MODULE ONE
MODULE ONE CONTENT

- SBIR Overview
- Program Phases
- Eligibility
- USDA SBIR Topic Areas
- Application Process
- Qualities of Strong Proposal
- Successful Applicants
- USDA SBIR Peer Review Process
- Successful Examples
- Resources
- Training Team
SBIR Program Description

- Established under the Small Business Innovation Development Act of 1982
- Authorized by the National Defense Authorization Act through September 2017
- 11 federal agencies offer SBIR programs
  - In FY 2014, 4,805 awards given totaling $2.4 Billion
  - 23% went to women and minority-owned or HUB zone-located small businesses
SBIR Program Description (cont.)

• SBIR Objectives are to:
  
  • Stimulate technological innovation in the private sector
  • Strengthen the role of small businesses in meeting federal research/development needs
  • Increase private sector commercialization of innovations
  • Foster and encourage participation by women-owned and socially and economically disadvantaged businesses
SBIR/STTR Estimated Budgets by Agency for FY 2015

~ $2.5 B in FY15 across all agencies

SBIR = Extramural Budget over $100M

Small Business Technology Transfer Program (STTR) = Extramural Budget over $1B
• Phase I (focus of this module)
  • Purpose is to determine scientific or technical feasibility of ideas submitted by applicant
  • Awards up to $100,000 for period of eight months (periods of up to 20 months may be considered under special circumstances)
  • Should concentrate on research that will contribute to proving scientific or technical feasibility of idea proposed (feasibility study)
  • It is a prerequisite to Phase II
USDA SBIR Program Phases (cont.)

- **Phase II**
  - Promote completion and commercialization of the idea funded in Phase I
  - Awards up to $600,000 of the cost for two years

- **Phase III**
  - Stimulate technological innovation and national return on investment from research
  - No federal SBIR funds may be used for this phase
  - Work to move the innovation into a commercial market and acquire third part investment
  - At this phase the innovation has been de-risked
USDA SBIR Phase I Eligibility

- Small business must be located in the U.S. and organized for profit
- 50%+ owned/controlled by one or more individuals who are citizens or permanent residents of the U.S.
- No more than 500 employees including affiliates
- If a parent company of a subsidiary is not a small business entity, then the subsidiary is not eligible.
- For detailed eligibility information visit: https://www.sbir.gov/sites/default/files/elig_size_compliance_guide.pdf
USDA SBIR Topic Areas

Forests & Related Resources
*Address the health, diversity and productivity of the Nation’s forests and grasslands through the development of environmentally sound approaches to increase productivity of forest lands, improve sustainability of forest resources, and develop value-added materials derived from woody resources.*

Animal Production and Protection
*Develops innovative, marketable technologies that will provide significant benefit to the production and protection of agricultural animals.*

Plant Production and Protection – Biology
*Enhancing crop production by applying biological approaches to, reduce the impact of harmful agents, develop new methods for plant improvement, and apply traditional plant breeding methods and new technologies to develop new food and non-food crop plants.*

Air, Water and Soils
*Develops technologies for conserving and protecting air, water and soil resources while sustaining optimal farm and forest productivity.*

Food Science and Nutrition
*Research focusing on developing new and improved processes, technologies, or services that address emerging food safety, food processing and nutrition issues.*
USDA SBIR Topic Areas (Con’t)

**Aquaculture**
*Develops new technologies that will enhance the knowledge and technology base necessary for the expansion of the domestic aquaculture industry as a form of production agriculture.*

**Biofuels and Biobased Products**
*Promotes the use of biofuels and non-food biobased products by developing new or improved technologies that will lead to increased production of industrial products from agricultural materials.*

**Rural and Community Development**
*Applications may be submitted for the development of new technology, or for the utilization of existing technology, that address important economic and social development issues or problems in rural America.*

**Plant Production and Protection – Engineering**
*Enhance crop production by creating and commercializing technologies that enhance system efficiency and profitability and that protect crops from pests and pathogens in economically and environmentally sound ways.*

**Small and Mid-Size Farms**
*The Small and Mid-Size Farms topic area aims to promote and improve the sustainability and profitability of small and mid-size farms and ranches (where annual sales of agricultural products are less than $250,000 for small farms and $500,000 for mid-size farms - hereafter referred to as small farms).*
Application Process

• Typically, small business focuses on research and development

• Average small business size is 9 employees

• Focus is not on equipment acquisition, nor commercializing an already developed technology

• **Deadline for Phase I is typically early October of each year. Check the solicitation for exact date.**

• Allow 6-8 weeks to prepare an application
• Prior to submitting an application, confirm your business is registered with:

1. Grants.gov  
   http://www.grants.gov/

2. System for Award Management (SAM)  
   https://www.sam.gov/portal/SAM/##11

3. Data Universal Numbering System (DUNS) Number  
   http://www.dnb.com/duns-number.html

• If not, you will need to create user accounts in all these systems

• Get registered early in your application timeline
Application Process (cont.)

• Follow application instructions and submission requirements in the RFA.
  • Including how to download the grant application package from grants.gov

• To be considered for funding, **ALL** required forms **must** be submitted as part of a complete application package.

• Your application will **NOT** be considered if all required forms are not submitted together.

• **All of your documents and forms must be submitted as PDFs.**
Application Process (cont.)

- Submit your application through Grants.gov (http://www.grants.gov/)

- Grants.gov issues emails to the applicant providing:
  - Submission Receipt Number
  - Submission Validation Receipt
  - Grantor Agency Retrieval notification

- NIFA sends confirmation of grant application receipt from Grants.gov

- Maintain these emails for your records
Qualities of a Strong Application

• Strong skills of PI and team
• Strong potential to commercialize
• Provides clear details on how/why the approach addresses the agencies needs and the priority area
• Describes how the business/firm will move the technology through Phase I with the goal to receive a Phase II grant and ultimately reach full commercialization
• Use SBIR.gov and other resources to help you - https://www.sbir.gov/
Successful Applicants

- Network with potential partners
- Talk with potential customers and ask for feedback on what they are proposing
- Understand intellectual property is protected (Bayh-Doyle Act) and share these details in the application
- Develop a concept paper summary (200 words) and share it with the USDA SBIR National Program Leader for feedback in advance of writing the application
USDA SBIR Peer Review

- USDA uses an external peer review process
- Utilize experts in the scientific area of research being proposed
- All reviewers complete and sign a Non-Disclosure Agreement (NDA)
- Reviewers meet to form a panel and make the recommendations on which applications to fund
- Applicants receive verbatim comments on the application minus the names of the reviewers
- Most reviewers are from academic and government sectors with some experts from private industry
Examples of Successful Applications

- Qualities of a strong application include:
  1. Strong potential to commercialize
  2. Provides clear details on how/why the approach addresses the agencies needs and the priority area
  3. Proprietary data is provided
  4. Describes how the business/firm will move the technology through Phase I with the goal to receive a Phase II grant and ultimately reach full commercialization under Phase III

- Read funded projects
  - [https://www.sbir.gov/sbirsearch/award/all](https://www.sbir.gov/sbirsearch/award/all)
  - Modify the search using keywords and/or selecting a specific Federal Agency
  - Look for SBIR Phase I projects
  - Ensure no duplication of work
  - Following examples of successfully funded projects can help to develop a solid application
Freund`s Farm, Inc.

Technology Developed
• What began on the farmhouse kitchen stove as an idea for a better biodegradable pot has grown into year round production of millions of CowPots to date. From a 3 inch pot for seed starting to a 17 inch pot for trees and shrubs, CowPots, LLC has expanded their innovative product line to match the diverse needs of the green industry.

Commercialization Success
• Since being featured on Discovery Channel’s “Dirty Jobs” with Mike Rowe in 2007, CowPots are now available internationally.
• Can be purchased from major worldwide sellers such as Amazon.com, cowpots.com and greenhousemegastore.com.

SBIR History
• Phase I in 2006 ($54K);
• Phase II in 2007($317K);
• 8.11 Animal Waste Management (Topic Area Discontinued)
AgraQuest, Inc.

Technology Developed
- Fungicide called Serenade®
- Non toxic to animals and to beneficial organisms.
- Serenade® is approved for use in organic production.
- Use of Serenade® helps manage development of resistance to synthetic fungicides.

Commercialization Success
- Serenade® has been sold in more than 23 countries
- Sales of Serenade® have exceeded $23 million
- Bayer AG's CropScience acquired AgraQuest Inc. for close to $500 million in July of 2012

SBIR History
- Phase I – 1997 ($65K)
- Phase II – 1998 ($250K)
- Company has had other Phase I and II projects with USDA SBIR
- 8.2 Plant Production and Protection - Biology
Technology Developed

- **SPLAT®,** a biodegradable slow release semiochemical formulation to use in insect pest management.
- Single application can last for months.
- Because SPLAT® is flowable, mechanical application is facilitated, fostering farm wide and area wide use.
- The active ingredient(s) in SPLAT are naturally occurring semiochemicals, like insect pheromones, a safer option to conventional pesticides.

Commercialization Success

- SPLAT Verb, helps U.S. Forest Service to effectively controls Mountain pine beetle infestations in public lands.
- Partnership with DOW AgroSciences resulted in SPLAT (Static) Mat Spinosad ME TM used globally for fruit fly control.

SBIR History

- **SPLAT Verb:** Phase I in 2012 ($100K); Phase II in 2013 ($450K); 8.1 Forests and Related Resources
- **SPLAT MAT SPINOSAD ME:** Phase I in 2012 ($100K); Phase II in 2015 ($500K); 8.12 Small and Mid Size Farms
SBIR NIFA Program
https://nifa.usda.gov/program/small-business-innovation-research-program-sbir

About SBIR
https://www.sbir.gov/about/about-sbir

Guide to SBIR/STTR Program Eligibility

Grants.Gov
http://www.grants.gov/web/grants/applicants.html

System for Award Management (SAM)
https://www.sam.gov/portal/SAM/#/11

Data Universal Numbering System (DUNS) Number
http://www.dnb.com/duns-number.html

SBIR Awardee Projects
https://www.sbir.gov/sbirsearch/award/all
USDA SBIR Technical Training Team

**Don Albrecht**  
SBIR Technical Training Project Leader  
Director, Western Rural Development Center  
Utah State University  
don.albrecht@usu.edu

**Scott Dockum**  
SBIR Program Coordinator  
USDA NIFA  
sdockum@nifa.usda.gov

**Charles Cleland**  
National Program Leader  
USDA NIFA  
ccleland@nifa.usda.gov

**Brent Elrod**  
National Program Leader  
USDA NIFA  
belrod@nifa.usda.gov

**Roberto Gallardo**  
Southern Region  
Mississippi State University Extension  
roberto.gallardo@msstate.edu

**José L. García-Pabón**  
Western Region  
Washington State University Extension  
garciajl@wsu.edu

**John Mann**  
North Central Region  
Michigan State University Extension  
mannjoh3@msu.edu

**Winifred McGee**  
Northeast Region  
Pennsylvania State University Extension  
wwm1@psu.edu
Thank You!