P-ISSN 2322 - 0678 & E-ISSN 3048 - 9946
https://doi.org/10.56572/gjoee.2025.40.1.0007 Gujarat Journal of Extension Education Vol. 40 : Issue 1 : December - 2025

FARMER PROFILE AND PERCEPTION NEXUS: A STUDY ON KVK'S TECHNOLOGICAL DIVERSIFICATION EFFORTS UNDER CFLD-PULSES

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ABSTRACT

*Pulse production in India is majorly confined to bund cultivation or as inter-cultivation. To rise the production Indian govt took efforts in form of demonstrating new technologies, promoting nutritional education through KVK's. In view of this a study was conducted during March 2022 in Central Telangana Zone, India to find out relation between farmer's traits linked to their perception of the efforts by KVK scientists. A semi-structured schedule was prepared and administered to 100 respondents (100 beneficiaries of CFLD programme) conducted by Krishi Vigyan Kendra Wyra and Malyal belonging to Khammam and Mahabubabad Districts of Telangana state respectively (50 beneficiary farmers from each KVK). Majority of the farmers had favourable followed by highly favourable perception on the efforts of KVK scientists. So, the present study tried to explore individual factors/ profile traits influencing farmer's perception on the efforts. Results show that social participation (0.898**) followed by risk taking ability (0.686**) were major factors. Multinomial model results confirm that these were determining factors that played major role in forming a favourable followed by high favourable perception in farmers. As results indicate that social participation was the major determining factor in perceiving the positive efforts of CFLD work by KVK scientists, higher authorities can encourage farmers for more social participation in organised activities and events, training programmes, nutritional awareness programmes etc.. so that farmers will be more socially exposed and benefitted from the CFLD program.*

Keywords **:** *cluster frontline demonstrations, KVK, profile, perception, relation.*

INTRODUCTION

Pulses are an essential and crucial category of crops, alongside cereals, that supply high-quality protein to a large portion of the vegetarian population globally (Bansilal et al., 2020). Even though India is the top country in pulse cultivation, the share of pulses in the total food grain production is only 7–10% in the country (Reddy et al., 2017 and Swati et al., 2022). While this group of crops is important from a nutritional perspective, there has been no significant increase in area and production since 1950–51; however, a notable rise is seen in recent years (i.e., from 2020–2021) (Bora, 2020 and Badhala et al., 2014). Government initiatives, like the National Food Security Mission's Cluster Front Line Demonstration (CFLD) program, have made considerable progress in increasing pulse production in the nation. CFLDs represent a sustained educational effort implemented under the NFSM in an organized manner on farmers' fields to showcase the advantages of new technologies (Balai et al., 2021 and Inbasekar, 2014). This program emphasizes the adoption of advanced technologies by farmers by making technologies and varieties accessible, and promoting the use of improved seeds, integrated nutrient management along with outreach efforts such as training and media initiatives (Singh et al., 2019; Puniya et al., 2021; Singh et al., 2018). Though there has been continued efforts from KVK scientists to educate farmers on nutritional importance of pulse, a positive perception of farmers on these efforts would ease the positive acceptance of CFLD technologies. Perception is a complex process involving sequential thought of action which were governed by personal, economic, psychological and cultural factors involved in situation. Some farmers perceive new agricultural technologies more quickly than others because of the varied personal characteristics indicating the significance of personal factors (Gamit and Vinaya, 2024). Despite its crucial importance, very limited study has tried to explore the interconnected relation between the profile traits of farmers that determine the how farmers perceive the efforts of KVK scientists. In this context, current study was designed primarily to evaluate the complex relationship

between the perception of farmers participating in CFLDs and farmer's profile traits that influence the formation of favourable /unfavourable perception towards efforts by KVK. Considering the importance of these characteristics, an attempt has been made in this investigation to ascertain the relationship between personal, economic and psychological characteristics of the respondents and their perception towards the effectiveness of CFLD

OBJECTIVE

To explore the intricate relationship between profile traits of farmers and their perception towards varietal and technological diversification efforts by Krishi Vigyan Kendras

METHODOLOGY

The present study followed a deductive approach, as it is based on existing theoretical constructs relating farmer profile characteristics with their perception toward KVK's technological diversification efforts under CFLD–Pulses. The study aimed to test these theoretical relationships empirically using quantitative data collected from farmers and using positivist research philosophy, which assumes that reality is objective and can be measured through observable variables. For the purpose of quantitative and qualitative perceptual data, a survey was conducted in March 2022 in Central Telangana Zone at KVK Wyra (17.1918° N, 80.3575° E) and KVK Malyal (17.55° N, 79.961° E) of Khammam and Mahabubabad districts, respectively. These KVKs were purposively selected as they were performing the CFLD Programme since 2015–16 under Pulse crop. From each KVK, 50 respondent farmers as beneficiaries were purposively selected.

Then, to explore the relationship between perception and profile of farmers, correlation has been performed in SPSS 20 software to point out the factors responsible for comprehending information by farmers

The computed 'r' values were then compared with the table values at 5 per cent and 1 per cent levels of significance (LOS). If the 'r' calculated value was greater than or equal to the 'r' table value, the relationship between the selected variables was considered significant; otherwise, it was considered non-significant. To validate the result, Multinomial analysis has been carried out and presented in the results.

RESULTS AND DISCUSSION

Relationship between farmers profile traits and their perception towards technological and diversification efforts by KVK

This relation was tested by Karl Pearson's correlation coefficient test and results obtained in this regard is presented in Table 1.

Table 1 : Correlation coefficients between profile and perception of beneficiary farmers of CFLD

(n=100)

Sr. No.	Independent variables	Correlation coefficient (r)
X_1	**Age**	-0.281**
X_2	**Education**	0.238*
X_3	**Mass media exposure**	0.436**
X_4	**Annual income**	0.199*
X_5	**Land holding**	0.240*
X_6	**Farming experience**	-0.181*
X_7	**No. of trainings**	0.318**
X_8	**Cosmopoliteness**	0.503**
X_9	**Resource availability**	0.470**
X_{10}	**Social participation**	0.898**
X_{11}	**Achievement motivation**	0.602**
X_{12}	**Economic motivation**	0.592**
X_{13}	**Risk taking ability**	0.686**

* : Significant at 0.05 level of probability

**: Significant at 0.01 level of probability

NS : Non-significant

1. Age Vs Perception

The Table 1. indicates a negative and significant relationship between age and perception of beneficiaries towards CFLD. It means that age of the farmers influences perception. From the table it is concluded that perception is significantly higher in younger group people than other. This might be due to the fact that old age farmers have more experience than young farmers that cdhsreates less curiosity to get knowledge and passiveness during training programme which reflected on the perception. This findings were in line with Shinde (2000), Patel et al. (2018), Dhananjaya (2020)

2. Education Vs Perception

The Table 1. indicates a positive and significant relationship between education and perception of beneficiaries towards CFLD. This may be due to the fact that educational status is a socio demographic factor that can affect to give opinion about someone's perception. More educated person has potential to interpret and judge someone's capability. This might be the reason for significant association observed. This findings were similar to findings of Shinde (2000), Dhananjaya (2020), Rathore and Kaur (2025)

3. Land holding Vs Perception

From the Table 1 it is seen that there exists a positive and

significant relationship between land holding and perception of beneficiaries towards CFLD. The probable reason for this trend might be due to, more no. of farmers with high economic motivation receives good number of trainings from KVKs and to get latest information through various sources farmers frequently interact with extension personnel resulting a good perception towards CFLD. Similar results were found with Dhananjaya (2020), Rathore and Kaur (2025)

4. Annual income Vs Perception

From the Table 1 it is seen that there exists a positive and significant relationship between Annual income and perception of beneficiaries towards CFLD. The probable reason for this trend might be that increased income enhances the farmers participation in training programmes to gain more information on latest technologies there by resulting in good perception towards CFLD. Similar results were found with Chand (2012) and Dhananjaya (2020), Rathore and Kaur (2025).

5. Farming experience Vs Perception

From the Table 1 it can be seen that there exists negative and significant relation between farming experience and perception of beneficiaries towards CFLD. It can be inferred that farming experience of farmers has influenced on their perception towards technical capability of KVK scientists and was found negative perception amongst those farmers having more experience. The probable reason could be that the medium to high level of experience affected on learning environmental factors combined with dormant behaviour during training programme. The results were in line with Bagheri (2008), Selvarani and Mohanraj (2024)

6. No. of trainings Vs Perception

From the Table 1 it can be seen a positive and significant relationship between trainings received and Perception of beneficiaries towards CFLD. The probable reason for this trend could be that training might have played an important role in influencing farmers perception in positive direction towards CFLD and was observed more positive perception amongst those, who had received more training programmes. It is obvious that a person having good exposure for training will always wish to update their level of knowledge about innovations. This might be reason, which leads them to change their behaviour for attending the training programmes. This finding was in line with Chand (2012), Singh et al. (2024).

7. Mass media exposure Vs Perception

From the Table 1 it is seen that there exists a positive and significant relationship between mass media exposure and beneficiaries perception towards CFLD. The probable reason for this might be that greater exposure to mass media would have helped them to keep themselves updated with latest knowledge through various extension programmes. This also might have motivated them to participate in such training programmes organized by KVK with passion. Similar results were found with Dhananjaya (2020), Vihariya et al. (2023)

8. Economic motivation Vs perception

From the Table 1 it is evident that there is a positive and significant relationship between economic motivation and perception. The probable reason for this might be that, farmers with high economic motivation have more inclination to maximize income from their farming and showing interest in learning ways to maximize income. They might have regarded to take part in the training interestingly and persuaded them to gain new information from the training. This led them for a self-motivated involvement in trainings making positive perception towards CFLD. Similar results were found with Dhananjaya (2020) and Chand (2012).

9. Risk taking ability Vs perception

From the Table 1 it is evident that there exist a positive and significant relationship between risk taking ability and perception of beneficiaries towards CFLD. The probable reason for this might be that, farmers who are having higher degree of risk orientation are more likely to undertake calculated risk for adopting new idea in their farming for profit maximization. This might be the reason which led them to change their behaviour for attending the training programmes with interest showing positive and significant perception. The results were in line with Shinde (2000) and Dhananjaya (2020).

10. Social Participation Vs Perception

From the Table 1 it is evident that there exist a positive and significant relationship between social participation and perception of beneficiaries towards CFLD. The probable reason might be that increased the farmers who are active in participating in various meetings and trainings have improved their perception towards the programme . The results were in line with Shah et al.(2002); Akbari et al. (2023) Lekha et al. (2024); Gamit and Vinaya (2024); Dolma et al. (2025).

To validate the result, Multiple linear regression as presented in Table 2 has been performed and found that land holding, Economic motivation, resource availability and risk management were not having a significant relationship with forming favorable/unfavorable perception of farmers on varietal and technological diversification efforts by KVK scientists.

Table 2. Multiple regression model (n=150)

Sr. No	Independent variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
X_1	**Age**	-.246	.085	-.349	-2.879	.005
X_2	**Education**	-.801	.319	-.226	-2.509	.014
X_3	**Annual Income**	-.730	.347	-.253	-2.107	.038
X_4	**Land holding(ha)**	-.040	.206	-.020	-.194	.847^{NS}
X_5	**Farming Experience**	.210	.092	.292	2.288	.025
X_6	**No. of trainings**	1.836	1.367	.143	1.344	.003
X_7	**Economic M.**	.141	.286	.084	.493	.623^{NS}
X_8	**Mass media Exp.**	.472	.258	.154	1.831	.070^{NS}
X_9	**Social Participation**	2.927	1.362	.186	2.149	.034
X_{10}	**Achievement M.**	.349	.161	.328	2.174	.032
X_{11}	**Risk Management**	.185	.099	.254	1.871	.065^{NS}
X_{12}	**Cosmopoliteness**	.884	.743	.130	1.190	.037
X_{13}	**Resource Availability**	.752	1.117	.069	.673	.503^{NS}
a. Dependent Variable: perception						

Multinomial logistic regression has been run with perception (Low/medium/High) categories as dependent variable and profile traits as independent variables. Usually multinomial model shows how profile characteristics influence the probability of farmers being in Low, Medium or in High perception level

The Multinomial model chooses any one category as the reference category (eg: Low) and it estimates the log odds of being in Medium vs Low and High vs Low for each independent variable. Multinomial logistic regression analysis revealed that farmers' profile characteristics significantly influenced their perception level in the CFLD programme. Variables such as age, education, annual income, trainings attended, and extension contact were found to be highly significant predictors of farmers perception ($p < 0.05$). Higher education, income, and exposure to extension services positively influenced the likelihood of farmers forming a favourable perception towards KVK efforts. These findings underscore the importance of socio-economic factors and extension interventions in enhancing farmer participation in such technology dissemination programmes.

CONCLUSION

The probable reason might be because beneficiaries had participated in various training programmes organized by KVK and field days, which made them to observe the real potential of the technologies, built interest and confidence in them to adopt these technologies, making beneficiaries more aware and scope to build good communication with KVK scientists. Age associated with farming experience and education made them to realize the benefits of latest technologies demonstrated through CFLD. Ground level extension personnel should strive hard to support them by bringing awareness and make them understand the benefits of joining the programme.

POLICY IMPLICATION

As the results suggest that social participation is one of the major determining factor in perceiving the CFLD efforts, re-orienting KVK demonstrations into more participatory involving different segments of population such that more exposure and participation enhances the adoption and acceptance of technologies faster

ACKNOWLEDGEMENT

The authors would like to thank Krishi Vigyan Kendra Malyal and Krishi Vigyan Kendra Wyra for their technical and material support which helped in the successful completion of the research. I want to thank Professor Jayashankar Telangana State Agricultural University, for providing me with an opportunity to build my research career.

CONFLICT OF INTEREST

The authors declare that they have no conflict of

interest with this paper and have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Received : September 2025 : Accepted : November 2025