

Original Research Article

25 January 2025: Received 28 March 2025: Revised 29 April 2025: Accepted 02 May 2025: Available Online

https://aatcc.peerjournals.net/

Open Access

Assessment of Farmers Attitude Levels Towards PM-Kisan Samman Nidhi Scheme in Ayodhya Division of Uttar Pradesh



Vishal Yada V¹, R K Doharey¹, Jyoti Vishwakarma⁴, N R Meena¹, Manoj Kumar³, Vikash Yadav²

¹Department of Extension Education Acharya Narendra Deva University of Agriculture and Technology, Kumarganj, Ayodhya, India ²ICAR- Indian Institute of Soil and Water Conservation, Dehradun, India ³Krishi Vigyan Kendra, A.N.D.U.A.T., Ayodhya, India

⁴School of Agriculture Science, Raffles University, India

ABSTRACT

The study was conducted from 2022 to 2025 in the Ayodhya region of Uttar Pradesh, which had the highest number of farmers registered under the PM-KISAN scheme compared to other regions in the state. The research focused on beneficiaries in the Ayodhya and Amethi districts. A list of beneficiary farmers was obtained, and 32 villages were randomly selected based on beneficiary availability across the Milkipur, Haringtonganj, Mawai, Amaniganj, Amethi, Musafirkhana, Gauriganj, and Jagdishpur blocks. Using a proportional random sampling method, a total of 320 farmers were selected as the study sample. Data was collected through a semi-structured interview schedule. A semi-structured interview schedule was used to collect the data from the respondents. The results of the study revealed that 64.68 per cent respondents has medium level of attitude towards PM-KISAN Scheme followed by 18.13 per cent High and 17.19 per cent have low level of attitude. There was similarity found in the rank assignment pattern regarding attitude of beneficiary and non-beneficiary respondents about PMKISAN, though there was a difference in the magnitude of Mean Percent Scores (MPS) of beneficiary and non-beneficiary farmers. A positive and significant association was found between the attitude and some selected characteristics like education, age, occupation, exposure to mass media and contact with extension agency. The factors like caste, social participation, annual income, land holding, source of irrigation, information seeking behavior and information sharing behavior have not shown any significant contribution to the multiple regression analysis and were nonsignificantly associated with attitude of overall respondents. Challenges of the study included logistical constraints in reaching remote villages, language and cultural barriers during interviews, and occasional non-cooperation from respondents due to political or personal biases regarding the PM-KISAN scheme. Additionally, maintaining the consistency and neutrality of responses across a diverse sample posed methodological challenges. The major contribution of the study lies in its empirical insights into the attitude levels of farmers towards the PM-KISAN scheme and the identification of key socio-personal variables that significantly influence these attitudes. The findings can inform policymakers and extension personnel in tailoring communication strategies and interventions to improve farmer engagement and satisfaction with government welfare programs.

Keywords: PM-KISAN Scheme, Respondent Attitude, Socioeconomic, Perception & Government Schemes.

Introduction

India's economy is deeply dependent on agriculture, making it a global leader in the sector. As the world's largest producer of milk, pulses, and spices, and with the most extensive land area for rice, wheat, and cotton cultivation, India plays a significant role in global food production. Agriculture sustains nearly 58% of the country's population, and with rapid population growth, its importance continues to rise. Despite being the backbone of the economy, the agricultural sector remains underdeveloped, facing persistent challenges that lead to low productivity and financial instability. A vast majority of Indian farmers, about 80%, are classified as small or marginal, owning less than two hectares of land. These farmers often depend on personal savings or borrowed funds to acquire essential inputs like seeds, fertilizers, and chemicals, hoping for a successful harvest to

*Corresponding Author: Vishal Yadav

DOI: https://doi.org/10.21276/AATCCReview.2025.13.02.428 © 2025 by the authors. The license of AATCC Review. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/). meet their financial needs. However, due to market oversupply at the end of the cropping season, prices frequently plummet, making it difficult for them to recover their investments. This results in cash shortages, forcing small and marginal farmers to take loans from moneylenders or cut down on household expenses to sustain themselves.

To address these challenges, the government has introduced several policies aimed at strengthening the agricultural sector, one of which is the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN). This central sector scheme provides direct financial assistance to farmers and their families. The concept of PM-KISAN was initially implemented as the Rythu Bandhu scheme by the Telangana government, offering direct monetary support to eligible farmers. Recognizing its potential, the central government adopted and expanded the initiative, announcing the nationwide launch of PM-KISAN on February 1, 2019, during the Interim Union Budget by then-Finance Minister Piyush Goyal. Prime Minister Narendra Modi officially launched the scheme on February 24, 2019, in Gorakhpur, Uttar Pradesh. Though formally launched in February 2019, the scheme was operationalized from December 1, 2018. PM-KISAN is entirely funded by the central government and implemented by the Ministry of Agriculture and Farmers Welfare. Initially, it was limited to small and marginal farmers with up to two hectares of cultivable land, but in June 2019, the scheme was expanded to include all landholding farmers.

The primary objective of PM-KISAN is to provide financial assistance to farmers for acquiring necessary agricultural inputs and meeting household expenses. Under the scheme, eligible farmers receive an annual income support of 36.000. disbursed in three equal installments of ₹2,000 every four months. State governments and Union Territories are responsible for identifying eligible farmer families based on the scheme's criteria. To ensure efficient implementation, the government introduced the PM-KISAN Portal, a centralized platform for maintaining farmer details and facilitating seamless benefit transfers. In light of these developments, an effort was made to assess farmers' knowledge and attitudes toward PM-KISAN. Understanding how beneficiaries perceive the scheme is essential for evaluating its effectiveness and making necessary policy adjustments. This study aimed to analyze farmers' awareness of PM-KISAN, their attitudes toward it, and how they utilize the financial assistance provided. The findings will help policymakers enhance the scheme and address challenges farmers face in accessing its benefits.

The study pursued specific objectives, including analyzing the personal profiles of beneficiary farmers, assessing their knowledge of PM-KISAN, measuring their attitudes toward the scheme, evaluating how they utilize the funds, and exploring the relationship between their knowledge and attitudes with personal attributes. Additionally, the study sought to identify the constraints farmers face in availing themselves of PM-KISAN benefits and propose strategies to improve accessibility. The government introduced PM-KISAN to offer financial security to farmers, ensuring sustainability during off-seasons and reducing reliance on informal credit sources. By examining farmers' knowledge and attitudes, this study provides insights into the scheme's impact and effectiveness. The results will indicate how well PM-KISAN has been received and suggest ways to enhance its implementation for greater farmer participation. Identifying the challenges faced by beneficiaries will further help address gaps and improve the scheme's future performance.

The research hypothesis was designed to determine whether a significant relationship exists between beneficiary farmers' personal profiles and their knowledge of PM-KISAN, as well as between their profiles and attitudes toward the scheme. Understanding these correlations is crucial for shaping more effective agricultural policies. Despite the study's significance, data collection posed certain challenges. Psychological barriers and reluctance among farmers to share information made gathering data difficult. While the language used in the study was familiar to farmers, many hesitated to disclose details during interviews, largely due to a lack of awareness about various aspects of PM-KISAN. Furthermore, the study was confined to 320 respondents from selected districts in the Ayodhya Division, and conclusions were drawn based on their responses. The findings will contribute to refining the scheme, making it more accessible and beneficial for farmers, and ensuring that agriculture remains a key driver of India's economic growth.

Material and Methods

The study was conducted in Uttar Pradesh, focusing on beneficiaries of the PM-Kisan scheme in the Ayodhya and Amethi districts. A list of beneficiary farmers was obtained and 32 villages were randomly selected based on beneficiary availability across the Milkipur, Haringtonganj, Mawai, Amaniganj, Amethi, Musafirkhana, Gauriganj and Jagdishpur blocks. Using a proportional random sampling method, 320 farmers were chosen as the study sample. An ex-post-facto research design was employed, as defined by Robinson (1976), who describes it as a systematic empirical inquiry where independent variables are not directly manipulated due to their prior occurrence or inherent nature. This design relies on deduced theories to analyze behavioral phenomena under specific conditions, aiming to understand their underlying causes. To collect data, a structured interview schedule was developed, aligning with the study's specific objectives. The interview questions and statements were designed based on a review of related literature, research reports, and popular articles, along with consultations with the Advisory Committee and PM-Kisan Scheme officials to ensure scientific rigor and relevance. The finalized schedule gathered information on beneficiaries' awareness and Attitude of the respondent. Data collection was conducted through personal interactions using a well-structured, pre-tested interview schedule. The collected data was then compiled, tabulated and analyzed to address the research objectives.

A structured schedule was formulated to gather information on regarding PM-Kisan scheme and Attitude of the Respondent. Data collection was conducted through personal contact using a well-structured, pre-tested interview schedule. The collected data was then compiled, tabulated and analyzed to address the research objectives. To assess respondents' opinions on beneficiary's practices, an opinion scale was used, consisting of 21 statements, related to the attitude of farmers. These statements were rated on a five-point continuum: Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA), and Strongly Disagree (SDA). Scores of 1, 2, 3, 4, and 5 were assigned, respectively. This approach aimed to discern prevalent patterns, trends and variations within the dataset thereby enabling a more insightful exploration of the information gathered to address the study's objectives effectively.

STATISTICAL ANALYSIS:

The frequency and percentage of respondents in each category were calculated and the Mean Percentage Score (MPS) for each statement was determined and ranked accordingly.

Percentage

Simple comparisons were made on the basis of percentage.

Mean percent score (MPS)

It was calculated by Multiplying the total obtained score of the respondents by 100 and dividing by the maximum obtainable score.

The mean was calculated by using formula

$$X = \frac{\sum xi}{n}$$

Where, X =Mean, n = Number of respondents, Xi = Value of the i^{th} respondent

Sr. No.	Stator	SA		Α		UD		DA		SDA		Maar	Rank
5r. NO.	Statements	f	%	f	%	f	%	F	%	f	%	Mean	Rank
1.	PM-KISAN motivates farmers to adopt the new agricultural technology	30	09.38	45	14.06	86	26.87	105	32.81	54	16.88	2.66	XV
2.	PM-KISAN aims at improving economic status of the farmers	70	21.88	96	30.00	81	25.31	51	15.94	22	06.88	3.44	IV
3.	PM-KISAN provides the livelihood security to the farmers	96	30.00	85	26.56	71	22.19	39	12.18	29	09.06	3.56	II
4.	PM-KISAN makes beneficiary farmers self- sufficient and raise their income level	71	22.19	109	34.06	64	20.00	59	18.44	17	05.31	3.49	III
5.	PM-KISAN is well thought scheme for upliftment of below poverty line farmers	21	06.56	41	12.81	77	21.88	146	45.63	35	10.94	2.58	XVIII
6.	The benefits of PM-KISAN scheme are available only to the selected farmers	52	16.25	44	13.75	68	21.25	136	42.50	21	06.56	2.90	XII
7.	PM-KISAN scheme helps the farmers to sustain during off-season	17	05.31	36	11.25	62	19.38	160	50.00	45	14.06	2.44	XIX
8.	There is no need of PM-KISAN scheme as it is not helpful in reducing poverty	34	10.63	26	08.13	119	37.18	116	36.25	35	10.94	2.65	XVI
9.	PM-KISAN helps farmers to protect against financial risks	17	05.31	37	11.56	61	19.06	160	50.00	45	14.06	2.44	XX
10.	PM-KISAN is able to encourage farmers to adopt innovative agricultural practices	17	05.31	35	10.94	51	15.93	168	52.50	49	15.31	2.38	XXI
11.	Availing of PM-KISAN would improve my social status in my community	36	11.25	43	13.44	84	26.25	136	42.50	21	06.56	2.80	XIV
12.	PM-KISAN is a convenient mechanism to avail credit for farmers	19	05.94	36	11.25	66	20.63	151	45.18	48	15.00	2.59	XVII
13.	PM-KISAN offers an efficient utilization of credit to the farmer	50	15.63	46	14.38	107	33.44	117	36.56	0	0	3.09	VIII
14.	PM-KISAN provides timely credit facilities to farmers throughout the year	63	19.69	60	18.75	80	25.00	117	36.56	0	0	3.21	VII
15.	PM-KISAN is a farmer friendly source to get credit	35	10.94	40	12.50	115	35.94	130	40.63	0	0	2.93	XI
16.	Registration process for PM-KISAN scheme is more time consuming	51	15.94	46	14.38	106	33.12	117	36.56	0	0	3.09	IX
17.	PM-KISAN is the best scheme of the government to the farmers	22	06.88	39	12.19	121	35.81	138	43.13	0	0	2.82	XIII
18.	There is little work and more propaganda made by the PM-KISAN	93	29.06	40	12.50	86	26.88	101	31.56	0	0	3.39	v
19.	PM-KISAN scheme makes farmer worried less	49	15.31	43	13.44	95	29.69	133	41.56	0	0	3.03	Х
20.	PM-KISAN does not discriminate between the rich and poor farmers	144	45.00	18	05.63	132	41.25	26	08.13	0	0	3.87	I
21.	Due to PM-KISAN, tendency of farmers to borrow credit from lenders reduced	74	23.13	31	09.69	121	37.81	94	29.37	0	0	3.26	VI

The table provides an analysis of respondents' attitude of the PM-KISAN scheme across 21 statements. The statements are related to different aspects of the scheme's impact on farmers, such as economic improvement, livelihood security and access to credit. The analysis is based on responses using a Likert scale: SA (Strongly Agree), A (Agree), UD (Undecided), DA (Disagree), SDA (Strongly Disagree).

Mean: The mean value represents the overall perception of respondents on each statement, calculated from their responses.

Rank: This ranks the statements based on the mean, from the highest to the lowest perception of the PM-KISAN scheme's effectiveness.

Explanation of the Data

1. High Attitude (Rank I to IV)

Statement 20: "PM-KISAN does not discriminate between the rich and poor farmers" ranks first with a mean of 3.87, indicating

strong agreement among respondents that the scheme benefits farmers regardless of their economic status.

Statement 2: "PM-KISAN aims at improving economic status of the farmers" follows with a mean of 3.44, showing a strong positive perception that the scheme helps improve farmers' economic standing (Rank IV).

Statement 3: "PM-KISAN provides livelihood security to the farmers" ranks second with a mean of 3.56, suggesting that respondents generally agree that the scheme ensures farmers' livelihood security (Rank II).

Statement 4: "PM-KISAN makes beneficiary farmers self-sufficient and raises their income level" ranks third with a mean of 3.49, indicating a positive response to the scheme's role in making farmers self-sufficient (Rank III).

2. Moderate Attitude (Rank V to X)

Statement 18: "There is little work and more propaganda made

by the PM-KISAN" shows moderate agreement with a mean of 3.39, suggesting that some respondents believe there is more propaganda than actual implementation (Rank V).

Statement 21: "Due to PM-KISAN, the tendency of farmers to borrow credit from lenders reduced" ranks sixth with a mean of 3.26, indicating that the scheme has had a noticeable effect on reducing the need for farmers to borrow from lenders (Rank VI).

Statement 14: "PM-KISAN provides timely credit facilities to farmers throughout the year" ranks seventh with a mean of 3.21, indicating general agreement that credit is made available on time (Rank VII).

Statement 13: "PM-KISAN offers an efficient utilization of credit to the farmer" follows closely with a mean of 3.09, suggesting respondents feel the scheme has a positive impact on the efficient use of credit (Rank VIII).

Statement 16: "Registration process for PM-KISAN scheme is more time consuming" ranks ninth with a mean of 3.09, indicating a perception that the registration process might be time-consuming but not a major deterrent for most respondents (Rank IX).

Statement 19: "PM-KISAN scheme makes farmers worry less" ranks tenth with a mean of 3.03, reflecting that the scheme is viewed as providing some level of relief for farmers (Rank X).

3. Lower Attitude (Rank XI to XVIII)

Statement 15: "PM-KISAN is a farmer-friendly source to get credit" ranks eleventh with a mean of 2.93, showing moderate agreement, indicating that some respondents believe the scheme is supportive of farmers' credit needs but with room for improvement (Rank XI).

Statement 6: "The benefits of PM-KISAN scheme are available only to selected farmers" ranks twelfth with a mean of 2.90, suggesting some skepticism regarding the inclusivity of the scheme (Rank XII).

Statement 17: "PM-KISAN is the best scheme of the government for farmers" ranks thirteenth with a mean of 2.82, showing moderate agreement that PM-KISAN is highly regarded but with some reservations (Rank XIII).

Statement 11: "Availing of PM-KISAN would improve my social status in my community" ranks fourteenth with a mean of 2.80, showing moderate agreement, suggesting that some farmers believe the scheme could improve their social standing (Rank XIV).

Statement 1: "PM-KISAN motivates farmers to adopt new agricultural technology" ranks fifteenth with a mean of 2.66, reflecting moderate agreement that the scheme encourages technological adoption (Rank XV).

Statement 8: "There is no need for the PM-KISAN scheme as it is not helpful in reducing poverty" ranks sixteenth with a mean of

2.65, suggesting disagreement with the statement, reflecting a belief that the scheme is helpful in reducing poverty (Rank XVI).

Statement 5: "PM-KISAN is a well-thought-out scheme for the upliftment of below poverty line farmers" ranks seventeenth with a mean of 2.58, indicating that there is some skepticism about the scheme's effectiveness in helping the poorest farmers (Rank XVII).

4. Very Low Attitude (Rank XIX to XXI)

Statement 7: "PM-KISAN scheme helps the farmers sustain during off-season" ranks nineteenth with a mean of 2.44, indicating disagreement that the scheme helps farmers in the off-season (Rank XIX).

Statement 9: "PM-KISAN helps farmers to protect against financial risks" ranks twentieth with a mean of 2.44, reflecting that respondents do not strongly associate the scheme with financial risk protection (Rank XX).

Statement 10: "PM-KISAN is able to encourage farmers to adopt innovative agricultural practices" ranks twenty-first with a mean of 2.38, suggesting low agreement with the idea that the scheme encourages innovation in agriculture (Rank XXI).

Positive Impact: The highest-ranked statements reflect a positive attitude of the PM-KISAN scheme, particularly its role in improving the economic status, livelihood security, and self-sufficiency of farmers. These results suggest that respondents generally view PM-KISAN as a valuable scheme in terms of its financial support and potential for improving farmers' living conditions (Rank I, II, III, IV).

Skepticism and Concerns: Some statements reflect skepticism or concern, such as the perception that PM-KISAN is primarily about propaganda rather than effective work (Rank V) or that it does not sufficiently support the adoption of new agricultural practices (Rank XXI). These concerns suggest that while the scheme is widely recognized, there may be a gap between its intended impact and farmers' actual experiences.

Registration and Accessibility Issues: The relatively low ranking of the registration process (Rank IX) indicates that while it may not be a major deterrent, the process could be improved for greater efficiency and ease of access for farmers.

Credit Access: The positive attitude regarding credit facilities (Rank VII, VIII) reflect the success of the scheme in providing financial support to farmers. However, there is still room for improvement in making this credit more accessible and user-friendly.

 Table 2: Distribution of respondents according to their Overall attitude level towards the PM-KISAN Scheme n=320

Sr. No.	Categories	Frequency	Percent
1.	Low (up to 57.20)	55	17.19
2.	Medium (57.21 to 67.90)	207	64.68
3.	High (67.91 and above)	58	18.13
Total		320	100.00

Mean- 62.55, S.D.- 5.35, Min.- 50, Max.- 76

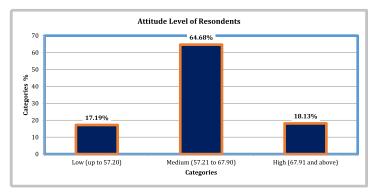


Fig. 1: Distribution of respondents according to their attitude level

Table 2. reveals that out of 320 respondents 64.68 per cent respondents has medium level of attitude towards PM-KISAN Scheme followed by 18.13 per cent High and 17.19 per cent have low level of attitude. The average mean of scores of attitude observed to be 62.55 with a range of minimum 50 and maximum 76. The findings are supported by the findings of Prodhan A.S. *et al.* (2017)

Relationship between the Profile of the Respondents with their Attitude towards the PM-KISAN Scheme The data pertaining to the relation between the profile of the respondents and their attitude towards PM-KISAN Scheme are presented in Table 3 and depicted diagrammatically in Fig.2.

Table 3: Relationship between the profile of the respondents with their attitude towards the PM-KISAN Scheme n=150 $\,$

Sr. No.	Independent Variables	Correlation Coefficient ('r' value)				
1.	Age	0.4024*				
2.	Education	0.3229*				
3.	Caste	0.0694*				
4.	Marital Status	0.0190*				
5.	Size of the family	-0.0034				
6.	Family Type	-0.0136				
7.	Size of land holdings	0.2147*				
8.	Annual Income	0.3917*				
9.	Occupation	0.2660*				
10.	Housing Pattern	0.0110*				
11.	Material Possession	-0.0024**				
12.	Social Participation	-0.0941*				
13.	Scientific orientation	-0.0391*				
14.	Risk Orientation	0.0457*				
15.	Economic Motivation	0.0353*				
16.	Extension Contact Agency	0.0574*				
17.	Innovativeness	0.0837*				
18.	Farming experience	-0.0302*				

Note: - * Significant at 0.05 level, NS Non significant

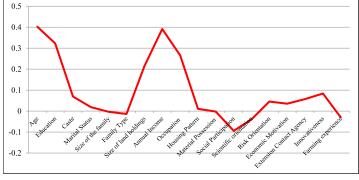


Fig. 2: Relationship between the profile of the respondents and their attitudetowards the use of PM-KISAN Scheme

Conclusion

The study conducted from 2020 to 2024 in the Ayodhya region of Uttar Pradesh revealed that the majority (64.68%) of respondents exhibited a medium level of attitude towards the PM-KISAN Scheme, followed by 18.13% with a high attitude and 17.19% with a low attitude. While both beneficiary and nonbeneficiary farmers showed a similar ranking pattern in their attitude towards the scheme, the magnitude of Mean Percent Scores (MPS) differed between the two groups. The analysis indicated a positive and significant association between attitude and factors such as education, age, occupation, mass media exposure and contact with extension agencies. However, variables like caste, social participation, annual income, landholding, source of irrigation, information-seeking behavior, and information-sharing behavior did not show a significant influence on farmers' attitudes.

References

- 1. Argade, S., Rao, K.V. and Sarkar, A. 2018. Attitude of agroinput dealers towards e-Parwana e-Agri Service in Maharashtra. *Journal of Global Communication*, 11(1): 81-86.
- 2. Bora, M., Deka, M., Bharali, M., Bhuyan, S., Chakravarty, M., Ali, A. and Datta, H.S. 2018. Attitude and economic motivation of farmers towards farming for doubling farm income. *Journal of Community Mobilization and Sustainable Development*, 13(3): 426-430.
- 3. Chouhan, N., Henry, C. and Sharma, S.K., 2014. Attitude of farmers towards ATMA. *Indian Journal of Extension Education & Research Development*, 22: 48-50.
- 4. Devy, M.R., Mani, M.S. and Shenoy, N.S. 2013. Attitude of farmers and extension officers towards Agricultural Technology Management Agency (ATMA) and suggestions for effective functioning. *Journal of Research ANGRAU*, 41(3): 53-57.
- 5. Jamanal, S.K. and Potdar, M.P. 2019. Constraints and suggestions expressed by the farmers in availing crop insurance schemes in northern Karnataka. *Journal of Education, Society and Behavioural Science*, 32(3): 1-5.
- 6. Jamanal, S.K., Natikar K.V. 2019. Attitude of farmers towards Crop Insurance Scheme. *Journal of Experimental Zoology*, 22(1):221-228.
- Madhu, H.R., Ranganathan, A.D., Nagesha, G. and Mahesh, D.S. 2020. Knowledge difficulty index and attitude level of farmers about soil health card in Mandya district of Karnataka. *Indian Journal of Pure and Applied Biosciences*, 8(3): 594-601.
- 8. Meena, S.K., Wakle, P.K., More, S.D., Badhala, B.S. and Meena, D.K. 2022. Knowledge and attitude of farmers towards Pradhan mantri fasal bima yojana (PMFBY). *Asian Journal of Agricultural Extension, Economics & Sociology*, 40(11): 562-568.

- 9. Singh, J.P., Bangarva, G.S. and Singh, V. 2016. Attitude of farmers and extension personnel towards sustainable groundnut production in semi-arid eastern plains of Rajasthan. *Journal of Community Mobilization and Sustainable Development*, 11(1): 88-94.
- 10. Tanwar, A., Kaur, M. and Rathore, S. 2021. Attitude of wheat growers towards Pradhan Mantri Fasal Bima Yojana. *The Indian Journal of Agricultural Sciences*, 91(6):842-846.
- 11. Darandale, A.D. and Soni, N.V. 2011. Relationship between attitude of tribal maize growers towards organic farming and their selected characteristics. *Gujarat journal of extension education*, 22: 8-9.
- 12. Makadia, J.J., Mistry, H.H. and Kuthe, S.B. 2017. Impact of Soil Health Card on Fertilizer Consumption and Yield of Sugarcane and Kharif Paddy in Gujarat State. *Economic Affairs*, 60(4): 61-66.
- 13. Panda, S. 2017. Assessing the effectiveness of information and communication technology (ICT) enabled extension services for addressing the information needs of farmers in Coochbehar district of West Bengal. thesis, M.Sc. Department of Agricultural extension, Uttar Banga Krishi Vishvavidhyalaya, West Bengal. 44p.

- 14. Patel, J.B., Chauhan, N.B. and Vinaya Kumar, H.M. 2018. Relationship between attitude of farmers towards FIG and their profile in Anand district of Gujarat. *Gujarat Journal of Extension Education*, 29(2): 174-177
- 15. Reddy, K.M., Rao, I.S., Srinivasulu, M. and Kumar, G.D. 2017. Perception and Usefulness of Mobile Phone Based Agro-Advisories (MBAS). *International Journal of Current Microbiology and Applied Sciences*, 6(7): 866-872, ISSN: 2319-7706
- Valamannavar, S., Saha, A. and Dhakre, D.S., 2018. A study on knowledge and opinion of the farmers regarding Kisan Credit Card scheme in Dharwad district of Karnataka. *International Journal of Agricultural Science and Research*, 8(6): 25-32
- 17. Venkatasubramanian, K., Tall, A., Hansen, J. and Aggarwal P.K. 2014. Assessment of India's Integrated Agrometeorological Advisory Service program from a farmer perspective. CCAFS Working Paper no. 54. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. pp.46-1271
- Manjusha, K.P., Nitin, D. Suvarna and Vinaykumar, H.M. 2019. Exposure, Perception and Advantages about Weather based Agro-advisory Services by Selected Farmers of Anand District, India. *International Journal of Current Microbiology Applied Science*, Volume 8 (Number 05): 2319-7706.