

COMBINED INCIDENCE OF MYCOTOXINS IN THE FEEDS GIVEN TO DAIRY COWS

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SUMMARY

The investigation examined mycological the feeds given to dairy cows in family farms, with the view to determine the level of contamination with some mycotoxins and the incidence of combinations of mycotoxins in the analysed feeds.

A total of 21 feed samples were collected and analysed: 6 samples of a mixture of concentrated feeds and 15 samples of fibrous feeds, from an association of family dairy farms in Giurgiu County. The mycotoxicological analysis was done with the immunoenzymatic test ELISA to determine: AF, OTA, DON, ZEA and T-2. By category of feeds, in decreasing order, the mycotoxins determined in the fibrous feed were: OTA in a proportion of 66.6%, ZEA, DON and T-2 in a proportion of 33.3% and AF in a proportion of 0%; in the concentrated feed: OTA in a proportion of 66.6%, AF in a proportion of 60.0%, ZEA and DON in a proportion of 46.6% each and T-2 in a proportion of 40%. Data analysis shows an increased incidence (in excess of 9.52%) of ochratoxin, of the combinations of 2 mycotoxins, OTA+DON and OTA+AF and of the combination of 3 mycotoxins, AF+OTA+DON. The analytical evidence showed that no sample exceeded the allowed limits for aflatoxin, ochratoxin A and DON, while some of the samples exceeded the allowed levels for zearalenone and T-2. Of the 21 analysed samples, 42.85% displayed combinations of 2 mycotoxins, 23.80% had a single mycotoxin or combinations of 3 mycotoxins, while 4.76% had combinations of 4 and 5 mycotoxins.

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