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**Deepa Singh**  
PhD Scholar, Division of  
Extension Education, ICAR-  
IVRI, Bareilly, Uttar Pradesh,  
India

**Niranjan Lal**  
Senior Scientist, KVK, ICAR  
Research Complex, Imphal,  
Manipur, India

**Sushil Kumar Sinha**  
PhD Scholar, Division of  
Extension Education, ICAR-  
IVRI, Bareilly, Uttar Pradesh,  
India

**Anupama Jena**  
PhD Scholar, Division of  
Extension Education, ICAR-  
IVRI, Bareilly, Uttar Pradesh,  
India

**Corresponding Author**  
**Deepa Singh**  
PhD Scholar, Division of  
Extension Education, ICAR-  
IVRI, Bareilly, Uttar Pradesh,  
India

## Knowledge level of farmers about scientific dairy farming practices in KVK Adopted and non-adopted villages in Rewa district of Madhya Pradesh

**Deepa Singh, Niranjan Lal, Sushil Kumar Sinha and Anupama Jena**

### Abstract

The present study was undertaken to find out the knowledge level and difference in knowledge level about scientific dairy farming practices amongst the livestock owners in adopted and non-adopted villages under the operational area of Krishi Vigyan Kendra (KVK) in Rewa district of M.P. The study revealed that majority of the respondents in KVK adopted villages had medium knowledge about Artificial Insemination (AI), Vaccination, Deworming and Concentrate feeding and low level of knowledge about feeding of green fodder. In non-adopted villages most of the livestock owners had medium level of knowledge about artificial insemination, for all other practices there was low level of knowledge. It can be discerned from the study that the intervention of KVK has brought significant change in knowledge level of livestock owners implying more need of such trainings.

**Keywords:** Artificial insemination, vaccination, deworming, green fodder, concentrate

### 1. Introduction

Dairy farming is multifarious sector which along with providing nutritious food also generate employment especially for landless, small and marginal farmers, but it hadn't achieved its full potential. The most of the rural livestock owners do not follow scientific animal husbandry practices which led to per animal lesser production, there may be various reasons like lack of knowledge, lesser resource availability at grass root level, misconception about scientific practices etc. The knowledge about any practice is imperative for its acceptance and adoption, which can be achieved by spreading awareness among the livestock owners about the modern technologies and scientific interventions in animal husbandry.

The Krishi Vigyan Kendra, Rewa in Zone VII was established in 2003 under control of Jawaharlal Nehru Agricultural University, Jabalpur. The KVK, Rewa regularly organizes need based trainings to enhance knowledge level about scientific dairy farming practices of the farmers. It was felt that knowledge level about scientific dairy farming practices among the dairy farmers being an important parameter to judge the impact of training. Keeping this view a study was undertaken to find out the knowledge level of livestock owners regarding scientific dairy farming practices.

### 2. Materials and Methods

The present study was ex-post facto research conducted purposively in Rewa district of Madhya Pradesh. The district is divided in nine blocks, out of them two blocks were selected randomly and from each block one village was selected randomly, thus village Hariharpur and Ajarha were selected for the study of non-adopted villages. The list of adopted villages was obtained from the KVK, Rewa and from it two villages viz. Rethi and Amilki were selected randomly for the study.

Thirty respondents who had at least two dairy animals were selected randomly from each adopted and non-adopted villages to constitute total sample size of 120 respondents. The respondents were personally interviewed and data were collected by using well-structured pre-tested interview schedule. Frequency, percentage and t-test were used as statistical measures to analyze the data.

### 3. Result and Discussion

#### 3.1 Knowledge level of livestock owners about artificial insemination

The result (Table 1) indicates that in both KVK adopted and non-adopted villages most of the

livestock owners had medium level of knowledge about artificial insemination, although percentage was more in KVK adopted villages, the calculated t' value was found significant. Prakash *et al.* (2016) in their study mentioned higher level of education was positively and significantly associated with both partial and full adoption of artificial insemination implying the importance of education and knowledge in adoption of innovation. They also highlighted negative influence of distance to veterinary institution or training institutions on AI adoption and mentioned that with increase in knowledge about scientific orientation, the likelihood of full adoption of AI increased by 50.6% in their study. The interventions of Krishi Vigyan Kendra in imparting knowledge and trainings about AI significantly increased the knowledge levels of livestock owners in KVK adopted

villages which will lead to more adoption of scientific dairy farming practices

### 3.2. Knowledge level of livestock owners about vaccination

In KVK adopted villages majority of the livestock owners had medium level of knowledge about vaccination whereas, in non-adopted villages mostly had low level of knowledge. The t value show significant difference in the knowledge level in adopted and non-adopted villages. The findings are in agreement with Patel *et al.* (2014) [5]. Hari *et al.* (2018) [6] in their study found that the lack of knowledge and awareness about the vaccination was the prime reason for livestock owners not following it. Vaccination needs to be done by the help of specialist and extension workers where KVK can play an important role.

**Table 1:** Distribution of respondents according to their knowledge level

Dependent variable	KVK adopted villages (N=60)			Non adopted villages (N=60)			‘t’ value
	Low level	Medium level	High level	Low level	Medium level	High level	
1. Artificial insemination	0 (0.00)	55 (91.67)	5 (8.33)	20 (33.33)	38 (63.33)	2 (3.33)	5.539**
2. Vaccination	5 (8.33)	39 (65.00)	16 (26.67)	55 (91.67)	5 (8.33)	0 (0.00)	14.789**
3. Deworming	5 (8.33)	42 (70.00)	13 (21.67)	55 (91.67)	5 (8.33)	0 (0.00)	11.768**
4. Green fodder	45 (75.00)	15 (25.00)	0 (0.00)	60 (100.00)	0 (0.00)	0 (0.00)	13.366**
5. Concentrate	10 (16.67)	43 (71.67)	7 (11.67)	31 (51.67)	25 (41.67)	4 (6.67)	7.162**

Figures in parentheses are percentages \*\*Significant at one percent level

### 3.3 Knowledge level of livestock owners about deworming

The greater number of the livestock owners in KVK adopted villages had medium level of knowledge about deworming practice while in non-adopted villages mostly had low level of knowledge about deworming. This result is similar to findings of Biswas *et al.* (2008). Deworming require the knowledge of dosage and medicines which can be imparted by KVK, veterinarians, extension workers etc. Hari *et al.* (2018) [6] reported that the villages where regular awareness was created more adoption of scientific dairy farming practices was seen.

### 3.4 Knowledge level of livestock owners about feeding of green fodder

As per the Table 1, in KVK adopted villages majority of the livestock owners had low level of knowledge about feeding of green fodder followed by medium level, while in non-adopted villages almost all livestock owners were in range of low level knowledge level. The difference in knowledge level about feeding of green fodder was highly significant. Kavitha *et al.* (2020) [3] also reported similar finding. The reason may be less interest of livestock owners in fodder cultivation due to lack of storage, labour intensive work, less knowledge about processing of green fodder, lack of knowledge about silage making etc. KVK can play here important role in

dissemination of knowledge through trainings and demonstrations to provide round the year quality green fodder at cheaper rates so that the shortage gap can be filled.

### 3.5 Knowledge level of livestock owners about feeding of concentrate

In case of feeding of concentrate in KVK adopted villages most of the livestock owners had medium level of knowledge, while in non-adopted villages more than half of the livestock owners had low level of knowledge about concentrate feeding. It was also found that less than one fourth of the livestock owners from KVK adopted villages had high level of knowledge about feeding of concentrate. The findings are in line with the observations reported by Patel *et al.* (2014) [5]. The concentrate feeding directly affect the productivity of animal, the concept of balanced ration should be known to all livestock owners. One of the major constraints in concentrate feeding is its high cost which makes it unaffordable to small and marginal farmers. KVKs should provide trainings on formulation of balanced ration and cheaper method of concentrate making at farm.

### 3.6 Overall knowledge score of respondents

**Table 2:** Distribution of respondents according to their overall knowledge – level

Knowledge level	KVK adopted villages (N=60)	Non adopted Villages (N=60)
Low	4 (6.67%)	31 (51.67%)
Medium	48 (80%)	27 (45.00%)
High	8 (13.33%)	2 (3.33%)

Figures in parentheses are percentages

The result (Table 2) indicates that in KVK adopted villages most of the livestock owners had medium level of knowledge followed by high knowledge-level and low knowledge-level, whereas in non-adopted villages mostly were in category low level of knowledge followed by medium-level and high level. These findings are similar to Chandawat & Singh (2013) [3],

Kumar *et al.* (2014) and Rajappan *et al.* (2014) [7].

## 4. Conclusion

The knowledge level of livestock owners in KVK adopted villages was comparatively higher than the livestock owners of non-adopted villages. It is discernible from the findings

that training intervention imparted by KVK was helpful for livestock owners in gaining knowledge about scientific dairy farming practices although more improvement is needed in the dissemination of technologies, more effort is needed to educate the farmers and encourage them to adopt scientific dairy farming practices. KVKs should regularly organize group meetings, training camps, animal health camps etc in the villages to increase the knowledge level and skill of livestock owners. It is pertinent that the knowledge will lead to adoption of scientific practices which would lead to improving productivity, profitability and sustainability of the dairy farming.

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