

NATURAL INCIDENCE OF AFLATOXINS (G1, G2, B1, B2) IN FEEDS AND SILAGES AND AFLATOXIN M1 IN GOAT MILK FARMED IN THE STATE OF RIO DE JANEIRO

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The production of goat milk is in a booming stage in the state of Rio de Janeiro where it has favorable conditions for raising animals and a receptive market for new products. However, in situations of inadequateness of the production, mycotoxin contamination of the milk may occur. Aflatoxin M1 (AFM1) stands out as one of the major mycotoxins and can be secreted in the milk of animals that eat contaminated food. This mycotoxin is maintained along the goat milk production chain, and can be ingested along with the contaminated milk or derived products. Given the scarcity of data with aflatoxins (AFs) in goat milk in the state of Rio de Janeiro, this study aimed to identify the incidence of AF in feed and silage as well as the presence of AFM1 in milk from animals and from the expansion tank. Five samples of feed and four of silage were collected, along with samples from 18 animals randomly selected during milking, in four properties. These represent significant portions of animals on each property measured. Analyses were performed in the laboratories of the Centro Estadual de Pesquisa em Alimentos at PESAGRO -RJ. The detection and quantitation of aflatoxin were performed by specific immunoaffinity purification columns (Aflatest and Aflatest M1 Vicam[®], Watertown, MA, USA) and subsequently forwarded for analysis by liquid chromatography with fluorescence detector (LC200, JASCO[®]) and column C18 (SUPELCO[®]) silica. The screening of the natural incidence of mycotoxins in feed and silage found detectable levels of AF in 6/9 samples (4/5 feeds and 2/4 silages) with values ranging from 1.13 to 3.33 µg / kg. The AFM1 detection occurred only in samples of liquid milk, collected directly from animals, not being detected in the expansion tank or refrigerated gallon. In the milk of animals in the two properties AFM1 was not detected but in the other two goat shepherds, 8/11 animals had detectable levels in milk, with values ranging from 0.03 to 0.23 µg/kg. In Brazil, the recommended values of AFM1 are 0.5 µg/kg in the fluid milk as established by ANVISA and MAPA. Despite the presence in individual samples, in no property AFM1 was detected in the expansion tank or refrigerated gallon, a fact that occurs because of the dilution of toxin by mixing milk with uncontaminated or undetectable levels. Further analysis will be carried out in other properties in order to know the real incidence of aflatoxins in goat milk produced in the state of Rio de Janeiro.

Palavras-chave: aflatoxinas, ração, silagem, leite de cabra, Rio de Janeiro

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