USDA Agricultural Research Service
Office of Scientific Quality Review
Panel Chair Orientation
2018

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Today

- USDA – ARS in context
- ARS – About us
- ARS Research Priorities
  - How we set them
  - How these lead to project plan objectives
- ARS Peer Review
  - Not a grant decision!
  - Why OSQR?
- Panel Chair Responsibilities
- OSQR Resources
USDA Structure - Where is ARS?

This organization chart displays the names of USDA offices, agencies, and mission areas. Each office, agency, and mission area is placed within a cell connected by lines to show the structure and hierarchy (Under Secretary, Deputy Secretary, or Secretary) for which they fall under. An HTML version that lists USDA Agencies and Offices and USDA Mission Areas is also available on usda.gov.
USDA Structure - Where is ARS?

USDA Organization Chart

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Research, Education, and Economics

Vacant
Under-Secretary

Chavonda Jacobs - Young
Acting Deputy Under Secretary

ARS
Chavonda Jacobs - Young
Administrator

NIFA
Sonny Ramaswamy
Director

ERS
Mary Bohman
Administrator

NASS
Huber Hamer
Administrator
ARS Profile

- In-house science research arm of USDA
- Farm-to-table research scope
- Information and technology transfer
- Administration and stakeholder priority setting process
- National Programs in Plants, Animals, Nutrition, Natural Resources
- 690 projects
- 2,000 scientists and post docs
- 6,000 + other employees
- 90+ laboratories
- ~$1.1 billion annual budget
- Partnerships with universities and industry
- International collaborations
ARS National Programs

**Animal Production**
- Food Animal Production (101)
- Animal Health (103)
- Veterinary, Medical, and Urban Entomology (104)
- Aquaculture (106)

**Natural Resources**
- Water Availability & Watershed Management (211)
- Soil and Air (212)
- Biorefining (213)
- Grass, Forage, and Rangeland Agroecosystems (215)
- Sustainable Agricultural Systems (216)

**Crop Production**
- Plant Genetic Resources, Genomics and Genetic Improvement (301)
- Plant Diseases (303)
- Crop Protection & Quarantine (304)
- Crop Production (305)

**Nutrition, Food Safety/Quality**
- Human Nutrition (107)
- Food Safety (animal & plant products) (108)
- Product Quality & New Uses (306)
ARS Mission

✓ Solve high priority agricultural problems (farm to plate) through research
✓ Transfer those solutions to the public
ARS Current Research Priorities

- Ensure high-quality, safe food, and other agricultural products;
- Assess the nutritional needs of Americans;
- Sustain a competitive agricultural economy;
- Enhance the natural resource base and the environment;
- Provide economic opportunities for rural citizens, communities, and society as a whole.
ARS Research
Scientific Quality and Review
National Program 5 - Year Cycle

1. **Relevance** - Stakeholder input – Informs the Action Plan/Objectives

2. **Quality** - Peer Review of every project – Cycle Start, Peer Review

3. **Performance** - 5-year cycle, annual objectives/accomplishments

4. **Quality** - Cycle End, National Program Retrospective Outside Review
ARS Customers and Stakeholders

• Administration
• Congress
• Action and Regulatory Agencies
• Producers—Farmers and Ranchers
• Industry
• State and Local Governments
• Non-governmental Organizations (NGOs)
• Advisory Boards
• Consumers
Relevance Planning and Priority Setting: Sources of Input

Executive Branch (OMB, OSTP, USDA, other Federal agencies)

Scientific Community

ARS Program & Budgeting Priorities

Customers, Partners, Stakeholders, & Advisory Boards

Congress

Agency Scientists & Managers

Relevance
NP 216 Accomplishment Report

• Accomplishments reported annually by each project

• Program Leader compiled selected Accomplishments for National Program (NP) report

• Provides summary of prior cycle Action Plan, coupled with retrospective integration of accomplishments and how they addressed goals for each NP component

• Foundational document provided to the external retrospective NP review panel, and publically available
ARS National Program Retrospective Review

• External Review Panel for ENTIRE National Program
• Primary/Secondary per Program Component
• Feedback on (may vary, not all inclusive):
  – Relationship to Program’s Action Plan
  – Relevance to identified stakeholder needs
  – Technology transfer and adoption
  – Impact on advancing science and the research community, producers, consumers, and/or regulatory agencies
  – Recommendation to continue/discontinue, or add components
• Informs Strategic Planning and Gathering input for the next Five-Year Action Plan
NP 216 Action Plan

MISSION: Build a science-based foundation for farming systems using an unbiased, systems approach. Provide multiple, actionable genetic and management options to achieve:

• Desired yield quantity, quality
• Economic viability and competitiveness
• Environmental enhancement
• Quality of life for rural populations, and society as a whole

Relevance
ARS Peer Review vs. Granting Agencies

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NIFA… for example
ARS and NIFA do RESEARCH, and BOTH do PEER REVIEW…

**ARS**

Chavonda Jacobs - Young Administrator

**NIFA**

Sonny Ramaswamy Director

You may have participated in NIFA or other research grant agency Peer Review. *It’s pretty much the same deal, right???
ARS and NIFA do RESEARCH, and they do PEER REVIEW…

ARS
Chavonda Jacobs - Young Administrator

≠

NIFA
Sonny Ramaswamy Director

Nope.

You may have participated in NIFA or other research grant agency Peer Review. It’s pretty much the same deal, right???
ARS Peer Review vs. Granting Agencies

**ARS**
- ASSIGNED Objectives
- NO FUNDING review/decision
- NO RANKING of plans
- FIVE-YEAR cycle
- PLAN Review
- Like a Manuscript Peer Review
- Reviewer Feedback
  - ARS Response Required by Law
  - Plans often changed based on Panel comments, as a manuscript
- Scientist Responses Available to Review Panel

**NIFA**
- DESIGNED Objectives
- Decide to Fund, or not to
- Rank Proposals for funds
- Cycles vary, often 1-3 years
- PROPOSAL Review
- Traditional Grant Peer Review
- Reviewer Feedback
  - May be seen by researchers
  - Proposals may not change based on Panel comments - unclear
- Scientist responses may not be available to Review Panel
ARS Cares… and It’s the Law!

- 1998 Farm Bill Requires
  - ARS Research Peer Reviewed every 5 years
  - External reviewers, unless expertise is not available outside of ARS (exceedingly rare)
  - EVERY PLAN submitted must pass review
    - Failing plans may be revised and re-reviewed
    - Plans failing initial, and re-review will not proceed
    - Funding for a twice failing plan must be redirected
      - Based on appropriations/authorities governing its use
ARS Project Review Criteria

Adequacy of Approach
• Plan and procedures appropriate?
• Sufficient information provided for understanding and review?
• Researcher understanding of methodology, technology demonstrated?
• Researcher/collaborator roles clear?
• Plan conveys a clear, logical experimental design; well-written?

Probability of Success
• Plan likely to lead to success, or produce significant new knowledge? If the risks are significant, are they worth the potential payoffs?

Merit and Significance
• Will the plan lead to new information, findings, or understandings?
• What is the potential impact to stakeholders? Society? Agriculture?
ARS Project Review Scores

Passing Scores
- **NO REVISION**: Excellent, no changes or additions, suggestions welcomed/responded to
- **MINOR REVISION**: Sound, feasible, minor changes needed
- **MODERATE REVISION**: Some change to approach needed, but feasible

What Happens Next?
- Lead Scientist will respond to reviewers’ comments
- Science Quality Review Officer certifies compliance with the recommendations, much like a science journal editor
- Plans are NOT certified until the review comments are fully addressed
ARS Project Review Scores

Failing Scores

- **MAJOR REVISION**: Sound and Feasible IF significantly revised, major gaps in plan
- **NOT FEASIBLE**: Major flaws, omissions, or deficiencies in resources, plan is unclear so as to be impossible to review

What Happens Next?

- Lead Scientist responds to comments and revises the plan
- The plan is re-reviewed by the SAME panel, and a second on-line panel discussion is held
- The plan receives a second score at re-review
- Re-reviewed plans scoring Major or Not Feasible a second time
  - Have “Failed Review”
  - The plan will not be implemented
So you’ve agreed to be a Panel Chair… now what?
Panel Chair Responsibilities

Select Qualified Panelists, Assign Plans to Review

- Aim for diversity
  - Varied, appropriate disciplines
  - Gender, ethnicity, cultural diversity in science
  - Early and experienced career researchers
- Submit names to OSQR to check for Conflict of Interest
  - No collaboration with PI in last 4 years
  - 8 years since serving supervisory/advisory role
  - No institutional or individual consulting affiliation
  - No financial gain from the research reviewed
- Scientific Quality Review Officer concurs with choices
- Invite and Assign primary and secondary reviews
- Assist as needed their completing Panelist Review Forms
Panel Chair Responsibilities

Getting Ready for the Panel Discussion

• Guide reviewers to focus for an ARS peer review, their understanding of ARS review differences from traditional grant programs is helpful here

• Are reviewers are comfortable with assignments?
  – Alert OSQR of any issue ASAP
  – Issues requiring additional review(er), MUST be addressed well in advance of the panel discussion

• TIMELINESS – late review comments bottleneck the entire process, and could impact the review discussion
  – Reviews are due ONE WEEK PRIOR TO PANEL DISCUSSION
  – OSQR will combine them, and send them to the panel in advance of the discussion for reviewers’ review/concurrence
On Review Panel On-line Discussion Day

- An agenda, and combined reviews will be sent before
- I will introduce the Science Quality Review Officer, David Shapiro-Ilan, who will make a brief statement
- I will follow up with a short overview/reminder briefing of the OSQR process – some of the material covered today
- I will turn the discussion over to you to lead for each plan individually.
- I will edit each combined review comment document on screen during the discussion, so at the end of each plan discussion, the final panel recommendation form is essentially complete
Panel Chair Responsibilities

Advice for the Panel Chair

• You may facilitate discussion as you wish; and do not need to follow the suggested agenda provided.

• I recommend focusing discussion so each plan takes ~25-30 minutes overall.
  – Maintain balance between reviewers’ identifying concerns that researchers can address or respond to, and
  – The panel’s need for clarifying discussion to agree on plan strengths, issues, and reviewer recommendations
  – It is ultimately up to researchers to respond to, solve, or clarify issues the reviewers have
  – Facilitating this balance may ensure adequate time to discuss each plan fully
Panel Chair Responsibilities

Panel Chair-led Discussion Format for Each Plan

• Overview (5 min): Primary, then Secondary
• For each Objective:
  – Primary, then Secondary, then others
  – (Ideally, it should take about 20 min total for all objectives.)
• Probability of Success (2-3 min) Primary, then Secondary, then others
• Merit and Significance (2-3 min) Primary, then Secondary, then others
• Turn it back to me to score EACH plan as we go
Panel Chair Responsibilities

Scoring the Plans – this is ANONYMOUS

• Following EACH plan discussion, I will instruct the panel how to submit scores anonymously; the chair is required to vote as well

• Once all are submitted, I will share the scores, and average for the plan – this is the tentative score

• I will turn it back to you for the next plan discussion
Panel Chair Responsibilities

Finishing up the Panel Discussion

• Once all plans are scored, I will review all tentative scores for final acceptance or individual revote – until the panel is in agreement – then the review panel will be complete

• I will provide information on next steps, and request feedback on the review process.

• I will turn it over to the Scientific Quality Review Officer, David Shapiro-Ilan, for his closing statement

• He will turn it back to you to make a final statement to the panel
Panel Chair Responsibilities

After the Panel Discussion

• Provide a written Panel Chair statement/summary
  – Template available
  – Reviewers remain anonymous, and are not named
  – No specifics or identifying information on the plan discussions

• Continue working with OSQR, and Panel members for any plans needing re-review
  – Generally re-review panels are scheduled ~12 weeks after the initial review
  – The review will focus only on researcher responses to issues raised in the initial panel discussion of the plan
NEXT! …if you haven’t already…

• Finalize any paperwork – including banking information for Honorarium
• Submit Panelist names for COI checks and SQRO to concur
  – NOTE those on our lists are NOT checked for COI until you request them to be
  – Send to OSQR@ars.usda.gov, David.Shapiro@ars.usda.gov, Linda.DalyLucas@ars.usda.gov, or Michele.Shaw@ars.usda.gov.
• Once the panel is appointed, assign primary and secondary reviewers
• OSQR will work with you and the panel to provide and collect documents, and to set a date for the on-line Panel Discussion
Thank you! Seriously, we can’t do it without you!!
OSQR Resources

- **OSQR:**
  - [www.ars.usda.gov/OSQR](http://www.ars.usda.gov/OSQR)
  - OSQR@ars.usda.gov

- **Office of National Programs:**
  - [www.ars.usda.gov/research/programs](http://www.ars.usda.gov/research/programs)

- **OSQR Staff:**
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