Mycotoxin Guidelines and Dietary Limits

Summarized by Dr. John Goeser, PAS & Dipl. ACAN
Revised January, 2015

Potentially Harmful Toxin Levels for a Total Diet (DM)					
	Dairy	**Feedlot**	**Swine**	**Poultry**	**Equine**
Toxin Type	Values listed in blue are PPM, all other listed are in PPB				
Aflatoxin	20	20	20	20	20
Deoxynivalenol (DON or Vomitoxin)*	0.5 to 1.0	10	1	2	500
Fumonisin	2	7	10	20	500
T-2 Toxin	100	500	100	100	NA
Zearalenone	400	5	300	10	50
Ochratoxin	5	5	700	700	35
Ergot Toxins (combined)	500	500	500	750	300

Note: The table lists maximum concentrations for the total diet. These values were summarized from the literature cited below and conservatively chosen to represent the lowest values recommended without causing animals harm. Measured toxin is likely not the only type of toxin present in a sample; multiple toxins (including those not measured or masked toxins) may interact to further impact health and performance.

To estimate the toxin contributed to total diet by the feedstuff analyzed, multiply the toxin amount in the feedstuff by the ratio of feedstuff % of total diet using the following equation (keep in mind the only accurate way to estimate total diet toxin level is to measure the total diet):

Total Diet DON Level = Feedstuff DON Level X (Feedstuff (lbs. DM) / Total Diet (lbs. DM)

e.g. Total Diet DON 2.5 ppm = 5.0 ppm (Corn Silage DON level) X (25 lbs. DM Corn Silage / 50 lbs. DM Total Diet)

Disclaimer: Many factors beyond dietary mycotoxin content and our control affect animal performance. We cannot be held responsible in any way for any management decisions, performance or actions taken following Rock River Lab mycotoxin results being delivered.

*Deoxynivalenol may be used as a marker for further mycotoxin contamination. If DON is detected, 90 to 100% of the time other mycotoxins are present as well (Whitlow, 2014).

References

Whitlow, L.W. and W.M. Hagler, Jr. 2006. Mold and Mycotoxin Issues in Dairy Cattle: Effects, Prevention and Treatment. CA Chapter ARPAS Cont. Ed. Conf. 2006.

Whitlow, L.W., 2014. Personal communication.

Adams, R.S. K.B. Kephard, V.A. Ishler, L.J. Hutchinson, and G.W. Roth. Mold and Mycotoxin problems in livestock feeding. Penn State College of Agr. Sciences Coop. Extension article.

The Mycotoxin Blue Book. 2005. Nottingham University Press, Nottingham, United Kingdom. Duarte Diaz, Editor.

ROCK RIVER LABORATORY, INC.
AGRICULTURAL ANALYSIS

710 COMMERCE DRIVE
PO BOX 169
WATERTOWN, WI 53094

920-261-0446
OFFICE@ROCKRIVERLAB.COM
WWW.ROCKRIVERLAB.COM