NEW INFORMATION AND COMMUNICATION TECHNOLOGIES FOR DAIRY GOAT MARKETING: THE CASE OF MERU SOUTH SUB-COUNTY, KENYA

Rwanda, C.B, Nyaga, S.M. and Imungi, J.[1]*Department of Agricultural Economics, University of Nairobi, Box 30197-00100, Nairobi*
Department of Development Studies, JKUAT, P. O. Box 62000-00200, Nairobi Department of Food Technology and Nutrition, University of Nairobi, P. O. Box 30197-00100, Nairobi, Kenya
**Email: chrisrwanda82@gmail.com, Tel.: 0724-421214*

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ABSTRACT
Dairy goat farming is a lucrative enterprise among the smallholder farmers due to its potential for socio-economic empowerment of the resource-poor. However, due to inefficient marketing systems, the smallholder farmers have not been able to realize maximum returns from their dairy goat enterprises. To resolve some of the market inefficiencies inherent in the conventional marketing approaches, smallholder farmers have shifted their attention to the use of new information and communication technologies. This study established awareness and use of the new ICTs in marketing of dairy goats among the smallholder farmers. The study was carried out in Meru South Sub-County. Chuka and Magumoni divisions were purposely selected. A sample of 97 dairy goat farmers was chosen through systematic random sampling from a population of 2,800 smallholder farmers. A pre-tested questionnaire was used to collect data, while descriptive statistics were used for data analysis. The use of new ICTs was highest among the respondents aged between 21 and 40 years. Awareness of the use of mobile phones and internet for dairy goat marketing among the respondents was 87.5% and 12.5%, respectively. Generally, the awareness and use of the new ICTs in the marketing of the dairy goats was high; mobile phone was the most commonly known and widely used ICT.
Keywords: Dairy goats, Awareness, Use, Meru South, New ICTs

INTRODUCTION
It has been observed that the use of conventional channels of communication such as contact farmers, farm visits and personal letters in disseminating agricultural information has proved counterproductive (Arokoyo, 2005). The use of old ICTs though successful, has been monologic and has not allowed for much interaction among the users (Okwu and Iorkaa, 2011). Mukhebi (2004) argues that the use of low-cost ICTs (including new ICTs) to package and deliver relevant and timely market information "can

improve the competitiveness of smallholder farmers in the market place". Thus, the utilization of the new ICT such as the mobile phones and internet could substantially help smallholder farmers and dairy goat farmers in particular to improve access to marketing information, resulting to improved profits from their production. Furthermore, several researchers, Aker (2008); Jensen (2007) and Abraham (2007), have documented that mobile phones (and other modern ICTs) can reduce information search costs, resulting to lower transaction costs. The main objective of the study was to assess the awareness and use of new information and communication technologies in dairy goat marketing among the smallholder farmers. The specific objectives of the study were threefold: firstly, to determine the socio-demographic characteristics influencing the use of new ICTs in dairy goat marketing among the smallholder farmers in Meru South sub-county; secondly, to determine the level of awareness of new ICTs' use in marketing of dairy goats among the smallholder dairy goat farmers in Meru South sub-county, and thirdly, to establish the usage levels of the new ICTs among the smallholder dairy goat farmers in Meru South sub-county.

METHODOLOGY

The study was carried out in Meru South sub-county. Chuka and Magumoni divisions were purposely selected. A sample of 97 systematically sampled dairy goat farmers was obtained from a population of 2800 smallholder farmers from two divisions. The study was cross-sectional in design. A previously pre-tested questionnaire was used to collect the data. Three focus group discussions (FGDs) were also carried out with the officials of selected dairy goat keeping groups and officials of MGBA officials from the two divisions constituting the members of the FGDs. The study used both descriptive and inferential statistics to analyze the data using the Statistical Package for Social Scientists (SPSS) software version 17. More so, one-sample test was used to test the three hypotheses of the study. A list of all the dairy goat farmers in the two divisions was obtained from the MGBA office at Chuka. The list constituted a sampling frame with 2,800 farmers from which a sample of 97 dairy goat farmers was drawn using a systematic sampling method in which every 29^{th} name from the list was selected.

RESULTS AND DISCUSSION

The socio-economic characteristics of the respondents had influence on the use of the new ICTs in marketing of the dairy goats. The major findings were that the use of new ICTs was highest among the respondents aged between 21-40 years, implying that the dairy goat farmers in the sub-county who had adopted the use of new ICTs in marketing were youth. More so, the awareness of the use of mobile phones and internet for dairy goat marketing among the respondents was 87.50% and 12.50% respectively suggesting the need for deliberate efforts to promote the use of internet as complementary form of new ICT.The study concludes that generally, the awareness and use of the new ICTs in the marketing of the dairy goats was high, and that the mobile phone was the most commonly known and widely used ICT.

RECOMMENDATIONS

This study recommends that: the institutions that promote the marketing of dairy goats such as the Meru Goat Breeders Association (MGBA), the dairy goat keeping groups and Tharaka Nithi county government's department of livestock production should strongly put into consideration the socio-demographic characteristics of the dairy goat farmers when developing strategies and policies that incorporate the use of new ICTs in marketing of the dairy goats and other agricultural produce. Secondly, the stakeholders involved in the marketing of the dairy goats should make efforts to promote the use of internet (emails and websites) as marketing platforms and hence avoid overreliance on mobile phones. This would ensure complementarities since different ICTs have varied strengths and weaknesses. Lastly, in view of the fact that the awareness and use of the new ICTs in marketing of the dairy goats was generally high, the national and the county governments should develop a policy to guide the promotion and use of the new ICTs in marketing of agricultural produce among the smallholder farmers.

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