

## TITLE:

# Aflatoxins Contamination in Animal Feeds and Fresh Milk in Kondoa District, Tanzania.

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## Abstract:

**Introduction:** The occurrence of aflatoxins in animal feeds and milk is common around the World as most livestock keepers are not aware of aflatoxins.

**Aims:** This study was conducted to assess storage and feeding practices, and assessment of aflatoxin B1 and M1 contamination in animal feeds and fresh milk samples in Kondoa.

**Study Design:** The study involved a survey using semi-structured questionnaires and Laboratory analysis of aflatoxin B1 and aflatoxin M1 in animal feeds and fresh milk samples collected from among smallholder dairy farmers.

**Methodology:** Purposive selection of 120 respondents among smallholder dairy farmers in six wards purposively selected due to having larger number of dairy cattle was conducted. Likewise, 20 samples of animal feeds and 25 composite milk samples from among 120 interviewed farmers were analysed for aflatoxin B1 and M1 using High-Performance Liquid Chromatography (HPLC).

**Results:** The results indicates that, aflatoxin B1 in feeds was 55%, with mean concentration of  $8.6 \pm 5.9$   $\mu\text{g}/\text{kg}$  ranging from the lowest limit of detection (LOD) to 21.1  $\mu\text{g}/\text{kg}$  with 5% samples above the maximum level stipulated by the Tanzania Bureau of Standards (TBS) and European Union (EU) of 20  $\mu\text{g}/\text{kg}$ . Likewise, about 44% of the milk samples revealed to contain traces of aflatoxin M1 with a mean amount of  $0.07 \pm 0.08$   $\mu\text{g}/\text{L}$ , ranging from the limit of detection (<LOD) to 0.23  $\mu\text{g}/\text{L}$ , and 12% exceeding the TBS and EU standards of 0.05  $\mu\text{g}/\text{kg}$ .

**Conclusion:** There is need to scale up aflatoxin public awareness campaigns and regular monitoring throughout the food system in Tanzania.