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Rakesh Panda
Department of Agri-Business and Rural Management, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

Sanjay Kumar Joshi
Department of Agri-Business and Rural Management, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

Hulas Pathak
Department of Agri-Business and Rural Management, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

A Kalne
Department of Agri-Business and Rural Management, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

S Ramole
Department of Agri-Business and Rural Management, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

Influence of social media on brand awareness and farmer buying decision process for pesticides 'A Case of Raipur City'

Rakesh Panda, Sanjay Kumar Joshi, Hulas Pathak, A Kalne and S Ramole

Abstract
Social media platforms are a boon for farmers to make wise purchasing selections. Farmers can utilize social media to influence other buyers by writing reviews of the goods or services they have used. The features offered by social media in interacting between users are an opportunity for business people, one of which functions to strengthen brand awareness. A representative sample of 250 respondents are chosen from the 20kms periphery of the Raipur City. The questionnaire has a close ended and to conduct the survey in the area. All farmers who used social media considered as the study's population. The study's data was collected are Banstall road, Jai stamb chowk and Samithi (IGKV) areas from where the farmers who used the social media are considered for this research study. The gathered data was analyzed using appropriate graphs. 5-point Likert scale, Garret ranking method was used for the social media activities by farmers and to determine the relationship between variables and their interpretation, the Correlation Coefficient test was performed. Cronbach's Alpha test was used to measure the internal consistency of the variables. The farmers of the age group 40-49 are high which means they are more responsive towards social media and the land holding capacity, semi- medium(2 -4 ha) which has 74 farmers and 29.6% farmers of population using social media. Farmers can utilize social media to influence other buyers by writing reviews of the goods or services used. The pesticides have a great effect in the area and the consumption of the pesticides is high in the Raipur city of Chhattisgarh State. This examined the influence of social media on farmer buying decision process towards the effects of pesticides. Suggestions were made regarding Agribusinesses and agri-entrepreneurs have the chance to connect with farmers and forge new partnerships thanks to social media. Social media sites like Facebook, Twitter, and WhatsApp promote extensive user interaction, which is advantageous to all parties.

Keywords: Social media, farmer, brand awareness, purchase decision, reliability test, cronbach's alpha test

Introduction
Social media is a kind of electronic communication through which users construct online communities to share information, ideas, personal messages, and other content (Merriam-Webster, 2016). Farmers can utilize social media to influence other buyers by writing reviews of the goods or services they've used. It's developing the tools online transactions of business in buying and selling. It's the modern way of marketing in which technology used drastically. It has now become a huge tool between marketers and customers. (Meng, 2009) [8]. Aaker (1991) [1] stated that the capacity of potential farmers to recognize or recall a brand in their minds, assisting farmers in associating products with brands, is known as brand awareness. Social media enhances agricultural communication and implements an innovative communication environment to agricultural stakeholders by promoting the farmer and industry network. Social media has a significant influence on farmers' purchasing decisions. Farmers often identify their needs, look for information about the product, compare the options, and then decide whether to buy it to meet their needs. Steffes and Burgee (2009) [11] discovered the effectiveness of word-of-mouth (WOM) advertising and its impact on customer choice, is widely documented in academic research. By exposing consumers to electronic WOM (eWOM) from fictitious strangers, the current adoption of online communication by many consumers has enabled a fundamental alteration to the structure of many WOM relationships. Andriyanto and Haryanto (2010) [2] stated farmers will only purchase products whose brands they are familiar with because they find it difficult to try new things and prefer tried-and-true brands.

Corresponding Author:
Rakesh Panda
Department of Agri-Business and Rural Management, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh, India

Gogoi, (2013) [5] found that the brand image and quality of the product are the main factors in contributing to farmer purchase intention along with some motivation by the reviews and feedback of those who have already experienced it. Hines, (2017) [6] built a relationship with farmers and earning their trust in the company's products, brand awareness can be built. Each brand develops a unique content marketing strategy through which they monitor the social media reach, mentions, blog shares, and search volume of their own brands. Sarwoko and Ardiansyah (2020) [10] proposed farmers recall a brand in a particular product category when making a choice between alternatives because they are familiar with and confident in the associated product and brand. Farmers are more likely to make purchases when they are more familiar with a brand. Lamb (1991) [7] stated that farmer perceptions, motivations, learning, attitudes, and beliefs all have an impact on their purchasing decisions. Ferdinand (2006) [4] defines buying intention as the intention of a consumer to purchase a good or service that exceeds all expectations. When making a purchase, a consumer considers when buying interest. The desire to purchase will manifest during the evaluating process. Ansari S, *et al.* (2019) [3], studied the "Impact of brand awareness and social media marketing on farmer buying decision" and established a hypothesis based on Farmer buying decision as a dependent variable, and brand awareness and social media marketing are taken into account as independent variables. Tiwari, N & Joshi SK (2021) [12] stated that Information and Communication Technology (ICT) can make agribusiness more lucrative and a profitable occupation for farmers by providing location based subject specific relevant information. It saves money, time and efforts and reduces dependency on so many factors in the chain of extension. The study revealed that 93.8 per cent and 93.5 percent respondents were using mobile phone and television respectively. The Objectives of the study are to study the utilization pattern of social media by the farmers and To determine the impact of social media marketing and brand awareness on farmer buying decision process in pesticides.

Materials and Methods
Research Design
A study plan was developed to collect data gathering and analysis. The study was carried out with primary and secondary data through the questionnaire from 250 farmers and the respondents are aged between 18-70 years considered for this research process.

Population
All farmers who used social media considered as the study's population. The study was conducted in the 20 kms periphery of Raipur city. The data was collected are Banstall road, Jai stamb chowk and SAMITHI (IGKV) areas from where the farmers who used the social media are considered for this research study.

Method of Data Collection
Data on various usage patterns of social media channels, including the types of social media sites utilized, the reasons individuals use them, the times they use them, and the locations where they are most frequently accessed, are gathered in this section. There will be inquiries on the respondents' daily social media usage. The Likert scale was used to analyze the social media usage trends.
Data was gathered which focused on analyzing how brand

awareness and social media marketing relate to farmer purchasing decisions. Farmer buying decision was considered in this study as a dependent variable, and brand awareness and social media marketing are considered as independent variables. The study was conducted a questionnaire survey that pertain to demographics, social media marketing, brand awareness, and farmer buying decision in order to get relevant data.

Analytical Framework
Ansari S, *et al.* (2019) [3] study focuses on analysing how brand awareness and social media marketing relate to farmer purchasing decisions. Farmer buying decision is taken into account in this study as a dependent variable, and brand awareness and social media marketing are taken into account as independent variables. This study will look at the elements listed below and how they relate to the variables.

This study tests the hypothesis:
H1: Brand awareness has a significant relationship with the farmer buying decision.
H2: Social media marketing has a significant relationship with farmer buying decision.
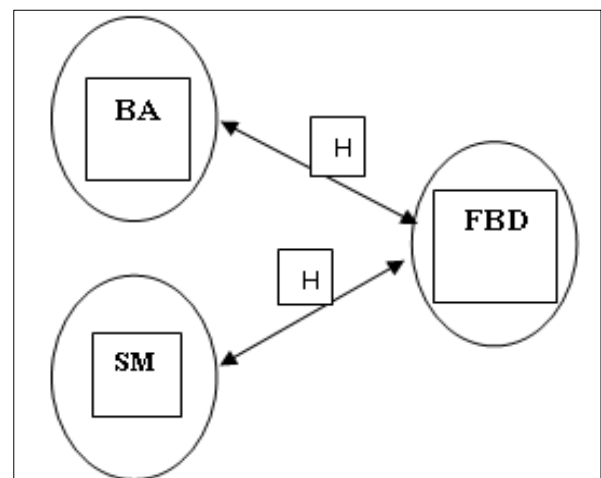To gather Farmer insights for this study, a quantitative research methodology will be employed. This technique can anticipate the hypothesis and is rapid and affordable.
SM – Social Media, FBD – Farmer Buying Decision.
BA – Brand Awareness.
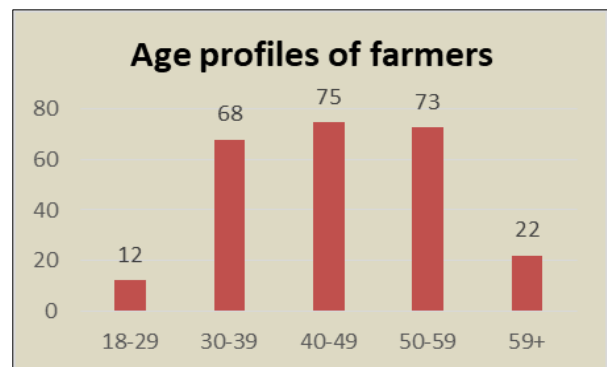
Fig 1: Analytical Framework

Fig 2: Age profiles of farmers

Results and Discussions
This chapter entails the analysis of the primary data calculated from the farmers. The section discusses the demographic

profile of the respondents such as age, land holding capacity of Raipur place. The next section discusses the impact of social media marketing and brand awareness on farmer buying decision process.

The utilization pattern of social media by the farmers
Age profiles of Farmers

Table 1: Age profiles of farmers

Age	Farmers	Frequency (%)	Mean
18-29	12	4.8	26.5
30-39	68	27.2	35.75
40-49	75	30	47.3
50-59	73	29.2	53.5
59+	22	8.8	64.2

The above picture is a bar graph which shows that the age group between 40-49 there are 75 farmers, which indicates 30% farmers of the total population are having very high stimulus towards usage of social media and in next place the farmers of the age group between 50-59 shows that there are 73 farmers, which indicates 29.2% farmers of the total population have high usability of the social media.

The above data proves that the farmers of the age group 40-49 are high which means they are more responsive towards social media.

Category of land holding by farmers

Table 2: Category of land holding

Sl. No	Farmers	Frequency	Mean
Marginal (< 1 ha)	54	21.6	0.7
Small (1-2 ha)	26	10.4	1.45
Semi-Medium (2-4 ha)	74	29.6	3.24
Medium (4-10 ha)	66	26.4	5.72
Large (> 10 ha)	30	12	10.5

Fig 3: Category of land holding

The farmers of the different land holding capacity was illustrated in the above figure with the help of a Treemap. In the first place the farmers of the semi- medium (2-4 ha) are 74 which indicates that 29.6% farmers of the total population are using social media which is highest in this case of land holding capacity and the next place which is Medium (4-10

ha) where there are 66 farmers which indicates that 26.4% farmers of the whole population are using the social media in this category and the next category which is Marginal (< 1 ha) where there are 54 farmers and 21.6SS% farmers of the total population are using the social media and the fourth category which is Large (> 10 ha) where there are 30 farmers and also 12% farmers of the total population are using social media which indicates that 12% farmers in the land holding capacity are responsive towards social media and the final category is the small (1-2 ha) land holding where there are only 26 farmers and there are 10.6% farmers of the total population are using social media and also this is the least category in the farmers' land holding capacity.

The above data proves that the land holding capacity, semi-medium (2-4 ha) which has 74 farmers and 29.6% farmers of population using social media which is highest in this case of land holding capacity of farmers has been observed.

Determine the impact of social media marketing and brand awareness on farmer buying decision process in pesticides

Table 3: Cronbach's Alpha test

Cronbach's alpha	Internal consistency
> 0.9	Excellent
0.8-0.9	Good
0.7-0.8	Acceptable
0.6-0.7	Questionable
0.5-0.6	Poor
< 0.5	Unacceptable

Table 4: Cronbach's alpha test

Variables	Cronbach's alpha
Purchase Decision	0.82
Social media	0.85
Brand awareness	0.84
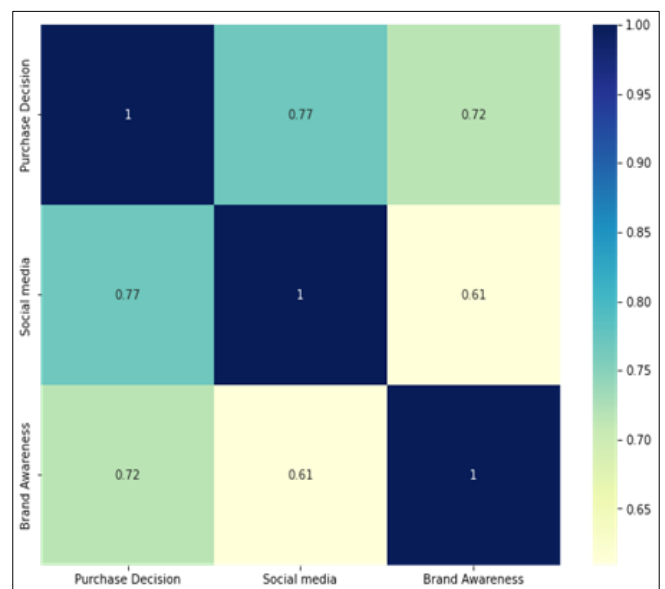
Fig 4: Correlation matrix between purchase decision, social media and brand awareness

Table 5: Model summary

Multiple R	R Squared	Adjusted R Square	Standard Error	Significance F
0.82	0.68	0.68	0.57	0.0043

In model summary the results were obtained using multiple linear regression using the three variables social media, purchase decision and brand awareness using Python programming language where multiple R is 0.82, R square is 0.68, Adjusted R square is 0.68, Standard Error is 0.57 etc. has been calculated using multiple regression method. It present the strength of the relationship between the independent variables of multiple regressions and the dependent variable which is measured by the relation R. Regarding the results of analysis, R = 0.82 which shows a reasonable positive correlation. The R Square value (= 0.68) shows the independent variables explain 68.3% of the variance in adoption. It means about 68.3% of the variation in purchase decision can be described by the variation in social media and brand awareness.

In ANOVA the F-Value is 0.004 which is less than 0.05 therefore it leads to the conclusion that purchase decision has significant relation between social media and brand awareness and Using P-Value approach, the P-Value of brand awareness is 0.0141 which is less than 0.05, therefore it leads to the conclusion that first hypothesis "Brand awareness has a significant relationship with the farmer buying decision" is accepted. The P-Value of social media is 0.0107 which is less than 0.05, therefore it leads to conclusion that second hypothesis "Social media marketing has a significant relationship with farmer buying decision" is accepted.

P-Value of social media is $0.0107 < 0.05$ it is significant that the null hypothesis is rejected.

P-Value of brand awareness is $0.0141 < 0.05$ it is significant that the null hypothesis is rejected.

Conclusion
Farmers can utilize social media to influence other buyers by writing reviews of the goods or services used. The pesticides have a great effect in the area and the consumption of the pesticides is high in the Raipur city of Chhattisgarh State. This examined the influence of social media on farmer buying decision process towards the effects of pesticides.

The farmers of the age group 40-49 have very high responsive towards social media and the farmers of the age group between50-59 shows there are 73 farmers of the total population have high usability of the social media.

The farmers land holding capacity where semi-medium (2-4 ha) has 74 farmers and 29.6% farmers of population using social media which is highest in this case of land holding capacity.

This research has proved that Communication activity stood in the social media activity and suggested to use other activities in the social media.

Facebook is the social media app where the farmers have given importance for usage hence suggested not only Facebook but also use other social media apps for your daily activities and suggested the importance of each and every social media app.

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