Update On Worldwide Regulations For Mycotoxins. The MERCOSUR Harmonization Of Limits On Mycotoxins With The International Regulations

Jacqueline M. CEA. Technological Laboratory of Uruguay, Montevideo, Uruguay , jcea@latu.org.uy

Mycotoxins have been defined as “fungal metabolites which, when ingested, inhaled or absorbed through the skin, cause lowered performance, sickness or death in man or animals, including birds”(Pitt, 1996). The ability of some mycotoxins to compromise the immune system and, consequently, to reduce resistance to infectious disease, is widely considered to be their most important effect. The mycotoxins attract worldwide attention because of the significant economic losses associated with their impact on human health, animal production and both domestic and international trade. Those mycotoxins that are currently considered to be worldwide importance are aflatoxins, trichothecenes, zearalenone, fumonisins, ochratoxin A, patulin (Coker, 2000). Mycotoxins can contaminate raw agricultural products before and or after harvest. As these commodities are subsequently incorporated into food and feed, concern exits regarding the fate of these toxins undergoing certain processes and the possible concentration of mycotoxins or their derivatives in the end product. (Task Force Report N°139, 2003). The knowledge that mycotoxins can have serious effects on humans and animals has led many countries to establish regulations on mycotoxins in food and feed in the last decades to safeguard the health of humans, as well as the economical interests of producers and traders. In 2002, an international inquiry on mycotoxins was initiated by the National Institute for Public Health and the Environment. Data received were sorted by country and by economic community (Australia/New Zealand, EU, MERCOSUR). In addition, information was included about standards set by Codex Alimentarius. The available data were classified into the categories food, dairy and feed and then tabulated in alphabetic order of the countries. On a worldwide basis, at least 99 countries had mycotoxin regulations for food and/or feed in 2003, an increase of approximately 30 percent compared to 1995. The total population in these countries represents approximately 87 percent of the worlds inhabitants. In 1995, 23 percent of the world’s inhabitants were living in a region where no known mycotoxin regulations were in force. This percentage had decreased to 13 percent in 2003, due to a slight increase in coverage in Latin America and Europe, and more significant increases in Africa and Asia/Oceania. Comparing the situation in 1995 and 2003, it appears that in 2003 more mycotoxins are regulated in more commodities and products, whereas tolerance limits generally remain the same or tend to decrease. Regulations have become more diverse and detailed with newer requirements regarding official procedures for sampling and analytical methodology. At the same time, several regulations have been harmonized between countries belonging to economic communities (Australia/New Zealand, EU, MERCOSUR). In 2003, the number of countries that had specific regulations for mycotoxins in foodstuffs was significantly more than those that had specific regulations for feedstuffs. Chronic toxicity studies carried out under good laboratory practice conditions are time consuming, very expensive and not necessarily bound to certain regions. These studies should be carried out in internationally recognized centres of excellence and their results evaluated by international groups of experts such as JECFA. (FAO, Food and Nutrition Paper 81, 2004)

The author thank the European Commission for funding the participation through the MYCOTOX project (contract number ICA4-CT-2002-10043 ; INCO-DEV Program)

Referencia: Conference Myco-Globe . Integration of Mycotoxin and Toxicogenic Fungi. Research for Food safety in Global System . Marzo 2006