

PROFILE CHARACTERISTICS DETERMINING THE ATTITUDE OF VEGETABLE GROWERS TOWARDS ENTREPRENEURSHIP IN CHENGALPATTU DISTRICT OF TAMIL NADU

P. Jacob Paul Raj¹, R. Sasmitha^{2*}, A. Muhammed Iqshanullah³, K. Sathees Kumar⁴

¹PG Scholar, Department of Agricultural Extension and Communication, SRM College of Agricultural Sciences, SRM Institute of Science and Technology, Baburayenpettai, Chengalpattu, Tamil Nadu-603201, India. Email: jc8988@srmist.edu.in

^{2*}Assistant Professor (Agricultural Extension), Department of Agricultural Extension and Communication, SRM College of Agricultural Sciences, SRM Institute of Science and Technology, Baburayenpettai, Chengalpattu, Tamil Nadu-603201, India.

³Assistant Professor (Agricultural Extension), Department of Agricultural Extension and Communication, SRM College of Agricultural Sciences, SRM Institute of Science and Technology, Baburayenpettai, Chengalpattu, Tamil Nadu-603201, India. Email: muhammea@srmist.edu.in

⁴Assistant Professor (Statistics), Department of Basic Sciences, SRM College of Agricultural Sciences, SRM Institute of Science and Technology, Baburayenpettai, Chengalpattu, Tamil Nadu-603201, India. Email: satheesk@srmist.edu.in

*Corresponding Author Email: sasmithr@srmist.edu.in

ABSTRACT

While a favourable attitude is widely regarded as a precursor to entrepreneurial behaviour, the profile characteristics that shape this attitude among vegetable growers remain under-examined. This study, conducted among 80 vegetable growers of Thiruporur and Tirukazhukundram blocks in Chengalpattu district of Tamil Nadu, examined the association and contribution of eleven profile characteristics, namely age, gender, education, occupation, area under cultivation, annual income, credit orientation, information seeking behaviour, family support, financial support and scientific orientation, to growers' attitude towards vegetable-based entrepreneurship, and further examined the relationship between attitude and actual entrepreneurial behaviour. Data were analysed using Karl Pearson's correlation, multiple linear regression and stepwise regression. Nearly three-fourths of the respondents (72.50%) held a medium level of attitude. Among the profile variables, only credit orientation ($r = 0.286$) and annual income ($r = 0.225$) were significantly and positively associated with attitude at the five per cent level; together, all eleven variables explained only 24.30 per cent of the variation in attitude ($R^2 = 0.243$, $F = 1.982$, $p < 0.05$). When subjected to stepwise regression, credit orientation alone qualified for entry, explaining 8.20 per cent of the variance ($R^2 = 0.082$, $F = 6.945$, $p < 0.05$). Attitude was not significantly correlated with entrepreneurial behaviour ($r = -0.082$, $R^2 = 0.007$, NS). These findings indicate that growers' attitude towards entrepreneurship is shaped more by access to credit and income security than by socio-demographic or psychological traits, and that a favourable attitude alone does not assure a corresponding level of entrepreneurial behaviour, pointing to the need for extension strategies that combine attitude-building with concrete economic-enabling measures.

KEYWORDS: Attitude, Entrepreneurship, Correlates, Multiple regression, Vegetable growers, Chengalpattu, Tamil Nadu

INTRODUCTION

Entrepreneurship in vegetable production is widely promoted as a route to higher farm income, yet its uptake depends on more than access to credit, technology and markets; it depends equally on growers' psychological readiness, of which attitude is a central component. A favourable attitude is generally treated as a necessary precondition for entrepreneurial behaviour, since growers who view entrepreneurship positively are more willing to take risks and invest in value-added activity. However, attitude itself is not uniform across a population, and identifying which profile characteristics shape it is essential if extension efforts are to be targeted efficiently rather than applied uniformly. Among the earliest work in this area, Kumar and Sharma (2009) documented the entrepreneurial behaviour of vegetable growers and found only a partial and inconsistent association with profile characteristics, a pattern later echoed in a large mixed-sampling study of polyhouse vegetable growers in Himachal Pradesh, where farm income, cultivation experience and extension contact emerged as significant correlates of entrepreneurial behaviour while age, family size and gender showed no significant association (Thakur et al., 2025).

Evidence from allied studies indicates that the correlates of entrepreneurial attitude and behaviour are context-specific rather than universal. Among upcountry vegetable farmers in Sri Lanka, entrepreneurial attitude was determined more strongly by educational background and farming experience than by age, gender or extent of farmland (Rosairo & Potts, 2016), suggesting that standard socio-demographic variables do not uniformly predict attitude across settings. In contrast, a study of farmer producer organisation members in Kerala found education, annual income, training, scientific orientation, group cohesion and creativity to be significantly related to entrepreneurial behaviour, while age and credit orientation showed no significant relationship in that context (Jose et al., 2023), underscoring that the same variable can behave quite differently depending on the population and the outcome measured. Socio-economic profile characteristics such as education, land holding, social participation, material possession and annual income were similarly found to be

positively and significantly correlated with entrepreneurial behaviour among vegetable growers in Varanasi district of Uttar Pradesh, while age showed a negative association (Singh et al., 2022). Comparable evidence from Barwani district of Madhya Pradesh (Bhuriya & Gour, 2025) and Bhopal district of the same state (Rai et al., 2014) further affirms that socio-economic standing consistently shapes vegetable growers' entrepreneurial orientation, although the specific characteristics identified as significant vary across locations. Somewhat differently, entrepreneurial behaviour among tribal winter vegetable growers of Jorhat district in Assam was shaped more strongly by social participation and extension contact than by basic economic indicators (Boruah et al., 2016), while a recent structural equation modelling study of Makhana growers in Bihar highlighted the combined influence of market linkage and risk perception over profile characteristics alone (Sonu & Jha, 2025). Financial constraints, including complex loan procedures and high perceived risk, have also been identified as a leading barrier to agripreneurship, ranking above knowledge, personal and psychological constraints among agripreneurs in southern Odisha (Das et al., 2025), which lends weight to the possibility that economic-access variables such as credit orientation could be more decisive for attitude than purely psychological traits. This financial dimension is echoed by evidence from Central Telangana, where credit-related and input-financing constraints ranked among the most severe barriers faced by farm-based agri-input entrepreneurs (Bathini et al., 2021), and from Haryana, where inadequate access to institutional credit was similarly flagged as a major constraint among tomato growers engaged in production and marketing (Anamika et al., 2023).

Scale-development work on agripreneurs' attitude towards the entrepreneurial climate has similarly emphasised that institutional and economic support conditions, alongside individual psychological orientation, jointly shape whether entrepreneurial intention is sustained (Gupta et al., 2022; Gupta et al., 2023). Attitudinal orientation has also been profiled through dedicated scale-development exercises in allied enterprises: tribal dairy farmers' attitude towards dairy entrepreneurship in Chhattisgarh was found to load onto distinct economic and psychological components (Gupta et al., 2020), and a validated scale for vegetable growers' attitude towards safe pesticide application has similarly been standardised to capture the psychological-readiness dimension of vegetable cultivation (Singh et al., 2025), reinforcing that attitude in vegetable-based enterprise is a multidimensional and measurable construct rather than a uniform disposition. Parallel evidence from vanilla growers in Tamil Nadu and Kerala linked favourable orientation towards commercial cultivation with higher entrepreneurial behaviour (Palmurugan et al., 2008), while entrepreneurial behaviour among floriculture nursery owners in Andhra Pradesh was more closely tied to risk orientation and achievement motivation than to basic demographic profile (Bhaskar et al., 2020). Beyond vegetable and vanilla cultivation, entrepreneurial competence among inland fish farmers has been shown to be shaped both directly and indirectly by antecedent socio-economic characteristics (Patel et al., 2023), and a comparative analysis of entrepreneurial success across farm and non-farm sectors similarly emphasised that success is jointly determined by resource access and psychological readiness rather than either factor alone (Kobba et al., 2021). A recent psychometric scale developed specifically for vegetable growers' entrepreneurial behaviour flagged attitude and risk perception as dimensions warranting further district-level investigation (Vineeta et al., 2026), reinforcing the need for the present analysis, while entrepreneurial aptitude among women in an aspirational district of Uttarakhand was found to be constrained more by limited exposure and mobility than by attitude itself (Dutta et al., 2023).

As part of a broader diagnostic study on the entrepreneurial behaviour and attitude of vegetable growers in Chengalpattu district, an initial companion analysis established the overall level of respondents' attitude and confirmed the reliability of the twelve-item Likert scale used to measure it. Building on that foundation, the present paper examines specifically which of the growers' profile characteristics are associated with, and contribute to, their attitude towards vegetable-based entrepreneurship, and whether this attitude corresponds with their actual entrepreneurial behaviour, so as to inform where extension inputs would be best targeted.

METHODOLOGY

The study was conducted in Chengalpattu district of Tamil Nadu. Two major vegetable-growing blocks, Thiruporur and Tirukazhukundram, were purposively selected based on the intensity of vegetable production, and two villages were selected from each block, giving four villages in total. From each village, 20 vegetable growers were selected through stratified random sampling, yielding a total sample of 80 respondents. An ex-post facto research design was used, and data were collected using a pre-tested structured interview schedule administered personally to the respondents.

Eleven profile characteristics of the respondents, namely age, gender, educational status, occupational status, area under vegetable cultivation, annual income, credit orientation, information seeking behaviour, family support, financial support and scientific orientation, were considered as independent variables. Attitude of the respondents towards vegetable-based entrepreneurship, the dependent variable for this analysis, was measured using the same twelve-statement, five-point Likert-type scale used in the companion analysis, and total scores were classified into low, medium and high categories using the mean and standard deviation as cut-off points. Entrepreneurial behaviour, used here as a second dependent variable in the last section of the analysis, was measured using a validated multi-dimensional entrepreneurial behaviour scale administered to the same respondents.

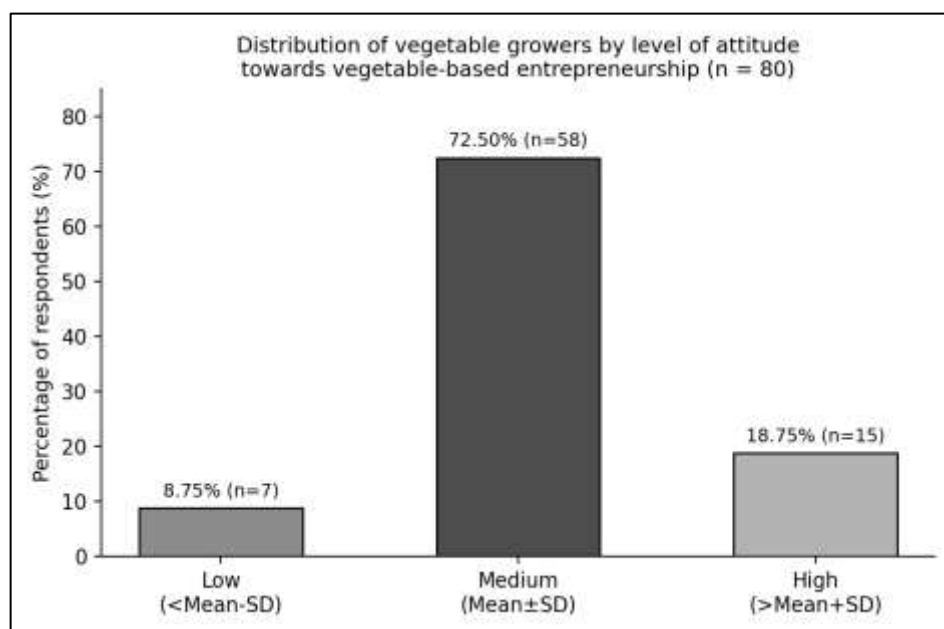
Karl Pearson's simple correlation and multiple linear regression (enter method) were used to examine the association and joint contribution of the eleven profile characteristics to attitude, and stepwise multiple regression was additionally used to identify the smallest subset of variables that best explained the variation in attitude. Simple correlation and simple linear regression were used to examine the relationship between attitude and entrepreneurial behaviour scores.

RESULTS AND DISCUSSION

Overall Level of Attitude towards Entrepreneurship

Table 1. Distribution of respondents based on their level of attitude towards vegetable-based entrepreneurship (n = 80)

S.No.	Category	Frequency (n)	Percentage (%)
1.	Low level of attitude	7	8.75
2.	Medium level of attitude	58	72.50
3.	High level of attitude	15	18.75
	Total	80	100.00



Nearly three-fourths of the respondents (72.50%) held a medium level of attitude towards vegetable-based entrepreneurship, while 18.75 per cent showed a high level and only 8.75 per cent recorded a low level, as summarised in Table 1 and Figure 1. This concentration in the medium category, rather than at either extreme, suggests that vegetable growers in the study area are broadly receptive to entrepreneurship in principle but have not yet consolidated a strongly committed orientation towards it, a pattern that mirrors the moderate favourability found among upcountry vegetable farmers in Sri Lanka rather than a sharply polarised distribution (Rosairo & Potts, 2016). The comparatively small share of growers with a low level of attitude is nonetheless an encouraging base on which targeted extension inputs could build.

Correlation of Profile Characteristics with Attitude

Table 2. Correlation and multiple regression of profile characteristics of the respondents with their attitude towards vegetable-based entrepreneurship (n = 80)

Var. No.	Variable	'r' value	Sig.	'b' value	S.E.	't' value	Sig.
X1	Age	0.017	NS	0.019	0.696	0.027	NS
X2	Sex	0.000	NS	0.413	0.751	0.550	NS
X3	Education	0.115	NS	0.581	0.299	1.945	NS
X4	Occupation	0.094	NS	0.249	0.332	0.749	NS
X5	Area	0.186	NS	-0.292	0.394	-0.743	NS
X6	Annual Income	0.225	*	0.000	0.000	1.429	NS
X7	Credit Orientation	0.286	*	1.191	0.456	2.613	*
X8	Info Seeking Behaviour	-0.121	NS	-0.354	0.189	-1.870	NS
X9	Family Support	0.029	NS	0.930	0.398	2.340	*
X10	Financial Support	-0.135	NS	-0.099	0.131	-0.755	NS
X11	Scientific Orientation	-0.041	NS	-0.050	0.215	-0.230	NS

$R^2 = 0.243$; $F(11, 68) = 1.982^*$; Constant (α) = 28.118. * Significant at 5% level of probability ($p < 0.05$); NS = Non-significant.

Of the eleven profile characteristics examined, only credit orientation (X7) and annual income (X6) showed a statistically significant positive correlation with attitude, at the five per cent level ($r = 0.286$ and $r = 0.225$, respectively). None of the remaining nine variables, namely age, gender, education, occupation, area under cultivation, information seeking behaviour, family support, financial support and scientific orientation, was significantly related to attitude. The significant association of credit orientation with attitude is consistent with the reasoning that a favourable disposition towards

institutional credit itself reflects a risk-accepting, growth-oriented mindset that overlaps conceptually with a positive attitude towards enterprise, and aligns with evidence that financial constraints, including complex loan procedures, rank among the most severe barriers perceived by agripreneurs elsewhere (Das et al., 2025), a pattern corroborated by the credit-related constraints reported among farm-based agri-input entrepreneurs in Telangana (Bathini et al., 2021) and tomato growers in Haryana (Anamika et al., 2023). The positive association of annual income with attitude similarly suggests that respondents with a stronger economic base are better placed to view vegetable-based enterprise as a viable proposition, a finding broadly consistent with the positive income-related correlations reported for vegetable growers in Varanasi (Singh et al., 2022) and for polyhouse vegetable growers in Himachal Pradesh (Thakur et al., 2025). Notably, this pattern contrasts with findings among farmer producer organisation members in Kerala, where credit orientation showed no significant relationship with entrepreneurial behaviour (Jose et al., 2023), suggesting that the same variable can operate differently depending on whether attitude or actual behaviour is the outcome being explained.

Contribution of Profile Characteristics to Attitude

The coefficient of multiple determination (R^2) for attitude worked out to 0.243, indicating that the eleven independent variables together explained only 24.30 per cent of the variation in attitude towards vegetable-based entrepreneurship. Although modest, the overall regression model was statistically significant ($F = 1.982$, $p < 0.05$), indicating that the profile characteristics as a set carried some explanatory value even though most individual variables did not contribute significantly on their own. Two variables contributed significantly even after the other variables were held constant: credit orientation ($b = 1.191$, $t = 2.613$, $p < 0.05$) and family support ($b = 0.930$, $t = 2.340$, $p < 0.05$). Family support, though not significantly correlated with attitude at the zero-order level ($r = 0.029$), emerged as a significant positive predictor once the other variables were controlled for, suggesting that its influence on attitude operates jointly with, and is partly masked by, the other variables until they are accounted for. This is consistent with the proposition that a supportive family climate lowers the perceived social and psychological cost of pursuing an enterprise, echoing the emphasis placed on family and institutional support in shaping agripreneurial climate elsewhere (Gupta et al., 2023), and aligning with evidence that social participation and family-linked social capital contributed meaningfully to entrepreneurial behaviour among tribal vegetable growers in Assam (Boruah et al., 2016) and to entrepreneurial success more broadly across farm and non-farm sectors (Kobba et al., 2021).

Stepwise Regression Analysis

Table 3. Stepwise regression of profile characteristics on the attitude of the respondents (n = 80)

Variable	B	S.E.	Beta	t	Sig.	Zero-order r	Partial r	Part r
Credit Orientation (X7)	1.070	0.406	0.286	2.635	*	0.286	0.286	0.286

Constant (α) = 27.128; $R^2 = 0.082$; Adjusted $R^2 = 0.070$; $F(1, 78) = 6.945^*$. * Significant at 5% level of probability.

When stepwise regression was applied, only credit orientation (X7) qualified for entry into the equation at the five per cent level of significance; none of the remaining ten variables added a statistically significant increment once credit orientation had entered the model. Credit orientation alone explained 8.20 per cent of the variation in attitude ($R^2 = 0.082$, $F = 6.945$, $p = 0.010$), with the fitted equation $Y = 27.128 + 1.070X7$. The comparatively weak explanatory power of this stepwise model indicates that attitude towards vegetable-based entrepreneurship in the study area is influenced substantially by factors lying outside the eleven profile variables considered here, such as prior enterprise exposure, peer influence and prevailing market conditions, a possibility also raised in relation to the education- and experience-driven attitudes observed among upcountry vegetable farmers in Sri Lanka (Rosairo & Potts, 2016), and consistent with the primacy of credit access repeatedly documented among agripreneurs in South India and elsewhere (Das et al., 2025; Bathini et al., 2021).

Relationship between Attitude and Entrepreneurial Behaviour

Table 4. Distribution of respondents based on their level of entrepreneurial behaviour towards vegetable-based entrepreneurship (n = 80)

S.No.	Category	Frequency (n)	Percentage (%)
1.	Low level of entrepreneurial behaviour	11	13.75
2.	Medium level of entrepreneurial behaviour	58	72.50
3.	High level of entrepreneurial behaviour	11	13.75
	Total	80	100.00

Entrepreneurial behaviour of the respondents, measured across ten components, namely risk orientation, innovativeness, economic motivation, decision-making ability, leadership ability, achievement motivation, planning orientation, self-confidence, perseverance and resilience, was similarly classified into low, medium and high categories using the mean and standard deviation as cut-off points. As shown in Table 4, nearly three-fourths of the respondents (72.50%) recorded a medium level of entrepreneurial behaviour, while 13.75 per cent each fell into the low and high categories. This

distribution closely mirrors the pattern observed for attitude in Table 1, with the bulk of respondents clustered in the medium category at both stages, setting the context for examining whether the two variables are correspondingly related.

Table 5. Relationship between attitude and entrepreneurial behaviour of the respondents (n = 80)

Relationship	'r' value	Sig.	'b' value	S.E.	't' value	Sig.	R ²
Attitude → Entrepreneurial Behaviour	-0.082	NS	-0.306	0.421	-0.726	NS	0.007

F (1, 78) = 0.527, NS; Constant (α) = 144.554. NS = Non-significant at 5% level of probability.

The correlation between attitude and entrepreneurial behaviour was negative and statistically non-significant ($r = -0.082$, $p = 0.470$), and the simple linear regression of entrepreneurial behaviour on attitude was likewise non-significant ($t = -0.726$, $p = 0.470$), with attitude explaining less than one per cent of the variation in entrepreneurial behaviour ($R^2 = 0.007$). This indicates that holding a more favourable attitude towards vegetable-based entrepreneurship was not, by itself, associated with a correspondingly higher level of actual entrepreneurial behaviour among the respondents. This finding, while counter-intuitive at first glance, is not unusual: a favourable attitude is generally recognised as a necessary but not a sufficient condition for translating intention into overt entrepreneurial action, with the gap commonly bridged, or not, by the possession of adequate resources, skills, opportunity and support, of the kind captured separately by the profile variables examined in this paper. This is broadly consistent with the observation that a favourable entrepreneurial attitude among vegetable farmers did not always correspond with a matching level of demonstrated entrepreneurial behaviour (Rosairo & Potts, 2016), with the constrained translation of aptitude into practice reported among women agripreneurs in Uttarakhand (Dutta et al., 2023), and with the emphasis placed on market linkage and risk perception, over attitude alone, in explaining actual entrepreneurial engagement among Makhana growers in Bihar (Sonu & Jha, 2025).

CONCLUSION

Vegetable growers in Chengalpattu district hold a broadly moderate-to-favourable attitude towards entrepreneurship, but this attitude is shaped mainly by economic-access characteristics, credit orientation and annual income, rather than by socio-demographic or psychological traits. Family support additionally emerged as a significant contributor once other variables were controlled for, although its independent zero-order association with attitude was weak. Even collectively, the profile characteristics examined explained only about a quarter of the variation in attitude, and credit orientation alone, identified through stepwise regression, accounted for most of this explained variance, pointing to unmeasured contextual factors such as market conditions and peer influence as important further determinants. Most notably, attitude was not significantly related to entrepreneurial behaviour, reaffirming that a favourable disposition towards enterprise does not automatically translate into entrepreneurial action. Extension strategies aimed at strengthening vegetable growers' entrepreneurship should therefore combine attitude-building efforts with concrete economic-enabling measures, particularly improved access to credit and family-inclusive extension approaches, to help bridge the gap between favourable attitude and actual entrepreneurial behaviour.

REFERENCES

1. Anamika, Ghalawat, S., Goyal, M., Malik, J. S., & Bishnoi, D. K. (2023). Constraints faced by tomato growers at production and marketing level in Haryana. *Indian Journal of Extension Education*, 59(2), 142–145. <https://doi.org/10.48165/IJEE.2023.59232>
2. Bathini, S., Jirli, B., & Manasa, K. (2021). Constraints faced by farm-based agri-input entrepreneurs in Central Telangana region. *Asian Journal of Agricultural Extension, Economics & Sociology*, 39(12), 94–101. <https://doi.org/10.9734/ajaees/2021/v39i1230810>
3. Bhaskar, M. U., Rao, M. S., & Sathya Gopal, P. V. (2020). Entrepreneurial behaviour of commercial floriculture nursery owners in Kadiyam of Andhra Pradesh. *Indian Journal of Extension Education*, 55(4), 1–6.
4. Bhuriya, R., & Gour, C. L. (2025). Entrepreneurial behaviour of vegetable farmers in Barwani district of Madhya Pradesh, India. *Journal of Experimental Agriculture International*, 47(6), 221–228. <https://doi.org/10.9734/jeai/2025/v47i63483>
5. Boruah, R., Borua, S., Deka, C. R., & Borah, D. (2016). Entrepreneurial behavior of tribal winter vegetable growers in Jorhat district of Assam. *Indian Research Journal of Extension Education*, 15(1), 65–69.
6. Das, N., Modak, S., Prusty, A. K., Saha, P., & Suman, S. (2025). Understanding and overcoming key challenges of agripreneurs in southern Odisha: A case study. *Indian Journal of Extension Education*, 61(2), 118–122. <https://doi.org/10.48165/IJEE.2025.612RN05>
7. Dutta, A., Singh, P., Dobhal, A., Mannan, D., Singh, J., & Goswami, P. (2023). Entrepreneurial aptitude of women of an aspirational district of Uttarakhand. *Indian Journal of Extension Education*, 59(2), 103–107.
8. Gupta, R. K., Saha, A., Tiwari, P. K., Dhakre, D. S., & Gupta, A. (2020). Attitudes of tribal dairy farmers towards dairy entrepreneurship in Balrampur district of Chhattisgarh: A principal component analysis. *Indian Journal of Extension Education*, 56(1), 59–63.
9. Gupta, S. K., Nain, M. S., Singh, R., & Mishra, J. R. (2022). Development of scale to measure agripreneurs' attitude towards entrepreneurial climate. *Indian Journal of Extension Education*, 58(2), 153–157. <https://doi.org/10.48165/IJEE.2022.58237>
10. Gupta, S. K., Nain, M. S., Singh, R., Mishra, J. R., & Lata, A. (2023). Exploring the entrepreneurial climate and attributes of agripreneurs and its determinants. *Indian Journal of Extension Education*, 59(2), 93–97.

<https://doi.org/10.48165/IJEE.2023.59220>

11. Jose, A. E., Jayalekshmi, G., Lade, A. H., & Karde, R. (2023). Socio-psychological constructs and perceived economic variables on entrepreneurial behavior among farmer producer organization members in Kerala: A comprehensive analysis. *Asian Journal of Agricultural Extension, Economics & Sociology*, 41(9), 241–250. <https://doi.org/10.9734/ajaees/2023/v41i92036>
12. Kobba, F., Nain, M. S., Singh, R., & Mishra, J. R. (2021). Determinants of entrepreneurial success in farm and non-farm sectors: A comparative analysis. *Indian Journal of Agricultural Sciences*, 91(2), 269–273.
13. Kumar, S., & Sharma, G. (2009). Entrepreneurial behaviour of vegetable growers. *Indian Journal of Extension Education*, 45(1&2), 125–127.
14. Palmurugan, M., Jhamtani, A., & Padaria, R. N. (2008). Entrepreneurial behaviour of vanilla growers of Tamil Nadu and Kerala. *Indian Journal of Extension Education*, 44(1&2), 58–64.
15. Patel, P. C., Patel, J. K., & Macwan, J. K. (2023). Direct and indirect effect between antecedent characteristics of inland fish farmers and their entrepreneurial competence. *Gujarat Journal of Extension Education*, 36(1), 65–67. <https://doi.org/10.56572/gjoe.2023.36.1.0012>
16. Rai, D. P., Singh, S. K., & Dang, J. S. (2014). A study on entrepreneurial behaviour of vegetable growers in Bhopal district of M.P. *Agriculture Update*, 9(3), 368–372.
17. Rosairo, H. S. R., & Potts, D. J. (2016). A study on entrepreneurial attitudes of upcountry vegetable farmers in Sri Lanka. *Journal of Agribusiness in Developing and Emerging Economies*, 6(1), 39–58. <https://doi.org/10.1108/JADEE-07-2014-0024>
18. Singh, A., Singh, D., Yadav, R. N., Singh, D. K., Prakash, S., & Singh, A. (2022). Socio-economical profile and its correlation with entrepreneurial behaviour of vegetable growers in Varanasi district of Uttar Pradesh. *Asian Journal of Agricultural Extension, Economics & Sociology*, 40(11), 448–454. <https://doi.org/10.9734/ajaees/2022/v40i111730>
19. Singh, P., Ghadei, K., Roy, S., Halder, J., Kumari, J., & Paliwal, H. (2025). Development and standardization of a scale to measure vegetable growers' attitude towards safety measures in pesticide application. *Indian Journal of Extension Education*, 61(4), 185–189. <https://doi.org/10.48165/IJEE.2025.614RT06>
20. Sonu, K., & Jha, K. K. (2025). Understanding entrepreneurial behaviour of Makhana growers in Bihar using SEM-PLS approach. *Indian Journal of Extension Education*, 61(2), 62–66.
21. Thakur, N., Sharma, R., Thakur, P., Shilpa, Chaturvedi, A., Khushwaha, R., Pani, S. K., Yadav, V. K., Singh, A. G., Sharma, A., & Sharma, P. (2025). Exploring the entrepreneurial behavior of vegetable growers: influential factors and implications for agricultural development. *Frontiers in Sustainable Food Systems*, 9, 1512414. <https://doi.org/10.3389/fsufs.2025.1512414>
22. Vineeta, Prusty, A. K., Padhy, C., Raj, R. K., & Ray, S. (2026). Psychometric scale development for the measurement of entrepreneurial behaviour of vegetable growers. *Indian Journal of Extension Education*, 62(2), 161–165. <https://doi.org/10.48165/IJEE.2026.622RT05>