USDA
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NP 304 Crop Protection and Quarantine Panel Report

July 7, 2017

Michael A. Grusak, Scientific Quality Review Officer
(January 2014-December 2015)

Date

July 7, 2017

Michael S. Strauss, Peer Review Program Coordinator

Date

The Agricultural Research Service
is an agency of the Department of Agriculture's
Research, Education, and Economics mission area.

Introduction

This Panel Report is an overview and analysis of the 2015 National Program (NP) 304 Crop Protection and Quarantine Panel Review. The project plans reviewed by these panels were applicable to the mission of the National Program to *"provide technology to manage pest population below economic damage thresholds by the integration of environmentally compatible strategies that are based on increased understanding of the biology and ecology of insect, mite, and weed pests."*

Candidates to chair each panel were recommended by the National Program Leaders (NPL's), Drs. Rosalind James and Kevin Hackett and vetted by the Office of Scientific Quality Review (OSQR). Dr. Michael A. Grusak, Scientific Quality Review Officer (SQRO), approved a Chair for 17 out of the 18 panels. Panel 16 had two unique plans and individual reviews were sought for each plan and a composite review prepared under Dr. Grusak's signature (Table 1).

Table 1. Crop Protection and Quarantine Panels with the date of the initial review meeting where all plans before the panel were discussed and rated, the number of panelists appointed to the panel, and the number of projects reviewed by each panel.

Panel	Panel Chair	Panel Meeting Date	Number of Panelists	Number of Projects Reviewed
Panel 1: BC-Augmentative	Dr. Denny J. Bruck, Research Scientist, DuPont Pioneer, DuPont Agricultural Biotechnology, Johnston, IA	July 8, 2015	5	5
Panel 2: BC-Classical	Dr. Lambert H. Kanga, Director, Florida A&M University, Tallahassee, FL	April 14, 2015	3	3
Panel 3: Cotton Pest Management	Dr. Tom A. Royer, Professor, Oklahoma State Univ, Stillwater, OK	April 9, 2015	3	3
Panel 4: IPM-Cotton	Dr. Charles D. Parker, Advisor to the Board, National Cotton Council of America, Cordova, TN	April 23, 2015	3	3
Panel 5: IPM-Other	Dr. Judith Hough-Goldstein, Professor, Dept Entomology & Wildlife Ecol, Newark, DE	June 9, 2015	3	3
Panel 6: Post-Harvest	Dr. Rizana M. Mahroof, Assoc Professor, Dept Biological & Physical Sciences, South Carolina State Univ, Orangeburg, SC	April 29, 2015	4	4
Panel 7: Systematics of Insect Pests & Beneficials	Dr. Wendy Moore, Assistant Professor, Dept Entomology, Univ Arizona, Tucson, AZ	July 17, 2015	3	3
Panels 8: Systematics of Pest Arthropods	Dr. Carol D. von Dohlen, Professor & Co-Director Graduate Studies, Dept Biology, Utah State Univ, Logan, UT	April 21, 2015	2	2
Panel 9: Insect Genomics & Physiology	Dr. Anandasankar Ray, Associate Professor, Univ California, Riverside, CA	August 18, 2015	3	4
Panel 10: IPM-Corn	Dr. Bonnie B. Pendleton, Assoc Professor, Dept Agricultural Sciences, West Texas A&M Univ, Canyon, TX	July 21, 2015	3	3
Panel 11: IPM-Fruits	Dr. Jaime C. Piñero, Assistant Professor, Cooperative Extension & Research, Lincoln Univ, Jefferson City, MO	July 15, 2015	5	5

Panel 12: IPM-Hort & Vegetables	Dr. Faith M. Oi, Associate Extension Specialist, Dept Entomology & Nematology, Univ Florida, Gainesville, FL	July 7, 2015	5	5
Panel 13: IPM-Small Farm	Dr. Oscar E. Liburd, Professor, Dept Entomology & Nematology, Univ Florida, Gainesville, FL	June 12, 2015	3	3
Panel 14: Systems Weed Management	Dr. Eric R. Gallandt, Assoc Professor, School of Food & Agriculture, Univ Maine, Orono, ME	June 10, 2015	3	3
Panel 15: Weed Classical Biocontrol	Dr. Ruth A. Hufbauer, Assistant Professor, Dept Bioagricultural Sciences & Pest Mgmt, Colorado State Univ, Fort Collins, CO	June 30, 2015	5	5
Panel 16: Weed and Arthropod Biocontrol	Dr. Michael A. Grusak, SQRO	N/A	8	2
Panel 17: Weed Ecology	Dr. Sam St. Clair, Associate Professor, Plant & Wildlife Sciences, Brigham Young Univ, Provo, UT	August 6, 2015	4	4
Panel 18: Weed Physio/Biochem/Genomics	Dr. David J. Schultz, Associate Professor, Dept Biology, Univ Louisville, Louisville, KY	July 14, 2015	4	4

Panel Review Results

Following Panel Review, OSQR sends each Area Director a document that contains the consensus recommendations for each plan from their Area. This may include recommendations for revision of the plan which researchers are required to respond in writing and, as appropriate, revise their written plan.

In addition, as part of their discussion panelists provide a judgment of the overall quality of the plan, expressed in terms of the degree of revision that may be required. This judgment is termed an "Action Class." Each reviewer is asked to provide an Action Class rating for each plan. OSQR assigns a *numerical equivalent* to each Action Class rating and then averages these to arrive at an overall Action Class Score for the plan.

The Action Classes and their Numerical Equivalents are defined below.

Average Score 7.0-8.0	**No Revision Required (Numerical Equivalent: 8).** An excellent plan; no revision is required, but minor changes to the project plan may be suggested.
Average Score 5.1-6.9	**Minor Revision Required (Numerical Equivalent: 6).** The project plan is feasible as written, requires only minor clarification or revision to increase quality to a higher level.
Average Score 3.1-5.0	**Moderate Revision Required (Numerical Equivalent: 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.

Average Score 1.1-3.0	**Major Revision Required (Numerical Equivalent: 2).** There are significant flaws in the experimental design and/or approach or lack of clarity which hampers understanding. Significant revision is needed.
Average Score 0-1.0	**Not Feasible (Numerical Equivalent: 0).** The project plan, as presented, has major scientific or technical flaws. Deficiencies exist in experimental design, methods, presentation, or expertise which make it unlikely to succeed.

For plans receiving one of the first three Action Classes (No Revision, Minor Revision or Moderate Revision) scientists respond in writing to panel comments in the consensus recommendation document, revise their project plan as appropriate, and submit the revised plan and responses to OSQR through their Area Office. These are reviewed by the SQRO and, once he/she is satisfied that all review concerns have been satisfactorily addressed, the project plan is certified and may be implemented. *Certification is contingent upon satisfactorily addressing panel comments and recommendations.* Plans have not "passed" review until receiving the Officer's certification.

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 panel, which provides a second set of Consensus Recommendations and Action Class. If the re-review Action Class is No Revision, Minor Revision or Moderate Revision the project plan may be implemented after receipt of a satisfactory response and Officer certification as described above. Plans receiving Major Revision or Not Feasible scores at this point fail review. (The Action Class and Consensus Recommendations are provided to the Area but there is no further option for revision). Such plans are terminated, reassigned, or restructured at the discretion of the Area of Office of National Programs. On occasion, it is elected not to further revise plans that have received a low score on initial review. In such cases, these are treated as having not successfully completed (i.e., failed) review, they cannot be certified, and appropriate action becomes the responsibility of the Area and NPL leadership.

NP 304 Overview

The results of review by panel are summarized in Table 2. Scores ranged from plans receiving No Revision to Major Revision. There were no plans judged as Not Feasible on either initial or final review. Nearly 63 percent of plans received a score of Minor Revision or higher on initial review and by the conclusion of review more than 70 percent had achieved that. Five plans (7.6%) received scores of Major Revision on initial review and all of those had received Minor or Moderate scores after revision. Overall, this represents an improvement in review outcomes for the National Program over prior review cycles (Table 3).

Review outcomes were examined for the potential for factors that might influence review. When results were compared to the number of reviewers on a panel no correlation was seen (Figure 1). Extending this to include all plans reviewed in the current review cycle (Figure 2) confirmed that the number of reviewers on a panel does not appear to influence review outcomes. Similarly, the

scientific effort, expressed as the number of Scientist Years (SYs) assigned to a project was compared to review outcomes. When combining the current NP304 review SY assignments with those of other plans reviewed in the present review cycle, the analysis did not reveal any influence of the scientific effort on review outcomes (Figures 3, 4). Alternatively, if the number of individual scientists devoted to a plan, irrespective of the level of their effort, is examined, there is still no influence seen on the review outcomes (Figures 5, 6).

The distribution of review scores (from No Revision to Not Feasible) was examined over the previous three review cycles (Figures 7, 8). For both initial review (Figure 7) and final review (Figure 8) there was a continued improvement over prior review cycles. Specifically there was an increase in the number of plans scoring initially at the Minor Revision level and a significant decrease in the number of plans scoring Major Revision or Not Feasible. The five plans scoring Major Revision received scores of No Revision (2) or Minor Revision (3) on re-review.

Table 2. Proportion of initial and final scores for the third (2015) cycle expressed as percentage of all reviewed and the average initial numerical score for the NP 304 Crop Protection and Quarantine Panels. Note that for the plans receiving No Revision, Minor Revision, or Moderate Revision, a second score is not received from the Panel so the initial score is recorded as the final score.

Third Cycle, 2015	Initial Review						Final Review					
	No Revision	Minor Revision	Moderate Revision	Major Revision	Not Feasible	Avg Initial Score	No Revision	Minor Revision	Moderate Revision	Major Revision	Not Feasible	Avg Final Score
Panel 1: BC-Augmentative	0.0%	80.0%	20.0%	0.0%	0.0%	5.6	0.0%	80.0%	20.0%	0.0%	0.0%	5.6
Panel 2: BC-Classical	33.3%	66.7%	0.0%	0.0%	0.0%	6.2	33.3%	66.7%	0.0%	0.0%	0.0%	6.2
Panel 3: Cotton Pest Management	0.0%	66.7%	0.0%	33.3%	0.0%	5.3	33.3%	66.7%	0.0%	0.0%	0.0%	7
Panel 4: IPM-Cotton	0.0%	66.7%	0.0%	33.3%	0.0%	4.8	0.0%	100.0%	0.0%	0.0%	0.0%	5.7
Panel 5: IPM-Other	0.0%	66.7%	33.3%	0.0%	0.0%	5.2	0.0%	66.7%	33.3%	0.0%	0.0%	5.2
Panel 6: Post-harvest	0.0%	50.0%	50.0%	0.0%	0.0%	5.5	0.0%	50.0%	50.0%	0.0%	0.0%	5.5
Panel 7: Systematics of Insect Pests & Beneficials	66.7%	33.3%	0.0%	0.0%	0.0%	6.8	66.7%	33.3%	0.0%	0.0%	0.0%	6.8
Panel 8: Systematics of Pest Arthropods	0.0%	100.0%	0.0%	0.0%	0.0%	6	0.0%	100.0%	0.0%	0.0%	0.0%	6
Panel 9: Insect Genomics & Physiology	25.0%	0.0%	50.0%	25.0%	0.0%	4.6	50.0%	0.0%	50.0%	0.0%	0.0%	5.9
Panel 10: IPM-Corn	0.0%	66.7%	33.3%	0.0%	0.0%	5.5	0.0%	66.7%	33.3%	0.0%	0.0%	5.5
Panel 11: IPM-Fruits	0.0%	80.0%	20.0%	0.0%	0.0%	5.5	0.0%	80.0%	20.0%	0.0%	0.0%	5.5
Panel 12: IPM-Hort and Vegetable Crops	20.0%	0.0%	60.0%	20.0%	0.0%	4.1	20.0%	20.0%	60.0%	0.0%	0.0%	5
Panel 13: IPM-Small Farm	0.0%	66.7%	33.3%	0.0%	0.0%	5.2	0.0%	66.7%	33.3%	0.0%	0.0%	5.2

Panel 14: Systems Weed Management	0.0%	33.3%	66.7%	0.0%	0.0%	5.2	0.0%	33.3%	66.7%	0.0%	0.0%	5.2
Panel 15: Weed Classical Biocontrol	0.0%	60.0%	40.0%	0.0%	0.0%	5.4	0.0%	60.0%	40.0%	0.0%	0.0%	5.4
Panel 16: Weed and Arthropod Biocontrol	0.0%	50.0%	50.0%	0.0%	0.0%	5.5	0.0%	50.0%	50.0%	0.0%	0.0%	5.5
Panel 17: Weed Ecology	0.0%	50.0%	50.0%	0.0%	0.0%	4.5	0.0%	50.0%	50.0%	0.0%	0.0%	4.5
Panel 18: Weed Physiol/Biochem/ Genomics	0.0%	50.0%	25.0%	25.0%	0.0%	4.6	0.0%	75.0%	25.0%	0.0%	0.0%	5.7
NP 304, All	**8.1%**	**54.8%**	**29.5%**	**7.6%**	**0.0%**	**5.2**	**11.3%**	**59.2%**	**29.5%**	**0.0%**	**0.0%**	**5.6**

Table 3. Proportion of initial and final scores for all cycles expressed as percentage of all reviewed and the average initial numerical score for the NP 304 Crop Protection and Quarantine Panels. See note above regarding No, Minor, and Moderate initial scores. Number of plans are indicated in parentheses.

	Initial Review						Final Review					
	No Revision	**Minor Revision**	**Moderate Revision**	**Major Revision**	**Not Feasible**	**Avg Initial Score**	**No Revision**	**Minor Revision**	**Moderate Revision**	**Major Revision**	**Not Feasible**	**Avg Final Score**
First Cycle (86)	4.0%	30.4%	33.7%	27.5%	4.4%	4	23.0%	35.3%	40.4%	0.0%	1.2%	5.5
Second Cycle (73)	6.7%	34.6%	40.9%	17.8%	0.0%	4.7	10.6%	46.7%	41.8%	0.9%	0.0%	5.4
Third Cycle (64)	7.8%	53.1%	31.3%	7.8%	0.0%	5.2	10.9%	57.8%	31.3%	0.0%	0.0%	5.6

Figure 1. Influences of the number of reviewers (Panel Size) on the averaged numerical outcome (Score) received on the first review for the 64 plans in the current NP 304 Crop Protection and Quarantine review.

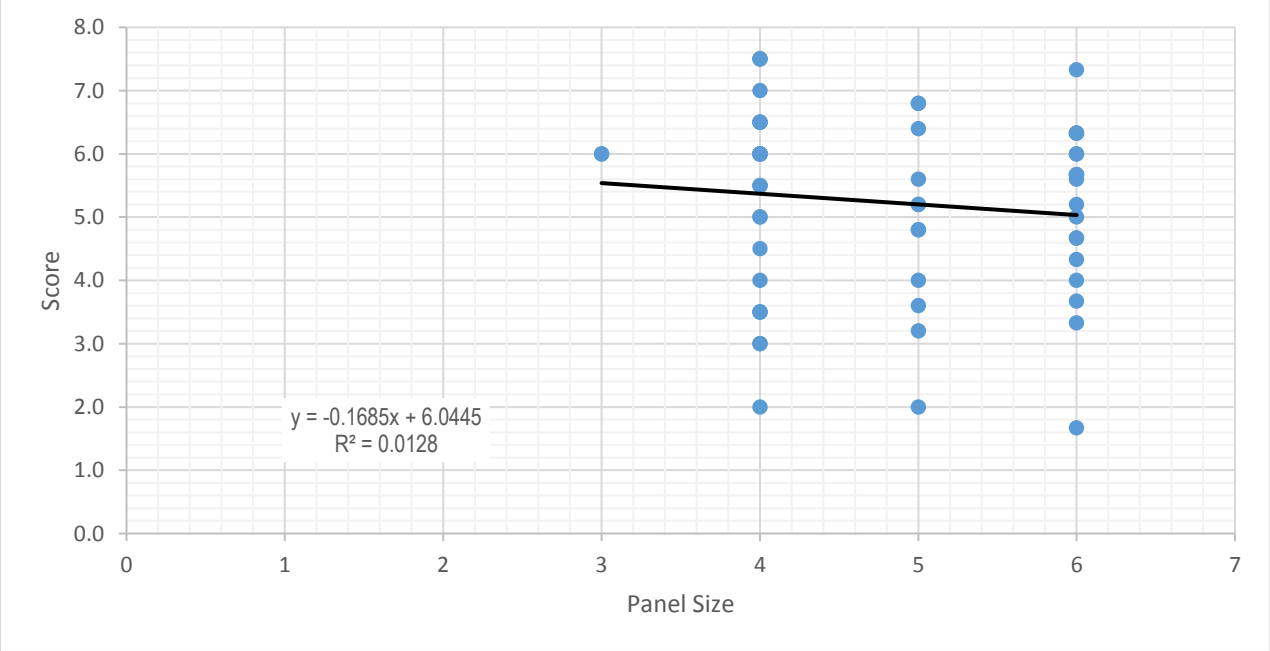


Figure 2. Similar to Figure 1 but for all plans reviewed by panels in the current 5-year review cycle.

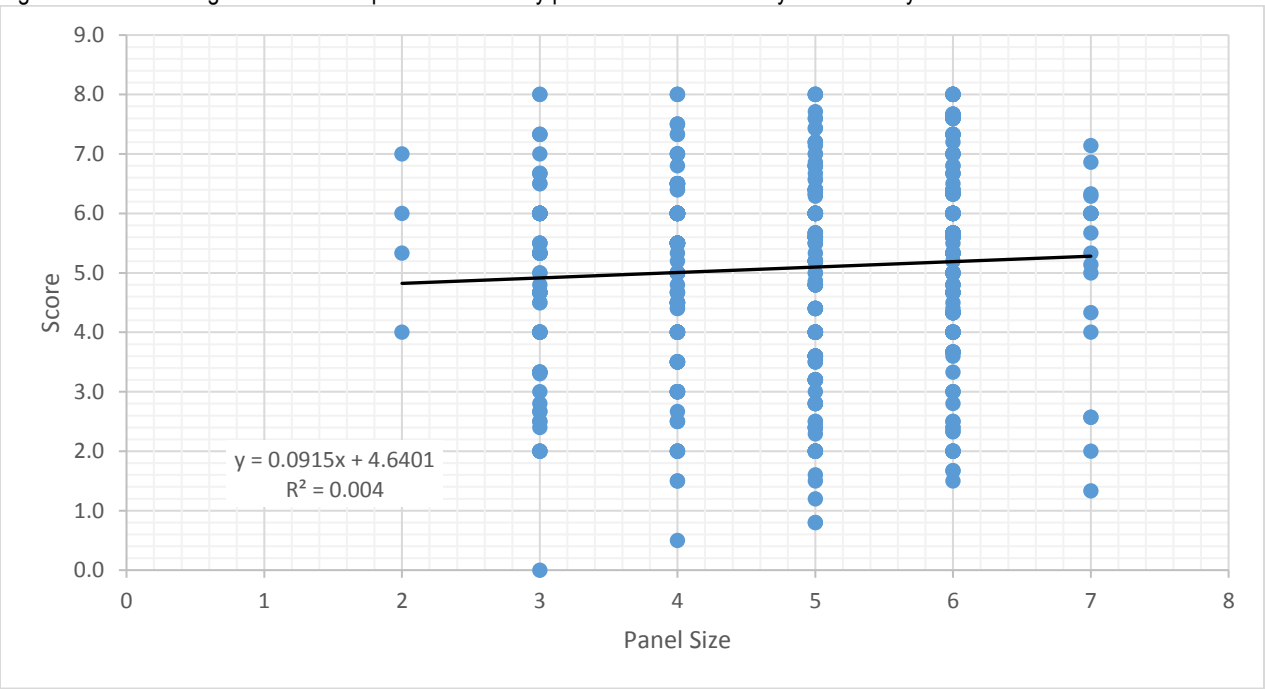


Figure 3. Influence of the overall scientific effort (in terms of Scientific Years, SY) assigned to a plan on the score received on initial review for the 64 plans in the current NP 304 Crop Protection and Quarantine Panel Review.

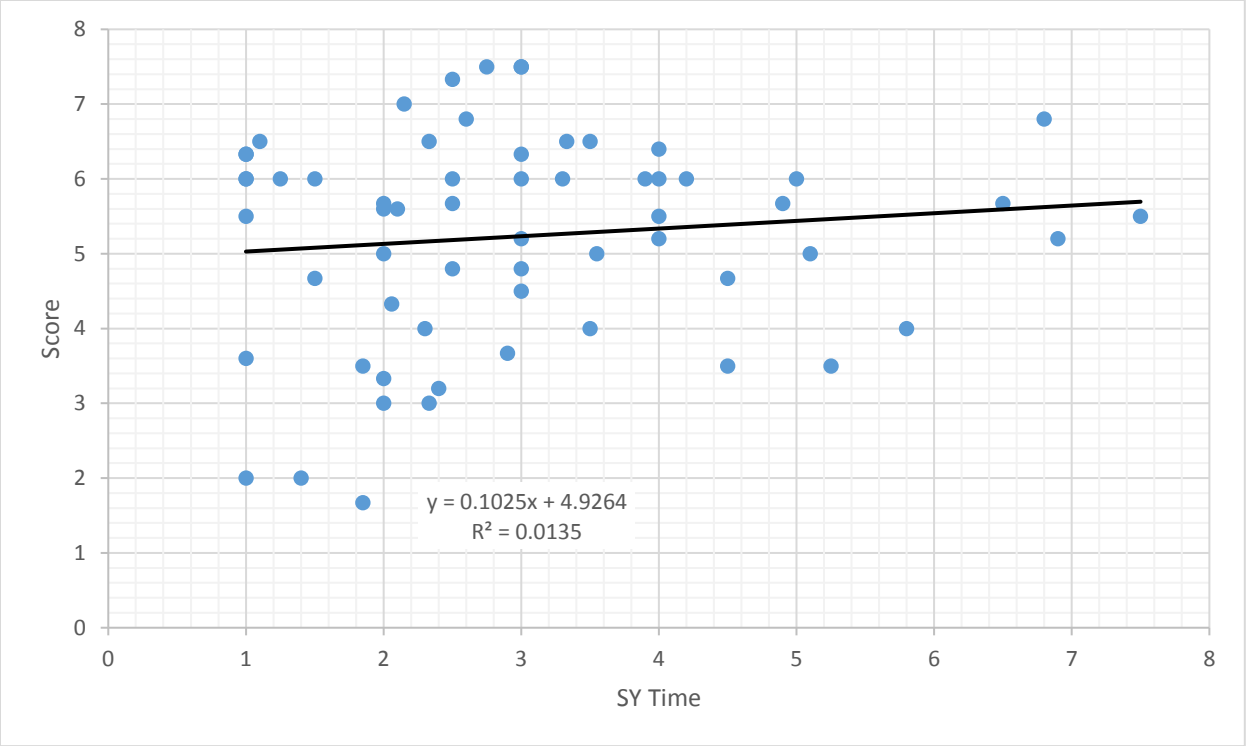


Figure 4. Same as Figure 4 but for all plans reviewed by panels in the current 5-year review cycle.

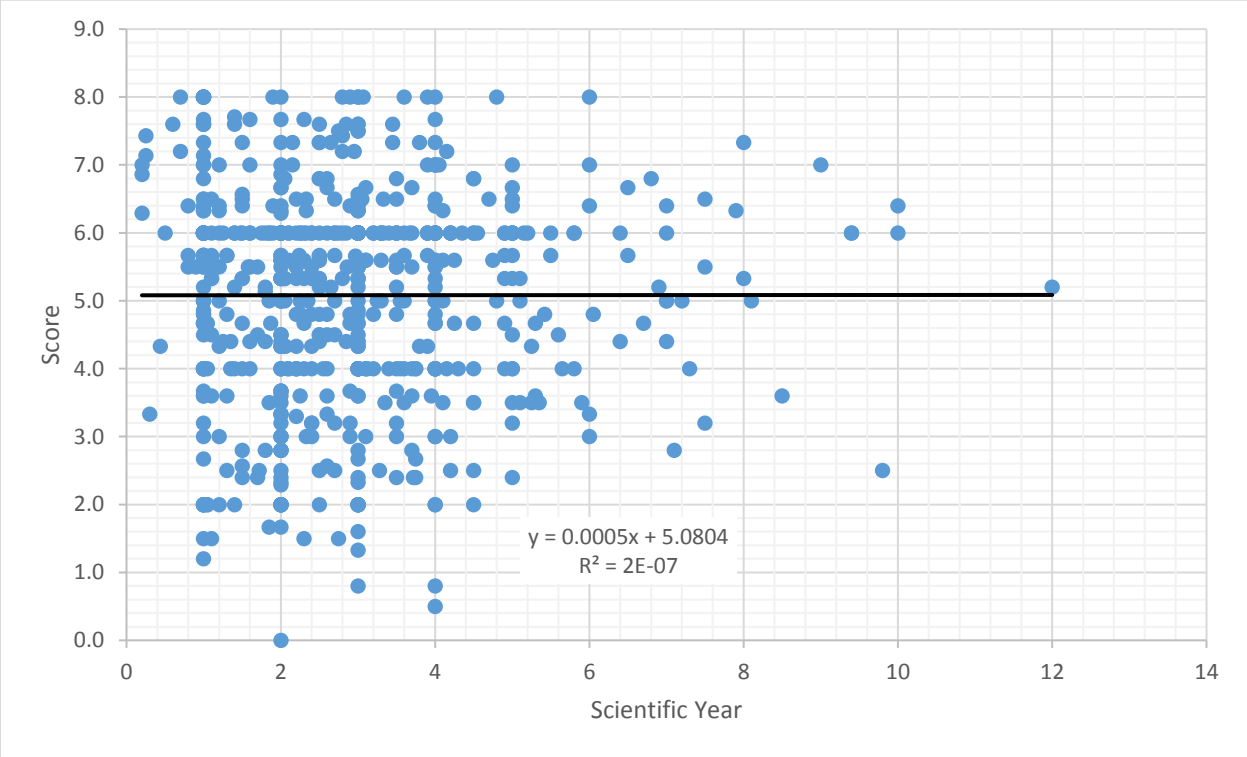


Figure 5. Influence of the number of scientists on a plan (independent of the proportion of their time) on the score received on initial review with the current NP 304 Crop Protection and Quarantine review.

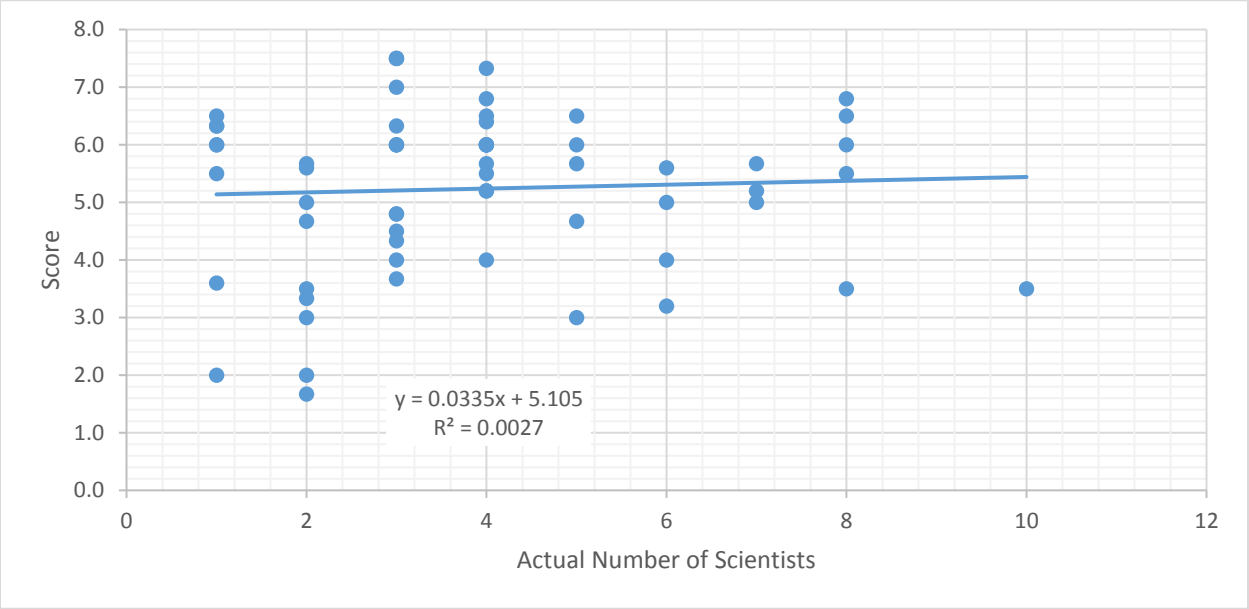


Figure 6. Same as Figure 6 but for all plans reviewed in the current 5-year review cycle.

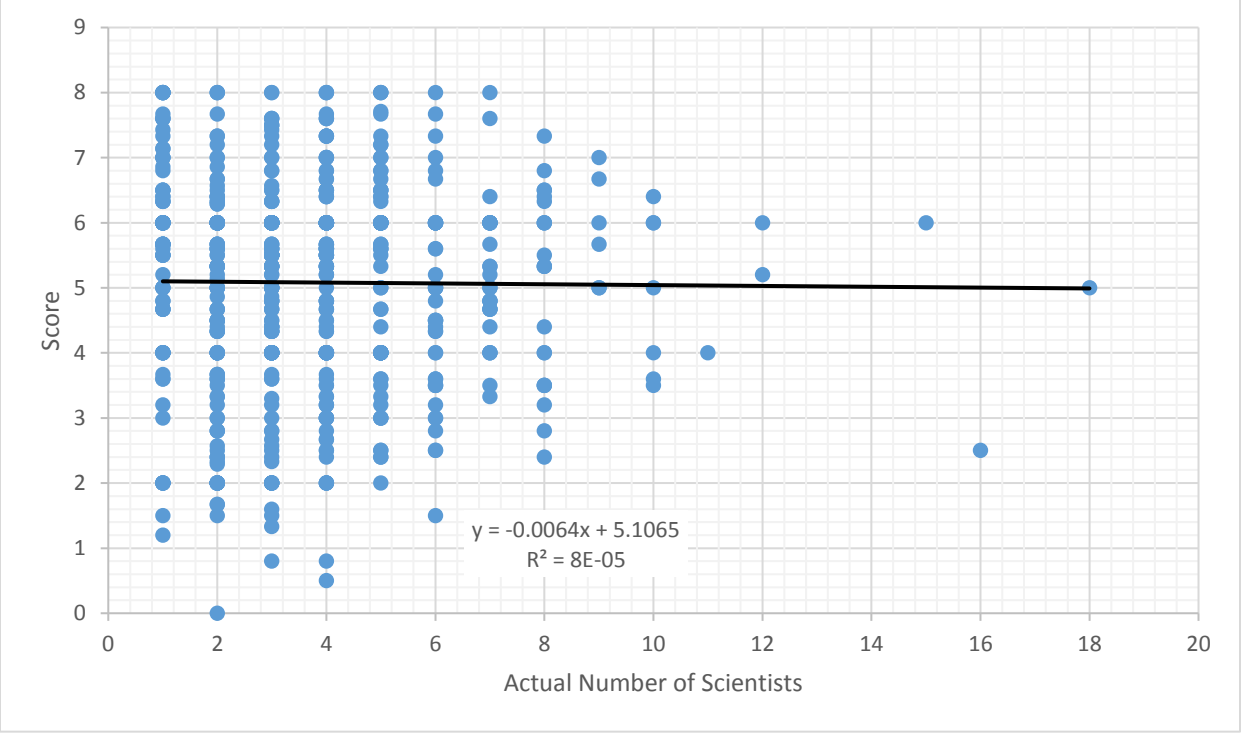


Figure 7. Percentage distribution of initial review scores for the first (2005) second (2010), and third cycle (2015) cycles for the NP 304 Crop Protection and Quarantine Panels (4.0; 4.7; 5.2, average composite scores, respectively). The number of plans reviewed by each cycle is in parentheses. Number over columns is the number of plans receiving that score.

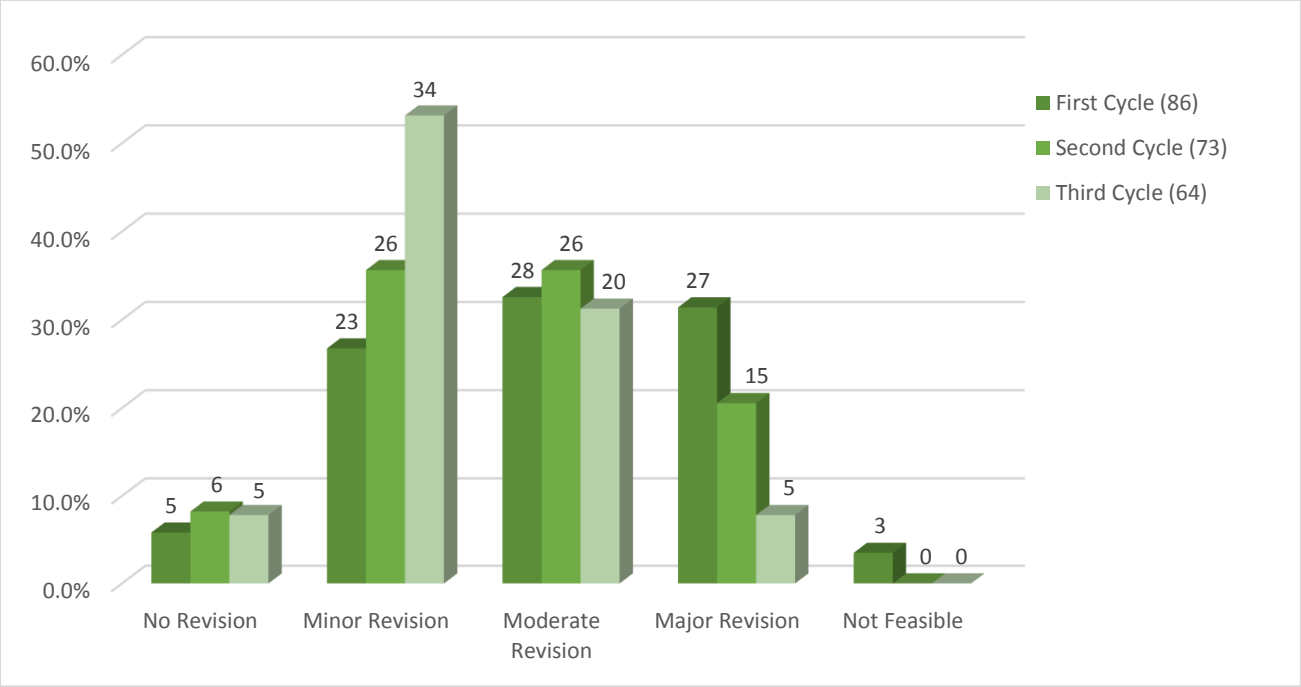
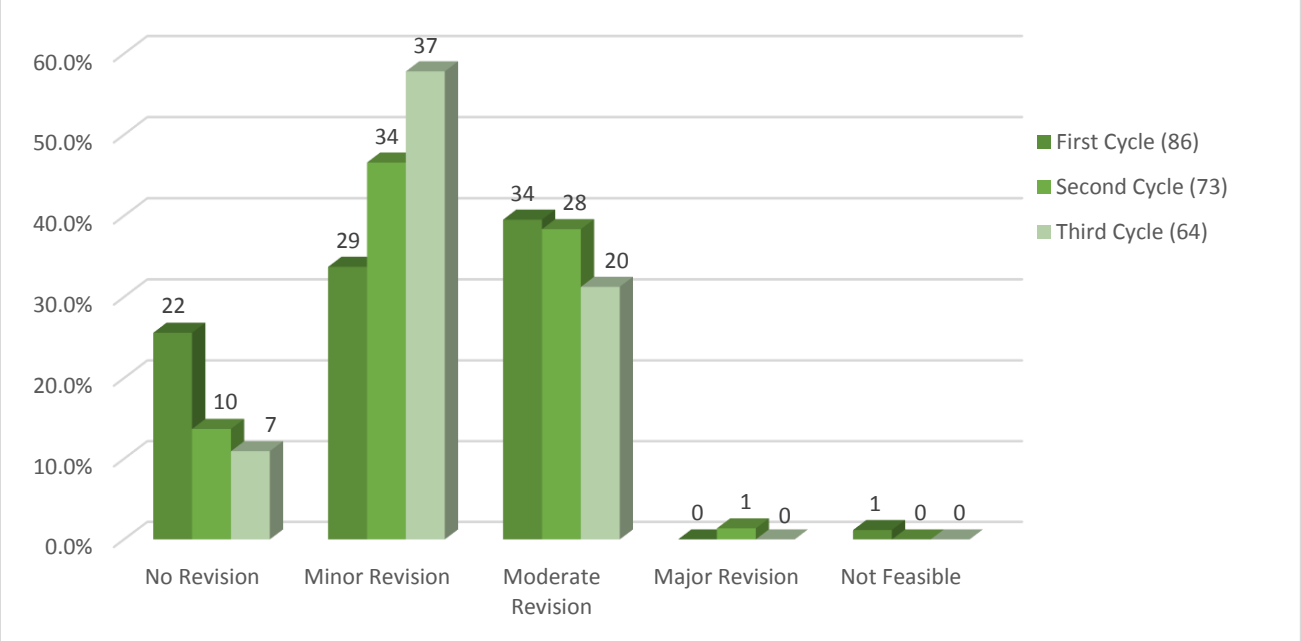


Figure 8. Percentage distribution of final review scores for the first (2005), second (2010) and third (2015) cycles for the NP 304 Crop Protection and Quarantine Panels (5.5; 5.4; 5.6, respectively). The number of plans reviewed by each cycle is in parentheses. Number over columns is the number of plans 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. However, the SQRO does review and approve the Panel Chair's panel member selections and may ask for alterations or additions. Several factors such as qualifications, diversity and availability play a role in who is selected for an ARS peer review panel. The 18 panels were composed of nationally and internationally recognized experts to review 64 projects primarily coded to the Crop Protection and Quarantine Program (see Table 1, page 2). The information and charts below provide key characteristics of the Crop Protection and Quarantine 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, but also 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. Table 4 shows the faculty rank of panelists affiliated with universities and the type of institutions with which the Crop Protection and Quarantine Panel members were affiliated with at the time of review.

Table 4. Faculty Rank of Panelists Affiliated with Universities and Other Affiliations Represented on the Panels

Panel	Academic	Government	Industry & Industry Orgs	Emeritus	Other
Panel 1: BC-Augmentative	2	1	1	2	
Panel 2: BC-Classical	4				
Panel 3: Cotton Pest Management	4				
Panel 4: IPM-Cotton	3			1	
Panel 5: IPM-Other	4				
Panel 6: Post-Harvest	3	1			
Panel 7: Syst, of Insect Pests & Beneficials	4				
Panel 8: Systematics of Pest Arthropods	3				
Panel 9: Insect Genomics & Physiology	4				
Panel 10: IPM-Corn	3			1	
Panel 11: IPM-Fruits	5	1			
Panel 12: IPM-Hort & Vegetables	5	1			
Panel 13: IPM-Small Farm	4				
Panel 14: Systems Weed Management	4				
Panel 15: Weed Classical Biocontrol	3	1			
Panel 16: Weed and Arthropod*	8				

Panel 17: Weed Ecology	3	1		1	
Panel 18: Weed Physio, Biochem, Genomics	5				

*-Two plans each reviewed through written, Ad Hoc, reviews process rather than a panel.

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 are asked if they are currently performing or leading research. Table 5 describes their characteristics in the Crop Protection and Quarantine Panels.

Table 5. The Panels' Recent Accomplishments

Panel	Recent Publication	Recent Professional Awards	Review Experience	Active in Research
Panel 1: BC-Augmentative	6	3	6	4
Panel 2: BC-Classical	4	4	4	3
Panel 3: Cotton Pest Management	4	4	4	4
Panel 4: IPM-Cotton	3	4	4	3
Panel 5: IPM-Other	4	4	4	4
Panel 6: Post-Harvest	5	5	5	5
Panel 7: Systematics of Insect Pests & Beneficials	4	3	4	4
Panel 8: Systematics of Pest Arthropods	3	1	3	3
Panel 9: Insect Genomics & Physiology	4	4	4	4
Panel 10: IPM-Corn	4	3	3	4
Panel 11: IPM-Fruits	6	5	6	6
Panel 12: IPM-Hort & Vegetables	6	4	6	5
Panel 13: IPM-Small Farm	4	3	4	3
Panel 14: Systems Weed Management	4	3	4	4
Panel 15: Weed Classical Biocontrol	6	4	6	5
Panel 16: Weed and Arthropod*	7	5	8	6
Panel 17: Weed Ecology	5	2	5	5
Panel 18: Weed Physio/Biochem/Genomics	5	3	5	5

*- Two plans each reviewed through written, Ad Hoc, reviews process rather than a panel.

Current and Previous ARS Employment

The Research Title of the 1995 Farm Bill 105-585, mandated ARS's requirements for the peer review of the 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 6 shows the number of peer reviewers for each panel that are currently or formerly employed by ARS.

Table 6. Affiliations with ARS

Panel	Currently Employed by ARS	Formerly Employed by ARS
Panel 1: BC-Augmentative	0	3
Panel 2: BC-Classical	0	1
Panel 3: Cotton Pest Management	0	1
Panel 4: IPM-Cotton	0	1
Panel 5: IPM-Other	0	1
Panel 6: Post-Harvest	0	1
Panel 7: Systematics of Insect Pests & Beneficials	0	0
Panel 8: Systematics of Pest Arthropods	0	0
Panel 9: Insect Genomics & Physiology	0	0
Panel 10: IPM-Corn	0	0
Panel 11: IPM-Fruits	0	0
Panel 12: IPM-Hort & Vegetables	0	1
Panel 13: IPM-Small Farm	0	0
Panel 14: Systems Weed Management	0	0
Panel 15: Weed Classical Biocontrol	0	1
Panel 16: Weed and Arthropod	0	3
Panel 17: Weed Ecology	1	0
Panel 18: Weed Physio/Biochem/Genomics	0	1

Panel Perspectives

At the close of panel meetings the panelists are asked to discuss:

1. The review process, its functioning, and any recommendations they may have to improve it; and
2. How or if the review altered their impression/understanding of ARS and ARS research.

Overall, panelists described the process as efficient, fair, thoughtful and thorough. They felt that the capturing of their written comments and recommendations and their transmission to researchers was important. The value of outside review of ARS research was cited as an important strength. It was noted that this can strengthen the work and builds general confidence in ARS research. They found that discussion of the plans among the panelists was an important strength. It was noted that not all were aware until this that ARS relies on this external review and its presence was impressive to many. It was noted that it is particularly important that it is a seriously considered review and not a *pro forma* exercise.

But reviewers felt it important for researchers to remember that reviewers on a panel may not all have specific, detailed, understanding of their work and the experimental details. Thus, parts of the plan that provide research history are important as are descriptions of the rationale for

individual parts of the work, how they integrate into the whole, and overall description of the research methods. It is important for researchers to understand that they may be writing for this somewhat more general audience. Also, for some plans the connection to stakeholders and benefits of the research in practical terms needed to be clearer.

With regard to ARS, the process provides reviewers with a good understanding and appreciation for the breadth and depth of ARS research.

Panel Chair Statements

All Panel Chairs are requested to turn in a statement that describes how their Panel was conducted and to possibly provide comments on the review process that might not otherwise be found in the individual research project plan reviews. Panel Chairs are given some guidelines for writing their statements, but are nevertheless free to discuss what they believe is important for broad audiences. Statements from NP 304 panel chairs follow.

November 18, 2015

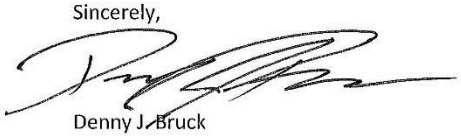
Dr. Michael A. Grusak
Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

Dear Dr. Grusak,

I am writing to thank you for the opportunity to serve as chair of the *NP 304 Panel 1: BC-Augmentative (2015)*. Our panel met in July and was tasked with evaluating the technical and scientific merit of the research. All of the projects that our panel evaluated were well written, comprehensive and thoughtful. It was clear to the entire panel that the scientific teams had taken their jobs seriously. The panel members reciprocated with very thorough and thoughtful reviews of each of the project plans. The process of having a primary reviewer lead the discussion for each plan worked very well and other panel members chimed in with their comments and suggestions for potential plan improvements. This allowed the primary reviewer to dig into the details of the plan while still allowing the other panel members to participate fully in the review. The OSQR Office did an admirable job organizing our teleconference and facilitating document sharing virtually which made the review process go seamlessly.

In summary, I think this panel provided clear and effective reviews of the project plans they were charged with evaluating. I trust that their comments will be valuable to the authors as they finalize their proposals.

Sincerely,



Denny J. Bruck

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November 23, 2015

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Beltsville, MD 20705

Dear Dr. Grusak,

I am writing to close-out the review panel for ARS' National Program NP 304 Panel 14: Systems Weeds Management (2015). I was very pleased with the quality of our panel and the thoroughness in which each member reviewed the proposed projects. While this review experience was new for us all, the preparatory briefings effectively guided our panel to complete through and thoughtful reviews of the proposed projects. I think the panel's input both ensures quality of ARS research projects, and ideas to significantly improve particular dimensions of this research.

It was a pleasure to serve as Panel Chair for this review.

With regards,

Eric Gallandt
Professor of Weed Ecology and Management

UNIVERSITY OF DELAWARE
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DEPARTMENT OF ENTOMOLOGY AND WILDLIFE ECOLOGY
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Dr. Michael A. Grusak
Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

June 9, 2015

Dear Dr. Grusak:

I write this as panel chair for The OSQR review that just concluded. Overall, I was very happy with the review process. The three reviewers had all taken their jobs extremely seriously, with thoughtful and detailed written comments, which made the on-line meeting quite painless. As indicated by several of the reviewers following the discussions, having three project plans to read, and only one each as primary and secondary reviewer, was entirely manageable, and allowed them to put substantial time into detailed review of each plan.

The plans themselves were appropriately rated as requiring either minor revision or moderate revision. For the most part those presenting the plans clearly had put much time and effort into writing and organizing them. Generally the scientists showed familiarity with broad issues of interest to scientists in their area in addition to specific knowledge of their system.

The overall quality of the review process was high, and the panel had no recommendations for change in future reviews. I commend Mike Strauss and Linda DalyLucas for their handling of the mechanics and flow of the entire review process.

Sincerely,

Judith A. Hough-Goldstein
Professor

Department of Bioagricultural
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Dr. Michael A. Grusak
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Beltsville, MD 20705

Department of Bioagricultural
Sciences and Pest Management
Fort Collins, Colorado 80523-1177

15 March, 2016

Dear Dr. Grusak,

I chaired the National Program 304 review panel last year. This letter is my close-out for the review.

The panel went well, the reviews were high quality, and the proposals also were in good shape. Given how tightly the programs were defined, the input provided by panelists was also narrowly focused, as any broader comments could not be taken into serious consideration.

My role as chair was focused mostly on choosing panelists with relatively little opportunity for input as a panel member myself. I had thought I would help lead the discussion, but was instead in a listening role. While it was nice that the work load of writing the reviews was taken on by employees of ARS, it did seem odd that there was never any check back with me to see if I agreed that the review matched the discussion of the proposals.

I hope this information is helpful.

Sincerely,

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December 14, 2015

Dr. Michael A. Grusak
Scientific Quality Review Officer
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Dear Dr. Grusak:

This letter is in regards to NP 304 Panel 2: BC – Classical (2015) for three project plans that were provided for evaluation. The review panel was excellent. Also, because these experienced panel members came from a broad research background, they provided unique perspectives and alternate approaches for consideration by Agency scientists and staff. The discussions provided rigorous and credible scientific peer review which led to recommendations and comments for improving the quality of research proposed by the investigators.

I was very impressed by the level of preparation of each of the reviewers regardless of their assigned role as primary or secondary reviewer. In addition, these reviewers have strong publication records in relevant, overlapping fields. All of the reviewers understood very well the review criteria and their roles as peer reviewers. The time spent discussing each project was appropriate. The panel was held by teleconference and the review was conducted in a timely and efficient manner. Panel members provided constructive and insightful scientific comments on the strengths and weaknesses of the various project plans; these comments should improve the quality of the research and strengthen the likelihood of success. The overall structure of the project plan could be streamlined (for example: information provided by the principal investigator (PI) for items such as "Scientific Background" and "Approach and Research Procedure" often overlaps). Logistical arrangements were adequate.

It was difficult to identify qualified panel members who had no conflict of interest because of the impressive team of collaborators for each PI. Perhaps the mere appearance of a conflict should not be a criterion for rejection of a panel member in order to broaden the pool of qualified reviewers. As the project plan has already been funded, the emphasis may need to shift to improving the quality of the research proposed by the PIs.

Panel members agreed that it took substantially more time to review the project plan than the few hours indicated in the letter of invitation.

The consensus building that was generated by the OSQR and sent to panel members before the panel review was very helpful as it made the review effective and efficient.

It's possible that instructions to the PIs were not clear: some PIs provided concise and efficient descriptions of the methodologies, while others failed to include simple experimental details. The lack of such information made review of project plans a little more difficult.

Overall, this was an effective peer review panel, and I enjoyed participating

Sincerely,

Lambert H. B. Kanga, Ph.D
Professor and Director

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June 21st, 2015

Michael Strauss
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Ave
Beltsville, MD 20705

Dear Dr. Strauss,

As you are aware our panel met and discussed the project plans on June 12th, 2015; two projects received only minor revisions and one received moderate reviews.

The proposals addressed emerging needs in agriculture as well as future direction in pest management. Overall, the proposals were well written and the scientists had a good understanding of current tools used in agricultural pest management. Furthermore, the projects provided good insights on the next generation of pest management tools including molecular cloning techniques and RNAi technology. All of the plans provided a good literature review, although some were more thorough than others. The biggest problem with the project plans was a lack of experimental controls to support the objectives and sub-objectives that were outlined. All of the project plans could be improved if the authors included controls that can adequately test the hypotheses stated in the objectives.

Some of the plans were ambitious in nature encompassing a series of objectives and sub-objectives. This raised the question of whether the work could be completed in a 5-year period. Despite having lots of objectives and sub-objectives, some of the important details in the methodology were left out making it difficult to assess the effectiveness of the proposed work. In a few cases where flow charts were used it was not always possible to follow the charts so that they tell a complete story from start to finish.

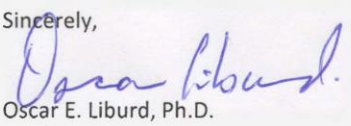
More information could have been included in all of the plans on how the data would be analyzed and what will happen post data analysis. The projects also lack an outreach component needed to ensure that end users (stakeholders, crop consultants and growers) will benefit from the research.

The review process was quite good. The online version saves time, labor and expenses associated with travelling from one city to the next. The panelists were quite knowledgeable and provided diversified points of view. All of the panelists appeared to be well prepared for the panel discussion. The reviews

for the most part were done thoroughly; however, there were differences in the experiences of the panelists. For instance, this was the first time one of the panelists was serving on a review board whereas other panelists had done this a few times. One of the panelist was quite knowledgeable on the use of molecular tools and was able to address the weaknesses on project plans that included this technology. Another panelist provided excellent suggestions with respect to the use of biological control and pests' ecology. The third panelist brought a different perspective in research and outreach (extension) and was quite knowledgeable on the use of semiochemicals in insect pest management. This panelist was able to identify shortcomings in all of the project plans with respect to outcomes. Overall, the panelists' recommendations on the project plans were more or less equivalent, and I concurred with all of their recommendations.

The program of research matches well with my experiences and training. I have served as Panel Manager on other USDA programs prior to this one. Please feel free to contact me at oeliburd@ufl.edu or call me at (352) 273-3918 if more information is needed regarding this review process.

Sincerely,



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May 7th 2015

Dr. Michael A. Grusak
Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
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Beltsville, MD 20705

Dear Dr. Grusak,

Please find below is a summary of panel chair statement for the NP 304 Panel 6: Post Harvest (2015). The panel met virtually on Wednesday, April 29th 2015 at 10:00 AM Eastern time via the OSQR web/phone conference. Panel meeting began with welcome by you followed with a brief overview of review process by Peer Review Program Coordinator Dr. Mike Strauss and by the Panel Chair.

The five-member panel consisted of four panelists and the Chair, who reviewed four intramural project plans submitted from ARS locations conducting research on methyl bromide alternatives. The panel evaluated of the technical and scientific quality of the research assessing the feasibility of the project plan, considering the approach, the facilities, the personnel and the merit & significance. Necessary recommendations were provided for improvement, if reviewers were critical of any aspect of the project plan.

Each of the four panelists served as a primary reviewer for one research plan, and as a secondary reviewer for a second research plan. In addition, each panelist provided brief comments on the remaining two plans. Panel chair reviewed all plans and provided necessary input. Written reviews were submitted to OSQR office a week before panel discussion. Plans were discussed in the order that was predetermined by the panel Chair based on review comments. For each plan, the primary reviewer presented a brief overview of the project and any significant issues and critical aspects. Secondary reviewer who followed then, indicated agreement or disagreement with the primary reviewer without overstating comments made by primary reviewer. Further discussion continued among panel members and finally the plan was rated by each member giving a score to the plan. Scores were finalized at the end of the meeting.

The National Program Action Plan identifies research needs. Plans reviewed during this meeting come under the National Program of Crop Production and Protection sub section 304: Crop Protection and Quarantine. Each of these plans were created in response to a National Program Action Plan that was based on input from a variety of stakeholders and from Congress. These plans were submitted by various ARS locations working on quarantine pests, invasive species, and postharvest commodity treatments. Evaluated plans were for a period of five years, of varying in size, with some being limited in scope and personnel and others wide ranging with several objectives involving several researchers and collaborators. Some plans elaborately proposed innovative and novel techniques as methyl bromide alternatives in multiple-component systems approach for quarantine pests or commodity treatments while other projects were a logical continuation of semiochemical work that researches have been conducting for several years for exotic insect species. Nevertheless, all plans indicated potential for positive impact on the industries involved and possibility for generating new knowledge. In overall, reviewers noted that, past accomplishments of researchers, along with proposed objectives in different plans and partnership with stakeholders will support expansion of US agricultural exports, protect US agriculture from quarantine pests and benefit farmers, exporters, consumers and regulatory agencies.

The virtual panel discussion, in general, completed with less technical difficulties, although couple of panelists experienced difficulties in either connecting to the web-based application or lost connection while trying connecting from a device remotely. However, panelists who joined the meeting overseas did not experience difficulties in remaining in the connection. Excellent support provided by OSQR staff in troubleshooting made the overall panel discussion smooth and continuous.

It has been a great pleasure serving on this panel as a Chair and I am looking forward for future opportunities.

Thank you.

Sincerely

Rizana Mahroof, PhD
Associate Professor

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Dr. Michael A. Grusak
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Beltsville, MD 20705

July 17, 2015

RE: USDA_ARS Panel: NP 304 Panel 7: Systematics of Insect Pests & Beneficials

Dear Dr. Grusak,

It was my pleasure to serve as the chair of this panel. The panel met online on Friday July 17, 2015 and reviewed three proposals. The review process lasted approximately two hours. Prior to the review each proposal was assigned to two reviewers, one served as the primary reviewer and the other as secondary reviewer. One week prior to the panel discussion, primary and secondary reviewers supplied written comments on their assigned proposals. All comments were summarized prior to the meeting and comments added during the discussion were added to the notes. After the discussion of each proposal, the reviewers commented on the probability of the success and the significance of the work as proposed. After these discussions, all three reviewers and the panel chair rated the proposal in a secret ballot as either "no revision," "minor revision," "moderate revision," "major revision," "not feasible." Secret ballot votes were tallied and the plan was thereby ranked.

The thoroughness and thoughtfulness of the reviewers and the streamlined nature of the entire review process was impressive. I commend the USDA-ARS in establishing this fair and efficient review process.

Sincerely,

Wendy Moore

Dr. Wendy Moore
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November 30, 2015

Dr. Michael A. Grusak
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Beltsville, MD 20705

Dear Dr. Grusak,

Thank you for the OSQR team's assistance during the review and the opportunity to provide input into the process. Please find my comments below:

The reviewers and their preparation for discussions: The reviewers took their responsibilities seriously and were prepared during the initial and follow-up discussions. The timely reminders from OSQR staff were instrumental in keeping the panel on track.

The panel's written reviews were thoughtful and provided valid guidance for improvements. OSQR team combined comments expertly which helped facilitate the discussion. Distributing the written reviews before convening greatly facilitated the discussion of each project. Each reviewer brought different issues to light while generally agreeing on the ranking of the proposals. The Review Recommendations questions thoroughly addressed the questions that should be answered during the review.

The overall process was smooth due to the cooperation of the panel, the procedures, guidance documents already in place, and responsiveness of OSQR staff. Enabling the panel to meet virtually also added to the efficiency of the process. The details of managing the review -- vetting of suggested panel members, initial training on review expectations, scheduling of deadlines, sending project proposals to the correct reviewers, collection of reviews, compilation of comments were all done by OSQR staff and ensured success.

Recommendations for enhancements:

1. Perhaps the in-depth reviewer scores should be weighted more heavily than the rest of the panel members. In one case, an in-depth reviewer with content area expertise felt strongly that a proposal should not go forward, but that score was diluted by the rest of the panel.

Allowing all panelist scores to be weighted equally may allow plans to advance when they should not. It also may defeat the purpose of having "experts" in an area.

2. While the plans are not reviewed "competitively," more plans could have been written as if for competitive review. While there is merit to each of the plans reviewed, there seemed to be a wide range in the writing quality within and between plans. Reviewer comments on several plans pointed out deficiencies in the literature review or lack of justification of an objective based on the literature presented. More than one plan was given the benefit of the doubt during review based on the past performance of the team. This panel did not dwell on the diversity of the research teams, but positive comments were made when the teams were diverse or when members were added to ensure project success.

3. Would it be helpful to provide those writing the project with the Review Recommendation document provided to reviewers, in addition to any other guidance ARS scientists receive during project preparation?

4. Updated list of possible panel members.

5. Consider Adobe Connect or Microsoft Lync which has a video function so that panel members can see each other during review.

General issues with regard to the area of research that the review encompassed: There were no issues with the area of research the plans encompassed.

Overall quality of the review process was excellent. I cannot say enough about OSQR and how instrumental they were in the success of this process. I am extremely grateful to the reviewers and appreciative of everyone's time.

Sincerely,

Faith M. Oi, Ph.D.
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December 2, 2015

Dr. Michael A. Grusak
Scientific Quality Review Officer
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Agricultural Research Services, USDA
5601 Sunnyside Avenue, MS 5142
Beltsville, MD 20705

Dear Dr. Grusak,

Thank you for your assistance to the NP-304 Crop Protection and Quarantine: IPM-Cotton Panel as our panel considered the proposed projects.

The members of the panel devoted considerable time to carefully review each project in its entirety. The panel discussions demonstrated the dedication of each panel member as they reviewed their review notes prepared prior to the group review. The diverse strengths of the panel members allowed them to highlight various methodology concerns, statistical questions, and discussion of relevant literature which greatly enhanced the review. The coordinated effort of the panel members identified project needs for clarification and in some instances identified methodology issues and comments for the project investigators consideration.

The panel members complimented the thoroughness of each project's content. The compiled material demonstrated knowledge of relevant literature, sound methodology, and tremendous investigator expertise. The panel members complimented the coordinated efforts between ARS, universities, and extension scientists to address real world problems with sound science that should contribute to viable solutions.

The panel members appreciated the opportunity to participate in the review process and were complimentary of the process. The members agreed that the review process provided an opportunity for critical review by scientist not associated with the projects, and the process provided an opportunity for projects enhancement through panel feed-back. At the conclusion of the panel participation, the members were complimentary and supportive of the projects provided for review.

I greatly appreciate the dedication of the panel members, and thank you and your staff for the excellent organization and coordination of the review process. Additionally, I am thankful to witness the merit of the scientists employed by USDA, and their devotion to addressing real world problems through scientific investigation.

Sincerely,

Charles D. Parker, Ph.D.
Manager, IPM

West Texas A&M University
Department of Agricultural Sciences

Dr. Michael A. Grusak
Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service, USDA
5601 Sunnyside Ave., MS 5142
Beltsville, MD 20705

30 November 2015

Dear Dr. Grusak:

It was a privilege to serve as chair of NP 304 Panel 10: IPM-Corn (2015) to review three USDA ARS five-year research project plans. The three panel members and I believe that reviews such as this help ensure that limited funding is used to most benefit stakeholders.

The quality of the review process was excellent. Having primary and secondary reviewers worked well for leading thorough discussion of each project plan. The panel members and I appreciated being able to meet and discuss by computer and telephone instead of spending time to travel to meet and discuss the plans. We appreciated your understanding when a reviewer was too busy with spring and summer research in the field to submit written reviews on time. Perhaps future panels might be convened earlier (in winter) to avoid peak spring and summer research by some panel members.

We found that some information on collaborators and several other subjects was difficult to find readily in the written plans. Panel members also frequently commented that researchers failed to mention statistical analysis they proposed for data collected. Perhaps more detail on placement of information in the written plans might be provided to the researchers.

The three panel members, two of whom I have known for 20 years, are very knowledgeable and experienced mid-career entomologists and pest managers who also have much expertise in field agronomy. All panel members have extensive education and experience in using IPM to manage pests of field crops, including maize. I consider all three panel members to be very qualified experts on the proposed research subjects. Two panel members have personally researched transgenic maize and ways to prevent development of resistance by corn rootworms -- a major topic of each project plan. Two of the panel members have worked for industry, and two are extension scientists.

The three panel members and I agree that the scientists and collaborators have the expertise needed for success of their planned USDA research projects. After minor revision of two of the plans and moderate revision of the third, we believe the proposed research will address important current problems and find ecologically-based solutions for managing major pests of agroecosystems, especially maize production, in the Great Plains region. We believe the proposed research will greatly benefit farmers and other stakeholders served by the United States Department of Agriculture.

The panel members and I thank you for the professional way you and those in your office managed the review. It was a privilege to have been involved in the process.

Sincerely,

Bonnie B Pendleton

Bonnie B. Pendleton, Ph.D.
Professor of Pest Management-Entomology

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Jefferson City, Missouri, July 24, 2015

Dr. Michael A. Grusak
Scientific Quality Review Officer
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RE: Panel Chair Statement

This letter provides an overview of the evaluation process of five ARS Project Plans in the USDA ARS National Program (NP) 304 Crop Protection and Quarantine - panel NP 304. Panel 11. IPM, Fruits (2015). I, Dr. Jaime Piñero, served as panel Chair. As part of the process, I participated in a 1-hour Microsoft Live Meeting orientation in preparation for the panel review meeting.

Five University people representing various geographical regions and multiple areas of expertise reviewed the projects. The five panelists had previously been short-listed following initial discussion held between myself and Dr. Mike Strauss (Peer Review Program Coordinator, OSQR).

After each reviewer accepted being part of the process, they received preliminary information via e-mail (on April 29, 2015) and they were asked to complete the confidentiality agreement and panelist information forms. They also participated in an online orientation session that explained the review process. Once they received the ARS projects, they were asked to examine plans using three criteria: 1) Adequacy of Approaches and Procedures, 2) Probability of Success, and 3) Merit and Significance. They were also asked to provide specific suggestions for improvement if any deficiencies or weaknesses were found.

The virtual panel was held on July 15th, 2015. All panelists connected to the virtual panel on time, and the review process / discussions ran smoothly. For nearly all plans, only minor revisions or no revisions were suggested, denoting the high-quality of the ARS projects that were evaluated.

Overall assessment of the process: The panel chair believes that this process was efficient. Each panelist provided important input (as written comments and also verbally during the virtual panel) on the overall quality of each plan, including a critical evaluation of the approaches and procedures proposed. In terms of recommendations for future reviews, panelists suggested inclusion of current and pending support forms in the projects to indicate which research has been / would be support by extra-mural funding. This is being done by nearly non-ARS scientists for each grant application.

Please let me know if you have any questions.

Sincerely yours,

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Dr. Michael A. Grusak
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Beltsville, MD 20705

Re: USDA NP 304 Panel 9: Insect Genomics & Physiology Panel Chair Statement

Dear Dr. Grusak,

I am grateful for the opportunity to Chair a panel for USDA and it has been a valuable experience. The panel had 4 members and we reviewed 4 proposals. I hope the research teams and the USDA found our reviews useful.

My general impression was that the panel provided thoughtful feedback in their written comments as well as during discussions. However, it may have helped to provide the junior member of the panel with additional guidelines for preparing their review. It is possible that the expectations of the level of detail that makes a review useful were not clear to the inexperienced member?

As far as the topics covered in the 4 grants the panel reviewed, I felt that there was a clear difference in subject matter between the two areas of Genomics and Physiology. This "merger" of two disparate topics could potentially challenge the quality of review in the future since it is difficult to find panel members that are experts in both physiology and genomics. The enthusiasm of members with expertise in one area can be limited when it comes to the other area.

During the course of our discussions, another concern that came up frequently was related specifically to the topics of the research projects set forward by the USDA, which the proposals were responding to. There were some concerns raised about two topics dealt with in the grants: the utility of genetically modified Asian Citrus Psyllids (ACP) and about acoustic methods to monitor insects. The main concern raised about these approaches for ACP control was in regards to the practical applicability of GM ACP given their lifestyle and reproductive biology. And for acoustic methods the opinion was it had little promise, despite several years of research.

It is difficult to speculate what the outcome of such grants would be in a review panel such as NSF or NIH where the impact and significance of the research topic is considered highly. Since experienced scientists are brought together for the panels anyway, it would be worth considering whether there is any value for panels to also provide a critique of the USDA topics as well during review (to the USDA and not the investigators).

I hope this letter is useful in the overall review process.

Yours sincerely,

Anandasankar Ray
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April 21, 2015

Dr. Michael A. Grusak
Scientific Quality Review Officer
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Dear Dr. Grusak:

This letter serves as my close out review and assessment as Chair of the NP 304 Panel 3: *Cotton Pest Management 2015* panel review. I was pleased with the quality of the reviewers, their preparation for our discussion and their written reviews. I was able to solicit reviewers that were familiar with the cropping systems and pest management approaches outlined in the projects. They provided a thorough, objective review of the projects that were assigned to them.

The support supplied by the program coordinator and program specialist allowed for an efficient, smoothly executed review from start to finish. I could not have been more pleased with the process.

The projects that we were asked to review were well defined and scientifically sound. Our panel believed that only one of the projects needed some fleshing out with regard to detail, and perhaps, the project leader needed to rein in the scope of the project so that the objectives outlined could be accomplished in a timely fashion.

My only suggestion to the National Program Panel is with regard to the list of suggested reviewers. Some on that list have either retired or have passed away, so I suggest that a process for regularly updating that list be developed and implemented.

In summary, I thank you for the opportunity to provide a "peer review" of these projects. I sincerely hope that we (and I) met your expectations.

Sincerely,

Tom A. Royer
Professor and IPM Coordinator

November 10, 2015

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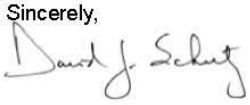
Dr. Grusak,

I'm writing this letter to provide you with my panel chair statement for USDA NP 304 Panel 18. In my opinion, this review was productive and carried out in a very thoughtful and constructive manner. The process facilitated by your office went very smoothly. While it was difficult to originally assemble reviewers with required expertise, I was very happy with the efforts and outcomes produced by the four reviewers for this panel. Each contributed important and insightful critiques of assigned programs. Each review balanced well the efforts to provide a rigorous scientific review while considering the mission and scope of the research objectives. I believe that the suggestions made by the reviewers will lead to stronger USDA research programs. The combined written comments of all reviewers worked nicely as points of reference during the oral discussions. The discussions were balanced and gave ample opportunity for reviewers to add individual perspectives. I appreciate the guidance the USDA provided with respect to time of discussions. Admittedly, our panel did get bogged down on some points and at times individual members had issues with brevity. This did lead to a more rushed feeling toward the end. It would have been nice to have a more opened ended time frame, though I appreciate the need to keep the panel focused and productive. A couple of additional points may have made the process easier for reviewers. For example, program PIs should not be allowed to submit proposals in which materials are listed as proprietary and then leave details out that the reviewers need in order to conduct an accurate review. Since reviewers have all signed confidentiality agreements, proprietary nature of materials is protected and thus details should be provided. Additionally, I think it would help reviewers to know (have highlighted in some way) parts of the application that fall outside the scope of the target program objectives, but that do match and fit into the objectives of another program. Multiple reviewers noted components that seemed to fall outside of our targeted objectives, but later we learned these were OK as they were part of another program objective. I understand the nature of many USDA research programs cut across program objectives. However, clarifying which specific points meet outside objectives would help the review since reviewers are spending at least some effort to ensure proposed programs are meeting defined program objectives.

In summary, I found the review process as facilitated by the USDA office to be straightforward and well planned. The reviewers were experts in their fields and were selected specifically for expertise contributed that was directly relevant to the research proposals. The critiques of the proposals were thorough and provided what is hoped to be valuable feedback to the research to be used to strengthen the USDA research program.

Sincerely,



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Dr. Michael A. Grusak
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11/23/15

A thorough review of proposals assigned to our panel USDA NP 304 Panel 17: Weed Ecology occurred in June 2015. This review was preceded by a search for qualified reviewers with expertise in the areas addressed by the proposals. Reviewers were selected to give both breadth and depth of expertise to the proposals being evaluated. The reviewers were carefully screened by myself and Dr. Mike Strauss to assure that their expertise matched the subject area of the proposals and that there were no conflicts of interest.

It was evident to me as the panel chair that all four reviewers put significant time and energy into their assigned reviews. Each reviewer came well prepared to discuss each proposal in our panel review meeting. The written reviews were thorough and insightful and from my perspective provided excellent feedback on each proposal, with detailed suggestions on how they could be improved. Each proposal and corresponding written review were evaluated by panel members and discussed in detail in our panel review meeting. There were several points that we debated and discussed but in the end there was consensus among all panel members in our decision for each proposal and the feedback we provided.

I have been involved in several scientific review panels during my career and the preparation, professionalism and quality of this review were as high as any panel I have served on.

Sam St. Clair

Dr. Sam St. Clair
Panel Chair
Brigham Young University
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UtahStateUniversity
DEPARTMENT OF BIOLOGY

April 25, 2015

Dr. Michael A. Grusak
Scientific Quality Review Officer
Office of Scientific Quality Review
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Dear Dr. Grusak,

With this letter I submit my panel chair statement for the ARS NP 304 Panel 8: Systematics of Pest Arthropods (2015). I very much enjoyed serving on this panel, and working with the ARS staff to make it happen. I was very impressed with how helpful Mike Strauss and Linda DalyLucas were, and how quickly they answered my emails and questions.

The process of executing this panel by email and online discussion was very effective, efficient, and economical. I likely would not have been able to serve if the panel had required travel. The first online session for the panel chairs training went very smoothly and the accompanying Powerpoint presentation was very clear; it was also helpful to have the file sent to us for reference. The materials made it very clear what was the purpose of these plans and what was to be expected in the components of a plan. With respect to choosing reviewers, I found it very helpful to have a list of individuals who were already on record as potential reviewers. It was a relatively straightforward task to secure the promises of two reviewers for my two plans. Both reviewers completed their reviews right on time (and I'm sure we all appreciated the well-paced reminders from Linda). Both reviewers provided thorough, thoughtful, and helpfully critical reviews. Both were in considerable agreement about the strengths and weaknesses of each plan.

It was very helpful to receive the combined review document prepared by ARS staff ahead of the online panel meeting. This meeting went very smoothly. (I would note here that it could be helpful to alert participants that the ATT Connect software web client seems to work only with certain web browsers—e.g., only Safari for Mac users). Both reviewers provided succinct and cogent summaries of their reviews in a professional manner. Both had very high regard for the PI scientists, and emphasized the great importance of the work they were doing as well as their admirable productivity. One criticism from both reviewers (and me) common to both plans was that a list of collaborators was included in the project

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descriptions, but the specific role of the collaborators was not completely spelled out. Another criticism was that certain elements in the major objectives were not followed up on in the project description with any methods, nor was it specified that collaborators would perform those aspects of the research. We, the panel, inferred that this would be a collaborator's contribution, but this was not clear from the project description. In addition, we all agreed that more specific detail on certain methods could have been included in the plans; both plans had some unnecessary figures that, if omitted, would have allowed space for more methodological detail.

This was my first time serving on an ARS panel. I did not know what to expect, so I was very pleased and grateful for how well the process was run and how easy it was to do my part.

Sincerely,

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Professor
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Projects Reviewed by the Crop Protection and Quarantine Panels (listed by Lead Scientist)

International

Marie-Claude Bon
Biological Control of Invasive Arthropod Pests from the Eastern Hemisphere

René Sforza
Biological Control of Invasive Weeds from Eurasia and Africa

Midwest Area

Robert Behle
Use of Microorganisms to Manage Weeds and Insect Pests in Turf and Agricultural Systems

Thomas Coudron
Insect Biotechnology Products for Pest Control and Emerging Needs in Agriculture

Adam Davis
Understanding and Responding to Multiple-Herbicide Resistance in Weeds

Bruce Hibbard
Plant Resistance, Artificial Diets, Biology, and Resistance Management of Western Corn Rootworm and Other Maize Pests

Richard Hellmich
Managing Insects in the Corn Agro-Ecosystem

Mark Jackson
Development of Production and Formulation Technologies for Microbial Biopesticides in Conjunction with the Development of Attractants and Repellents for Invasive Insect Pests

Michael Reding
New Strategies for Management of Invasive Ambrosia Beetles in Horticultural and Nursey Crops

Northeast Area

William Bruckart
Utilizing Plant Pathogens as Biological Control Agents of Invasive Weeds in the United States

Matthew Buffington
Systematics of Parasitic and Herbivorous Wasps of Agricultural Importance

Jian Duan
Biological Control of Invasive Wood-Boring Insect Pests Such as Emerald Ash Borer and Asian Longhorned Beetle

Donna Gibson
Conservation and Enhancement of Fungal Resources for Biological Control and High Value Uses

Matthew Greenstone
Urban Landscape Integrated Pest Management

Kim Hoelmer
Classical Biological Control of Insect Pests of Crops, Emphasizing Brown Marmorated Stink Bug, Spotted Wing Drosophila and Tarnished Plant Bug

Keith Hopper
Host Specificity and Systematics of Insect Biological Control Agents

Steven Lingafelter
Beetle Taxonomy and Systematics Supporting U.S. Agriculture, Arboriculture, and Biological Control

Stuart McKamey
Systematics of Hemiptera, Including Plant Pests and Disease Vectors, and Beneficial Predators

Lindsey Milbrath
Evaluation of Biological Control for Invasive Weeds of the Northeastern United States

Steven Mirsky
Cover Crop-Based Weed Management: Defining Plant-Plant and Plant-Soil Mechanisms and Developing New Systems

Allen Norrbom
Systematics of Flies of Importance in Agroecosystems and the Environment

Ronald Ochoa
Plant Feeding Mite (Acari) Systematics

John Vandenberg
Microbial and Arthropod Biological Control Agents for Management of Insect Pests of Greenhouse Crops and Trees

Fernando Vega
Develop Pest Management Technologies and Strategies to Control the Coffee Berry Borer

Donald Weber
Urban Small Farms and Gardens Pest Management

Pacific West Area

Peter Follett
Pre- and Postharvest Treatment of Tropical Commodities to Improve Quality and Increase Trade through Quarantine Security

Brenda Grewell
Watershed-Scale Assessment of Pest Dynamics and Implications for Area-Wide Management of Invasive Insects and Weeds

Peter Landolt
New Technologies and Strategies to Manage the Changing Pest Complex on Temperate Fruit Trees

Jana Lee
Biologically-Based Management of Arthropod Pests in Small Fruit and Nursery Crops

Yong Biao Liu
Methyl Bromide Replacement: Post-Harvest Treatment of Perishable Commodities

John Madsen
Enhancing Water Resources Stewardship through Aquatic and Riparian Weed Management

Patrick Moran
Management of Invasive Weeds in Rangeland, Forest and Riparian Ecosystems in the Far Western U.S. Using Biological Control

Joseph Munyaneza
Systems Approach for Managing Emerging Insect Pests and Insect-Transmitted Pathogens of Potatoes

Roger Sheley
A Systems Approach to Restoring Invaded Sagebrush Steppe

Joel Siegel
Systems-Based Approaches for Control of Arthropod Pests Important to Agricultural Production, Trade and Quarantine

Keirith Snyder
Integrating Ecological Process Knowledge into Effective Management of Invasive Plants in Great Basin Rangelands

Dale Spurgeon
Ecologically Based Pest Management in Western Crops Such as Cotton

Roger Vargas
Detection, Control and Areawide Management of Fruit Flies and Other Quarantine Pests of Tropical/Subtropical Crops

Plains Area

James Anderson
Novel Weed Management Solutions: Understanding Weed-Crop Interactions in Northern Climates

David Branson
Ecology and Management of Grasshoppers and Other Rangeland and Crop Insects in the Great Plains

Louis Hesler
Ecologically-Based Pest Management for Modern Cropping Systems

Gary Puterka
Management of Aphids Attacking Cereals

John Westbrook
Detection and Biologically Based Management of Row Crop Pests Concurrent with Boll Weevil Eradication

George Yocum
Conservation of Genetic Diversity and Improved Storage Protocols for Agricultural Pests and Beneficial Insects

Southeast Area

Hans Alborn
Insect, Nematode, and Plant Semiochemical Communication Systems

Sandra Allan
Improved Biologically-Based Tactics to Manage Invasive Insect Pests and Weeds

Kerry Allen
Integrated Insect Pest and Resistance Management on Corn, Cotton, Sorghum, Soybean, and Sweet Potato

Douglas Boyette
Bioherbicidal Control of Invasive Weeds with Indigenous Plant Pathogens

James Carpenter
Integrating Biological and Genetic Control Tactics to Manage Invasive Insect Pests

Stephen Duke
New Weed Management Tools from Natural Product-Based Discoveries

Nancy Epsky
Methyl Bromide Replacement: Mitigation of the Invasive Pest Threat from the American Tropics and Subtropics

Alfred Handler
Improved Biologically-Based Methods for Insect Pest Management of Crop Insect Pests

Robert Hoagland
Biology and Management of Herbicide-Resistant Weeds

Stephen LaPointe
IPM Methods for Insect Pests of Orchard Crops

Cindy McKenzie
Exotic Whitefly Pests of Vegetables and Ornamental Plants

Juan Morales-Ramos
Production and Deployment of Natural Enemies for Biological Control of Arthropod Pests

Dawn Olson
Ecology and Biologically-Based Management Systems for Insect Pests in Agricultural Landscapes in the Southeastern Region

Omaththage Perera
Innovative Strategies for Insect Resistance Management in Bt Cotton

Maribel Portilla
Alternative Approaches to Tarnished Plant Bug Control

David Shapiro-Ilan
New Tools for Managing Key Pests of Pecan and Peach

Alvin Simmons

Sustainable Approaches for Pest Management in Vegetable Crops

Philip Tipping

Identification, Evaluation, and Implementation of Biological Control Agents for Invasive Weeds of Southeastern Ecosystems

Theodore Webster

Integrated Management and Ecology of Weed Populations in the Southeastern Field Crops

William White

Integrated Weed and Insect Pest Management Systems for Sustainable Sugarcane Production

Office of Scientific Quality Review

The Office of Scientific Quality Review 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 with 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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