

THE ADOPTION OF KATUMANI IMPROVED  
SEED VARIETIES IN WOTE DIVISION,  
MAKUENI DISTRICT (KENYA)

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## ABSTRACT

The study investigates the key factors that explain the low adoption levels of Katumani improved seed varieties. It focuses on the acceptability, affordability and awareness of Katumani improved seed varieties in Wote division, Makueni District. The study mainly aimed at generating knowledge concerning the social interaction between the crop breeders from the National Dryland Farming Research Station, the extension services and the farmers within the dry marginal areas of Makueni District.

The study has used three aspects of adoption and diffusion theory to explain the level of adoption and diffusion of Katumani improved seed varieties. These approaches include:- (i) "Price induced approach" which has been used to understand the basis for the farmers' perception in relation to the economic feasibility of the adoption of Katumani improved seeds in terms of the prices and distribution of the seeds and fertilisers. (ii) The "outward (spatial) adoption approach" which has been applied to explain the effect of distance from Kitale (where Katumani seeds are produced and bulked) to dry areas (Makueni) where adoption of the seeds is expected to take place. (iii) The "trickle down effect adoption approach" which has been used in this study to explain how information on the improved seed varieties diffuses from the National Dryland Farming Research Station, selectively penetrating through a few key individuals who pass it on to others through demonstration effect and latter to the most conservative farmers. The common assumption underlying the adoption and diffusion theory is that, the new practices have been tested, certified and are actually useful to the farmers and that the organization of the extension service is effective. Four main hypotheses have been tested to find out the key factors that influence the transfer of new farm technologies from the National Dryland Farming Research Centre to the farmers and the low adoption levels of Katumani improved seed varieties.

Three sampling strategies were applied while selecting the area and the respondents. These include (i) Purposive sampling, which was used in the selection of the province, district, division, sub-locations and the villages of the study. (ii) Simple random sampling was used to select the administrative locations while systematic random sampling was used to select the households of the study. Methods used in data collection included: (a) questionnaires (b) observation (c) documentary evidence. A total of 147 farmers, 11 crop breeders from Katumani station and three locational Agricultural Extension officers were interviewed.

The study found out that most (67.3%) of the farms in Wote division of Makueni district are managed by semi-literate women. That, 85% of the respondents do not take farming as their main source of income. The introduction of early maturing but low yielding katumani composite A maize seeds popularly known as "Kakiti" (small dog) in 1968 created a psychological barrier in relation to the adoption of Katumani seeds because from the experience of katumani composite A maize, farmers started perceiving all the seeds associated with Katumani Dryland Research Station as early maturing but low yielding. Most (61.3%) of the respondents were found not to have had interpersonal contact with the technically trained agricultural officers. Membership in an agriculturally oriented self help group was found to promote high level of awareness on the technically recommended agricultural practices.

In conclusion it is recommended that the agricultural extension service be made more accountable and transparent by de-linking it from the Central government and place it under the Kenya Agricultural Research Institute (KARI), that the agricultural extension officers be posted to work in areas where they don't have farms, that these extension officers be given offices from where they should be operating. More agriculturally based self-help groups be formed and that more farmers be encouraged to become members. That there is a need to come up with rewarding systems that promote adoption of new farm technologies and that the government should further subsidize the prices of all agricultural inputs within the dry marginal areas.