

TOXICOLOGICAL ESTIMATION OF FEED ADDITION OF INSORB

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Mycotoxins, toxic fungal metabolites, are chemically diverse and occur in a variety of substrates, including agricultural commodities. The fungi that produce mycotoxins can invade these commodities during production, processing, transport, or storage. The economic impact of mycotoxins occurs at all levels of production, marketing, and utilization. The ease and frequency with which mycotoxins contaminate agricultural commodities, concomitant with the chronic exposure of animals to these chemicals via contaminated animal feeds, can mean the difference between profit and loss for the poultry industry (Jones et al., 1982; Nichols, 1983; Hamilton, 1984).

All mycotoxins are thermostable, which is a potential and real danger. They are stable and stable to the action of high and low temperatures, treatment with mineral acids, alkalis and other reagents. The mechanism of action of mycotoxins depends on their chemical structure. Most of them belong to the compounds of the first class of toxicity, which exhibit dermatonecrotic, mutagenic, teratogenic, embryotoxic, carcinogenic and immunosuppressive effects. Also important is the fact of accumulation of mycotoxins in animals in small doses, as a result of eating food contaminated with mycotoxins. However, the number of mycotoxins in such feeds is below the MRL. As a result, there is an illusion of their absence and, accordingly, the safety of the feed. But within a few days of feeding such feeds, the dose of the received toxins reaches a critical one and manifests itself in any way, mainly with a decrease in appetite, general depression, and digestive disorders. In most cases, the cause of these symptoms is sought in anything, but not in the action of mycotoxins. In view of the toxic action of mycotoxins in the body of animals, blood formation processes are disturbed, the nervous, cardiovascular, lymphoid and immune systems are affected, and the functioning of the liver, kidneys and the gastrointestinal tract is suppressed. Mycotoxins can contaminate almost all types of feed and through the livestock products enter the human body. Today, the most effective method of detoxification of mycotoxins in animal feed is the use of sorbents and feed additives based on them. Today it is known that the addition of aluminosilicates to the diet has a positive effect on the health and productivity of animals, because they are involved in the regulation

of mineral metabolism and contribute to the absorption of feed nutrients. The latter occurs due to the enveloping action of aluminosilicates, since surfactants promote the absorption of fatty acids and fat-soluble products. It should be noted that aluminosilicate clays actively adsorb mycotoxins, since the molecular surface of these additives, after being saturated with water, attracts and binds the polar functional groups of mycotoxins, which helps to eliminate them from the intestine and makes it impossible to enter the blood.

The introduction of the feed additive Inorb for rats at a dose of 4 and 8 g contributed to the stimulation of hemopoiesis, which is due to the high biological effect of the elements that make up it, namely magnesium, cobalt and zinc, which favorably affect the increased respiratory function, improved oxygen supply and more intensive redox processes that occur in the body of rats, as a consequence - the activation of metabolic processes and energy. It was established that with the introduction of 12 g of Inorb intra-gastrically for rats, it causes an irritant effect on the mucous membrane of the gastrointestinal tract, namely, on the 7th day of the experiment, hemorrhagic inflammation of the fundus and 12 duodenal ulcer was observed.

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