Texas A&M AgriLife Research

Hatch and Hatch-Multistate Workshop

Henry Fadamiro
Director's Office

Kim Redmon, Katie Fulton, & Loree Lewis
Administrative Services

Texas A&M AgriLife Research

Outline

- **The Land-Grant System**
- **Importance and Elements of Hatch and Hatch-Multistate Projects**
- **Hatch and Hatch-Multistate Project Initiation (NRS and NIMSS)**
- **Reporting: Communicating Your Science**
- **Q & A**

The Land-Grant System

- **Land-Grant System Acts**
  - Morrill Act of 1862 - Instruction
  - **Hatch Act of 1887 - Research (Agricultural Experiment Stations)**
  - Smith-Lever Act of 1914 – Extension
  - McIntire-Stennis Cooperative Forestry Research Act of 1962

- **Texas A&M AgriLife Research founded in 1888 as**
  - Texas Agricultural Experiment Station
  - Later Texas Agricultural Research Service
  - Name changed to Texas A&M AgriLife Research (January 1, 2008)

- **Mission:**
  - Advance scientific discoveries and innovations that benefits consumers and expands agricultural sustainability, profitability, and environmental stewardship.

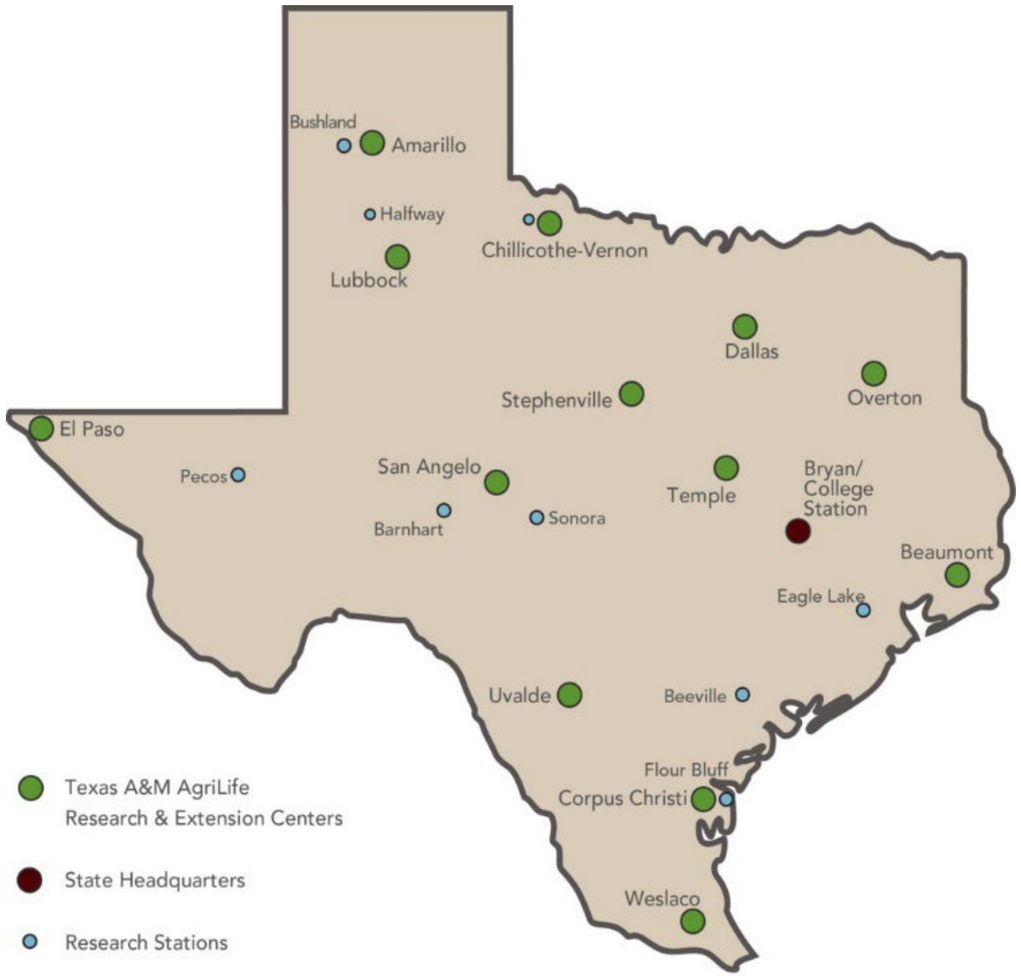
Texas A&M AgriLife Research

- **Research Enterprise**
  - 13 Research and Extension Centers across Texas
  - 15 On-Campus Departments
  - 1,289 employees
  - 406 doctoral-level scientists
  - $233M in total expenditures in FY20 (NSF HERD report)

- **Federal Capacity Funding for Research (through NIFA)**
  - Hatch
  - Hatch-Multistate
  - Animal Health
  - McIntire-Stennis – Forest Service

  - Texas State Match

  - *Faculty salaries, facilities, operations, and seed funding.*



Hatch Projects

- **The Federal Hatch funds and the required state matching dollars require faculty to have plans of work in the form of a Hatch Project.**
  - Administrative oversight of research conducted by experiment stations

- **A Hatch Project is a five year "plan of work" for faculty and serves as an umbrella for all research activities of a faculty member.**
  - Unfunded project that guides faculty's research
  - Include measurable goals and anticipated outcomes/impacts
  - Hatch projects are mostly single PI projects but can be team-based projects

- **Benefits:**
  - AGLR faculty must have an approved Hatch project or participate in a Hatch-Multistate project to be eligible for seed funding opportunities.
  - Potential for research to be highlighted nationally by NIFA.
  - Leveraging of extramural funding.

Hatch as Defined by the USDA

Hatch activities are broad and includes research on all aspects of agriculture, including soil and water conservation and use; plant and animal production, protection, and health; processing, distribution, safety, marketing, and utilization of food and agricultural products; forestry, including range management and range products; multiple use of forest rangelands, and urban forestry; aquaculture; home economics and family life; human nutrition; rural and community development; sustainable agriculture; molecular biology; and biotechnology. Research may be conducted on problems of local, state, regional, or national concern.

https://nifa.usda.gov/program/hatch-act-1887

Elements of a Hatch Proposal

- A Hatch proposal must address the mission of the Hatch act and should include the following elements:

- **Non-Technical Summary** *(Summarize the importance of your project in terms that general citizens can understand).*
- **Literature Review** *(Summarize previous related work and present outlook).*
- **Goals and Objectives** *(Include a statement on how the project will advance knowledge; justify how it addresses the mission of AGLR).*
- **Procedures and Methods** *(Provide a summary of your research procedures including a project timeline; no need to be too specific)*
- **Outreach Plan**
- **Expected Outcomes/Anticipated Impact**
- **Target Audience**
- **Participants** *(Estimated Projects FTEs for the Project Duration)*
- **Literature Cited**

Hatch-Multistate Projects

- **Similar to Hatch projects but involve a team of investigators associated with AES in other states working together to solve a complex scientific problem of regional or national interest.**
  - Excellent opportunity to build/expand professional network.

- **Information on Multistate projects is available on the National Information Management and Support System (NIMSS) Web site**: http://www.nimss.org/
  - Faculty interested in joining a Multistate project must complete an Appendix E form in NIMSS.
  - Contact Kim Redmon to submit an Appendix E form.

- **Can I file a Multistate Project as my Hatch Project?**
  - Yes, you may use a Multistate project as your Hatch project. First you would need to make sure the Hatch-Multistate covers 100% of your research then complete an Appendix E in NIMSS, and lastly, file a project initiation under the Hatch-Multistate project category in NRS.
    - A Multistate project can have multiple Co-PIs.

Hatch Project Initiation: Requirements to Submit a Hatch proposal

1. Written Hatch proposal
2. Reviews
   - Work with your dept head or director to choose 3 people who are knowledgeable to review your proposal.
   - Recommend at least 1 person outside the university
   - Incorporate any changes or feedback into Final version of proposal
3. Dept Head or Director's Approval of Final version of Hatch proposal (AG-905)
4. Send PDFs of Final version of proposal, all reviews & signed AG-905 to Kim Redmon & Katie Fulton

eAuthentication

- NIFA’s new reporting portal (NRS) requires PIs to login to the portal using the USDA's eAuthentication system.
- If you’ve received a USDA grant, you may already have an account. If you have not, you will need to register as a new user.
- Having an account in the USDA's eAuthentication system is the first step in submitting your proposal to NIFA via in the new NRS system.

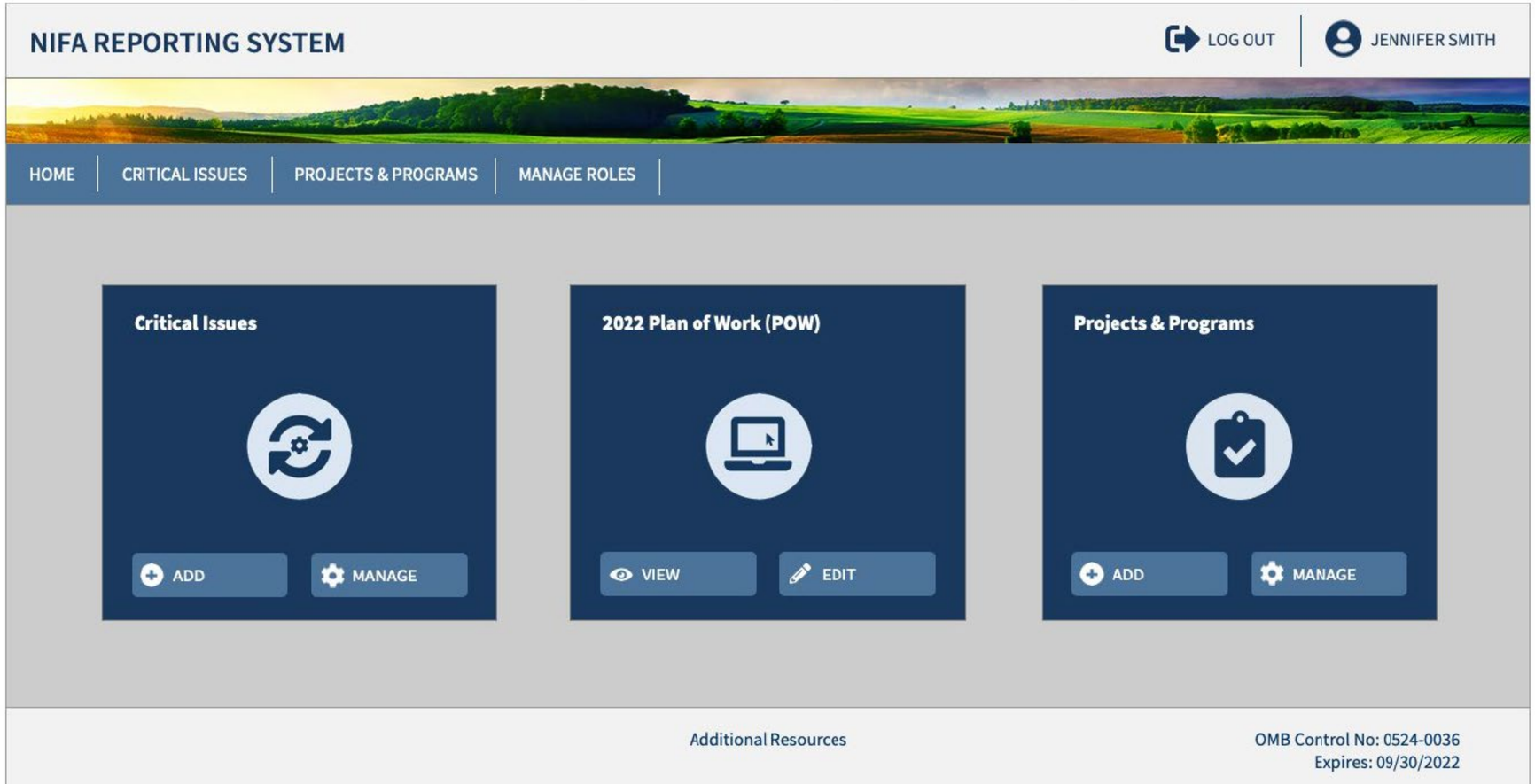
eAuthentication cont’d

- If you **pass** the **Identity Verification Success** screen will appear, and you will receive a **confirmation email**.
- If you **do not pass** the quiz on the **2nd** attempt, you **must verify your identity via email** with **Lyndsey Shirley**, our local USDA Service Center contact.
  - Send **Lyndsey Shirley** an email explaining you need access to the new NIFA Reporting System (NRS) via eAuthenication and include a copy of the front & back of your Driver’s license.
- **Next email Kim Redmon which email address you used to set up eAuthentication.**
- Kim will then authorize you in the NRS system and send out the final steps for submitting your proposal.

NIFA Reporting System (NRS) Home Page

Login in to the new NIFA Reporting System (NRS) *using Google Chrome or Mozilla Firefox*

Click **Manage** under **Projects & Programs**



Texas A&M AgriLife

NIFA Reporting System (NRS) cont’d

Once Kim receives your confirmation of submission email, she will review your proposal for typos, etc. then submit it to NIFA REVIEW for review.

Turnaround time for approval is typically 1 month minimum.

Please plan for this and submit proposals in a timely manner.

Top 5 Reasons Projects are Deferred

1. Project does not relate enough to Agriculture (especially regarding micro-organisms).
2. Non-technical summary is too short.
3. Non-technical summary is too technical.
4. IACUC number (regards animal testing) is not up-to-date or has expired.
5. Field of Science (FOS) or Subject of Investigation (SOI) does not match with the project.

Choosing a Hatch-Multistate Project

Go to NIMSS & Search for active projects

National Information Management & Support System

Welcome! The National Information Management and Support System (NIMSS) is a web-based application that will allow participants of Multistate Research Projects and Activities to submit proposals and reports online. Interested parties, stakeholders and cooperators can also query the System for relevant and timely information. NIMSS manages Multistate Research and Activities supported by the State Agricultural Experiment Station (SAES) from the Hatch Multistate Research Fund (MRF) provided by the National Institute for Food and Agriculture (NIFA).

Search NIMSS

Search for a project

Search

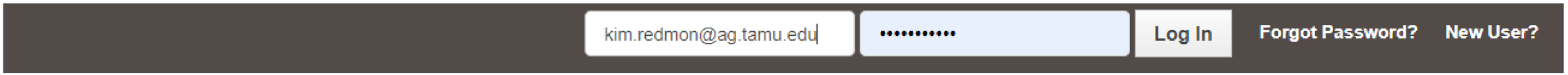
Featured Projects

TEXAS A&M AGRILIFE

Accessing NIMSS

New to NIMSS?

Click **New User?** to get started!



NIMSS

Texas A&M AgriLife

NIMSS

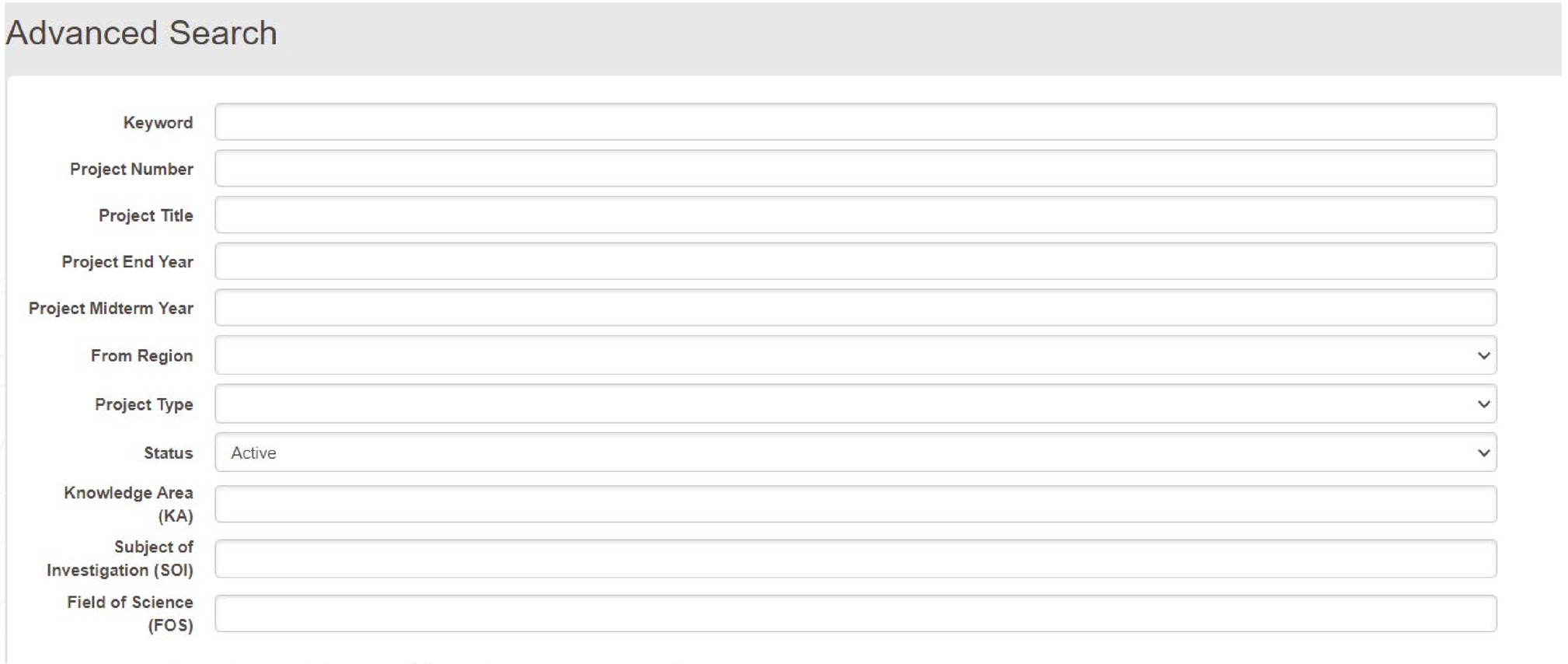
Fill out User Interest Form & click Submit

User Interest Form

First Name	Jane
Last Name	Smith
Phone Number	555-555-5555
Email Address	jane.smith@tamu.edu
Confirm email	jane.smith@tamu.edu
Station Name	Texas AgriLife Research: AES
Station Address	2147 TAMU
Region	South

NIMSS Advanced Search

Advanced Search Feature available once registered as New User



TEXAS A&M AGRILIFE

NIMSS

Decided on a Hatch-Multistate Project to join?

Email Kim Redmon the following info:

1. Project Number
2. Title
3. Objectives you plan to work on
4. Knowledge Area, Subject of Investigation & Field of Science
   - USDA Manual of Classification (KA, SOI, FOS)

Questions about submitting a Hatch or Hatch-Multistate Project?

Contact Kim Redmon

Reporting: Communicating Your Science

- **AGLR faculty members must submit a report annually (in REEport/NRS) on the accomplishments of their NIFA project (Hatch, Multistate, and grants)**
  - The quality of the report matters!

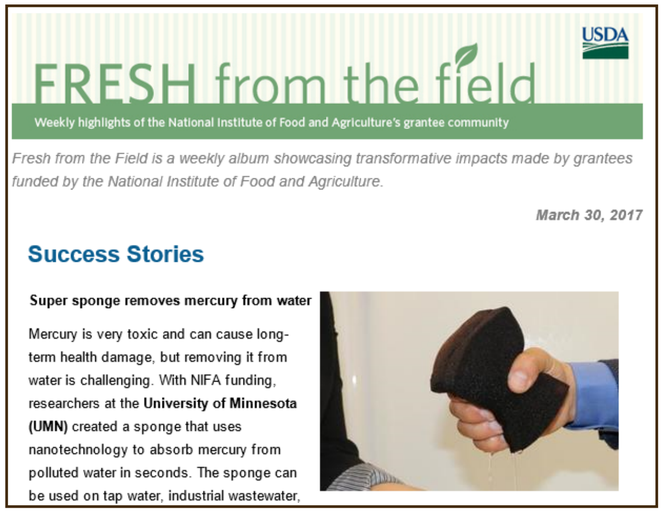
- **AGLR must submit a report annually to NIFA on the accomplishments/outcomes of Hatch funding.**
  - This is required for continuation of funding

- **Hatch Reporting Process**
  - Hatch Project Reports are Due Annually to NIFA in the early Spring
  - Individual project reports will be reviewed and used to prepare the Federal report for AGLR.
  - Individual project reports and the Federal report for AGLR will reviewed by NIFA (accept or return)

Why it is Important to Write Good Quality Reports

- **NIFA uses your reports** to raise awareness about ag and to demonstrate the public value of Hatch/NIFA funding.
  - Success stories in “Fresh from the Field”
  - Press releases
  - Social media
  - Annual Reports
  - Budge Justifications

- **Reports are used by various NIFA audiences**:
  - Congress
    - ***Congress cares about your outcomes/ impacts!***
    - https://www.youtube.com/watch?v=fOhDcUY-7GA&feature=youtu.be&t=3h35m32s
  - Land-grant partners, advocates, other federal agencies, media, and general public.



USDA

FRESH from the field

Weekly highlights of the National Institute of Food and Agriculture's grantee community

Fresh from the Field is a weekly album showcasing transformative impacts made by grantees funded by the National Institute of Food and Agriculture.

March 30, 2017

Success Stories

Super sponge removes mercury from water

Mercury is very toxic and can cause long-term health damage, but removing it from water is challenging. With NIFA funding, researchers at the **University of Minnesota (UMN)** created a sponge that uses nanotechnology to absorb mercury from polluted water in seconds. The sponge can be used on tap water, industrial wastewater,

Congress
- Budget Justifications
- Outcomes Reporting
- Fiscal Planning

Office of the NIFA Director
- Presentations/Speeches
- Requests for Additional Funds
- Audits

National Program Leaders
- Program Management
- RFA Improvements

Communications
- NIFA Annual Report
- Marketing and Promotion
- Branding

PARS
- Evaluations, Strategic Planning
- Performance Measurement, Needs Assessment, Systems Improvements, Ad-Hoc Requests

Other USDA Offices
- Process Improvements
- Collaboration and Networking

USDA

Texas A&M AgriLife

How Does NIFA Decide What to Communicate?

- **Topics of Congressional interest**
  - Examples: Citrus greening, precision ag, dairy, specialty crops, COVID-19, nutrition, health, etc.
- **Major advancements in the field**
- **Possess a "wow!" factor**
- **Timely items within the scope of the news cycle**
  - Examples: Food safety at Thanksgiving, Water or drought research on World Water Day, Veterans Stories on Veterans Day
- **Compelling stories of how NIFA-funded projects affect lives**
- **How Does NIFA Obtain Information About Your Project?**
  - Direct Communication – Press releases, Success stories, Tweets, Photos
  - REEport/NRS – Outputs, Outcome, and Impacts

- ***Projects with well-written reports are more likely to be selected!***

Writing Good Quality Hatch Proposals/Reports: Non Technical Summary

- **First step during project initiation**
  - Opportunity to sum up the importance of your project in terms that general citizens can understand
  - Not the same as your technical project abstract

- **A good non-technical summary is composed of 1-2 succinct paragraphs that cover three main points:**
  - What is the current issue or problem that the research addresses and why does it need to be researched?
  - What basic methods/approaches will be used to collect and produce data/results and inform audiences.
  - What ultimate goals does the project hopes to achieve and what is the general impact expected?
  - What societal benefits may be realized?

- **Remember your audience**
  - Why is the project important to constituents? Frame accordingly.
  - Write clearly and limit technical language

- **Avoid jargon, acronyms, passive voice**

- **Use quantitative and qualitative descriptors (when possible).**

Non Technical Summary

- **How to Construct Your Message**

1) **What is the context of your project?**
   What is the problem you are addressing and why does it matter? (Address the "so what?" of your work)

2) **How did or how will you approach these issues?**
   Brief, **non-technical** description of your methods

3) **What did you or do you hope to accomplish through your work?**
   Realized or anticipated outcomes/impacts

4) **Why is this work important?**
   How will your outcomes relate to the broader context? (Consider your goals here)

NIFA Reporting Uses the Logic Model Framework

INPUTS → **OUTPUTS** → **OUTCOMES** → **IMPACT**

(Participants)
Investment
-Staff
-Time
-Resources
-$$$
-Equipment
-Technology
-Partners

(Products)
-Publications
-Patents
-Workshops
-Apps

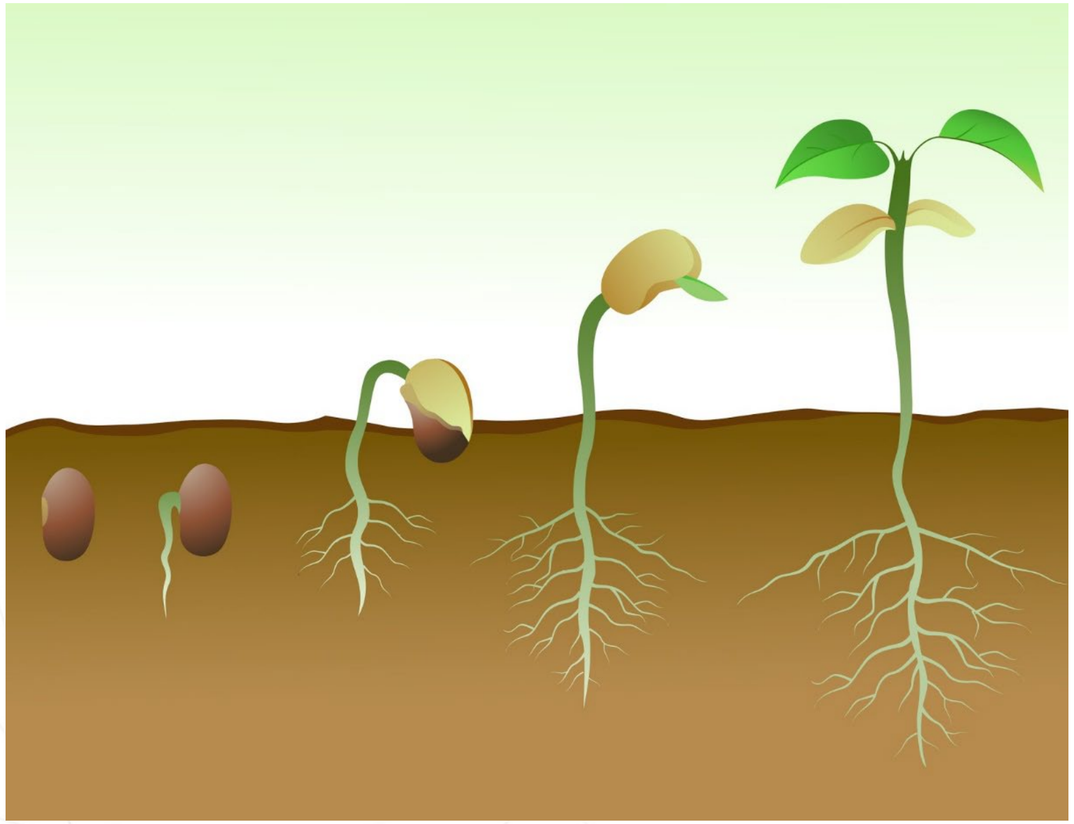
Change in knowledge, behavior/action, or condition

Social, economic, and/or environmental changes

Outcomes/Impacts = Accomplishments in REEport/NRS

Logic Model Reporting

- **Inputs, Outputs, Outcomes, and Impact (what is the difference?)**



Source: https://www.google.com/search?q=seed+germination+stages&tbm

Outputs

Activities: conducting and analyzing experiments or surveys, assessments, facilitating, teaching, or mentoring

Events: conferences, demonstration sites, field days, tours, symposia, workshops, and trainings

Services: consulting, counseling, and tutoring

Publications: journal articles, books, conference abstracts

Other Scientific Products: methods or techniques, data or databases, equipment or instruments, patents and patent applications, applications for Plant Variety Act protection, models, new germplasm or genetic maps, decision support tools.

Communication Products: audio or video products, website(s) with the appropriate URL(s), information, media impressions (coverage), press releases, policy briefings

Education Products: curricula, networks and/or collaborations fostered by the project or activity, physical collections or resources, train-the-trainer manuals

Other Technology: software, technology skills, and apps

Graduates: students graduated in agricultural sciences

Provide context to your outputs to give them meaning to your audience!

Outputs

Remember to acknowledge NIFA in your outputs (publications, presentations, patents, press releases, etc.)!

> *"This work is/was supported by the USDA National Institute of Food and Agriculture, [insert project type, e.g., Hatch] project [insert accession number]."*

Outcomes

Measurable and documented changes in:

1) **Knowledge**:

Occurs when a participant (scientist, trainee, citizen, etc.) learns or becomes aware.

2) or Action:

Occurs when there is a change in behavior, or the participants act upon what they have learned (adoption of techniques or a change in practice).

3) or Condition:

Occurs when a societal condition is changed due to a participant's action. Outcomes lead to greater societal impacts.

Outcomes

Change in Knowledge:

For a research project, a change in knowledge can be an incremental change in the understanding of scientific knowledge

- The genome for this plant species was annotated and markers for drought tolerance were found.
- Sequencing of a portion of a plant or animal gene.
- A new variety of plant seed was developed.

Outcomes

Change in Action:

A change in action occurs when a change in behavior(s) or practice(s) results from the project's activities.

- A drought tolerant cultivar was released and planted by farmers on a trial basis.
- A new variety of plant seed has been accepted by farmers, with 10% of the farmers in Brazos County using this seed this past year.
- A significant increase in food safety practices was observed after a new website was posted that had over 10,000 unique users within the first year of posting.

Outcomes

Change in Condition:

A change in condition occurs when there is a measurable difference within a large group, community, region.

- There is a reduction in the proportion of youth who are overweight.
- The drought tolerant cultivar was planted on 35% of the acreage, resulting in a 50% reduction in irrigation. This saved 5 million gallons of water and reduced power consumption by 2.5 Kw.

Impact

A sustainable societal, environmental, and/or economic change affecting people

Reportable, quantifiable difference, or potential difference a program makes in the lives of real people.

Impact statements do encompass success stories

What did your project do about the problem that it addresses?

Who or what will be helped by your work, and how?

Think: PEOPLE!

Impact Statements

- A gene was identified and a new methodology was developed… This new gene could result in a major suppression of the disease over the next 5 years. Based on average losses to the disease, 40% suppression could result in $ savings over 5 years *(Example from M. Draper)*

Output-Outcome-Impact Continuum

- Peanut breeding program resulted in the development of a new variety TAMU-19100.

- Peanut breeding program resulted in the development of TAMU-1910. About 30% producers (~300) having 100,000 acres would like to adopt the latest variety.

- Peanut breeding program resulted in the development of TAMU-1910 that was adopted by 30% of peanut producers within the first year of release. Those producers (n= 300) reported $50 million increase in revenue (economic impact).

NIFA Cares About Good Quality Hatch Proposals: Example of a Commendation Letter from NIFA

From: [redacted]- REE-NIFA, Kansas City, MO <[redacted]@usda.gov>
Sent: Tuesday, July 28, 2020 2:51 PM
To: Henry Fadamiro <fadamhy@auburn.edu>
Subject: Quality in Hatch Submissions

Dear Dr. Fadamiro -

I want to give credit where due but your team, seems to be well tuned to making sure Hatch proposals are presented with excellence. This is evidenced by review exchanges between the team and Dr. X

The latter submitted a stellar Hatch proposal to our program and should also be commended. Thank you,

Sincerely,

[redacted], Ph.D.
National Program Leader
Institute of Food Production and Sustainability
USDA-National Institute of Food and Agriculture (NIFA)
Kansas City, MO 64133

Texas A&M AgriLife

Examples of AGLR Success Stories Highlighted by NIFA

NIFA Newsletter Oct. 6 - Saving the Great Plains with Prescribed Fire

Ranchers are under increasing stress due to changing environmental conditions and subsequent losses of rangelands to woody plants, but a relatively new management approach shows promise in turning the tide against encroaching brush and shrubs.

NIFA Newsletter Sept. 22 - Eliminating Beef Cattle Pregnancy Loss with CRISPR/Cas9 Technology

Calves on the ground eventually mean dollars in the pocket and steaks in the meat case. It's the basics of the beef industry. However, reproductive inefficiency costs the beef industry billions every year. Most of that is driven by embryonic mortality and pregnancy loss, said Texas A&M University Associate Professor Ky Pohler.

NIFA Twitter Link to AgriLife Today Article

An #AgriLifeResearch study supported by @USDA_NIFA shows that space and exercise could be almost as important as food and water to the successful development of beef heifers raised in drylots. 🐂🐂🐂

NIFA Twitter Link to TAMU Today Article

.@AgriLife researchers are working to combat one of the most damaging #pest insects for the multi-billion-dollar U.S. floriculture and nursery #crop industry: the European pepper #moth. @USDA_NIFA funded. https://today.tamu.edu/2021/10/04/protecting-the-green-industry-through-european-pepper-moth-research/

Take-Home Message

Congress and NIFA care about your projects' outcomes.

NIFA cares about good quality reports and uses the information you share via the reporting database and direct communication.

Clearly communicating your science helps us to obtain information and accurately amplify your message.

QUESTIONS