

MYCOTOXINS

REPORTED DETRIMENTAL FEED CONCENTRATIONS

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Zearalenone (ppm=parts per million)			
Swine	Concentration	Duration	Effect
Prepubertal gilts	1-5 ppm	3-7 days	Hyperestrogenism, prolapse
Sexually mature open gilts	3-10 ppm	Mid-cycle (day 11-14)	Anestrus, pseudopregnancy
Bred sows	15-30 ppm	1 st trimester	Early embryonic death, small litters
Juvenile boars	10-50 ppm	Indefinite	Reduced libido, small testicles
Mature boars	200 ppm	Indefinite	No effect
Cattle			
Virgin heifers	12 ppm	Open Heifers	Reduced conception
Dairy cows	50 ppm	Open cows	Reduced conception
Poultry			
Broilers & turkey poults	200 ppm	Indefinite	No effect
Deoxynivalenol (vomitoxin, DON)			
Swine			
Feeder pigs	1-3 ppm	1-5 days	Reduced feed intake
Feeder pigs	5-10 ppm	1-5 days	50% reduction in feed intake, vomiting
Feeder pigs	10-40 ppm	1-5 days	Complete feed refusal, vomiting
Sows	3-5 ppm	Gestation, lactation	Lower fetal weights, or no effect
Cattle			
Feeder cattle	10 ppm	Indefinite	No effect
Dairy cows	6 ppm	6 weeks	No effect or slightly reduced feed intake
Dairy cows	12 ppm	10 weeks	No effect on milk production
Poultry			
Broilers and turkey poults	50 ppm	Indefinite	No effect
Fumonisin (FB1 and/or FB2)			
Horses	Concentration	Duration	Effect
All classes and ages	>10 ppm	30 days	Liver damage, leucoencephalomalacia, death
Swine			
All classes and ages	>25 ppm	30 days	Reduced gain and feed efficiency, mild liver damage
All classes and ages	>50 ppm	10 days	Reduced gain and feed efficiency, moderate liver damage

All classes and ages	>100 ppm	5 days	Severe pulmonary edema, death
Cattle and sheep			
All classes and ages	>100 ppm	30 days	Slightly reduced gain, mild liver damage
All classes and ages	>200 ppm	14 days	Reduced feed intake and gain, moderate liver damage
Turkeys			
All classes and ages	>100 ppm	7-21 days	Reduced feed intake, liver damage, diarrhea, rickets, tibial lesions
Chickens			
All classes and ages	>200 ppm	7-21 days	Reduced feed intake, liver damage, diarrhea, rickets, tibial lesions
Aflatoxins (ppb=parts per billion)			
Swine	Concentration	Effect	
All classes and ages	200 ppb	Slow growth, reduced feed efficiency	
All classes and ages	400 ppb	Liver damage and immune suppression	
Feeder cattle			
All classes and ages	400 ppb	Tissue residues	
All classes and ages	700 ppb	Mild liver damage, reduced growth and feed efficiency	
All classes and ages	1000 ppb	Moderate liver damage and weight loss	
All classes and ages	2000 ppb	Severe liver damage, jaundice, death	
Dairy cows			
Lactating cows	20 ppb	Detectable aflatoxin in milk	
Lactating cows	1500 ppb	Decreased milk production	
Poultry			
Broiler chicks	210 ppb	No effect	
Turkeys	250 ppb	Reduced growth	
Broiler chicks	420 ppb	Lose weight, moderate liver damage after 3 weeks	
Horses			
All classes and ages	400 ppb	Liver damage and immune suppression	
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