Status of aflatoxin contamination in marketed and farm gate milk in Nairobi county, Kenya

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Introduction

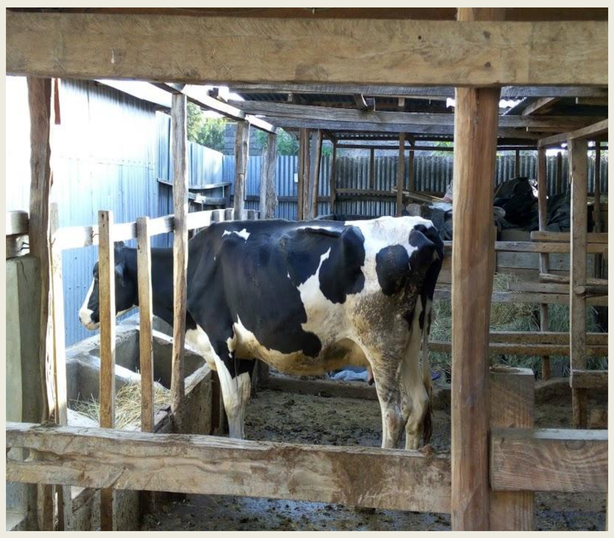
- **Aflatoxins are immunotoxic, carcinogenic, mutagenic and hepatotoxic metabolites produced by *Aspergillus* species growing on cereals especially maize and other crops.**
- **Aflatoxins cause reduced productivity in livestock.**
- **Milk contamination usually emanates from feeding cows with aflatoxin B1 (AFB1) contaminated feeds.**
- **Aflatoxins are metabolized by the animals into aflatoxin M1(AFM1), which is excreted in milk.**
- **Milk contamination with AFM1 has been causing public health concerns.**

Maize stalks used as animal feed

Materials and methods

- **Samples from retail shops (291) and urban and peri-urban small scale dairy farms (84).**
- **Analysis for AFM1 was done in BecA-ILRI labs using Enzyme-Linked Immunosorbent Assay (ELISA).**

Results and discussion



Zero grazing in a dairy farm in Kasarani one of the sample sites in Nairobi

- **52% of the marketed milk samples had more than 50ng/kg (EU legal limit). The average AFM1 for marketed milk in low and middle/high income areas was 106 and 66 ng/kg respectively and the maximum of 1100 ng/kg.**
- **64% of the on-farm milk samples exceeded the EU legal limit. The average AFM1 was 84 ng/kg and the highest was 256 ng/kg.**
- **High contamination of milk from urban and peri-urban small-scale dairy farms results in high contamination of marketed milk and milk products as 80% of milk production in Kenya is from such farms.**

Recommendation

Exploring different strategies to reduce AFM1 in small-scale dairy farms may help bring down toxicity levels of milk consumed in Nairobi County.

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