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## MICROBIOLOGICAL SAFETY OF MIXED FODDER, USED IN THE POULTRY FARMS OF ARMENIA

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In the spoilage process of mixed fodder and its ingredients the leading part is played by microscopic fungi, including toxin-forming species. Microbiological examination of 50 samples of mixed fodders which are used for poultry feeding has been carried out. Separate components were imported to the Republic from Russia, Ukraine and Iran. Contamination of mixed fodders and some of their components (wheat, corn, barley) by microscopic fungi and coliforms bacteria was studied. By the results of microbiological examination, and by the quantitative maintenance of the specified groups of microorganisms, the investigated samples mismatch the International standards. Non-conformity of sanitary-and-hygienic conditions to the requirements during manufacture of mixed fodders promotes a substantial increase of a degree of contamination by microorganisms. Basic sources of contamination were revealed. In the majority of samples of ready mixed fodders the quantity of coliforms bacteria reached up to  $2 \times 10^6$  cfu/g. Allocated strains belong basically to the following species: *E. coli*, *Enterobacter spp.*, *Hafnia spp.* 29 species of fungi were isolated and identified from investigated fodders, belonging to the classes *Zygomycetes* and *Deuteromycetes*. *Aspergillus flavus*, *A. Niger*, *A. fumigates*, *Macro* species were isolated from all investigated samples. Dependence between specific fungi structure and components of fodder has been shown. In some samples the degree of contamination with *Aspergillus flavus* reached up to  $6 \times 10^3$  cfu/g. In the fodders imported from Iran, species *A. nutans*, *Manila sitophila* were dominating. The last one is particularly aggressive and stable to a wide spectrum of chemical disinfectants and to UV-radiation. When incubated on a liquid nutrient medium Czapek-Dox, 18 strains of *Aspergillus flavus* from the total of 42 isolated, produced aflatoxin  $\alpha_1$  in the quantities of 15 – 40 mkg/kg. The obtained results show a risk factor for health of consumers of the poultry, fed on contaminated mixed fodders.

**Key words:** Poultry, Armenia, microbiological safety *Aspergillus flavus*, *E. coli*, *Enterobacte*, *Hafnia*