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A Study on Profile Characteristics of Respondents about Practicing Integrated Weed Management (IWM) Practices in Major Crops in Mahaboobnagar Disrtict in Telangana State

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ABSTRACT

The present investigation was carried out in Mahaboobnagar district of Telangana. Ex-post facto research design was followed selecting 120 respondents at random from four mandals of twelve villages of the district. We studied profile characteristics of farmers on various IWM practices of major crops. Ex-post facto research design was adopted for carrying out the study. Salient findings of the study are, most of the respondents were middle aged (46.70%), had primary level education (35.05%), had semi medium farm size (44.20%), low farming experience (50.80%), medium extension contact (50.00%), low mass media exposure (54.20%), low information seeking behaviour (50.80%), medium farm mechanization status (70.00%), medium risk orientation (65.00%), medium innovativeness (55.00%), medium input availability (55.00%), medium labour availability (55.00%) and low training (43.33%).

Key words: *Profile characteristics, IWM practices.*

INTRODUCTION

Weeds are unwanted and undesirable plants which interfere with the utilization of land and water resources. Weeds are an important factor in the management of all land and water resources, but it effect is greatest on agriculture. The losses caused by weeds exceed the losses caused by any other category of agricultural pests. Of the total annual loss in agriculture produce, weeds account for 45 per cent, insect 30 per cent, disease 20 per cent and other pests 5 per cent. The different traditional methods like manual weeding, interculture operations and herbicide spraying farmers practicing is separately. Integrated weed management (IWM) is the control of weeds through a long-term management approach, using several weed management techniques such as: Physical control, Chemical control, Biological control and Cultural control methods. Therefore, a system approach to weed management known as "integrated weed management systems" (IWMS) is gaining importance.

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MATERIAL AND METHODS

Ex-post facto research design was used in the present investigation. The state of Telangana was choosen as the locale of the study and Mahaboobnagar district of Telangana was randomly chosen and 4 mandals in the district were selected randomly. From all the selected mandals, a list of villages containing farmers practicing IMW practices was obtained from Department of agriculture. From this list 3 villages from each mandal were selected randomly. Thus a total of 12 villages were selected for the study. Ten IWM practising respondents from each village were selected randomly using lottery method, thus making a total of 120 respondents for the study. For measuring respondents knowledge on IWM practices, a knowledge test was developed. Data was collected using interview schedule developed for the study. Based on obtained scores the respondents were grouped into low, medium and high knowledge categories according to equal interval method. The collected data was analysed using appropriate statistical tools like frequency and percentage, class interval, arithmetic mean ($\overline{X}$), standard deviation and co- efficient of correlation.

RESULTS AND DISCUSSION

Age

Table 1: Distribution of respondents according to their age (N=120)

S.No.	Category	Age range	Frequency	Percentage
1.	Young age(24to 38)	24-38 yrs	45	37.50
2.	Middle age(38-52)	38-52 yrs	56	46.70
3.	Old age(52-66years)	52-66 yrs	19	15.80

From the above table found that, most of (46.70%) the respondents were belonged to middle age followed by young (37.50%) and old (15.80%) age categories.

The probable reason might be that young farmers have been engaged in activities others than agriculture and old farmers may be due to their traditional outlook and also being less energetic are reluctant to practice new technologies. Hence majority of IWM practicing farmers found to be middle aged farmers.

Education

Table 2: Distribution of respondents according to their education (N=120)

S.No.	Level of Education	Score	Frequency	Percentage
1.	Illiterate	0	8	6.70
2.	Primary School	1	40	33.30
3.	High school	2	42	35.05
4.	Intermediate	3	22	18.31
5.	Under graduate	4	7	5.84
6.	Post graduate	5	1	0.80

From the above table found that most of the farmers were educated up to high school level (35.05%) followed by primary school (33.30%), inter (18.31%), degree (5.84%), post graduate (0.80%) and 6.70 per cent of farmers were found to be illiterate.

The probable reason for this might be that, even today there is no access for villagers to college education at village level. They have

to go to mandal head quarters if they want persue college education. Hence majority of the farmers got educated only upto primary and high school education.

Farm Size

Table 3: Distribution of respondents according to their farm size (N=120)

S.No.	Land holding	Frequency	Percentage
1.	Marginal (<1 ha)	0	0
2.	Small (1-2 ha)	31	25.80
3.	Semi medium (2-4 ha)	53	44.20
4.	Medium (4-10 ha)	29	24.20
5.	Large (>10 ha)	7	5.80

From the above table found that, most (44.20%) of the farmers were semi medium farmers followed by small (25.80%), medium (24.20%) and large (5.80%) farmers.

The reason for this kind of result might be the fragmentation of land holdings from generation to generation led to most of big famers turning to small, semi-medium and medium farmers.

The majority of farmers are semi medium, small and medium, the extension agencies have to take care while introducing technologies, for sustainable production in available land.

These results were in confirmation with findings reported by Prasanth[5].

Farming experience

Table 4: Distribution of respondents according to their farming experience (N=120)

S.No.	Category	Class interval	Frequency	Percentage
1.	Low	4-18 yrs	61	50.80
2.	Medium	18-32 yrs	45	37.50
3.	High	32-46 yrs	14	11.70

From the above table found that, majority (50.80%) of the respondents had low farming experience followed by medium (37.50%) and high (11.70%) farming experience. As majority of farmers were young and middle aged, they might had less no.of years of farming experience.

The results were not in confirmation with findings reported by Natarajan[2] (2004) and Joseph[1].

Training undergone

Table 5: Distribution of respondents according to training undergone (N=120)

S. No.	Training undergone	Score	Frequency	Percentage (%)
1	No training	Nil (1)	30	25.00
2	Low	< 2 (2)	52	43.33
3	Medium	3 (3)	33	27.50
4	High	>4(4)	5	4.17

From the above table found that, most (43.33%) of the respondents had received low training followed by medium training (27.50%), no training (25.00%) and high (4.17%) training.

The reason could be their very low to medium extension contacts and information seeking. As the contacts maintained by respondents with extension agencies and the information sources were on the lower side coupled with their poor educational background and lack of awareness, might have resulted inlesser participation in trainings by respondents. Specifically the IWM is covered as only one of the componentsof production technologies in training programmes. Hence extension agencies should organize more trainings by focusing only on IWM practices which helps in increasing the level of knowledge and rate of adoption of IWM practices by farmers.

These results were in confirmation with findings reported by Prasanth[5].

Extension contact

Table 6: Distribution of respondents according to their extension contact (N=120)

S. No.	Extension contact	Class interval	Frequency	Percentage (%)
1	Low	7-10	57	47.50
2	Medium	10-13	60	50.00
3	High	13-16	3	2.50

From the above table found that majority (50.00%) of the respondents were found to possess medium extension contacts, followed by low (47.50%) and high (2.50%) extension contacts.

Majority of the respondents had medium to low extension contacts with the government, non-government and private extension agencies. This might be due to the fact that as majority of respondents were small and medium farmers with low farming experience and primary school education. They may not be having frequent contact with officials due to fear and inhibition. Inadequate staff may be another reason for this result. Hence recruitment of adequate staff and providing quality extension services will improve the situation. Further, instead of expecting farmers to visit the extension workers/ research worker office, these extension and research functionaries should go to villages very frequently and organize extension activities in the villages itself, which serves a dual purpose of increasing knowledge among the farmers and getting feedback from farmers.

These results were in confirmation with findings reported by Rajendra[6] and Sajith[8].

Mass media exposure

Table 7: Distribution of respondents according to their mass media exposure (N=120)

S. No.	Mass media exposure	Class interval	Frequency	Percentage (%)
1	Low	13-16	65	54.20
2	Medium	16-19	50	41.60
3	High	19-22	5	4.20

From the above table found that majority (54.20%) of the respondents had low mass media exposure followed by medium (41.60%) and high (4.20%) mass media exposure.

This trend might be due to the fact that majority of respondents were small farmers with primary school education with meager facilities of exposure to television educational

films etc in the villages might be the reason for the above trend.

Mass media exposure to farmers is the dire need for quick acquisition and evaluation of technologies. Mass media is also considered as the most credible source of information. Hence the officials may help the farmers by creating opportunities for farmers to improve their the mass media exposure.

Information seeking behaviour

Table 8: Distribution of respondents according to their information seeking behaviour (N=120)

S. No.	Category	Class interval	Frequency	Percentage (%)
1	Low	5-9	61	50.80
2	Medium	9-14	58	48.40
3	High	14-18	1	0.80

From the above table found that majority of the respondents had low level of information seeking behavior (50.80%) followed by medium (48.40%) high (0.80%) information seeking behaviour.

It could be furnished that majority of the respondents had low level of information seeking behavior. The low level of awareness of information sources regarding IWM practice management, mass media exposure and literacy might have contributed the low level of information seeking behavior.

These results were in confirmation with findings reported by Reddy[7].

Farm mechanization status

Table 9: Distribution of respondents according to their farm mechanization status (N=120)

S. No.	Category	Class interval	Frequency	Percentage (%)
1	Low	14-17	18	15.00
2	Medium	17-20	84	70.00
3	High	20-23	18	15.00

From the above table found that, majority (70.00%) of the respondents had medium farm mechanization status followed by low (15.00%) and high (15.00%) farm mechanization status.

It could be furnished that majority of the respondents had medium farm mechanization status. This trend indicates that respondents have greater scope to practice weed management as they have medium status of farm mechanization. And every farmers cannot afford to have all adequate farm machinery at his disposal and it is not economical in terms of its maintenance and use. This might be the probable reason for medium farm mechanization status.

These results were in confirmation with findings reported by Pradipta[4].

Risk orientation

Table 10: Distribution of respondents according to their risk orientation (N=120)

S. No.	Category	Class interval	Frequency	Percentage (%)
1	Low	11-13	14	11.70
2	Medium	13-15	78	65.00
3	High	15-17	28	23.30

From the above table found that majority (65.00%) of the respondents had medium risk orientation followed by high (27.50%) and low (11.70%) risk orientation.

The possible reason for this result might be that majority of respondents had education up to primary school and belonged to functionally literate category with medium to low extension contact. Another important reason might be the mind set, and lack of awareness of the respondents.

Extension workers should maintain closer rapport with farmers to make them understand the IWM concept by organizing demonstrations and exposure visits. They should also help them to overcome the problems in adoption and suggest alternatives and induce confidence. As a result, unnecessary fears and confusion prevailing in the farmers can be eliminated and they can be made to easily adopt the technology.

These results were in confirmation with findings reported by Rajendra[6].

Innovativeness

Table 11: Distribution of respondents according to their innovativeness (N=120)

S. No.	Innovativeness	Class interval	Frequency	Percentage (%)
1	Low	13-16	6	5.00
2	Medium	16-19	66	55.00
3	High	19-22	48	40.00

From the above table found that, majority (55.00%) of the respondents had medium innovativeness followed by high (40.00%) and low (5.00%) innovativeness.

Majority of the respondents in the present study had medium innovativeness. As innovativeness involves an element of risk, most of the small farmers cannot afford taking risk by practicing innovations. This category of farmers adopts innovation only after their success is established. Hence this kind of result might have been revealed in this study.

These results were in confirmation with findings reported by Rajendra[6] and Nirmala[3].

Input availability

Table 12: Distribution of respondents according to their input availability (N=120)

S. No.	Input availability	Class interval	Frequency	Percentage (%)
1	Low	41-46	5	4.20
2	Medium	46-52	66	55.00
3	High	52-57	49	40.80

From the above table found that, majority (55.00%) of the respondents perceived medium input availability followed by high (40.80%) and low (4.20%) input availability.

In the present study, input availability was measured by computing three aspects i.e. ease of availability, proximity of sources of inputs and prices. Most of the farmers are not following IWM practices in crop production because of non availability of bio herbicides and bioagents and shortage of inputs like weeders which are crucial for weeding.

These results were in confirmation with findings reported by Nirmala[3].

Labour availability

Table 13: Distribution of respondents according to their labour availability (N=120)

S. No.	Labour availability	Class interval	Frequency	Percentage (%)
1	Low	52-59	32	26.70
2	Medium	59-66	66	55.00
3	High	66-73	22	18.30

From the above table found that, majority (55.00%) of respondents had medium level labour availability followed by low (26.70%) and high (18.30%) level labour availability.

Conventional method of crop production is deeply set in the minds of farmers and labour. In conventional method, weeding is done by the women, where as in IWM practice involve men in running mechanical weeders and other implements and giving instructions to labours. Hence though weed control in conventional method is more labour intensive compared to IWM practice, conventional method is mostly followed.

These results were in confirmation with findings reported by Nirmala[3].

CONCLUSION

Above results concluded that most of the respondents were middle aged, had primary level education, medium extension contact, low information seeking behaviour, medium farm mechanization status, medium innovativeness, medium input availability, medium labour availability and low training. The reason might be due to fact that not available latest information about agriculture. So Department of Agriculture and private agencies providing training facilities to farmers regarding IWM practices for effective weed management.

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