



Entrepreneurial Skills Development : A Step Forward Towards Sustainable Rural Development

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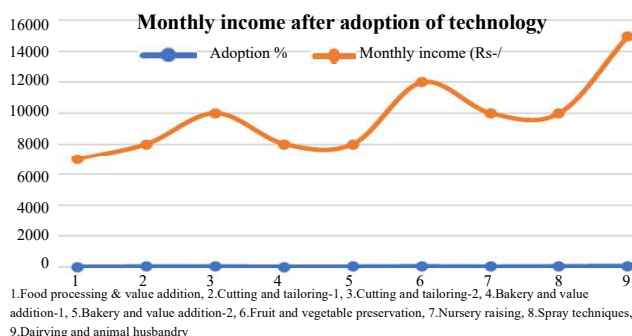
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HIGHLIGHTS

- Conducted lab and field demonstrations of technology and providing information on scientific components of diversified agripreneurship increased the post-knowledge of trainees significantly
- Addressed the key contents and necessary steps for the establishment of agripreneurial setup on diversified agricultural technologies
- Tested utility of deliverables of trainings and identified products; and collected feedback on adoption of technology

GRAPHICAL ABSTRACT



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ABSTRACT

Context: Entrepreneurship is one of the key drivers for economic development. The Central and State governments are putting their prodigious efforts into promoting entrepreneurship among the younger.

Objective: This study aimed to assess the impact of nine vocational trainings on skill development and income generation among rural youth and women.

Methods: This study was conducted in the Faridabad district purposively. Nine pieces of training were imparted to 270 respondents under the scheme 'Skill development of SC/ST farmers of Haryana for improvement of livelihood' at Krishi Vigyan Kendra, Faridabad during 2022-2023. Each vocational training was conducted for five days having 30 respondents in a group. Feedback was collected on pre and post-training exposure and their post-training involvement in entrepreneurial activities and earnings.

Results and Discussion: Results indicated that the knowledge score of respondents at baseline ranged from 0.32 ± 0.21 to 0.70 ± 0.41 which increased significantly ($p \leq 0.05$) after exposure to five days of training in various disciplines and ranged from 1.00 ± 0.32 to 1.80 ± 0.57 . As a result, there was a significant gain in awareness and knowledge regarding nursery raising practices, preserved products of fruits and vegetables, value-added and diverse baked and dairy products, loan process, govt. aided programs and schemes at KVK, spray techniques, cutting and tailoring products, and packaging and marketing of developed products. A significant earning between Rs./-8000 to 12000 thousand was observed among the trainees after training exposure and an entrepreneur adoption was observed among 45.0 to 58.0 percent of the trainees.

Significance: Offering training on skill development turns on the avenues of income generation and improving livelihood at the local level.

Entrepreneurship is one of the key drivers for economic development as it appears to be the best substitute for finding employment opportunities, income generation, poverty reduction, and improvements in nutrition, health, and overall food security. Entrepreneurship development is the driving force of the socio-economic growth of any nation as the establishment of micro or household industries in rural areas can break the cycle of poverty and ensure food safety and a way to decent livelihood by employing rural youth, women, farmers, and landless people. Agriculture is the principal means of livelihood for the Indian population since a large segment of the population is engaged in farming and allied activities. Food processing enhances the shelf life of food. In this way, entrepreneurship in food processing and value addition is emerging as a solution to rural migration, rural unemployment, rural poverty, and food insecurity among the rural population (Narayan *et al.*, 2018). The integration of the principle of entrepreneurship in agriculture is called agripreneurship, and it has emerged as a transformative approach to achieving sustainable rural and economic development in India. In a previous study, Arumugam and Manida (2023) revealed that agripreneurship offers a promising solution by encouraging farmers to adopt innovative practices, value-addition techniques, and market-oriented approaches (Sharma *et al.*, 2014). By becoming agripreneurs, farmers can not only enhance their income but also contribute to overall economic growth. Agripreneurship aligns with this goal by promoting sustainable agricultural practices that minimize environmental degradation, conserve natural resources, and promote biodiversity (Kaur *et al.*, 2022). Imparting vocational training is important to ensure availability of skilled workforce at all management levels, enhancing ability potential among entrepreneurs, increase efficiency, maintain and enhance product quality, minimize wastages in the production process, reduce fatigue and increase the speed of work' (Sawale and Karpe, 2019; Spandana *et al.* 2023).

'The process of skill development may be defined as the training imparted by the institutions or government to improve the skill, quality of work, and efficiency of the entrepreneurs at the workplace. Chaudhary (2017) concluded in her study that 'women are willing to take up business and contribute to the nation's growth. Their role is being recognized and steps are taken to promote women's entrepreneurship.

The resurgence of entrepreneurship is the need of the hour. Women entrepreneurs must be molded properly with entrepreneurial traits and skills to meet changing trends and challenging global markets, and also be competent enough to sustain and strive in the local economic arena (Dutta *et al.*, 2023; Spandana *et al.*, 2023). Skill development will be the key factor for empowering the women.' Considering the potential role of agripreneurship and entrepreneurship in achieving sustainable rural and economic development this study was planned to assess the impact of vocational trainings on income generation among rural unemployed youth and women.

METHODOLOGY

This study was conducted in the Faridabad district (Latitude 28.38221900 Longitude 77.30309300) of Haryana state purposively. Thirty villages were selected randomly for the selection of unemployed rural youth and women. Two hundred and ten women between the ages of 20 to 40 years and sixty men between the ages of 18 to 30 years belong to SC/ST families and are interested in bakery, value addition, cutting and tailoring, nursery raising, fruits, and vegetable preservation, dairy farming, and spray techniques were selected for the study and divided into nine groups of either 30 women or rural youth in each.

To observe the effect of training knowledge score of trainees was collected before and after training exposure and the gain in knowledge was calculated. Training utility was measured by getting the response of trainees for 21 items related to training on a four-point continuum i.e., very useful, useful, undecided, and not useful with scores assigned 4, 3, 2, and 1 respectively. Adoption of technology has been indicated in percentage. The mean of the monthly



Location of study area district Faridabad

income (Rs./-) has been given in approx. unit. Data was analyzed statistically using SPSS software to get the results in a sensible order.

RESULTS

Results presented in Table 1 indicated that pre and post-training knowledge scores of and gain in knowledge by the trainees under various domains. The results of the first domain i.e. food processing and value addition indicated that the pre-training score of grain processing was found to be 0.51 and that was increased to 1.72 after imparting live demonstrations and lectures on various technologies such as soaking, roasting, and popping of grains, germination of grains, fermented products and blanching of grains. Similarly, the knowledge score of trainees increased from 0.34

to 1.61 regarding the value addition of traditional products. Food-to-food fortification and a combination of processing methods during product development were used to improve the nutritional value of developed products. Further, it was observed that the knowledge score of storage of ingredients and developed products was increased from 0.67 to 1.54. Results presented in Table 1 indicated a significant improvement in the knowledge score of home furnishing and decorative items and making of soft toys and bags and these were increased to 1.75 and 1.63, respectively. The post-training knowledge score of paper pattern and drafting and cost calculation of developed products were also increased to 1.55 and 1.49, respectively. The consumption trend of bakery products is increasing day by day as these products appeal to people of all

Table 1. Impact of training on trainees's knowledge regarding scientific components of different training programs

Knowledge contents	Pre-training score	Post-training score	Gain in knowledge	t value
<i>Food processing & value addition</i>				
Cereals, pulses & oil seeds processing	0.51 ± 0.11	1.72 ± 0.23	1.21	13.5**
Value addition of traditional products	0.34 ± 0.14	1.61 ± 0.28	1.27	11.7**
Storage of ingredients & developed products	0.67 ± 0.16	1.54 ± 0.14	0.87	9.8**
<i>Cutting and tailoring -1</i>				
Home furnishing and decorative items	0.66 ± 0.18	1.75 ± 0.41	1.09	12.4**
Making of soft toys and bags	0.33 ± 0.15	1.63 ± 0.39	1.30	9.4**
<i>Cutting and tailoring-2</i>				
Paper pattern and drafting	0.32 ± 0.21	1.55 ± 0.57	1.23	13.2**
Cost calculation of developed products	0.36 ± 0.18	1.49 ± 0.32	1.13	10.6**
<i>Bakery and value addition-1</i>				
Understanding of raw ingredients	0.43 ± 0.15	1.65 ± 0.38	1.22	8.30**
Preparation of biscuits and cakes	0.51 ± 0.18	1.35 ± 0.29	0.84	9.20**
<i>Bakery and value addition-2</i>				
Functions of various ingredients in bakery	0.61 ± 0.23	1.80 ± 0.57	1.19	7.10**
Preparation of cookies and muffins	0.30 ± 0.17	1.53 ± 0.33	1.23	8.50**
<i>Fruit and vegetable preservation</i>				
Fruit and vegetable processing	0.70 ± 0.41	1.75 ± 0.31	1.05	8.40**
Preserved products of fruits	0.59 ± 0.29	1.70 ± 0.42	1.11	10.7**
Preserved products of vegetables	0.51 ± 0.21	1.65 ± 0.28	1.14	9.62**
<i>Nursery raising</i>				
Nursery raising of flower & ornamental plants	0.57 ± 0.25	1.00 ± 0.32	0.43	9.10**
Hi-Tech nursery production	0.48 ± 0.23	1.49 ± 0.47	1.01	7.30**
<i>Spray techniques</i>				
Weed management in Kharif and Rabi crops	0.63 ± 0.53	1.65 ± 0.56	1.02	7.20**
Weed management in flowers and vegetable crops	0.69 ± 0.34	1.73 ± 0.46	1.04	8.70**
<i>Dairying and animal husbandry</i>				
Value addition & marketing of milk products	0.38 ± 0.12	1.53 ± 0.52	1.15	10.70**
Diseases of dairy animals & their control	0.46 ± 0.15	1.48 ± 0.58	1.02	12.50**
Feeding management in dairying animals	0.70 ± 0.39	1.78 ± 0.62	1.08	9.30**

Values are mean ± SD; ** Significant at 1% level; * Significant at 5% level

age groups. The respondents were found very keen to learn the preparation of bakery products. The post-training knowledge score of understanding raw bakery ingredients, preparation of biscuits and cakes, functions of various ingredients in the bakery, and preparation of cookies and muffins were increased to 1.65, 1.35, 1.80, and 1.53, respectively. Nationwide, literature revealed a huge post-harvest loss of fruits and vegetables due to poor transport and storage facilities. Due to their perishable nature fruits and vegetables spoil quickly therefore, processing and preservation of fruits and vegetables become necessary to enjoy this tangy flavor all around the year.

After imparting training, the post-knowledge score of fruit and vegetable processing, and preserved products of fruits and vegetables were increased to 1.75, 1.70, and 1.65, respectively (Table 1). Recently, nursery raising has become popular among unemployed youth as every household irrespective of being rural or urban wants to develop a kitchen gardening or flower bed. Vertical kitchen gardening is also very popular. Further, the results of nursery raising training indicated that post-knowledge scores of nursery raising of flower & ornamental plants and hi-tech nursery production were raised to 1.00 and 1.49, respectively. Unwanted

grasses or weeds cause harm to growing crops and are therefore necessary to remove however, labor-intensive work is no longer required as this task can be done by specific sprays. Results of spray techniques training indicated that post-knowledge scores of weed management in Kharif and Rabi crops and weed management in flowers and vegetable crops were increased to 1.65 and 1.73, respectively.

There is a huge potential for self-employment generation in the dairy or mini-dairy sector. There is well-knit infrastructure of veterinary institutions throughout Haryana catering to the needs of the livestock owners for providing breeding, health, and related services in the State. Results of dairying and animal husbandry training indicated that post-knowledge scores of value addition & marketing of milk products, diseases of dairy animals & their control measures, and feeding management in dairying animals were increased to 1.53, 1.48, and 1.78, respectively.

Results given in Table 2 represented the effectiveness of the training program conducted by KVK in terms of the usefulness of delivered contents within different domains. However, all the delivered contents were found useful by the trainees, yet as per the weighted mean scores feeding management in dairying animals was found most useful

Table 2. Utility of contents delivered on scientific components in different training programs

Knowledge contents	V. Useful	Useful	Don't know	Not Useful	Overall utility (W.M.S.)	Rank
Cereals, pulses & oil seeds processing	18	10	01	01	3.46	VI
Value addition of traditional products	13	16	-	01	3.45	V
Storage of ingredients & developed products	19	11	-	-	3.63	III
Home furnishing and decorative items	12	14	02	02	3.16	XIV
Making of soft toys and bags	14	15	01	-	3.43	VII
Paper pattern and drafting	08	21	01	-	3.23	XII
Cost calculation of developed products	11	17	-	02	3.16	XIV
Understanding of raw ingredients used in bakery	10	19	01	-	3.30	X
Preparation of biscuits and cakes	07	22	01	-	3.20	XIII
Functions of various ingredients in bakery	08	22	-	-	3.26	XI
Preparation of cookies and muffins	09	21	-	-	3.30	X
Fruit and vegetable processing	13	17	-	-	3.43	VII
Preserved products of fruits	10	19	-	01	3.23	XII
Preserved products of vegetables	08	17	-	05	2.76	XV
Nursery raising of flower & ornamental plants	13	16	-	01	3.33	IX
Hi-Tech nursery production	15	14	-	01	3.40	VIII
Weed management in Kharif and Rabi crops	19	11	-	-	3.63	III
Weed management in flowers and vegetable crops	09	13	-	08	2.50	XVI
Value addition & marketing of milk products	18	12	-	-	3.60	IV
Diseases of dairy animals & their control measures	22	08	-	-	3.73	II
Feeding management in dairying animals	25	05	-	-	3.83	I

Table 3. Adoption of technology as an entrepreneurial activity by the trainees and their monthly income (N=270)

Title of training	Adoption (%) of tech.	Income (Rs./-)/Mo
Food processing & value addition	17.0	7000.00
Cutting and tailoring-1	40.0	8000.00
Cutting and tailoring-2	47.0	10000.00
Bakery and value addition-1	20.0	8000.00
Bakery and value addition-2	30.0	8000.00
Fruit and vegetable preservation	53.0	12000.00
Nursery raising	30.0	10000.00
Spray techniques	50.0	10000.00
Dairying and animal husbandry	73.0	15000.00

content with a weighted mean score of 3.83 followed by diseases of dairy animals & their control measures with a weighted mean score of 3.73.

Next, the weed management in Kharif and Rabi crops and storage of ingredients and developed products secured III rank in terms of the usefulness of contents whereas, value addition & marketing of milk products secured IV rank, and value addition of traditional products obtained V rank by securing a weighted mean score of 3.45. Making soft toys and bags and fruit and vegetable processing were liked next by the trainees by having a weighted mean score of 3.43.

The information regarding the adoption of delivered technology as an entrepreneurial activity and the monthly income earned from the same has been provided in Table 3. Results indicated that the maximum monthly income i.e. approx. rupees 15000 was earned by the trainees involved in dairying and animal husbandry followed by rupees 12000 earned by the trainees who have adopted fruit and vegetable preservation as an entrepreneurial activity. Trainees engaged in nursery raising, spray techniques, and cutting and tailoring-based entrepreneurial technology were earning approx. rupees 10000 per month, whereas trainees engaged in other activities such as food processing & value addition and bakery and value addition were earning rupees approx. 7000 to 8000 per month.

DISCUSSION

The present study was conducted to analyze the impact of vocational trainings on the skill development of the trainees and the adoption of delivered technology as an entrepreneur development in the Faridabad

district. A significant improvement in post-training knowledge scores of respondents was observed in each of the nine vocational trainings. Vocational trainings are very effective in developing skills among rural youth, a similar impact of imparting vocational training on skill development among trainees was observed by Tyagi and Tyagi, (2014); Kumar *et al.* (2016); Kumar *et al.* (2024) and Rani *et al.* (2024). Mohan and Revathi (2012) revealed that the ‘development of an entrepreneur included inculcating entrepreneurial traits in a person, imparting requisite knowledge, developing the technical, managerial, financial and marketing skills and building the entrepreneurial attitude. The process of entrepreneurial training involves equipping a person with the information needed for enterprise building and sharpening his entrepreneurial skills.’ Further, results indicated that though all the delivered contents of the pieces of training were found useful by the trainees, yet as per the weighted mean scores feeding management in dairying animals was found most useful followed by diseases of dairy animals & their control measures. Barman *et al.* (2024) revealed that imparting training among dairying farmers is necessary to improve breeding practices and optimize reproductive efficiency. Appropriate knowledge of the feeding management of animals such as ensuring a balanced diet and reducing the financial burden of expensive feed purchases from the market is crucial. Providing information on accessible veterinary services, affordable healthcare options, and government support programs is necessary to enhance farmers' financial capacity and that will enable them to invest in dairy farming and promote overall growth and sustainability in the sector. Results presented in the present study indicated that an income between the range of Rs./- 7000 to 15000 can be earned monthly by getting engaged in delivered technology-based agripreneurship activities. It was observed that such vocational trainings organized by Krishi Vigyan Kendras have been found effective in uplifting the livelihood of rural communities (Kobba *et al.*, 2020). Results of present study regarding monthly income of unemployed rural women and rural youth have been corroborated with the earlier findings of Singh and Singh (2018), Bonny *et al.* (2022), Saikia (2022), Chauhan and Saikia (2022) and Singh *et al.* (2022).

CONCLUSION

In this study, the impact of nine vocation trainings

based on home science and agriculture technology was studied concerning improving the livelihood security of unemployed youth and women. Trainees observed that all of the delivered contents and kits distributed within a specific domain were very useful. Delivery of lectures touched upon all the important aspects, demonstrations, and distribution of tools and kits to start the entrepreneurial activity at a small scale was found as an effective strategy for improving livelihood. Opting for these technologies as entrepreneurial activity was more effective when it was done by forming a self-help group.

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Data availability : The data utilised in this paper is available in the public domain and will be provided if required at any stage.

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REFERENCES

- Arumugam, U. and Manida, M. (2023). Agripreneurship for sustainable economic development in India. *ComFin Res.*, **11**(4):15–23.
- Barman, B.; Mohammad, A.; Kisku, U. and Lepcha, C. Y. (2024). Exploring dairy farming practices and perceived constraints: A study of Rajbanshi farmers in Coochbehar. *Indian Res. J. Ext. Edu.*, **24**(1):44-52.
- Bonny, B. P.; Lokesh S. and Smitha, S. (2022). Determinants of women's entrepreneurial performance in Kerala. *Indian J. Ext. Edu.*, **58**(1):117-120.
- Chaudhary, B. (2017). The role of skill development in women empowerment. *Int. J. Dev. Social Sci. Hum.*, **3**:43-52.
- Chauhan, J.K. and Saikia, P. (2022). Effect of entrepreneurship on women entrepreneurs. *Indian Res. J. Ext. Edu.*, **22**(1):155-159.
- Dutta, A.; Singh, P.; Dobhal, A.; Mannan, D.; Singh, J. and Goswami, P. (2023). Entrepreneurial aptitude of women of an aspirational district of Uttarakhand. *Indian J. Ext. Edu.*, **59**(2):103-107.
- Kaur, A.; Walia, G.S. and Singh, R. (2022). Leveraging social media platforms for valuing Agri-entrepreneurship in Punjab, India. *Indian J. Ext. Edu.*, **58**(3): 70-73.
- Kobba, F.; Nain, M.S.; Singh, R.; Mishra, J.R. and Shitu, G.A. (2020) 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 J. Ext. Edu.*, **56**(3): 17-26.
- Kumar, S. K.; Devaki, K. and Subramanian, R. (2016). Assessment of the effectiveness of training programmes through perception of Krishi Vigyan Kendra Trainees. *Indian Res. J. Ext. Edu.*, **14**(1): 96-98.
- Kumar, V.; Chauhan, J.K.; Upadhyay, A.D.; Pal, P.; Lahiri, B.; Ghosh, A.; Singh, Y.J. and Chandegara, A.K. (2024). Assessment of training effectiveness for fish farmers of Tripura. *Indian Res. J. Ext. Edu.*, **24**(2): 10-18.
- Mohan, S. and Revathi, R. (2012). Impact of training on entrepreneurial development. *Int. J. Ext. Mngt. Res.*, **2**(6):1-6.
- Narayan, M.; Vadera, M. and Vadera M.L. (2018). Rural entrepreneurship in India: An overview. *Inspira- J. Modern Mngt. & Entrepren.*, **8**(4):280-284.
- Rani, V., Yadav, V.P.S. Kumar, R. Gupta, R.B. and Deswal A.K. (2024) Diversified millet-based products: A way forward to climate resilient and sustainable nutritional security. *Indian Res. J. Ext. Edu.* **24**(2):19-25.
- Saikia, P. (2022). Performance of entrepreneurs in North Eastern Region. *Indian Res. J. Ext. Edu.*, **22**(1):110-113.
- Sawale, S.B. and Karpe, M.D. (2019). Skill development and women entrepreneurship in India, *Int. J. Eco.*, **8** (1): 32-36.
- Sharma, A.; Venya, V. and Chauhan, J. (2014). Entrepreneurial behavior of potato growers in Kohima district of Nagaland. *Indian Res. J. Ext. Edu.*, **14**(2): 82-86.
- Singh, N.; Bhardwaj, N.; Meena, H.R. and Latha, M.C. (2022). Constraints and opinions of farm women regarding vocational trainings conducted by Krishi Vigyan Kendra in Uttarakhand. *Indian Res. J. Ext. Edu.*, **22**(5):178-183.
- Singh, S. and Singh, P. (2018). Entrepreneurial behaviors of farm women from Baghpat District, Uttar Pradesh, *Indian J. Ext. Edu.*, **54**(4):69-73.
- Spandana, B.; Jamuna, R.B. and Preethi, M. (2023). Economic motivation of the women entrepreneurs in Telangana State. *Indian Res. J. Ext. Edu.* **23**(2): 42-45.
- Tyagi, A.K. and Tyagi, B.D. (2014). Assessments of effectiveness of training programmes through the perception of Krishi Vigyan Kendra trainees. *Agriways*, **2**(2): 73-76.

