FY 2021
Panel Outcome Report
Plant Diseases (NP 303)

Weidong Chen

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Weidong Chen, Ph.D., Scientific Quality Review Officer (January 2022-December 2023) — Date

MARQUEA KING

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Marquea D. King, Ph.D., Director/Program Coordinator — Date

Panel Outcome Report FY 2021
Plant Diseases (NP 303)

This Panel Outcome Report is a summary of the Plant Diseases (NP 303) OSQR Project Plan Peer Review (PPPR) Process held from September 2021 – March 2022.

The mission of this National Program is to develop control strategies that are effective and affordable while maintaining environmental quality to reduce losses cause by plant diseases.

This panel outcome report is intended to inform the Office of National Programs (ONP) and each Area of research (research scientist or SY) progress as it relates to the NP 303. Data tables display outcome of scoring by Areas, Panels and overall program.

Selected chairs (Table 1) were in part, recommended by National Program Leaders (NPLs) from NP303 and/or previous OSQR service; others were sought out based on their nationally recognized expertise by the OSQR Director. They were examined for suitability to lead a panel review, screened for conflicts of interest (COI) and finally concurred upon by the appropriate Scientific Quality Review Officer (SQRO).

Table 1.
Panels reviewed for the Plant Diseases National Program (303)

Panel	Panel Chair	Panel Meeting (Re-Review)	Number of Panelists	Number of Projects
1. Nematology	Jonathan Eisenback	2/1/2022	6	5
2. Post-Harvest Mycotoxins	Gary Munkvold	3/10/2022	5	4
3. Diagnostic Systematics	Boris Vinatzer	3/2/2022 5/23/2022	5	4
4a. Virology Vectors	Rajagopahlbab Srinvasan	1/24/2022 6/13/2022	5	4
4b. Virology Vectors	Sead Sabanadzovic	3/1/2022	4	3
5. Field Crops	Paul Esker	3/9/2022	5	4
6. Vegetable Ornamentals	Harald Scherm	3/3/2022	6	5
7. Resistance	Bingyu Zhao	1/31/2022	6	5
8a. Management	Daren Mueller	12/21/2022	4	3
8b. Management	Thomas Mitchell	3/22/2022 6/29/2022	5	4
9. Pathogen Biology	Kerik Cox	3/21/2022 7/6/2022	6	5

Review Process

Following panel review for each plan, OSQR with SQRO concurrence, sends each Area Director a panel consensus recommendation document. This may include recommendations for revision of the plan to which researchers are required to respond in writing and, as appropriate, revise their written plans in accordance with guidelines as detailed in the OSQR Handbook (see www.ars.usda.gov/osqr).

In addition, as part of the panel deliberation, a scoring of the overall quality of the plan is judged based on the degree of revision the panel deems is required. This scoring is termed an "Action Class." Each reviewer is asked to anonymously 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 Class is defined as follows:

No Revision Required. An excellent plan; no revision is required, but minor changes to the project plan may be suggested.[1]

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

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

Passed Review:

For plans receiving one of the above three Action Class scores (No Revision, Minor Revision or Moderate Revision), scientists are required to respond, in writing, to address all panel comments in the consensus recommendation document; revise their project plan as appropriate; and submit the revised plan and responses to the OSQR through their Area Office. Both the updated plan and the recommendations' form are reviewed by the SQRO and, once they are satisfied that all review concerns have been satisfactorily addressed, the project plan is certified, the Area Office is notified, and the project plan may be implemented.

Certification:

Certification is contingent upon making a good faith effort to satisfactorily address panel comments and recommendations. A plan has not "passed" the OSQR PPPR process until the SQRO's certification is delivered to the Area.

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

Not Feasible. 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.

Failed Review:

For plans receiving an Action Class score of Major Revision or Not Feasible, scientists are required to address, in writing, all panel comments in the consensus recommendation document; revise their project plan as appropriate; and submit the revised plan and responses to the OSQR through their Area Office. This plan *MUST* undergo a Re-Review by the initial deliberating panel, at which time a second set of consensus recommendations and second Action Class score are obtained.

Per the Re-Review, if the plan receives an Action Class score of a No Revision, Minor Revision or Moderate Revision the project plan may be implemented after following the **Passed Review** section above. Plans receiving a second Major Revision, or Not Feasible score are considered failed reviews. The

[1] While a No Revision action class would imply that change to the plan is not required, where the panel requests specific additions to the plan, if accepted, these should be incorporated into the updated plan.

Action Class and Consensus Recommendations from the Re-Review are provided to the Area with NO further option for revision nor review on that particular project plan as it has been submitted.

Per the Re-Review, if the plan receives an Action Class score of a No Revision, Minor Revision, or Moderate Revision, the project plan may be implemented after following the **Passed Review** section above. Plans receiving a second Major Revision, or Not Feasible score are considered failed reviews. The Action Class and Consensus Recommendations from the Re-Review are provided to the Area with NO further option for revision or review on that particular project plan as it has been submitted.

Such plans may terminate, reassigned, or restructured at the discretion of the Area and Office of ONP. For plans receiving Major Revision, it may be elected not to further revise them and to end review with the plan not receiving certification (plan fails review). For those receiving a score of Not Feasible, Area and NPL approval are needed in order for the plan to be revised for re-review. Otherwise the plan will be considered to have failed review. Subsequent action with regard to the research and researchers is left to Area and ONP-NPL leadership.

At the conclusion of each PPPR deliberation, the chair and panel reviewers are asked to provide general statements or recommendations on the overall process as well as the general quality of the plans which underwent review. The Chair is specifically sought to provide a Panel Chair Statement which they feel focuses on the overall conduct of the review or any broad areas with regard to the research that they feel would benefit future researchers or the Agency as a whole. Copies of such statements for (NP303) can be found following this report.

Review Outcomes

Reviews can vary, but ultimately, depend on a combination of the panelists selected and the scientific writing capabilities of the team which wrote the project plan. The OSQR is responsible for assuring that each panel contains subject matter experts who provide knowledgeable, clear, rigorous, and fair assessments. Therefore, PPPR panels vary in their overall outcomes.

Uniquely, the ability of an ARS research team to respond to panel recommendations/comments in order to *revise and improve project plans is, perhaps, the greatest strength of the ARS PPPR process.*

ARS uses the National Program Panel Outcomes Report as a measure of scientific progress and as a demonstration of overall program quality, how well researchers understand and address the needs of the expert panel reviewers. Initial review scores that are moderate or higher are recorded as such and will not be certified as having completed the PPPR until the SQRO has deemed that all reviewer concerns have been satisfactorily addressed. For lower scores/failed reviews, the panel provides a re-review score, which is considered along with the initial review score.

Table 2.
Initial and Re-review Scores for Plant Diseases, National Program (303)

Panel	No revision	Minor	Moderate	Major	Not Feasible	Re-Review
1. Nematology	3	2				
2. Post-Harvest Mycotoxins		2	2			
3. Diagnostic Systematics		2	1	1		Minor
4a. Virology Vectors	1	1	1	1		Minor
4b. Virology Vectors		3				
5. Field Crops		4				
6. Vegetable Ornamentals		2	3			
7. Resistance		3	2			
8a. Management	1	1	1			
8b. Management		3		1		Minor
9. Pathogen Biology	1	1	2	1		No Revision

*Review conducted by no less than two (or greater) expert panel reviewers providing independent written reviews and scores without group panel deliberation. Scores reflect the average of no less than two expert reviewers and written reviews are compiled and screened by Office Director.

Table 3.
Area Scores for Plant Diseases, National Program (303)

Area	No revision	Minor	Moderate	Major	Not Feasible
MWA	1	4	1	0	0
NEA	2	6	4	3	0
PA	0	4	0	0	0
PWA	1	6	3	1	0
SEA	2	4	4	0	0

Table 4.
Overall Scores for Plant Disease, National Program (303)

	No revision	Minor	Moderate	Major	Not Feasible
# Plans with each score	6	24	12	4	0

Overall Panel Characteristics:

Panel Characteristics

The OSQR PPPR relies heavily on expert panel member selection by the OSQR Director and SQRO selected Panel Chairs. ARS scientists, research leaders and ONP are encouraged to recommend panelists they understand to be free of any COIs. While the selected/seated Panel Chair is under no obligation to use Agency recommended panelists, the SQRO must review and approve the Chair's panelist selections and may ask for substitutions or provide additional experts for consideration.

Factors and qualifications considered in PPPR panel selection (chair and panelist) such as being a qualified expert in the field being reviewed, research tenure, publication record, award history, geographic location, overall diversity and availability to participate fully in the process all, play an integral role in who is invited to serve an ARS/OSQR PPPR panel. Many of the reviews are composed with a balance of nationally and internationally recognized experts. Tables 5-6 display various characteristics of the panel composition; all affiliations were accurate at the time of the panel review.

Affiliations

Peer reviewers are affiliated with several types of institutions, primarily those in academia, 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 5.

Panelist Faculty Rank and Affiliations for Plant Diseases, National Program (303)

Panel	Professor	Associate Professor	Assistant Professor	Government (Agency)	Industry & Organizations
1. Nematology	3		3		
2. Post-Harvest Mycotoxins	3		1		1
3. Diagnostic Systematics	2	1	2		
4a. Virology Vectors	2	2	1		
4b. Virology Vectors	3		1		
5. Field Crops	2	2	1		
6. Vegetable Ornamentals	5		1		
7. Resistance	3	2	1		
8a. Management	2	1	1		
8b. Management	4		1		
9. Pathogen Biology		2	3		1

Research Impact and Ethnicity/Gender

The OSQR PPPR process is lauded as a rigorous and objective ARS function striving for the highest possible scientific credibility. In general, panelists shall hold a doctoral degree unless the discipline in question is one which does not subscribe to a 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 being researched in the National Program under review are preferred.

Table 6.

Panel Accomplishments and Ethnic/Gender for Plant Diseases, National Program (303)

Panel	H-Index Average	Gender	Geographic Location
1. Nematology	12	2 Females 4 Males	3 SEA, 1 PWA, 1 MWA, 1 NEA
2. Post-Harvest Mycotoxins	20	2 Females 3 Males	1 PWA, 1 MWA, 1 Plains, 1 Canada, 1 Argentina
3. Diagnostic Systematics	23	2 Females 3 Males	2 NEA, 1 SEA, 1 PWA, 1 Plains
4a. Virology Vectors	17	2 Females 3 Males	3 SEA, 2 Plains
4b. Virology Vectors	29	4 Males	1 PWA, 2 SEA, 1 NEA
5. Field Crops	18	2 Females 3 Males	2 MWA, 2 NEA, 1 SEA
6. Vegetable Ornamentals	18	6 Males	2 PWA, 3 SEA, 1 Plains
7. Resistance	24	1 Female 5 Males	2 NEA, 1 MWA, 2 PWA, 1 Plains
8a. Management	24	1 Female 3 Males	1 MWA, 1 PWA, 2 SEA
8b. Management	24	1 Female 4 Males	1 PWA, 1 SEA, 1 NEA, 2 MWA
9. Pathogen Biology	9	2 Females 4 Males	2 MWA, 2 NEA, 1 PWA, 1 Canada

List of Panel Chairs

1. Nematology
Jonathan Eisenback, Professor
Virginia Tech
Education: North Carolina State University

2. Post-Harvest Mycotoxins
Gary Munkvold, Professor
Iowa State University
Education: University of California Davis

3. Diagnostic Systematics
Boris Vinatzer, Professor
Virginia Tech
Education: University of Chicago

4a. Virology Vectors
Rajagopalbab Srinivasan
University of Georgia
Education: University of Idaho

4b. Virology Vectors
Sead Sabanadzovic
Mississippi State University
Education: University of Bari, Italy

5. Field Crops
Paul Esker
Penn State University
Education: Iowa State University

6. Vegetable Ornamentals
Harald Scherm
University of Georgia
Education: University of California, Davis

7. Resistance
Bingyu Zhao
Virginia Tech
Education: Kansas State University

8a. Management
Daren Mueller
Iowa State
Education: University of Illinois-Urbana

8b. Management
Thomas Mitchell
Ohio State
Education: North Carolina State University

9. Pathogen Biology
Kerik Cox
Cornell University
Education: University of Georgia

NP303 Plant Diseases National Program Panel Chair Statements

Panel Chair responsibilities include providing the OSQR with a statement that describes their overall panel experience, how the panel was conducted, and general quality of the plans reviewed. It does not lend itself to discussing details of a specific research project plan reviews nor attribution to individual panelists. Panel Chairs are given a format to follow for writing their statements, however, are free to discuss what they believe is important for broader audiences.

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Weidong Chen, Ph.D.
Scientific Quality Review Officer
Office of Scientific Quality Review
Agricultural Research Service,
USDA 5601 Sunnyside Avenue,
MS 5142
Beltsville, MD 20705

Dear Dr. Chen,

Thank you for the opportunity to serve as chair of a review panel for project plans in the 5-year Review Cycle. Our team consisted of five reviewers to evaluate five projects. Panel members included a diverse group of highly trained and experience members from various academic ranks from assistant to full professor and wide geographic regions of the United States with members of both genders.

After accepting the role of chair, a list of suitable reviewers was assembled and approved by the Office of Scientific Quality Review. Letters inviting participation in the panel were sent out and acceptances were noted. The necessary forms were mailed to the team members and returned in a timely manner.

The five projects were assigned to a primary and secondary reviewer, and the projects were mailed to all team members. The assignments were made by the chair according to the experience or the panel members. A poll was taken to determine an acceptable time to meet and review each panel.

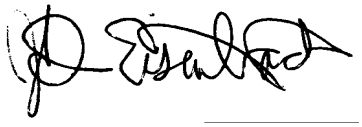
The review of the five projects began in a timely manner and each project was thoroughly evaluated. Initially the primary reviewer gave a short 3-5 min overview of the project followed by the secondary reviewer and then comments were solicited from the remaining members of the review panel. Each objective of was evaluated and the methods for achieving these objectives were discussed and determined to be appropriate. After 30-40 min. reviewing each of the projects, an evaluation was made by all of the members of the panel with all projects receiving passing marks.

All panel members were well prepared for the review. Previously each member watched a very helpful video informing them about the purposes of the National Program and what

was expected of the review panel member. Each member took their assignment seriously and performed a timely, informative, and appropriate review. Each member was eminently qualified and used their expertise and experience to perform an outstanding review. Members appreciated the opportunity to serve on the panel and found it to be a rewarding experience. The members were impressed with the quality of the research being proposed by these 5-year plans. The projects were addressing valuable topics that will help solve important problems in agricultural production. While some objectives were straightforward and promised to deliver answers to problems that growers are facing, some had risk for success, but they had possibilities of high returns on the investment.

Overall, the review was well run and the Office of Scientific Quality Review was very helpful and made the process efficient and timely. It was efficient and the outcome was very appropriate for both the members of the review panel and the projects that were reviewed.

Sincerely yours,



Jonathan D. Eisenback, Ph.D.
Chair of the Review Panel
Professor of Nematology

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

1 April 2022

Weidong Chen, Ph.D.
Scientific Quality Review Officer Office of Scientific Quality Review Agricultural Research Service, USDA 5601 Sunnyside Avenue, MS 5142
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Department of Plant Pathology & Microbiology
Seed Science Center Ames, IA 50011

Panel Chair Statement – NP 303 Panel 2. Post-Harvest Mycotoxins 2021

The on-line review panel meeting for NP 303 Panel 2, Post-Harvest Mycotoxins, took place on March 10 2022. The discussion itself proceeded very efficiently, in large part because there was mostly a consensus within the panel regarding the overall quality of each of the project plans, all of which required only minor or moderate revisions, according to the review process. Revisions to the review summaries were handled very effectively by the USDA staff, and this was done transparently using the Zoom meeting capabilities. Primary and secondary reviewers generally did thorough reviews and provided useful recommendations. There were some questions about the status of one of the projects because the PI had retired and other positions mentioned in the project description were open. Although the staff explained to the panel that this should not affect the review of the project, it still left some uncertainty because the panel recommendation form includes space to comment on the probability of success for the project. That clearly depends in part on the qualifications and expertise of the personnel, so panel members felt that it was difficult to assess the probability of success for that project.

Although the projects included in the panel all included mycotoxin-related research, they involved a wide range of different crops, mycotoxins, and types of research. This made it somewhat challenging to recruit panel members with adequate expertise to evaluate all the projects. While I felt that we had at least one very well qualified reviewer for each project, for some projects, the depth of expertise could have been better. One issue regarding the assigning of reviewers turned out less than ideal. As chair, I had specific ideas about which projects each reviewer would be assigned as primary and secondary reviewer, and I recruited panel members with this in mind. After the reviewers had been approved and invited, it became evident that one reviewer had a COI with one of the project PIs; unfortunately, it was the project for which I had hoped that reviewer would serve as primary reviewer. This necessitated rearranging all the reviewer assignments and as a result, in some cases the primary or secondary reviewer did not have the optimal qualifications for reviewing the project. On the other hand, all the reviewers contributed to the reviews of all four projects, and I believe this adequately covered any gaps.

Preparation for the review panel meeting proceeded effectively and communication from the USDA staff was excellent. The review panel approvals were completed quickly and the project descriptions were distributed in a timely way. The orientation program was very informative and complete. Two reviewers were late returning their comments, one of whom did not return the reviews until 2 days before the panel meeting. This likely put some pressure on the staff, and it compressed the timeline for the panel to look over the comments before the meeting, but this did not appear to detract from the thoroughness of the discussion.
Overall, I feel the review process was well organized and effective. The only thing that could have made it go more smoothly is if the one COI issue was caught earlier, I could have possibly invited a different panel member.

Respectfully,

Gary Munkvold
Professor
Plant Pathology & Microbiology

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March 6, 2022

To:

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The NP303 Panel 3 met on Wednesday, March 2, at 12:00PM EST. Three plans received passing scores while one plan will need a re-review. The structure that the USDA ARS scientists had to follow when writing their plans, made it easy for reviewers to evaluate them. This structure assured that the plans had an overall good organization. The objectives assigned to the scientists made sense. However, the quality of the rationale provided by the USDA ARS scientists for choosing their sub-objective varied greatly. Some were able to clearly articulate why they focused on certain pathogen groups over others and why they chosen certain approaches to answer certain questions and reach certain goals in their sub-objectives. Other USDA ARS scientists were not very clear and the reviewers had to infer, or even guess, why these choices were made. A general weakness was seen in the description of the methods. In several instances, references were not provided for methods and previous experience with methods was not directly described. Reviewers had to infer experience from the list of previous publications. Based on these general trends, I would recommend that scientists are given additional directions for crafting their plans, for example: Provide a clear overall rationale for your project plan, provide a strong justification for each sub-objective, when describing methods cite references and articulate your previous experience in using them.

The information provided to me as chair and to the reviewers during the orientation sessions prior to the review were very informative and made it very clear what the goal of the review was. The provided video of the National Program was informative and helped the chair and the reviewers understand the National Program but I do not think that it did have a strong impact on the review itself.

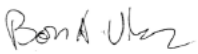
The reviewers provided high quality written reviews and USDA ARS did an excellent job merging them into the recommendation forms. Having access to the review forms ahead of the review panel and being able to go through the review forms as the panel discussed each plan, facilitated the review process greatly. The reviewers had complementary subject expertise in different aspects of plant pathology and the different agents (viruses, bacteria, and

fungi/oomycetes). This allowed the panel to review the overall quality of the plans and to critically assess the technical details of the planned experiments in each plan. Reviewers were succinct in their elaborations allowing the panel to be efficient and to finish on time. The panel failed to discuss the data management plans. However, I did not see any major issues with any of the data management plans.

Overall, USDA ARS did an excellent job providing information ahead of the panel meeting and made the process as easy as could be. Two recommendations: it was not clear to all reviewers how to submit the reviews to USDA ARS. Therefore, when reminding reviewers to submit their reviews, please also remind them how to submit their reviews. As for chair instructions, it was not clear to me before the panel meeting what exactly I would have to do during the panel meeting and what the panel chair statement was about and what was needed from me after the panel meeting. Therefore, I suggest to provide more guidance to the chair ahead of the meeting in regard to responsibilities and the required statement. I carefully read all four plans and made some notes about each of them. I think that was a good approach. Therefore, my suggestion is that instead of telling the chairs that they can provide their own reviews, I would recommend to chairs to read all plans and read all review forms and to be prepared to synthesize recommendations from the panel discussion during the meeting and help solve possible disagreements between panelists. The agenda could specify that USDA ARS would open the meeting and the chair would then take over to moderate the review of the plans. I would send the instructions for the chair statement ahead of time, or at least describe in some more detail what that statement is about.

The overall quality of the review process was excellent. USDA ARS personnel was incredibly helpful and well organized. The structure for the whole process was well thought out and made the process a wonderful experience. I deeply appreciate to have been given the opportunity to chair NP303 Panel 3 and would be happy to do this again in the future.

Sincerely,



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March 24, 2022

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Reg: NP 303 Panel 4A Virology Vectors Summary Report

Dear Dr. Chen,

Included below is a report on the NP 303 virology vectors panel 4A meeting that was conducted on the 28th of February 2022. I served as the chair of the panel. The panel included four members in addition to the chair.

Proposals

There were four proposals that were submitted and reviewed. Two proposals were from the West, one from Midwest, and the fourth from the Northeast.

Panel

The panel members were carefully chosen, and their approval was sought from USDA. The panelists all had substantial experience and extensive publication record in virology and vectors and were highly suitable for evaluating the submitted proposals. One of the panel members was a professor, two others were associate professors, and the fourth one was an assistant professor. Two panel members were from the Southeast (Florida and North Carolina), one from the Southwest (Texas), and another from the West (Colorado). The panel members had a few weeks

of prior access to the proposals and had written reviews submitted on each proposal prior to the panel's virtual meeting. Each panel member was assigned with reviewing two proposals (one as a primary reviewer and one as a secondary reviewer).

Panel meeting

The panel met virtually (via Zoom) on the 28th of February 2022. The panel began with introductions and continued with general stipulations. Once that was accomplished, the panel took on the discussion of each proposal (one-by-one). Lack of conflict-of-interest was double-checked prior to discussing the proposals. The panel chair introduced the proposal at the outset and asked the primary reviewer to provide an in-depth assessment of the proposal. The review began by stating the overall purpose and a brief overview. Further, each objective was discussed elaborately, and finally collaborations and facilities were discussed. The merits of each objective, its novelty, feasibility, outcomes to be obtained, and knowledge to be gained were discussed. Upon completion by the primary reviewer, the secondary reviewer was then asked to provide his/her assessment. In this process, the secondary reviewer was asked to include information that was not already discussed by the primary reviewer or if there were any discrepancies. Once both the reviewers concluded, an opportunity was provided for the entire panel to chime in. Upon completion of the discussion on the proposal, an anonymous virtual vote was initiated. The proposal was graded under the five categories (No revision required; Minor revision required; Moderate revision required; Major revision required; and Not feasible). The majority votes matching one of the categories was affixed to the evaluated proposal. The whole process took approximately an hour for each proposal. The review for each proposal was thorough and meticulous. All four submitted proposals were reviewed in one sitting with two short breaks (~five-minutes each).

Deliberations and recommendations

The careful deliberations on each objective involved the overall goal, experimental approach, novelty, appropriate collaborations, timeline for completion, and relevance of the outcomes. This thorough approach was followed for each objective, and overall, for the proposal.

Recommendations requested minor clarifications on methods adopted, on collaborations proposed/not proposed, and on novelty. Moderate clarifications involved elucidating objectives and experiments, lack of preliminary data and/or pilot experiments, and major clarifications involved critical lack of details in experimental methods, lack of appropriate collaborations, and questionable novelty and feasibility on some of the objectives/experiments. The panel also provided an outline on each one of these situations as to how the clarifications sought could be addressed. The outline included details on how the objectives could be tweaked to enhance feasibility, conduct pilot experiments, and how the experiments could be modified/altered to address the concerns of panel members. In at least one instance, the ability of the PI and Co-PIs to complete a specific portion of an objective was called into question. The panel, to rectify this issue, suggested referring to recent advancements on the same issue and encouraged the PIs to seek relevant collaborators.

Overall, the panel was exceptionally qualified to conduct these reviews. The panel members had either worked/continue to work on the same systems that proposals were based upon and/or had extensive knowledge on the systems. The written reviews were meticulous and thorough, and the discussions were constructive with the sole goal of improving the proposals and providing appropriate suggestions to ensure the expected/outlined outcomes are attained in each proposal.

Should you have any questions, please do not hesitate to contact me.

Yours sincerely,

Rajagopalbabu Srinivasan
Professor

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31 March 2022

Weidong Chen, Ph.D.
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Dear Dr. Chen-

Please find a summary of the overall review process I chaired for the Office of Scientific Quality Review.

Overall, the review process and convening of the review panel were conducted to the highest professional standards. The provided information and training sessions were most helpful in explaining the expectations and methodology used to perform the review. Information was transparent, with feedback provided promptly. Critical to our panel was the constant reminder of what this type of review was not, i.e., that of a grant panel. This improved the quality of the review process and discussion since we could focus on science.

The ability to suggest multiple reviewers, who were then vetted and cleared (or not in some cases), was beneficial. The approach used alleviated some of the stress that I would have had in determining who were appropriate reviewers. Instead, this provided an opportunity to think broadly to identify reviewers who would be comfortable with the subject matter. This process also clearly showed me the importance of maintaining an extensive network of colleagues to draw on the necessary expertise for this review process.

While there were some challenges in identifying a date for the review panel, in some respects, I think this helped us achieve our objective without much trouble. The reviewers provided high-quality written reviews. They also were willing to share their thoughts and ask relevant questions during the panel, which I feel would not have occurred in a rushed process. Overall, this made my role as Chair and facilitator during the panel discussion very easy.

Finally, it is essential to mention that our review panel was very successful, given that the written project plans were of high quality. By starting with high-quality project plans, our review panel could focus on specific aspects of each plan rather than conducting a lengthy discussion focused on just trying to understand the research idea.

Thank you for the opportunity to provide feedback and comments related to the scientific quality review process. Please feel free to contact me if you require further information or have additional questions.

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Sincerely,

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May 12, 2022

Weidong Chen, Ph.D.
Office of Scientific Quality Review
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5601 Sunnyside Avenue, MS 5142
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Dear Weidong,

Thank you for the opportunity to serve as Panel Chair for the program review of USDA-ARS NP 303 Panel 6: Vegetables Ornamentals (2021) on 3 March 2022. The panel involved five project plans and five reviewers (in addition to the Chair).

The review process, in general, went very well, and the panelists were impressed by the overall quality of the project plans. The orientations and instructions provided to the Chair and panel members prior to the review meeting were thorough and effective, and the logistical support from USDA-ARS staff prior to and during the panel meeting was excellent. One challenge for the Chair was the very large number of COIs encountered during the assembly of the panel, which limited the available reviewer pool and slowed down panel selection. ARS may want to review its COI criteria to exclude loose collaborations, especially at a time when an increasing amount of science is done by large teams where the actual interaction between any two members of the team may have been minimal.

During the panel meeting itself, each member was well prepared and provided quality written and oral input to each project reviewed. With the support and guidance of the participating ARS staff, the meeting proceeded smoothly and at a good pace. The reviewers appreciated the diverse expertise and different career stages within the panel, as well as the synergistic interactions and consensus-building among panelists.

There were a few suggestions for potential process improvements that came up during and after the panel meeting:

- Project plans would benefit from the inclusion of a logic model or flow chart illustrating how the different pieces of the proposal fit together and highlighting outputs, outcomes, and impacts. This would benefit both the panelists and the scientists preparing the project plan.
- Panelists felt that project plans should be required to explicitly address impacts on stakeholders, at least briefly.
- There was some frustration about project plans with disconnected/disjointed objectives conducted by different scientists on the team. It was felt that the project plan guidelines should include an expectation that objectives need to be reasonably linked.

Thank you again for inviting me to serve in this important capacity. Should you have any questions or need additional clarification, please feel free to contact me at scherm@uga.edu

Sincerely,

H. Scherm

Harald Scherm
Professor of Plant Pathology & Department Head

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Weidong Chen, Ph.D.
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May 20, 2022

Dear Dr. Chen,

The review panel for NP 303 Panel 7: Resistance (2021) virtually met on Monday, January 31, 2022, to review five ARS proposals. The projects focused primarily on plant-microbe interactions.

The review panel has six reviewers, including the panel chair. All reviewers are experts in the fields of the research programs. Each reviewer served as the primary reviewer and second reviewer of a project. Before the panel meeting, the reviewers provided written evaluations of the assigned proposals. During the panel meeting, the primary reviewer led the discussion of the project, explained the proposal's strengths and weaknesses, and provided suggestions for improvement. The secondary reviewer also discussed the proposal, either agreed or disagreed with the points presented by the primary reviewer. The other reviewers also actively engaged in the discussion and asked questions about the proposals. The panel chair summarized the panel discussion. The ARS staff recorded the consensus comments. Finally, all panel members anonymously voted to rank the discussed project. In my option, this panel did a thorough job of reviewing the proposals. The evaluations were fair and objective and provided great feedback to the principal investigators.

In general, all five plans were well prepared. The proposed projects are critically needed for the sustainability of US agriculture.

The panelist orientation is very helpful, it helps the reviewers to understand the organization and the short and long-term research goals of USDA-ARS. The ARS staff did an excellent job of keeping the review process smooth and efficient. I would like to especially thank Ms. Linda Daly-Lucas for helping me identify the reviewers, communicating with all reviewers, and sending reminders to everyone on schedule. Without her help, we will not be able to complete the review process smoothly!

I also want to thank you for the opportunity to lead the review panel. I enjoyed the panel meeting and learned about the great research that is occurring in the ARS system. Should you require additional information, please feel free to contact me.

Sincerely,

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January 3, 2022

David I. Shapiro-Ilan, Ph.D.
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Dr. Shapiro-Ilan,

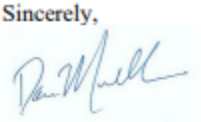
This letter is an overview and assessment of the review process for the 303 Panel 8A: Management section. The review was completed on December 21, 2021. All three reviewers provided thorough reviews before the panel discussion and engaged in meaningful discussion for each of the proposals.

The review process went without any problems. All three reviewers were quickly identified with the help of the USDA staff. Each reviewer brought a different expertise to the discussion, which helped us evaluate each proposal from different angles. The structure of the discussion, which alternated between the primary and secondary reviews as we worked through the specific elements of the proposals, went well. Discussions were completely professional and addressed strengths and shortcomings of project plans. The final result was a very thorough and well-thought-out review of each proposal.

The USDA staff had the review panel prepared for the panel discussion by integrating the two reviews for each project which streamlined the discussions. Also, the preparation prior to the discussion was excellent, with the explanation of the process and the orientation about the scope and purpose of the review.

The proposals were generally well-prepared making review of project aims and objectives straightforward. There were minor concerns raised by the panel with most projects and these concerns were captured in the project's review summary. There were no systematic issues or challenges common to all of the proposals. All were well written and followed a structure that aligned well with the review process.

Sincerely,



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March 23, 2022

Weidong Chen, Ph.D.
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Re: Panel Chair Statement, USDA NP303 Panel 8B

Dear Dr. Chen,

This statement will describe the process of panel selection and deliberations as well as quality indicators of the review. The panel was assigned 4 proposals to review. After submitting the names and affiliations of potential panel members for review of possible conflicts of interest, I began to invite those approved. This process was more difficult than I expected. In the end, I believe that I invited about 15 or more scientist and after over two months, finally rounded out the panel. The problem was that we were asking people to serve during very busy time of the year in Dec./Jan. As such, the panel was not finalized until Feb. and the meeting could not be held until March 22. The panel consisted of faculty members from four different institutions spread across the country, at different stages in their careers, and with gender and race diversity. Each panel member was assigned to be the primary reviewer on one proposal and secondary reviewer on another. They were given about 3-weeks to complete and submit their reviews. On the day of the review, the primary review gave a brief summary of the main objectives of the proposal and proceeded to introduce each objective in order. As we followed down the objectives, the secondary reviewer gave their evaluation. Next the other panel members and myself gave our thoughts on the objective. I was glad to see that there were very active discussions on each objective regarding the appropriateness of the techniques proposed, where the objective fit into the goal of the grant and with regard to the other objective, how the results were going to be analyzed and used, and the collaborators aligned. After all the objectives and merit considerations were discussed, once everyone agreed, the proposal was ranked by a blind poll. Overall, the rankings were consistent amongst the panel members and where there were slight disagreements, the majority carried the ranking. I was impressed with discussions. It was clear, that each reviewer read all four proposals and came prepared to have deep discussions. This preparedness allowed the panel to provide a comprehensive review to the authors complete with well-considered points that should be addressed. I found the written reviews to be insightful and a solid launching point for discussions. This allowed us to be efficient and move through the process with a sense of alacrity.

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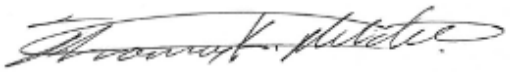
As I reflect on the process, I have to say that securing panel members was frustrating at times. However, I would like to acknowledge the USDA staff managing these proposals and process for expertly guiding me/us through the process, for their timely response to questions, and for the ease with which I could communicate with them. Without their timely support, this would have been very difficult for me to direct. During the review day, I was relieved to see that there was a dedicated person taking notes and clarifying evaluation points for the official review. I was worried that would fall on me as Chair and I would be spending my time capturing the discussion and not being able to participate as much as I wanted to. The preparation presentations to me and then the panel prior to the review were very helpful as was the presentation the day of the review. All the support and preparation provided made for a very positive experience; so much so that I would consider participating as a panel Chair or participant in the future.

Regards,



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March 25, 2022

Weidong Chen, Ph.D.
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Re: Panel Chair statement for NP 303 Panel 9 Pathogen Biology

Dear Dr. Chen,

It was my great pleasure to serve as Panel Chair for the NP 303 Panel 9 Pathogen Biology program. This letter serves as a summary of the panel review process during the meeting on Monday, March 21st, 2022, at 12pm EST. The panel consisted of myself, four anonymous reviewers from across North America including the United States and Canada with east, west, and midcontinent representation.

The review panel itself proceeded efficiently, it took a few minutes to get everyone connected via phone and computer, and we started within three minutes of the assigned time. After delivery of the process information by Dr. King and Dr. Chen, we proceeded to follow the standard review protocol. Summaries of the plan were first provided by the primary and secondary reviewers, and subsequently, the primary and secondary reviewers providing assessments of each objective in order. Primary and secondary reviewers then provided an assessment of the probabilities of success based on personnel and proposed research and summarized the merit and scientific significance of the project plans. After each primary and secondary assessed, the chair asked for additional comments for other panel reviewers. As group, we then discussed each proposal briefly and then anonymously scored each proposal using zoom polls. On average, this review

process took 23-27 minutes per project plan leaving us with five minutes for wrap-up and closing remarks

There were many generalities among project plan reviews provided by the panel members. Across all plans, we felt that all objectives were appropriate, and none seemed to be outliers or appeared to be less appropriate to the overall scope of work. The scope of work for all plans addressed the USDA ARS National Program 303 for pathogen biology, and all project plans involved similar areas of work such as pathogen genomics, diversity, and molecular and microbiology. It was encouraging to see several programs for different systems all approaching the problem in unique, but unified manners. We felt that all plans had a good balance of applied and basic objectives with slightly greater levels of interest in applied and basic research efforts depending on the background of the project leader. We felt that there were good ties to previous efforts, and many had excellent options for transition to practice for several objectives. All project leaders demonstrated a proven track record in the proposed line of work and had a history of research accomplishments that logically led them to the newly proposed work. Along these lines, all project plans were found to have appropriate expertise and collaborators, which caused the panel to feel assured of project success in each case. The only area in which the panel found uniform weakness across the project plans was in the depth of descriptions for proposed experimentation. Some of the experiments in all project plans lacked essential details in experimental design, site selection, treatment description, experimental variables, data collection and statistical analyses. Some experiments were adequately described in each plan, but there were several that were grossly lacking in essential details. There seemed to be no overall trend that explained this this lack of description for some experiments. However, we found that the lack of description for experimentation was more prevalent toward the end of the project plan more so than in experiments proposed at the beginning. The only other questions the panel had across all project plans related to whether ongoing work should be included in project plans and whether certain objectives that pursued for more than 3-5 decades should still be pursued.

Overall, there was little disparity among reviewers and both primary and secondary reviewer seem to identify the same strengths and weakness in the project plan objectives. In this capacity, the project plans were scored similarly across the panel with few discrepancies regardless of the plan being reviewed. The review process was expedient, and the online format was most favored by all members. In this regard, I enthusiastically support this process in future project plan evaluations. If further clarification of any of these points becomes necessary, please do not hesitate to contact me.

Sincerely,

Kerik