MYCOTOXINS ESTIMATION IN KIDNEY BEANS AND CHICK PEAS (HOMOS) COMMON PALESTINIAN FOOD

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Abstract

Toxic metabolites produced by fungi in infected plants or in moldy food supplies, known as mycotoxin industry preparations. It has been estimated that one-quarter of the world’s foods and feeds are contaminant (deoxynivalenol and T-2 toxin) in 1975, Ochratoxins in 1980, and fumonisins in 1990. Mycotoxins can elicit estrogenic activities. This first paper is devoted to the aflatoxins, produced by Aspergillus Flavus. Primarily maize, peanuts, Oil-seeds, nuts (almond, brazil hazel, pecans, pistachio, walnut), Copra, Figs, and with an economic impact evaluated as reduction of livestock productivity many times greater than that of an indicated a positive correlation between estimated degree of exposure and incidence of human liver cancer. We undertook a comparative investigation of mycotoxins in dry kidney beans and chick peas (homos) which collected from Gaza market. Randomly (20) samples of Chickpeas and kidney beans were collected from Gaza market. The source of samples is Turkey, Israel and U.S.A. And were examined for Aflatoxin, Ochratoxin and T-2 toxins contamination using HPLC. An average of 95% of kidney bean and chick peas samples had mycotoxins residues. The most frequently estimated ones were aflatoxins (100%), Ochratoxins (89%), Zearalenone (72%) and T-2 (0%) in Homos samples. With an average of (200-400) ppm, (10-40) ppm. And (10-30) ppm. Respectively. In kidney beans samples, Aflatoxins estimated in 100% of positive ones for the presence of mycotoxins, ochratoxin (61%), ZEN (67%) and 0 for T-2 with an average of (150-350) ppm. We suggest that monitoring mycotoxins in imported beans can be simplified by use of predetermined profiles of bean mycoflora for each exporting and importing country or region. This will allow identifying the most-probable mycotoxins. This can also be applied to other field crops. Control system for food safety should be improved and monitored in Palestine.