www.ThePharmaJournal.com

The Pharma Innovation

Dr. Komal Chandraker
Veterinary Assistant Surgeon,
Gariyaband, Chhattisgarh, India

Dr. Alok Kumar Pandey
University Professor, Birsa
Agriculture University, Ranchi,
Jharkhand, India

Factors affecting adoption of improved goat rearing practices in Jharkhand & Chhattisgarh

Dr. Komal Chandraker and Dr. Alok Kumar Pandey

Abstract
To transform a traditional goat farmer into an entrepreneur, certain specific traits are necessary. A study was conducted to identify the key factors influencing the adoption of improved goat management practices by entrepreneurs. The study took place in Jharkhand and Chhattisgarh, with three agroclimatic regions in each state. Sixty large commercial goat farmers from different districts participated in the study. The analysis focused on socio-economic and entrepreneurial characteristics to understand their impact on the adoption of improved goat management practices. The results showed that 82.8% of the variation was influenced by five significant predictor variables: self-confidence, total risk orientation, decision-making ability, innovativeness, and exposure to mass media. To make this transformation into reality, extension officers, veterinary personnel, Grampanchayats, and other related functional units must play a crucial role in supporting and shaping this endeavor.

Keywords: Entrepreneur, adoption, goat rearing practices, predictor variable

Introduction
Livestock husbandry has been a long-standing agricultural activity in rural India, alongside traditional farming. It is a crucial sub-sector that contributes significantly to employment and the Indian economy. The livestock sector accounts for around 4.11% of the country's Gross Domestic Product (GDP) (Basic animal husbandry statistics, 2019) [1].

In India, goat farming has transformed from an unorganized sector into a well-structured industry. The demand for goat products is steadily increasing in both domestic and international markets, turning it into a thriving export business and a significant income source for the Indian economy. Factors such as a growing awareness of health, shifting socio-economic dynamics, and an expanding middle-class population with greater disposable income have created a strong market for livestock products. As a result, numerous entrepreneurs have entered the goat rearing business on a commercial level, playing a vital role in the industry's growth.

Becoming a livestock entrepreneur requires certain entrepreneurial traits such as innovation, identifying opportunities, resource mobilization, and perseverance to achieve goals. Entrepreneurship is not limited to specific classes or genders but can be developed and mastered through sincere efforts and training.

Entrepreneurship programs play a crucial role in boosting economies of various nations, particularly amid agriculture's current challenges like policy reforms, climate change, limited budgets, evolving social and economic conditions, and new global markets. Encouraging entrepreneurship among farmers is essential for agricultural development and survival in this changing landscape (Kobba *et al*., 2020) [6].

Nieman (2000) [8] defines an entrepreneur as someone who identifies market opportunities, gathers resources, initiates and grows a business venture to meet those needs, and takes the risk of the venture with the hope of earning profit upon success. This study aims to analyze the socio-economic and entrepreneurial behavior of livestock owners and its influence on the adoption of improved goat management practices.

Material and Methods
The study was conducted in the states of Jharkhand and Chhattisgarh, India. These states were chosen due to their similar agroclimatic conditions. From each region within the states, specific districts were randomly selected: Ranchi, Deoghar, and Saraikela Kharsawan in Jharkhand, and Bastar, Mahasamund, and Surguja in Chhattisgarh.

Corresponding Author:
Dr. Komal Chandraker
Veterinary Assistant Surgeon,
Gariyaband, Chhattisgarh, India

The list of commercial goat farmers was compiled from various departments and organizations. A total of 60 large commercial goat farmers were selected from six districts in two states based on the criterion of having 20 or more goats. These farmers were then divided into two groups: Entrepreneurs and Conventional large livestock farmers. Entrepreneurs were characterized by implementing innovations, engaging in commercialization, and receiving awards or recognition for their work. For the analysis, 42 conventional goat farmers and 18 goat entrepreneurs were chosen.

The study assessed the socio-economic and entrepreneurial characteristics of the respondents using frequency percentile distribution. To identify the significant predictor variables influencing the adoption of improved goat management practices, stepwise multiple regression with backward elimination was employed. In total, 25 independent variables were considered, including factors like age, education, family type and size, social participation, occupations, family income rank, livestock possession, training received, credit utilization, rearing experience, marketing channel, information sources, land holding, mass media exposure, extension contact, innovativeness, achievement motivation, decision-making ability, total risk orientation, coordinating ability, planning ability, cosmopoliteness, and self-confidence. The study focused on measuring the adoption of improved goat management practices and its correlation with the identified independent variables.

Results and Discussion

In this study, various socioeconomic and entrepreneurial factors were analyzed using stepwise regression to determine their impact on the adoption level. The backward elimination technique was applied until only the significant factors affecting the adoption level of improved goat husbandry practices were identified.

Table 1 shows that initially, all 25 predictors together explained 88.7% of the total variation in the adoption level. However, after removing 20 variables, five variables were retained, and the final R square value was 0.828, indicating that these five significant predictor variables had an 82.8% influence on the adoption level (as shown in Table 2). These important predictors were self-confidence, total risk orientation, decision-making ability, innovativeness, and mass media exposure.

Self-confidence emerged as a crucial predictor for better adoption of innovations. Having a well-thought-out business plan from the beginning helps entrepreneurs prepare for potential challenges in the future. Similar findings were observed by Kiran et al. (2012) [5] and Lawrence and Ganguly (2012) [7].

Higher risks often come with the potential for higher rewards. By taking calculated risks, entrepreneurs can position themselves to achieve greater profitability and financial success in their goat farming business. Risk-taking inherently involves the possibility of failure. However, failure can be a valuable learning experience that helps entrepreneurs build resilience, learn from mistakes, and improve their decision-making processes. In goat farming, vital decisions include selecting breeding stock to improve genetic quality, impacting productivity and disease resistance. Informed choices about feed, supplements, and nutrition ensure balanced diets for growth and productivity. Effective decision-making for biosecurity prevents disease spread. Market and sales strategies influence demand and profitability, requiring assessment of trends, pricing, and distribution channels. Overall decision taking ability influence other components of entrepreneurial quality within a farmer. Emphasizing innovativeness encourages investment in research and development, leading to advancements in goat farming knowledge and practices. Frequent exposure to mass media helped in higher adoption index. Pre arguments could be that these factors predispose the farmers to interact with the external world, permitting a likely increase in the inflow of new ideas and thus act in a progressive way. The findings are in conformity with Godara and Bhimawat (2012) [2]; Gulkari et al., (2014) [4] & Gupta and Sharma (2020) [3].

Table 1: Stepwise multiple regression on adoption of improved goat husbandry practices

Model/step no	Variables removed	Name of the Variable	R	R square	R square change
1			.942	.887	.887
2	Education	X2	.942	.887	.000
3	Social participation	X5	.942	.887	.000
4	Secondary occupation	X7	.942	.887	.000
5	Family size	X4	.941	.886	.000
6	Primary occupation	X6	.941	.886	.000
7	Achievement motivation	X19	.941	.885	-.001
8	Extension contact	X17	.940	.884	-.001
9	Planning ability	X23	.939	.882	-.002
10	Livestock possession	X9	.938	.880	-.003
11	Information sources	X14	.935	.874	-.006
12	Coordinating ability	X22	.931	.867	-.007
13	Cosmo politeness	X24	.929	.862	-.005
14	Land holding	X15	.927	.859	-0.009
15	Marketing channel	X13	.925	.856	-0.003
16	Rearing experience	X 12	.924	.854	-0.002
17	Credit utilization	X11	.918	.843	-0.011
18	Training received	X10	.917	.841	-0.002
19	Family income rank	X8	.915	.837	-0.004
20	Family type	X3	.915	.837	-0
21	Age	X1	.910	.828	-0.011

r = Correlation coefficient, r square = coefficient of determination

Table 2: Independent predictor variables for adoption of improved goat husbandry practices

Parameter	Name of the variable	p-value	S.E of b	t-value
(Constant)		7.849	2.494	3.148
Self confidence	X25	.582	.156	3.725
Total risk orientation	X21	.217	.081	2.677
Decision making ability	X20	.237	.071	3.363
Innovativeness	X18	.430	.061	7.048
Mass media exposure	X16	.218	.077	2.831

R=.910, R2=.828, F=22.140

Y= 7.849+X25*0.582+X21*0.217+X20*0.237+X18*(0.430)+X16*0.218

b = coefficient of regression, t = value of paired t test

Conclusion
Livestock farming is undergoing a significant transformation, shifting from being an allied agricultural activity to a mainstream industrial venture. Improved goat husbandry and breeding practices are now ensuring profitable returns for goat farmers. With the support of technology and logistics, product shelf life has been extended, leading to increased income for entrepreneurs. To fully leverage existing infrastructure and establish a strong business model, traditional farmers must undergo a necessary transformation. The journey from a traditional goat farmer to an entrepreneur involves various factors, but the key predictor variables in this transformation are self-confidence, total risk orientation, decision-making ability, innovativeness, and exposure to mass media. These factors play a crucial role in determining the success of the shift towards becoming an entrepreneur in the goat farming industry. While providing training to the farmers, exposure to above variables must be taken into account.

References
1. Basic animal husbandry statistics. Ministry of Agriculture. Department of Animal Husbandry, Dairying and Fisheries. New Delhi; c2014-2019.
2. Godara S, Bhimawat BS. Information sources and channels utilization pattern by the farm women for technical knowledge of wheat production technology. Rajasthan Journal of Extension Education. 2012;20(2):164-166.
3. Gupta RM, Sharma P. SWOT analysis of online teaching during lock down: Blended teaching the way forward, Indian Journal of Extension Education. 2020;56(4):19-25.
4. Gulkari KD, Nethravathi G, Phodiyil OV, Gade Y. Profile analysis of dairy farm women in adoption of scientific practices. International Journal of Agriculture Extension. 2014;2(3):159-163.
5. Kiran De. D, Gupta BK, Pandey DK. Entrepreneurial behaviour in rural women of Sultanpur district of Uttar Pradesh. Indian Research Journal of Extension Education. 2012;12(2):29-33.
6. Kobba F, Nain MS, Singh R, Mishra JR, Shitu GA. Entrepreneurial Profile and Constraint Analysis of Farm and Non-farm Sectors Entrepreneurial Training Programmes in Krishi Vigyan Kendra and Rural Development & Self Employment Training Institute. Indian Journal of Extension Education. 2020;56(3):17-26.
7. Lawrence C, Ganguly D. Entrepreneurial behaviour of dairy farmers in Tamil Nadu. Indian Research Journal of Extension Education. 2012;12(1):66-70.
8. Nieman GH. Study guide for M. Phil. in entrepreneurship and small business management. Department of Business Management, University of Pretoria, Pretoria; c2000.