

Food safety and Hygiene

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Risk assessment of aflatoxin in weanimix (cereal-legume complementary food)

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Weanimix (a cereal-legume complementary food) has shown promising results in improving health and growth rate of children. However, this could be compromised due to the susceptibility of the product to aflatoxin contamination. The objective was to assess the risk of liver cancer development from aflatoxin if infants (6-12months) in Ghana consume commercially prepared and homemade weanimix. Samples of weanimix were purchased from shops and the level of aflatoxins was tested. Previously published data on aflatoxin levels in homemade weanimix was also collected. These data were analysed to assess the level of risks of cancer development. Findings showed the minimum and maximum levels of aflatoxin in weanimix purchased from shops as 2.51ppb and 98.87ppb respectively while the same values for homemade weanimix were 7.90ppb and 500.00ppb respectively. Daily exposure

estimate was higher in homemade weanimix compared to commercial weanimix. The margin of exposure from commercial weanimix with minimum and maximum levels of aflatoxin were 13.08 and 0.33 respectively while that for homemade weanimix were 4.146 and 0.065 respectively. The maximum risk of developing primary liver cancer was estimated at 23.74 and 119.34 cancers/year/100,000 population of infants fed on commercial and homemade weanimix respectively. Weanimix from both homes and shops pose high public health risk however findings showed weanimix with non-detectable levels of aflatoxin as well as levels below regulatory limits. Therefore, there is the need to educate commercial producers and women at household levels on the various mitigation measures for aflatoxin control and to enforce regulation of aflatoxin standards.

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