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The Mycotoxins Contamination In Corn Silage from Dairy Farms in Mexico

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Corn silage is the main forage available in the whole dairy cattle rations around the world; which can undergo a deterioration by the presence of fungi mainly *Aspergillus* sp, *Penicillium* sp and *Fusarium* sp. and their mycotoxins, with the loss of their nutritional value, commitment in health and animal production and public health. The aim of this study was to determine the presence of three mycotoxins in corn silage from three dairy farms located in Central region in Mexico. A total of twelve samples of corn silage, were collected. It was made a sampling at three levels of trench silo, upper, middle and edge was performed in duplicate. It was determined the physical forage quality using the particle size and pH parameters. Mycotoxins multiple technique by Aflatoxins, OchratoxinA(OA) and Zearalenone (ZEA) was used in thin layer (TLC) to determine the presence of mycotoxins. The physical quality results showed variations in dry matter content, with a lost half 15.78%, particle size upper to 5 cm, and pH in a range of 5.2-5.9. The pH founded it was ideal for the synthesis of mycotoxins, it was detected the simultaneous presence of type B aflatoxins (AFB1) and G (Aflatoxin G1), OA and ZEA in the upper layer and edge of the horizontal silo (trench silo). It is concluded that corn silage from two farms don't fulfill the physical quality and that all contain multiple mycotoxins. It is recommended to monitor the toxicological quality corn silage prior to administration to cattle.

Biography

Silvia Denise Peña Betancourt is a Veterinarian, completed her Master of Science from UNAM-FMVZ, Toxicology Specialist Clinic at Faculty Medicine Alexis Carrel and Doctor of Pharmaceutical Science at Faculty of Claude Bernard University. She currently works as a Research Professor at UAM-X, since 1991 to date and as Toxicology Laboratory Responsible at Department of Agricultural and Animal Production in UAM-X. She has written more than 30 research papers in national and international journals and is a Member of National Council of Animal Health and published books and books chapter in toxicology.

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