



CENTRAL INSTITUTE FOR SUPERVISING AND TESTING IN AGRICULTURE FEED SAFETY AND QUALITY

Mycotoxins are particularly produced by molds. More than 300 varieties of molds with toxic effect are known currently. *Aspergillus*, *Penicillium* and *Fusarium* families are the most frequent in food. Almost all mycotoxins have harmful effects on liver, kidneys, immune system; some of them are potentially carcinogenic. Mycotoxins intake may damage liver, digestive tract and blood circulation system or increase the risk of tumorous diseases.

Occurrence of mycotoxins is variable from year to year. There is a higher risk of agricultural plants contamination in times of heavy precipitations during the harvest season. The inappropriate storage conditions of agricultural products contribute to mycotoxins expansion. ÚKZÚZ focuses on appropriate storage and production conditions and continuously monitors the occurrence of mycotoxins in feed.

ÚKZÚZ continuously monitors the above mentioned and other safety aspects of feed that enter into the food chain. Thereby it contributes to consumers' health protection and increasing consumers' trust in food safety and quality.

Registration and approval of feed business establishments

In compliance with legislative requirements, ÚKZÚZ keeps the **National feed registry** containing more than 32 000 feed business establishments, including the scope of their activities. This information, together with control findings and analytical results of samples, is used for creating the control plan and planning activities for the future periods.



Biological feed testing

Biological feed testing is carried out at biological testing station (BTS) in Lípa, owned by ÚKZÚZ. There are performed both the verification of production effectiveness of compound feed for different farm animal species (chickens, pigs, rabbits, coypus) and the testing of compound feed for laying hens. It is also possible to test final hybrids of meat pig breeds at the BTS.



ÚKZÚZ: Hroznová 2, 656 06 Brno
tel.: (+420) 543 548 111
www.ukzuz.cz

Contacts:

SZV: tel.: (+420) 543 548 330
fax: (+420) 543 548 330
krmiva@ukzuz.cz

Food chain safety is a prerequisite to maintain high level of consumers' health and interest protection. The aim of Food law is to keep the whole food chain safe – from primary production up to retail trade. Feed is one of the key inputs of food chain and could be a source of potential health risks.

In order to ensure the highest possible level of **feed safety**, the feed business establishments have to meet many requirements, relating mainly to manufacturing procedures, quality control, facility cleanliness, feed storage, record-keeping and inputs and products traceability.

According to Act No. 142/2002 Coll., the Central Institute for Supervising and Testing in Agriculture (ÚKZÚZ) is the administrative authority that checks compliance with legislative requirements relating to feed safety. ÚKZÚZ performs different types of official controls, covering wide range of agricultural operators' activities.



Official feed controls

Routine controls include planned control activities, covering many areas (fulfilment of registration/approval conditions, labelling, facilities and equipment, records etc.). Inspector may choose the areas that will be checked based on the current situation in the establishment. Sampling can be a part of these controls.

Targeted controls are planned controls focused on the most frequent risks linked to feed safety e.g. feed contamination by residues of coccidiostats and veterinary medicines, presence of unauthorized genetic modifications, dioxins, heavy metals, pesticides and other high-risk substances in feed. Targeted controls always include sampling in order to determine whether the legislative requirements regarding limits for substances contained in feed have been met.

Feed monitoring is a coordinated program focused on monitoring of mycotoxins with no legally binding limits set, but it is desirable to monitor their presence in feed. The presence of mycotoxins is systematically monitored in compound feed and in feed materials that are used in primary production.

Exceptional controls are unscheduled targeted controls initiated by external impulses, e.g. RASFF notifications, consumers' complaints or information received from other governmental control authorities.

Official feed sampling

Close attention is continually paid to the safety and the maintaining of declared qualitative parameters of **officially sampled feed**. Annually, there are around 1 000 of feed samples taken and evaluated within official controls.

An important part of the official feed sampling and evaluation system are the workplaces of ÚKZÚZ National Reference Laboratory, holder of the Certificate of Accreditation according to ČSN EN ISO/IEC 17025:2005 and ČSN EN ISO/IEC 17043.

The results of analyses of official feed samples are processed and presented to the inspected operators through protocols of **commodity experts' evaluations**. Summary reports

containing checked feed and the values of monitored parameters are made available every month on our website.

Monitoring of feed contamination with foreign substances

Feed cross contamination is the risk of pollution with the residues of feed additives (mainly coccidiostats or medications) that remained in production line during previous production processes. ÚKZÚZ focuses on checking decontamination programs created by producers on the basis of coordinated manufacturing schedule, careful production line cleaning and periodical monitoring of residues in final products. ÚKZÚZ is also continuously monitoring the level of cross contamination in both the first batch and the whole lot of feed manufactured just after the production with coccidiostats or medications. In case of any findings, the correction of decontamination measures and verification of their effectiveness is required.

Soil contains **heavy metals** and that results in their natural presence in the food chain. However, their presence in environment and food is mainly caused by human activities. High doses of heavy metals can harm the liver, kidneys and nervous system. Following elements present the highest risk for feed contamination: lead, cadmium, mercury and arsenic, nickel and cobalt and their contents in feed are continuously checked.

Polychlorinated biphenyls (PCB's) are global pollutants with high accumulative potential and resistance to biological degradation. Although their production officially finished in 1980's, the residues are still present in feed and food products. The main natural PCB's reservoirs are freshwater sediments from which they can be released according to the external conditions. Therefore, it is still important to monitor PCB's in the environment including feed and food and ÚKZÚZ is doing it continuously.

One of the most effective methods of plant protection against harmful organisms is the use of products containing **pesticides**. Their use may result in the presence of residues in treated products, which then enter into the food chain. Therefore, it is necessary to maintain the residue levels within the limits not posing any risk for humans and animals. The presence of more than 100 commonly used pesticide types is monitored by ÚKZÚZ in feed products.



Low levels of **dioxins** occur in the environment naturally (fire, volcanic activity). However, higher levels may enter into the food chain due to unsuitable technology used during the feed or food production. Dioxins remain in the environment in the long term (they are persistent) and are bio accumulative (accumulate in bio organisms, mainly in tissues rich in fat). They have harmful effect on liver, skin, present a risk during the pregnancy and are also carcinogenic. ÚKZÚZ continuously carries out targeted controls of dioxins and dioxins type PCB's.