

# The Information Needs of Small Scale Dairy Farmers in Tanzania

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**ABSTRACT:** The study was undertaken to investigate the information needs of small-scale dairy farmers and various information sources they consulted to resolve their information needs. It involved 71 small-scale dairy farmers from five villages, which were selected through a systematic random sampling from Mbozi district. Personal interviews were used to gather data from small-scale dairy farmers. Small scale dairy farmers were found to be in need of information on livestock feeds availability and feeding techniques (97.2%), parasite and disease control (83.1%), general animal husbandry (81.7%), heat detection and breeding techniques (43.7%) and information on milk marketing (39.4%). In resolving their information needs it was found that attending extension meetings and extension worker visits were the most dependable information sources used by the majority of farmers. The use of agricultural libraries as an information source was very uncommon to the majority of the respondents with the major reason being lack of such a service.

**RESUMÉ:** Cette étude a été entreprise pour enquêter sur les besoins d'information des petits producteurs laitiers, et les sources d'information qu'ils consultent pour satisfaire leurs besoins d'information. Un échantillon de 71 petits producteurs laitiers de 5 villages a été sélectionné. Ces petits producteurs laitiers ont été interviewés personnellement pour collecter l'information. Les résultats montrent que les petits producteurs laitiers ont besoin d'information sur la disponibilité d'aliments pour les animaux ainsi que les techniques d'alimentation (97,2%), le contrôle phyto-sanitaire (83,1%), la santé animale en général (81,7%), la détection des chaleurs et les techniques de reproduction (43,7%), et le marché laitier (39,4%). En répondant à leurs besoins d'information, il s'est avéré que l'information la plus fiable, utilisée par la majorité des producteurs, est obtenue lors de réunions avec les vulgarisateurs, ou au cours des visites de ces derniers. Pour la majorité des producteurs, il est très inhabituel d'aller chercher l'information dans une bibliothèque agricole, pour la principale raison que celle-ci n'existe pas.

**RESUMEN:** Se investigaron las necesidades de información de pequeños ganaderos lecheros y las diversas fuentes de información que ellos consultan para resolver sus necesidades de información. Participaron 71 pequeños ganaderos lecheros de cinco aldeas, que fueron seleccionados mediante un muestreo aleatorio sistemático en el distrito de Mbozi. Se recopilaron los datos de estos ganaderos en entrevistas personales. Se encontró que ellos necesitaban información sobre la disponibilidad de especies forrajeras y técnicas de alimentación (97.2%), el control de parásitos y de enfermedades (83.1%), la ganadería en general (81.7%), la detección de celo y técnicas de zootecnia (43.7%) e información sobre el mercadeo de productos lácteos (39.4%). Se encontró que, en la solución de sus necesidades de información, la asistencia a las reuniones de extensión y las visitas de los extensionistas fueron las fuentes de información más confiables utilizadas por la mayoría de los agricultores. El uso de las bibliotecas agrícolas como fuente de información fue poco común entre la mayoría de los entrevistados, debido principalmente a la falta de dicho servicio.

INFORMATION IS AN important resource needed by every individual whether literate or not. While the information providers make every effort to supply information on a regular basis to the literates; the non-literates are literally neglected by most information providers. The majority of the rural inhabitants in Africa who are non-literates are mostly farmers. They constitute the bulk of the labour force in most African countries. Appropriate provision of information to this group will largely increase their productivity; so the provision of information to farmers becomes crucial.

In order to provide appropriate and relevant information to farmers, it is necessary to identify their information needs. Several scholars have addressed the information needs of

farmers from a variety of communities. On the basis of a survey carried out on information needs and information-seeking involvement of farmers (N=258) in Nigeria by Aina (1985), it was established that 83.3% of the sampled farmers needed information on fertilizers; 67.4% needed information on planning materials; and 63.25% of the respondents needed information on credit and loans. Ojiambo (1995) reported that 425 farmers were asked to indicate the type of information they usually sought to improve their agricultural productivity. The findings of this study showed that the most frequently cited information need by farmers was on better farming methods (99.8%), appropriate fertilizers (98.8%), information on crop husbandry (72%), information on credit and marketing (39.8%) and information on animal husbandry (28.2%). Writing on user populations critical tasks in Africa, Kaniki (1995) pointed out that farmer's information needs relate to directional information such as where to get (resources of) fertilizers, implements, and other agricultural inputs. Further directional information are pointed out to be those of credit facilities, issues on land ownership and land disputes, and where to market products.

While extension workers are the traditional providers of information to farmers in developing countries, it is expected that other agencies other than extension organisations should provide agricultural information to farmers. There are problems facing other potential agricultural information providers to farmers in developing countries. These problems have been well documented. Newspapers, radio and television channels are considered to be inaccessible to farmers for reasons such as low lit-

eracy level and unavailability of radio and television sets to the majority of farmers in Africa (Aina, 1995). The same author claims further that most agricultural libraries and documentation centres on the continent were unable to perform most of their functions principally due to inadequate funding. Chifwepa (1997) had criticised the Zambia Library Service for only providing library services to people who can read, as

no provision was made for information support to the illiterates. It is expected that libraries in Africa have to devise means of providing information to non-literates since they constitute the majority. Sharing the above views, Sheba (1997) in his article on using the library for problem solving in African agriculture, argues that failure of libraries to meet information needs of farmers is the result of the set-up of such libraries

without considering the information needs of African communities.

Agricultural extension which is considered to be the best method for disseminating agricultural information to farmers has been criticised widely (Feder: 1984; Aina, 1990; Sturges and Neill, 1990 and Sheba, 1997). Aina (1990) cited an inadequate number of agricultural extension staff and the slow rate at which information on improved practices reaches them from researchers as some of the problems inherent in agricultural extension services. Sturges and Neill (1990) raised more critical issues on agricultural extension services. According to them "the information that the extension workers are supposed to disseminate too often takes the form of a series of highly technical packages, which are no doubt as incomprehensible to them as they are to the barely literate farmers they are struggling to advise". Studies done in Tanzania had also demonstrated little impact of agricultural extension services. A study by Mattee (1989) revealed that the involvement of farmers (N=194) in extension activities was low to the extent that 60.3% had never attended any extension meeting, 58.7% had never participated in a field day, 52% had never listened to a radio extension program, 46.45% had never been visited by an extension worker and 69% had never read extension pamphlets and bulletins. Similarly Wambura (1992) in his study on accessibility of agricultural technical information to rural women, concluded that the involvement of women in extension activities was not satisfactory.

In spite of the problems associated with extension agents in providing information to farmers, it is still the method used mainly for disseminating information to farmers. In Tanzania, it is recognised among government and non-governmental organisations, that efforts towards the provision of information to rural communities can best be carried out using the extension methodology.

The Southern Highlands Dairy Development Project is one of the

*Table 1 – Distribution of small scale dairy farmers by age (N = 71)*

Age	Frequency	Percent	Cumulative percent
21–30 Years	4	5.6	5.6
31–40 Years	15	21.1	26.8
41–50 Years	28	39.4	66.2
Above 50 Years	24	33.8	100.0
Total	71	100.0	

*Table 2 – Distribution of small scale dairy farmers by education level (N = 71)*

Education level	Frequency	Percent	Cumulative percent
Never attended class	2	2.8	2.8
Adult education	7	9.9	12.7
Class 1–4	19	26.8	39.4
Class 5–8	37	52.1	91.5
Secondary education	6	8.5	100.0
Total	71	100.0	

*Table 3 – Perceived information needs of small scale dairy farmers (N = 71)*

Information need	Frequency	Rank Order	Percent
Availability of animal feeds and feeding techniques	69	1	97.2
Parasite and disease control	59	2	83.1
General animal husbandry	58	3	81.7
Heat detection and breeding techniques	31	4	43.7
Milk marketing	28	5	39.4
Milking practices	9	6	12.7
Credit and loans	4	7	5.6
Vaccination and disease control	1	8	1.4

*Table 4 – Use of various information sources by small scale dairy farmers (N = 71)*

Information Source	Frequency	Percent
Attending extension meetings	63	88.7
Participating in agricultural shows	—	—
Listening to radio extension program	29	40.8
Being visited by an extension worker	59	83.1
Reading an extension pamphlet/bulletin	38	53.5
Visiting a fellow farmer	53	74.6
Visiting agricultural library	—	—
Visiting livestock institution	—	—

non-governmental organizations actively involved in disseminating agricultural information to small-scale dairy farmers in the Southern Highlands of Tanzania since 1978. The project established bull centres in 1978 where interested farmers brought their indigenous cattle for upgrading. After some years, the project adopted the village approach in which farmers from various villages are grouped. The various groups are later offered training on dairy cattle management. The project is presently concentrated in 10 districts. As at 1996 it involved 2047 small-scale dairy farmers. The project is jointly funded by the Swiss and Tanzanian governments.

A study was undertaken within the project area with the main objectives of finding out the information needs of the dairy farmers and to determine how their information needs are met. The study was carried out in 1997. The study involved 71 small-scale dairy farmers from five villages, which were selected through a systematic random sampling from Mbozi district, a district in the project. The response rate was 69.7% for extension workers while it was 87.6% for small-scale dairy farmers. Interviews (structured and semi-structured) were used to collect data from small-scale dairy farmers and the project extension coordinator.

## Discussion

The general background of the respondents was analysed with respect to their ages and educational levels. Table 1 shows that a large proportion of the sampled farmers were in the age ranges of 41–50 years (39.4%) and above 50 years (33.8%). They both constitute more than 70% of the sample. This shows that the active age groups of 21–30 years and 31–40 years were not fairly represented. The implication is that their productivity will be affected since it is assumed that the younger groups are more productive. It is therefore not surprising that farmers in this sample are bare-

ly literate as only 8.5% of the respondents had gone beyond primary education (Table 2). As far as the education level is concerned, the majority of the respondents (78.9%) had basic primary education [class 1–8] a small percentage (2.8%) claimed to have never attended any class. The educational level of the respondents being one of the factors affecting the adoption of new innovations is also reflected in these results as the majority of the respondents had formal education. Based on the education level of the respondents it is suggested that repackaged information in simple Swahili language (books and leaflets) can probably be used successfully by the majority of the respondents.

**Information Needs of Small Scale Dairy Farmers** – According to Mchombu (1992) information needs assessment is quite difficult to establish. Both a diagnostic approach and direct questioning were used in determining information needs of the respondents. In the first instance farmers were inquired on main problems which they thought affected their dairy business. In addition to the direct observation on the conditions of the animals and environment in which they were kept, farmers were asked to indicate the areas where they thought they needed more information. This was the most difficult question for the majority of the respondents indicating lack of articulating their information needs. Much of the time the respondents were referred back to the problems they considered hindered their business and queried as to whether or not they thought finding solutions to the mentioned problems was necessary. With this question it was possible for majority of them to indicate areas they lacked knowledge and needed more training.

Table 3 indicates that information was needed most by the sample studied in the areas of animal feeds and feeding techniques (97.2%). This is followed information on parasite and disease control (83.1%), and animal husbandry (81.7%).

**Information Sources Consulted By Small Scale Dairy Farmers** – Farmers were queried on information sources they consulted in resolving their information needs. The results from this investigation are shown under Table 4.

It is noted that 88.7% claimed to regularly attend extension meetings, 83.1% of the respondents reported to have been visited by an extension worker, while 74.6% reported to have visited a fellow farmer. On the other extreme, all respondents claimed to have never or rarely visited an agricultural library. A variety of reasons including lack of the agricultural libraries at their vicinity, lack of awareness of the service and illiteracy were claimed to be the major obstacles for the non use of agricultural libraries as an information source. The failure of agricultural libraries to meet information needs of farmers is a common phenomenon to most of African countries as reviewed earlier in this paper.

## Conclusions and Recommendations

The study reveals that the active age groups are not well represented in the dairy farmer's project. In addition, more than 90% of the respondents did not go beyond primary school level. The implications are obvious as the extension agents who are the primary information providers will have to make most of the information available by personal contacts. Given their low level of literacy, there will be a lot of inhibitions in using other alternative information providers including libraries. Based on problems and information needs expressed by small scale farmers there is a need for the project to design a training programme specifically focusing on feeds availability and feeding techniques, parasite and disease control as well as heat detection and breeding techniques. It is also recommended that other agencies besides extension organisations should be actively involved in the information

provision to farmers. It is about time libraries in Africa focused their attention on information provision to the neglected majority of which farmers constitute bulk. It is hoped that the recently established Sokoine National Agricultural Library Act which provides for information provision to extension workers, farmers and peasants will be vigorously pursued. In addition, the Tanzanian government must actively encourage the younger age groups who have under post-primary education to be involved in dairy production as this will necessarily increase productivity.

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