

Economic impact of mycotoxins in nuts and dried fruit chain

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Abstract

In the present report, estimation on the global economic losses caused by mycotoxins in nuts and dried fruits has been made. In the economic sense, mycotoxin infestation, contamination and exposure affects growers and processors, with the loss of part of the crop, prevention in the field and storage, border rejections, transportation, tests, etc., as well as governments, in terms of controls costs and public health costs. Within the group of nuts and dried fruits, aflatoxins are found in peanuts, tree nuts and dried figs, while ochratoxin A is found in dried fruits. The toxicity of the mycotoxins and its implication in some diseases, the food safety expenditures and control costs were evaluated to calculate the government's costs. Border rejections of the commodities, destruction of goods and routine analysis were evaluated for the industry losses estimation. The industry losses were evaluated with the real border rejections of the EU-27 countries plus Norway, Liechtenstein, Switzerland and Iceland, Japan, United States of America and Australia, which all of them account for around the 70% of all the global imports of nuts and dried fruits. A questionnaire was distributed to the main exporters to estimate the costs of routine analysis, fees, demurrage at ports, staff and extra costs on transportation due to border rejections. The total costs due to mycotoxin contamination for the industry reaches up to 100,000,000 US\$ annually. Government's cost on public health related to mycotoxin ingestion was evaluated with the incidence of mycotoxins on different illnesses, the rate of implication of those illnesses on the disability-adjusted life year (WHO) and the health expenditure per capita of the countries most affected by uncontrolled mycotoxin exposure. Estimating the lowest percentage of implication (1%), this cost reaches 2 billion US\$. Government's costs by controls at borders are mainly charged to the imports industry.