

MARKETING OF ORNAMENTAL PLANTS IN RANGLI-RANGLIOT BLOCK, DARJEELING, WEST BENGAL

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ABSTRACT

Rangli Rangliot is a Community Development (CD) Block in Darjeeling District of West Bengal. The block is spread across an area of 272.99 sq km. There are 29 inhabited villages with total population of 70,125. The sources income and livelihood in the block were – (a) other source (plantation, transport, teaching, business and commerce, offices, etc.) absorbing 74.84 percent of the workers; (b) agriculture absorbing 15.09 percent of workers; and (c) cultivation absorbing 8.28 percent workers.

The floriculture activities are slowly and steadily on the rise in the area. It is drawing cultivators from agriculture and labours from plantations. This paper is a study on the impact the distance (location) of floriculturists from motorable road has on their marketing practices and their income from floriculture in the Block. It is observed that the distance (location) from the road affects the choices of marketing communication practices as well as the income from floricultural activities.

Key Words: Ornamental plants, distance, communication channels, sales frequency, turnover

1. Introduction

Communication and transportation connectivity is a basic requirement for facilitating and encouraging economic activities of a geographical region. For farmers and cultivators, access to and interaction with the market is a dominant factor in indentifying and transaction with customers and ultimately in the selling and distribution of their products. Communication and transportation networks are the life-line for initiating, sustaining and development of such activities.

Rangli Rangliot is a Community Development (CD) Block in Darjeeling District of West Bengal. The block is spread across an area of 272.99 sq km. Deep valleys, high ridges, forest cover, and tea plantations characterise the geography of the CD Block. It is separated from Kalimpong District by Teesta River and NH10 in the East. Takdah, the headquarters of the block, is one of the upcoming tourist destinations of the region. It has good road

connectivity to Darjeeling and Kalimpong towns as well as to Siliguri and to the state of Sikkim because of the NH 10.

West Bengal Directorate of Census Operations (GoWB, 2011) reported that there were 29 inhabited villages with total population of 70,125 in the Block. Almost two-third population, 62.46 per cent, were recorded non-workers and just 37.54 per cent of the population were recorded as workers. The sources of income and livelihood in the block were – (a) other source (plantation, transport, teaching, business and commerce, offices, etc.) absorbing 74.84 per cent of the workers; (b) agriculture absorbing 15.09 per cent of workers; and (c) cultivation absorbing 8.28 per cent workers.

Rangli Rangliot CD Block has a very suitable climate for agricultural activities. Besides tea plantation, rice, corn, ginger, cucumber, cabbage, cauliflower, cardamom, chillies, potatoes, medicinal herbs, avocado and orange,

etc. are cultivated in the block. Ornamental plants based floriculture along with other horticulture activities have tremendous scope and holds great promise for absorbing the unemployed population of the block. The floriculture activities are slowly and steadily on the rise in the area. It is drawing cultivators from agriculture and labours from plantations. However, the precarious topography of the block, to a great extent affects the entrepreneurial activities in the block. As per Census 2011, there were about 1517 main cultivators and 662 marginal cultivators comprising just about 8.28 per cent of the working population of the Block (GoWB, 2011).

Being a mountainous Block situated in the Darjeeling Himalayas, the topography of Rangli Rangliot Block, makes any activity difficult and arduous. For cultivators, selling and disposing of their cultivation is the last and very crucial step in realizing the financial return and monetary value of their cultivation activities. This paper is a study on the impact the distance (location) of floriculturists from the motorable road has on their marketing practices and their income from floriculture in the Block.

The understanding of the dynamic relationship between floriculturists' distance from the motorable road, communication channel and the financial outcome of their floricultural activities in the CD Block will be useful in engaging in, establishing, maintaining and strengthening the communication and transportation infrastructure in the area as well as elsewhere. It will help increase facilitation of horticulture, floriculture and other such flora and fauna based economic activity in the region.

2. Literature Review

Dorosh, Wang, You and Schmidt (2009) examined the relationship between transport infrastructure and agriculture in Sub-Saharan Africa. The study revealed that agricultural production is highly correlated with proximity (as measured by travel time) to urban markets. Like-wise adoption of high-productive / high-input technology is negatively correlated with travel time to urban centres. The reported total crop production relative to potential production was 45 percent for areas within four (4) hours

of travel time from a city of 1,00,000 people. In contrast, it was just five (5) percent for areas more than eight (8) hours away. Low population densities and long travel times to urban centres sharply constrain production.

Redding and Venables (2002) reviewed the impact of distance on trade costs and trade flows and investigated the effects of remoteness on real income. The study found that distance from markets and sources of supply can have a significant negative impact on per capita income.

Edeme, Nkalu, Idenyi and Arazu (2020) concluded, in the context of Economic Community of West African States (ECOWAS), that infrastructures that support agriculture productivity foster employment creation. Information and communication technology positively affect agricultural output while access to electricity has positive effect on agriculture employment. Transport infrastructure had negative and insignificant effect on agriculture performance. Investment in infrastructural development with a view to improving agricultural productivity potentially contributes to employment generation.

Ray, Duraipandian and Sinha (2021) aimed to understand the unorganized, organized and online retailer supply chain for fruits and vegetables distribution from farm to consumers. The study classified the risk into performance, information and knowledge management and market or external risks. It concluded that performance risks are associated with collaboration, shelf life, transportation, on-time delivery and quality; Information and knowledge management risks are linked with accuracy, infrastructure cost, accessibility and availability; and the external market risks are closely linked with supplier relationship, labelling and packaging. The study suggested that the understanding the risks would help online retailers and organized retail to reduce unpredictability and improve to make supply chain more efficient.

2.1 Conceptual Framework

The above studies reveal that the availability and access of communication and transportation infrastructure and facilities provide external stimulus and leverage for creating and/or procuring capital(s) and carrying out economic activities. The study

explores in the Rangli Rangliot CD Block, the impact the distance / location of floriculturists from the motorable road has on their choice of communication channels, nature of interaction with buyers and customers, sales frequency of their produce and ultimately on their average annual turnover from floriculture activities.

0. Objectives and Hypothesis

The study aimed (a) to map the distance between floriculturists and the motorable road in Rangli Rangliot CD Block; (b) to investigate the impact of location from the road on the floriculturists' choice of communication channels of the floriculturists; (c) to analyse the impact of location from the road on the sales frequency of floriculture produce and average annual turnover of floriculturists; and (d) to explore the impact of choice of communication channels on the sales frequency of floriculture produce and average annual turnover of floriculturists.

3. Material and Methods

The data set used for study are from the primary sources collected by the researcher. The relevant literature was reviewed to prepare the setting for the study. The study was conducted with the help of semi-structured questionnaire administered to the respondents. To supplement and corroborate with the individual respondents, five focused group discussion were also conducted for which the members varied from three to seven. The 85 respondents were selected through random snowballing sample method from 20 villages of the block. The villages were also selected conveniently at random. The focused group discussions were very difficult to come-by and execute because of the far distanced, isolated and scattered floriculturists in the block. It was conducted at the convenience (choice of time, place and presence) of the participants.

The data was tested and analysed using the Statistical Package for Social Sciences (SPSS) software. The variables considered for studies were transport infrastructure (TI) as the independent variables, and marketing communication (MC) and floriculture income (FI) as the dependent variables.

4. Results and Interpretation

There were 85 respondents for the study. The variables enlisted in the questionnaire included Livelihood (L) variables consisting of – main occupation, years in agriculture, any training in floriculture, and whether the respondent was registered as floriculturist. The transport infrastructure (TI) variables included – distance from the main road traversing the block, the nature of pathways used to connect with the main road, and agency / body constructing and maintaining the pathway. The marketing communication (MC) variables included – the nature of respondent-buyer / customer relationship, channel of communication; and Income from Floriculture (FI) – sales frequency in a year, and the average annual turnover from floriculture.

The descriptive statistics of the data showed that 62.4 per cent the respondents had floriculture as their main occupational activity and 17.6 per cent reported agriculture as their main activity. 71.8 per cent of the respondents were in the floricultural activities for at least 10 years. 56.5 per cent of the respondents were located 01-02km away from the main road while just 25 percent of the floriculturists were within less than 01km distance from the main road. 54.1 percent of the floriculturists had access to the main road through bamboo and wooden paths; 32.9 per cent through cemented path and just 3.5 per cent through an approach road.

Table 4.1 Result of Regression Analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.813 ^a	.661	.644	.332

a. Predictors: (Constant), Mode of Contacting Buyers, Distance from the Main Road, Ways to Reach Farm, Respondent & Buyer Relation

According to the regression analysis model summary of multiple linear regression analysis (table 4.1) the R-value of the table was 0.813 which shows the highest degree of relationship between independent and dependent variables. The adjusted R² value of the regression model was 0.644 indicating that 64.4 per cent of the variance in sales frequency of floricultural produce in the Rangli-Rangliot Block was accounted for distance (location) of

floriculturists from the main road, ways to reaching the floriculture farm, nature of relationship between floriculturists and their customers and mode of communication used by the floriculturists.

Table 4.2 Result of ANOVA^a output

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.159	4	4.290	39.026	.000 ^b
Residual	8.794	80	.110		
Total	25.953	84			

a. Dependent Variable: Number of Selling Season

b. Predictors: (Constant), Mode of Contacting Buyers, Distance from the Main Road, Ways to Reach Farm, Respondent & Buyer Relation

The ANOVA output (Table 4.2) indicated that the multiple regression model itself is statistically significant when the distance (location) of floriculturists from the main road, ways to reaching the floriculture farm, nature of relationship between floriculturists and their customers and mode of communication used by the floriculturists were included ($F = 39.026$; $p < 0.001$).

Table 4.3 Result of Multiple Regression Analysis (Coefficients^a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.466	.172		8.525	.000
Distance from the Main Road	-.141	.055	-.168	-2.536	.013
Ways to Reach Farm	.392	.066	.487	5.914	.000
Respondent & Buyer Relation	-.014	.050	-.029	-.278	.782
Mode of Contacting Buyers	.296	.088	.384	3.370	.001

a. Dependent Variable: Number of Selling Season

Ways to reach to floriculturists' farm has statistically significant effect on the sales frequencies of floriculture produce. The beta coefficient and p-value ($\beta = 0.487$; $p < 0.001$) (Table 4.3) indicate that the floriculturists improve their sales frequencies by improving or upgrading the way to reach their floriculture farm.

The mode of communication with the customers was also a determinant factor for floriculturists in Rangli Ranliot block. The beta coefficient for mode of contacting customers was positive and significant at the 0.1 per cent level of significance. The beta coefficient and p-value ($\beta = 0.384$; $p < 0.001$) (Table 4.3) indicate that the floriculturists improve their sales frequencies by appropriating modern means of communicating with their customers.

5. Conclusion

Rangli Rangliot Block had registered 62.46 per cent non-working population. Ornamental plants based floriculture activities in the block can help create gainful and meaningful employment and absorb the unemployed population. The study revealed that the sales frequency of floriculture produces as well as the average annual turnover from floriculture can be increased and augmented by improving the access paths of floriculture farms in the block. Improving and upgrading of access paths to floriculture farms from the main road brings added advantage of improving upon floriculturists' mode of contacting and relating with their customers which has a positive

cascading effect on the sales frequency and on the average annual turnover from floriculture.

The study is also important from the point of view of conservation of the environment and the flora-fauna wealth of the block. The improvement in the transport and communication connectivity in the block has further positive implications for reducing migration from the block; for creating and strengthening physical and social infrastructure; for increasing employment opportunities besides horticulture and floriculture – tourism, adventure, construction.

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Main Occupation of Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture	15	17.6	17.6	17.6
	Floriculture	53	62.4	62.4	80.0
	Plantation	6	7.1	7.1	87.1
	Other	11	12.9	12.9	100.0
	Total	85	100.0	100.0	

Years in Floriculture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	00 - 10 Years	14	16.5	16.5	16.5
	11 - 20 Years	34	40.0	40.0	56.5
	21 - 30 Years	27	31.8	31.8	88.2
	31 Years and Above	10	11.8	11.8	100.0
	Total	85	100.0	100.0	

Distance from the Main Road

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	00 - 01 KM	22	25.9	25.9	25.9
	01 - 02 KM	48	56.5	56.5	82.4
	02 - 03 KM	15	17.6	17.6	100.0
	Total	85	100.0	100.0	

Ways to Reach Farm

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mud and Stone Path	8	9.4	9.4	9.4
	Bamboo and Wooden Path	46	54.1	54.1	63.5
	Cemented Path	28	32.9	32.9	96.5
	Approach Road	3	3.5	3.5	100.0
	Total	85	100.0	100.0	