

Fumonisin Fact Sheet



Background Information: Fumonisin is a *Fusarium*-produced mycotoxin.

Major crops affected: Corn

Associated mold: *Fusarium verticillioides* (*F. moniliforme*), and *Fusarium proliferatum*

Conditions favoring production: Period of drought during the growing season followed by cool and moist conditions during pollination and kernel formation.

Symptoms: Equine: Equine leukoencephalomalacia (ELEM –characterized by facial paralysis, nervousness, lameness, ataxia, and inability to eat or drink), depression, aimless wandering, incoordination, weakness, blindness, head-pressing, coma, death from brain necrosis.

Swine: Porcine pulmonary edema (PPE) – Dyspnea, cyanosis of mucous membranes, weakness, recumbency, liver damage (pale & fatty liver), pancreatic necrosis, kidney damage, icterus, increased water consumption, fever, immunosuppression, decreased performance, and death.

Cattle & Sheep: Inappetance, weight loss, mild liver damage (increase in liver enzymes), immunosuppression, and decreased milk production.

Poultry: Inappetance, weight loss, decreased performance, skeletal abnormalities, fatty liver, immunosuppression, inhomogeneous flocks, impaired feathering, and impaired intestinal health.

Interpretation Guidelines

Detection Limit	Concern Level* (TRDM)	Potentially Harmful Level** (TRDM)		
		Cattle	Swine	Equine
0.1 ppm	1.1-3.3 ppm	6.7-11.1 ppm	11.1 ppm	6.7-11.1

*Level indicating possible favorable conditions for mycotoxins and probable need for further testing of all feeds or the TMR. Pending further tests, negative samples should be considered at concern levels in the presence of moderate symptoms and at harmful levels with marked symptoms. Limit amounts fed if moderate performance effects are present. Discontinue use at least temporarily if pronounced performance effects or acute clinical symptoms are present. Closely observe animals and continue checking for other possible causes.

**Mycotoxins at these levels indicate probable involvement in performance effects or acute clinical symptoms. Discontinue feeding at least temporarily in the presence of either type of symptoms. Observe animals closely in the absence of symptoms and do further testing of all feeds or the TMR.

TRDM = total ration dry matter

Dairyland Lab Packages that include Fumonisin:

- Individual Mycotoxin request
- Mycotoxin Basic Package
- Mycotoxin Select Package
- Mycotoxin Complete Package

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FDA Guidance Levels

Class of Animal	Corn and corn by-products	Total Ration
Equids and rabbits	5 ppm	1 ppm
Swine and catfish	20 ppm	10 ppm
Breeding Ruminants, breeding poultry and breeding mink*	30 ppm	15 ppm
Ruminants >= 3 months old being raised for slaughter and mink being raised for pelt production	60 ppm	30 ppm
Poultry being raised for slaughter	100 ppm	50 ppm
All other species or classes of livestock and pet animals	10 ppm	5 ppm
*Includes lactating dairy cattle and hens laying eggs for human consumption		

Sources

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