



Mycotoxin Reference Guide for Dairy Cows

The world of modern milk production brings new challenges to producers who must manage a great variety of elements in each and every stage of the process. Nutrition constitutes one of the most significant links of the production chain. However, it is crucial to be aware of the presence of undesirable substances in the regular diet, like mycotoxins. These mycotoxins interfere with the whole production chain, some of the symptoms observed include digestive disorders, reduced feed consumption, low milk production, impaired reproduction, and mixed infectious disease profile.

Aflatoxin B₁ in Dairy Cows

Precise estimates of economic impact to dairy producers due to Aflatoxin-contaminated feed are difficult to calculate. Since the discovery that dairy cows consuming rations contaminated with Aflatoxin B₁ excrete Aflatoxin M₁ in their milk, restrictions of grain with more than 20 ppb (US Food and Drug Administration) of aflatoxin have been mandated. Recent studies demonstrated that cows with high milk production had a greater excretion of Aflatoxin M₁, as a result of greater permeability of the cell membranes of the alveoli (Veldman et al., 1992). Products like ConditionAde have been used in the feed industry for many years to sequester aflatoxin from dairy feed thus reducing the Aflatoxin M₁ content of milk (Harvey et al., 1991).

Zearalenone in Dairy Cows

The estrogenic capacity of this mycotoxin is one of the principal problems in dairy farming. Prepubescent females are more susceptible to Zearalenone (ZEA). Consumption of ZEA, produced by *Fusarium* fungi, has resulted in infertility, reduced milk production, and hyperestrogenism in cows (Mirocha et al., 1974). Swollen and hyperemic external genitalia have been observed when feeding higher levels of ZEA to Holstein cows for 42 consecutive days (Mirocha et al., 1978). In a separate incidence, enlarged udders and “skim milk” like secretions were observed in 2 prepubertal Holstein heifers (8 and 12 months old) that consumed corn with a high fungal count and was found to contain ZEA (Bloomquist et al., 1982). Reduced conception rates (62% vs. 87% for the control cows) were observed when cycling, virgin Holstein heifers were fed high daily oral doses of purified ZEN for three estrous cycles (Weaver et al., 1986).

How ConditionAde 200HPC Works



Mycotoxins in the feed become mobile in liquid.



As moisture is absorbed, mycotoxins come in contact with ConditionAde 200HPC granules.



The mycotoxins present in the moisture are chemically bonded onto the surface sites of the granules, where they are locked in.

* ConditionAde products contain ingredients that have affirmed GRAS status as anti-caking agents by the U.S. FDA, (21CFR582).

* ConditionAde 200HPC is not available for sale in the U.S.



410 N. Michigan Avenue, Suite 400 • Chicago, Illinois 60611
phone: 312.321.1515 • conditionade@oildri.com
www.conditionade.com