

OFFICE OF THE TEXAS STATE CHEMIST

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FEED INDUSTRY MEMORANDUM NO. 5-12

DISTRIBUTION OF AFLATOXIN-CONTAINING WHOLE GRAIN AND OILSEED IN COMMERCIAL CHANNELS AND THEIR USE IN MIXED FEEDS

OBJECTIVE:

To provide instructions on how to implement the law (Chapter 141 of the Texas Agriculture Code) and rule (Chapter 61 of the Texas Administrative Code) including labeling, blending, and record of disposition regarding aflatoxin-containing whole grain and oilseed introduced into Texas commercial channels for feed purposes.

POLICY:

A. LICENSING

Grain and oilseed - not specifically exempt under the provisions of §141.002(c)(4) - **containing > 20 ppb aflatoxin (B1, B2, G1, G2 individual or in toto)** as well as all grains and oilseed specifically designated for 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 that wishes to distribute aflatoxin-containing feed ingredients above 20 ppb within the State or any grain and/or oilseed designated to wildlife, must be licensed and registered to distribute aflatoxin containing grains and oilseeds 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. In addition, a facility wishing to distribute whole grain and oilseed containing >20 ppb aflatoxin must comply with the specific instructions laid out in the Distribution section (Part B).

The Office recognizes this is a complex policy and that questions will arise. Please feel free to contact the Office for answers at Office of the Texas State Chemist, P.O. Box 3160, College Station, Texas 77841-3160, (979) 845-1121, Fax No. (979) 845-1389; e-mail web@otsc.tamu.edu.

B. DISTRIBUTION

1. As Unblended, Unprocessed Whole Grain or Oilseed.

A facility may introduce aflatoxin-contaminated ingredients, i.e., ingredients containing more than 20 ppb aflatoxin, directly into commercial channels if the whole grain or oilseed does not exceed

- a) 50 ppb when designated for wildlife
- b) 100 ppb when destined for breeding cattle and goats whose milk is not processed for human use, breeding swine, mature poultry, and sheep.
- c) 200 ppb when destined for finishing swine (more than 100 lbs. body weight).
- d) 300 ppb when destined for finishing cattle in confinement.

For domestic animals, the label must show the range of aflatoxin, i.e., if the test shows 40 ppb, the range should be 20 - 100 and must provide feeding directions and target animals consistent with the level of aflatoxin. Typical labels are shown in Appendix I.

For wildlife, the label must (a) show the level of aflatoxin as less than 20 ppb or less than 50 ppb, and (b) provide guarantees for crude protein, crude fat and crude fiber.

2. As Blended Corn

A facility may distribute unprocessed whole corn originally containing **no more than 500 ppb** aflatoxin after blending it with similar corn containing **no less than 20 ppb** aflatoxin

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 II.

3. As Ammoniated Corn and Cottonseed

A facility may distribute unprocessed corn or cottonseed containing no more than 500 ppb aflatoxin ammoniated under conditions as defined in Appendix III so that the final treated product contains no more than 200 ppb aflatoxin.

Ammoniated corn or cottonseed are ingredients separate and distinct from corn and cottonseed themselves and, as such, the common-name term "ammoniated" preceding the ingredient name must appear on the labels of feeds, premixes, supplements, or concentrates or any other product as required by the Act and the Commercial Feed Rules

for any distinct ingredient. Feed labels must declare the amount of non-protein nitrogen (NPN). In addition to any other requirements of the Act or Rules, every product must bear the statements "Warning: (1) "Not for human use," (2) "Feed to ruminants only." **Please note that if the aflatoxin remains in ammoniated corn or cottonseed, the only allowed feed uses are those listed in Section B-1.** A typical label is shown in Appendix IV.

Each facility distributing ammoniated corn or cottonseed must also have in its possession and provide on reasonable request a certificate indicating either (a) its ammonia process has been approved by this Office, or (b) that the firm providing ammoniation has been approved by this Office. Each facility must provide, on reasonable request, to the Office a record showing the name of the buyer and the amount sold to such buyer.

4. Grain containing >500 ppb aflatoxin and oilseed containing >300 ppb aflatoxin may not enter commerce. A record of disposition of these grains and oilseeds shall be kept by the licensee to document that said commercial feed ingredients are not used in the manufacture of animal feed.

C. LIMITATIONS

Blended corn (B.2) and aflatoxin-containing corn or cottonseed which is ammoniated or rations containing these products **cannot** be distributed in interstate commerce.

Once designated as feed, the ingredient regardless of level of aflatoxin or processing procedure, cannot be converted to any use other than feed. Such diversion is contrary to the rules of this Office and the Texas Department of Health.



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

APPENDIX I

**PROPOSED LABEL FOR
AFLATOXIN-CONTAINING CORN**

<p>FEED CORN</p> <p>This product contains between _____ and _____ ppb aflatoxin. To be fed to _____*.</p> <p>Warnings: May not be fed to lactating dairy cattle or lactating dairy goats. Not for human use.</p> <p style="text-align: center;">Name of Supplier Address of Supplier City/State/Zip of Supplier</p> <p style="text-align: center;">Net Wt. ___ lb. (___ kg)</p>
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EXAMPLE:

This product contains between 20 and 100 ppb aflatoxin. May be fed to breeding cattle, breeding swine, mature poultry, sheep, goats, finishing swine or finishing cattle in confinement.

Warnings: May not be fed to lactating dairy cattle or lactating dairy goats.
 Not for human use.

*Note: Specific species may be selected from text (Section [B][1]), e.g., goats.

APPENDIX II

ELEMENTS OF A BLENDING PLAN

The plan must specify the following:

1. Corn with aflatoxin levels from 300 to 500 ppb aflatoxin will be blended with corn containing greater than 20 ppb aflatoxin to a level under 200 ppb aflatoxin.
2. The sampling scheme and testing procedures must conform to the One Sample Strategy Handbook (2013).
3. All products must be properly labeled in accordance with Feed Industry Memorandum No. 5-12 Appendix I.
4. Records of distribution and aflatoxin results of blended corn must be kept for two years.
5. Anything over 500 ppb aflatoxin cannot be blended with any other corn and may not enter commerce. A separate record of disposition must be provided for this material.
6. Aflatoxin-containing corn which has been blended or rations containing the blended corn cannot be shipped in interstate commerce.
7. The aflatoxin test results, the final destination, any associated firm and/or broker, and the amount of blended corn distributed must be submitted to the Office.

APPENDIX III

GENERAL PROVISIONS FOR AMMONIATING AFLATOXIN-CONTAMINATED COTTONSEED, COTTONSEED MEAL, AND/OR CORN:

The provisions apply to all facilities and equipment used in the ammoniation and shall also govern those instances in which failure to adhere to these practices cause ineffective treatment of the product. In such cases, the product is adulterated within the meaning of Section 141.148 of the Texas Law.

The process used for aflatoxin-decontamination shall be a high pressure/high temperature (HP/HT) process involving the addition of ammonia (gaseous or in solution) and water in a contained vessel. The process used shall consist of loading the pressure vessel by means of a conveyer, skip loader or other suitable equipment, adding ammonia (2%) and water (12%) sealing the vessel, pressurizing the vessel (40 psi, minimum), mixing the product in the vessel (60 minutes). The temperature in the reactor must rise to at least 80°C (176°F).

Aflatoxin Levels Before and After Treatment: Aflatoxin concentrations shall be measured before and after ammoniation of each batch or production run by collecting a representative sample, preparing the sample for analysis, and analyzing for aflatoxins, B1, B2, G1, and G2.

Records and Reports:

Processors shall keep records to ensure that the appropriate procedures were followed.

APPENDIX IV

PROPOSED LABEL FOR AMMONIATED CORN

AMMONIATED CORN PRODUCED VIA THE _____ PROCESS

(To Be Fed To _____)

This product contained less than ____ ppb aflatoxin prior to ammoniation.

This product contains between ____ and ____ ppb aflatoxin after ammoniation as determined on __ (date) __.

Net Weight ____ or may appear on invoice.

Guaranteed Analysis:

Crude Protein (minimum) _____ %

(This includes not more than ____% equivalent protein from non-protein nitrogen.)

WARNINGS: Not for human use.

Feed to ruminants.

Not for interstate shipment

Manufactured By:

Name of manufacturer

Address of manufacturer

City/State/Zip of manufacturer

Net Wt. ____ lb. (____ kg)