**Toxigenic potential of *Aspergillus* spp. isolated from farmed fish feed in Sao Paulo State – preliminary results**

Massocco, M.M.; Michelin, E.C.; Godoy, S.H.S.; Almeida-Queiroz, S.R.; Yasui, G.S.; Sousa, R.L.M.; Fernandes, A.M.

USP - University of São Paulo. Faculty of Animal Science and Food Engineering, Pirassununga, SP, 13635-900, Brazil.

The study of toxigenic fungi in feeds is relevant, because the feed provided to fish are susceptible to contamination by fungi and their mycotoxins, which may cause economic losses in farmed fish, interfering with the growth, development and reproduction of the animals. The mycotoxin contamination of animal feed has been represented as a hazard to animal and human health, due to potential transmission of toxins to meat and their byproducts. The aim of this study was to evaluate the toxigenic potential of *Aspergillus* spp. isolated from farmed fish feed in Sao Paulo State. Feed samples were collected from three properties, adding up to nine types of feed, stored and in use or in different sizes. Samples were prepared and grown in Dichloran glycerol agar (DG18) for 7 days at 28°C. The microcultive analysis was performed using Potato dextrose agar (PDA) for identification of genera using optical microscopy, besides inoculation in *Aspergillus flavus parasiticus* agar (AFPA). In order to evaluate the toxigenic potential, an inoculum of *Aspergillus* colony, isolated from a culture in PDA agar at 28°C, was spread in coconut agar and incubated at 28°C for 15 days. Following, all the plate content was transferred to an erlenmeyer flask and 30 mL chloroform were added for each 10 g culture. Flasks were shaken for 30 minutes and the extracts filtered and collected in amber flasks and evaporated. The ressuspended extracts were applied to thin layer chromatography with acetone:chloroform (1:10) as mobile phase. From all samples analyzed, nine colonies were identified as *Aspergillus flavus* or *parasiticus* by AFPA growth characteristics and were tested for toxigenic potential. All isolates produced aflatoxin (AF). $AFB_1$ and $AFB_2$ were produced by 100% of isolates and $AFG_1$ by 37.5%. It is concluded that fish feed analyzed were susceptible to *Aspergillus* spp. contamination and although in a few isolates, potentially aflatoxigenic fungi was detected. Further investigation is being performed with feed from other farmed fish to verify also the occurrence of aflatoxins in feed and fish.

Keywords: Mycotoxins, $AFB_1$, fungi, aflatoxigenic.
Development Agency: FAPESP and CAPES