

Mycotoxin poisoning of dogs

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Moulds are capable of producing some of the world's deadliest natural toxins, including mycotoxins. Due to the severe drought conditions of the 2012 U.S. growing season, crops were heavily infested with moulds. Of particular concern is **afatoxin**. The 2012 corn-crop contamination was so bad that the U.S. FDA raised the acceptability threshold on the use of aflatoxin-contaminated corn from 20 parts per billion (ppb) to 500 ppb.

Raising this bar means that animal feed manufacturers can dilute contaminated corn with "clean" corn to reduce, but not eliminate, the contamination. Alternatively they may ship the corn to ethanol plants, receiving a lower price. The by-product from the use of corn in ethanol production, called Dried Distillers Grains or DDG, goes back into animal feed manufacturing along with its toxin contamination, now concentrated by 3 to 4 times.

Aflatoxins cause liver disease, cancer, immunosuppression and mutagenicity in embryos. It is commonly found in corn, peanuts and cottonseed meal, which are all used in pet nutrition. Other far more common toxins can be found in wheat, oats, barley and soybeans. All of these ingredients can find their way into dry pet foods because of the practice of "least-cost formulation." It must be noted that cooking does not destroy toxins produced by moulds and that mould cannot always be seen growing on dry pet foods.

Acute aflatoxicosis is liver failure in dogs and cats. Symptoms include: loss of appetite, weakness, lethargy and depression; vomiting, bloody stools and jaundice (yellowing of the gums, skin and eye whites) and seizures. These symptoms can be fatal within a few days, so don't hesitate to see your veterinarian. With a mortality rate of 68%, aflatoxicosis is not a disease to be casual about. There is no cure, but prompt treatment with detoxifiers can help your dog metabolize and clear the poisons from its system. Antibiotics will help control secondary infections from a compromised immune system.

Many of us enjoy the convenience of dry dog food, so it is our responsibility to be aware of what goes into our companion's feed. Learning to read labels carefully will empower us. Look for manufacturers that are certified by ISO (International Standards Organisation), GMP (Good Manufacturing Practice) and HACCP (Hazard Analysis Critical Control Points). Selecting brands that have spent the money to ensure compliance with international standards will provide you with a high level of confidence in the pet foods you buy. Avoid purchasing pet foods sold in parking lots and by door- to-door hawkers.

If you have doubts about the quality of your pet's food, your vet can arrange for mycotoxin analysis. Food may be analysed at Laboratory Services (OMAFRA) Stone Road, Guelph; Agri-Food Labs; Guelph, or Selected BioProducts Inc, Guelph. Testing costs around \$30-50. A 250 g food sample is required and turn-around time is 2–3 days.



Ralph Robinson is President of Canine Herbals, a division of Guelph-based Selected Bioproducts. The company's herbal, nutraceutical and nutritional products are manufactured in Canada under Good Manufacturing Practice (GMP) standards.