

OFFICE OF THE TEXAS STATE CHEMIST

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Fumonisin Sampling, Testing, and Risk Management in Corn

Associations representing producers, grain handlers, and processors are working with the Office of the Texas State Chemist (OTSC) to manage fumonisin risk in the 2017 corn crop in the Southern Plains and Panhandle of Texas. Cereal grains and oilseeds containing mycotoxins, such as aflatoxin and fumonisin, meet the definition of adulterated and fall under the authority of the Texas Feed and Fertilizer Control Service of OTSC per the Texas Commercial Feed Control Act (§141.002 and §141.148).

OTSC recognizes the challenge associated with sampling and testing for fumonisin. To address this concern, OTSC implemented a program referred to as the One Sample Strategy (OSS) to measure and manage mycotoxin risk using official equipment and methods. Both the aflatoxin and fumonisin programs provide guidance for creating a plan for representative sampling and accurate testing. By participating in OSS, grain operators can become qualified to conduct onsite fumonisin tests. OSS establishes criteria for proper sampling pattern, sample size, sample preparation, testing, and record keeping.

Grain, oilseeds, processed grain, and oilseed meal containing fumonisin above 5 parts per million (ppm) require proper labeling as approved by OTSC. The regulatory limits contained in the Texas Commercial Feed Rules (Chapter 61) are as follows:

- ≤ 20 ppm for swine and catfish not to exceed 50% of diet
- ≤ 30 ppm for breeding ruminants, breeding poultry, and breeding mink not to exceed 50% of diet
- ≤ 60 ppm for ruminants greater than 3 months old being raised for slaughter, and mink being raised for pelt products not to exceed 50% of diet
- ≤ 100 ppm for poultry being raised for slaughter not to exceed 50% of diet
- ≤ 10 ppm for all other species or classes of livestock and pet animals not to exceed 50% of diet except equids and rabbits which should not exceed 5 ppm and 20% of diet.

Facilities may implement blending as an approved method to reduce fumonisin below the regulatory maximum levels. Each facility must provide to OTSC a blending plan using OSS methodology. OTSC will issue credentials to qualified analysts employed by firms that submit an OSS plan or an approved blend plan. Firms participating in these programs may issue official results on behalf of OTSC for the purposes of buying, selling, and regulation.

“The One Sample Strategy is so named because it utilizes the concept of ‘test once, use multiple times.’ The objective of this program is to provide legal certainty to the agriculture community while preserving market integrity through accurate sampling and testing,” according to State Chemist, Dr. Tim Herrman.

The Office of the Texas State Chemist monitors performance and verifies test results to ensure testing accuracy. As an additional service, firms participating in the OSS program receive reference material at no cost to ensure accurate testing.

For more information about the One Sample Strategy, log onto <http://otscweb.tamu.edu/risk/OneSample/> or call the Office of the Texas State Chemist 979-845-1121.