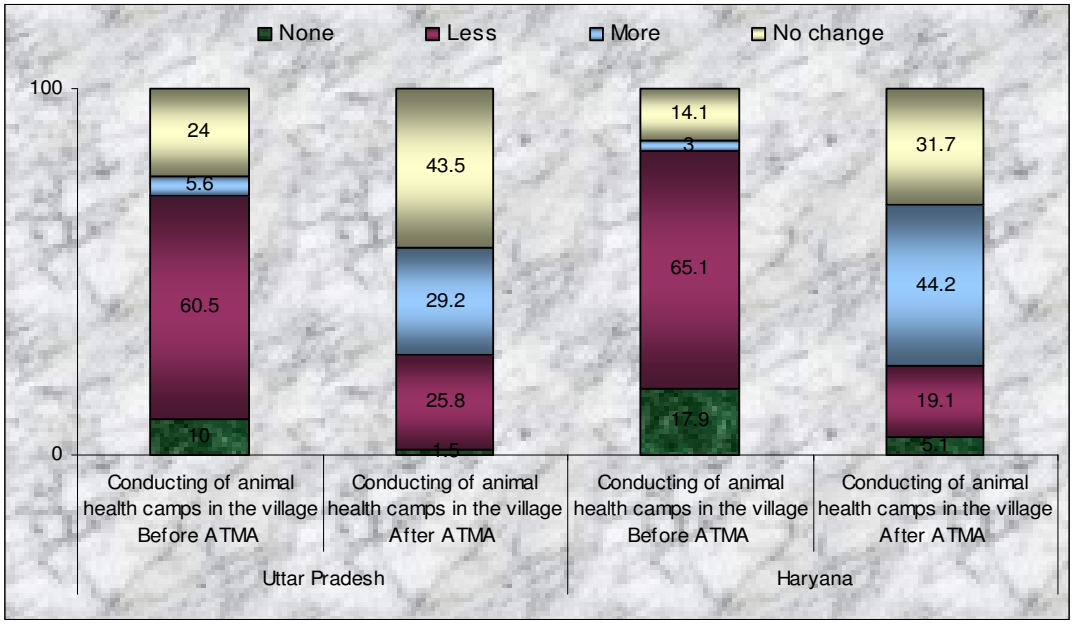
Advice in value addition was reported by 5% after ATMA, about 15% in Sonepat and Baghpat, and it was less than 1% before ATMA. It indicates that something substantial in dairy extension is yet to be realized through ATMA.

CONDUCTING OF ANIMAL HEALTH CAMP

5.54 Health camps are conducted in the villages or nearby villages to advise on diseases, vaccination and other problems. The status in this regard before and after ATMA is presented in Table 5.50

Table 5.50 : Conducting of Animal Health Camps in the Village before & after ATMA

State/ District	Conducting of animal health camps in the village Before ATMA				Total	Conducting of animal health camps in the village After ATMA			
	None	Less	More	No change		None	Less	More	No change
Jalaun	1.3	81.8	0.3	16.6	680	0.0	16.0	30.9	53.1
Lucknow	10.7	67.8	5.6	15.9	680	1.6	32.6	24.0	41.8
Saharanpur	3.1	86.0	2.8	8.1	680	2.6	53.1	36.8	7.5
Baghpat	18.8	59.0	7.1	15.1	680	9.0	48.2	19.7	23.1
Bareilly	3.5	72.4	0.0	24.1	680	0.3	35.4	25.4	38.8
Aligarh	5.0	83.8	0.0	11.2	680	0.0	18.8	33.5	47.6
Maharajganj	5.6	28.8	19.0	46.6	680	0.0	14.1	29.6	56.3
Allahabad	36.8	23.8	0.0	39.4	680	0.0	0.1	15.3	84.6
Barabanki	4.8	40.9	15.3	39.0	685	0.1	13.6	47.2	39.1
Total	**10.0**	**60.5**	**5.6**	**24.0**	**6125**	**1.5**	**25.8**	**29.2**	**43.5**
Sirsa	17.7	61.6	5.4	15.3	875	1.5	10.9	65.7	21.9
Sonepat	18.1	68.6	0.6	12.8	875	8.7	27.3	22.6	41.4
Total	**17.9**	**65.1**	**3.0**	**14.1**	**1750**	**5.1**	**19.1**	**44.2**	**31.7**
G. Total	**11.7**	**61.6**	**5.0**	**21.9**	**7875**	**2.3**	**24.3**	**32.5**	**40.9**



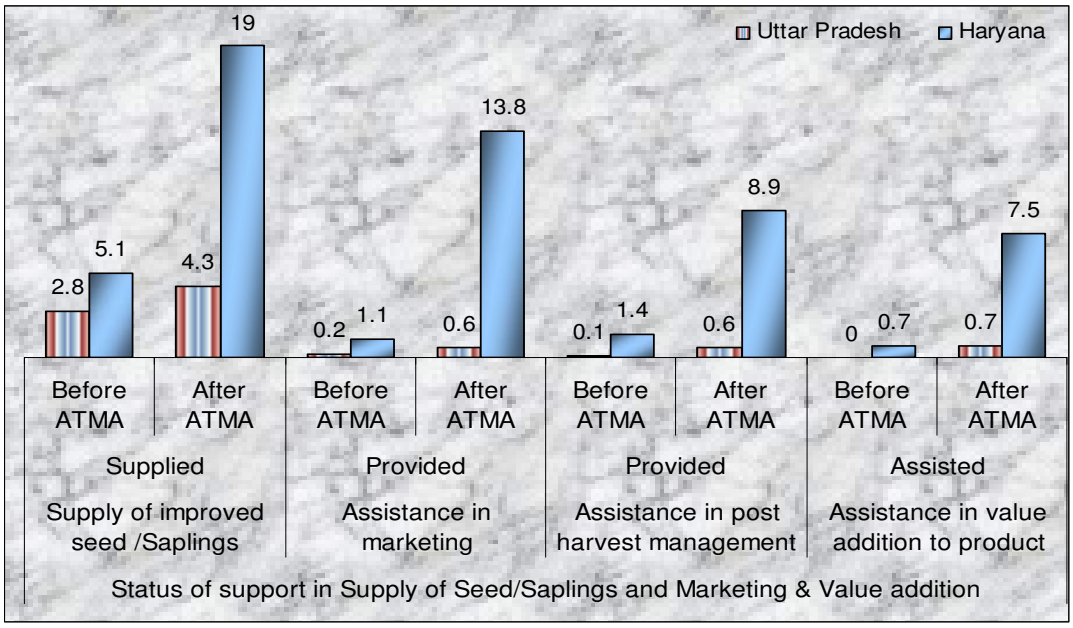
The percentage of farmers who reported no camp has come up after ATMA from about 12% to 2%. The farmers who reported increase in the number of camps has gone up from 5% to about 33%. However, those reporting that no change has occurred are still 40% increasing from 22% in pre-ATMA period. No increase in the animal camps after ATMA was reported by more than 50% respondents in Allahabad, Jalaun and Maharajganj districts. Notwithstanding the contents of the questions, it emerges that the number of health camps does not indicate any substantial increase. This table again points out the need to lay greater focus of extension on dairy development.

EXTENSION FACILITIES FOR HORTICULTURE

5.55 The responses of the sample farmers about the availability of seed/sapling and advice in marketing and post harvest management were compiled district-wise as presented in Table 5.51.

Table 5.51 : Improvement in Supply of Seed/Saplings and Assistance in Marketing & Value addition

District	Status of the Support before ATMA					Status of the Support after ATMA			
	Supply of improved seed / sapling material	Assistance in marketing	Assistance in post harvest management	Assistance in value addition to product	Total sample	Supply of improved seed / sapling material	Assistance in marketing	Assistance in post harvest moment	Assistance in value addition to product
	Supplied	Provided	Provided	Assisted		Supplied	Provided	Provided	Assisted
Jalaun	0.0	0.0	0.0	0.0	680	1.0	0.4	0.0	1.2
Lucknow	3.8	0.0	0.0	0.0	680	4.6	0.0	0.0	0.0
Saharanpur	1.0	0.0	0.1	0.1	680	2.5	0.0	0.6	0.0
Baghpat	2.1	0.7	0.3	0.1	680	5.4	1.6	1.6	0.4
Bareilly	0.3	0.0	0.0	0.0	680	1.0	0.0	0.0	0.0
Aligarh	9.1	0.0	0.1	0.0	680	13.7	1.3	1.5	1.5
Maharajganj	0.3	0.1	0.1	0.0	680	2.2	0.4	0.6	2.8
Allahabad	0.0	0.0	0.0	0.0	680	0.0	0.0	0.0	0.0
Barabanki	8.2	1.0	0.6	0.1	685	8.3	1.2	1.0	0.1
Total	**2.8**	**0.2**	**0.1**	**0.0**	**6,125**	**4.3**	**0.6**	**0.6**	**0.7**
Sirsa	0.3	0.0	0.1	0.0	875	1.1	0.0	0.1	0.0
Sonepat	9.8	2.2	2.7	1.5	875	36.8	27.5	17.7	15.1
Total	**5.1**	**1.1**	**1.4**	**0.7**	**1,750**	**19.0**	**13.8**	**8.9**	**7.5**
G Total	**3.3**	**0.5**	**0.4**	**0.2**	**7875**	**7.6**	**3.5**	**2.4**	**2.2**



The table above shows that the supply of seed and planting material was reported from government agencies by about 3% farmers before ATMA which increased to just 8% after ATMA indicating very feeble impact of ATMA. The maximum supply was in Sonepat (37%) and Aligarh (14%). Advice / assistance in marketing and post harvest management are reported by about 3% after ATMA which means that marketing of the produce is and has been the concern of farmers themselves. Therefore, the government extension may focus on supply of seed and saplings while marketing and post harvest management have to be facilitated by government extension in public-private partnership mode.

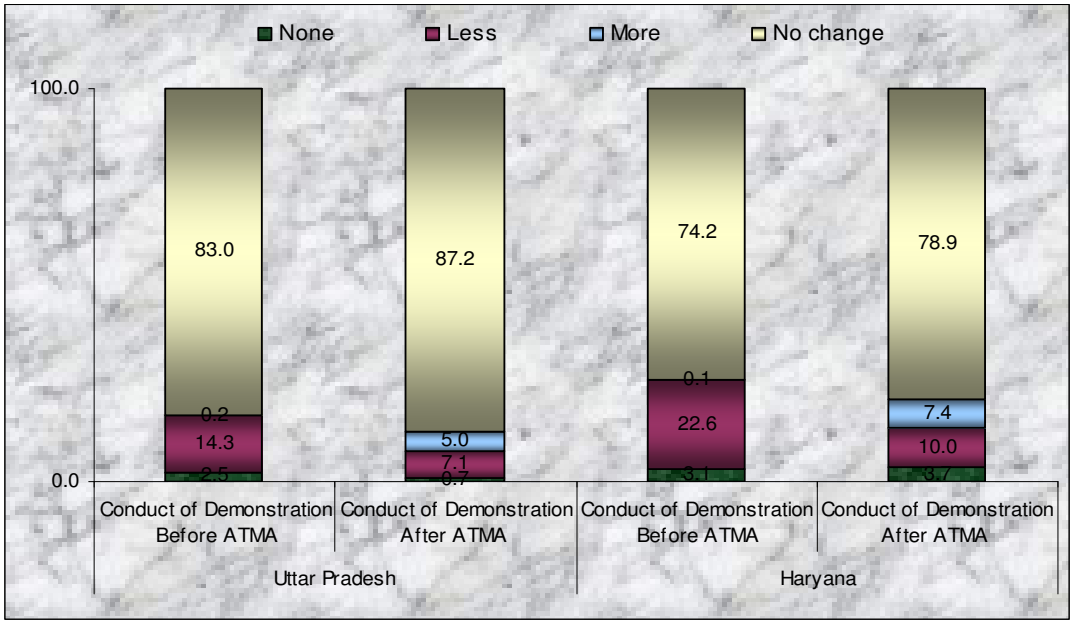
CONDUCT OF DEMONSTRATION FOR HORTICULTURE

5.56 Demonstration is an effective way to promote horticulture/others as we have seen earlier in Section I. The conduct of horticulture demonstration was ascertained from sample farmers to know the extent of utility of this exercise. The compiled views of farmers by districts are given in Table 5.52

Table 5.53 shows that the farmers have given very low response to questions relating to conduct of less or more demonstrations. However, the question of no change was confirmed to the extent of 85% after ATMA situation. No change was indicated by more than 90% of farmers in Jalaun, Bareilly, Allahabad and Sirsa districts. It indicates that the use of demonstration method has not been increased after ATMA.

Table 5.52 : Conduct of Demonstrations on Horticulture

District	Conduct of Demonstration Before ATMA				Total	Conduct of Demonstration After ATMA			
	None	Less	More	No change		None	Less	More	No change
Jalaun	0.0	6.6	0.0	93.4	100.0	0.0	1.5	2.1	96.5
Lucknow	0.9	19.1	0.0	80.0	100.0	0.3	6.6	5.1	87.9
Saharanpur	0.3	20.4	0.7	78.5	100.0	0.4	17.6	3.2	78.7
Baghpat	6.5	11.5	0.0	82.1	100.0	4.9	10.9	1.9	82.4
Bareilly	0.4	2.2	0.0	97.4	100.0	0.0	0.1	1.5	98.4
Aligarh	0.6	36.0	0.0	63.4	100.0	0.1	9.0	19.9	71.0
Maharajganj	2.6	21.0	0.4	75.9	100.0	0.1	14.4	4.1	81.3
Allahabad	10.4	2.5	0.0	87.1	100.0	0.0	0.1	0.3	99.6
Barabanki	0.9	9.2	0.9	89.1	100.0	0.7	3.6	6.6	89.1
Total	**154**	**875**	**14**	**5,082**	**6,125**	**45**	**435**	**304**	**5,341**
	2.5	**14.3**	**0.2**	**83.0**	**100.0**	**0.7**	**7.1**	**5.0**	**87.2**
Sirsa	0.1	2.4	0.0	97.5	100.0	0.1	1.3	0.8	97.8
Sonepat	6.2	42.7	0.1	51.0	100.0	7.3	18.7	14.1	59.9
Total	**55**	**395**	**1**	**1,299**	**1,750**	**65**	**175**	**130**	**1,380**
	3.1	**22.6**	**0.1**	**74.2**	**100.0**	**3.7**	**10.0**	**7.4**	**78.9**
G. Total	**209**	**1,270**	**15**	**6,381**	**7,875**	**110**	**610**	**434**	**6,721**
	2.7	**16.1**	**0.2**	**81.0**	**100**	**1.4**	**7.7**	**5.5**	**85.3**

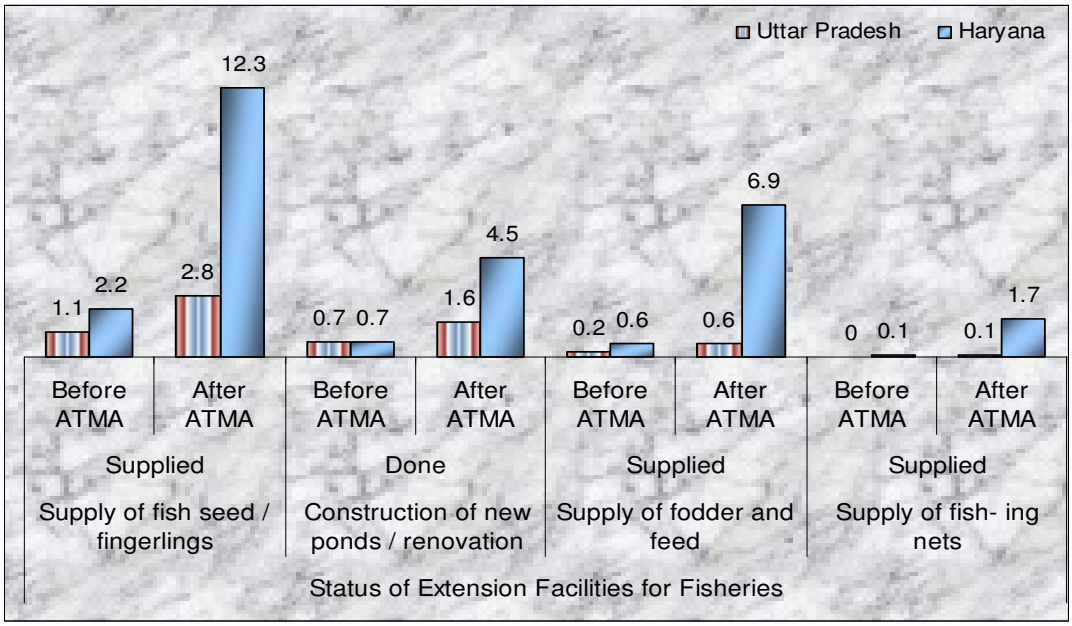


EXTENSION FACILITIES FOR FISHERIES

5.57 The feedback about availability of fingerlings, supply of feed and fishing net and assistance in construction of ponds etc. is given in Table 5.53.

Table 5.53 : Extension Facilities for Fisheries before and After ATMA

District	Status of facilities before ATMA					Total	Status of facilities before ATMA				
	Supply of fish seed / fingerlings	Construction of new ponds / renovation	Supply of fodder and feed	Supply of fishing nets	Assistance in marketing of fish		Supply of fish seed / fingerlings	Construction of new ponds / renovation	Supply of fodder and feed	Supply of fishing nets	Assistance in marketing of fish
	Supplied	Done	Supplied	Supplied	Provided		Supplied	Supplied	Supplied	Supplied	Provided
Jalaun	0.0	0.0	0.0	0.0	0.0	680	0.1	0.0	0.1	0.0	0.0
Lucknow	2.8	0.6	0.6	0.0	2.8	680	3.4	0.7	0.9	0.0	0.0
Saharanpur	0.0	0.0	0.0	0.0	0.0	680	0.0	0.0	0.0	0.0	0.0
Baghpat	2.8	1.2	0.6	0.4	2.8	680	6.5	2.4	1.8	1.2	0.7
Bareilly	0.0	0.0	0.0	0.0	0.0	680	4.4	1.3	1.0	0.0	0.3
Aligarh	0.1	0.0	0.0	0.0	0.1	680	0.1	0.0	0.0	0.0	0.0
Maharajganj	1.0	1.0	0.0	0.0	1.0	680	1.3	1.2	0.0	0.0	0.0
Allahabad	0.0	0.0	0.0	0.0	0.0	680	0.7	0.3	0.4	0.1	0.6
Barabanki	3.2	3.8	1.0	0.0	3.2	685	8.5	8.0	1.0	0.0	0.0
Total	**1.1**	**0.7**	**0.2**	**0.0**	**1.1**	**6125**	**2.8**	**1.6**	**0.6**	**0.1**	**0.2**
Sirsa	0.1	0.2	0.1	0.0	0.1	875	1.9	1.5	0.5	0.0	0.0
Sonepat	4.2	1.3	1.0	0.1	4.2	875	22.7	7.5	13.3	3.4	17.9
Total	**2.2**	**0.7**	**0.6**	**0.1**	**2.2**	**1750**	**12.3**	**4.5**	**6.9**	**1.7**	**9.0**
G total	**1.3**	**0.7**	**0.3**	**0.1**	**1.3**	**7875**	**4.9**	**2.2**	**2.0**	**0.5**	**2.1**



The supply of fingerlings was reported by 4.9% farmers in post ATMA as against 1.3% in pre ATMA situation. The response of farmers is very low, about 2% for assistance in construction of new ponds or renovation, supply of fish feed, supply of

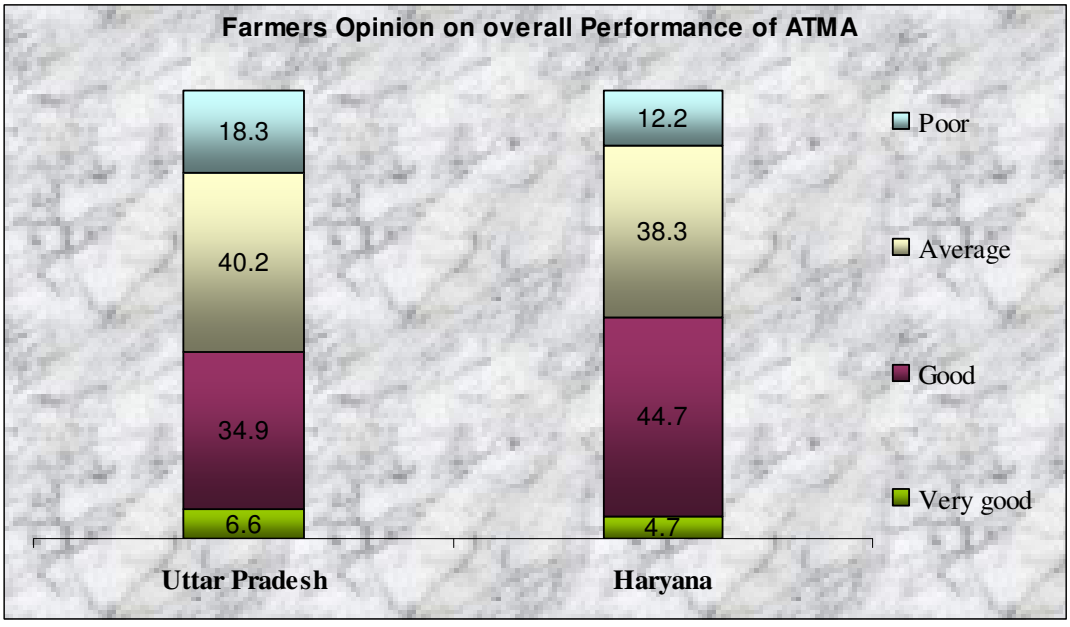
fishing nets and assistance in marketing. It indicates that the actual facilities for fisheries have not been provided though training etc. may have been undertaken.

FARMERS OPINION ON OVERALL PERFORMANCE OF ATMA

5.58 The farmers were asked to give their opinion by rating the overall programme in four grades viz., very good, good, average and poor. The compiled opinion in this regard is given in Table 5.54.

Table 5.54 : Farmers opinion on overall performance of ATMA

District	What do you feel about the ATMA extension programme?				Total
	Very good	Good	Average	Poor	
Jalaun	0.1	21.8	48.1	30.0	680
Lucknow	2.1	17.5	61.3	19.1	680
Saharanpur	31.6	42.6	25.1	0.6	680
Baghpat	6.2	50.0	38.4	5.4	680
Bareilly	6.5	10.3	64.7	18.5	680
Aligarh	1.5	22.2	52.4	24.0	680
Maharajganj	1.8	50.6	28.7	19.0	680
Allahabad	5.1	16.8	30.4	47.6	680
Barabanki	4.7	81.9	13.3	0.1	685
Total	**6.6**	**34.9**	**40.2**	**18.3**	**6,125**
Sirsa	4.3	65.6	23.8	6.3	680
Sonepat	5.1	23.9	52.9	18.1	680
Total	**4.7**	**44.7**	**38.3**	**12.2**	**1,750**
G. Total	**6.2**	**37.1**	**39.8**	**16.9**	**7,875**
Coefficient of variation	26.5	26.5	26.5	26.5	



The 'very good' rating is given by about 6% whereas 37% have termed it as good**.** The maximum 31% good rating is given in Saharanpur while in other districts, it is

about 5% or less in spite of low literacy. 'Good' rating is the maximum in Barabanki (81%), Sirsa (66%) and it was below 20% in Bareilly and Lucknow. Each of the 'average' and 'poor' rating was given by about 27% farmers. Thus, about 53% are finding the ATMA programme either poor or average i.e. no different from the earlier ones. However, the variations in responses across the districts are very high with coefficient of variation as 26.5 per cent which reflect on the reliability of the opinion.

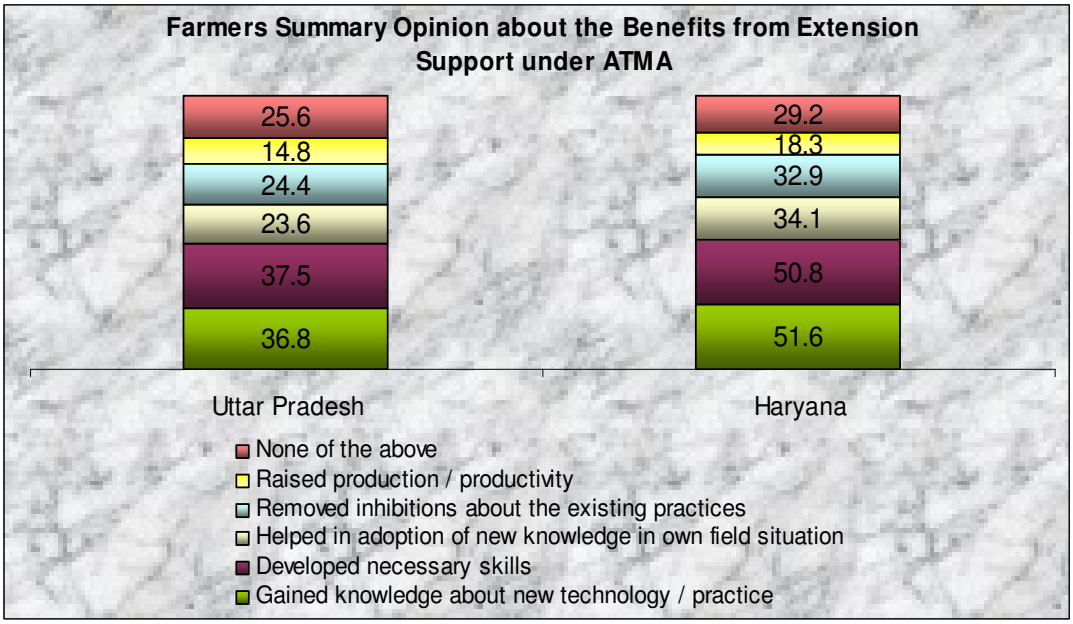
FARMERS' SUMMARY OPINION ABOUT BENEFITS OF ATMA

5.59 The summary opinion on benefits was factored in knowledge about new technology/practices, acquiring new skill, use of knowledge gained, clarity about the existing practices and the resultant increase in productivity. The compiled district-wise opinions are presented in Table 5.55.

Table 5.55 : Farmer's Summary Opinion about the Benefits from Extension Support under ATMA

State/ District	Extension Support had been beneficial						Total
	Gained knowledge about new technology / practice	Developed necessary skills	Helped in adoption of new knowledge in own field situation	Removed inhibitions about the existing practices	Raised production / productivity	None of the above	
Uttar Pradesh							
Jalaun	22.1	31.6	21.2	30.0	8.5	54.0	680
Lucknow	17.2	55.6	12.5	36.2	23.4	28.2	680
Saharanpur	70.3	61.8	31.5	14.6	2.4	19.4	680
Baghpat	60.3	70.1	61.3	47.4	23.4	14.6	680
Bareilly	70.7	47.9	20.3	50.3	50.6	24.3	680
Aligarh	37.1	59.1	51.0	39.6	34.1	29.4	680
Maharajganj	47.6	26.3	23.8	12.6	3.5	48.4	680
Allahabad	30.9	19.6	16.2	22.8	9.9	69.1	680
Barabanki	69.6	61.5	34.9	29.2	15.3	9.2	685
Total	**36.8**	**37.5**	**23.6**	**24.4**	**14.8**	**25.6**	**6,125**
Haryana							
Sirsa	56.8	67.4	45.1	34.1	11.1	14.6	875
Sonepat	76.6	52.5	49.7	41.8	20.9	17.5	875
Total	**66.7**	**59.9**	**47.4**	**37.9**	**16.0**	**16.1**	**1,750**
Grand Total	**51.6**	**50.8**	**34.1**	**32.9**	**18.3**	**29.2**	**7,875**
Coefficient of Variation	37.7	30.8	44.1	33.9	68.8	58.9	

The inferences from this table 5.55 are blended with factored - responses in the earlier sections of this chapter to summarize the impact of ATMA during 2005-06 to 2007-08 in reforming the agricultural extension system.



FARMERS NOT FEELING INCLUDED

5.60 Taking the last question first, as much as 29% of the sample farmers (column 7 of Table 5.52) felt that there has not been any change during the last 3 years. This is almost equal to the 26 % of the respondents who have rated ATMA extension programme as poor (Table 5.51). Indirectly, it indicates that about one third farmers are still not accessed in the extension programme. However; coefficient of variations of this response is as high as 59 % which reduces its reliability**.**

DISSEMINATION OF THE NEW FARM INFORMATION AND TECHNOLOGIES/PRACTICES

5.61 Dissemination of the new farm information and technologies/ practices is the first & foremost objective of any extension programme. Of the sample farmers, about 52% felt having gained knowledge of new practices/technologies under ATMA programme. However, the feedback in this regard varied widely over districts from the minimum 17% in Lucknow to the maximum 77% in Sonepat & 71% in Bareilly districts with coefficient of variations of 38% across the districts.

SKILL UPGRADATION

5.62 Upgradation in their Skills have been reported by overall 51% of sample farmers, varying from the minimum 20% in Allahabad to the maximum 70% in Baghpat and 67% in Sirsa districts with coefficient of variations of 31% over districts.

ADOPTION OF NEW KNOWLEDGE IN FIELD

5.63 The overall feedback on the adoption of new farm knowledge is 34%, varying from the minimum of about 13% in Lucknow to the maximum of 61% in Baghpat and 50% in Sonepat with coefficient of variations of 44% across districts**.** The farmers acquired knowledge through training, demonstrations, exposure visits and Kisan Goshties which has been discussed under the farmer oriented activities in section II.

REMOVED INHIBITIONS ABOUT THE EXISTING PRACTICES

5.64 Of the total sample about 33% feel that their inhibitions about the existing practices like summer ploughing, timely sowing and watering have been explained as per scientific findings. Across the districts, these clarifications were satisfying to maximum (50%) in Bareilly, Baghpat (47%) and Sonepat (42%) districts with coefficient of variations of 34.

INCREASE IN PRODUCTIVITY/PRODUCTION

5.65 The increase in productivity was reported by 18% of sample farmers and the increase was indicated by the maximum respondents in Bareilly (51%) and Aligarh (34%) whereas it was the minimum in Saharanpur (2.4%) and Maharajganj (3.5%) with coefficient of variations of 69% over the districts. The conclusions in this respect will be drawn in the next chapter where the cropping pattern and yield of the important crops have been discussed.