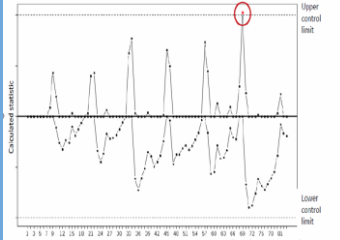


Food Protection and Defense Institute

Updates in
Education and IT
for AFDO 2017



FPDI Product Lines



RESEARCH

Research organized and led by internal and external PIs according to themes

Exploratory, Basic, and Applied Research by Themes

- >> Agent Detection
- >> Supply Chains
- >> Modeling
- >> Risk Analysis
- >> Information Sharing



EDUCATION

Education and training for students & professionals both domestic and international

- Credit and Non-Credit Offerings Delivered Through*
- >> Classrooms
 - >> Online Courses
 - >> Seminars
 - >> Collaborative Exchanges



INFORMATION TECHNOLOGY

IT development to transition research to end-users and maintain CoreSHIELD operations

- >> FoodSHIELD
- >> Laboratory Portals
- >> EMA Database
- >> Risk Assessments
- >> Supply Chain Documentation
- >> Horizon Scanning



THE FOOD DEFENSE CONFERENCE 2014
SEPTEMBER 15-16, 2014 MINNEAPOLIS, MN

SERVICE DELIVERY

Delivery of service to advance the profession through leadership and service projects

- >> Exercises
- >> Consultation
- >> Preparedness
- >> Thought Leadership

SUPPORT SERVICES



Food Defense Readiness Assessment 2.0



EMA Preventive Controls | IA Mitigation Strategies |
Management & Operations | Industry & Government Coordination



Food Defense Readiness Assessment


FoodSHIELD

Assessment for: Ted Steinmann

Navigation: Introduction

Progress: 100 %

Options: Status Delete Exit



FSMA Food Defense Readiness Assessment 2.0

More information

This qualitative assessment addresses readiness and offers suggestions for improvement to address key Food Defense and Safety components of FSMA including:

- Intentional Adulteration and
- Economically Motivated Adulteration (EMA)

References

- 21 CFR 121 Mitigation Strategies to Protect Food Against Intentional Adulteration (IA)
- 21 CFR 117 Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food (PCFH)

What will the assessment provide?

More information

Raise awareness of FSMA requirements and identify operational areas of improvement for:

- EMA risks needing preventive controls as specified in the PCFH final rule and
- Food defense risks needing mitigation strategies required in the IA rule

Facility educational tool

- Interactive survey
- Readiness report
- Suggested next steps

<https://foodprotection.umn.edu/fdra>

Intentional Adulteration Qualified Individual for Certain Activities (Question 18)

For the IA rule besides having qualified individuals as workers and supervisors at the facility, for some specific activities the qualified individual(s) must be able to demonstrate his expertise either by job experience or completion of a standardized curriculum recognized as adequate by the FDA. This individual is the only one that can complete or oversee:

- The preparation of the food defense plan
- Conduct the vulnerability assessment
- Identify and document the explanation of all mitigation strategies
- Conduct all reanalysis

References

21 CFR § 121.3 – Definitions

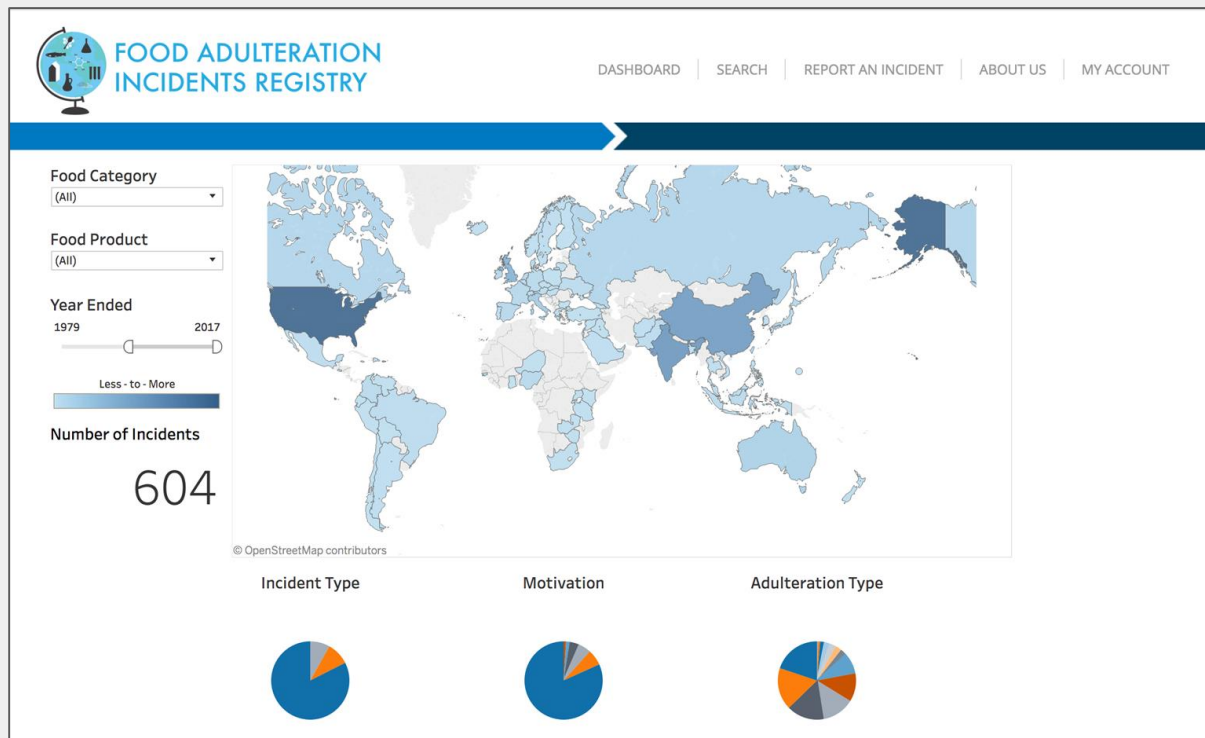
21 CFR § 121.4(c) – Qualifications of individuals for certain activities described in paragraph (c)(3) of this section

Q18. Does the qualified person(s) assigned to prepare or oversee the Food Defense Plan, the vulnerability assessment, identification and explanation of the mitigation strategies, and the reanalysis have the education, training, or experience necessary to perform these activities?

B. Yes



Food Adulteration Incidents Registry




Interactive dashboard:

- Food product & category
- Location
- Date
- Incident, Motivation & Adulteration type

<https://foodprotection.umn.edu/fair>



Food Adulteration Incidents Registry (FAIR)

 **FOOD ADULTERATION
INCIDENTS REGISTRY**

DASHBOARD | SEARCH | REPORT AN INCIDENT | ABOUT US | MY ACCOUNT

Showing 1 to 21 of 21 entries 1 Show

Food Category	Year Began	Year Ended	Adulterated Food Product(s)	Adulterant(s)	Method of Adulteration	Originated Location(s)
Other	2002	2009	honey	Chinese honey; chloramphenicol; Ciprofloxacin; Furazolidone; Norfloxacin	Transshipment/Origin Masking	East Asia, China
Sweets Confection Dessert	2016	2016	honey	Honey	Mislabeling	East Asia, China

Searchable incidents:

- Economically Motivated Adulteration
- Terrorism
- Sabotage

<https://foodprotection.umn.edu/fair>

Your contact information (email or phone number)

Name:

Email:

Phone:

Incident description and sources

Department of Homeland Security (DHS)
Science & Technology Directorate (S&T)




Food Protection and Defense Institute
A Homeland Security Center of Excellence

foodprotection.umn.edu

World Factbook of Food

Q. Almonds



Product Uses

Food Product Codes

Standards and Grades

Consumption, Production and Trade

Processing and Supply Chain Characteristics

Food Safety and Defense

https://www.usitc.gov/trade/remedy/731_ad_701_cvd/investigations/active/index.htm

Processing and Supply Chain Characteristics

Seasonality Profile

Almond trees do best in environments with mild, wet winters and hot, dry summers. In the United States, almonds are in season August-November, but can be found in supermarkets year-round. The vast majority of the almonds in the United States are grown in California, but they are also found in warmer, temperate climates in Europe and the Middle East.

Supply Chain Characteristics

1.) Almond Grower, 2.) Huller/Shellers, 3.) Handler, 4.) Export Market/ Further Processing/ Consumers

Typical Packaging

Almonds are typically sealed in plastic bags or tin cans for easy snacking.

Sources

- Almond Board of California- Global Usage. (2016). Retrieved from <http://www.almonds.com/food-professionals/about-almonds/global-almond-usage> , Center for Urban Education about Sustainable Agriculture- Seasonality Charts. (2016). Retrieved from <http://www.cuesa.org/eat-seasonally/charts/frui> , University of California Davis- Almond Climate and Cultivars. (2011). Retrieved from <http://fruitsandnuts.ucdavis.edu/almondpages/AlmondClimateCultivars/>
- Almond Hullers and Processors Association. (2014). Retrieved from <http://ahpa.net/wp-content/uploads/2014/03/Almond-Hullers-and-Processors-Association-FSMA-Comments-Animal-Feed.pdf>
- Blue Diamond Almonds. (2016). Retrieved <https://bluediamond.com/index.cfm?navid=30>



Curated Data:

- Production & Trade
- Food uses
- Seasonality
- Processing
- Supply chain structure
- Food safety concerns

<https://foodprotection.umn.edu/world-factbook-food>

Department of Homeland Security (DHS)
Science & Technology Directorate (S&T)




Intentional Adulteration Assessment Tool (IAAT)



Desk-top risk analysis tool:

- Building process flows
- Vulnerability assessments
- Chemical & Biological threats

<https://foodprotection.umn.edu/iaat>



The Intentional Adulteration Assessment Tool is an application designed to aid food production facilities in an assessment of their processes to intentional contamination by a potential internal or external aggressor. Agents evaluated include acute toxic chemicals, biological toxins, and microbes.

Resource Data

- [Chemical Agents Data](#)
- [Microbe Agents Data](#)
- [Natural Toxin Agents Data](#)

Background

Why the tool was built

- [Regulatory Requirements](#)
- [Partners and Sponsorship](#)
- [Inputs and Calculations](#)

Getting Started

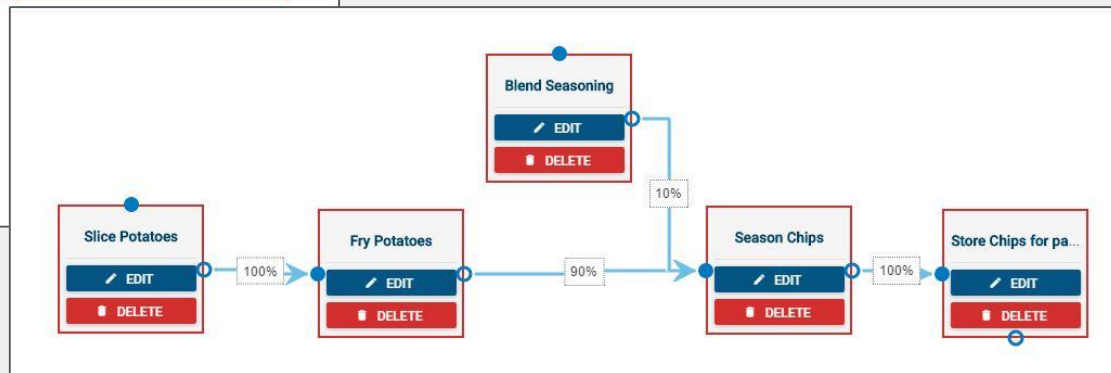
How to use the tool

- [Fill out your facility profile](#)
- [Create a product to assess](#)
- [View your list of products](#)

Results

What do the results mean?

DHS S&T Chemical Security and Analysis Center (CSAC) and Archer Daniels Midland (ADM)





Frame

Comprehensive training framework

- Positions, Roles & Training
- Courses, Experience & Certifications

<https://foodprotection.umn.edu/frame>

Frames / Animal Emergency Frame			
Senior Leader	Senior Leader		
Incident Commander	Incident Commander		
Command Staff	Liaison Officer	Public Information Officer	Safety Officer
Section Chief	Administration/finance Section Chief	Logistics Section Chief	
	Time Unit Leader	Support Branch Director	
	Procurement Unit Leader	Ground Support Unit Leader	
	Compensation Unit Leader		
	Operations Section Chief		
	Operations Branch Director		
	Operations Divisions/group Supervisor		
	Operations Task Force/strike Team		
	Operations Task Force/strike Team		



Penny Norquist



Penny is a project manager at the Food Protection and Defense Institute at the University of Minnesota. She is the project manager for the Frame development. She has over 18 years of experience in R&D across multiple food platforms from yogurt processing to bakery and snack products.



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Course Completions

Effective Communication (IS-242 b)

Collaboration and Advocacy Techniques: Lesson 3 Advocacy
Completed on 01/11/2017

My Roles

Program Manager

My Wish List

Principal (OPS/Policy)

Core Competencies

Operational One Health

Systems Thinking

Leadership

Vision Integration

Team Building

Management

One Health Response

DHS FAV-D division
USDA collaboration UMN OneHealth



NAHLN



ICLN



CoreSHIELD Portals



FoodSHIELD

Utilization

32,000 + Profiles

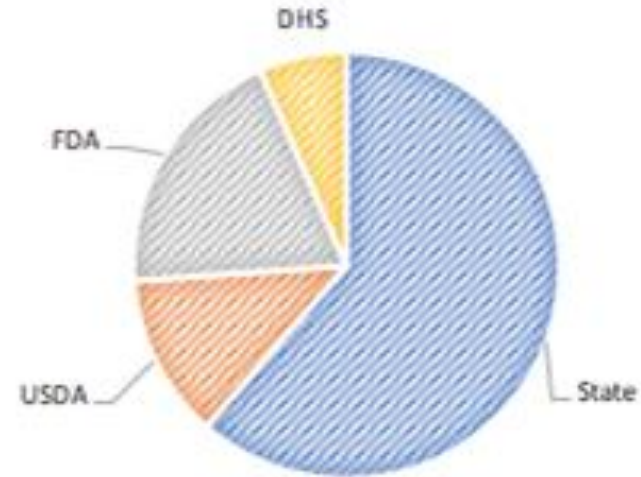
3,900 + Active user accounts

245 new users per month

Average in 2016



USERS BY AGENCY



maintaining active FoodSHIELD accounts

FoodSHIELD

FDA sponsored projects

Current Efforts

- State Task Force Websites
- Rapid Response Team
Capability Assessment Tool (RRT CAT)
- Retail Risk Factor Studies
- Resource Library
- Multilingual
- After Action Exchange (AAX)
- Data Exchange (APIs) & Integrations
- FoodSHIELD Mobile

CORE updates

- Task Manager
- Event Manager
- Training Manager
- Alerts Manager
- DataTools

Future projects

- Document Control
- Shopper card



Additional Projects and Initiatives

Data Science & Big Data

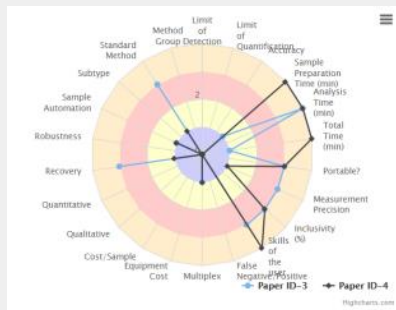
- Data Lake
- Predictive Analytics
- Spatial Analytics

Supply Chains

- Risk Assessment

Agent Detection

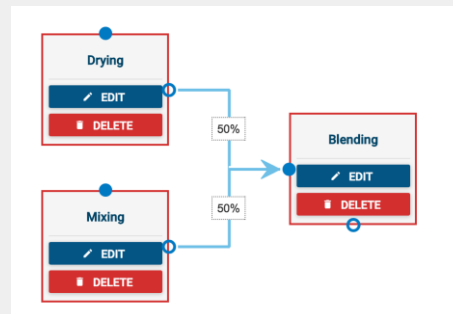
Process Modeling



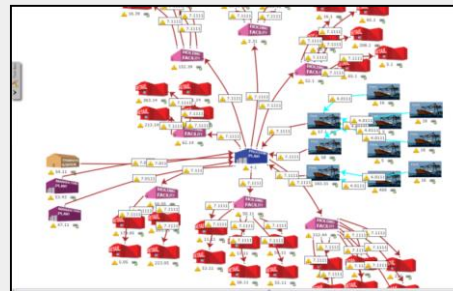
Agent Detection



FIDES



IAAT



CRISTAL

FPDI Education Initiatives



Professional Development & Training

- Executive Education and Professional Training
- Food Industry Training
- Customized Programs
- Food Defense Awareness Certificate

Food Defense Table Top Exercises

<https://foodprotection.umn.edu/education>



Thank you



Questions?

