

Knowledge, Attitude and Practices (KAP) of Farmers on Postharvest Aflatoxin Contamination of Maize in Makueni and Baringo counties, Kenya

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Abstract

Aflatoxin contaminated home grown maize has been a perennial problem in Kenya especially in the Eastern and North Rift parts of the country. This study focused on investigating the influence of knowledge, attitude and practices of farmers on aflatoxin contamination of maize in Makueni and Baringo counties in Kenya. A convergent mixed method study design combined quantitative and qualitative data collection techniques in maize producing areas of Baringo and Makueni Counties in Kenya. These methods included questionnaire administration, focus group discussions and key informant interviews. Of the 220 farmers who participated in the survey, 67.27% were male and 32.73% female in Baringo County whilst 45.45% male and 54.55% female in Makueni County. Majority of the farmers were in a marital union and were between the ages of 40-54 years. The average KAP score for knowledge was 57.6 ± 11.79 % for both counties. The average knowledge score for Makueni was 37.70 ± 11.36 % and 77.2 ± 12.23 % for Baringo County. The average KAP attitude of the farmers in both counties was 77.1 ± 9.32 %. There was a significant difference in the knowledge of factors contributing to aflatoxin in maize, as to the point where contamination begins, the signs of aflatoxin contamination and the consequences of aflatoxin exposure in both counties ($p < 0.005$) The individual county scores were 76.5 ± 9.24 % and 77.7 ± 9.41 % in Makueni and Baringo counties respectively. Socio-economic and demographic factors were linear predictors of knowledge ($R^2 = 0.76$, $p < 0.001$), whereas they had no effect ($R^2 = 0.043$, $p = 0.076$) on the attitude of the maize farmers. Farmers from Makueni County (Eastern Region of Kenya) were more likely ($OR = 1.24$) to have higher knowledge scores on aflatoxin contamination than those from Baringo County (Rift Region of Kenya). On the contrary, with increasing age the maize farmers were less likely ($OR = 0.01$) to have higher scores of knowledge. Farmers associated poorly dried maize and poor storage conditions as the maize cause of aflatoxin contamination. The study findings revealed a significant difference in knowledge and attitude between the two counties. This consequently had an effect on the practices of the farmers. There is need for increased awareness creation on dangers posed by consumption of aflatoxin contaminated maize grain within the communities. Training of farmers on good agricultural and management practices is also of utmost importance. This coupled with regular surveillance and enhancement of laboratory capacities can also significantly reduce the occurrence of aflatoxicosis in Kenya.

Key words: Aflatoxin, maize, knowledge, attitude, practices