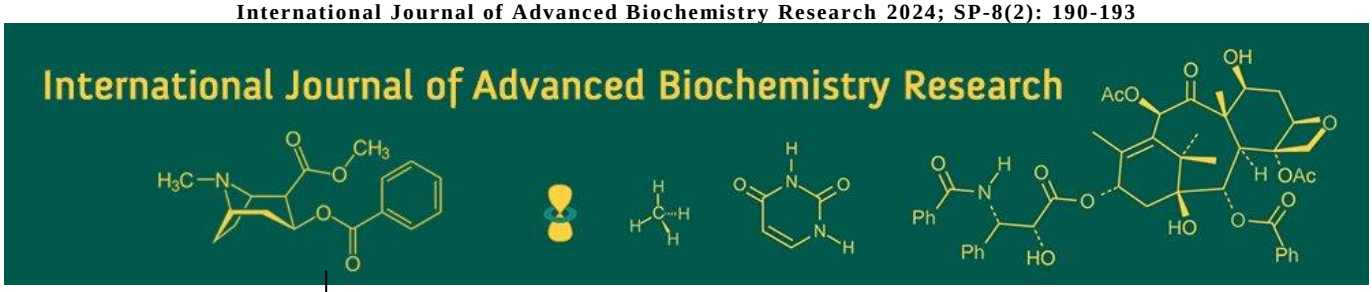


**ISSN Print:** 2617-4693
**ISSN Online:** 2617-4707
IJABR 2024; SP-8(2): 190-193
www.biochemjournal.com
Received: 02-12-2023
Accepted: 03-01-2024

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# Impact of ATMA training programmes in Animal Husbandry sectors on the knowledge level of farmers in Muzaffarpur district of Bihar

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**DOI:** https://doi.org/10.33545/26174693.2024.v8.i2Sc.536

**Abstract**
The present study was conducted Muzaffarpur district of Bihar, Training programmes conducted by ATMA was analyzed for period of three years. The data was collected by the researcher itself by direct interview method with help of semi-structured interview schedule. Analysis of result obtained by interview of ATMA trainers depicts that the trainings provided by ATMA had overall significant impact on the knowledge level of the farmers in Muzaffarpur district of Bihar. Significant improvement in knowledge level was observed in the areas of breeding, feeding, management, health care and marketing. In the Animal Management knowledge level of trained farmers (82%) were found to be high. In Poultry the difference in knowledge was found to be insignificant.

**Keywords:** Training, knowledge level, breeding, feeding, management, health care, poultry, marketing

## Introduction
Training is one of the potent tools for bringing transformation in the working pattern of animal husbandry farmers. Based on the principal of "Learning by doing", training provides capacity building in all aspects including animal husbandry. Training enhances the accuracy in working along with developing confidence in the people. Billions of rupees are expended on training to farmers every year worldwide (Lynton & Pareek, 2015) [5]. In order to utilize the money invested in training of famers it is essential that trainings must be successful and profitable for farmers. Training of animal husbandry farmers is required for maintaining standards of scientific livestock farming and package of recommended practices. Vocational training for the farmers proved to be significant input in increasing farm production, information regarding various inputs like breeding, feeding, management etc.

Training Impact deals with the effect of training on various practices and attitude of the people towards various animal husbandry practices *viz*. breeding, feeding, health care, management and marketing. There are several agencies proving training to the farmers *viz*. ATMA, KVK, NGO, SHG, SAMETI, Cooperative Societies, Banks etc. In order to conduct these residential training programmes billions of rupees are being spent every year worldwide (Lynton & Pareek, 2015) [5], without its impact assessment. Knowledge of impact of trainings is important to prepare the policy issues and remedial steps to improve the quality and effectiveness of the training. Since ATMA is overall performing the coordination work of all the agricultural related work in all the 38 districts of Bihar, and improving the capacity building of the farmers by providing training in the different domains, therefore it is necessary to know the impact of training programmes, so that it can be improved substantially for overall improvement of the animal husbandry sector.

Researches conducted by Patel *et al.* (2012) [6], Kumar *et al.* (2014) [4], Shankara *et al.* (2014) [8], Sharma *et al.* (2014) [9], Bhise (2015) [1], Hundal *et al.* (2016) [2], Sharma *et al.* (2016) [10], Singh *et al.* (2016) [11], Pordhiya *et al.* (2017) [7] revealed that trained farmers were having higher knowledge level as compared to untrained farmers. The present study was conducted with objective to know the impact of ATMA training programmes in Animal Husbandry sectors on the knowledge level of farmers in Bihar.

## Methodology

The study was conducted in the state of Bihar. Muzaffarpur, also called financial capital of Bihar, is the Fourth largest producer of milk in Bihar after Gaya, Patna, East and West Champaran. This district has recorded milk production of 4.2768 Lakh tonnes during year 2020-21 which is 3.7 percent of total milk production of Bihar (Economic Survey-2021-22) [3]. This district has recorded fish production of 0.0312 Lakh tonnes during 2020-21. It offers good opportunity for setting up of new dairies supplying milk to nearby locality.

From Muzaffarpur district 50 farmers were selected randomly who had been trained by ATMA in Animal Husbandry and allied sectors within last three years has been taken under study and 50 untrained farmers who are doing Animal Husbandry and allied activities as their main or subsidiary occupation, had been selected randomly in order to test the impact of training on the various parameters.

The data from respondents was collected by direct interview method by the researcher itself with help of semi-structured interview schedule and simple tests like mean, standard deviation, mean difference, percentage and t-test were used to analyze the data.

## Results

### Impact on knowledge in the area of Breeding

**Table 1:** Knowledge level of ATMA trained and untrained farmers of Muzaffarpur district in breeding area

| Sl. No. | A.H. area | Knowledge categories | Frequencies (%) | | | | Mean Difference "d" | Calculated "t" value |
|---|---|---|---|---|---|---|---|---|
| | | | Trained | | Untrained | | | |
| 1 | Breeding | Low | 4 (8) | Mean | 19 (38) | Mean | 6.56 | 12.137* |
| 2 | | Medium | 16 (32) | 13.5 | 30 (60) | 6.94 | | |
| 3 | | High | 30 (60) | SD 2.04 | 1 (2) | SD1.49 | | |

Figures in parenthesis indicates percentage
* Significant at the level of 5 percent (P≤0.05)

It is evident from the Table-1 that in Muzaffarpur district there was significant difference in the knowledge level of trained and untrained farmers in Breeding area. Majority (60%) of the ATMA trained farmers were having high knowledge level followed by medium (32%) and low (8%), in case of ATMA untrained farmers majority (60%) of respondents were having medium knowledge level followed by low (38%) and High (2%). The mean difference was found to be 6.56 and calculated "t" value was 12.137 which was found to be significant at 5 percent level.

### Impact on knowledge in the area of Feeding

**Table 2:** Knowledge level of ATMA trained and untrained farmers of Muzaffarpur district in feeding area

| Sl. No. | A.H. area | Knowledge categories | Frequencies (%) | | | | Mean Difference "d" | Calculated "t" value |
|---|---|---|---|---|---|---|---|---|
| | | | Trained | | Untrained | | | |
| 1 | Feeding | Low | 16 (32) | Mean | 34 (68) | Mean | 5.42 | 23.265* |
| 2 | | Medium | 20 (40) | 11.6 | 15(30) | 6.18 | | |
| 3 | | High | 14 (28) | SD 2.21 | 1 (2) | SD 1.4 | | |

Figures in parenthesis indicates percentage
* Significant at the level of 5 percent (P≤0.05)

It is evident from Table - 2 that in Muzaffarpur district among ATMA trained farmers in case of knowledge in feeding was significantly higher than untrained farmers. Majority (40%) of the respondents were having medium knowledge level followed by low (32%) and high (28%) respectively. In case of ATMA untrained farmers majority (68%) of the respondents were having low knowledge level followed by medium (30%) and only 2 percent of the respondents were having high knowledge level. The value was found significantly different at the 5 percent level.

### Impact on knowledge in the area of Management

**Table 3:** Knowledge level of ATMA trained and untrained farmers of Muzaffarpur district in Management area

| Sl. No. | A.H. area | Knowledge categories | Frequencies (%) | | | | Mean Difference "d" | Calculated "t" value |
|---|---|---|---|---|---|---|---|---|
| | | | Trained | | Untrained | | | |
| 1 | Management | Low | 4 (8) | Mean | 35 (70) | Mean | 6.4 | 14.485** |
| 2 | | Medium | 5 (10) | 12.54 | 9 (18) | 6.14 | | |
| 3 | | High | 41 (82) | SD 2.37 | 6 (12) | SD 1.08 | | |

Figures in parenthesis indicates percentage
** Significant at the level of 1 percent (P≤0.01)

It is evident from Table –3 that in Muzaffarpur district there was significant difference in the knowledge level of trained and untrained farmers in Management area. Among ATMA trained farmers majority (82%) of the famers were having high knowledge level followed by medium (82%) and low (8%) respectively. Among untrained farmers majority (70%) of the farmers were having low knowledge level followed by medium (18%) and high (12%) respectively. The mean difference in knowledge was found to be 6.4 and "t" value was found to be 14.485 which was found significant at 1 percent level.

### Impact on knowledge in the area of Health Care

It is evident from the table –4 that in Muzaffarpur district there was significant difference in the knowledge level of trained and untrained farmers in Health Care area. Among ATMA trained farmers majority (50%) of the farmers were having high knowledge level followed by medium (30%) and low (20%) knowledge level respectively.

**Table 4:** Knowledge level of ATMA trained and untrained farmers of Muzaffarpur district in Health Care area

| Sl. No. | A.H. area | Knowledge categories | Frequencies (%) | | | | Mean Difference "d" | Calculated "t" value |
|---|---|---|---|---|---|---|---|---|
| | | | Trained | | Untrained | | | |
| 1 | Health care | Low | 10 (20) | Mean | 10 (20) | Mean | 5.94 | 22.256* |
| 2 | | Medium | 15 (30) | 12.48 | 30 (60) | 6.54 | | |
| 3 | | High | 25 (50) | SD 1.75 | 10 (20) | SD 1.23 | | |

Figures in parenthesis indicates percentage
* Significant at the level of 5 percent (P≤0.05)

Among untrained farmers majority (60%) were having medium knowledge level followed by equal number of farmers (20%) having low and high knowledge level. It was observed that good number of ATMA untrained farmers were having medium and high knowledge level, this might be due to reason that the farmers of that particular area may be aware of health care of animals either from their peer groups or they might have been trained by some other agencies. However, there was significant difference in knowledge level with "t" value of 22.256. The mean difference of the score obtained was found to be 5.94.

**Impact on knowledge in the area of Poultry**

**Table 5:** Knowledge level of ATMA trained and untrained farmers of Muzaffarpur district in Poultry area

| Sl. No. | A.H. area | Knowledge categories | Frequencies (%) | | | | Mean Difference "d" | Calculated "t" value |
|---|---|---|---|---|---|---|---|---|
| | | | Trained | | Untrained | | | |
| 1 | Poultry | Low | 6 (12) | Mean | 14 (28) | Mean | 1.83 | 18.548*** |
| 2 | | Medium | 21 (42) | 9.11 | 33 (66) | 7.28 | | |
| 3 | | High | 23 (46) | SD 1.59 | 3 (6) | SD 1.03 | | |

Figures in parenthesis indicates percentage
*** Non significant

It is evident from the table-5 that among ATMA trained farmers majority (46%) were having high knowledge level followed by medium (42%) and low (12%) knowledge respectively. Among ATMA untrained farmers majority (66%) of the respondents were having medium knowledge level followed by low (28%) and high (6%). There was non-significant difference in the knowledge level. With mean difference of 1.83.

**Impact on knowledge in the area of Marketing**

**Table 6:** Knowledge level of ATMA trained and untrained farmers of Muzaffarpur district in Marketing area

| Sl. No. | A.H. area | Knowledge categories | Frequencies (%) | | | | Mean difference "d" | Calculated "t" value |
|---|---|---|---|---|---|---|---|---|
| | | | Trained | | Untrained | | | |
| 1 | Marketing | Low | 9 (18) | Mean | 24(48) | Mean | 5.54 | 27.485* |
| 2 | | Medium | 16 (32) | 12.2 | 15(30) | 6.66 | | |
| 3 | | High | 25(50) | SD 1.78 | 11(22) | SD 1.22 | | |

Figures in parenthesis indicates percentage
* Significant at the level of 5 percent ($p \leq 0.05$)

It is evident from the table –6 that in Muzaffarpur district there was significant difference in the knowledge level of trained and untrained farmers in Marketing area. Among ATMA trained farmers majority (50%) of the farmers were having high knowledge level followed by medium (32%) and low (18%) knowledge respectively. Among ATMA untrained farmers majority (48%) of the respondents were having low knowledge level followed by medium (30%) and high (22%) respectively. The mean difference was found to be 5.54 and calculated "t" value was found to be 27.485.

**Summary & Conclusion**

**The changes in knowledge level of ATMA trained and untrained farmers of Muzaffarpur district may be summarized as below**

**Breeding**

Majority (60%) of the ATMA trained farmers were having high knowledge level followed by medium (32%) and low (8%), in case of ATMA untrained farmers majority (60%) of respondents were having medium knowledge level followed by low (38%) and High (2%). The difference in knowledge was found to be significant.

**Feeding:** Majority (40%) of the respondents were having medium knowledge level followed by low (32%) and high (28%) respectively. In case of ATMA untrained farmers majority (68%) of the respondents were having low knowledge level followed by medium (30%) and only 2 percent of the respondents were having high knowledge level. The difference in knowledge was found to be significant.

**Management**

Among ATMA trained farmers majority (82%) of the famers were having high knowledge level followed by medium (10%) and low (8%) respectively. Among untrained farmers majority (70%) of the farmers were having low knowledge level followed by medium (18%) and high (12%) respectively. The difference in knowledge was found to be significant.

**Health Care**

Among ATMA trained farmers majority (50%) of the farmers were having high knowledge level followed by medium (30%) and low (20%) knowledge level respectively. Among untrained farmers majority (60%) were having medium knowledge level followed by equal number of farmers (20%) having low and high knowledge level. The difference in knowledge was found to be significant.

**Poultry**

Among ATMA trained farmers majority (46%) were having high knowledge level followed by medium (42%) and low (12%) knowledge respectively. Among ATMA untrained farmers majority (66%) of the respondents were having medium knowledge level followed by low (28%) and high (6%). There was non-significant difference in the knowledge level.

**Marketing**

Among ATMA trained farmers majority (50%) of the farmers were having high knowledge level followed by medium (32%) and low (18%) knowledge respectively. Among ATMA untrained farmers majority (48%) of the respondents were having low knowledge level followed by medium (30%) and high (22%) respectively. The difference in knowledge was found to be significant.

**Conclusion**

Therefore, it may be concluded that the trainings provided by ATMA had overall significant impact on the knowledge level of the farmers in Muzaffarpur district of Bihar. Significant improvement in knowledge level was observed in the areas of breeding, feeding, management, health care and marketing. In Poultry the difference in knowledge was found to be insignificant.

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