

Allergen Residues in Spices: Discovery, Detection and Risk Assessment

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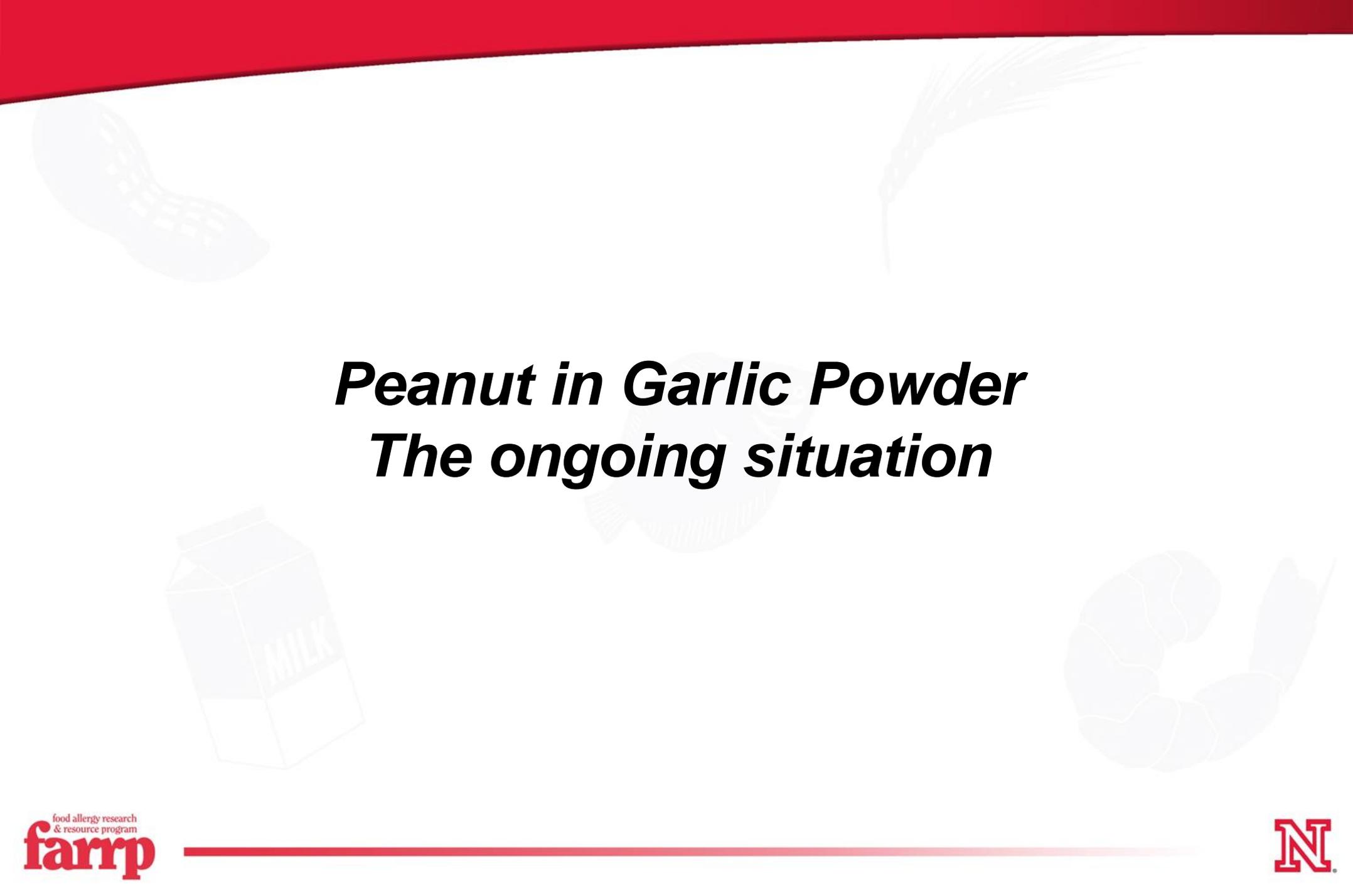
Food Allergy Research & Resource Program

University of Nebraska

2017 FAMS Meeting

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Peanut in Garlic Powder ***The ongoing situation***

Peanut in Garlic Powder

- **November 2014**
 - FARRP Lab found low undeclared levels of peanut in garlic powder when testing ingredients for company involved in the Canadian taco seasoning recall but focus became very high levels of peanut in ground cumin in that product
- **December 2014/March 2015**
 - Very infrequent testing of garlic powder
 - A few low positive results were obtained
- **May/June 2015**
 - Several FARRP companies find recurrent levels of undeclared peanut in garlic powder at levels ranging from 10 ppm up to >200 ppm
 - Source – China garlic

Peanut in Garlic Powder

- **Spice company filed RFR with FDA for peanut in garlic**
 - Their supplier was notified and, in turn, notified all of their other customers of possible undeclared peanut in garlic
 - FARRP Lab analyzed >100 products and found low levels of peanut in garlic but many finished products contained no detectable peanut because of low use level of garlic
 - FARRP conducted about a dozen QRAs for various companies and these were presented to FDA
 - Ultimately FDA quietly indicated that the original garlic supplier could market the lot of garlic powder that originally tested positive for peanut; FDA indicated that there was no need to file RFRs for “low levels” of undeclared peanut in garlic
 - Several companies send investigative delegations to China but no root cause has yet been found for peanut in garlic

Peanut in Garlic Powder

- **Spice importer claims that the peanut ELISA results are false positives**
 - But some garlic powder samples do not contain detectable peanut
 - Positive ELISA results only found in garlic powder and granules; never in flakes, minced or cloves
 - Claim made that sprouted garlic was source of false positive but FARRP disproved that assertion
 - FARRP spiked peanut flour into garlic powder and got excellent recovery and detection by several commercial ELISA methods; confirmed the positive results with mass spec
 - The situation began to subside during first 9 months of 2016
 - But Chinese garlic powder continues to test positive for peanut, although not all lots and perhaps not all suppliers

Peanut in Garlic Powder

- **Round 2**

- At a consumer group meeting in Germany in November 2016, a food manufacturer discloses the presence of undeclared peanut in garlic powder to allergic consumers
- Leads to a wave of testing in EU with findings of positive results
- But FSA has begun to do QRA and appears not very excited about these low levels in garlic powder when there are no consumer complaints
- The EU market is disrupted nonetheless

Peanut in Garlic Powder

- **Round 3**

- Early 2017, one of the 4 major U.S. importers of Chinese garlic sends a letter to their customers revealing the presence of undeclared peanut in garlic; tells concerned customers to seek QRAs from FARRP
- A similar letter appears in Australia and causes widespread concern and analytical testing of garlic for peanut residues
- Will QRAs have any impact on FSANZ?
- The root cause of peanut in Chinese garlic needs to be revealed and corrected

Thank You for Your Attention

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