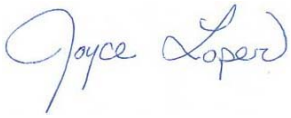
Report NP214 – April 2012

NP 214 Agricultural and Industrial Byproducts

Christina Woods
Program Analyst

_____ 9/4/2012

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



_____ 8/24/2012

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

_____ 4/9/2012

Michael S. Strauss, Peer Review Program Coordinator Date

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

Introduction

This Panel Report provides the background on the 2010 National Program (NP) 214 Agricultural and Industrial Byproducts Panel Review. The project plans reviewed by these panels were applicable to the mission of the National Program to *"to effectively and safely manage and use manure and other agricultural and industrial byproducts in ways that maximize their potential benefits while protecting the environment and human and animal health.*"

In collaboration with the Office of Scientific Quality Review (OSQR), and the National Program Leader, Matt Smith, divided 17 projects into five panels. After considering several candidates, Dr. Donald Knowles, Scientific Quality Review Officer (SQRO), appointed a chair for the five panels (Table 1).

Table 1. Agricultural and Industrial Byproducts Panels

Panel	Panel Chair	Panel Meeting Date	Number of Panelists	Number of Projects Reviewed
Byproducts and Use	Dr. Warren Dick, Professor, Dept Soil Sciences, The Ohio State University, Wooster, OH	May 10, 2010	5	4
Dairy and Beef	Dr. Wes Wood, Professor, Dept Agronomy & Soils, Auburn University, Auburn, AL	March 25, 2010	5	4
Manure Management	Dr. Katharine Knowlton, Assoc Professor, Dept Dairy Sci, Virginia Tech, Blacksburg, VA	June 28, 2010	5	4
Poultry	Dr. Richard Gates, Professor, Dept Agric & Biol Engr, Univ Illinois, Urbana, IL	April 26, 2010	5	3
Swine	Dr. Larry Jacobson, Professor, Dept Bioproducts, Biosystems Engr, Univ Minnesota, St. Paul, MN	April 21, 2010	3	2

Dr. Michael Strauss, Peer Review Program Coordinator, and Dr. Knowles presented an orientation to the Panel Chairs. Dr. Knowles subsequently approved the candidate panelists selected by each Chair. The approvals took into account conflicts of interest and followed guidelines for diversifying panel composition geographically, institutionally, and according to gender and ethnicity. Panelists demonstrated a recognizable level of knowledge of recent research within their respective fields of agricultural and industrial byproducts. The panels received a telephone/web-based orientation. The Office of National Programs (ONP) provided an overview of the NP 214 Agricultural and Industrial Byproducts Program. All panels convened online.

Panel Review Results

Along with the Panel's written recommendations, OSQR sends each Area Director a worksheet that shows each reviewer's judgment of the degree of revision their project plan requires. This

judgment is referred to as an “action class”. The action classes of the panelists are also converted to a numerical equivalent, averaged, and a final action class rating is assigned.

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

Action Classes are as below.

> **No Revision Required.** An excellent plan; no revision is required, but minor changes to the project plan may be suggested.
>
> **Minor Revision Required.** The project plan is feasible as written, and 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 alteration of the experimental approaches in order to increase quality to a higher level and may need some rewriting for greater clarity.
>
> **Major Revision Required.** 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 flaws or deficiencies, and cannot be simply revised. Deficiencies exist in approach, experimental design, presentation or expertise which makes it unlikely to succeed.

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

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

NP 214 Program Review Overview

Following review, panels were asked about their impressions and recommendations for the review process and their sense overall of ARS Research. After serving on the review panel, there was a much better respect for ARS projects. One panelist, who had served on a previous review panel, appreciated seeing that comments were substantively addressed and yielded a quality improvement. The evidence through responses that their reviews had tangible impact on the research was considered a strength of the process. Reviewers were impressed that ARS had a process that enabled and responded to review from the general scientific community.

Table 2 shows the initial and final scores for the third cycle in terms of percentages. All projects passed review including those that initially scored major revision. By completion of review more than 60 percent of plans scored Minor Revision or No Revision Needed. The overall average score for all plans of 5.31 is in the Minor Revision range.

Table 3 shows the initial and final scores for the first, second and third cycles expressed as percentages. The third cycle completed with a much higher proportion of plans scoring Minor Revision or better. While four plans scored Major Revision in the third cycle (23.5%), these all successfully completed review. Overall, the average score of 5.31 by the end of review was higher than in the prior two cycles.

Over the three cycles of review panels have shifted from in-person meetings to online discussions. Table 4 shows the initial and final scores for the in-person and online panels over all three review cycles. While it appears that online panels may have scored a small number more plans with Major Revision than in person panels, the overall average score for online panels is higher. Comparing these data to an analysis of the effect of panel size on score (Figure 1) would suggest that there is not an effect (most panels of five or fewer are online). Further study of the potential differences between online and in person reviews is ongoing as sufficient data for analyses accumulates.

Figure 2 presents the distribution of scores with panel size vs. score for the NP 214 third cycle review. Again, there appears to be little or no impact on panel size on score. This is confirmed when data from all third cycle review (Figure 1) is compared.

It was asked if the size of a project, in terms of the number of researchers, had an impact on its likely success in review (Figure 3). While the regression line suggests little correlation, it is notable that several larger plans received low scores. Clearly the data here are not sufficient alone to draw a definitive conclusion.

Figures 4 and 5 show the distribution of initial and final scores assigned by the First (2000), Second (2005) and Third (2010) Cycles Agricultural and Byproduct Utilization Panels. The second cycle initial score (4.56; moderate) was slightly higher than the first (4.48; moderate) and third cycle (4.54; moderate). However, the third cycle final score (5.31; minor) was markedly improved over the first (5.08; minor) and second (4.96; moderate) cycles.

Table 2. Initial and Final Scores for the Third (2010) Cycle Expressed as Percentages for the NP 214 Agricultural and Industrial Byproducts Panels.

	Initial Review						Final Review					
Third Cycle, 2010	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Initial Score	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Final Score
Byproducts and Use	0.0%	75.0%	25.0%	0.0%	0.0%	5.5	0.0%	75.0%	25.0%	0.0%	0.0%	5.5
Dairy and Beef	0.0%	25.0%	25.0%	50.0%	0.0%	4.0	0.0%	50.0%	50.0%	0.0%	0.0%	5.2
Manure Management	0.0%	50.0%	25.0%	25.0%	0.0%	4.6	25.0%	50.0%	25.0%	0.0%	0.0%	5.65
Poultry	0.0%	66.7%	33.3%	0.0%	0.0%	4.93	0.0%	66.7%	33.3%	0.0%	0.0%	4.93
Swine	0.0%	0.0%	50.0%	50.0%	0.0%	3.0	0.0%	50.0%	50.0%	0.0%	0.0%	5.0
Total	0.0%	47.1%	29.4%	23.5%	0.0%	4.54	5.9%	58.8%	35.3%	0.0%	0.0%	5.31

Table 3. Initial and Final Scores for All Cycles Expressed as Percentages for the NP 214 Agricultural and Industrial Byproducts Panels.

	Initial Review						Final Review					
	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Initial Score	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Final Score
First Cycle	4.8%	42.9%	33.3%	9.5%	9.5%	4.48	9.5%	47.6%	38.1%	0.0%	4.8%	5.08
Second Cycle	4.0%	28.0%	60.0%	8.0%	0.0%	4.56	12.0%	28.0%	60.0%	0.0%	0.0%	4.96
Third Cycle	0.0%	47.1%	29.4%	23.5%	0.0%	4.54	5.9%	58.8%	35.3%	0.0%	0.0%	5.31

Table 4. In Person vs Online Scores for the NP 214 Agricultural and Industrial Byproducts Panels for All Three Cycles.

	Initial						Final					
	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Initial Score	% No Rev	% Min Rev	% Mod Rev	% Maj Rev	% Not Feas	Avg Final Score
In Person	4.3%	34.8%	47.8%	8.7%	4.3%	4.52	10.9%	37.0%	50.0%	0.0%	2.2%	5.02
Online	0.0%	47.1%	29.4%	23.5%	0.0%	4.54	5.9%	58.8%	35.3%	0.0%	0.0%	5.31

Figure 1. Panel Size vs. Score for All the Third Cycle Panels.

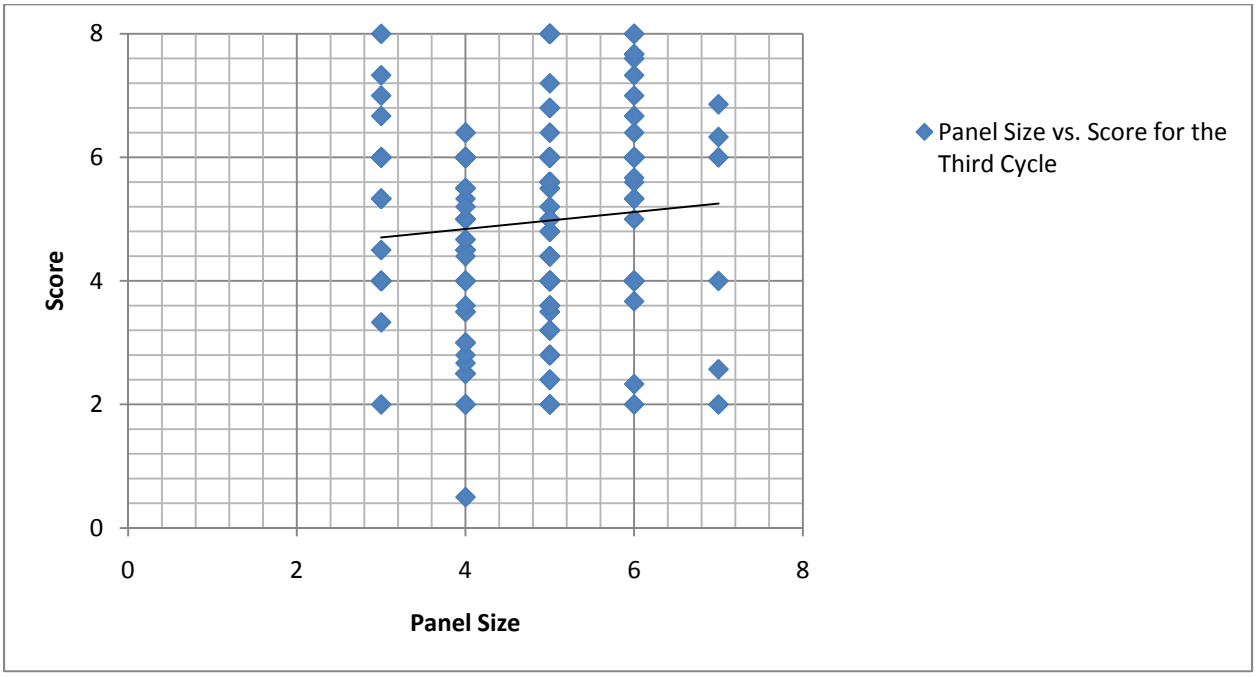


Figure 2. Panel Size vs. Score for the Third Cycle of the NP 214 Agricultural and Industrial Byproducts Panels.

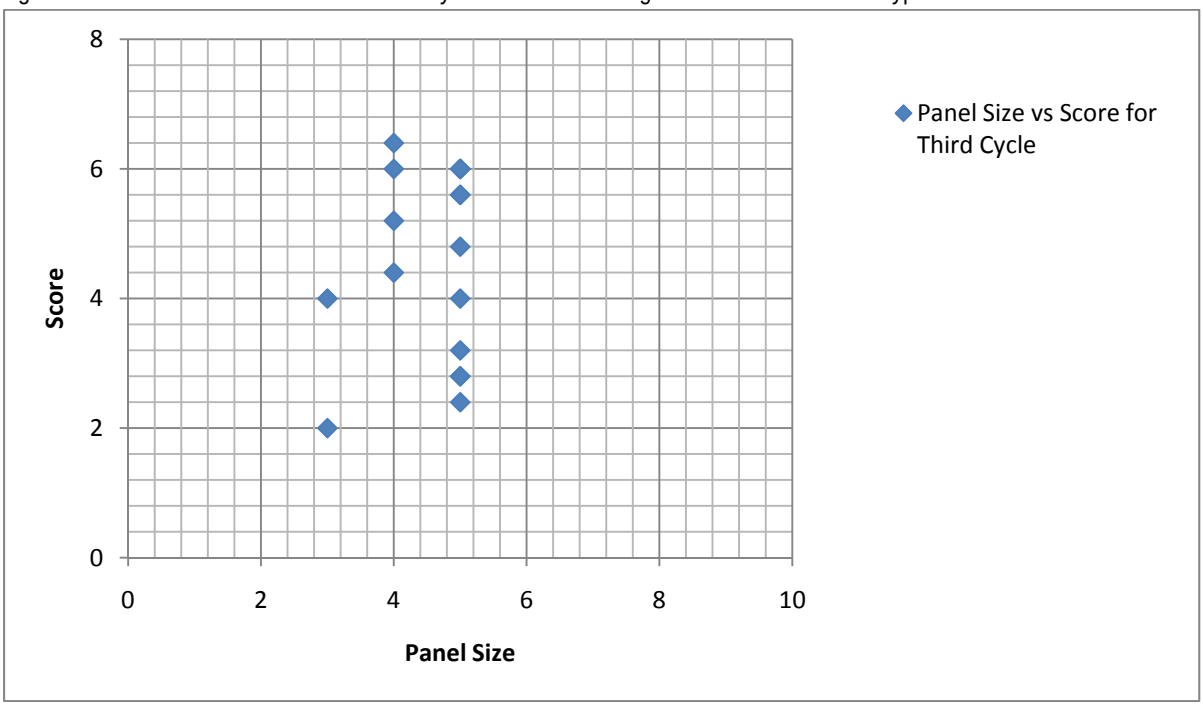


Figure 3. Panel Size vs. Score for all Three Cycles of the NP 214 Agricultural and Industrial Byproducts Panels.

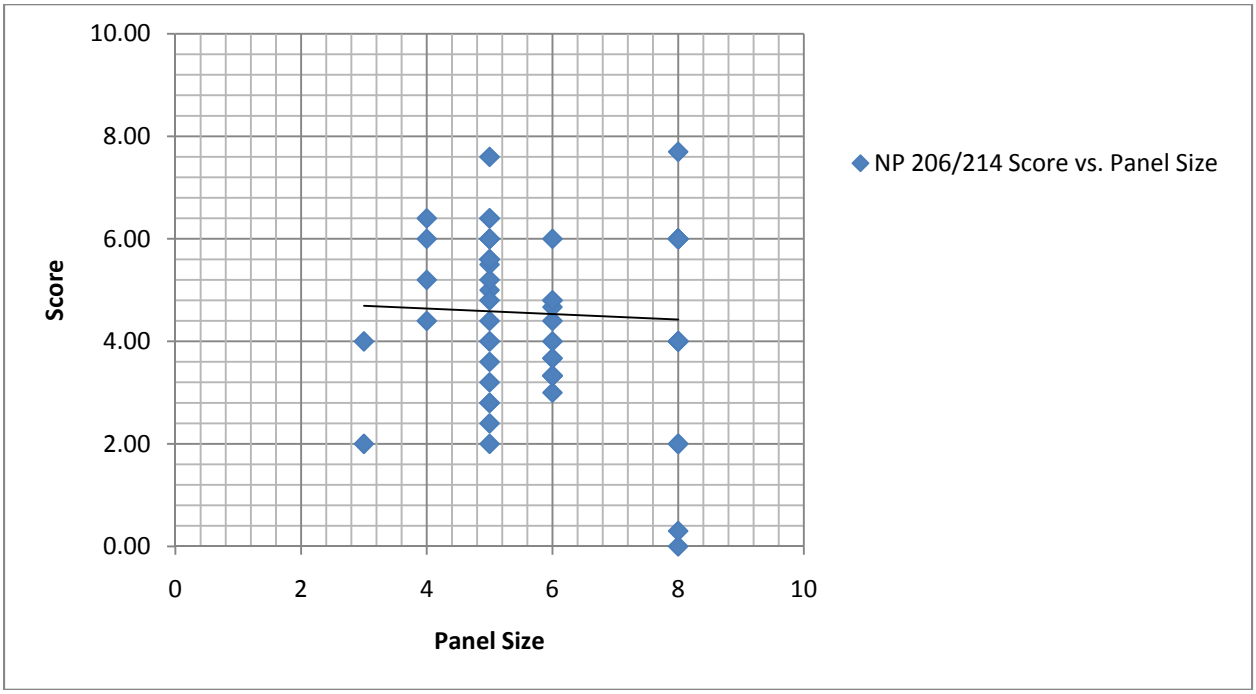


Figure 4. Number of Scientists vs. Score for the Third Cycle of the NP 214 Agricultural and Industrial Byproducts Panels

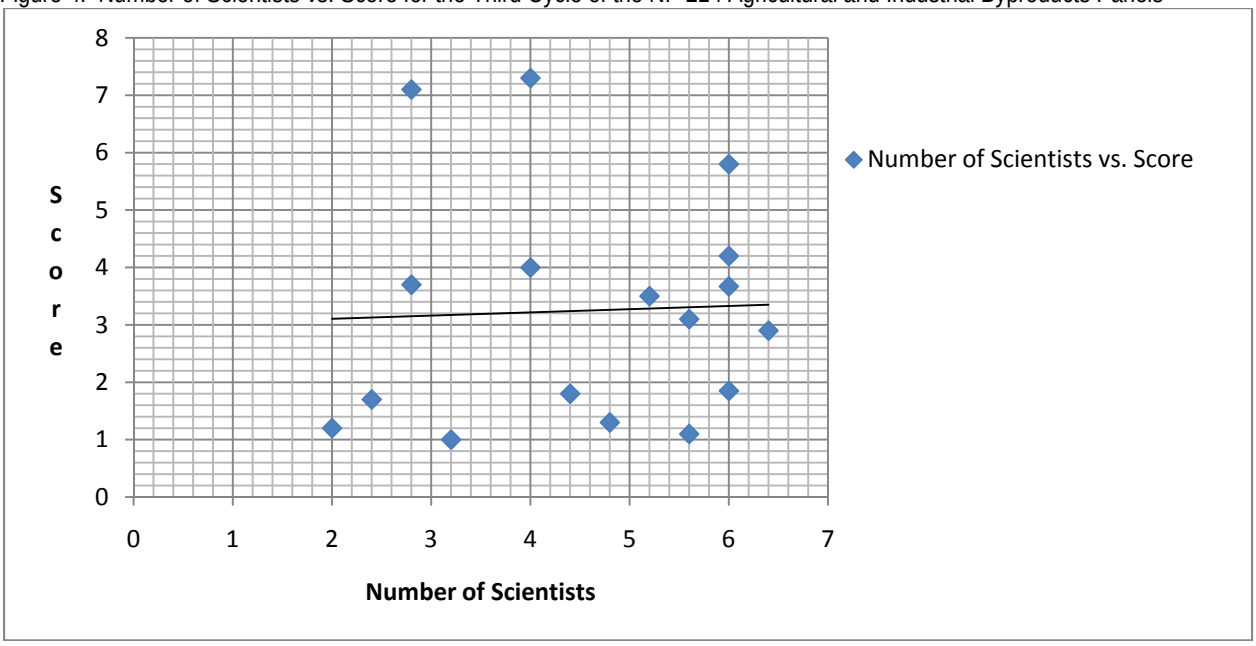


Figure 5. Initial Review Scores for the First (2000), Second (2005) and Third (2010) Cycle Distribution for the NP 214 Agricultural and Industrial Byproducts Panels (average score 4.48; 4.56; 4.54, respectively). The number of plans reviewed by each cycle is in parentheses. Numbers over columns are the actual number of plans receiving that score.

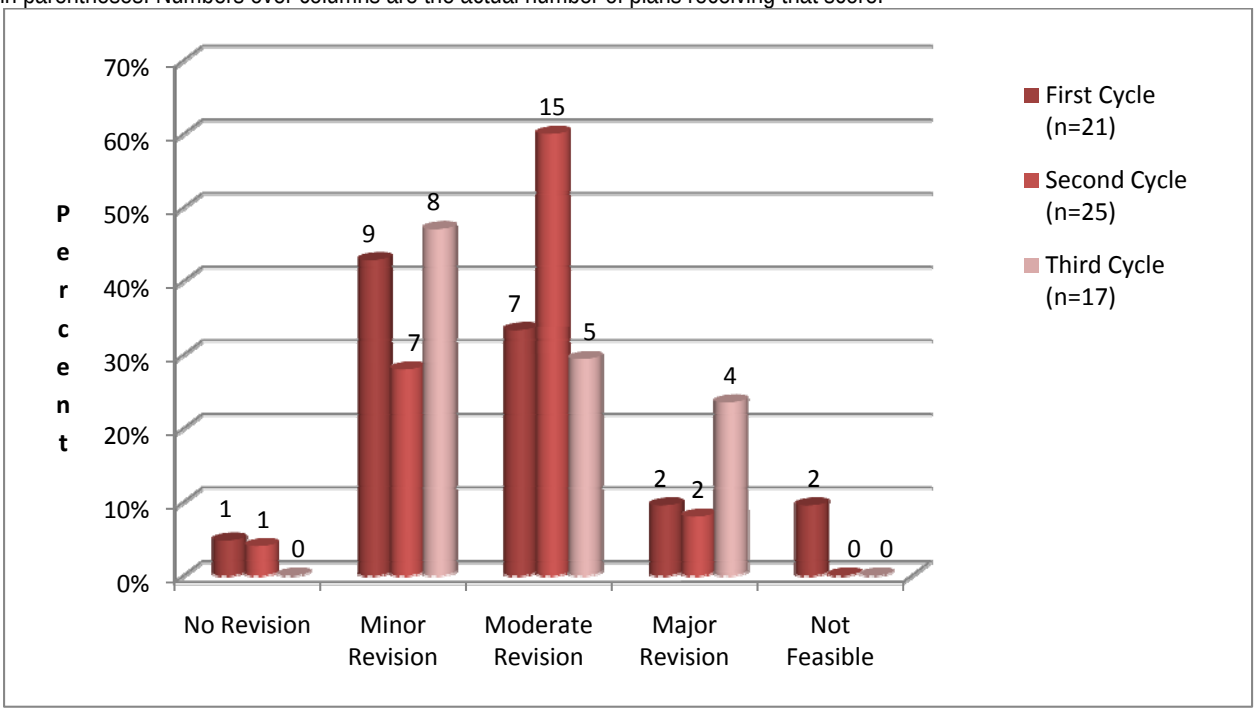
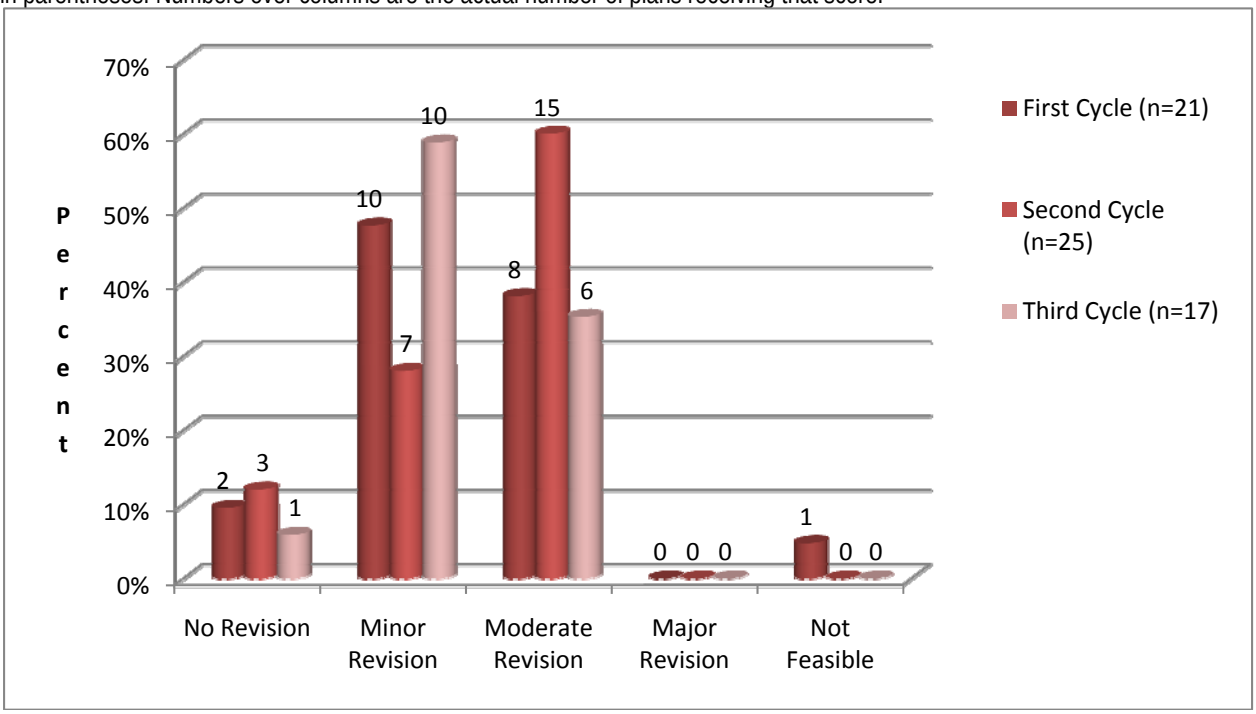


Figure 6. Final Review Scores for the First (2000), Second (2005) and Third (2010) Cycle Distribution for the NP 214 Agricultural and Industrial Byproducts Panels (average score 5.08; 4.96; 5.31, respectively). The number of plans reviewed by each cycle is in parentheses. Numbers over columns are the actual number of plans receiving that score.



Panel Characteristics

ARS places responsibility for panel member selection primarily on external and independent Panel Chairs. ARS scientists, managers, and the Office of National Programs may recommend panelists but the Panel Chair is under no obligation to use these recommendations. Several factors such as qualification, diversity, and availability play a role in who is selected for an ARS peer review panel. The five panels were composed of nationally and internationally recognized experts to review 17 projects primarily coded to the Agricultural and Industrial Byproducts Program (see Table 1, page 2). The information and charts below provide key characteristics of the Agricultural and Industrial Byproducts Panels. This information should be read in conjunction with the Panel Chair Statements.

Affiliations

Peer reviewers are affiliated with several types of institutions, especially universities, government, special interest groups, and industry. In some cases, peer reviewers have recently retired but are active as consultants, scientific editorial board members, and are members of professional societies. Also, several government-employed panelists are recognized for both their government affiliation and faculty ranking. Tables 5 and 6 show the type of institutions with which the Agricultural and Industrial Byproducts Panel members were affiliated with at the time of the review.

Table 5. Faculty Rank of Panelists Affiliated with Universities

Panel	Professor	Associate Professor	Assistant Professor
Byproducts & Use	1	1	1
Dairy & Beef	4	1	
Manure Management	2	2	1
Poultry	2		3
Swine	3		

Table 6. Other Affiliations Represented on the Panels

Panel	Government	Industry & Organizations	Other
Byproducts & Use	1		
Dairy & Beef			
Manure Management			
Poultry			
Swine			

Accomplishments

The peer review process is intended to be rigorous and objective, striving for the highest possible scientific credibility. In general, panelists are expected to hold a PhD unless the norm for their discipline tends to not require doctorate level education to achieve the highest recognition and qualification (e.g., engineers and modeling specialists). Panelists are also judged by their most recent professional accomplishments (e.g. awards and publications completed in the last five years). Finally, the panelists who are currently performing or leading research to address a problem similar to those addressed in the National Program are preferred. Table 7 describes their characteristics in the Agricultural and Industrial Byproducts Panel.

Table 7. The Panels' Recent Accomplishments

Panel	Published Articles Recently	Received Recent Professional Awards	Having Review Experience	Currently Performing Research
Byproducts & Use	5	2	4	5
Dairy & Beef	5	3	5	5
Manure Management	5	5	5	5
Poultry	5	5	5	5
Swine	3	2	3	3

Current and Previous ARS Employment

The Research Title of the 1998 Farm Bill 105-185, mandated ARS's requirements for the peer review of ARS research projects: 1) panel peer reviews of each research project were mandated at least every five years and 2) the majority of peer reviewers must be external (non-ARS scientists).

Table 8. Affiliations with ARS

Panel	Currently Employed by ARS	Formerly Employed by ARS
Byproducts & Use		
Dairy & Beef		1
Manure Management		
Poultry		
Swine		

Agricultural and Industrial Byproducts Panel Chairs

Dr. Warren Dick, Ph.D., ARS Panel Chair

Byproducts and Use Panel

Professor, Department of Soil Sciences, The Ohio State University, Wooster, OH

Education: B.S. Wheaton College, M.S. & Ph.D. Iowa State University

Dr. Dick started out as an Assistant Professor at the Ohio State University in 1980, Associate Professor from 1984-1990 and then Professor in 1990. His research program focuses on soil biochemistry, microbiology and environmental soil chemistry. He is the caretaker of the longest continuously maintained no-tillage plots in the world. The plots have been no-tilled continuously since 1962.

Dr. Richard Gates, Ph.D., ARS Panel Chair

Poultry Panel

Professor, Department of Agricultural and Biological Engineering Department, University of Illinois, Urbana, IL

Education: B.S. University of Minnesota; M.S. & Ph.D. Cornell University

Dr. Gates is a Professor in the Agricultural and Biological Engineering Department at the University of Illinois since 2008. His research areas are 1) controlled environment systems, with emphasis on biological and physiological responses and interactions between occupants and environment; 2) controlled environment systems analysis, control and simulation; 3) dietary manipulation in poultry and livestock for reduced aerial gases and building emissions; poinsettia propagation and hydroponic lettuce; 4) control systems development including fuzzy logic, heuristics and vapor pressure deficit; and 5) livestock production models for real-time economic optimization.

Dr. Larry Jacobson, Ph.D., ARS Panel Chair

Swine Panel

Professor, Department of Bioproducts and Biosystems Engineering Department, University of Minnesota, St. Paul, MN

Education: BAgE; MS & Ph.D. University of Minnesota

Dr. Jacobson has been a Professor and Extension Engineer in the Bioproducts and Biosystems Engineering Department at the University of Minnesota since 2000. He has leadership responsibility for Minnesota's extension programs in animal housing systems. Dr. Jacobson's research includes: alternative housing systems for pigs, development of manure management practices for the Minnesota pork industry, evaluation of the indoor air quality concerns, energy conservation and lighting efficiencies in dairy and pig facilities, and evaluation of odor control technologies and the development of an odor ratings systems.

Dr. Katharine Knowlton, Ph.D., ARS Panel Chair

Manure Management Panel

Associate Professor, Department of Dairy Science, Virginia Tech, Blacksburg, VA

Education: B.S. Cornell University; M.S. Michigan State University; Ph.D. University of Maryland

Dr. Knowlton is an Associate Professor in the Department of Dairy Science at Virginia Tech since 2005. Her research and teaching program focuses on environmental issues affecting the dairy industry. Her areas of expertise include environmental issues associated with animal agriculture, including nutrient pollution of ground and surface water; impact of nutrition and herd management on nutrient losses from dairy farms; ruminant phosphorus digestion and metabolism; wastewater treatment to achieve target nutrient composition of land applied wastes and endocrine disrupting chemicals in livestock wastes.

Dr. Wes Wood, Ph.D., ARS Panel Chair

Dairy and Beef Panel

Professor, Department of Agronomy and Soils,
Auburn University, Auburn, AL

Education: B.S. & M.S. Mississippi State University;
Ph.D. Colorado State University

Dr. Wood started out as an Assistant Professor at Auburn in 1990; he then became Associate Professor in 1993 and Professor in 1997. His scholarly program is oriented toward the area of biogeochemistry with primary emphasis on carbon, nitrogen and phosphorus cycling in agricultural and natural ecosystems. He also has investigated the impact of increasing atmospheric carbon dioxide concentrations on carbon and nitrogen cycling processes and been involved in research designed to elucidate carbon and nitrogen cycles in commercial fish ponds.

Panel Chair Statements

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

Warren A. Dick, Professor of Soil Science
The Ohio State University
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May 25, 2010

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

Dear Dr. Knowles,

I recently served as a chair of a panel reviewing National Program 214—Utilization of Manure and Other Agricultural and Industrial Byproducts. I identified four highly qualified panelists to conduct a thorough and complete scientific review of four different project plans. The panelists were invited to participate in this review during the first week of March, 2010 and we met to discuss our review comments and recommendations on May 10, 2010.

Our meeting on May 10 lasted about 2.5 hours and we discussed each of the project plans for slightly more than 30 minutes. The panelist that was the lead reviewer for a project plan initiated the discussion and this was followed by comments from the secondary review. As panel chair, I had read all four project plans. We focused primarily on the research approaches and procedures in each of the project plans. Did they adequately address the research needs and objectives? Did they represent creative scientific thinking? Were the proper procedures being proposed to conduct the research? For all four project plans, the review panel was impressed with the breadth of work proposed and the resources available to move forward in completing stated objectives.

After the review process was completed, the panelists spent just a few minutes discussing how the evaluation process could be improved. One suggestion was that every panel member should be required to read the Project Summaries, although these summaries were often rather short and not very informative. An Executive Summary of about 1-2 pages in length, that includes all of the important information, would be useful for reviewers not assigned as primary or secondary reviewers. That way everyone on the panel could participate in a project plan review in a more meaningful way. This Executive Summary could include the basic problems to be studied, the objectives, a brief description of the work plans to be followed to complete the objectives, and expected outcomes.

The panel's overall assessment of the review process, however, was positive. The project plans were written in sufficient detail, even though they represented work to be conducted over a five-year period. The primary and secondary reviewers were able to gain a clear understanding of (1) the research goals and (2) the research approaches and procedures to be used. This allowed our meeting on May 10 to focus on the "big picture" issues instead of getting bogged down on minor details. The help by the USDA staff to make sure panelists did not have a conflict of

interest was appreciated by the panel chair when various people were being considered to serve on this review panel. The USDA staff did a good job clearly defining what was expected of us and how to complete the review process without injecting any personal comments about the quality of the project plans that we were asked to review. In summary, the review process when smoothly and allowed expert input, external to USDA, into the project plans.

Sincerely,

Warren A. Dick

Warren A. Dick
Professor, Soil Science

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Department of Agricultural and Biological Engineering

College of Agricultural, Consumer and Environmental Sciences and College of Engineering
338 Agricultural Engineering Sciences Building
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26 April 2010

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

Dear Dr. Knowles:

This letter is to communicate the results of our panel's review of three projects within the NP 206/214 Agricultural and Industrial Byproducts that focused on Poultry Production systems. The panel was comprised of me and four faculty experts from different Land Grant Universities. Their combined expertise included poultry production systems, subsurface and surface hydrology and transport, microbial community assessment, and air and water quality fate, transport and measurement. There was substantial expertise in research, instruction and extension present on the panel.

The panel met in a web conference on 26 April and reviewed the assigned proposals. Two reviewers per proposal presented their summary comments. Other panelists were invited to provide their input during and after the main presentation. After some discussion and revision of the draft panel summary document, the panel voted. All panelists were prepared for the discussions and the allotted time was sufficient to allow ample discussion as needed on each proposal, without getting too detailed. The provision of the online draft panel summary is an effective tool for helping the group stay focused on the panel outcomes.

The group worked well together and was effective in providing appropriate peer-review input to the project plan PIs. Panelists all agreed that a key positive aspect of the process was the orientation training, which clearly explained how the ARS Research Project Plans are developed and where this panel review fits into the greater scheme of things. This was helpful to understand panelists' roles and to keep focused on the proposed science in each review. Logistics prior to the panel meeting were also noted as positive, with a recommendation to utilize selective direct email reminders in addition to the calendar appointment email method employed. One panelist felt that there was some loss of communication through use of the web conferencing system (as compared to formal face-to-face panel meetings) but this was gauged to be relatively minor, especially given the makeup of the panelists and their prior recognition of one another's capabilities and experience. Several panelists also noticed variable audio quality during the 3-hour conference.

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A suggestion to further improve the peer review process is to recommend that proposals are screened for obvious deficiencies, and that those should be corrected prior to going out for external review.

My assessment of the process is that it achieved a sound and credible peer review. I appreciate the opportunity to provide input into the USDA ARS research process. Please contact me if you have any further questions.

Sincerely,

Richard S. Gates, Ph.D., P.E.
Professor

UNIVERSITY OF MINNESOTA

Twin Cities Campus

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Web: www.bbe.umn.edu

April 21, 2010

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

Dear Dr. Knowles,

As panel chair of the NP 206/214 Swine Panel, I would like to report that during our just completed panel review, which occurred on Wednesday, April 21, 2010 from 11 AM to 1 PM (CDT), the panel members had a sound and credible scientific peer review discussion on the two designated projects. The primary and secondary reviewers gave well thought out critiques of the research and offered ideas, procedures, and alternative approaches to improving the proposed research in both projects. They offered perspectives, because of their university faculty positions, which is different than those in USDA/ARS.

The positive characteristics of the panel discussion were:

-The amount of time spend discussing the proposal (approximately an hour per proposal)
-The seriousness and level of professionalism that each reviewer demonstrated
-The understanding by each reviewer of their role (peer reviewer) in the process

The less positive characteristics of the panel discussion were:

-Some aspects of the logistical arrangement, including not hearing directly or seeing people's body language as they discussed their critiques and suggestions
-Actual scoring or voting on each proposal and the critique writing procedures

The most important suggestion to improve the "on-line" peer review process is more frequent communication between the panel chair/reviewers with the OSQR staff during the process to make sure everyone is on the same page and to remind reviewers of upcoming response deadlines.

Finally, this was an effective peer review panel which, I believe, has provided some valuable feedback to the scientists who have prepared their research proposals. I feel the reviewers provided a fair and honest review of the two projects to the best of their professional abilities.

Sincerely,

Larry D. Jacobson

Larry D. Jacobson, Professor, BBE Department

Our mission is to integrate engineering, science, technology and management for sustainable use of renewable resources and enhancement of the environment

VirginiaTech
College of Agriculture
and Life Sciences

Department of Dairy Science
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Blacksburg, Virginia 24061
540/231-5287 Fax: 540/231-5014
E-mail: knowlton@vt.edu
www.dasc.vt.edu

October 22, 2010

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

Dr Knowles:

I enjoyed serving as chair of the Manure Management Panel this year. I felt that we had discussions that reflected in-depth review by highly qualified peer scientists of USDA project proposals. I'm pleased that we were able to obtain the services of all of our first choices as panelists. These panelists brought new ideas and suggestions to the reviews that likely improved the quality of the research.

The online- and conference call-based discussion process worked very well with this panel. All panelists took the process seriously, submitting substantive reviews by the imposed deadlines. Your staff effectively collated and distributed the panelists reviews prior to the online/phone-based meeting. This allowed for efficient, effective discussion. I was pleased that when the panel did identify significant concerns with one plan, there was no negative pushback from staff, just a clear discussion of the next steps in the revision and re-review process. That re-review went smoothly as the scientists made the needed adjustments.

In summary, I found this to be a very effective review panel, balancing the need for in depth quality review with the need for a process accommodating busy panel members time. Thank you for having me serve as chair.

Sincerely,

Katharine F. Knowlton
Professor

Auburn University

Auburn, Alabama 36849-5412

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201 Funchess Hall

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Fax: 334-844-3945

26 October 2010

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

Dr. Knowles:

Our NP206/214 Dairy and Beef Waste Panel reviewed and had discussions regarding four ARS CRIS projects. Two projects needed some revision without re-review, while two needed re-review. The four reviewers on this panel conducted a sound and credible scientific peer review that considered ideas, creative thinking, and alternative approaches to improve the quality of research on these projects.

The four reviewers on this panel were well-prepared for our on-line discussions, and exhibited an understanding of the review criteria and their roles as peer reviewers. Adequate time was spent on discussion of each project, and our votes suggested like-mindedness among reviewers. No conflicts of interest were noted, so that exclusion of reviewers in our discussions was not necessary. The logistical arrangements were excellent, and the ARS staff made it easy for us to conduct our business. Scoring and critique writing procedures outlined on the forms were straightforward – it seems that ARS OSQR has the process down to a science.

Overall, I feel this panel was effective, and that our work went smoothly with the help of ARS OSQR staff. At this time I don't have any suggestions to improve the peer review process. As always, I enjoyed working with my ARS colleagues, and I appreciate the opportunity to chair this panel. I look forward to working with the ARS OSQR office again in the future.

Sincerely,

Wes Wood

C. Wesley Wood
Professor

Projects Reviewed by the Agricultural and Industrial Byproducts Panels

Beltsville Area

Eton Codling
Developing Beneficial Uses of Agricultural, Industrial and Municipal Byproducts

Thanh Dao
Developing Analytical and Management Strategies to Improve Crop Utilization of Manure Carbon, Nitrogen, and Phosphorus and Reduce Losses to the Environment

Walter Mulbry
Biological Treatment of Manure and Organic Residuals to Capture Nutrients and Transform Contaminants

Mid South Area

Johnie Jenkins
Safe Management and Use of Manure, Biosolids and Industrial Byproducts

Karamat Sistani
Efficient Management and Use of Animal Manure to Protect Human Health and Environmental Quality

Henry Torbert, III
Using Agricultural and Industrial Byproducts to Improve Crop Production Systems and Environmental Quality

Midwest Area

William Jokela
Improving Dairy Forage and Manure Management to Reduce Environmental Risk

Brian Kerr
Animal and Manure Management for Sustainable Production and Reduced Environmental Impact

Terence Whitehead
Understanding the Role of Commensal Anaerobic Bacteria in Odor, Emissions, and Antibiotic Resistance from Stored Livestock Manure

Northern Plains Area

Daniel Miller
Environmentally Sound Manure Management for Reduction of Gas Emissions, Nutrients, and Pathogens

Bryan Woodbury
Management of Manure Nutrients, Environmental Contaminants, and Energy from Cattle and Swine Production Facilities

Pacific West Area

Robert Dungan
Assessing Atmospheric Emissions from Concentrated Animal Feeding Operations in the Pacific Northwest

Abasiofiok Ibekwe
Protection of Food and Water Supplies from Pathogen Contamination

South Atlantic Area

Michael Jenkins
Survival and Transport of Pathogens from Animal Production Systems within Landscapes of the Southeastern USA

Ariel Szogi
Innovative Bioresource Management Technologies for Enhanced Environmental Quality and Value Optimization

Southern Plains Area

Noel Cole
Develop Technologies to Protect Air Quality, Maintain Production Efficiency, and Enhance the Use of Manure from Southern Great Plains Beef and Dairy Agriculture

Philip Moore, Jr.
Manure Management Strategies to Improve Air and Water Quality

Office of Scientific Quality Review

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

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

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

Contact

Send all questions or comments about this Report to:

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