

Author: Kasungi, Jeremiah Mutiso

Abstract:

Outbreaks of acute aflatoxin poisoning have become a recurrent public health problem as a result of severe aflatoxin exposure in many developing countries including Kenya. The toxin is produced by fungal action during food production, harvesting, storage and preparation. The vulnerable foods to contamination include maize and groundnuts which are staple food for many households. Aflatoxin poisoning outbreaks have continued to recur in a yearly pattern in Kibwezi Division since 2004 outbreak with loss of human lives. This resulted from people consuming their own grown maize grains which were contaminated with Aflatoxins due to their poor storage under damp conditions. However studies have shown that, this trend can be reversed through proper grain handling practices during and post harvest that include; proper grain drying, proper grain storage and simple food preparation practices. Despite these periodic aflatoxin poisoning outbreaks experienced in Kibwezi Division, there has been little progress in improving grain storage at household level for control and prevention of the outbreaks. This study aimed. at establishing the associated factors and the findings be used to guide in interventions formulation by policy makers for prevention and control of future Aflatoxin poisoning outbreaks. To achieve this objective, information on community knowledge about aflatoxin poisoning, grain storage practices during harvesting, grain storage practices post harvest and food preparation practices was obtained through a cross- sectional study design conducted in the month of May 2010. Household heads constituted the study sample of 350 respondents in four randomly selected sub locations of Kibwezi Division of Makueni County. The division was purposively selected due to its high prevalence of the outbreaks. Systematic sampling technique was used to select the households to conduct the interviews by randomly determining a direction by a toss of a pen at the centre of each sub location. Data collection was through use of interview schedules, observation checklists and focus group discussion guides. Data was processed using statistical package for social sciences (SPSS) using both descriptive and inferential statistics at 95% CI and a P value of < 0.05 was considered significant. Descriptive statistics was used to describe both quantitative and categorical data. The study results revealed that the cause of aflatoxin poisoning was not well known (44%). In overall knowledge on aflatoxin poisoning was low (20.6%). However correlation analysis showed an inverse relationship between knowledge and occurrence of aflatoxin poisoning ($r = -0.072$, $P = 0.180$). Early harvesting of grains before they are dry and placement of grain cobs practices during harvesting did not influence aflatoxin poisoning outbreaks in Kibwezi Division ($r = 0.081$, $P = 0.132$, $t = 3.696$, $P = 0.296$ respectively). Handling of mouldy grains significantly influenced the occurrence of aflatoxin poisoning outbreaks in this Division ($\chi^2 = 20.572$, $P = 0.000$). A correlation analysis showed that grain drying after threshing before long storage was significantly correlated with the aflatoxin poisoning outbreaks ($r = -0.028$, $P = 0.602$). Place of storing bagged grains significantly influenced aflatoxin poisoning outbreaks ($\chi^2 = 18.359$, $P = 0.000$) where cases were reported more by the households who kept their bagged grains in granaries. Based on these findings there is urgent need to develop effective and broad awareness programmes to target the farmers, traders and also consumers in Kibwezi Division for control and prevention of further occurrence of aflatoxin poisoning. Further studies should be undertaken in the same Division to explore other possible causes of Aflatoxin poisoning outbreaks.