

**DEMAND OF ORGANIC MANURE WITH RESPECT SOME SOCIO-  
ECONOMIC VARIABLE OF FERTILIZER DEALER:  
A STUDY IN COOCHBEHAR DISTRICT**

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**Abstract:** Organic manure is a good source of plant nutrients. Organic manure is environmentally sustainable and it can produce within home. But still their some limitations for raising it demand. On the basis of above limitation Coochbehar Krishi Vigyan Kendra organized one day awareness programme of fertilizer dealer of Coochbeahr district in eastern zone of India to promote the organic manure and a study was conducted on Demand of organic manure with respect some socio-economic variable of fertilizer dealer. The study was conducted during February, 2016. The research design was followed in the study was survey research method. The respondents for this study included from the Cooch Behar 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 Demand of organic manure and independent variables were age, occupation, education, land holding, religion, family member and number of year associated with their occupation. The descriptive statistics like frequency, percentage and other statistical tools were used for the investigation.

**Keywords:** Demand, Awareness, Sustainable, Socio-economic, Trainees.

### **Introduction**

Organic manure contain essential amounts of plants nutrients its can produce within home. The production cost is very less and it's environmentally sustainable. Different government and private organization were continuously promoting organic manure among the farmers. The Finance Minister of India in the Budget Speech (2015-16) has proposed to support Agricultural Ministry organic farming scheme- 'Parampragat Krishi Vikas Yojana'. Tamaki et al. (2002) reported that the growth of rice was better under continuous organic farming than with conventional farming. Sharma and Mitra (1990) reported that the application of organic materials increased grain and straw yield of rice. Subbarao (1985) argued that there were differences in the determinants of Fertilizer off- take in low, medium and high productivity districts in the region. In the low productivity districts, fertilizer off-take was essentially demand determined, being explained almost entirely and directly by quantity of irrigation and

soil rating index. In the medium and high productivity districts, fertilizer consumption was primarily influenced by supply side factors, viz., access to fertilizer retail outlets, credit institutions, rural road network and related. The study indicated that in both low and high productivity districts, the physical and institutional environment of the district played a dominant role in conditioning the extent of fertilizer use. Uma *et al.* (1990) used adjustment model a version of dynamic model. This approach captured some of the dynamic elements in fertilizer demand better than simple static models without merely resorting to time trends. The results indicated that an increase in fertilizer demand to raise productivity of land would require a fall in relative price. Though the farmers stand to gain directly from the provision of subsidies, the economy as a whole suffered in the long run. Hence, they suggested that education was to be imparted to farmers about the balanced use of fertilizers and use of micronutrients wherever necessary. John and George (1991) conducted a study on factors influencing fertilizer application for sustainable agriculture in west coast plains and the hilly regions of India. They found that relatively high cost of fertilizers, low benefit cost ratio and lack of awareness of recommended dose of fertilizer for specific crops were the reasons behind the low use of fertilizers. According to Morris *et al.* (2007), even if farmers believe that fertilizer is profitable, they may be unable to purchase it if lack cash and/or cannot obtain credit. In agricultural households, the main sources of cash include earnings from salary/wage employment, sell of livestock, and trade. Besides, farm-household size and composition – which has close links with labour supply as well as the income status of the household head, has both positive and negative implications on adoption of inputs. In case of labour intensive inputs such as production and use of organic fertilizer, availability of labour with minimum knowledge can encourage its use even in poor households. On the other hand, if large households are disproportionately poor, then lower use of relatively expensive inputs such as inorganic fertilizer is expected in households with large families. As such, 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). 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. Plsek (2003) concluded from his study that Perceived complexity can be reduced by practical experience and demonstration. It has been found from studies that if the innovation can be broken down into more manageable parts and adopted incrementally, it will be more easily adopted. Interventions to reduce the number and extent of such response barriers

improve the chances of successful adoption (Plsek 2003; and Rogers 1995). Adler *et al.* (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. But still there some problems of raising the demand the organic manure among the farmers in Coochbehar district. It may due to low awareness, high dependent on inorganic fertilizer or the other factor. On the basis of above problem a study was conducted on “Demand of organic manure with respects some socio-economic variable of fertilizer dealer”. The respondents were selected from Coochbehar district, West Bengal. Fertilizer dealer were selected as respondent because farmers contact were more with them than others. Data were collected at the time of awareness programme of fertilizer dealer in Eastern India by Coochbehar Krishi Vigyan Kendra during February, 2016. The purpose of this study is to identify the demand of organic manure and its distribution among the different independent variable selected for the study.

### **Research Methodology**

The study was conducted on the respondents of Coochbehar district, West Bengal, who were participated awareness programme on use of organic manure by Coochbehar Krishi Vigyan Kendra during February, 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 Demand of organic manure and independent variables were age, occupation, education, land holding, religion, family member and number of year associated with their occupation. The descriptive statistics like frequency, percentage, range and other statistical tools were used for the investigation.

### **Result and Discussion**

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 business. They can take more initiative to educate the farmer for organic farming (Uma *et al.*). 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 can be say from the result that the dealer can more involve on organic fertilizer business for making sustainable

agriculture. 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 can be say from the result that large land holding size dealer can motivate farmer about organic manure used by demonstration method (Plsek2003). It was found from the survey that majority of the respondents age range was 30 to 50 years (56%) followed by Less than 30 years (24%). It was expose from the result that majority of the respondent were middle age group. It can be revealed from the study that middle age group of respondents were more involve in fertilizer business. It was shown from the investigation that majority of the respondents religion were Hindu (68%) followed by Muslim (32%). It was revealed from the result that Majority of Hindu respondent were occupying fertilizer business. So policy may be taken by government or private organization which is not harmful on religion. It was found from the study that the great percentage of the respondent family member size were less than 5 (76%) followed by More than 5 (24%). It was expose from the study that majority of the respondent family size were small. It can be say from the study that respondent belong in small family were get more time to motivate the farmer. It was exposed from the investigation that majority of the respondents associated with their major occupation were 6 to 10 years (40%) followed by more than 20 years (28%). It was clear from the result from the result that majority of respondent were great experienced in their occupation. So this experienced respondent can easily motivate the farmer to used organic manure. It was shown after investigation that demands of organic manure among the farmers were medium (48.00%) followed by normal (20.00%) and low (18.00%). It may due to more dependent on inorganic fertilizer, low risk bearing capacity or other socio economic factor.

### **Conclusion**

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 can more involve in promoting organic manure among the farmers. The findings are in line with the results reported by Adler et al. (2003) and Uma et al. (1990). 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 organic manure 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 professionally in fertilizer

business. It was found that majority of the fertilizer dealer 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 aware the farmers on organic manure. 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 in fertilizer business. They were attached more than 6 years in fertilizer business. They can take more initiative to motivate farmers on organic manure. It was found from the investigation the demand of organic manure were medium. It may be due to that famers were produces organic manure in home. But if they produce organic manure in home than automatically demand of inorganic fertilizer will be reduces. But it was not shown in Coochbehar district. So it can be say from the study that commercialization of the organic manure may be taken by government and private organization for sustainable and eco-friendly agriculture.

**Table 1: Variables and their measurement**

Variable	Measurement
<b>A. Dependent variable</b>	
1. Demand	Schedule developed for the study
<b>B. Independent variable</b>	
1. Age	Chronological age of the respondents in completed years
2. Family member	Schedule developed for the study
3. Education level	Procedure used by Sivamurthy (1994)
4. Land holding	Schedule developed for the study
5. Religion	Schedule developed for the study
6. 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.	<b>Educational level</b>		
1.	Illiterate	-	-
2.	Can read only	-	-
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>B.</b>	<b>Occupation</b>		
1.	Business	37	74
2.	Business and Farming	13	26
<b>C.</b>	<b>Land holding (acre)</b>		
1.	Less than 2	4	8
2.	2-5	10	20
3.	5-10	16	32
4.	More 10	20	40
<b>D.</b>	<b>Age</b>		
1.	Less than 30 years	12	24
2.	30 to 50 years	28	56
3.	More than 50 years	10	20
<b>E.</b>	<b>Religion</b>		
1.	Hindu	34	68
2.	Muslim	16	32
3.	Others	-	-
<b>F.</b>	<b>Family member</b>		
1.	Less than 5	38	76
2.	More than 5	12	24
<b>G.</b>	<b>Number of year's respondent associated with the occupation</b>		
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

**Table 3: Classification of the respondent with the Demand of organic manure among the farmers**

n=50

Demand of organic manure	Frequency	Percentage
Very high	-	-
High	7	14.00
Medium	24	48.00
Normal	10	20.00
Low	9	18.00

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