



# Adoption of Entrepreneurial Activities and Scientific Management Practices by Nomadic and Semi-Nomadic Livestock Tribal Farmers of Kargil (Ladakh)

Nazir Ahmed<sup>\*1</sup>, Maria Abbas<sup>2</sup>, Bulbul K H<sup>3</sup>, M I Bhat<sup>4</sup>, Afzal H Akhand<sup>5</sup>, K A Zargar<sup>6</sup> and Lyaqat Ali<sup>4</sup>

Krishi Vigyan Kendra, Kargil-194 301,  
Sher-e-Kashmir University of Agriculture Sciences and Technology–Kashmir (SKUAST-K)

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## ABSTRACT

The term training refers to the acquisition of knowledge, skills, and competencies as a result of the teaching of vocational or practical skills. Krishi Vigyan Kendra, Kargil organized employment generating and skill development based training programme in livestock sector and evaluated the impact of the technology based trainings acquired by the tribal farmers. The study revealed that out of 260 trainees who participated in the employment generating training programme, 66.53 per cent beneficiaries adopted the technology whereas, out of 226 trainees who participated in skill development trainings, 69.46 per cent beneficiaries adopted the technologies. The highest adoption in the said training programme was found to be that of clean milk production and the least was adopted for vaccination in livestock. A good number of women folk also participated, to gain the knowledge and adopted the technologies. The study encouraged building capacities of livestock farmers through informal trainings especially in the areas of diseases management, feeding management, value addition of milk, deworming, vaccination and poultry farming, pashmina harvesting, spinning of wool etc. so that they can face challenges of the enterprise, boost their farm size and income.

**Key Words:** Impact analysis, Kargil, Livestock, Training, Tribal farmers.

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## INTRODUCTION

Kargil region of Jammu and Kashmir is located at an altitude of 3000 to 5000 m above mean sea level. The soil of this region is sandy in nature coupled with brown rocks. The annual rainfall in this area is quite low *i.e.* up to 8-9 cm, while the temperature varies from 35°C in summer to -40°C in winter. Snowfall is a very common phenomenon in winter. The high wind velocity with a low precipitation rate, low humidity, low oxygen tension and fluctuating temperature makes the climate inhospitable to crop based livelihood activities.

The region is having very short cropping season and only single crop is harvested every year. Under such harsh environmental conditions, livestock is the major source of livelihood to the inhabitants, including the nomadic and semi nomadic tribes of various regions of Kargil.

The nomadic people of Ladakh rear a variety of livestock such as sheep, goat, horses, yaks, donkey and poultry, which provide them with various goods and services. Sheep plays an important role in the hilly and other inaccessible areas, where it is difficult for other livestock to thrive and contribute

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Corresponding Author's Email: animaldr2@gmail.com

<sup>1</sup>Subject Matter Specialist-Krishi Vigyan Kendra-Kargil-SKUAST-K

<sup>2</sup>Junior Research Fellow in CWDB Project at Kargil, Ladakh-SKUAST-K

<sup>3</sup>Assistant Professor Division of Veterinary Parasitology. F.V.Sc & A.H- SKUAST-K

<sup>4</sup>Subject Matter Specialist-Krishi Vigyan Kendra-Budgam-SKUAST-K

<sup>5</sup> Assistant Professor Division of Veterinary Extension. F.V.Sc & A.H- SKUAST-K

<sup>6</sup>Programme Assistant -Krishi Vigyan Kendra-Kargil-SKUAST-K

to the income of poor communities (Nazir *et al*, 2017). Agriculture allied activities *viz*; dairy farming, mushroom farming and apiculture etc. provide employment and additional income to farming families if adopted on scientific lines (Singh *et al*, 2016). The livestock sector provides vast opportunities for self-employment and contributes to the rural economy by providing milk, meat, wool etc. (Singh *et al*, 2016).

Krishi Vigyan Kendra Kargil is engaged in promotion of improved technology among nomadic and semi-nomadic tribes. This center has conducted various extension activities for the upliftment of rural farmers, farm women and rural youths. KVK conducts various extension activities such as, technology week, *Kisan Mela*, *Kisan goshti*, farmers field schools, exposure visits, study trips, field days, radio talks, TV talks, distribution of literature in local language, besides, conducts on-farm trials (OFTs) and front line demonstrations (FLDs). In many of the training programmes, very often the focus is on the number of programmes organized and number of participants rather than the effectiveness of the programme. Therefore, present study was conducted to see the impact analysis for employment generating and skill development technology based training programme.

## MATERIALS AND METHODS

The study was conducted in Kargil district of Jammu and Kashmir state during the year 2014-15 and 2015-16. For the present study, three blocks of district Kargil, *viz*: Shargol ( $B_1$ ), Taisuru ( $B_2$ ) and Drass ( $B_3$ ) were randomly selected. From each of the selected block further three villages were purposively selected where livestock rearing was practiced since decades. The selected villages were *Nunamchey*, *Tacha* and *Kuksty* ( $B_1$ ), *Panikhar*, *Khawos* and *Youljud* ( $B_2$ ) and (*Bhimbat*, *Holyal* and *Olberus* ( $B_3$ ), respectively. These nine villages were selected as participatory villages to carry out various extension activities for employment generation and skill development. The disease diagnostic services and advisory services were provided to the

progressive farmers, farm women and rural youth engaged in dairy farming, goat farming (Pashmina goat rearing) and poultry farming. Training to extension personnel was also provided for transfer the improved technologies developed by the Sher-e-Kashmir University of Agriculture Sciences and Technology–Kashmir (SKUAST-K).

The data were collected from the participants of training and awareness programmes organized by KVK, Kargil. Data were collected with the help of a semi-structured interview schedule through focus group technique. Total 486 farmers, farm women, rural youths and extension personal were involved in the present study. To assess the impact of extension programs, the adoption of allied enterprise as income generating occupation among the active participants assessed.

## RESULTS AND DISCUSSION

### Distribution of respondents based on participation in different training programmes

The present study revealed that the participation of tribal women (52.67%) in awareness programme in different thematic areas of animal science discipline was higher than the male (23.45%) (Table 1). It is because of the reason that least dominant female folk were the leading participators of agricultural and livestock production related activities and about 70 per cent of farm work is performed by women folk, Nishi Slathia (2003). Finding of present study was also in agreement with Hai *et al* (2011). They reported that women role in participation in training programme to achieve the technologies was at higher side as compared to their counterpart in respect of feeding and management of their livestock. The frequency distribution of awareness level was found to be positive in the field of animal husbandry practice as reported by Bulbul *et al* (2014), in Srinagar of Jammu and Kashmir.

The present findings showed that in the participation from thematic areas for different categories of training programmes, participation of livestock holder was found to be 66 per cent

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**Table 1. Distribution of respondents based on participation in different training Programmes.**

Thematic area	Distribution of respondents				Total
	Rural youth		Practicing nomadic and semi-nomadic farmers		
	Male (%)	Female (%)	Male (%)	Female (%)	
Dairy farming	0.0	5.1	10.0	84.9	21
Sheep and goat farming	5.3	2.6	76.3	15.1	34
Poultry farming	28.2	0.0	10.2	62.6	68
Housing management	0.0	0.0	5.5	94.5	19
Winter management	0.0	0.0	20.8	79.2	22
Disease management	20.0	0.0	70.0	10.0	146
Feed management	0.0	0.0	18.3	81.7	63
Production of quality animal products	0.0	8.0	0.0	92.0	176
Total	74	42	114	256	486

followed by rural youth 26 per cent and field and extension personal 8 per cent. The application of new technologies and practices is largely based on the desire of farmers to improve their socio economic status and overall economic returns.

In backyard poultry farming, however participation of women was also found higher than their counter parts *i.e.* 53.38 and 46.62 per cent which was in agreement with Motin *et al* (2014) who reported that women took active part in poultry farming. Chaturvedani *et al* (2015) also found the role of women in backyard poultry farming has significant importance. It might be due to the reason that most of the management practices *viz.*, housing, feeding, breeding, health care and marketing practices were carried out by the women.

The data (Table 1.) shows the distribution of respondents based on participation in different training programmes and it was clear that participation of women folk was seen higher in almost all trainings programmes. It is because of the fact that in tribal areas, women folk are more active in agriculture and animal husbandry sectors. Participation of male counterpart of rural youth in trainings related to poultry farming and diseases

management was found higher than women. It might be due to unemployment, which creates interest among new generation to start Agri-enterprises on small scale like poultry farming. However, in case of nomadic and semi-nomadic farmers male participation was found more in disease management and sheep and goat farming. The possible reason might be due to the fact that male counterparts have to move with their sheep and goat in high land pastures for more than 6 months and has to take care of their health related problems.

### Adoption of different entrepreneurial activities

*Pashmina* is the main source of income of this region, hence *Pashmina* based skill trainings were organized to enhance the income of backward tribal farmers. It was evident (Table 2) that skill based training on harvesting of *Pashmina* fiber had the highest impact in terms of adoption. Out of total 22 rural youth trained in harvesting of *Pashmina* for income generation, more than eighty per cent (81.82%) adopted it as entrepreneurial activity.

Similarly, 14 (77.78%) trained youth, out of total 18 participants adopted spinning of *Pashmina* as an entrepreneurial activity. Near about three fourth (73.53%) trained farmers adopted value addition of

**Table 2. Adoption of different entrepreneurial activities by trained rural youth of Kargil.**

<b>Employment generating and income enhancement trainings for rural youth of Kargil</b>	<b>Number of trainees</b>	<b>Adopters (%)</b>	<b>Non-adopters (%)</b>
Shearing of <i>Pashmina</i> goat as source of income	22	15 (68.18)	07 (31.82)
Harvesting of <i>Pashmina</i> wool	22	18 (81.82)	04 (18.18)
Spinning of wool	20	12 (60.00)	08 (40.00)
Spinning of <i>Pashmina</i>	18	14 (77.78)	04 (22.22)
Value addition of milk	34	25 (73.53)	09 (26.47)
Backyard poultry	34	23(67.65)	11(32.35)
Total	150	107 (71.33)	43 (28.67)

milk as an income generation activity.

Backyard poultry farming can generate good amount of money for house hold requirements in addition to providing balanced food with minimum inputs available in the rural areas, Bulbul *et al* (2010). Skill trainings on backyard poultry farming along with awareness programs helped in empowering women of tribal communities. More than one third (67.65%) participants of skill training programs adopted back yard poultry farming after acquiring trainings. Training on back yard poultry empowered women farmers by providing opportunity for income generation and thus improving socio-economic status and livelihood. The study revealed that out of 150 trainees that participated in vocational training programs, more than seventy per cent (71.33%) adopted different entrepreneurial activities for income generation. Thus, vocational training programme were instrumental developing entrepreneurial abilities among rural youth, thus enhancing their income.

#### **Adoption of scientific management practices by livestock farmers**

Training on feed management, winter management, housing management, control of mastitis, management of ecto and endo parasites was provided to practicing livestock farmers. The adoption level was found to be highest in clean milk production (82.9%) followed by feed management (81.0%) and winter management (72.7%). Findings

were in agreement with study conducted by (Singh *et al*, 2016). Which reported enhancement of knowledge level of trainees in breed characteristics, disease management and feed management and increase in daily income of famers after adoption of learnt scientific practices.

However, adoption of control measures for mastitis was found to be low (56.5%). It might be due to unavailability of veterinary services to remote areas. Adoption of vaccination in livestock was lowest (10.0%) as revealed in Table 3. The high adoption of technologies might be due to high interest of tribal women as well as knowledge gained in the training programme organized by the KVK Kargil. However, low adoption of vaccination in livestock due to unavailability of vaccines at nearby places to different livestock farmers.

#### **Adoption of scientific management practices by sheep and goat farmers**

The study also revealed that KVK Kargil played the major role in transferring and dissemination of latest agriculture based technology especially on *Pashmina* goat farming, management of ecto and endo parasites, shearing of sheep and its management. Maximum adoption was in sheep and goat management (76.4%) followed by disease management in *Pashmina* goats (63.6%), housing management (63.2%) and shearing of sheep (60.0%). Similar findings were reported by Dubey (2008) who highlighted the role of KVK in transfer

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**Table 3. Adoption of scientific management practices by practicing livestock farmers of Kargil.**

<b>Skill development trainings for practicing livestock farmers of Kargil</b>	<b>No. of trainees</b>	<b>Adopters (%)</b>	<b>Non-adopters (%)</b>
Livestock farmers			
Feed management in milch cows during winters	21	17 (81.0)	4 (19.0)
Winter management	22	16 (72.7)	6 (27.3)
Mastitis and its control	23	13 (56.5)	10 (43.5)
Management of ecto and endoparasites	23	16 (69.6)	7 (30.4)
De-worming of livestock	21	13 (61.9)	8 (38.1)
Vaccination in livestock	20	2 (10.0)	18 (90.0)
Clean milk production	35	29 (82.9)	6 (17.1)
<b>Goat and sheep farmers</b>			
Housing management in <i>Pashmina</i> goats	19	12 (63.2)	7 (36.8)
Disease management in <i>Pashmina</i> goats	33	21 (63.6)	12 (36.4)
Sheep and Goat management	34	27 (79.4)	7 (20.6)
Shearing of sheep	25	15 (60.0)	10 (40.0)
<b>Poultry farmers</b>			
Scientific management of poultry birds	34	23 (67.6)	11 (32.4)
Management of common poultry diseases	26	19 (73.1)	7 (26.9)
Total	336	223 (66.4)	113 (33.6)

of technology. Results are also in agreement with the findings of Salunkhe (2011), who reported improvement in socio-economic status and knowledge level trained farmers in Allahabad district of Uttar Pradesh.

### **Adoption of scientific management practices by poultry farmers**

Adoption of scientific management of poultry birds was found to be 67.6 per cent. Similarly, adoption of management of common poultry diseases was 73.1 per cent. Overall adoption of various management practices among practicing farmers was 66.4 per cent while 33.6 of the practicing farmers did not adopt recommended practices.

### **CONCLUSION**

It was concluded that livestock is the backbone of disadvantageous areas like Kargil where crop based activities are very low due to harsh climatic conditions. So it is very important to provide the opportunities to young generation through awareness and training on latest technologies in animal husbandry production and management so that they develop more interest towards livestock rearing. KVK, Kargil played the pivotal role in employment generation through skill trainings among rural youth of Kargil. The transfer and dissemination of latest recommended technologies in livestock rearing and management helped in raising socio economic status of farmers and farm women.

## REFERENCES

- Ahmed N, Abbas M, Mailk A, Akhand A, Ahmed B, Ali lyaqat and bhat M I (2017). Traditional handloom of Kargil district, Ladakh. *Br Econ, Manage & Trade*; Article no.BJEMT.33908, 17(4): 1-8, 2017.
- Bulbul K H, Mehdi D, Islam S and Wani G A (2010). Vanaraja for Backyard poultry farming. *North-East Vets* 9: 4-5.
- Bulbul K H, Sheikh I U and Kanth R H (2014). Knowledge level of livestock farmers on improved husbandry practices in Kashmir valley. *Indian Anim, Prod Mgmt* 30: 30-34.
- Chaturvedani A K, Niranjana Lal, Khalid, Khyalia N K and Jitendra Pratap (2015). Empowering tribal women through backyard poultry in Bastar district of Chhattisgarh. *J Krishi Vigyan* 3 (Special Issue): 19-22.
- Hai A, Akand A H, Shahnaz S and Bulbul K H (2011). Contribution of farm women towards dairy enterprise in Ganderbal district of Kashmir valley. *Dairying, foods & H Sci* 30: 140-146.
- Motin G A, Goswami A, Mazumder D and Pal Biswajit (2014). Backyard poultry farming system: women and its role. *Int Dev Res* 4 (5):1122-1124
- Singh J P, Swanson B E and Singh K M (2016). Developing a decentralized, market-driven extension system in India: The ATMA model. In A W Van de Ban & R K Samanta (Eds.), *Changing Roles of Agricultural Extension in Asian Nations* (pp. 203– 223). B R Publishing, Delhi, India.
- Slathia Nishi (2003). *Agriculture: Towards a New Paradigm of Sustainability*. ISBN: 978-93-83083-64-0. Pp 150-157.

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