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## Diffusion of Information on Innovations in Agriculture

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### Abstract

Using participatory training approaches to improve farmers' knowledge on integrated production and pest management (IPPM) technologies is perceived to be more costly than alternative less intensive approaches of knowledge transfer. In addition benefits depend on the diffusion of knowledge within the village community. However, several empirical studies found that knowledge generated by participatory extension training does not always sufficiently diffuse to non-participating farmers. On the other hand diffusion of information has high potential for the successful introduction and establishment of an innovation.

A case study, conducted in two villages in Senegal in 2004, investigates the effects of training intensity on the diffusion of information. A total of 341 vegetable growers were interviewed in two villages that had different shares of trained farmers (14% and 3% trained farmers) but are similar in all other respects. The objective of the study was to analyse the factors determining the quantity and quality of information diffusion. A set of predominantly closed questions was used to generate data on demographic, farm-related, IPPM-related, and information-related issues, which are considered important to capture the diffusion processes. The data has been analysed using a logistic regression model as well as the ordinary OLS-estimation model.

The results show that the proportion of farmers who were trained affect the dissemination of IPPM-related information. The higher share of trained farmers in a village increases the individual exposure of non-participants. As a result, the likelihood of receiving information about IPPM is four times higher in village 1 than in village 2. Consequently, the number of exposed farmers approaches 100% in village 1 and in addition, the quantity and quality of information that is shared is higher. Further, the findings suggest that information induces a higher demand for more knowledge by stimulating the intrinsic motivation of non-trained farmers to adopt IPPM.

**Keywords:** Diffusion, farmer training, knowledge and information, Senegal, West Africa