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PERCEPTION OF SEED TREATMENT OF FERTILIZER AND PESTICIDE DEALER WITH RESPECT THEIR SOCIO-ECONOMIC VARIABLE: A STUDY IN COOCHBEHAR DISTRICT

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ABSTRACT

The seed treatment was essential for sowing of new plant. Seed treatments act a preventive of present and future pest and diseases. Every farmer needs seed treatments before sowing of any crops. Farmers were getting Seed treatment information from variety of sources. Among the variety of sources fertilizer and pesticide dealer were play an important role for information dissemination about Seed treatment. Fertilizer and pesticide dealer were closely contact with farmers. But there were several question may arises that is they have proper knowledge in seed treatment? On the basis above query Coochbehar Krishi Vigyan Kendra was organized an awareness generation programme on fertilizer and pesticide dealer of Coochbeahr district in eastern zone of India to know the perception of Seed treatment of fertilizer and pesticide dealer with respect their socio-economic variable. The study was conducted during March, 2016.The research design was followed in the study was survey research method. The respondents for this study included from the Coochbehar district. The entire trainees available at the time of awareness programme were considered as respondents. Semi-structure interview schedule were used for collection of data. The sample size for the study was 50**.** The dependent variable of this study was perception of seed treatment and independent variables were age, occupation, education, land holding, religion, family member, number of year associated with their occupation and annual income. The descriptive statistics like frequency, percentage and other statistical tools were used for the investigation.

KEYWORDS: Perception, Knowledge, Treatment, Information, Awareness

INTRODUCTION

The demand of food is increasing day by day. On the other hand used of different type of pesticide also increasing which is affect the biodiversity conservation. The concept of agriculture is dynamic. Today agriculture is move to become sustainable agriculture. The different government and private organization were conducting different programme on sustainable agriculture. Sustainable agriculture is minimum dependence on synthetic fertilizer, pesticide and antibiotics. Seed treatment is essential part for making sustainable agriculture. Adesina and Zinnah (1993a) found that farmers' perceptions of the characteristics of modern rice varieties significantly affected adoption decisions in Sierra Leone. The importance of commodity-attribute perceptions has long been of interest to social scientists investigating agricultural technology adoption decisions. Indeed, anthropologists and sociologists have played a lead role in this area and have argued, using qualitative methods, that farmers' subjective assessments of agricultural technologies influence adoption behaviour (Kivlin and Fliegel, 1966, 1967; Nowak, 1992). Economists investigating consumer demand have, however, accumulated considerable evidence showing that consumers generally have subjective preferences for characteristics of

products and that their demand for products is significantly affected by their perceptions of the product's attributes (Jones, 1989; Lin and Milon, 1993). Lanyintuo and Mekuria (2005) categorized from their study non-economic factors that influence farmers' decisions to use agricultural improved inputs as: farmer characteristics, institutional factors and characteristics of the input. Farmer characteristics among others include sex, age, education, and household size while institutional factors include farm size, membership to association, access to information, access to credit, and access to infrastructure such as roads or storage. Characteristics of the factor input relate to the subjective attributes of the input as perceived by the farmer (Adesina & Zinnah, 1993). Adesina and Baido-Forson (1995) reported a positive relationship between age and adoption of new sorghum and rice varieties in Burkina Faso and Guinea respectively. On the contrary, Kassie et al. (2010) found a negative relationship between age and use of compost manure and stubble tillage in Ethiopia. Educated farmers were believed to have higher ability to perceive, interpret and respond to new information about improved technologies than their counterparts with little or no education (Lanyintuo & Mekuria, 2005; Tabi et al., 2010). It was found from most of the studies that a positive relationship exist between access to credit and use of improved technologies (Feder et al., 1985) and access to extension services and use of improved technologies (Feder & Slade, 1984; Igodan et al., 1988; Strauss et al., 1991; Deininger & Okidi, 2001; Akramov, 2009). Plsek (2003) concluded from his study that Perceived complexity can be reduced by practical experience and demonstration. Adler, Kwon, and Singer (2003) reported that if the knowledge required for the innovation's use can be codified and transferred from one context to another, it will be adopted more easily. Mittal et al, (2010) found from their study that Producers serving local markets are reliant on information delivered informally through local networks of communication, where trust and risk reduction are major factors that govern their dependence on those networks. In the 59th survey round of NSSO (Situational Assessment Survey of Farmers, January-June 2003), binary responses of farm households were compiled. However, knowing that a farmer is using HYVs, fertilizers and plant protection chemicals may not provide much information, because he may be using them for 1 per cent or 100 per cent of his acreage (Feder et al., 1985). The effect of family size and composition on agricultural technology adoption is not clear in adoption literature –as both positive and negative relationships have been reported (Oluoch-Kosura et al., 2001). NSSO (2005) reported that the proportion of farmers with access to information was found to increase with an increase in the size of holding. The establishment of the Agricultural Technology Management Agency (ATMA) was a major step forward in the convergence of multiple actors engaged in agricultural extension. ATMA is supposed to act as an umbrella organisation for all major stakeholders in agriculture and allied activities within a district. ATMA also tried to utilise the potential of agri-entrepreneurs, custom hire service providers, input dealers, and extension workers in non-governmental organisations to supplement the efforts of public extension functionaries (DAC 2014). The seed treatment is essential for sowing of new crops because seed may carry different type of diseases and pest from one area to another area. Fertilizer and pesticide dealer play an important role for information dissemination about seed treatment to the farmers. They were closely contact with farmers. Farmers were getting so many advices from fertilizer and pesticide dealer. They act as key Extension person in a village for suggest plant protection, fertilizer dose and other practices in agriculture. But the problem was that is they have right knowledge of seed treatment? On the basis above query Coochbehar Krishi Vigyan Kendra was organize a one day awareness generation programme of fertilizer and pesticide dealer of Coochbeahr district in eastern zone of India to know the perception of seed treatment of fertilizer and pesticide dealer with respect their some socio-economic variable. The respondents were selected from Coochbehar district, West Bengal. Fertilizer and pesticide dealer were selected as respondent because farmer contacts were more with them than others. Data were collected at the time of awareness programme of fertilizer and pesticide dealer in Eastern India by

Coochbehar Krishi Vigyan Kendra during March, 2016. The purpose of this study was to identify the perception of seed treatment of fertilizer and pesticide dealer and its distribution among the different independent variable selected for the study.

RESEARCH METHODOLOGY

The study was conducted on the respondent of Coochbehar district, West Bengal, who were participated awareness programme on seed treatment organised by Coochbehar Krishi Vigyan Kendra during March, 2016. A pre-tested Semi-structure interview schedule was used for collection of data. Survey research method was used at the time of investigation. The entire trainees available at time of awareness programme were considered as respondent. The sample size was 50. The variables were selected based on recommendation of the scientist of Uttar Banga Krishi Viswavidyalaya, Coochbehar, West Bengal. The dependent variable of this study was perception of seed treatment and independent variables were age, occupation, education, land holding, religion, family member, number of year associated with their occupation and annual income. The descriptive statistics like frequency, percentage, range and other statistical tools were used for the investigation.

RESULTS AND DISCUSSIONS

It was observed from the study that the majority percentage of the respondent educational level at the time of survey were high school pass (60%) pass followed by graduate and above (40%). It was revealed from the study that educated respondents were doing fertilizer and pesticide business. It was found from the study that the great percentage of the respondent major occupation were business (74%) followed by business and farming (26%). It was expose from the result that majority of the respondent occupation were only business. It was found from the investigation that majority of the respondents (40%) land holding size were more than 10 acre followed by 5 to 10 acre (32%). It was shown from the result majority of the respondent land holding size were large followed medium and small. It was found from the survey that majority of the respondents (56%) age range were 30 to 50 years followed by Less than 30 years (24%). It was expose from the result that majority of the respondent were middle age group. It was shown from the investigation that majority of the respondents (68%) religion were Hindu followed by Muslim (32%). It was revealed from the result that Majority of Hindu respondent were occupying fertilizer and pesticide business. It was found from the study that the great percentage of the respondent family member size were less than 5 (74%) followed by More than 5 (26%). It was expose from the study that majority of the respondent family size were small. It was found from the investigation that majority of the respondents (40%) associated with their major occupation were 6 to 10 years followed by more than 20 years (28%). It was clear from the result that majority of respondent were great experienced in their occupation. It was found from the study that majority of the respondent annual income level were 3, 00,001 and above (80%) followed by 2, 00,001-3, 00,000 (20%). It can be say from the result that majority of the respondent annual income level was high. It was shown after investigation that majority of the respondent perception agree with the statement of “Seed treatment protect the seed from different pest and diseases” (80%) followed by “Seed treatment is essential for every crops” (70%). It was found from the survey that majority of respondent perception were not agree with the statement of “Seed treatment is not essential for crops” (70%) and “Seed treatment should be done after sowing”(70%) followed by “ Seed treatment is not beneficial” (60%). It was also found from the study that majority of respondent perception unknown with the statement of “The yield of the crop increases after seed treatment” (70%) and “Seed treatment is not necessary for certified seed” (70%) followed by “The

impact of seed treatment is visible (60%)".

CONCLUSIONS

It can be concluded from the investigation that majority of the respondent were high school and graduate and above pass. They were theoretically more knowledgeable and can codify a technology in one context to another context. They may have more perception in seed treatment and information disseminating to the farmer (Lanyintuo & Mekuria, 2005; Tabi et al., 2010). The findings are in line with the results reported by Adler, Kwon, and Singer (2003). It was found that majority of the respondents land holding size were larger than other. This category respondent may more involve in motivating the farmers on seed treatment by showing practical demonstration in their own field (Plsek, 2003). It was shown that majority of the respondents were middle age group (more than 30 years to less than 50 years). This category age group was more involved in fertilizer and pesticide business. They can easily adopt and dissemination of new technology (Adesina and Baido-Forson ,1995). It was found that majority of the respondent religion were Hindu than Muslim. So policy may be taken in a proper way which is not harmful on religion. It was shown that majority of the respondent family member size were less than 5. This category respondent may get more time to participating different agricultural programme and aware the farmers on scientific method of seed treatment. The finding is in line with the results reported by Oluoch-Kosura et al., 2001. It was shown from the investigation that majority of the respondents were experienced fertilizer and pesticide business. They were attached more than 6 years in fertilizer and pesticide business. They can easily motivate the farmers. They can take more initiative to learn and disseminating the seed treatment information to the farmers. It was found from the study that majority of respondent annual income level were high. They can easily use of improved technologies than others (Feder et al., 1985). It was revealed from the investigation that majority of the respondent perception were high in the statements of "Seed treatment protect the seed from different pest and diseases", "Seed treatment is essential for every crops", "Seed treatment is not essential for crops" and "Seed treatment should be done after sowing". It was concluded from the survey that respondent perception were low in case of "The yield of the crop increases after seed treatment" , "Seed treatment is not necessary for certified seed" and "The impact of seed treatment is visible".

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APPENDICES

- **List of Table**

Table 1: Variables and Their Measurement

Variable	Measurement
Dependent variable	
Perception	Schedule developed for the study
Independent variable	
Age	Chronological age of the respondents in completed years
Family member	Schedule developed for the study
Education level	Procedure used by Sivamurthy (1994)
Occupation	Schedule developed for the study
Annual Income	Schedule developed for the study
Land holding	Schedule developed for the study
Religion	Schedule developed for the study
Numbers of year associated with their occupation	Schedule developed for the study

Table 2: Classification of the Respondents with Different Independent Variable

Sl No.	Category	Frequency	Percentage
A.	**Educational level**		
1.	Illiterate	-	-
2.	Can read only	-	-

Table 2: Contd.,			
3.	Can read and write only	-	-
4.	Primary school	-	-
5.	Middle school	-	-
6.	High school	30	60
7.	Pre-university		
8.	Graduate and above	20	40
B.	**Occupation**		
1.	Business	37	74
2.	Business and Farming	13	26
C.	**Land holding (acre)**		
1.	Less than 2	4	8
2.	2-5	10	20
3.	5-10	16	32
4.	More 10	20	40
D.	**Age**		
1.	Less than 30 years	12	24
2.	30 to 50 years	28	56
3.	More than 50 years	10	20
E.	**Religion**		
1.	Hindu	34	68
2.	Muslim	16	32
3.	Others	-	-
F.	**Family member**		
1.	Less than 5	38	76
2.	More than 5	12	24
G.	**Number of year's respondent associated with the occupation**		
1.	Less than 1	2	4
2.	1-5	4	8
3.	6-10	20	40
4.	11-20	10	20
5.	More than 20	14	28
H.	**Annual income level**		
1.	Less than 30,000		
2.	30,001-60,000		
3.	60,001-1,00,000		
4.	1,00,001-2,00,000		
5.	2,00,001-3,00,000	10	20
6.	3,00,001 and above	40	80

Table 3: Perception of the Fertilizer and Pesticide Dealer on Seed Treatment

	Statement	Yes	Percentage	Ranking	No	Percentage	Ranking	Don't Know	Percentage	Ranking
1	Seed treatment is essential for every crops	35	70	II	10	20	V	5	10	IV
2	Seed treatment should be done after sowing	5	10	V	35	70	I	10	20	III
3	Seed treatment is not necessary for certified seed	10	20	IV	5	10	VI	35	70	I
4	Seed treatment is not beneficial	10	20	IV	30	60	II	10	20	III
5	The impact of seed treatment is visible	5	10	V	15	30	IV	30	60	II

Table 3: Contd.,

6	Seed treatment protect the seed from different pest and diseases	40	80	I	5	10	VI	5	10	IV
7	The yield of the crop increases after seed treatment	10	20	IV	5	10	VI	35	70	I
8	Seed treatment procedure are same for every crops	15	30	III	25	50	III	10	20	III
9	Seed treatment is not essential for crops	10	20	IV	35	70	I	5	10	IV