Production and Productivity Increase of Milch Animals through the Supply of Green and Dry Fodder in Non-Delta Districts of Tamil Nadu

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Abstract— *In India, fodder production is less than the demand and hence deficit is noticed in different states with varying per cent of deficit observed in many states. To alleviate the deficiency of green and dry fodder and to maximize the fodder production for increased a productivity of livestock was studied among 310 respondents of 23 non-delta districts of Tamil Nadu. The results showed that, gain among different types of faming, increased quantum of feeding and increased body weight gain and daily average milk yield among the indigenous as well as cross breed animals.*

Keywords— fodder production, weight gain, milk yield, productivity.

I. INTRODUCTION

Fodder refers mostly the crops which are harvested and used for stall feeding of livestock. Cultivated fodders are broadly divided in to two groups, namely legumes and non-legumes. They are further grouped into annuals and perennials. Annuals are seasonal crops. Perennials remain for more than one year on the field, usually for 3 to 4 years. Another classification of fodder crops are cereal fodder, grass fodder, legume fodder and tree fodder. It is estimated that the average cultivated area devoted to fodder and forage availability in about 53 per cent for dry and about 68 per cent for green fodder (MoA, 2011). Fodder production in India is highly dependent on rainfall hence drought like situation will further intensifies the fodder scarcity. Drought reduces the fodder production in certain years by as much as 15-100 per cent of a normal year (Dikshit and Birthal, 2010). Generally for livestock, the feed comprises of dry fodder, green fodder and concentrate of which dry fodder forms the major share. The rearing practices of livestock also changed from traditional production system in to scientific technology oriented farming. In order to make fodder available at the village level and to overcome the distress sale of livestock, cultivation of green fodder and production of dry fodder for supply to the famers of non-delta districts except Chennai as been taken up during 2011-2013 with the following objectives

- To study the quantity increase of fodder crops such as fodder sorghum in non-delta districts
- To ascertain the production and productivity of milch animals through the supply of green and dry fodder

II. METHODOLOGY

2.1 Selection of respondents

A total of 310 sample respondents, which includes 10 respondents from each district, except Kanyakumari representing high rain fall zone and The Nilgiris and Dindigul (Kodaikanal) Districts representing the hill zone had contributed, minimum of 30 respondents. An interview schedule was developed incorporating items pertaining to the objectives of the study was constructed and finalized for data collection. Thus, the respondents were selected from 23 non-delta districts (except Chennai) as given below:

S.No.	Area covered (in acres)	Agro-climatic zones covered	District / Centres covered	No. of Respondents
1.	Non-Delta Districts	North Eastern, North western, Western, Southern, High rain fall, Hill zone	Kancheepuram, Tiruvallur, , Vellore, Thiruvannamalai, Villupuram, Dharmapuri, Krishnagiri, Salem, Namakkal, Theni, Coimbatore, Dindigul, Erode, Tiruppur, Perambalur The Nilgiris, Madurai, Sivagangai, Ramanathapuram, Tirunelveli Virudhunagar Thoothukudi and Kanyakumari.	310
Total				**310**

2.2 Method of Data Collection

Interview method was selected as an appropriate tool for data collection. An interview schedule incorporating all the items pertaining to the objectives was developed in consultation with extension specialists and faculties of Tamil Nadu Veterinary and Animal Sciences University outreach centers and finalized for data collection.

The interview schedule thus developed was circulated among all the peripheral centers of Tamil Nadu Veterinary and Animal Sciences University covering all the districts of Tamil Nadu. The data so collected were coded, tabulated and necessary analytical techniques were used. With this methodology, the data was subjected to analysis and results were interpreted.

III. RESULTS AND DISCUSSION

The beneficiaries of the scheme were classified in to four types based on the type of farming viz., crop farming, mixed farming, fodder farming and miscellaneous farming like horticulture etc.

3.1 Quantity of fodder production

The increase in the production of the fodder was given below in Table – 1.

TABLE -1
QUANTITY OF FODDER PRODUCTION

Type of Farming	Quantity of Fodder Produced(In Tonnes/Year)		Gain
	Before	After	
Crop farming	133.92	483.12	349.2
Mixed farming	110.04	365.34	255.3
Fodder farming	55.68	454.32	398.64
Miscellaneous	104.1	372.9	232.8

The study showed that the beneficiaries involved in crop farming had a gain in fodder production of 349.2 tonnes per year. The beneficiaries of mixed farming had a again in production of 255.3 tonnes per year. Whereas, the beneficiaries involved only in fodder farming had a gain of 398.64 tonnes per year. The rest of beneficiaries involved in other types of farming activities had a gain in fodder production of 232.8 tonnes per year.

3.2 Benefits of increased fodder production

It is evident from the Table - 2 that, due to increased production of fodder from 325.74 to 1561.68 tonnes in a year, the quantum annual livestock feeding was also increased from 44.70 to 67.38 tonnes. Further, the quantum of surplus fodder was also increased from 281.04 to 1494.3 tonnes per year.

3.2.1 Interms of feeding and increased production

TABLE – 2
BENEFITS INTERMS OF FEEDING AND INCREASED PRODUCTION

Use of Fodder and Feed (In Tonnes / Year)	Before	After
Quantity of fodder produced(Q_1)	325.74	1561.68
Quantum of feeding(Q_2)	44.70	67.38
Quantity of surplus fodder produced(Q_1-Q_2)	281.04	1494.3

3.2.2 Interms of productivity of livestock

The productivity benefits of livestock interms of increased body weight of the animal and increased milk yield of milch animals owned by the beneficiaries are given in Table – 3.

TABLE – 3
BENEFITS INTERMS OF PRODUCTIVITY OF LIVESTOCK

Details	Indigenous		Cross Breed	
	Before	After	Before	After
Animal Body Weight (in Kgs)/Year	70.56	88.08	35.35	55.42
Daily average milk yield (in litres)	8.56	14.02	16.82	19.60

The study revealed that, the indigenous milch animals of the beneficiaries had a body weight gain of 17.52kgs in a year whereas the cross breed milch animals of the beneficiaries had a body weight gain of 20.07 kgs in a year. It is also evident from the table that, the indigenous milch animals of the beneficiaries had gained an average milk yield of 5.46 liters of milk on daily basis whereas cross breed milch animals had gained an average milk yield of 2.78 liters of milk on daily basis.

IV. CONCLUSION

The economic viability of livestock sector depends on the sources of feed and fodder. Newer farming management techniques like use of drought resistant fodder crops, balanced feeding, and production oriented feeding management have received wider acceptance at various levels among the farmers.

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