November 2, 2005

FEED INDUSTRY MEMORANDUM 5-20

THE DISTRIBUTION OF FUMONISIN-CONTAINING WHOLE GRAIN 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:

Fumonisins, 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) and (6) - containing > 5 ppm fumonisin (F1,F2,F3) individual or in toto are commercial feeds under §141.002(e)(2) of the Texas Agriculture Code and are subject to regulation by the Act. Distributors of such grain and seed must be licensed as required under §141.021 and product labeled as required under §141.052.

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

Unprocessed whole grain or seed exceeding 75 ppm which has been blended with other similar grain or seed containing not less than 5 ppm fumonisin may be performed, pending approval of a blending plan submitted to and approved by the Office. (Blended grain must be destined for feedlot cattle even if the final blend shows less than 5 ppm fumonisin.)
As noted above, each firm distributing unblended, unprocessed or blended fumonisin-containing feed ingredients above 5 ppm within the State, must apply for a license to distribute commercial feed, provide labeling, report tonnage and pay inspection fees. Label format should follow those in Appendix II.

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, or report correctly, tonnage 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.

For the Office,

Tim Hertman
State Chemist & Director, OTSC
APPENDIX I
Guidance for Industry: Fumonisin Levels in Human Foods and Animal Feeds

### Human Foods

<table>
<thead>
<tr>
<th>Product</th>
<th>Total Fumonisins (FB₁+FB₂+FB₃)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degermed dry milled corn products (e.g., flaking grits, corn grits, corn meal, corn flour with fat content of &lt;2.25%, dry weight basis)</td>
<td>2 parts per million (ppm)</td>
</tr>
<tr>
<td>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)</td>
<td>4 ppm</td>
</tr>
<tr>
<td>Dry milled corn bran</td>
<td>4 ppm</td>
</tr>
<tr>
<td>Cleaned corn intended for masa production</td>
<td>4 ppm</td>
</tr>
<tr>
<td>Cleaned corn intended for popcorn</td>
<td>3 ppm</td>
</tr>
</tbody>
</table>

### Animal Feeds

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

*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 UNBLENDED, UNPROCESSED, NON-AMMONIATED FUMONISIN-CONTAINING CORN

FEED CORN

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

* Specific species may be selected from text, e.g.,

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.
EXAMPLE LABEL FOR UNBLENDED, UNPROCESSED, NON-AMMONIATED, 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.