

IRAC FY2020 Annual Report
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Introduction

The Interagency Risk Assessment Consortium (IRAC) is a collaborative network of federal agencies with responsibilities and interests in the conduct and use of food safety risk assessments. It was established in response to Presidential Executive Order 13100, in 1998, to enhance cross-agency coordination of food-safety risk assessment activities and to provide support for the then emerging field of quantitative microbiological risk assessment and application in guiding federal food-safety policies. In 2011, in response to a recommendation from the President's Food Safety Working Group, the IRAC was re-chartered¹ to further enhance coordination and information-sharing among federal agencies.

The Consortium aims to improve risk assessment research, enhance the development and use of risk assessment tools, and serve as a forum for communication about risk assessment and related research issues. IRAC accomplishes many of its goals through the work of its Policy Council and Technical Committee, both of which include representatives from 23 Federal agencies and offices that constitute the consortium's current membership.

Over the past two decades, IRAC has explored a range of issues related to the conduct and use of federal food safety (microbial and chemical) risk assessments. Research topics addressed by IRAC include data quality, peer review, food safety and nutrition, susceptible sub-populations, nanotechnology, microbiomes, genomics, dietary exposure and more recently, rigor and reproducibility in risk assessment. IRAC also has continued to explore evolving approaches to assessing food safety risks and application of risk assessment in decision-making. In addition, IRAC member agencies make their risk assessment tools more easily available on the Consortium's host website: Foodrisk.org

¹ 2011 IRAC Charter available at: <http://foodrisk.org/irac/charter>

IRAC Signatory Agencies:

■ **Department of Agriculture**

- ❖ Agricultural Marketing Service
- ❖ Agricultural Research Service
- ❖ Animal and Plant Health Inspection Service
- ❖ Economic Research Service
- ❖ Food and Nutrition Service
- ❖ Food Safety and Inspection Service
- ❖ National Agricultural Statistics Service
- ❖ National Institute of Food and Agriculture
- ❖ Office of the Chief Scientist
- ❖ Office of Pest Management Policy
- ❖ Office of Risk Assessment and Cost Benefit Analysis

■ **Department of Commerce**

- ❖ National Oceanic and Atmospheric Administration

■ **Department of Defense**

- ❖ Defense Health Agency

■ **Department of Energy**

- ❖ Los Alamos National Laboratory

■ **Department of Health and Human Services**

- ❖ Centers for Disease Control and Prevention
 - National Center for Emerging and Zoonotic Infectious Diseases
 - National Institute for Occupational Safety and Health
- ❖ Food and Drug Administration
 - Center for Biologics Evaluation and Research
 - Center for Food Safety and Applied Nutrition
 - Center for Veterinary Medicine
 - National Center for Toxicological Research
- ❖ National Institutes of Health
 - National Institute of Allergy and Infectious Diseases

■ **Environmental Protection Agency**

- ❖ Office of Pesticide Programs
- ❖ Office of Water

■ **National Oceanic & Atmospheric Administration**

- ❖ National Marine Fisheries Service

■ **U.S. Agency for International Development**

IRAC FY2020 Objectives

IRAC successfully advanced the three overarching objectives identified in the FY20 Annual Plan:

- *Enhanced Governance and Operation of the IRAC*
- *Strengthen Outreach and Engagement of New and Existing Federal Agencies*
- *Facilitate Information Exchange and Sharing Tools, Data, and Models*

Selected achievements toward these objectives are detailed below.

Enhanced Governance and Operation of the IRAC. In FY 2020, the IRAC Policy Council held 2 meetings (October 2019 and April 2020) to discuss accomplishments and establish an annual plan for the following year. The IRAC created and broadly shared the FY19 end of the year report and an annual plan for FY20 by posting it on the IRAC website and sharing it with signatory Agencies.

Strengthen Outreach and Engagement of Federal Partners. In FY20, to facilitate outreach and engagement with federal partners, IRAC held four Technical Committee meetings (October 2019 and January, April, and June 2020). At the Technical Committee meetings, presentations were given by member agency representatives as outlined below (under quarterly meetings). The meeting minutes, updates, and presentations were posted on the IRAC website. IRAC also completed updates to the website to reflect a focus on risk information & tool sharing. In FY19, IRAC reached out to Accelerating the Pace of Chemical Risk Assessment (APCRA), a government-to-government initiative whose goal is to promote collaboration and dialogue on the scientific and regulatory needs for the application and acceptance of new approaches and methodologies (NAMs) in regulatory decision-making. In FY 2020, APCRA presented an overview of activities related to implementation of NAMs in regulatory decision-making. During FY20, the IRAC also discussed ideas for a workgroup to explore ways to enhance IRAC member engagement, identify IRAC member agency needs, and recruit new agencies.

Facilitate Interagency Coordination and Information-Sharing. To continue enhanced interagency coordination and information sharing, IRAC exchanged information through quarterly meetings and presentations. In FY 2019, IRAC implemented a process for interagency review of IRAC member agency products. In FY20, a document outlining FDA-CFSAN's process for calculating screening levels for chemical contaminants in food was peer reviewed through IRAC using the interagency process. The document was reviewed by 16 technical reviewers from multiple IRAC member agencies. The review will be completed in FY 2021 and a summary of the review will be posted to the IRAC website. In FY 2020, IRAC also addressed the goal to share data sets, models, and related tools developed by federal agencies by posting the following information to the IRAC website:

- **FSIS Plant Deli Meat Model**

- **USDA/FSIS**, in collaboration with **Virginia Tech**, developed an updated user friendly version of an initial **risk assessment** model (the “Risk Assessment for *Listeria monocytogenes* in Deli Meat (May 2003). The updated model – the “In-Plant Deli Meat Model” – is an open source model that evaluates the effectiveness of processing interventions and testing in reducing the risk of listeriosis associated with ready-to-eat meat and poultry products (e.g., deli meats).
- **Salmonella in Eggs Risk Assessment and Model developed jointly by USDA-FSIS and FDA:**
 - **Risk Assessment:** Assessment of the risk of salmonellosis linked to various types of egg products made from hatchery eggs diverted for human consumption. The study estimates and compares the risk of salmonellosis from the consumption of pasteurized liquid egg products made from eggs held at 45 and 65°F during a period of 0 to 9 days post-layer house stage.
 - **Risk Assessment Model:** Model used in the *Salmonella* in eggs risk assessment that combines existing models for shell eggs and for egg products, and quantifies and compares *Salmonella* Enteritidis levels in eggs held at 65°F versus 45°F, *Salmonella* Enteritidis levels in the resulting egg products, and the risk of human salmonellosis from consumption of those egg products.

Quarterly Meetings

The IRAC Technical Committee met on October 24, 2019 and January 14, June 23, and April 28, 2020. Members gave agency updates, and invited guests gave presentations (described below).

The Policy Council met during a separate meeting on October 24, 2019 to discuss FY19 accomplishments, plans for FY 2020, and potential workgroup proposals. The Policy Council met again on April 28, 2020 to evaluate mid-year accomplishments.

Presentations at FY20 IRAC Technical Committee Meetings

- **Ground Beef Recalls and Subsequent Food Safety Performance.** By Michael Ollinger, Elina Page, and Dwight Houser. Speaker: Mr. Michael Ollinger, Economist, USDA, Economic Research Service.
- **Introduction to Accelerating the Pace of Chemical Risk Assessment (APCRA).** Speaker: Dr. Maureen Gwinn, Director of the Biomolecular and Computational Toxicology Division (BCTD) in the Center for Computational Toxicology and Exposure (CCTE).
- **USDA Pesticide Data Program (PDP) Data.** Speaker: Mr. Roger Fry, Program Analyst and Database Manager, Science & Technology / Monitoring Program, USDA-AMS.
- **IFSAC Annual Attribution Estimates: A Recency-Weighted Statistical Modeling Approach to Attribute Illnesses to Food Sources Using Outbreak Data:** Speaker: Mr. Michael Batz, Operations Research Analyst, Division of Public Health Informatics and Analytics, FDA CFSAN.
- **Highlighting the Commitments to Food Safety Within the Bureau for Resilience and Food Security/USAID.** Speakers: Dr. Ahmed Kablan, Senior Science Advisor in the Nutrition Center/Food Safety Division, Bureau for Resilience and Food Security, USAID; Dr. Randy W. Worobo, Professor of Food Microbiology, Department of Food Science, Cornell University and

Associate Director, USAID Feed the Future Food Safety Innovation Lab; and Dr. Haley Oliver, Associate Professor of Food Science, Purdue University and Director, USAID Feed the Future Food Safety Innovation Lab

- ***A Predictive Model for Survival of Escherichia coli O157:H7 and Generic E. coli in Soil Amended with Untreated Animal Manure.*** Speaker: Dr. Hao Pang, Visiting Scientist, Division of Risk and Decision Analysis, Risk Analysis Branch, FDA-CFSAN.
- ***U.S. Food & Drug Administration Total Diet Study – Modernization.*** Speakers: Ms. Judith Spungen, Nutritionist and Mr. Mark Wirtz, Branch Chief, Division of Risk and Decision Analysis, Exposure Assessment Branch, FDA-CFSAN.

Work Group Projects

IRAC workgroups are a means for IRAC member agencies to collaborate and share technical expertise regarding specific topics or issues. Members collaborate on scientific issues, review and synthesize data and information, and convene workshops featuring experts. Workgroup products can be used by member agencies to inform or make improvements in food safety risk analysis – from enhancing innovation in modeling or improving rigor to garnering enhanced review or input to filling key data gaps. Workgroup products are posted on the IRAC website on its “Events” page (<http://foodrisk.org/irac/quarterly-meeting-minutes/>), and often published as papers in scientific journals and/or presented at national scientific conferences to benefit the larger risk assessment community. No workgroups were formed during FY 2020.