

EFFECT OF TRAINING THE FARMERS IN USAGE OF FODDER PRODUCTION TECHNOLOGY IMPLEMENTS

V. Sujatha¹, C. Suresh² and C. Lawrence³

¹Assistant Professor, Education Cell, Madras Veterinary College, Chennai

²Assistant Professor, Veterinary University Training and Research Centre, Nagapattinam.

³Veterinary Assistant Surgeon, Veterinary Dispensary, Sikkal, Nagapattinam

E-mail: drsujathavas@gmail.com

Abstract: The green fodder resources for livestock are mainly derived from grazing in grass lands and pastures, fodder crops from cropped lands, weeds, bund grasses, tree leaves and mixed forages. Crop residues, mainly sorghum and paddy straws, constitute the major fodder source for livestock in the field conditions. Department of Animal Husbandry provided chaff cutters to the farmers to reduce wastage of fodder, increase palatability and improve digestibility; rain gun system of irrigation for efficient irrigation and grass cutters to facilitate easy and uniform harvest of fodder. Farmers were trained to use the implements of fodder production and utilization. Education of farmers thus provides an opportunity to learn various techniques by doing. By seeing the efficiency of chaff cutter, grass cutter and rain gun usage in fodder production and feedback on utility from the trained farmers, the untrained farmers also learnt the techniques and practices involved in fodder production. These activities bridge the gap between demand and supply of green fodder. This is the milestone achievement by educating the farmers to use modern implements and machineries in fodder production.

Keywords: Implements, fodder, training, chaff cutter, rain gun, grass cutter.

Introduction

Livestock plays an important role in the economy of India in general and sustainable livelihood of poor people of rain-fed agro-ecosystem in particular, because of inherent risk involved in the crop farming due to uncertainty of rainfall and occurrence of recurrent droughts (Misra 2005). They are raised mainly for meat, milk and skin, thus providing a flexible financial reserve (social security) in bad crop years for the rural population (Rangnekar 2006). The economic viability of livestock husbandry depends on sources of feed and fodder as feeding cost constitutes about 65% - 70% of the total cost of the livestock farming. Fodder Development is the fundamental block for livestock development. The gap between dry fodder requirement and production is very narrow and the shortage is felt only during severe drought situations. But the green fodder production is inadequate to meet the requirement and there is always a shortfall of almost 25% in the State level. Training of

farmers is essential to create awareness and to learn utilization techniques of fodder processing implements.

Materials and Methods

1. Beneficiaries

The beneficiaries of State Fodder Development Scheme and Accelerated fodder development programme were organized to enroll them to avail training. Farmers of the above fodder development schemes were provided inputs needed for the cultivation of green fodder in 25 cents to 50 cents. Totally 62 (38 males and 24 female) farmers were given training at Veterinary dispensary, Thirunavalur in Villupuram District.

2. Inputs provided

Beneficiaries were financially assisted for bush clearance, land preparation and fodder slips/ seeds were also distributed to them for cultivation. Required amount (Urea 15kg, Super phosphate 30 kg and potash 5 kg) of fertilizers was also provided from the primary agricultural cooperative societies. Machineries like Chaff cutter, grass cutter and rain gun were given to the farmers with 25-75 percent subsidies by the government of Animal Husbandry.

3. Training

Training composed of Lectures, method demonstration and result demonstration techniques to operate the chaff cutter (Both power driven and hand operated), grass cutter and rain gun. Training was conducted for a period of five days. Lectures were scheduled with three resource persons working as veterinary surgeon with post graduation in Animal Nutrition, Dairy science and Livestock Production & Management. Major points emphasized as below in the lectures.

Merits of Chaff cutter

By using the chaff cutter wastage of the fodder could be reduced (up to 30%) substantially (Misra *et al.*, 2007). Selective feeding of animals towards the tender parts of fodder and avoiding stem and fibrous parts of fodder can be avoided (Misra, Rao and Ravishankar, 2010). Chaffing of fodder will increase the digestibility. Particle size of fodder is reduced in chaffing. The surface area available for microbial action in digestive system is increased. Plant enzymes released while chaffing will increase the palatability and juiciness of fodder. Voluntary intake of fodder will increase.

Merits of Grass cutter

Cultivated fodders like Hybrid Napier CO3, CO4, stylo, fodder sorghum, fodder maize and fodder cowpea can be harvested. Weeds in the fodder field and other crops, bush in the bunds can be cleared. Grass cutter will reduce the requirement of manpower to harvest, bush clearance and deweeding practices.

Merits of Raingun

Raingun can be used in the water scarcity areas. It reduces the manpower requirement and prevent the complication of weeds which flourish in flood irrigation, thereby nutrients loss due to utilization of nutrients by the weeds arising in flood irrigation will be minimized. Water is used economically and efficiently and hence the saved water can be diverted to cultivation of other crops.

Method Demonstration

Operational technique was demonstrated with each instrument after dividing the framers in a group of five farmers. Common problems encountered during operation of implements were demonstrated to rectify themselves as far as possible. The farmers were enabled to realize the importance of usage fodder processing implements.

Result Demonstration

Three innovative farmers of Thirunavalur village were selected for result demonstration of technical usage of the fodder processing implements and each farmer with one implement of our inputs *viz.* Chaff cutter, grass cutter and rain gun. The trainee farmers are brought to the first farmer's home to visualize the difference in voluntary intake of chaffed and unchaffed long CO3 variety hybrid napier grass. The second farmer also shown his bush cleared field and harvested one cent field of the hybrid napier grass within short time and another one cent area by hand cutting method. The third innovative farmer explained the benefits of raingun to maintain the CO4 field green throughout the year with lesser water resource. The farmers realized the above merits of each implements and thereby learning by seeing was achieved

Result and Discussion

The farmers were familiarized and learnt the techniques and operational procedure of chaff cutter, grass cutter and raingun. Each farmer were given opportunity to operate the above three implements individually to enable themselves to operate the implements in their home without any hesitation. It is observed that male farmers learnt the operational procedure easily than female farmers. Female farmers operated the chaff cutter (both hand driven and

power operated) and rain gun easily and the female farmers expressed their difficulty in carrying the grass cutter while operation.

For personal use, villagers preferred the manual chaff cutter rather than the powered chaff cutter, because of its low cost as well as easy operation. Only two persons are required to cut the fodder by manual chaff cutter, whereas for the power operated chaff cutter, a minimum of three persons are needed to perform the task satisfactorily. The power chaff cutter is generally fixed in one place to which people have to bring their fodder for cutting, which is not preferred by some social groups. However, one advantage is that it can provide a livelihood option: because of its output capacity, the owner or operator charges a cutting fee (Rs. 0.70/crop residue bundle of about 10 kg) to villagers those wishing to cut their fodder (Misra *et al.*, 2007)

In India and Pakistan, chaffed stovers and straws are mixed with chaffed greens and usually fed in troughs (FAO, 2000). The trained farmers were used the implements confidently to chaff their fodders and they taught the techniques to the other untrained farmers in their surrounding area. It is observed that the trained farmers serve as technical source to the untrained farmers in their locality. The performance of trained farmers enabled the untrained farmers to develop the enthusiasm and urge to purchase and use the above implements to their farm animals.

Conclusion

Rapid urbanization has resulted in shrinking of grazing lands. Education of farmers thus provides an opportunity to the farmers to learn the various techniques by doing. By seeing the efficiency of chaff cutter, grass cutter and rain gun in fodder production and utility from the trained farmers, untrained farmers also understood about the techniques and practices involved in fodder production. These activities bridge the gap between demand and supply of green fodder. This is the milestone achievement in the education of farmers in usage of modern implements in fodder production. Training of farmers is essential before providing the fodder processing implements. Training not only enable the trained farmers but also the untrained farmers around the trained farmers through learning by seeing and doing.

References

[1] FAO. 2000. Using hay and dry residues. *In Hay and straw conservation*, FAO Plant production and protection series, Chapter X, p. 315

- [2] Misra AK 2005 Contingency planning for feeding and management of livestock during drought. In: KD Sharma and KS Ramasastri (Editors) Drought Management. Allied Publishers Pvt. Ltd., New Delhi. pp 276-286
- [3] Misra AK, CA Rama Rao, KV Subrahmanyam, M Vijay Sankar Babu, B Shivarudrappa and Y S Ramakrishna. 2007. Strategies for livestock development in rainfed agro-ecosystem of India, *Livestock Research for Rural Development* 19 (6) 2007
- [4] Rangnekar DV 2006 Livestock and livelihoods of the underprivileged communities in India: A review. International Livestock Research Institute, Nairobi, Kenya. 72 pp
- [5] Misra, A.K., Rama Rao, C.A. & Ravishankar, K. 2010. Analysis of potentials and problems of dairy production in rainfed agro-ecosystem of India. *Indian J. Anim. Sci.*, 80 (11): 1126–1133.