

Research Application Summary

**Effect of information dissemination pathways on small scale tea production in western Kenya**

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**Abstract**

The yield of tea, an important cash crop in Kenya, has been declining amongst the small scale farmer's in spite of the research recommendations. A survey was carried out in western Kenya to determine the effect of information dissemination pathways on tea production among the small scale farmers. Extension staff was the main source of information. More than 70% of the farmers were however not satisfied with the information received and the intensity of contact. Socio-economic characteristics affected access to information and technology. Farmers with formal education had better access to information through a wider range of dissemination channels.

Key words: Information dissemination, small Scale farmers, tea production

**Résumé**

Le rendement de thé, une importante culture commerciale au Kenya, a diminué au sein des petites exploitations agricoles en dépit des recommandations de recherche. Une enquête a été menée à l'ouest du Kenya pour déterminer l'effet des voies de diffusion de l'information sur la production de thé parmi les petits agriculteurs. Le personnel de vulgarisation a été la principale source d'information. Plus de 70% des agriculteurs n'ont cependant pas été satisfaits de l'information reçue et l'intensité du contact. Les caractéristiques socio-économiques ont donné accès à l'information et à la technologie. Les agriculteurs avec éducation formelle ont un meilleur accès à l'information par un large éventail de canaux de diffusion.

Mots clés: Diffusion de l'information, petits exploitants agricoles, production de thé

**Background**

Tea is one of the most important cash crops in Kenya. The country contributes about 21% of the total world exports. Generally, more than 60% of tea in Kenya is grown by small

scale farmers, under the management of Kenya Tea Development Authority (KTDA). Research in the sector is however carried out by the Tea Research Foundation of Kenya (TRFK) which disseminates information to farmers through field days, radio, and demonstrations. Despite the generation and dissemination of innovations aimed at enhancing production, yields of tea among small scale farmers have continued to decline. Thus, the main objectives of this study were to identify and characterize sources of information used by small holder tea farmers in western Kenya, determine the socio-economic factors that influenced the choice and use of information pathways in tea production, and determine the extent to which information dissemination pathways impacted on tea production among small scale tea farmers.

## Literature Summary

Access to information has been identified as the turning point to successful farming (Feder *et al.*, 2004) and availability of information is a crucial component of efficiency. The agriculture industry depends on information related to the market, efficient allocation of available resources and use of new or innovative farming practices. In some circumstances access to information speeds up adoption and diffusion of new technologies more than availing subsidies to farmers. For example, Margarita *et al.* (2006) noted that provision of information and not subsidies was an effective way of promoting adoption of organic farming.

Farmers obtain information from a wide range of sources. In Kenya, Rees *et al.* (2000) reported that neighbours, families, markets and community based organizations were the major sources of agricultural information for farmers. However, both farmers and extension personnel expressed dissatisfaction with the quality and frequency of their interactions. Elsewhere, and in Kenya, many studies report government extension as an important source of information. In Uganda, information and visual centers that produce pocket books, leaflets, posters and films serve as important alternative sources of agricultural information for farmers (Mubiru and Ojacor, 2001).

Several technologies available to the Kenya's tea industry have been developed (Othieno, 1994). The low productivity in the smallholder tea sector is probably because the improved production technology packages do not reach the individual farmers or that the technologies per se are not being adopted by the farmers (Owuor *et al.*, 2005). It is necessary to ensure that the technology reaches the farmers and factors leading to low adoption are unveiled and corrected.

Small scale farmers generally understand the benefits of adopting new and/or innovative technologies and farming practices provided that the cost/return relationships are favourable. However, it is the large-scale tea farmers/estates that have largely benefited from the use of the tea production technologies (Othieno, 1994). Sustainable and improved tea production in Kenya requires that effective mechanisms for transfer of developed technologies be put in place. Currently the information is disseminated to the growers through seminars, symposia, courses, publications such as annual reports, journals, participatory farmer demonstrations and advisory (extension) visits. These methods may be inappropriate to transfer the packages to the sector. One possible factor responsible for poor diffusion of tea production technologies to the smallholder sector is the low level of education of the target farmers (Owuor *et al.*, 2005).

### Study Description

A multiage sampling procedure was used. A survey was carried out in three tea growing zones (Vihiga, Sabatia and Emuhaya) of western Kenya. The area lies between longitudes 34<sup>o</sup>, 30 and 35<sup>o</sup> east, and between latitudes 00 and 0<sup>o</sup> 15 north. It receives between 1800mm to 2000mm, of rainfall annually and experiences temperature range of between 14<sup>o</sup>C to 32<sup>o</sup>C. The soils are well drained and suited for tea production, coffee, maize and beans (Jaetzold and Schmidt, 2006). This study involved a questionnaire survey and focussed group discussion with about 300 respondents. Preliminary findings are reported below.

### Research Application

The amount of information disseminated to the small scale tea farmers depends on the availability of the source (frequency and duration of contact) and knowledge level of the information source. The success of tea production in the small holder tea sub sector is heavily dependent on appropriate production technologies reaching the farmers. But this can only happen if correct production and technology transfer policies are put in place. Table 1 shows that more than 70% of the farmers

**Table 1. The level of satisfaction with tea information.**

Rating	Frequency	Percent
Satisfied	13	6.3
Fairly satisfied	45	21.8
Not satisfied	145	70.4
Total	203	98.5

interviewed were dissatisfied with the information they received as well as the channels used to pass the information to them, while 22% were fairly satisfied and 6% were satisfied. The results indicate that there is need to revise the current information dissemination channels/pathways if any increase in small scale tea production is to be achieved.

Farmers were also not satisfied with the services offered by the factory. Their satisfaction was assessed based on their experience which included opportunities, constraints faced while accessing services and their suggestions for improving the service delivery. This was due to the fact that the perceived factors play an important role in influencing farmers' decisions to take up the recommended practices/technologies and the performance of the entire extension system. Farmers' level of satisfaction was as indicted in Table 2. The majority (72% farmers) were not satisfied with their interaction with the factory and the source of information in this case.

**Table 2. Relationship between farmer and factory services.**

Rating	Frequency	Percent
Satisfied	10	4.9
Fairly satisfied	43	20.9
Not satisfied	149	72.3
Total	202	98.1

The results can be used to increase small scale tea production, through establishing more efficient information dissemination channels as well as strengthening the interaction between farmers and Tea Research Foundation of Kenya. Clearly, the information flow between the factory, TRFK (Tea Research Foundation of Kenya) and farmers needs to be improved. Farmers should be provided with clear information in a more efficient and effective manner on the services rendered to them by the factory to avoid suspicion which may be largely due to lack of proper information;

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### **References**

Feder, G, Murgai, R. and Quizon, J.B. 2004. The acquisition and Diffusion of knowledge: The case of pest management

- training in farmer field schools in Indonesia. *American Journal of Agriculture Information* 67(2):23-28.
- Kinyili.J. 2003. A diagnostic study of the tea industry in Kenya. Export Promotion Council. Nairobi, Kenya.
- Margarita, G, Christos, J.P. and Vangelis, T. 2006. Information acquisition and adoption of organic farming practices. *Journal of Agricultural Resource Economics* 31(1):93-113.
- Mubiru, J.B. and Ojacor, F.A. 2001. Agricultural extension and education. In: National Agricultural Research Organization. 2001. Agriculture in Uganda. *General Information* 1:56-67.
- Owour, P.O., Kivoi, M.M. and Siele, D.K. 2001. Assessment of technological and policy factors impending production of green leaf in smallholder tea farms of the Kenya tea industry. An assessment of farmers' awareness and adoption levels of technologies. Report submitted to Africa technology policy studies network. Nairobi, Kenya.
- Othieno, C.O. 1994. Agronomic practices for higher tea productivity in Kenya. Proceedings of the International Seminar on Integrated Management in Tea: Towards higher productivity. Colombo, Sri Lanka, April 26-27<sup>th</sup>, 1994. pp. 79-85.
- Owour, P.O., Kivoi, M.M. and Siele, D.K. 2001. Assessment of technological and policy factors impending production of green leaf in smallholder tea farms of the Kenya tea industry. An assessment of farmers' awareness and adoption levels of technologies. Report submitted to Africa Technology Policy Studies Network. Nairobi, Kenya.
- Rees, D., Momanyi, M., Wekundah, J., Ndugu, F., Odondi, J., Oyure, A.O., Andima, D., Kamau, M., Ndubi, J., Musembi, F., Mwaura, L. and Jolndersma, R. 2000. Agricultural knowledge and information systems in Kenya: Implications of technology development and dissemination. ODI. Agricultural Research and Extension Network and Extension Network. Network Paper No.107.