

PERCEIVED EFFECTIVENESS OF SUPPLY OF FODDER SEEDS AND SLIPS BY DIFFERENT DAIRY SERVICE DELIVERY SYSTEMS IN NAMAKKAL DISTRICT OF TAMIL NADU

S. Karthikeyan

Assistant Professor, Veterinary Clinical Complex
Veterinary College and Research Institute, TANUVAS, Theni, Tamil Nadu– 625534
E-mail: drkarthiknkl@gmail.com

Abstract: The present study was conducted in Namakkal District of Tamil Nadu to explore the perceived effectiveness of supply of fodder seeds and slips by different dairy service delivery systems. A total of 120 respondents were selected for the study by stratified proportionate random sampling method and the data were collected by personal interview method using pre-tested interview schedule. The respondents predominantly availed the fodder seeds and slips of improved varieties from neighbours (59.17%) followed by dairy cooperatives (33.33%) and educational institutes like veterinary college and KVK (18.33%) while meagre percentage of the respondents received the fodder seeds and slips from private integrators (9.17%) and public departments (1.67%). Based on the mean weighted score, the dairy farmers perceived the supply of educational institutes (248.83) like veterinary college and KVK in the Namakkal district was effective in terms of their regularity, timeliness, quality, quantity, variety and cost effectiveness followed by dairy cooperatives (247.92) and neighbours (242.28).

Keywords: Dairy, Fodder, Seeds, Slips, Neighbours, Institutes, Cooperatives, Departments.

INTRODUCTION

Dairying forms an integral component of Indian agriculture, providing a stable source of income, nutrition, and employment to millions of rural households. Among the various inputs influencing dairy productivity, feed and fodder account for nearly 60–70 per cent of the total cost of milk production. Ensuring adequate year-round supply of nutritious fodder is, therefore, essential not only for sustaining animal health and productivity but also for enhancing the profitability of smallholder dairy farming systems. However, in most parts of India, and particularly in Tamil Nadu, the availability of quality fodder seeds and slips continues to be a major constraint faced by farmers. Limited access to improved fodder varieties restricts the adoption of scientific feeding practices, thereby lowering milk yield and farmer income.

In this context, various service delivery systems have emerged to supply fodder inputs to dairy farmers. These include formal institutions such as dairy cooperatives, educational institutes, research organizations, public departments, private integrators and informal

channels like farmer-to-farmer exchanges. Despite these multiple avenues, the effectiveness of these service delivery systems as perceived by the end-users—the dairy farmers—remains insufficiently studied. With a strong cooperative structure, active private integrators, and the presence of research and extension institutes, farmers here have access to multiple channels for fodder procurement in Namakkal district of Tamil Nadu. Yet, anecdotal evidence suggests that none of these systems alone fully satisfies the diverse requirements of smallholders. Understanding farmers' perceptions about the effectiveness of each system is thus vital for identifying best practices, addressing gaps, and formulating a more coordinated fodder delivery strategy. Against this backdrop, the present study was undertaken to evaluate the perceived effectiveness of different dairy service delivery systems in supplying fodder seeds and slips in Namakkal district.

MATERIALS AND METHODS

The study was undertaken in Namakkal district of Tamil Nadu state under the Salem District Co-operative Milk Producers Union, which is one of the largest milk procuring union of Tamil Nadu Cooperative Milk Producers Federation. Apart from cooperatives, various private dairies, vendors and cream separation units are also procuring milk from the farmers and offering dairy related services to them. All the four taluks of Namakkal district were purposively included for the study. For each taluk, the revenue villages which are having a female bovine population of above 1000 animals were listed out. From this list, one village from each taluk was randomly selected for the research study. Respondents were selected based on the criteria that the farmers should have milch animal either a cow or a buffalo in milking condition and availing services from different dairy service delivery systems aforementioned. A total of 30 respondents from each village were selected by using stratified proportionate random sampling method. Thus, a total of 120 respondents were selected for the study. The data were collected by personal interview method using a pre-tested interview schedule. The perceived effectiveness of different dairy service delivery systems for the supply of fodder seeds and slips was ascertained in terms of their regularity, timeliness, quality, quantity, variety and cost effectiveness. The scores were assigned on a three - point continuum for the indicators in order to analyze their perceived effectiveness. Weighted score for each dairy service delivery system was calculated by assigning 3 for 'good', 2 for 'average' and 1 for 'poor' then multiply the per cent of observation by the respective score and finally adding the total observation.

RESULTS AND DISCUSSION

A. Supply of fodder seeds and slips by different dairy service delivery systems

More than half of the dairy farmers (59.17%) availed the supply of fodder seeds and slips from the neighbouring farmers. Some of the dairy farmers with large land holding with sufficient irrigation facilities and ample livestock possession tend to cultivate improved varieties of fodder crops in extensive area in their farm mainly for their own needs. These dairy farmers in turn will tend to supply the fodder seeds and slips of improved varieties to the neighbouring farmers who are in need during the surplus and lean season. This might be due to the mutual benefits offered and gained between the fellow farmers. One third (33.33%) of the respondents received supply of fodder seeds and slips offered by the dairy cooperatives. Banerjee (2016) also found that majority of respondents (89.47 %) in Dharwad and Belagawi district of Karnataka state obtained fodder seed materials from other growers. while 2.11% of respondents obtained seed materials from Karnataka Milk Federation (KMF) and 1.05 per cent of respondents obtained seed materials from Indian Grassland and Fodder Research Institute, Dharwad.

Table 1: Supply of fodder seeds and slips by different service delivery systems

Sl. No	Dairy service delivery systems (N = 120)	Supply of Fodder Seeds and Slips	
		Frequency*	Per cent
1	Dairy Cooperatives	40	33.33
2	Private Integrators	11	9.17
3	Pubic Departments	2	1.67
4	Educational Institutes	22	18.33
5	Others (Neighbours)	71	59.17

* Multiple response

It can be inferred from the Table 1 that a sizeable percentage of the respondents (18.33%) had procured the improved variety fodder seed and slips from the educational institutes like veterinary college and Krishi Vigyan Kendra located in the Namakkal region. These institutes were catering the needs of the dairy farmers in terms of giving the farmers necessary inputs as well as training and advisory services by means of office call, farm and home visit, field visit, training, study tour and exposure visits, etc. Chakoma and Chummun (2019) also reported that forage seeds in Zimbabwe were mainly sourced from development organisations like seed companies, research and extension institutions and NGOs.

Lesser percentage of the respondents (9.17%) received the supply of fodder seeds and slips from the private integrators like Hatsun and Aroky, etc. A very small percentage of the respondents (1.67%) received the supply of fodder seeds and slips from the public departments like state animal husbandry department. The dairy farmers were provided with mini kit for fodder development and seeds of high yielding varieties by the department officials as well as slips of improved varieties of grass fodder like Hybrid Cumbu Napier (Co4) under State Fodder Development Scheme (SFDS).

Leyte *et al.*, (2022) found that in Philippines the government institutions acquired improved forage materials from other government institutions, colleges, universities and provided them for free to the farmers whereas in Vietnam, the farmers acquired forage materials from government actors, family members and traders. In both cases, government actors played gate keeping roles in introducing new forage species and varieties into the farmer's field.

B. Perceived effectiveness of supply of fodder seeds and slips by different dairy service delivery systems

Only three service providers i.e., dairy co-operatives; educational institutes; and neighbours who were supplying fodder seeds and slips to the dairy farmers in the study area were considered for the comparison and the results are presented in Table 2. Since the number of observation for the private integrators and public departments was less, it was not included for analyzing their perceived effectiveness of insurance services.

I. Dairy Cooperatives : It can be inferred from Table 2 that the dairy farmers perceived that the supply of fodder seeds and slips by the dairy cooperatives were more regular (227.50) and timely (220.00) throughout the year and the quantum of seeds and slips supplied was felt adequate by the respondents (277.50) as well as the quality (285.00) and variety of fodder seeds and slips (277.50) since they used maintain their own stock of improved varieties under the district cooperative milk union and the same was supplied to their member dairy farmers on demand through their respective village primary dairy cooperative societies. But it was observed that the cooperatives were not cost effective (200.00) in providing the fodder seeds and slips to the farmers as they used to charge little higher price when compared to other dairy service providers for the improved varieties of fodder seeds and slips. Wambu and Gichuki (2024) also reported that most dairy farmers societies supported their member farmers through seed production and bulking of super napier and selling them to farmers (94.2%) while 71.7% reported that they were supported by supplying subsidized feeds and fodders.

II. Educational Institutes: The dairy farmers perceived that the fodder seeds and slips available from the educational and research institutes were effective in their quality (290.91) and of latest variety (290.91) which the farmers needed but it was not available in adequate quantity (263.34) at the required time (190.91) for the dairy farmers. With a weighted score of 209.09, the dairy farmers in the study area perceived that the fodder seeds and slips supplied by the veterinary college and KVKs were cost effective than dairy cooperatives. However, their supply to the farmers in the Namakkal district was not regular as that of dairy cooperatives.

III. Neighbours: The dairy farmers perceived that the supply of improved varieties of fodder seeds and slips from the neighbours were quantum sufficient (288.73) and cost effective respectively (300) than other systems because they were supplied mostly free of cost and without any restriction on the quantity than the cooperatives and educational institutes. But the supply was not regular (197.18) and also the quality (259.15) and variety of fodder seeds and slips (256.34) availed from neighbours were not those comparable to that of dairy cooperatives because the farmers used to maintain stocks of fodder seeds and slips procured by them long time ago and cultivated them in their land for many seasons without any change or rotation to ensure steady supply to their dairy animals.

Table 2: Perceived effectiveness of supply of fodder seeds and slips by different dairy service delivery systems

Indicators	Dairy co-operatives (n = 40)				Educational Institutes (n = 22)				Neighbours (n = 71)			
	Good % (F)	Average % (F)	Poor % (F)	Weighted Score	Good % (F)	Average % (F)	Poor % (F)	Weighted Score	Good % (F)	Average % (F)	Poor % (F)	Weighted Score
Regularity	47.50 (19)	32.50 (13)	20.00 (8)	227.50	45.45 (10)	18.18 (4)	36.36 (8)	209.09	12.68 (9)	71.83 (51)	15.49 (11)	197.18
Timeliness	40.00 (16)	40.00 (16)	20.00 (8)	220.00	27.27 (6)	36.36 (8)	36.36 (8)	190.91	7.04 (5)	77.46 (55)	15.49 (11)	191.55
Quality	92.50 (37)	0.00 (0)	7.50 (3)	285.00	90.91 (20)	9.09 (2)	0.00 (0)	290.91	61.97 (44)	35.21 (25)	2.82 (2)	259.15
Quantity	85.00 (34)	7.50 (3)	7.50 (3)	277.50	63.64 (14)	36.36 (8)	0.00 (0)	263.64	88.73 (63)	11.27 (8)	0.00 (0)	288.73
Variety	85.00 (34)	7.50 (3)	7.50 (3)	277.50	90.91 (20)	9.09 (2)	0.00 (0)	290.91	57.75 (41)	40.85 (29)	1.41 (1)	256.34
Cost effectiveness	40.00 (16)	20.00 (8)	40.00 (16)	200.00	45.45 (10)	18.18 (4)	36.36 (8)	209.09	100.0 (71)	0.00 (0)	0.00 (0)	300.00
Overall	247.92				248.83				242.28			
Rank	II				I				III			

CONCLUSION

The present investigation concluded that neighbours were the most common source of fodder seeds and slips, ensuring affordability and adequacy but often lacking regularity, quality and varietal diversity. However, dairy cooperatives offered more regular and timely supplies with acceptable quality and variety, though at relatively higher cost. Educational and research institutes were valued for providing superior quality and latest varieties at reasonable cost, yet their contribution was limited by irregular and inadequate supply. Private integrators and public departments played only a minor role, mainly through specific schemes. Overall, no single system fully met farmers' requirements; rather, each offered distinct advantages. A coordinated strategy encompassing the regularity of cooperatives, the varietal innovation of

educational institutes and the cost-effectiveness of peer to peer exchanges, while scaling up institutional production and timely distribution would greatly enhance fodder security and strengthen dairy farming.

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