

Subject: RE: MN FFA Food Science CDE question

Date: Monday, January 13, 2025 at 9:19:05 AM Central Standard Time

From: Travaglio_Nick_R

To: Saterbak_Katie_J, Mortenson, Natasha

CC: Travaglio_Nick_R

Hello, and Thanks for reaching out.

I think mold is an interesting topic as it relates to what type of hazard it is and whether it is a food safety issue. When it comes to peanuts, we actually consider aflatoxin to be a food safety hazard, and consider it to be a chemical hazard, as the toxin is produced by certain fungus and molds. When you think of the biological hazard at Jennie-O Turkey Store, Salmonella, Listeria monocytogenes and Clostridium perfringens and botulinum come to mind. Of course these are invisible to the naked eye. That is also where mold and fungus can be interesting, is in some cases these are visible. Molds for Jennie-O Turkey Store are considered more of a quality issue.

When it comes to different type of hazards and the difference between food safety and quality, one of our guidance references is the HACCP regulation from the code of federal regulations. The link to this regulation is:

<https://www.ecfr.gov/current/title-9/chapter-III/subchapter-E/part-417>

This is the regulation that requires HACCP plans for Jennie-O Turkey Store by USDA FSIS. HACCP plans are the key food safety plan at each of our facilities. A few key call outs from 417.1 and 417.2 are:

- *Food safety hazard definition is:* Any biological, chemical, or physical property that may cause a food to be unsafe for human consumption.
- In our HACCP plans The hazard analysis shall include food safety hazards that can occur before, during, and after entry into the establishment. A food safety hazard that is reasonably likely to occur is one for which a prudent establishment would establish controls because it historically has occurred, or because there is a reasonable possibility that it will occur in the particular type of product being processed, in the absence of those controls.
- Food safety hazards might be expected to arise from the following:
 - (i) Natural toxins;
 - (ii) Microbiological contamination;
 - (iii) Chemical contamination;
 - (iv) Pesticides;
 - (v) Drug residues;
 - (vi) Zoonotic diseases;
 - (vii) Decomposition;

- (viii) Parasites;
- (ix) Unapproved use of direct or indirect food or color additives; and
- (x) Physical hazards.

So food safety hazards in our HACCP plans are determined by our history, both what has occurred in the industry in general and with our specific company. And it really does come down to what is unsafe for human consumption. If it is unsafe for human consumption, we consider this to be a food safety issue. If it is not unsafe for human consumption, but undesirable from a consumer standpoint, we consider this more of a quality issue.

When a company fails to control a food safety hazard and it does make it to customer and consumer level, then that is when a recall can occur. USDA FSIS has other definitions for classification for the type of recall that can occur, which would be (resource https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/understanding-fsis-food-recalls#:~:text=Class%20I%20%2D%20A%20Class%20I,or%20the%20risk%20is%20negligible:)):

- **Class I** - A Class I recall involves a health hazard situation where there is a *reasonable* probability that use of the product will cause serious, adverse health consequences or death.
- **Class II** - A Class II recall involves a health hazard situation where there is a *remote* probability of adverse health consequences from use of the product.
- **Class III** - A Class III recall involves a situation where use of the product will not cause adverse health consequences, or the risk is negligible.

Physical hazards also are interesting. We consider physical hazards that are hard and sharp, 7-25 mm to be a food safety issue from the perspective of choking, cutting the inside of the mouth or throat, etc (source is <https://www.fda.gov/media/71953/download>). Physical hazards that do not fit this category are a quality issue, and fall under “not unsafe for human consumption, but undesirable from a consumer standpoint.”

Hope this helps. If you need more information, or would like to further discuss, let me know.

Thank You

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From: Saterbak_Katie_J <KJSaterbak@J-OTS.Com>

Sent: Friday, January 10, 2025 11:25 AM

To: Travaglio_Nick_R <nrtravaglio@j-ots.com>; Mortenson, Natasha <nmortenson@mnffa.org>

Subject: MN FFA Food Science CDE question

Hello Nick,

I have been working With the MN FFA Food Science Career Development Committee. For the Food Science Contest students need to identify if consumer complaints are food safety or food quality issue and if the issue is from a biological, chemical or physical hazard. At the National Level contest, mold on a product is considered a quality issue from a biological hazard. Several of the state level contests in the past consider mold on a product a food safety issue and a biological hazard.

Jordan and I had a brief conversation about this yesterday and we are in agreement that mold is a biological hazard. From your experience how would you classify mold? Could you provide some insight and potentially a resource that can be shared with FFA advisors about different type of hazards and the difference between food safety and quality.

Thank you,

Katie Saterbak