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Knowledge of aflatoxin contamination in groundnut among rural women groundnut farmers in Kwara State, Nigeria

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The economic and health implication of aflatoxin contamination of food crops especially in developing countries of the world is of great importance. Therefore, this study sought to assess rural women groundnut farmers' knowledge on aflatoxin contamination. The population for the study comprises of 167 rural women groundnut farmers randomly selected in zone B of Kwara ADP, structured interview schedule was used in data collection while data was analyzed using descriptive statistics and Chi-square test. The study revealed that majority (81.4%) of the farmers has a high level of knowledge on aflatoxin contamination in groundnut, 87.4% has contact with extension agents and it was observed that male predominantly did land preparation and weeding while planting, sun drying, decorticating and selling of produce were considered women's job. At 5% level of significance, respondents' age, and farm size showed a significant relationship with the level aflatoxin knowledge. The study therefore recommends that farmers should be sensitize on cultural practices that can reduce aflatoxin contamination in groundnut, provided with facilities that will help minimize aflatoxin contamination and there should be a periodic update of extension agents' knowledge and skills on aflatoxin control so that farmers can benefit from such information.

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Detection of diverse fungi metabolites in fish feeds from Nigeria

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Fish feed being an indispensable requirement in fish farming is prone to contamination from diverse range of compounds such as pesticides, microorganisms and their metabolites because it is made up of several ingredients from both animal and plant sources. In this study, the contamination level of locally formulated fish feeds from different fish farms in Nigeria was determined. 94 fish feed samples were collected from warehouses in six states within South-western, Nigeria namely; Lagos, Ogun, Oyo, Osun, Ondo and Ekiti state. The spectrum of fungi metabolites including mycotoxins in the feeds was assessed using a Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS). 84 metabolites from diverse fungi were found in the feeds. Aflatoxins were detected in 97.9% of the feeds while fumonisins were quantified in 88.3% of the samples and deoxynivalenol in 87.2% of the feeds. Aflatoxin B1 was the most prevalent aflatoxin occurring at concentrations ranging from 0.70 µg/kg-550.78 µg/kg while fumonisin B1 was the most occurring fumonisin found at levels up to 6097.90 µg/kg. Enniatins {A, A1, B, B1}, beauvericin, skyrim, equisetin, aurofusarin, moniliformin, curvularin, emodin and sterigmatocystin which are new emerging mycotoxins were found co-occurring with major mycotoxins at a concentration as high as 429.35 µg/kg for skyrin. Considering the array and levels of fungi metabolites found in the feeds including those with known toxicities and newly emerging ones, this is a risk posed to the fish industries in Nigeria. This is the first report of multi-microbial metabolite contaminations in fish feeds from Nigeria.

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