Report NP108 – August 2012

NP 108 Food Safety (Animal and Plant Products) Panel Report

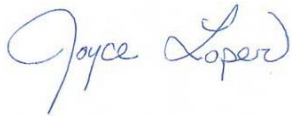
Christina Woods
Program Analyst

_____ 10/25/2012

Donald P. Knowles, Scientific Quality Review Officer — Date
(January 2009-December 2010)

_____ 10/01/2012

David Marshall, Scientific Quality Review Officer — Date
(January 2011-December 2012)



_____ 10/20/2012

Joyce Loper, Scientific Quality Review Officer — Date
(January 2012-December 2013)

_____ 09/13/2012

Michael S. Strauss, Peer Review Program Coordinator — Date

Office of Scientific Quality Review
Agricultural Research Service
United States Department of Agriculture

Introduction

This Panel Report provides the background of the 2010 National Program (NP) 108 Food Safety (Animal and Plant Products) Panel Review. The project plans reviewed by these panels were applicable to the mission of the National Program to *"provide through scientific research, the means to ensure that the food supply is safe, and secure for consumers and that food and feed meet foreign and domestic regulatory requirements."*

In collaboration with the Office of Scientific Quality Review (OSQR), and the National Program Leaders, Drs. James Lindsay and Mary Torrence, divided 62 plans into16 panels. After considering several candidates, Dr. Donald Knowles, Scientific Quality Review Officer (SQRO), appointed a Chair for the 16 panels (Table 1).

Dr. Michael Strauss, Peer Review Program Coordinator, and Dr. Knowles presented an orientation to the Panel Chairs. Dr. Knowles subsequently approved the candidate panelists selected by each Chair. The approvals took into account conflicts of interest and followed guidelines for diversifying panel composition geographically, institutionally, and according to gender and ethnicity. Panelists demonstrated a recognizable level of knowledge of recent research within their respective fields of food safety. All panels received a telephone/web-based orientation. The Office of National Programs (ONP) provided an overview of the NP108 Food Safety (animal and plant products) Program. Thirteen panels convened online except for one which convened in Beltsville, Maryland.

Panel Review Results

Along with the Panel's written recommendations, OSQR sends each Area Director a worksheet that shows each reviewer's judgment of the degree of revision their project plan requires. This judgment is referred to as an "action class". The action classes of the panelists are also converted to a numerical equivalent, averaged, and a final action class rating is assigned.

Scientists are required to revise their project plans as appropriate and submit a formal statement to OSQR through their Area Director demonstrating their response to the Panel's recommendations. The project plans are implemented following approval and certification from the SQRO.

Table 1. Food Safety Panels

Panel	Panel Chair	Panel Meeting Date	Number of Panelists	Number of Projects Reviewed
Panel 1 – Poultry Pre-Harvest	Dr. Richard Isaacson, Prof & Chair, Dept Vet Biomed Sci, Univ Minnesota, St. Paul, MN	December 15, 2010	4	6
Panel 2 – Poultry Processing/Egg	Dr. Steven Ricke, Prof Wray Endowed Chair, Director, Ctr Food Safety, Food Sci Dept, Univ Arkansas, Fayetteville, AR	November 8, 2010	6	5
Panel 3 – Mycotoxin (Fusarium)	Dr. Marleen Wekell, Director, Office of Applied Res & Safety Assessment, Ctr Applied Res & Applied Nutr, U.S. FDA , CFSAN, Laurel, MD	December 2, 2010	6	5
Panel 4 – Molecular Methods	Dr. Thomas Montville, Prof, Dept Food Sci, Rutgers Univ, New Brunswick, NJ	November 23, 2010	6	5
Panel 5 – Post Harvest Processing	Dr. John Sofos, Distinguished Prof, Ctr Meat Safety & Qual, Dept Anim Sci, Colorado State Univ, Fort Collins, CO	November 19, 2010	5	4
Panel 6 – E. Coli (EHEC)	Dr. Carolyn Hovde Bohach, Prof & Director, Idaho INBRE Program, Univ Idaho, Moscow, ID	October 1, 2010	5	4
Panel 7 – Antimicrobial Resistance	Dr. Qijing Zhang, Prof & Frank Ramsay Endowed Chair, Dept Vet Micro & Prev Med, Iowa State Univ, Ames, IA	October 18, 2010	5	4
Panel 8 – Residues	Dr. Nate Bauer, Vet Medical Officer, Microbial Risk Branch, Risk Assess Div, Office Public Hlth Sci, USDA, FSIS, College Station, TX	December 9, 2010	5	4
Panel 9 – Mycotoxins (Aspergillus)	Dr. J. David Miller, Prof & NSERC Res Chair, Dept Chem, Carleton Univ, Ottawa, Canada	November 30, 2010	5	4
Panel 10 – Produce	Dr. Robert Buchanan, Dir & Prof, Ctr Food Safety & Security Sys, Univ Maryland, College Park, MD	December 17, 2010	5	4
Panel 11 – Manure Pathogens Transport	Dr. Robert Wright, Robert Wright Environ Consulting, Garfield, AR	November 29, 2010	4	3
Panel 12 – Mycotoxin Bicontrol	Dr. Charles Woloshuk, Prof, Dept Botany & Plant Pathol, Purdue Univ, West Lafayette, IN	November 5, 2010	4	3
Panel 13 – Parasitology	Dr. Jessica Kissinger, Assoc Prof, Dept Genetics & Ctr Trop & Emerging Global Dis & Inst Bioinform, Athens, GA	November 18, 2010	5	3
Panel 14 – Modeling	Dr. Anna Lammerding, Chief, Sci to Policy Div, Infect Dis Prevention & Control Branch, Public Hlth Agency of Canada, Guelph, Ontario, Canada	September 30, 2010	4	3
Panel 15 – Sensing Technology	Dr. Donald Knowles, SQRO	N/A	3	3
Panel 16 – Toxins/ Biological	Dr. Donald Knowles, SQRO	N/A	4	2

Action classes are defined below.

No Revision Required (score: 8). An excellent plan; no revision is required, but minor changes to the project plan may be suggested.

Minor Revision Required (score: 6). The project plan is feasible as written, and requires only minor clarification or revision to increase quality to a higher level.

Moderate Revision Required (score: 4). The project plan is basically feasible, but requires changes or revision to the work on one or more objectives, perhaps involving alteration of the experimental approaches in order to increase quality to a higher level and may need some rewriting for greater clarity.

Major Revision Required (score: 2). There are significant flaws in the experimental design and/or approach or lack of clarity which hampers understanding. Significant revision is needed.

Not Feasible (score: 0). The project plan, as presented, has major scientific or technical flaws. Deficiencies exist in experimental design, methods, presentation, or expertises which make it unlikely to succeed.

For plans receiving one of the first three Action Classes (No Revision, Minor Revision, and Moderate Revision) scientists respond in writing to panel comments, revise their project plan as appropriate, and submit the revised plan and responses to OSQR through their Area Office. These are reviewed by the SQR Officer at OSQR and, once they are satisfied that all review concerns have been satisfactorily addressed, the project plan is certified and may be implemented.

When the Action Class is Major Revision or Not Feasible, responses and revised plans are provided as above, but must then be re-reviewed by the original review panel that provide a second set of narrative comments and Action Class based on the revised plan. If the re-review action class is no revision, minor or moderate revision the project plan may be implemented after receipt of a satisfactory response and SQRO certification, as described above. Plans receiving major revision or not feasible scores on re-review are deemed to have failed. The action class and consensus comments are provided to the Area but there is no further option for revision of such plans. Low scoring or failed plans may be terminated, reassigned, or restructured, at the discretion of the Area and Office of National Programs.

NP 108 Program Review Overview

The following is a summary of the comments made in the panel debriefings of the third cycle. Some of the panelists were not aware of ARS' research in this area and quite impressed at the importance and depth of the research and with the detail and quality of the work. It was felt that the scientists were competent and it was especially gratifying to read the plans by long experienced individuals. Some of the objectives were scientifically valid but did not seem to advance food safety; and in some cases, the link to food safety was weak. The projects working on biofilms did not, for example, demonstrate that biofilms are important as a food safety issue

on produce. Statistical validity was an issue in some cases and in these the sample size and statistics were deficient.

Table 2 shows the initial and final scores for the third cycle expressed as a percentage of the plans reviewed. The average action class score was calculated for each panel and for the overall program. Three of the plans did not pass the second review and were not certified. The average initial score for all panels was 4.54 (moderate), however, the average final score was raised to 5.16 (minor).

Table 3 shows the initial and final scores for all cycles of the Food Safety panels. The third cycle's average initial score was higher than the previous two cycles but in final review the second cycle score was higher.

Figure 1 examines the impact of panel size on the review score. The variance for scores at each panel size suggest that there is little, if any, correlation and that panel size does not affect score. This becomes more evident when the data from all three review cycles (Figure 2) or that from all National Programs reviewed in the third review cycle (Figure 3) are included in the data. It is also clear that the number of scientists on a plan does not significantly impact overall outcomes for the National Program (Figure 4). Distribution of scores (Figure 5) is somewhat better for Minor (higher), Moderate (higher), Major (lower), and Not Feasible (lower) outcomes in the current review cycle (3^{rd}) than in the prior (2^{nd}). However, overall, there is not a remarkable difference between the current and prior review cycles.

Table 2. Initial and Final Scores for the Third (2010) Cycle Expressed as Percentages for the NP 108 Food Safety Panels

	Initial Review						Final Review					
Third Cycle, 2010	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Initial Score	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Final Score
Panel 1 - Poultry Pre-Harvest	0.0%	0.0%	16.7%	66.7%	16.7%	2.42	16.7%	33.3%	16.7%	33.3%	0.0%	4.75
Panel 2 - Poultry Processing/Egg	0.0%	40.0%	20.0%	40.0%	0.0%	3.87	0.0%	80.0%	20.0%	0.0%	0.0%	5.32
Panel 3 - Mycotoxin (Fusarium)	40.0%	60.0%	0.0%	0.0%	0.0%	6.93	40.0%	60.0%	0.0%	0.0%	0.0%	6.93
Panel 4 - Molecular Methods	0.0%	40.0%	60.0%	0.0%	0.0%	4.8	0.0%	40.0%	60.0%	0.0%	0.0%	4.8
Panel 5 - Post Harvest Processing	0.0%	25.0%	50.0%	25.0%	0.0%	4.2	25.0%	25.0%	50.0%	0.0%	0.0%	5.3
Panel 6 - E. coli (EHEC)	0.0%	50.0%	50.0%	0.0%	0.0%	4.65	0.0%	50.0%	50.0%	0.0%	0.0%	4.65
Panel 7 - Antimicrobial Resistance	0.0%	50.0%	50.0%	0.0%	0.0%	3.7	25.0%	25.0%	25.0%	25.0%	0.0%	4.8
Panel 8 - Residues	25.0%	75.0%	0.0%	0.0%	0.0%	6.8	25.0%	75.0%	0.0%	0.0%	0.0%	6.8
Panel 9 - Mycotoxins (Aspergillus)	0.0%	75.0%	25.0%	0.0%	0.0%	4.05	25.0%	0.0%	75.0%	0.0%	0.0%	5.33
Panel 10 - Produce	0.0%	0.0%	100.0%	0.0%	0.0%	3.78	0.0%	0.0%	100.0%	0.0%	0.0%	3.78
Panel 11 - Manure Pathogens Transport	0.0%	0.0%	100.0%	0.0%	0.0%	4.5	0.0%	0.0%	100.0%	0.0%	0.0%	4.5
Panel 12 - Mycotoxin Biocontrol	0.0%	66.7%	0.0%	33.3%	0.0%	4.67	0.0%	100.0%	0.0%	0.0%	0.0%	5
Panel 13 - Parasitology	0.0%	33.3%	66.7%	0.0%	0.0%	4.67	0.0%	33.3%	66.7%	0.0%	0.0%	4.67
Panel 14 - Modeling	0.0%	33.3%	33.3%	33.3%	0.0%	4	0.0%	33.3%	33.3%	33.3%	0.0%	4
Panel 15 - Sensing Technology	0.0%	33.3%	33.3%	33.3%	0.0%	4.56	0.0%	33.3%	66.7%	0.0%	0.0%	5.33
Panel 16 - Toxins/Biological	50.0%	50.0%	0.0%	0.0%	0.0%	6.67	50.0%	50.0%	0.0%	0.0%	0.0%	6.67
Total	7.2%	39.5%	37.8%	14.5%	1.0%	4.54	12.9%	39.9%	41.5%	5.7%	0.0%	5.16

Table 3. Initial and Final Scores for All Cycles Expressed as Percentages for the NP 108 Food Safety Panels

	Initial Review						Final Review					
	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Initial Score	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Final Score
First Cycle	3.9%	35.1%	36.4%	23.4%	1.3%	4.41	11.7%	44.2%	44.2%	0.0%	0.0%	5.35
Second Cycle	10.3%	25.0%	32.4%	23.5%	8.8%	4.28	22.1%	30.9%	38.2%	4.4%	4.4%	5.47
Third Cycle	6.5%	33.9%	40.3%	17.7%	1.6%	4.54	12.9%	40.3%	40.3%	6.5%	0.0%	5.16

Figure 1. Panel Size vs. Score for the Third Cycle of the NP 108 Food Safety Panels

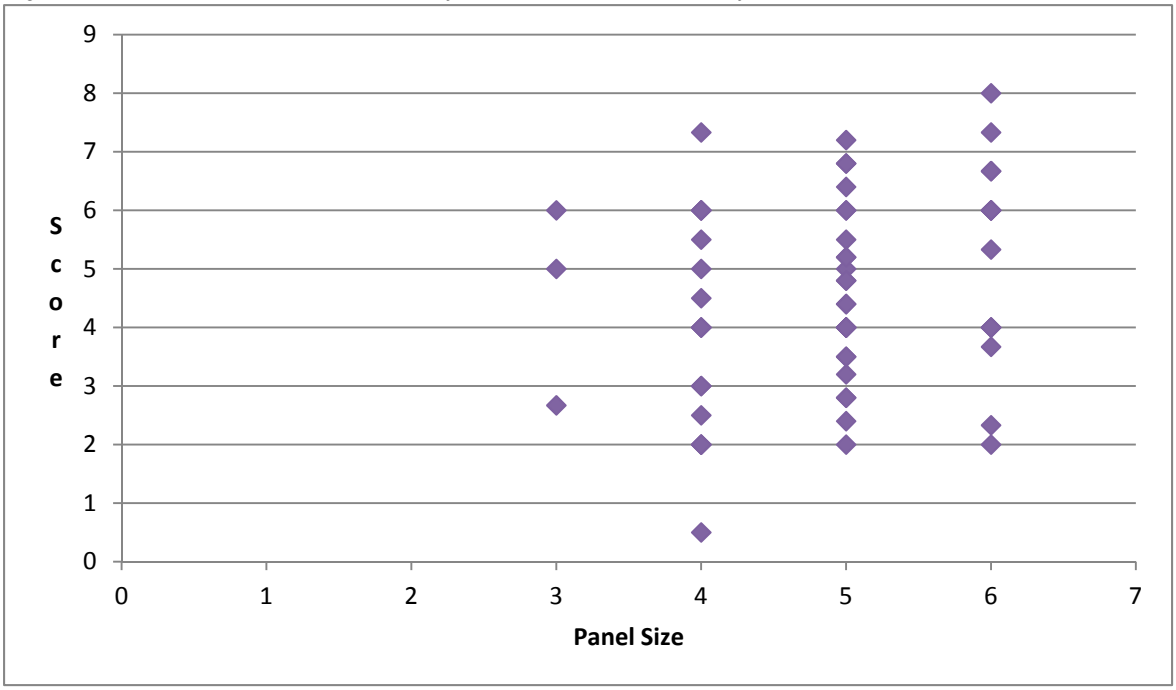


Figure 2. Panel Size vs. Score for all Three Cycles of the NP 108 Food Safety Panels

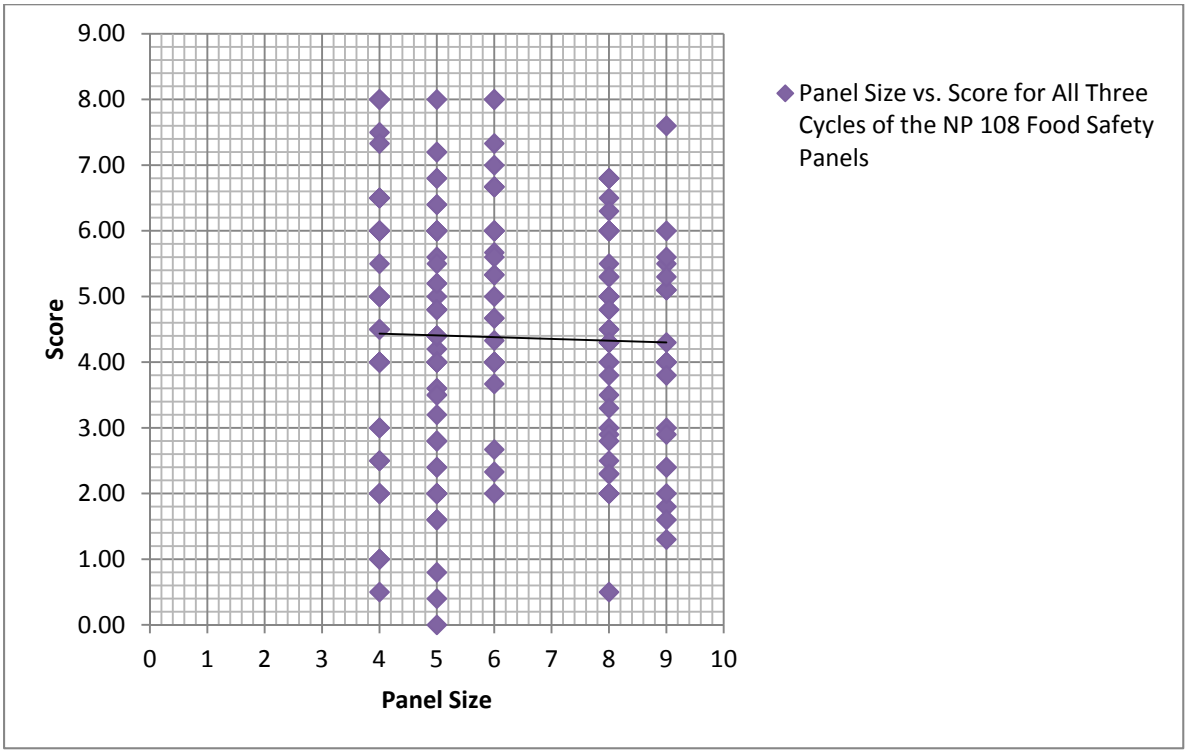


Figure 3. Panel Size vs. Score for All Third Cycle Panels

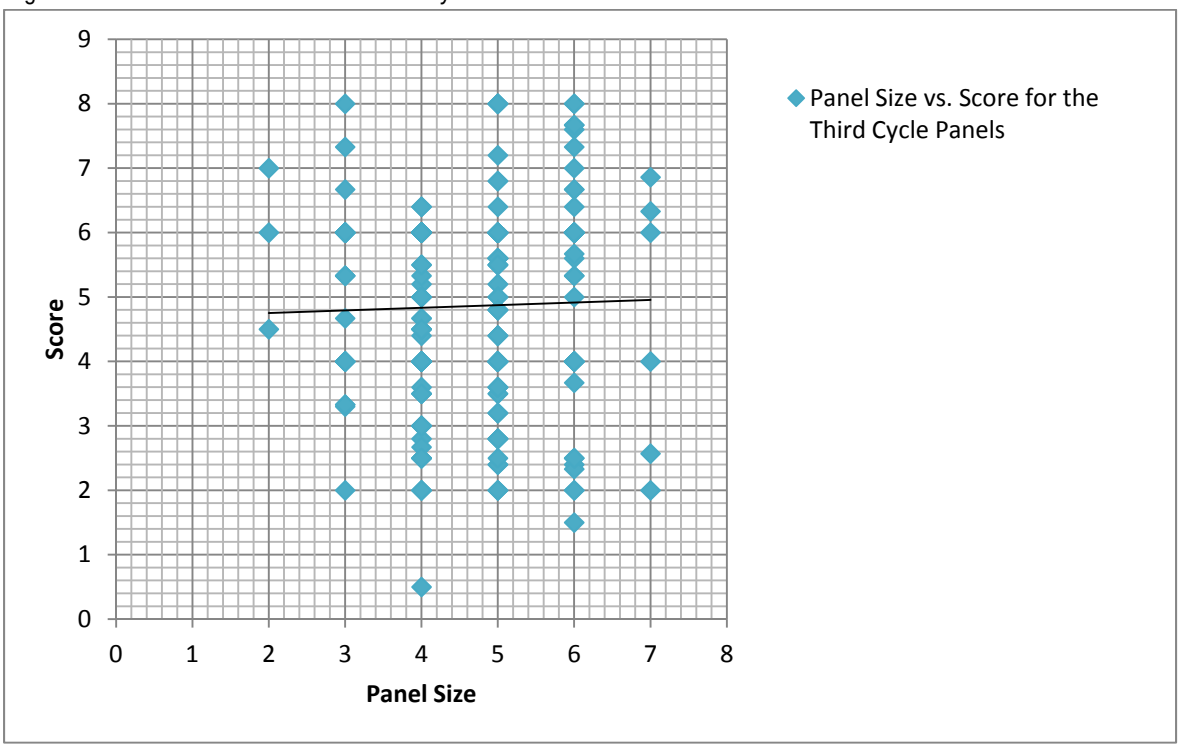


Figure 4. Number of Scientists vs. Score for the Third Cycle of the NP 108 Food Safety Panels

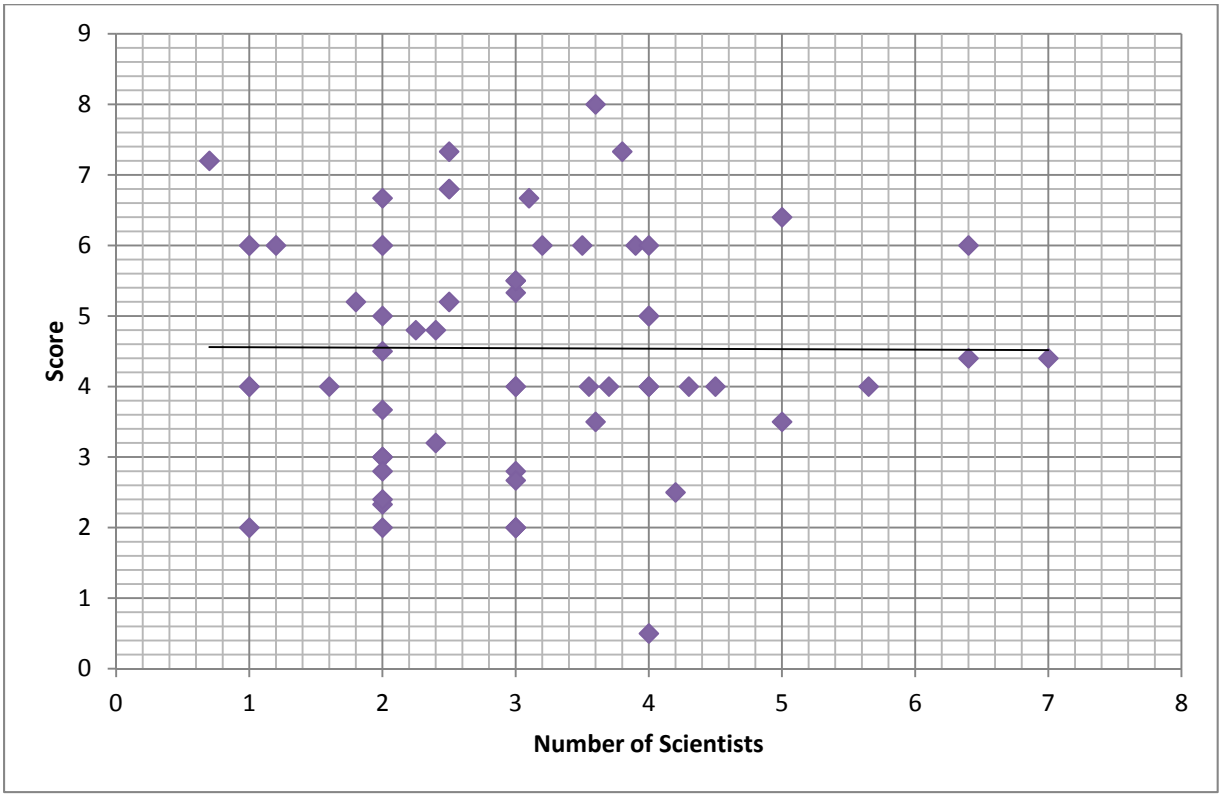


Figure 5. Initial Review Scores for the First (2000), Second (2005), and Third (2010) Cycle Distribution for the NP 108 Food Safety Panels (average score 4.41; 4.28; 4.54, respectively). The number of plans reviewed by each cycle is in parentheses. Numbers over columns are the actual number of plans receiving that score.

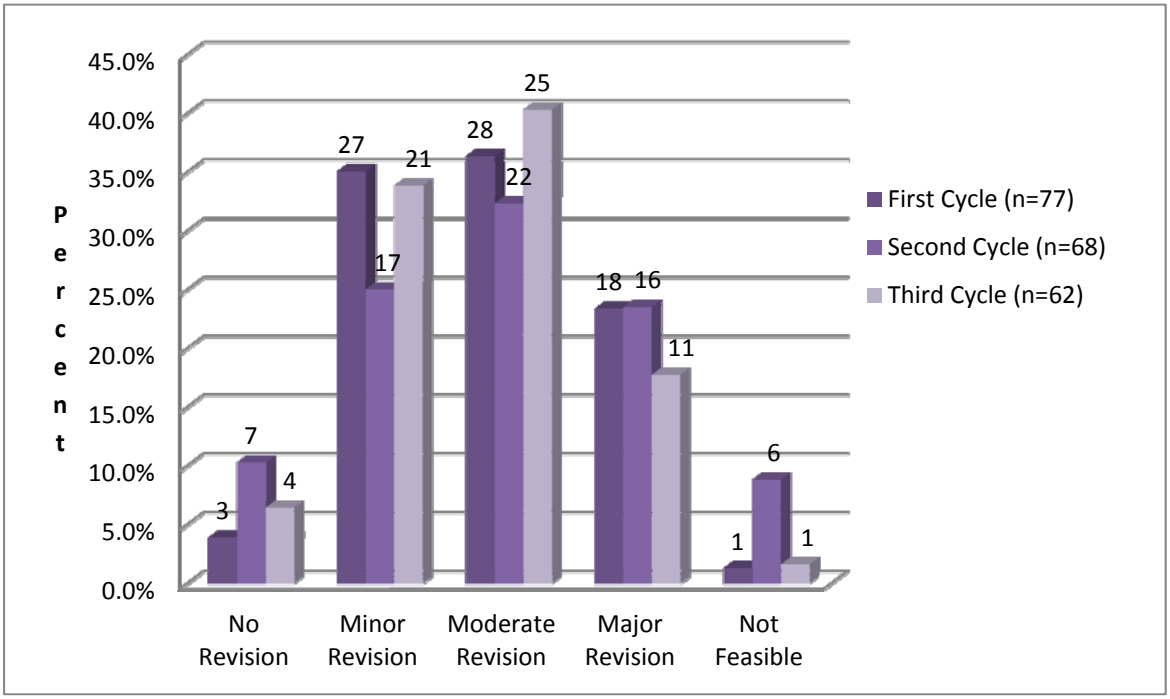
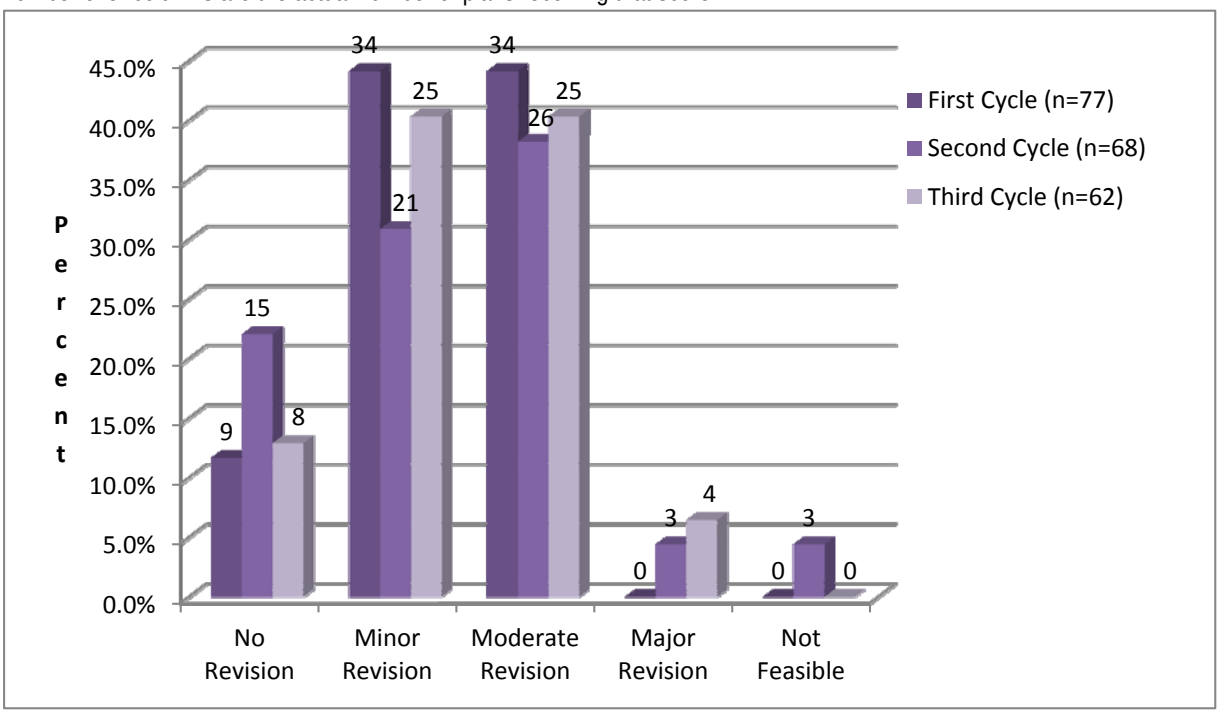


Figure 6. Final Review Scores for the First (2000), Second (2005) and Third (2010) Cycle Distribution for the NP 108 Food Safety Panels (average score 5.35; 5.47; 5.16, respectively). The number of plans reviewed by each cycle is in parentheses. Number over columns are the actual number of plans receiving that score.



Panel Characteristics

ARS places responsibility for panel member selection primarily on external and independent Panel Chairs. ARS scientists, managers, and the Office of National Programs may recommend panelists but the Panel Chair is under no obligation to use these recommendations. Several factors such as qualification, diversity, and availability play a role in who is selected for an ARS peer review panel. The 16 panels were composed of nationally and internationally recognized experts to review 62 projects primarily coded to the Food Safety Program (see Table 1, page 3). The information and charts below provide key characteristics of the Food Safety Panels. This information should be read in conjunction with the Panel Chair Statements.

Affiliations

Peer reviewers are affiliated with several types of institutions, especially universities, government, special interest groups, and industry. In some cases, peer reviewers have recently retired but are active as consultants, scientific editorial board members, and are members of professional societies. Also, several government-employed panelists are recognized for both their government affiliation and faculty ranking. Tables 4 and 5 show the type of institutions with which the Food Safety Panel members were affiliated with at the time of the review.

Table 4. Faculty Rank of Panelists Affiliated with Universities

Panel	Professor	Associate Professor	Assistant Professor
1 Poultry Preharvest	2	1	1
2 Poultry Processing/Egg	1	1	2
3 Mycotoxin (Fusarium)	2		1
4 Molecular Methods	4	1	1
5 Post Harvest Processing	4		
6 E. coli (EHEC)	3		
7 Antimicrobial Resistance	4	1	
8 Residues	1		
9 Mycotoxins (Aspergillus)	2	1	
10 Produce	1	1	
11 Manure Pathogens	1	1	
12 Mycotoxin Biocontrol	2	1	1
13 Parasitology	3		
14 Modeling		1	
15 Sensing Technology	1	1	
16 Toxins/Biological	1		1

Table 5. Other Affiliations Represented on the Panels

Panel	Government	Industry & Industry Organizations	Other
1 Poultry Preharvest			
2 Poultry Processing/Egg	1	1	
3 Mycotoxin (Fusarium)	1	1	1
4 Molecular Methods			
5 Post Harvest Processing	1		
6 E. coli (EHEC)			
7 Antimicrobial Resistance	2		
8 Residues	3		1
9 Mycotoxins (Aspergillus)	1		1
10 Produce	2	1	
11 Manure Pathogens	1		1
12 Mycotoxin Biocontrol			
13 Parasitology	2		
14 Modeling	2		
15 Sensing Technology		1	
16 Toxins/Biological	2		

Accomplishments

The peer review process is intended to be rigorous and objective, striving for the highest possible scientific credibility. In general, panelists are expected to hold a PhD unless the norm for their discipline tends to not require doctorate level education to achieve the highest recognition and qualification (e.g., engineers and modeling specialists). Panelists are also judged by their most recent professional accomplishments (e.g. awards and publications completed in the last five years). Finally, the panelists who are currently performing or leading research to address a problem similar to those addressed in the National Program are preferred. Table 6 describes their characteristics in the Food Safety Panels.

Table 6. The Panels' Recent Accomplishments

Panel	Published Articles Recently	Received Recent Professional Awards	Having Review Experience	Currently Performing Research
1 Poultry Preharvest	4	4	4	4
2 Poultry Processing/Egg	5	4	5	4
3 Mycotoxin (Fusarium)	5	3	6	3
4 Molecular Methods	6	5	6	6
5 Post Harvest Processing	4	3	4	2
6 E. coli (EHEC)	5	4	5	5
7 Antimicrobial Resistance	4	3	5	5
8 Residues	4	1	3	1
9 Mycotoxins (Aspergillus)	5	2	3	2
10 Produce	4	4	4	2
11 Manure Pathogens	3	3	4	3
12 Mycotoxin Biocontrol	4	3	3	3
13 Parasitology	5	1	2	4
14 Modeling	4	3	3	3
15 Sensing Technology*	1		2	2
16 Toxins/Biological*	1	1	1	1

*Date not available.

Current and Previous ARS Employment

The Research Title of the 1995 Farm Bill 105-585, mandated ARS's requirements for the peer review of ARS research projects: 1) panel peer reviews of each research project were mandated at least every five years and 2) the majority of peer reviewers must be external (non-ARS scientists).

Table 7. Affiliations with ARS

Panel	Formerly Employed by ARS
1 Poultry Preharvest	
2 Poultry Processing/Egg	2
3 Mycotoxin (Fusarium)	
4 Molecular Methods	1
5 Post Harvest Processing	
6 E. coli (EHEC)	
7 Antimicrobial Resistance	
8 Residues	2
9 Mycotoxins (Aspergillus)	
10 Produce	2
11 Manure Pathogens	1
12 Mycotoxin Biocontrol	2
13 Parasitology	
14 Modeling	
15 Sensing Technology*	
16 Toxins/Biological*	

*Data not available.

Food Safety Panel Chairs

Richard E. Isaacson, Ph.D., ARS Panel Chair
Panel 1 – Poultry Preharvest

Professor and Chair, Department of Veterinary and Biomedical Sciences, University of Minnesota, St. Paul, MN

Education: B.S., M.S. & Ph.D. University of Illinois

Dr. Isaacson is currently Professor and Chair of the Department of Veterinary and Biomedical Sciences. He is also an Adjunct Professor for the Department of Microbiology. His research interests are food safety, pathogenesis, E. coli, salmonella, molecular biology, genetics, pathogenesis, and host-pathogen.

Steven C. Ricke, Ph.D., ARS Panel Chair

Panel 2 – Poultry Processing/Egg

Professor Wray Endowed Chair and Director, Center for Food Safety, University of Arkansas, Fayetteville, AR

Education: B.S. & M.S. University of Illinois; Ph.D. University of Wisconsin

Since 2005, Dr. Ricke has been the Director for the Center for Food Safety at the University of Arkansas. His research interests include salmonella, gut microbiology, poultry and eggs.

Marleen M. Wekell, Ph.D., ARS Panel Chair

Panel 3 – Mycotoxins (Fusarium)

Director, Office of Applied Research and Safety Assessment, U.S. FDA, CFSAN, Laurel, MD

Education: BSc Seattle University; M.S. & Ph.D. University of Washington

Dr. Wekell is currently the Director of the Office of Applied Research and Safety Assessment of the U.S. FDA. Her research interests include marine toxins, chemical residues, antibiotic resistance, mycotoxins, microbial pathogens (Salmonella, Listeria, Vibrio, E. coli, and their toxins (botulinum toxin, staph toxin) , noroviruses, food (terrestrial and aquatic) safety.

Thomas J. Montville, Ph.D. ARS Panel Chair

Panel 4 – Molecular Methods

Professor II, Department of Food Science, Rutgers University, New Brunswick, NJ

Education: B.S. Rutgers University , Cook College; Ph.D. Massachusetts Institute of Technology

Dr. Montville is currently a Professor II of the Department of Food Science at Rutgers University. His research interests include marine toxins, chemical residues, antibiotic resistance, mycotoxins, microbial pathogens (salmonella, listeria, vibrio, E. coli, and their toxins (botulinum toxin, staph toxin), noroviruses, and food (terrestrial and aquatic) safety.

John N. Sofos, Ph.D., ARS Panel Chair

Panel 5 – Post Harvest Processing

Director, Center for Meat Quality and Safety, Distinguished Professor, Department of Animal Sciences, Colorado State University

Education: B.S. University of Thessalonki, Greece; M.S. & Ph.D. University of Minnesota

Dr. Sofos is currently a Distinguished Professor of the Department of Animal Science and the Director for the Center for Meat Quality and Safety at the Colorado State University. His research interests include food safety, meat safety, bacterial pathogen, pathogen interventions, escherichia coli 0157:H7, and pathogen control.

Carol Hovde Bohach, Ph.D., ARS Panel Chair

Panel 6 – E. coli (EHEC)

Professor of Microbiology, Director, Idaho NIH INBRE, University of Idaho, Boise, Idaho

Education: B.S. University of Illinois; M.T. Swedish Hospital Medical Center; Ph.D. University of Minnesota

Dr. Bohach is a Professor in the Department of Microbiology, Molecular Biology and Biochemistry. She is also the Director of the Idaho National Institutes of Health (NIH), IDeA Networks of Biomedical Research Excellence (INBRE). Her research interests are E. coli O157:H7, cattle, Shiga toxin, vaccine, EHEC (enterohemorrhagic E. coli), diarrhea, pathogenesis, manure, and cattle.

Qijing Zhang, Ph.D., ARS Panel Chair

Panel 7 – Antimicrobial Resistance

Professor & Frank K. Ramsey Endowed Chair in Veterinary Medicine, Department of Veterinary Microbiology and Preventive Medicine, Iowa State University, Ames, Iowa

Education: B.V.Sc. Shandong Agricultural University; M.S National Institute Veterinary Biologics; Ph.D. University of Missouri, Columbia

Dr. Zhang was appointed as the Frank K. Ramsay Endowed Chair in Veterinary Medicine in 2008. His research interests include food safety, antimicrobial resistance, and microbiology.

Picture Not Available

Nathan E. Bauer, Jr., Ph.D., ARS Panel Chair

Panel 8 – Residues

Scientific Liaison, Microbial Risk Branch, USDA,
Food Safety and Inspection Service, College Station, Texas

Education: B.S., M.S. & DVM Texas A&M University

Dr. Bauer is the Scientific Liaision of the Office of Public Health and Science, Animal and Egg Production Food Safety Branch. His research interests include veterinary medicine, genetics, residues, food safety, meat inspection, preharvest food safety, foodborne pathogens, and epidemiology.

J. David Miller, Ph.D., ARS Panel Chair

Panel 9 – Mycotoxins (Aspergillus)

Professor, Department of Chemistry, Carleton University

Education: B.Sc., M.Sc., Ph.D. University of Brunswick

Dr. Miller is an Industrial Research Chair of the Natural Sciences and Engineering Research Council (NSERC) of Canada. His research interests include mycotoxins, toxicology and mycology.

Robert Buchanan, Ph.D., ARS Panel Chair

Panel 10 – Produce

Professor and Director, Center for Food Safety and Security Systems, University of Maryland, College Park, Maryland

Education: B.S., M.S. & Ph.D. Rutgers University

Since 2008, Dr. Buchanan has been the Director of the Center for Food Safety and Security Systems. His research interests include food safety, microbiology and risk assessment.

Picture Not Available

Robert J. Wright, Ph.D., ARS Panel Chair

Panel 11 – Manure Pathogens

Consultant, Robert J. Wright Environmental Consulting, Garfield, Arkansas

Education: B.S. Pittsburg State; M.S. University of Arkansas & Ph.D. Texas A&M University

Dr. Wright has been a Consultant since 2008. His research interests are manure management, nutrients, pathogens, emissions, environmental impacts, fate and transport, management practices, and control technologies

Charles Woloshuk, Ph.D., ARS Panel Chair

Panel 12 – Mycotoxin Biocontrol

Professor, Department of Botany and Plant Pathology, Purdue University, West Lafayette, Indiana

Education: B.S. Valdosta State College; M.S. University of Maryland; Ph.D. Washington State University

Dr. Woloshuk has been a Professor in the Department of Botany and Plant Pathology since 2002. His research interests include mycotoxin, fungal biology and stored grain management.

Jessica Kissinger, Ph.D., ARS Panel Chair

Panel 13 – Parasitology

Associate Professor, Department of Genetics, University of Georgia, Athens, GA

Education: A.B. University of Chicago; Ph.D. Indiana

Since 2007, Dr. Kissinger has been an Associate Professor in the Department of Genetics, Center for Tropical and Emerging Global Diseases and an Adjunct Professor in Computer Science. Her research interests are genomics, bioinformatics, protist pathogens, and parasitology.

Anna Lammerding, Ph.D., ARS Panel Chair

Panel 14 – Modeling

Chief, Microbial Food Safety Risk Assessment, Public Health Agency of Canada

Education: B.Sc. & M.Sc. University of Guelph; Ph.D. University of Wisconsin

Dr. Lammerding has been the Chief of the Microbial Food Safety Risk Assessment at the Public Health Agency of Canada since 1994 when it was Health Canada. Her current research interests are food safety, risk assessment and foodborne pathogens.

Panel Chair Statements

All Panel Chairs are required to turn in a statement that describes how their Panel was conducted and possibly provide comments on the review process that might not otherwise be found in the individual research project plan peer reviews. Panel Chairs are given some guidelines for writing their statements, but are nevertheless free to discuss what they believe is most important for broad audiences.

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May 2, 2011

Dr. Don Knowles, Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Avenue, MS 5142
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Dr. Dr. Knowles:

This letter constitutes my final report as panel chair for NP108 Pre-Harvest Food Safety reviews.

1. Did the NP108 Pre-Harvest Food Safety panel have discussions that reflected:
   -sound and credible scientific peer review
   - ideas, creative thinking, and alternative approaches to improve the quality of research that may not have been considered by Agency scientists and staff.

This panel had extraordinary energy and was able to discuss each proposal at to the depth necessary to provide useful feedback to the research teams. The panel discussions were quite lively and importantly very fair. The panel exhibited high level of professionalism, creativity, and "outside" the box thinking. I heard many suggestions for ideas to avoid pitfalls and alternate approaches discussed. Discussion was very complementary to the projects and the project objectives. In my opinion the comments provided to the investigators were spot on target and particularly helpful for re-writes. Each proposal had an hour to an hour and a half devoted to discussion and creating a set of comments. The proposal re-writes submitted by the research teams, for the most part, used the detailed comments provided to them to ultimately produce very strong, worthwhile research proposals.

2. What were the most notable (positive or negative) characteristics of the discussion process and why:
   -level of preparation for the discussion
   -time spent discussing each project
   -logistical arrangements
   -exclusion of peer reviewers who had a conflict with the project
   -understanding of the review criteria and roles as peer reviewers
   -scoring and critique writing procedures

Overall, the process was excellent. The level and depth of discussion allowed for a good understanding of the proposal and allowed for excellent feed back to the investigative teams. The

process was well coordinated by the on sight team. The webinar was an excellent tool to assist panel members before arriving to the review site.

3. What suggestions do you have to improve the peer review process?

I was very pleased with the overall process. Dr. Strauss was a great help making sure we remained on track and in collating the prepared reports.

4. Overall, was this an effective peer review panel?

Overall, this was an excellent panel. The discussion was appropriate and resulted in an improvement to each proposal reviewed. It is good to know that the level of review is this good for the ARS intramural research projects.

Sincerely,

Richard E. Isaacson

Richard E Isaacson
Professor of Microbiology

UNIVERSITY OF ARKANSAS
DIVISION OF AGRICULTURE

DEPARTMENT OF FOOD SCIENCE

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Nov. 19, 2010

Dr. Don Knowles
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

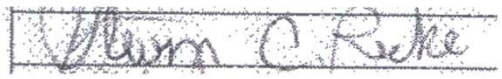
Dear Dr. Knowles

I am pleased to report that the External Review Panel for the ARS NP 108 Panel 2 – Poultry Pathogens research group successfully completed a highly productive, sound and credible scientific peer review of this group of projects. I believe that we achieved significant input from all panel members with numerous ideas and creative thinking initiated by our discussions of the proposal presented to us. A wide range of alternative approaches to improve the quality of research that may not have been considered by Agency scientists and staff were suggested by the panel members. There were two key concerns raised by the panel that do require some adjustment by all researchers evaluated by this panel. First of all experimental plans should be much more logically spelled out. One suggestion might be to incorporate some sort of logic matrix diagram that shows more clearly how each experiment fits with the overall proposal. Secondly, it was disconcerting to see the minimal effort by the ARS researchers to generate stronger and more extensive collaborations outside their immediate ARS unit as well as beyond ARS such as academia. At times there was certain level of narrowness and less than complete understanding as to how the outcomes of the research would actually benefit the industry that the proposed research projects would serve. It was believed by the panel that outside collaborations would greatly help to alleviate these concerns. Incorporating these suggestions should improve what were already very high quality research projects.

I was very impressed with the level of preparation for the discussion made by each of the panel members and this was certainly reflected in the extensive but very effective amount of time we spent discussing each project. We elected to hold an electronic meeting rather than physically going to a single meeting site and this proved to be very much more efficient from a scheduling standpoint and was much easier to arrange from a logistical standpoint. There was no problem with exclusion of peer reviewers who had a conflict with the project or understanding of the review criteria and roles as peer reviewers. One exception was the attempt to evaluate the overall objectives and then realizing that these were preset and were not really supposed to be part of the evaluation process. Otherwise the scoring and critique writing procedures were very clear to all panel members. The panel did not have any specific suggestions to improve the peer review process and everyone felt that this was a highly effective peer review panel. As chair I

very much appreciate the opportunity to serve on this committee and hope that we as a panel have provided useful comments that result in the highest quality research.

Sincerely,



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Dr. Don Knowles
Scientific Quality Review Officer
Office of Scientific Quality Review
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5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

December 8, 2010

Dear Dr. Knowles,

As the Invited Chair of the NP 108 Panel 3 – Mycotoxin (Fusarium) (2011) I want to thank you and ARS for the opportunity to chair this panel and to assist you in the review of the five projects. It was a great honor for me. I also commend the Panel for an excellent job in reviewing these plans. During our meeting on December 2nd it was obvious that all of the Panel Members had given each of the five research plans projected for the next five years a very thorough and thoughtful evaluation. It was also obvious that the Panel Members are experts in the field of mycotoxins. The discussions were lively and critical resulting in a sound and credible peer review of the projects. All panel members participated in the discussions with the merits and strengths for each project thoroughly reviewed. Many creative and very helpful suggestions were made to improve or strengthen the studies proposed. Also suggestions were made for some of the Principal Investigators to elaborate more for example, on some of the methods that will be used or to perhaps consider adding some of the other mycotoxins in their studies.

I personally read in detail each of the five projects. It was apparent, that the Panel came to the meeting fully prepared. Each member had thoroughly studied the two projects assigned to them as primary and secondary reviewers. Most had read all the projects and provided additional comments on them. Our meeting began promptly at noon and we completed the evaluations by 2:30-2:45 PM. We spent an equal amount of time discussing each project so that on average we spent approximately 30 minutes per project plus time spent in final discussions.

The logistical arrangements were perfect. At the conclusion of our meeting, panel members commented that they appreciated not having to travel to the Washington, D.C. area especially during this holiday time. They all agreed that the Web-Cast format worked exceptionally well. I agree. I chose to drive to Beltsville to be there personally for it was

easiest for me to do it this way and required only a 20 minute drive from our laboratories in Laurel. It is clear that each of the Panel members had an excellent understanding of the review requirements and of their respective roles as peer reviewers. We were able to reach agreement on the scoring for each of the projects and in most cases our scoring was unanimously in agreement. I want to thank Dr. Mike Strauss for his expert guidance to me and to our Panel. This was my first time as a Panel Chair for ARS. Dr. Strauss also kept our discussions moving along and was excellent in capturing all of the comments we made. I also want to thank Ms. Christina Woods for her help as well in such aspects as answering my questions! I commend ARS for excluding from the Panel any scientists having a conflict of interest and understand that this is not very easy to do. I also commend ARS for requiring that each Principal Investigator thoroughly investigate the potential for overlap or duplication of their proposed research with research of others.

I cannot think of any way to improve this process for it is a sound one and greatly increases the probability of success for ARS researchers in their endeavors. I believe that this was an effective peer review panel. We worked well together. I enjoyed interacting with such fine and remarkable experts in this field.

In conclusion, I echo the comments made at the conclusion of our meeting. The research proposals we evaluated were exceptional and represent work that is of the highest quality and of the utmost importance to U.S. agriculture as well as for safeguarding human and animal foods. All of the ARS research scientists involved in the projects we reviewed have remarkable accomplishments in their respective fields as well as a wealth of expertise and experience. Many are world leaders in their fields. The proposals were very well written which made our job much easier. In addition, many aspects of the work proposed are proactive rather than merely reactive. The researchers incorporated anticipated potential changes in distribution of fungi, possibly changes in toxin profiles as well as introduction of new toxigenic fungi into the U.S. that can adversely affect crops grown here. In light of the primal importance of U.S. agriculture and the impacts of globalization, climate change and possibly other factors that can affect U.S. agriculture, this is laudable indeed. We are very fortunate that ARS has and is continuing to conduct this important research!

Sincerely,

Marleen M. Wekell

Marleen M. Wekell, Ph.D.
Director Office of Applied Research and Safety Assessment
Panel Chair
NP 108 Panel 3 – Mycotoxin (Fusarium) (2011)

Cc
Michael Landa, Director CFSAN
Roberta Wagner, Deputy Director CFSAN

RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

THOMAS J. MONTVILLE, Ph.D., F.A.A.M., F.I.F.T.
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December 1, 2010

Dr. Don Knowles, Scientific Quality Review Officer
Office of Scientific Quality Review
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Dear Dr. Knowles:

Panel 4- Molecular Methods met on November 23 to review five USDA intramural research proposals. The primary and secondary reviewers had the appropriate expertise to conduct a sound and credible scientific peer review. However, the panel's ability to provide input on ideas, creative thinking, and alternative approaches to improve the quality of research was constrained by the prohibition against considering objectives. It should be noted, however, that within these constraints, the panel was generally impressed by the expertise of the scientists and the quality of the proposed research.

The discussion process went very smoothly because the reviewers submitted their reviews in advance and they were combined and disseminated prior to the meeting. The logistical support, the distribution of the material, and the online orientations reduced the workload of the panel members and helped focus the discussion. This kept the meeting relatively short. There were no issues with conflicts nor scoring. The review criteria and roles as peer reviewers were well understood.

The review process could be improved by inviting some discussion of the research objectives. The Office of Scientific Quality Review indicated that objectives were already approved by USDA leadership and may be influenced by factors not immediately apparent to the panel. Still, the panel might feel more empowered if it could comment on the objectives which the USDA could consider (or not) post-panel, rather than preemptively before the panel. The *gravitas* of the final review document would increase if the Panel Chair were given the opportunity to review and sign off on the written document.

Only the USDA can determine if this was an effective peer review panel. The consensus of the panel was that the review process was a highly polished, well executed, but *pro forma* exercise designed to fulfill a Congressional mandate. While it may have achieved that, this process would be more likely to contribute to significant improvements in the quality of ARS research if the objectives were also evaluated.

Best wishes for the success of these projects.

Sincerely,

Thomas J. Montville, Ph.D., F.A.A.M., F.I.F.T
Professor of Food Microbiology

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November 29, 2010

Dr. Don Knowles, Scientific Quality Review Officer
Office of Scientific Quality Review
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Dear Dr. Knowles:

The Peer Review Panel 5 for the United States Department of Agriculture Agricultural Research Service National Program 108, Post Harvest Processing (2011) met by telewebconferencing on November 19, 2010 and peer reviewed four five-year research project plans. The panel consisted of five members, including the chair.

The discussions of the panel reflected a professional, sound, objective, constructive and credible peer review of the submitted project plans. In their evaluation reports, the panelists provided comments and input that included ideas and alternative approaches, based on creative thinking, that may be considered by the Agency and staff to improve the submitted, as well as future projects, and the peer review process.

The review process went perfectly well with no negative issues (except for some technical issues with on of the panelists web connection). None of the reviewers had any conflicts with any of the projects. It became obvious to me before the panel meeting, by reading their reports, that all panelists had done a thorough job with their reviews as the major comments of each pair of reviewers for a given project were in good agreement. Early during the meeting, the discussions indicated that all panel members were well prepared, and understood the review criteria, their role as peer reviewers, and the scoring and critique writing procedures. The time spent in discussing each project was similar among them and did not exceed the planned target limit. The logistical arrangements before and during the meeting and throughout the process were really excellent. Overall, it was a good panel that had professional and constructive discussions in evaluating the projects.

Based on the discussions, one suggestion for improvement may be that the scientists become more realistic, focused and specific on experimental approaches and parameters to be evaluated in addressing certain objectives. In some instances the panelists felt that the planned approaches for addressing certain goals were too broad and general, which made it somewhat difficult to determine their feasibility within the overall plan and to suggest specific improvements.

Overall, the panel was well prepared, worked well together, maintained an excellent level of professionalism during the discussion, and provided constructive comments for improvement of the planned projects.

Sincerely,

John N. Sofos, PhD
University Distinguished Professor

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Dr. Don Knowles, Scientific Quality Review Officer
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October 9, 2010

Dear Dr. Knowles:

I am writing to you as the Chair of the NP 108 Panel 6 - *E. coli* (EHEC) (2011) to give you my opinions about the panel review discussion and process. Below is a list of my thoughts:

1. I am very proud of the expertise of the particular Panel members who served in this review. Every person I asked to participate, said, 'YES' to my request! I think this is a direct result of the following two aspects of the process (#2, and #3).

2. Reviewing a smaller number of proposals in a select topic allowed for the panel to be very expert in the research area and did not overburden individuals with too many proposals to review nor take anyone out of their 'comfort zone' in being well versed in the scientific literature.

3. The format to eliminate travel and communicate electronically, followed by teleconference with a Web interface also allowed over-committed panel members, who might otherwise have declined, to agree to participate.

4. I think each Panel member was very well prepared and had read all proposals so was able to participate well.

5. Each Panel member gave a very good scientific review not only as formal primary and secondary reviewers but also by participating in the discussions. We often had everyone participating. In several instances we identified areas where further justification or detail was needed in order to convince experts (us!) that particular experiments should be revised or eliminated. I think this will help the investigators focus their efforts to get the best results.

6. At times, the discussion of each project became tedious. We all read the reviewers written comments and it was suggested that we not go over the reviews line by line, but in the end, this is what happened. I think this resulted because no one was prepared to do anything different and it was the natural progression as the primary and secondary

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reviewers went through the paces of their comments. We did have the primary reviewer speak and then the secondary review speak on each Specific Aim and I think that approach encouraged discussion, rather than using a format where the primary reviewer discussed the entire proposal followed by the secondary reviewer discussing the entire proposal.

7. A revised format for better discussion might be achieved if in addition to the written review....and for the express purpose of panel discussion each reviewer were charged to list orally 3 strengths and 3 weaknesses of each proposal. Getting those ideas out for discussion in the first few minutes might help focus the remaining discussion on important points. This might be a crazy idea....so take it or leave it....

8. I very much liked the scoring process and the critique writing process. It is fabulous to have discussion with the written review for all to see and be able to revise the writing as the discussion proceeds. Dr. Michael Strauss and his office personnel (Christina Woods, etc.) should get commended for their hard work to streamline this process.

I hope my comments are helpful to you and to the ARS area directors and central agency managers. Overall, I think this was an effective peer review panel. I am always impressed with the process that the USDA uses as it handles research reviews. If you have further questions, don't hesitate to contact me.

With best regards,

Carolyn Hovde Bohach, Professor and
Director of the Idaho INBRE Program

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April 4, 2011

Dr. David Marshall, Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

RE: Panel Chair Statement

Dear Dr. Marshall:

NP 108 Panel 7 (Antimicrobial Resistance) reviewed 4 projects that were related to antibiotic resistance in bacterial foodborne pathogens. I am glad to report that the entire review process was sound and of high quality. Each project received thorough and in-depth evaluation and discussion. All panel members actively contributed to the review process and provided thoughtful critiques and suggestions for each project. I believe that the panel's efforts significantly improved the quality and feasibility of the reviewed projects.

Some of the most notable characteristics of the review process included the high-level preparation prior to meetings, appropriate and sufficient amount of time allocated to discussing each project, active participation by each member, and strict adherence to policies and criteria. The preparation by panel members and OSQR was superb, which made the panel meetings highly efficient and productive. During the discussion, panel members offered constructive feedback and scored each project in a fair and consistent manner. Another notable aspect of the review process is the internet-based meeting format. Our members were strongly pleased by this format because it was easy to use and saved a lot of travel time.

In summary, Panel 7 was highly successful and achieved the desired outcomes. In my experience as a panel member or panel manager, this was one of the most efficient and productive peer review processes. I would commend OSQR staff and officers for their outstanding organization skills, clear guidance in the review process, and quick response to questions from our panel members. The collective effort of the team made the review a highly enjoyable process.

Respectfully submitted,

Qijing Zhang, Chair, Panel 7
Professor and Frank Ramsey Endowed Chair in Veterinary Medicine

United States Department of Agriculture
Food Safety and Inspection Service
Office of Public Health Science

Donald P. Knowles, DVM, PhD
Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

Dear Dr. Knowles:

The United States Department of Agriculture (USDA) Agricultural Research Service (ARS) National Program 108 (NP-108) Food Safety Residues Panel met in an on-line session on December 9, 2010. The Panelists were selected in the late summer 2010 for their decades of experience in residue issues with academia, and/or Federal regulatory agencies. The Panelists have expertise in chemistry, toxicology, veterinary medicine, veterinary drugs, and residue testing methodologies. The Panelists all had advanced degrees: masters, doctoral, and doctor of veterinary medicine degrees. All of the Panelists were familiar with ARS food safety research.

The Panel was briefed on the Office of Scientific Quality Review (OSQR) process in a World Wide Web-based conference call with a power point presentation in the fall 2010. The Panel understood the research project plans were for directed long term research and that the project plans were not proposals for funding. The Panel clearly understood the charge to assess the plans for adequacy of approach, probability of successfully accomplishing the project objectives, and merit/significance.

The Panelists received four research project plans in the early fall 2010. Each Panelist was assigned by the Panel Chair one project plan as primary reviewer and one project plan as secondary reviewer. The primary and secondary reviewers prepared written reviews, submitting them in advance of the Panel meeting and prepared oral reports for the Panel's December 9, 2010, on-line session.

The logistics (briefing material, on-line orientation and on-line final meeting) were superb as were the OSQR support staff. Some of the Panelists were surprised at how much time they needed to conduct their reviews.

I read all the project plans in detail. It was evident from the written review comments, and the spirited in-depth discussion during the December 9th on-line session, that the Panelists were thoroughly familiar with the details of the plans. The NP-108 Residues Panelists were pleased with the science/research in all the project plans. No Panelist felt that any of the plans needed major revisions. All the Panelists commented on the quality of the past and proposed research, and the depth/scope of the project plans. All the Panelists believed the plans addressed important high priority agricultural problems. Criticisms of the plans were constructive, both in the written reviews and during the Panel discussions. The Panelists had insightful, beneficial suggestions for each plan, including the plan that received a "No Revisions" score.

This was my second experience as a Panel Chair for OSQR. My first experience, five years ago, called for the Panelists to meet together at ARS Headquarters in Beltsville, Maryland. Although I was prepared to dislike the on-line sessions, I am now totally on-board for on-line reviews of project plans. All the Panelists (including Panel Chair) would have liked the opportunity to meet each other in person; however, we were unanimously happy that we did not need to take time out of our schedules to travel.

We felt the format of the on-line review provided for a fair, and equitable evaluation of the plans. None of the panelists had any hesitation or mental reservation about speaking up during the review of the plans. The Panel readily came to a consensus when scoring the plans. I believe that the quality of comments on the project plans this time was better than during the last OSQR, in part due to Panelists having fewer plans to review.

In summary, the NP 108 Food Safety Residues Panel was pleased with the outstanding residue-related research that ARS is engaged in. We are all pleased that we were accorded the privilege of reviewing the project plans for the next five years of ARS residues research. We all enjoyed the OSQR process for on-line review and appreciate the stellar support of the OSQR staff.

Sincerely yours,

Nate Bauer, Jr., DVM, MS

Nate Bauer, Jr., DVM, MS, FADD
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Dr. Don Knowles
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5601 Sunnyside Avenue, MS 5142
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April 20, 2011

Dear Dr.Knowles

I am writing you in relation to NP 108 Panel 9 - Mycotoxins (Aspergillus; 2011). I am sorry that this has taken so long since we finished in February but I had many deadlines and travel committments.

1. In my opinion, the discussions reflected sound and credible scientific review in general superior to that typical of academic granting agencies. I believe we were very lucky to get top flight people to participate with a mixture of government, private sector and academic experience. This resulted in many suggestions for all the proposals and, in one case, a fairly major revision. I do believe that a number of suggestions were made that improved the soundness of the research. This should translate into more reliable data being generated and better value for the moneyand potential application.

2. In my opinion, the level of preparation was appropriate which, again, I think speaks well for the panel members we were fortunate to engage. However, it also speaks well to the ARS process because I think that we all felt that the suggestions offered would be taken seriously. As chair, I believe that it was my responsibility to ensure that adequate time was spent on each proposal and on the comments of each member. I hope that this was achieved.The organization, logistics, clarity of the explanations and helpfulness of staff were exceptional. It was equal or better to the best I have experienced on other US agency review panels, academic panels in Canada, Europe and the US.

3. The proposal that was kicked back for major revisions might have been a beta version. In the 2010 round, I provided first stage reviews for other proposals in other ARS locations. I can say that these were well written at that stage and my comments were intended to grind off the rough edges. In this case, the time of ARS staff and panel members was taken on something that one would hope would be very rare.

4. Overall, I believe that the group and the ARS team produced a useful outcome and added value. Thank you for the opportunity to comment. Please do not hesitate to contact me if you need more information.

J. David Miller
Professor & NSERC Research Chair

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December 22, 2010

Dr. Don Knowles
Scientific Quality Review Officer
Office of Scientific Quality Review
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5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

Dear Dr. Knowles:

I wanted to express what a pleasure it was to serve as the Panel Chair for NP108 Panel 10-Produce (2011). I found it an extremely rewarding experience and it was a pleasure to work with the review team. The review team proved to be a highly motivated group of scientists who provided an excellent mixture of basic and applied sciences, industry experience, and practical extension expertise. I recommend strongly that you keep this mixture of perspectives on your review panels. I cannot say enough about their willingness to rigorously read and evaluate the review documents and provide meaningful feedback to the research teams. It was evident that they had committed themselves to excellence.

I would also like to express my appreciation to Mike Strauss and his team. They did a marvelous job of making our job easy. We found the use of combined in person + online meeting format quite conducive to meaningful discussions. Their preparation of the review team and me made it very easy to get done to business. The only area that could benefit in the future is providing easier to-use instructions for getting into the Web-reader for the remote participants. We also noted that there seems to be little communication between the four ARS research teams that we reviewed, suggesting potential improvement in inter-research team communications and coordination. While this may be an artifact of the peer review system, it is a characteristic that was ubiquitously noted by the review team.

In summary, I felt that this was a highly effectively peer review. I am sure that I speak for the entire review team when I state that you have excellent research teams addressing pressing food safety issues related to the production and processing of fresh and fresh-cut produce. We hope

our suggestions help the researcher further enhance their important work.

Sincerely,

Robert L. Buchanan

Robert L. Buchanan, Ph.D.
Director and Professor

Robert Wright Environmental Consulting
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December 10, 2010

Dr. Don Knowles, Scientific Quality Review Officer
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Dear Dr. Knowles:

I am writing this letter to proved a Panel Chair Statement characterizing an online panel meeting held on November 29, 2010, for NP 108, Panel 11 - Manure Pathogen Transport. All of the panel members had considerable research experience in areas related to the three Project Plans under review. This allowed them to point out limitations in some of the methods and approaches in the Project Plans and to propose alternative methods and/or approaches that will provide additional information and a greater likelihood of success.

The reviews provided by the panel members were relatively detailed and indicated a significant amount of preparation. All panel members were actively engaged in the discussion of the Project Plans. They seemed to enjoy the process and indicated that they had learned a lot from the review and now have a greater respect for ARS research. Based on the significant number of helpful suggestions, I believe that input from this panel will strengthen the three ARS Project Plans.

Over the years the Office of Scientific Quality Review has continued to improve the peer review process. At this point the panel's comments were of a positive nature. The panel members were pleased that the review could be conducted online. Combination of the primary and secondary reviewer comments prior to the meeting allowed the panel to effectively discuss and revise the Panel Recommendations online. The online review seems to be very effective for panels with a small number of projects to review, thereby saving panelist time and ARS money.

Sincerely,

Robert J. Wright

Robert J. Wright

PURDUE
UNIVERSITY

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY

March 31, 2011

Dr. Don Knowles, Scientific Quality Review Officer
Office of Scientific Quality Review
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Beltsville, MD 20705

Dear Dr. Knowles,

I appreciated the opportunity to serve as chair of the panel for NP 108 Panel 12-Mycotoxin Biocontrol, which reviewed three ARS research plans. This was the first time I participated in this type of review. Now that it is over I will say that I am glad I accepted the job. The three panel members, one person with prior experience on a panel, did an outstanding job. They all did their assigned reviews on time and provided excellent discussions during the panel phone conferences. If I did anything right, it was choosing the panel members. Their individual expertise was complementary, which allowed us to review the research plans that were broad in scope. The process of reviewing these research plans is a good thing for ARS. The criteria for evaluation provided a good outline for the panel reviews. For the panel, we appreciated the two plans that were well prepared. Our discussions of these plans were really just to provide suggestions for small improvements. We did have one plan that the panel deemed in need of major revisions. This particular plan required a significant amount of work and the discussion was quite long. First impulse after reading this research plan was to just say it is not feasible and walk away. I am happy to say that all panel members reviewed this plan and seriously contributed to the discussion. We provided constructive suggestions for improving the plan to both the investigators and the ARS administrators.

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I do not have any suggestions for improving the process. I really appreciated the help from the review coordinators. You all provided the panel with good information about the review process and the expected outcomes. The interaction we had with your group during the discussions provided the panel members some confidence that the review process is a serious endeavor by ARS.

Sincerely,

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November 18, 2010

Dr. Don Knowles, Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
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Beltsville, MD 20705

Dear Dr Knowles,

As requested I am providing my answers to your questions. I was the chair of NP-108 panel 13.

1. Discussions: Panel consisted of 4 members in addition to the chair. The proposals were diverse so the panelists were diverse. The diversity was good and the discussion reflected the expertise that each panelist brought to the table. The discussion was, in my opinion, fair and aimed at bettering the science. There were a few discussions related to policy but overall the process was quite sound.

2. What were the most notable (positive or negative) characteristics of the discussion process and why:

Positive:

- Quality of the reviewers
- Thoughtfulness of the reviewers and their verbal and written comments
- Timeline for the entire process
- Preparation of reviewers concerning their roles and the judging criteria

Could use additional consideration:

- Logistics – had a meeting time change and a new hard copy for the notebooks was not sent out so there was some confusion about the meeting time.
- Technical – it seemed inefficient to me to have someone else type my comments. I can see that for the technically challenged it might be a disaster to turn over control, but for some it might be easier if they had the ability to type their own words. One possibility might be to let panelists email comments, or type them in the "chat" box for someone else to copy into the document.

3. What suggestions do you have to improve the peer review process?

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I don't think that reviewers should send their reviews to each other. I think that each reviewer should be required to submit their own critique prior to having access to the reviews of others. NIH accomplishes this with a website where reviewers upload their comments and scores and once they are uploaded other reviews for that proposal are available.

Also, it was hard to pick the best reviewers based upon the limited information that I had available to me as chair. In one instance, the proposal turned out to be more molecular than indicated and thus one of the reviewers was not particularly suited.

Finally, as chair, it was not clear to me ahead of time how much role I would have in the evaluations. I can see that if there were lots of proposals, I would not have been able to read them all. But in this case, I was able and I had comments on each, but there was no mechanism to provided feedback other than in the discussion and for someone else to type them. If I were to do this again, I would know to type up my comments and send them in ahead of time. I think it would be useful for the Chair and non-assigned reviewers to know that this is one way they can contribute feedback if they feel they have something to add to the critique of a proposal to which they were not assigned.

4. Overall, was this an effective peer review panel?

In my opinion, yes. Again, the range of topics was diverse and the nature of the ARS labs and this review process makes it difficult to provide they types of suggestions that one might in other funding and review situations, but I feel that the end objective was reached fairly and efficiently.

Sincerely,

Jessica Kissinger

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January 14, 2011

Panel Chair Statement, NP 108 – Modeling (2011)

Dear Dr. Knowles;

The NP 108 Food Safety Panel 14 on Modeling met via two online panel review meetings, first on September 30, 2010 for a comprehensive review of three ARS research project plans, and again on January 6, 2011 for a second review of one plan for which major revisions were recommended by the panel on September 30.

The three Modeling Panel members are very experienced in the quantification of bacterial responses to the food environment, and the biostatistics and stochastic processes in biological systems. Each is an internationally well-respected scientist; their affiliations are a food research institute, a university and one federal agency. The panel discussions reflected a high caliber of thoughtful insight and contemporary knowledge of the science. Each project plan was accorded a very thorough review and the discussions were objective and focused.

Excellent recommendations were provided by the panel members to enhance and strengthen the five-year work programs proposed by the various Agency scientists and staff. Suggestions ranged from offering innovative alternative strategies that might be considered in testing one or more specific hypotheses in a well-drafted project plan, to extensive detailed recommendations when warranted to ensure the proposed work would be current, and contribute new knowledge to the field. All panel members participated in the discussions for each of the three projects as none had conflicts of interest with any of the ARS researchers. The primary and secondary reviewers were well-prepared in advance of our conference calls, presenting thorough written in-depth comments on the individual project plans.

The discussion time devoted to each project varied as needed, from a minimum of 30 minutes to over one hour when it was felt that substantial modifications to a project were needed. In total, the conference time required was not onerous, yet sufficient to address all relevant issues and concerns and finalize the review reports. The online web conference was very efficient, and worked well for the small number of project plans we reviewed. This is clearly a cost-effective alternative to face-to-face meetings, and allows the contribution of international experts without overburdening them with overseas travel.

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The panel orientation that had taken place prior to the assigned reviews, via on-line media and teleconference led by Mike Strauss, was enormously beneficial to the entire process by clearly re-emphasizing the review criteria. Panel members had the opportunity to ask questions and in the end clearly understood their role and responsibilities in the process. The instructions were quite clear on how to proceed with the scoring of each project plan. OSQR staff had combined the written comments provided in advance by the panel members and preparation of the final reviews was a straightforward process where the final editing was done live via the web presentation. Panel members agreed it worked very efficiently. Overall, the peer review process was quite streamlined, and there are no obvious suggestions that come to mind to improve the process. Perhaps the next stage would be via video teleconference, as this technology becomes more available to all participants of such review panels.

Overall, the peer review panel was very effective. From the documentation provided and the initial briefing, the panel members recognized that the approach undertaken by OSQR through this external review process adds a great deal of credibility to the ARS research programs and scientist outputs. In response, each panel member delivered high quality and carefully considered analysis and recommendations to enhance the quality and outcomes of the planned research. As panel chair, I personally found this experience insightful, and appreciated the expertise and commitment of each panel member. It was also a pleasure to once again work with the highly competent staff of OSQR.

Sincerely,

Anna M. Lammerding

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Chair, NP 108 Panel 14 – Modeling
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Projects Reviewed by the Food Safety Panels

Beltsville Area

Rufus Chaney
Plant and Soil Factors that Influence the Bioavailability of Heavy Metals in Crops

Ronald Fayer
Zoonotic Parasites Affecting Food Safety and Public Health

Dolores Hill
Integrated Approach to the Detection and Control of Foodborne Parasites and the Impact on Food Safety

Jeffrey Karns
Ecology and Molecular Epidemiology of Zoonotic Bacterial Pathogens Associated with Dairy Farms

Moon Kim
Development of Sensing and Instrumentation Technologies for Food Safety and Sanitation Inspection in Fresh Fruit and Vegetable Processing

Xiangwu Nou
Molecular Mechanisms of Pathogenic Bacteria Interactions with Plant Surfaces and Environmental Matrices

Yakov Pachepsky
Pathogen Gate and Transport in Irrigation Waters

Jitendra Patel
Microbial Ecology and Safety of Fresh Produce

Benjamin Rosenthal
Molecular Genetics, Genomics, and Phylogenetics of Foodborne Zoonotic Parasites Affecting Food Safety and Public Health

Mid South Area

Deepak Bhatnagar
Control of Aflatoxin Production by Targeting Aflatoxin Biosynthesis

Jeffrey Cary
Developing Resistance to Aflatoxin through Seed-Based Technologies

Kenneth Ehrlich
Improvement of Biological Control Fungi for Reduction of Aflatoxin Contamination

Midwest Area

Nancy Alexander
Genetic Control of Fusarium Mycotoxins to Enhance Food Safety

Shawn Bearson
Molecular Analysis of *Salmonella* Virulence, Antibiotic Resistance, and Host Response

Chris Maragos
Innovative Materials for Use in Mycotoxin Detection

Kerry O'Donnell
Comparative Genomic Systems for Molecular Detection and Control of Toxigenic *Fusarium*

Robert Proctor
Control of Fumonisin Mycotoxin Contamination in Maize through Elucidation of Genetic and Environmental Factors that Regulate Secondary Metabolism in *Fusarium*

Vijay Sharma
Prevention and Characterization of Persistent Colonization by *Escherichia coli* O157:H7 and Other Shiga Toxin-Producing *E. coli* (STEC) in Cattle

Thaddeus Stanton
Animal Intestinal Microbiomes, Foodborne Pathogens, and Antimicrobials

Donald Wicklow
Protective Endophytes of Maize that Inhibit Fungal Pathogens and Reduce Mycotoxin Contamination

North Atlantic Area

Xuetong Fan
Integrated Approach to Process and Package Technologies

Pina Fratamico
Genomic and Proteomic Analysis of Foodborne Pathogens

Andrew Gehring
Detection and Typing of Foodborne Pathogens

David Geveke
Developing Processing Intervention Technologies

Vijay Juneja
Predictive Microbiology for Food Safety

Richard Linton
Innovative Pathogen Detection and Characterization Technologies for Use in Food Safety

Steven Lehotay
Technologies for the Detection of Chemical and Biological Contaminants in Foods

John Luchansky
Pathogen Persistence and Processing Optimization for Elimination in Foods

Brendan Niemira
Intervention Technologies for Minimally Processed Foods

Tom Oscar
Data Acquisition and Modeling for Poultry Food Safety

George Paoli
Microbial Communities and Interactions and their Impact on Food Safety

Gary Richards
Pathogen Detection and Intervention Methods for Shellfish

Christopher Sommers
Alternative Food Processing Technologies

Northern Plains Area

Terrance Arthur
Pathogen Mitigation in Livestock and Red Meat Production

Elaine Berry
Prevention and Pathogen Transmission from Animal Manure to Food, Water, and Environment

James Bono
Exploring Genomic Differences and Ecological Reservoirs to Control Foodborne Pathogens

Janice Huwe
Chemical and Biological Residues in Foods

David Smith
Metabolic Fate of Chemical and Biological Contaminants

Pacific West Area

Maria Brandl
Biology and Control of Human Pathogens on Fresh Produce

David Brandon
Technologies for Detecting and Determining the Bioavailability of Bacterial Toxins

Bruce Campbell
Chemical Approaches to Eliminate Fungal Contamination and Mycotoxin Production in Plant Products

Peter Cotty
Reducing Aflatoxin Contamination Using Biological Crop and Crop Management

Sui Sheng Hua
Environmental and Ecological Approaches to Eliminate Fungal Contamination and Mycotoxin Production in Plant Products

Robert Mandrell
Molecular Biology of Human Pathogens Associated with Food

South Atlantic Area

Charles Bacon
Control of Toxic Endophytic Fungi with Bacterial Endophytes and Regulation of Bacterial Metabolites for Novel Uses in Food Safety

Frederick Breidt
Control of Human Pathogens Associated with Acidified Produce Foods

Richard Buhr
Interventions for Foodborne Pathogens during Poultry and Egg Production and Processing

Paula Cray
Monitoring of Antimicrobial Resistance in Food Animal Production

Jean Guard

Genetic Analysis of Poultry-Associated *Salmonella Enterica* to Identify and Characterize Properties and Markers Associated with Egg-Borne Transmission of Illness

Kelli Hiett

Molecular Approaches for the Characterization of Foodborne Pathogens in Poultry

Arthur Hinton, Jr.

Pathogen Reduction and Processing Parameters in Poultry Processing Systems

Charlene Jackson

Molecular Approaches for the Detection and Understanding of Antimicrobial Resistance in Food Safety

Deana Jones

Microbiological, Immunological, and Product Quality Consequences of Housing Laying Hens in Production Systems

John Line

Pre-Harvest Interventions for Application During Poultry Production to Reduce Foodborne Bacterial Pathogens

Richard Meinersmann

Microbial Ecology of Human Pathogens Relative to Poultry Processing

Michael Musgrove

Intervention and Processing Strategies for Food-borne Pathogens in Shell Eggs

Bosoon Park

Optical Detection of Food Safety and Food Defense Hazards

Ronald Riley

Toxicology and Toxinology of Mycotoxins in Foods

Southern Plains Area

Robin Anderson

Interventions to Reduce Foodborne Pathogens in Swine and Cattle

James Byrd II

Microbial Interactions and Management Approaches to Reduce Pathogenic Bacteria in Poultry

Geraldine Huff

Alternative Strategies for Enhancing the Safety of Poultry Products

Michael Kogut

A Systems Biology Approach to Understanding the Salmonella-Host Interactome in Poultry and Swine

Office of Scientific Quality Review

The Office of Scientific Quality Review (OSQR) manages and implements the ARS peer review system for research projects, including peer review policies, processes and procedures. OSQR centrally coordinates and conducts panel peer reviews for project plans within ARS' National Program every five years.

OSQR sets the schedule of National Program Review sessions. The OSQR Team is responsible for:

- Panel organization and composition (number of panels and the scientific disciplines needed)
- Distribution of project plans
- Reviewer instruction and panel orientation
- The distribution of review results in ARS
- Notification to panelists of the Agency response to review recommendations
- *Ad hoc* or re-review of project plans

Contact

Send all questions or comments about this Report to:

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