ROLE AND ACCEPTABILITY OF DIFFERENT AGENCIES IN ZERO-TILLAGE TECHNOLOGY DISSEMINATION IN RICE-WHEAT CROPPING SYSTEM

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INTRODUCTION

Rice-Wheat is the major cropping system of the Indo-Gangetic plains. These two crops are grown in rotation in about ten million hectares of land. In our country, though the yields of rice and wheat are increasing but pressure on resources (specially land and water) is also increasing day by day. There is now a great concern about decline in soil fertility, lowering down of water table, rising level of soil salinity and pollution by using harmful chemicals. In order to mitigate these problems it is essential to adopt appropriate and economically viable technologies.

In wheat-rice cropping system, reduction of weed problem and improvement in fertilizer and water use efficiency can be achieved simply by avoiding late planting. This is difficult in normal course when after harvesting the rice, the field preparation is required. Yet, it can be achieved through resource conservation practices viz. zero tillage technology in rice-wheat system.

Many government and non-government agencies are working for popularizing the zero-tillage technology by taking the technological details to the farmers through different extension methods like mass media, training, on farm trials, etc. In India despite the fact that a broad network of government and non-government organizations and agencies are entrusted with transfer of technology programme, there exists a significant adoption gap at field level, which results in to notable yield gap at the farm level. As far as, the role of different agencies involved in technology dissemination is concerned; their credibility, acceptability and accessibility influence extent of adoption. Present investigation has been taken up in order to study the role and acceptability of various sources involved in technologies dissemination.

METHODOLOGY

This study was conducted in Meerut, Muzaffarnagar, Baghpat and Sharanpur districts of Western U.P. comprising two categories of farmers who follow the rice-wheat system. A sample of 100 farmers adopting rice-wheat system (50 from each category i.e. programme and non-Programme) were selected at random, as respondents for the study. The respondents were asked to indicate the sources (different agencies) involved in technology dissemination they preferred and/ or available to them for getting technical information and advice about improved practices including zero tillage in wheat after rice in rice-wheat cropping system. Five technological components related to zero tillage technique namely (machine operation, time of sowing, chemical weed control, residue management and availability of machine) were taken. The information sources were divided into six groups such as: (1) Government agencies (different government extension personnel) (2) input dealers (3) reciprocal colleagues (neighbours, friends, relatives and other

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Table 1 : Role of information source in dissemination of ZT technology in wheat (programme farmers) N=100

Sr. No.	Agencies /Technological component	MO (per cent)	TS (per cent)	CWC (per cent)	RM (per cent)	AM (per cent)	Average (per cent)	Rank
1.	Government agencies	10	6	12	-	12	8	IV
2.	Input dealers/ agencies	32	5	36	9	18	20	II
3.	Reciprocal colleagues	14	17	4	7	8	10	III
4.	On farm trial	3	68	42	72	62	55.2	I
5.	Training	7	4	6	5	-	4.4	V
6.	Mass media	5	-	-	7	-	2.4	VI

MO=machine operation, TS=time of sowing, CWC=chemical weed control, RM=residue management AM=availability of machine

fellow farmers) (4) on farm trial (5) training and (6) mass media (radio and television).

RESULTS AND DISCUSSION

Experimental results presented in Table 1 & 2, indicated that on farm trial plays an important role in disseminating the zero tillage technology amongst the programme farmers, while on farm trials failed to show such impact among non-programme farmers. These findings are in close conformity of earlier findings reported by Wasnik et. al. (2003).

Input dealers play much more significant role in disseminating the zero tillage technology amongst the non-programme farmers in comparison to pragramme farmers. The results also revealed that the reciprocal colleagues and relatives of responded farmers also play definite role in technology dissemination. Other sources like mass media and training also have same role to play in dissemination of zero tillage. Kamalakannan (2003) reported that mass media is more effective for dissemination of technology.

The results further revealed that the on farm trial/ demonstration are very effective in technology dissemination when there is a government supported scheme backed by financial help, input supply and technological assistance. Besides, when the government agencies are specific and target oriented as in case of the programme farmers, their communication ability proves to be more effective. Whereas, the private and non-government agencies like the input dealers, are more accessible and acceptable to the farmers belonging to non-programme category. Input dealers are more interactive and friendly with the farmers. Naturally their advices are greatly accepted by the farmers. Their credibility and acceptability are remarkable because of their non-formal, non-bureaucratic attitude towards the farmers.

Table 2 : Role of information source in dissemination of ZT technology in wheat (non programme farmers) N=100

Sr. No.	Agencies /Technological component	MO (per cent)	TS (per cent)	CWC (per cent)	RM (per cent)	AM (per cent)	Average (per cent)	Rank
1.	Government agencies	13	11	7	6	8	9	IV
2.	Input dealers/ agencies	51	14	43	6	42	31.2	I
3.	Reciprocal colleagues	9	8	6	11	41	15	III
4.	On farm trial	6	42	29	24	9	22	II
5.	Training	5	7	-	9	-	4.2	V
6.	Mass media	4	-	3	4	-	2.1	VI

MO=machine operation, TS=time of sowing, CWC=chemical weed control, RM=residue management AM=availability of machine

CONCLUSION

For speedy and all round development of agricultural sector, agricultural development requires an appropriate, effective and efficient system to disseminate various improved technologies in shortest possible time. Keeping the importance of speedy technology dissemination the planners and extension specialists should consider the farmers' preferences as well as their perception about credibility of different sources of technology dissemination. To achieve this the government agencies need to plan and conduct on farm trails on problem specific technologies in farmers' fields allthough with farmer's participation. They may act in term of a more friendly with the largest group as the input agencies do. This will improve their acceptability, credibility and accessibility as well as the rate of technology adoption among the farmers.

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