

OFFICE OF THE TEXAS STATE CHEMIST

Texas Feed and Fertilizer Control Service • Agricultural Analytical Service

445 Agronomy Road • College Station, TX 77843-2114

Mailing Address
P. O. Box 3160
College Station, TX 77841-3160

Tel. (979) 845 1121
Fax. (979) 845 1389
<http://otsc.tamu.edu>

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FEED INDUSTRY MEMORANDUM 5-20

THE DISTRIBUTION OF FUMONISIN-CONTAINING WHOLE GRAIN, WHOLE SEEDS, AND SCREENINGS IN COMMERCIAL CHANNELS AND THEIR USE IN MIXED FEEDS

OBJECTIVE:

To define the conditions under which fumonisin-containing feed ingredients may be introduced into Texas commercial channels for feed purposes.

BACKGROUND:

Fumonisin, metabolites produced by various *Fusarium* species, have been implicated as agents capable of causing death and/or severe injury to horses, loss of productivity in other species and cancer in humans. The Office has found these compounds both in corn and corn screenings.

The Office bases its authority on §141.002(c)(2), §141.051(a)(8), §141.147 and §141.148(a)(2) and (6) of the Texas Commercial Feed Control Act as amended.

POLICY:

A. Whole Grain and Whole Seed as Feed or for Use in Feed.

Grain and seed - not specifically exempt under the provisions of §141.002(c)(4) - **containing > 5 ppm fumonisin (F1,F2,F3) individual or in toto** as well as all grains and seeds specifically designated as wildlife are commercial feeds under §141.002(c)(2) and §141.002(e) of the Texas Agriculture Code and are subject to regulation by the Act. Each facility which wishes to distribute fumonisin-containing feed ingredients above 5 ppm within the State or any grain and/or seed designated to wildlife, must be licensed and registered to distribute fumonisin containing grain and/or seed for this purpose as required under §141.021, provide labeling as required under §141.051 & §141.052, report tonnage and pay appropriate inspection fees. Labels for each product must accompany the application for license and must comply with all aspects of Texas Commercial Feed Rules. Label format should follow those in Appendix II.

Grain and seed containing >5 ppm fumonisin may be introduced into commercial channels by a licensee following guidance levels outlined by FDA contained in Appendix I.

A facility may distribute unprocessed whole grain or seed exceeding 75 ppm fumonisin after blending it with other similar grain or seed containing not less than 5 ppm fumonisin.

Each facility must provide to the Office a blending plan, and upon request, its record showing the name of the buyer and the amount sold to such buyer as outlined in Appendix III.

B. Meals and Screenings.

Although distributors of meals and screenings should already be registrants, the presence of fumonisin above 5 ppm imposes exactly the same labeling requirements as imposed on distributors of whole grain.

C. Enforcement.

Registration, label violations and violations originating in failure to report tonnage, report tonnage correctly, or in failure to pay fees will be dealt with within the existing framework of OTSC policy, (e.g., pass through guarantee will be accepted). Unlabeled grain, meal or screenings is by implication less than 5 ppm.



Dr. Timothy J. Herrman
State Chemist & Director
Office of the Texas State Chemist

APPENDIX I

Guidance for Industry: Fumonisin Levels in Human Foods and Animal Feeds

Human Foods

<u>Product</u>	<u>Total Fumonisin (FB₁+FB₂+FB₃)</u>
➤ Degermed dry milled corn products (e.g., flaking grits, corn grits, corn meal, corn flour with fat content of <2.25%, dry weight basis)	2 parts per million (ppm)
➤ Whole or partially degermed dry milled corn products (e.g., flaking grits, corn grits, corn meal, corn flour with fat content of ≥2.25 %, dry weight basis)	4 ppm
➤ Dry milled corn bran	4 ppm
➤ Cleaned corn intended for masa production	4 ppm
➤ Cleaned corn intended for popcorn	3 ppm

Animal Feeds

<u>Corn and corn by-products intended for:</u>	<u>Total Fumonisin (FB₁+FB₂+FB₃)</u>
➤ Equids and rabbits	5 ppm (no more than 20% of diet)**
➤ Swine and catfish	20 ppm (no more than 50% of diet)**
➤ Breeding ruminants, breeding poultry and breeding mink*	30 ppm (no more than 50% of diet)**
➤ Ruminants ≥ 3 months old being raised for slaughter and mink being raised for pelt production	60 ppm (no more than 50% of diet)**
➤ Poultry being raised for slaughter	100 ppm (no more than 50% of diet)**
➤ All other species or classes of livestock and pet animals	10 ppm (no more than 50% of diet)**

*Includes lactating dairy cattle and hens laying eggs for human consumption

**Dry weight basis

Source: U.S. Dept. of Health and Human Services, Food & Drug Administration
 Center for Food Safety and Applied Nutrition
 Center of Veterinary Medicine

APPENDIX II
PROPOSED LABEL FOR
FUMONISIN-CONTAINING CORN

FEED CORN

This product contains between _____ and _____ ppm fumonisin. To be fed **only** to _____*_____.

Warnings: May not be fed to horses or rabbits.
Not for human use.

Name of Supplier
Address of Supplier including City/State/Zip

EXAMPLE:

This product contains between 45 and 60 ppm fumonisin. To be fed **only** to cattle and poultry fed for slaughter.

WARNINGS: May not be fed to horses or rabbits.
Not for human use.

*Specific species may be selected from text (Appendix I, Animal Feeds), e.g., cattle and poultry fed for slaughter.

**EXAMPLE LABEL FOR
AFLATOXIN-CONTAINING AND
FUMONISIN-CONTAINING CORN**

FEED CORN

This product contains between 5 and 50 ppm fumonisin and between 20 and 300 ppb aflatoxin. To be fed to feedlot cattle intended for slaughter .

Warnings: May not be fed to any lactating dairy animals, horses or rabbits.

 Not for human use.

 Manufactured by:
 Blue Bird Feed Mill
 Anytown, TX 77777

Note: See Feed Industry Memorandum 5-20 and Feed Industry Memorandum 5-12 for approved levels for different species.

APPENDIX III

ELEMENTS OF A BLENDING PLAN

The plan must specify the following:

1. Corn with fumonisin levels greater than 75 ppm fumonisin will be blended with corn containing greater than 5 ppm fumonisin to a level under 75 ppm fumonisin.
2. Blended grain must be destined for feedlot cattle even if the final blend shows less than 5 ppm fumonisin.
3. The sampling scheme and testing procedures must conform to the One Sample Strategy Handbook (2013).
4. All products must be properly labeled in accordance with Feed Industry Memorandum No. 5-20 appendix II.
5. Records of distribution and fumonisin results of blended corn must be kept for two years.
6. Fumonisin-containing corn which has been blended or rations containing the blended corn cannot be shipped in interstate commerce.
7. The fumonisin test results, the final destination, any associated firm and/or broker, and the amount of blended corn distributed must be submitted to the Office.