Constraints in Adoption of Animal Husbandry Practices in Kurnool District of Andhra Pradesh, India

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Authors' contributions

This work was carried out in collaboration between both authors. Author AL designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author GPB managed the analyses of the study. Both authors read and approved the final manuscript.

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ABSTRACT

The present study was carried out to find out the constraints in implementation of improved dairy related activities among the dairy farmers in adopted villages who have been receiving regular guidance and technical support from KVK, Banavasi, Kurnool district of Andhra Pradesh. A total of 120 farmers from 3 mandals were selected using simple random sampling method and a series of questions covering aspects like breeding, feeding, health care and clean milk production were administered and constraints were recorded and categorised. The beneficiaries perceived "non-availability of green fodder throughout the year" (81.66%) and "A.I. centre not/distantly located" (64%) as the most serious infrastructural constraints. "Cost of rearing crossbred cows is very high" (89.66%) and "excess workload" (84%) as the main constraints of socio psychological nature encountered by the beneficiaries.

Keywords: Animal husbandry; management; breeding; feeding; constraints.
1. INTRODUCTION

Animal husbandry and Agriculture including animal husbandry are the backbones of Indian rural economy providing employment to around 75% of the rural population. The progress of the nation, therefore, is linked with the advancement in animal husbandry [1-3]. Development of animal husbandry and agriculture in India can only be made possible through scientific education of the farmers including youth, mostly living in the villages.

Krishi Vigyan Kendra (KVK) is a noble concept developed by Indian Council of Agricultural Research (ICAR) which rest upon Transfer of Technology (ToT) from laboratory to farmers field. As it is clear that, the KVK is meant for bridging the gap between inventing the technology and its actual application on the field by farmers [4-6].

The present study was carried out to identify constraints encountered by beneficiaries of adopted villages of KVK, Banavasi where sizeable farmers are practicing animal husbandry as livelihood and receive regular guidance and technical support from KVK, Banavasi, Kurnool district of Andhra Pradesh. The data was collected from a total of 120 respondents by conducting personal interview which was pretested before using it for collection of the data. The qualitative data was converted into quantitative form.

2. METHODOLOGY

2.1 Selection of Villages and Beneficiaries

The present study was carried in 3 adopted mandals of Krishi Vign Kendra, Banavasi, in the year 2019-20 i.e Yemmiganur, Gonaegandla and Nandavaram where 40 farmers from each mandal were randomly selected using simple random selection method based on the database from Krishi Vigyan Kendra, Banavasi of Kurnool district.

2.2 Identification of Constraints as Encountered by Beneficiaries in the Adoption of Animal Husbandry Practices

Animal husbandry has been concerned to be a rural domain. Beneficiaries of the study area spent many hours of the day for caring of their animals but the desired production parameters has not been achieved so far. Therefore, an attempt has also been made to know the constraints in adoption of animal husbandry operations as perceived by the beneficiaries. The constraints encountered by the farmers were categorized into four categories namely - Infrastructural, Technical, Socio-psychological and Financial constraints.

2.3 Ranking Procedure of Constraints

The following ranking procedure has been followed for the constraints faced by beneficiaries regarding selected animal husbandry practices:

1. The responses were arranged in two classes either yes or no.
2. A frequency of the beneficiaries falling in each category was worked out.
3. These frequencies were then expressed in terms of the percentage of the total size of sample.
4. The constraint having the highest percentage was ranked first and one having the lowest was ranked last.

3. RESULTS AND DISCUSSION

3.1 Infrastructural Constraints Perceived by the Beneficiaries of Villages Adopted by KVK, Banavasi

It was revealed from the Table 1 that on the basis of percentage, the beneficiaries perceived "non-availability of green fodder throughout the year" (81.66%) and "A.I. centre not/distantly located" (64.00%) as the most serious infrastructural constraints so they rated these as I and II ranks respectively. The last rank was awarded to "Lack of supply of animal feed and fodder" (14.00%) by the beneficiaries. Rank IV and V were given to "Lack of veterinary hospital and health centre" (25.33%) and "Non-availability of improved sire in the village" (19.66%). Findings of Kaur et al. [7] also support these results as they found lack of A.I. centres and distant location of veterinary hospitals were important constraints.

3.2 Technical Constraints Perceived by the Beneficiaries of Villages Adopted by KVK, Banavasi

Table 2 incorporates the findings of technical constraints encountered by the beneficiaries. The study indicated that out of the several constraints "Lack of knowledge about rearing crossbred cows" (71.67%) and "Lack of training about..."
improved animal husbandry practices" (62.00%) constituted the most important constraints with I and II ranks respectively while the beneficiaries rated "Lack of knowledge about clean milk production" (19.33%) as the least important technical constraint. "Lack of vaccination facilities in veterinary hospitals" (44%) and "Lack of knowledge about feeding, breeding and management practices" (27.67%) were ranked III and IV respectively.

3.3 Socio-Psychological Constraints Perceived by the Beneficiaries of Villages Adopted by KVK, Banavasi

Data regarding socio-psychological constraints of animal husbandry practices have been presented in Table 3. On the whole, "Cost of rearing crossbred/improved breeds of livestock is very high" (89.66%) and "Excess work load" (84.00%) were the main constraints of socio-psychological nature encountered by the beneficiaries and these were accorded I and II ranks respectively. "Non-cooperation of other family member in animal husbandry activities" (31.33%) was perceived as the least important "Resistance towards raising improved breeds" (51.66%). The results have been supported by Kaur et al. [7] who reported rearing of cross bred cow is very costly and excessive burden of work as very serious constraints.

3.4 Financial Constraints Perceived by the Beneficiaries of Villages Adopted by KVK, Banavasi

Data regarding financial constraints of animal husbandry practices have been presented in Table 4. It was found that Less price was given cow/buffalo milk in Village compared to urban areas, due to less demand and spending capacity which was the top most constraint among financial constraints where farmers expressed disatisfaction.

| S. no | Constraints                                      | Constraint perceived by no. of farmers | Percent  | Rank |
|-------|-------------------------------------------------|----------------------------------------|----------|------|
| 1     | Lack of supply of animal feed & fodder           | 17                                     | 14.00    | VI   |
| 2     | Non-availability of improved sire in the village | 24                                     | 19.65    | V    |
| 3     | Lack of veterinary hospital and health centre    | 30                                     | 25.33    | IV   |
| 4     | Lack of transport facilities for sick animals    | 35                                     | 29.57    | III  |
| 5     | A. I. centre not/distantly located               | 77                                     | 64.00    | II   |
| 6     | Non-availability of green fodder throughout the year | 98                                     | 81.66    | I    |

Table 1. Infrastructural constraints perceived by the beneficiaries

| S. no | Constraints                                      | Constraint perceived by no. of farmers | Percent  | Rank |
|-------|-------------------------------------------------|----------------------------------------|----------|------|
| 1     | Lack of knowledge about feeding, breeding and management practices | 33                                     | 27.67    | IV   |
| 2     | Lack of knowledge about clean milk production   | 23                                     | 19.33    | V    |
| 3     | Lack of training about improved animal husbandry practices | 74                                     | 62.00    | II   |
| 4     | Lack of vaccination facilities in veterinary hospitals | 53                                     | 44.00    | III  |
| 5     | Lack of knowledge about rearing cross-bred cows | 86                                     | 71.67    | I    |

Table 2. Technical constraints perceived by the beneficiaries

| S. no | Constraints                                      | Constraint perceived by no. of farmers | Percent  | Rank |
|-------|-------------------------------------------------|----------------------------------------|----------|------|
| 1     | Excess workload                                 | 101                                    | 84       | II   |
| 2     | Non-cooperation of other family member in animal husbandry activities | 38                                     | 31.33    | IV   |
| 3     | Cost of rearing crossbred/improved breeds of livestock is very high | 108                                    | 89.66    | I    |
| 4     | Resistance towards raising improved breeds      | 62                                     | 51.66    | III  |

Table 3. Socio-psychological constraints perceived by the beneficiaries
Table 4. Financial constraints perceived by the beneficiaries

| S. no. | Constraints                                                                 | Constraint perceived by no. of farmers | Percent  | Rank |
|--------|-----------------------------------------------------------------------------|---------------------------------------|----------|------|
| 1      | High cost of construction for animal housing                               | 19                                    | 15.66    | V    |
| 2      | More expenditure on animal's medicines and vaccination                      | 98                                    | 82.00    | II   |
| 3      | Lack of loan facilities for animals                                         | 36                                    | 30.33    | IV   |
| 4      | Less price of cow/buffalo milk given in Village compared to urban areas     | 107                                   | 89.33    | I    |
| 5      | High cost given for emergency services                                      | 78                                    | 65.33    | III  |

4. CONCLUSION

Out of the five financial constraints mentioned in Table 4, it was revealed that "Less price of cow/buffalo milk given in village" (89.33%) was the constraint perceived by maximum beneficiaries so it stood at rank I, followed by "More expenditure on animal's medicines and vaccination" (82.00%), "High cost given for emergency services" (65.33%) and "Lack of loan facilities for animals (30.33%) with II, III and IV ranks respectively. However, the constraint "High cost of construction for animal housing" (15.66%) was given least priority by the beneficiaries among the financial constraints.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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