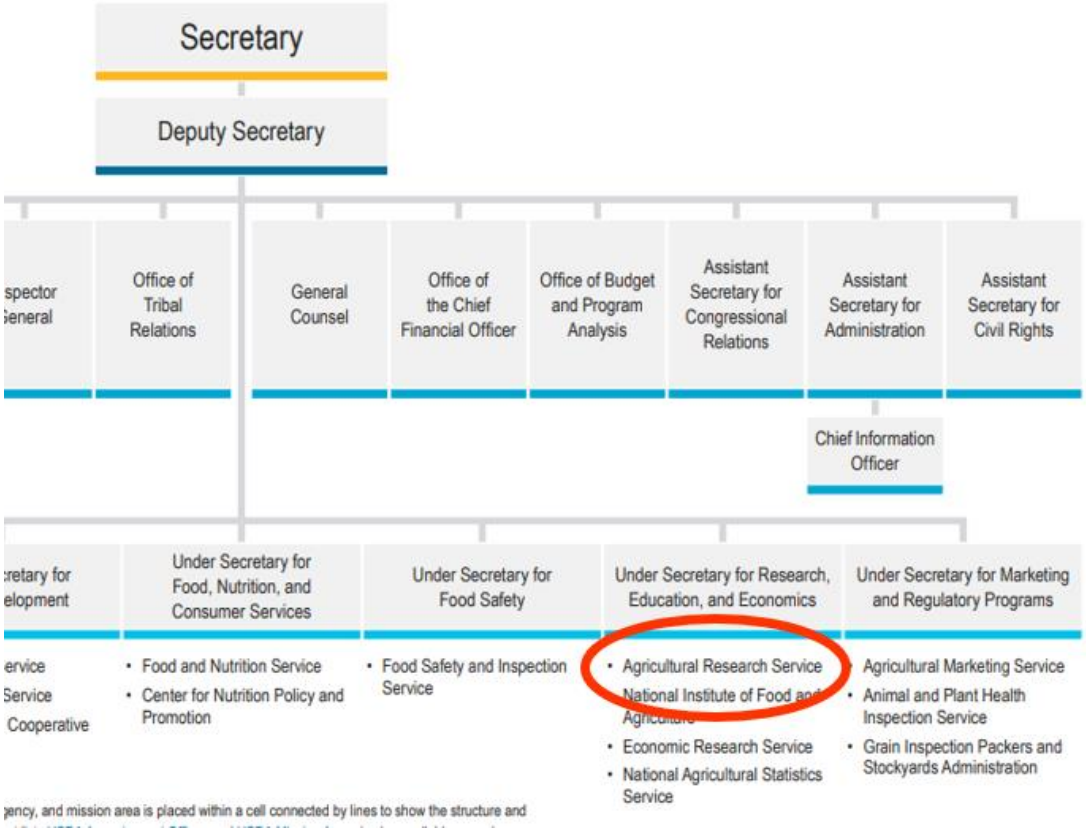
USDA Agricultural Research Service Office of Scientific Quality Review Panelist Orientation

Agenda

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

USDA Structure - Where is ARS?



Research, Education, and Economics

Vacant

Under-Secretary

Scott Hutchins

Deputy Under Secretary

ARS

Chavonda Jacobs - Young
Administrator

NIFA

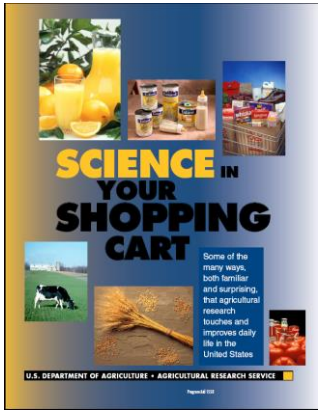
Scott Angle
Director

ERS

Marca Weinberg
Acting Administrator

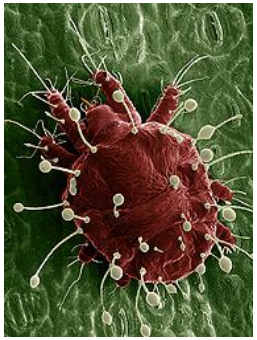
NASS

Huber Hamer
Administrator



ARS Mission

- Solve high priority agricultural problems (farm to plate) through research
- Transfer solutions to customers and stakeholders



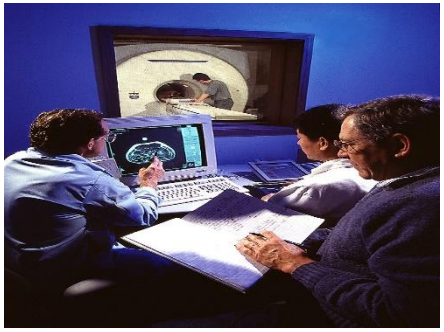
ARS Research Priorities

- 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

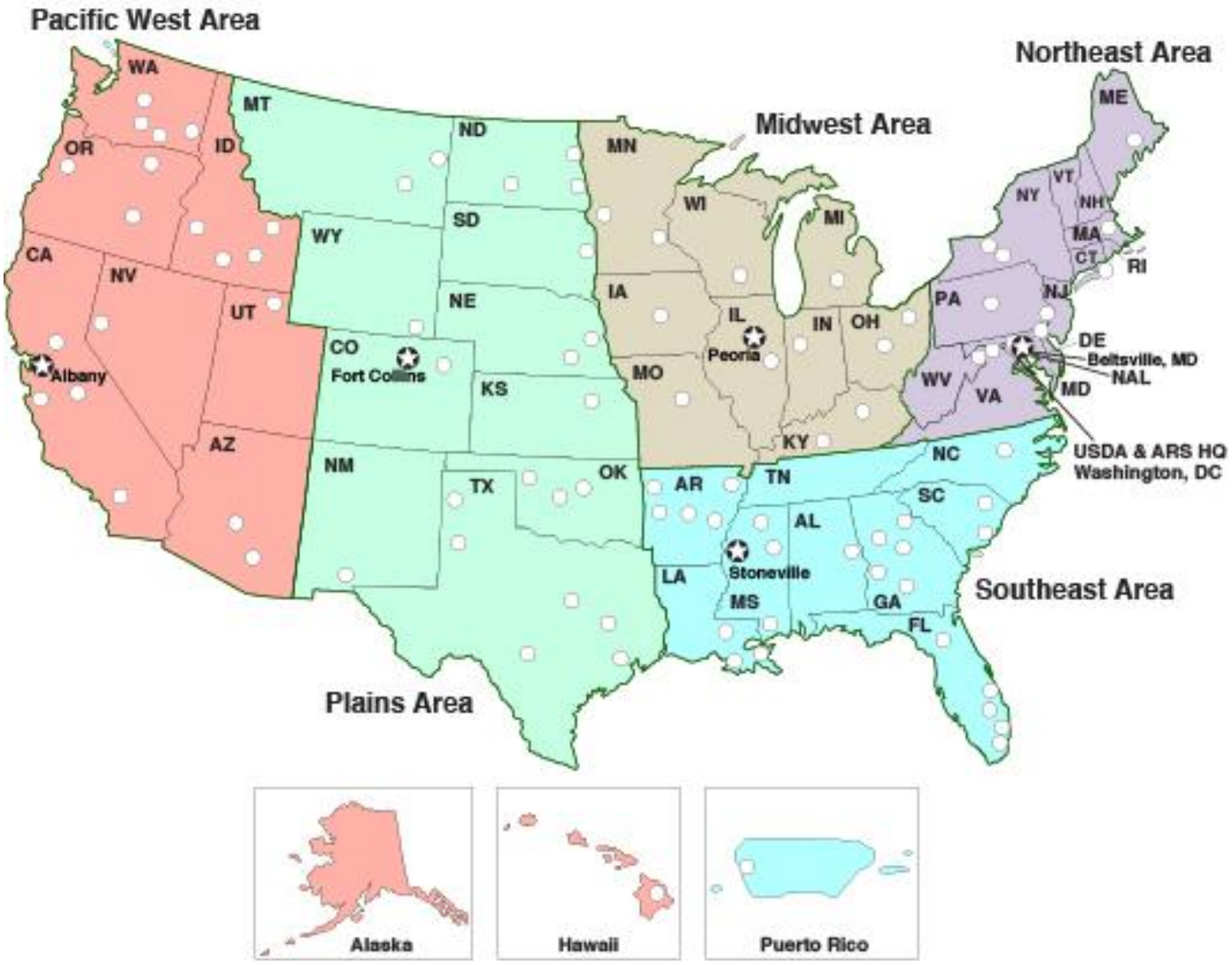
ARS Profile

- In-house science research arm of USDA
- Farm-to-table research scope
- Information and technology transfer
- International collaborations

- 660 projects
- 2,000 scientists and post docs
- 6,000 other employees
- 90+ laboratories
- $1.4 billion annual budget
- Partnerships with universities and industry



ARS Areas


Pacific West Area
Northeast Area
Midwest Area
Plains Area
Southeast Area
WA
OR
CA
ID
NV
MT
WY
UT
AZ
CO
NM
ND
SD
NE
KS
OK
TX
MN
IA
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OH
KY
TN
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AL
GA
FL
SC
NC
VA
WV
PA
NY
VT
NH
ME
MA
CT
RI
NJ
DE
MD
Albany
Fort Collins
Peoria
Stoneville
Beltsville, MD
NAL
USDA & ARS HQ
Washington, DC
Alaska
Hawaii
Puerto Rico

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)
- 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)

Customers/Stakeholders Formulating Research Priorities

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

Customers, Partners, Stakeholders, & Advisory Boards

Congress

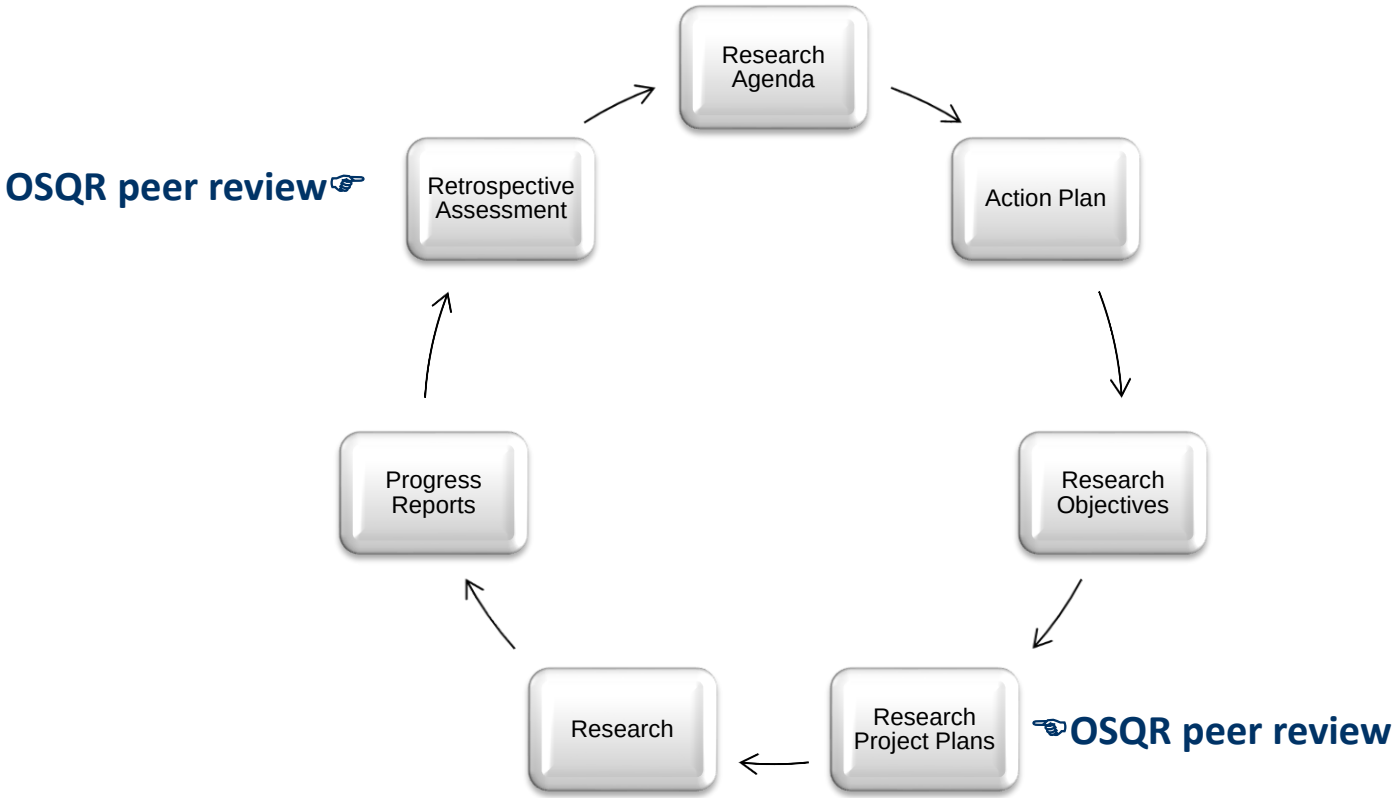
Scientific Community

ARS Program & Budgeting Priorities

Agency Scientists & Managers

https://www.ars.usda.gov/research/programs/

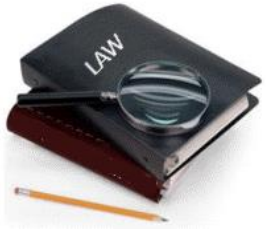
Building Blocks of ARS Research Cycle



Peer Review is Important to ARS … and It's the Law!

1998 Farm Bill *(PL 105-185)* Requires

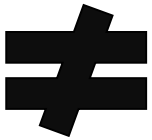
- ARS Research Project Plans Peer Reviewed every 5 years
- External reviewers, unless expertise is not available outside of ARS
- Every plan must pass review
  - Failing plans may be revised and re-reviewed
  - Plans failing re-review will not be implemented



ARS Peer Review vs. Granting Agencies

ARS

- ASSIGNED Objectives
- NO FUNDING review/decision
- NO RANKING of plans
- FIVE-YEAR research 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



Granting Agencies

- DESIGNED Objectives
- Decide to Fund, or not to
- Rank Proposals for funding
- Cycles vary, often 1-3 years
- **PROPOSAL** Review
- Traditional Grant Peer Review
- Reviewer Feedback
  - May be seen by researchers
  - Proposals perhaps may not change based on Panel comments
- Scientist responses may not be available to Review Panel

So you've agreed to be a Panelist … now what?

Panelist Responsibilities – Preparing for the Review

- Panel Chair will assign each panelist two plans
  - One plan as the primary reviewer
  - Another plan as the secondary reviewer
  - Every panelist is expected to submit a written review for assigned plans/plans are generally 70 pages
  - OSQR encourages comments on each plan from non-primary and non-secondary panelists
    - *We will provide non-primary/non-secondary reviewer form*
- Verify there are no Conflict of Interest (COI)
  - No collaboration in last 4 years with any of ARS researches on "your" two plans
  - No academic relationships (supervisory/advisory/etc.) in last 8 years with any of ARS researches on "your" plans
  - No institutional or individual consulting affiliation
  - No financial gain from the research reviewed
- 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 comments, and send them to the panel in advance of the discussion for review and concurrence

ARS Project Plan Peer 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?
- Data management plan

❑ 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?

Panelist Responsibilities – Preparing the Written Review Form

Adequacy of Approach and Procedures covers the plan objectives.
A common format style (circled) makes it easier to combine and discuss your review points accurately and efficiently!

Project Title: **Enhancing Production with High Throughput Phenotyping and Other Genetic Approaches**

Lead Scientist: **Last, First** Date: Tuesday, January 23, 2018

Name of the Review Session: **NP 500 13: Production (2018)**

Reviewer ID Number: **EYPA7339**

PANELIST REVIEW OF ARS RESEARCH PROJECT PLAN

The purpose of this review is to judge the technical merit of the planned research and to make constructive comments for improvement. The focus of research has been determined by ARS to be essential to its mission, and, if approved, funding is available. Please provide both comments on each review criterion. For criterion 1, please follow the format provided. It is important to state briefly the rationale for suggestions or questions posed. Recommendations can include specific questions you believe should be addressed by the lead scientist.

1. **Adequacy of Approach and Procedures:** [illegible] and/or plan of work well conceived? Are the experiments, analytical [illegible], and approaches and procedures appropriate [illegible] sufficient to accomplish the objectives? [illegible] could the approach or research procedures be improved?

For* Adequacy of Approach and Procedures *please use the following format to organize your comments:

-Overview of project and general review comments
-Objective 1
  -Subobjective 1.1.
    -Strengths
    -Questions or Recommendations
  -Subobjective 1.n…
    -Strengths
    -Questions or Recommendations
Objective n…

Probability of Success in meeting the objectives. Consider the team, the collaborators, and resources.

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2. **Probability of Successfully Accomplishing the Project's Objectives:** What is the probability of success in light of the investigator or project team's training, research experience, preliminary data, if available, and past accomplishments? Are the objectives both feasible and realistic within the stated timeframe and with the resources proposed? Do the investigators have an adequate knowledge of the literature as it relates to the proposed research?

Merit and Significance

Will the successful completion of the project

- Lead to new information, findings, or understandings?
- Have a meaningful impact on stakeholders? Society? Agriculture?

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3. **Merit and Significance:** Will the successful completion of the project enhance knowledge of a scientifically important problem? Will the project lead to the development of new knowledge and technology? Are you aware of any other data/studies relevant to this research effort? If applied research, comment on the value of the research to its customers.

Additional Comments or Suggestions: Any final thoughts, questions, or ideas to share with the researchers and management

ARS Project Plan Peer 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?

i. Lead Scientist responds to reviewers' comments and updates the research project plan

ii. Scientific Quality Review Officer certifies each plan when panel recommendations are addressed, much like an approval from a science journal editor

Borderline and Failing Scores

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

What Happens Next?

i. Lead Scientist responds to reviewers' comments and revises the research project plan

ii. The plan is re-reviewed by the SAME panel, and a second on-line panel discussion is held

iii. The plan receives a second score at re-review

Re-reviewed plan scoring Major or Not Feasible a second time

- Is marked as "Failed Review"
- The plan will not be implemented

On-line Panel Discussion

- An agenda and combined reviews will be sent in advance
- Introduction of Panel members and Office of Scientific Quality Review staff
- Overview/reminder briefing of the OSQR process – some of the material covered today
- Panel Chair will lead review of each plan individually
- During the discussion, additional key points, if needed, can be added to a combined review comment document
  - *Please be explicit about modifications that want to make*
- At the end of each plan discussion, the final panel recommendation form will be complete

On-line Panel Discussion

- Generally, a well focused discussion takes about 25-30 minutes for each plan
  - Read the documents provided ahead of time
  - Work with other panelists to maintain balance in discussion

    *- Identify concerns that ARS **researchers** can address or respond to*

    - Have a clarifying discussion to agree on plan strengths, issues, and reviewer recommendations
  - Ensure an adequate time to discuss each plan fully

On-line Panel Discussion

- **Panel Chair-led Discussion Agenda**
  - i. Overview (3 min)

    Primary, then Secondary
  - ii. Review of each Objective (~ 20 min total for all objectives)

    Primary, then Secondary, then others
  - iii. Probability of Success (2 min)

    Primary, then Secondary, then others
  - iv. Merit and Significance (2 min)

    Primary, then Secondary, then others
  - v. Scoring of EACH plan

    OSQR Coordinator will facilitate scoring

On-line Panel Discussion

- **Scoring the Plans – this is ANONYMOUS**
  - Following EACH plan discussion, OSQR Coordinator will instruct the panel how to submit scores anonymously

    - The Panel Chair is required to vote as well
  - Once all scores are submitted, OSQR Coordinator will share the scores and the overall score for the plan

Panelist Responsibilities

- **Finishing up the Panel Discussion**
  - Once all plans are scored, OSQR Coordinator will review all scores for final acceptance – then the review panel will be complete
  - OSQR Coordinator will provide information on next steps and request feedback on the review process
  - OSQR Coordinator will make a final statement and conclude the panel

Panelist Responsibilities

- **After the Panel Discussion**
  - The Panel Chair will provide a written statement/summary
    - If you feel something should be included, contact the Panel Chair
    - Reviewers remain anonymous, and are not named
    - No specifics or identifying information on the plan discussions
  - Continue working with OSQR and other Panel members on any plans needing re-review
    - Generally re-review panels are scheduled ~12 weeks after the initial review
    - The re-review will focus on researcher responses to issues raised in the initial panel discussion of the plan only

if you haven't already…

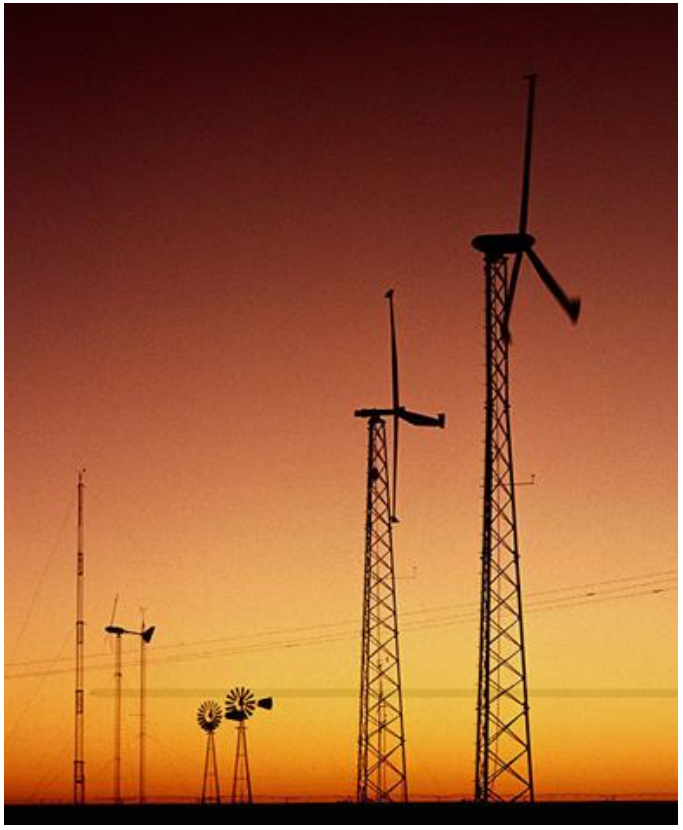
- Finalize and Submit all Paperwork
  - Reviewer Information form
  - Panelist Additional Information form
  - Confidentiality Agreement form
  - CV
- Let your Panel Chair and OSQR know IMMEDIATELY
  - If you have a conflict of interest with your assigned plans
  - If you have any concerns over your ability to review your assigned plans

OSQR facilitates research project plan peer review panels by

- Answering all questions
- Providing and collecting documents
- Setting a date for the on-line Panel Discussion

OSQR Resources

- Office of National Programs:
  - www.ars.usda.gov/research/programs/
- OSQR:
  - www.ars.usda.gov/OSQR
  - OSQR@usda.gov, General Mailbox
- OSQR Staff:
  - Linda.DalyLucas@usda.gov, Program Analyst
  - Michele.Shaw@usda.gov, Program Specialist
  - Todd.Ward@usda.gov, SQRO
  - Marquea.King@usda.gov, Coordinator



Questions


NO Pesticides
Orangeglo (Sunshine)
(Yellow watermelon)
Really sweet
(Price as mark)

Thank You!