ANR PLN 2017 Ft Worth TX

Minutes – Resources and Presentation PPTS available on Google Drive (see email from B Grisso)

Attendees: B Grisso, M Main, T Melton, K Hollins, G Palmer, B Hubbard, D Phinney, N Smith, S Martin, R Leonard, R Shange, J Trapp, D Doye, M Daniels, V Ford, B Helms, R Taylor, A Essel, N Whitley, L Cailer, P Mask, M Buschermohle, L Rivers Jr., S Mukhtar, R Burns, L Boby, T Miller, S Gu, M Simon, M McCann.

Election of Officers for 2018 – Results:

- Alejandro (Alex) Bolques, Florida A&M U – Secretary
- Martin Main, U of Florida – Vice Chair
- Bobby Grisso, Virginia Tech, & Billy Lawton, Prairie View A&M U – Co-Chairs
- Tom Melton, North Carolina State U – 1862 PLC Representative (re-elected)

Presentation: Synthetic Auxin Herbicides – Travis Miller, Texas AgriLife Extension

- Auxin herbicides used on GMO-herbicide resistant crops, primarily soybeans and cotton, can volatize and drift, and cause mortality in non-target species including other crops, residential landscapes, and natural areas.
- Texas AgriLife Extension created an app and online system designed to reduce/eliminate problems associated with herbicide drift.
- There are two elements, a crop registry/monitoring system and a flagging system. These can be found on line at: https://agrilifeextension.tamu.edu/solutions/flag-the-technology/
    - 1. Hit the Target – Crop and pesticide registry and monitoring system
        - Provides registry and details of crops and pesticide/herbicide application
    - 2. Flag the Technology App – Field marking information system
        - Provides flagging strategies to identify boundaries between conventional and experimental crops (to avoid herbicide damage), with different colored flags used to indicate different information
        - Adapted from flag technology initiated in Arkansas extension
- Group discussion:
    - Issue of herbicide drift from use of auxin herbicides on herbicide-resistant (GMO) crops (e.g., soybeans) is one of increasing importance in many different states
    - Some states have received complaints regarding negative impacts of herbicide drift on adjacent crops (some more sensitive than others), residential landscapes, honey bee production (e.g., from mortality of pollinator nectar plants), and natural areas (e.g., bald cypress)
    - Several states have implemented educational programs on the risks of auxin drift and the importance of using proper application techniques to reduce drift with mixed results

Field Tour: Fort Worth Botanic Garden - Organized by Travis Miller, Texas AgriLife Extension

Presentation: Texas AgriLife Onbarding Process for New Agents - Organized by Travis Miller, Texas AgriLife Extension

- Presentation provided by Scott Cummings, Texas AgriLife Extension

- Discussion by group regarding various strategies for providing professional development in core competencies for new hires and advanced training for experienced extension agents

Presentation: Florida use of Specialized Agents – Saqib Mukhtar, UF/IFAS Extension

- Described strategies for Regional Specialized Agents and State Specialized Agents in Florida
- 100% Extension positions in leadership roles working on regional issues in designated areas of expertise with specialists and county faculty to create greater teamwork approach
- SSAs and RSAs are in the "county extension agent" promotion track that can result in permanent status – this differs from the departmental state specialist/professor track which results in tenure and permanent status

Presentation: Use of Precision Ag Technologies – Randy Taylor, Oklahoma State U

- Discussed opportunities and resources needed to expand and enhance precision agriculture programming
- Discussed sharing personnel and other resources (training programs and educational products) across the region

Presentation: Expert vs Engaged (Lecture vs Facilitator) Agent Model – Karen Vines, Virginia Tech

Presentation: Southern Regional Extension Forestry Update – Bill Hubbard, Leslie Boby

State reports 1890 institutions

- Mr. Brennan Washington has replaced Mr. James Hill as the 1890 Land Grant Liaison and Limited-Resource/Minority Farmers Outreach Specialist. He is housed at Fort Valley State University and can be reached at 478-825-6263 or washingtonb@fvsu.edu.

State reports 1862 institutions

- Travis Miller, Texas AgriLife Extension is retiring September 2017. Enjoy your retirement Travis.
- Michael Buschermohle was named as UT Extension Interim Assistant Dean for ANR/CED Programs effective Monday August 14

Updates on 2017 Plan of Work – Bobby Grisso, Virginia Tech, Chair ANR-PLN

- Updates completed
- Discussion regarding professional development for extension agents/faculty, including online training

Plan of Work Action/ Information Items for 2018 – Bobby Grisso, Chair – see minutes and plan 2017-18.

- The presentations and resources shared at the conference can be downloaded at: https://drive.google.com/drive/folders/0BwXtf_d3iernRTZlOFVZLXp4LUU?usp=sharing

2017 PLN/ANR AGENDA

FORT WORTH, TEXAS • AUGUST 21-24, 2017
HILTON FORT WORTH • 815 MAIN ST., FORT WORTH, TX 76102

Tuesday, August 22

10:30 a.m. **Introduction of Members and Guest**

- Circulate sign-in sheet
- Circulate membership roster for update

Updates from Administrative Advisors

- 1862/1890 Advisors - Laura Johnson / M. Ray McKinnie
- PLC Reps – Louie Rivers/Tom Melton

10:50 a.m. **Synthetic Auxin Herbicides (Travis Miller) - 30 min**

- State Program Leaders tell what's happening in your state -25 min

11:45 a.m. **Lunch & Ignite Sessions**

1:30 p.m. **Van pick up for Tour (Travis Miller)**

1:45 p.m. **Depart Hotel for Tour** - Ft. Worth Botanic Garden
Japanese Gardens - Dr. Steve George overview of urban horticultural programs in the DFW area Discuss our "Earth-Kind" and "Texas Superstar" urban programming - The Cutting Edge In Beautiful, Environmentally-Responsible Landscapes

4:00 p.m. **Return to Hotel**

6:30 p.m. **Evening Committee Night Out - Cattleman's in the Ft Worth Stockyards (Billy Lawton)**

Wednesday, August 23

8:00 a.m. **Introduction of Members and Guest**

- Circulate sign-in sheet
- Circulate membership roster for update

8:10 a.m. **Updates on 2016-2017 Plan of Work (Report) – 20 min**

- Review/Update and Approve 2016-2017 POW
- Submit PowerPoint document

8:30 a.m. **AgriLife Onboarding Process for New Agents (Travis Miller) - 45 min**

- North Central Academy 15 min

9:30 a.m. **Florida Use of Specialized Agents (Saqib Mukhtar) - 30 min**

10:00 a.m.

- **Break**

10:30 a.m. **Continued: Use of Specialized Agents (Saqib Mukhtar) 30 min**

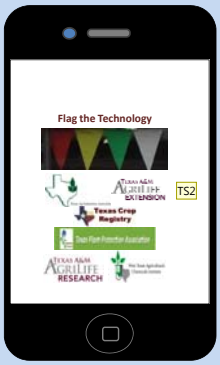
- Contrast with regional specialist & funding model
- State Program Leaders tell what's happening in your State

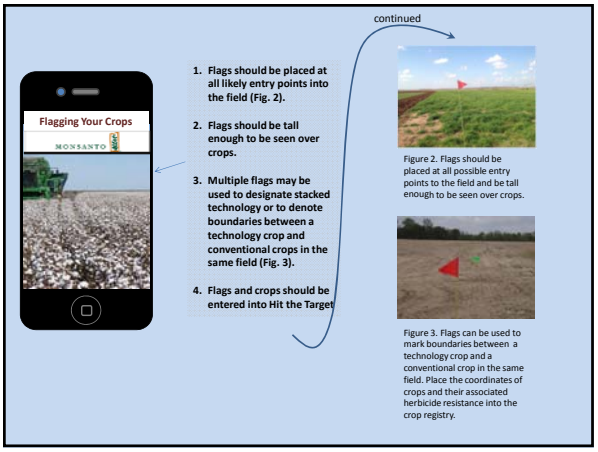
11:00 a.m.	**1890 Research and Extension Update (Billy Lawton) 45 min**
11:45 a.m.	**Election of New Officers** • ANR-PLN Secretary (1890) • Establish dates for 2017-2018 conference calls
12:00 Noon	**Lunch**
1:30 p.m.	**Use of Precision Ag Technologies (Randy Taylor) - 30 min** • UAS, Demos, Applied Research • State Program Leaders tell what's happening in your state - 15 min
2:15 p.m.	**Develop Action & Information Items, Accomplishments and Call times (Due at 3:00 pm)** • Develop 2017-2018 Plan of Work-All • 2019 Joint Meeting Southeast/North Central Joint Meeting (Informational Item) • Subject Area Core Competency Training
3:00 p.m.	**Break**
3:30 p.m.	**Expert vs Engaged (Lecture vs Facilitator) Agent Model (Karen Vines) – 30 min**
4:00 p.m.	**State Reports-States that will not be attending Thursday's ANR Committee Meeting** • Southern Regional Forestry Update-Bill Hubbard
5:00 p.m.	**Adjourn**
6:30 p.m.	**State's Night Out - Stockyard (Optional)**
Thursday, August 24	
8:00 a.m.	**Introduction of Members and Guest** • Circulate sign-in sheet • Circulate membership roster for update
8:05 am	**eXtension Initiatives: Impact Collaborative focusing on Food Systems, Behavioral Health and Diversity and Inclusion, Beverly Coberly, CEO - 10 min**
8:15 a.m.	**State Reports (Hard Copies Optional)**
12:00 p.m.	**Adjourn**

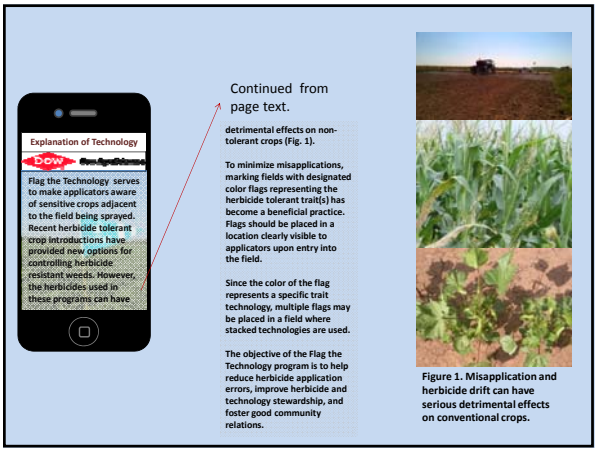
A strategy to minimize off target injury to sensitive ag enterprises

Flag the Technology
and
Hit the target

TEXAS A&M AGRILIFE EXTENSION

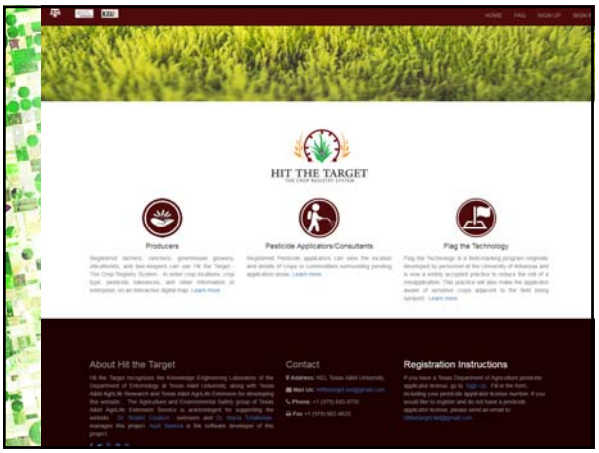






Flag Color Codes

- White – technology tolerant to glyphosate
- Green – technology tolerant to glufosinate
- Yellow – Clearfield (IMI tolerant) rice, sunflowers, wheat, and canola
- Teal – Enlist Technology (2,4-D and FOP tolerance)
- Black and White checkered – tolerant to dicamba (Engenia and Xtendimax) and glyphosate
- Red – Conventional crops as well as sensitive areas such as vegetables, vineyards, organic production



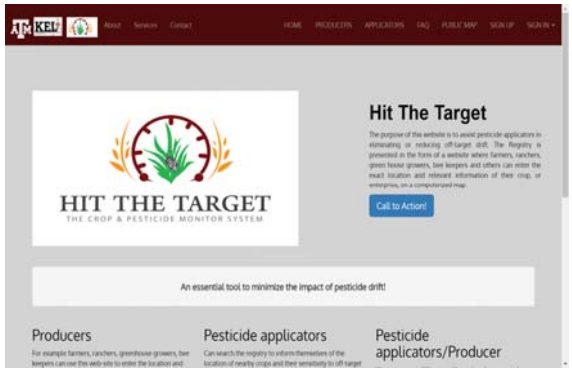
HIT THE TARGET

THE CROP & PESTICIDE MONITOR SYSTEM

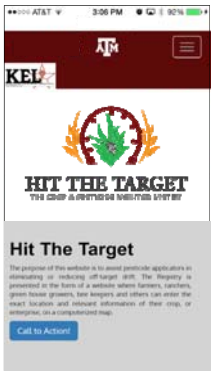
https://hitthetarget.tamu.edu/

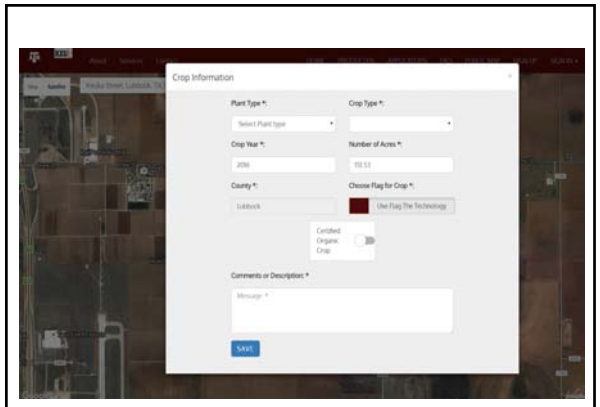
Robert N. Coulson
Maria D. Tchakerian
Arpit Saxena

- **Hit the Target:** an online computer application designed to help producers and pesticide applicators eliminate/reduce the impact of off-target pesticide drift.
- In summary:
  - –Producers enter exact location and boundaries of crops, vineyards, and apiaries on a digital map
  - –Pesticide applicators can view crop, vineyard, and apiary locations relative to pending applications and make necessary adjustments to manage drift



Download the Texas A&M extension "Flag the Field" app for IOS at iTunes
https://itunes.apple.com/us/app/flag-the-technology/id1102268300?mt=8

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County *:
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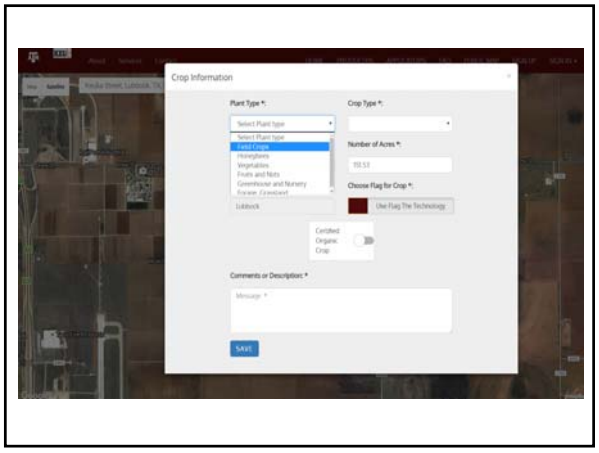
SAVE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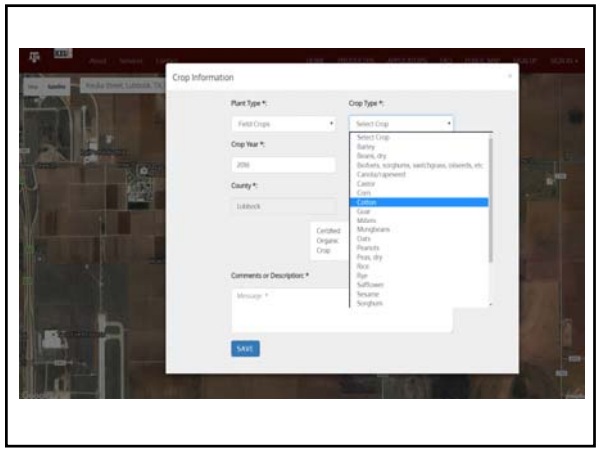
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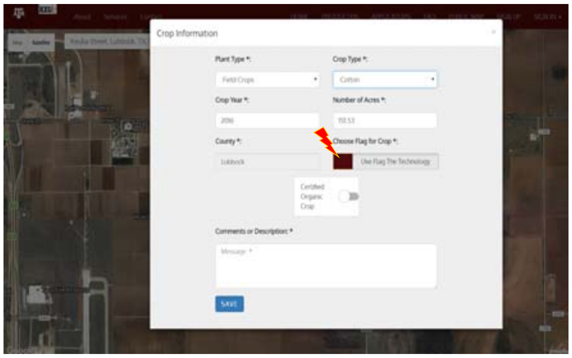
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Field Crops
Cotton
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Lubbock
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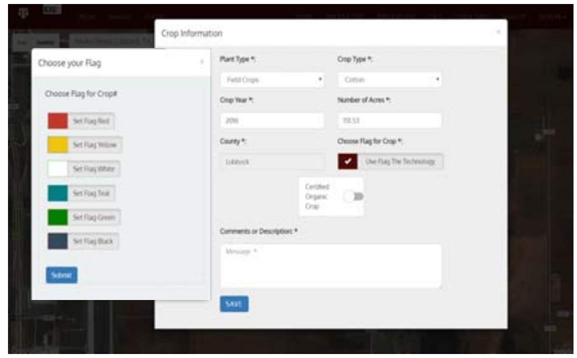
Use Flag The Technology
Certified Organic Crop
Comments or Description: *
Message *
SAVE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Set Flag Teal
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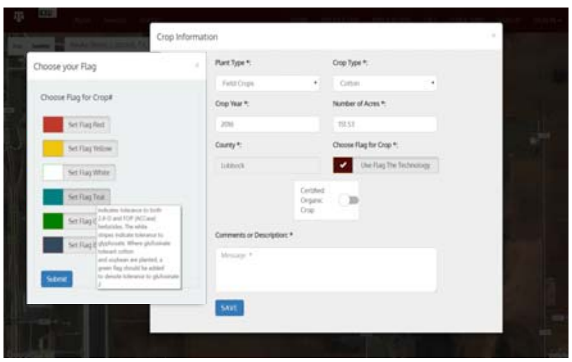
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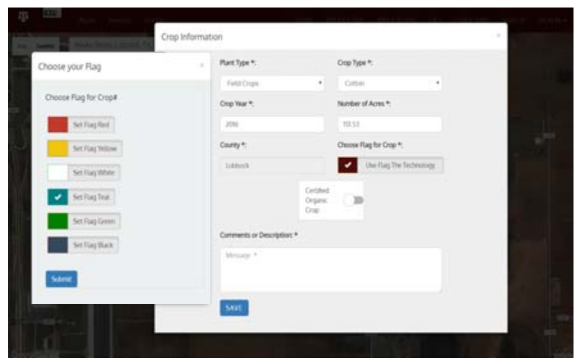
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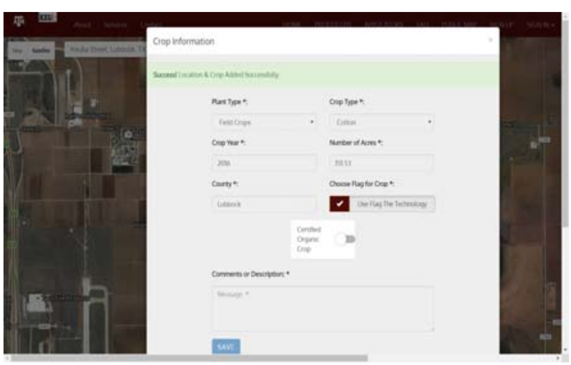
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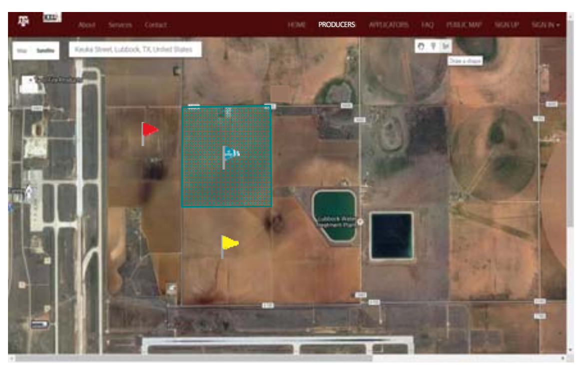
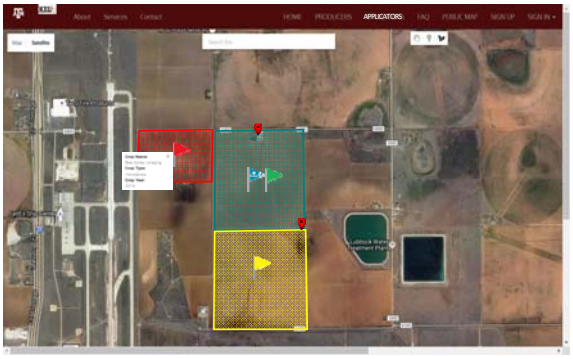

About
Services
Contact
HOME
PRODUCERS
APPLICATORS
FAQ
PUBLIC MAP
SIGN UP
SIGN IN

- Hit the Target allows producers and pesticide applicators contracted by producers to:
  - View the location and details of crops or commodities surrounding pending application areas
  - Provides alerts to notify applicators of potential crop – application area conflicts



Onboarding Strategy

Feedback from the Advisory Committee

- Modified Delphi Study
- Essentials for Onboarding
  - What is absolutely Required
  - What is Important to know
  - What is Nice to know
- Round 1 and Round 2

Results of the Survey

Item	Required	Important	Nice to Know
Structure & Mission of the Land Grant System	21		
Program Development	21		
Committees (Why & How)	15		
ANR/FCS/4H Breakout Sessions	12	2	
DEA & RPL Face to Face Meetings	12	6	
Reporting & Planning	12	4	
Professionalism	9	12	
County Office Management	6	12	
FCS & Livestock 101's	9	6	1
Effective Teaching	9	6	1

Feedback from Administration

- Academy
  - Information Overload
  - The Week is too long
  - Travel on Sundays
  - Look at a Regional Approach for certain subjects
  - Focus on Campus Centric Trainings for Academy
  - Better use of online trainings
  - Lacking Excitement

Proposed changes to the system

- Onboarding on a State Level
- Onboarding on Regional Level
- Involvement from RPL's, DEA's, Mentors and Advisory Committee Members

Academy I

Focus on:

- Issue ID
- Planning
- Developing Programs

Academy II

Focus on:

- Teaching
- Evaluation
- Interpretation

Academy Issues

- Information Overload
- Timing
- Costs

Initial Onboarding Questions

- What should be covered at the statewide agency orientation?
- What should be covered at the regional trainings?
- How many sessions should be held in the regional trainings?
- How long should each regional training last?
- What should be covered at each session?
- Should mentors be involved in the regional trainings?
- How should online training be incorporated into the overall process?

Extension's Challenge

- How do we incorporate our entire Onboarding process into a system that is beneficial for both the agency and the employee?

Involvement from DEA's, RPL's, Mentors and Advisory Committee Members

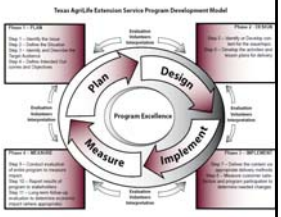
- Input
- Curriculum Design
- Assistance in delivery and Teaching

Agency Orientation

- One time visit to Campus
- Agents/Specialists
- Agency Overview
- Educational Mission
- Interaction with Departmental Specialists
- Training on more Campus Centric subject matters
- 4-H 101's
- Specialists 101

Regional Trainings

- Multiple Trainings within the first 18 months of employment
- Heavily focused on Program Development
- Peer Taught



Regional Content

Program Development (2 Days)
Modules:

- Issue ID
- Developing Programs
- Effective Committees
- Evaluation of Programs
- Success Stories (interpretation, impact reporting and public value)
- Program Support (funding, fee based programming)
- Facilitation Skills

Regional Content

Effectiveness as an Educator (1 Day)
Modules:

- Effective Teaching
- Serving as the Moderator

Regional Content

Office Management and Professionalism (1 Day)
Modules:

- Professional Appearance/Behavior
- Office Management (County Budgets, Support Staff, Conflict Management)
- Performance Appraisal
- Career Ladder
- Professional Development Plans

Regional Content

Working with People (1 Day)
Modules:

- Knowing Your Community
- Partnerships
- Working with Elected Officials (includes Courts)
- Volunteer Management

Regional Content

Working with the Media (1 Day – possibly combined with Program Development)

Modules:

- Working with the Media
- Radio/TV Shows
- Press Releases
- Newsletters
- Web Content
- Use of Social Media

Regional Content

- **Result Demonstrations/Applied Research (ANR Agents, 1 Day)**
- **BLT/Special Project Training (FCS Agents, 1 Day)**

Subject Matter Training

- **Led primarily by departmental units**
- **Input from Regional Program Leaders**
- **Pilot testing certificate programs**

Certificate Programs

- **Certificate programs are internal**
- **Demonstrate area(s) of expertise to clientele**
- **Job tie breaker**
- **Combination of online and face-to-face methods**
- **Consistent rigor (time and effort)**

Certificate Programs

- **Water (completed)**
- **Horticulture (ongoing)**
- **Pesticide (ongoing)**
- **Beef Cattle (upcoming)**
- **Health (upcoming)**

UF IFAS
UNIVERSITY of FLORIDA

Specialized Agents

Saqib Mukhtar

UF IFAS Extension

ANR-PLN Meeting, August 23, 2017, Ft. Worth

UF/IFAS Statewide Operations

UF IFAS Extension

Needs and Level of Expertise

Several Programs Have no County Boundaries

- State-wide expertise (FSMA, Precision Ag, Ag Safety)
- Regional expertise (Water Management- Ag, Coastal, Urban)
- Multi County (Commercial Hort. (fruit crops), Sea Grant)

UF IFAS Extension

Regional Specialized Agent (RSA)

- Expertise is at a different level
- Provides leadership to county faculty in the region
  - Support of extension faculty in the region
  - Professional development for extension agents
- Should do applied research
- Fill in gaps of specialist
- Grants with state faculty

UF IFAS Extension

RSA Qualifications

Qualifications

MS and 5 yrs of extension education experience, Ph.D. is preferred

Degree in an academic area related to the position subject matter assignment

Administration

District Extension Director (DED) and
either the County Extension Director (CED) of the home county,
the Research and Education Center (REC) director, or the unit/center leader

Promotion and permanent status are acquired through the Extension District in which the agent is located

UF IFAS Extension

Example- Water RSAs

Each District (five total) has one Water RSA (4 out of 5 have a Ph.D.)

Statewide collaboration & specific water education and outreach

NW, NE District- Ag related water issues- Some urban

C, SW Districts- Ag and Urban water issues

SE District- Coastal, urban and Ag water issues

UF IFAS Extension

RSA Challenges

- Buy in from counties- RSA's especially
- Perhaps no perceived value because 100% state paid
- Locked into expertise
- Perception-hard to get promoted
- Faculty position – commitment may be for years - permanent status

State Specialized Agent (SSA)

- Fills in missing expertise (Precision Ag, Master Naturalist)
- State-wide programs
- Non-tenure track but Permanent Status accruing
- Extension programs and applied research with agents
- Grants with and without Specialist
- Supervised by DED & REC Dir

SSA Qualifications & Admin

Qualifications

- Same as RSA but Ph.D. is highly preferred

Administration

- Administratively responsible to the DED and the REC director or the unit/center leader
- Promotion and permanent status are acquired through the Extension District in which the agent is located

State Specialized Agent (SSA)

Duties and Responsibilities

- Has the same basic responsibilities as an RSA
- Develops and implements practical and applied research projects associated with his/her area of expertise.
- Acquires a greater amount of extramural funding to support his/her extension program, compared with an RSA.

Example-SSA Food Safety

-Statewide food safety education and outreach

-Statewide FSMA training of agents and industry

-Expert resource and point-of-contact for agents, agencies and industry

-Research information transfer to industry, agencies and citizens

-Statewide collaboration and participation in applied research projects

SSA Challenges

- Buy in from counties and districts
- Perceived value
- Locked into expertise
- Perception hard to get promoted
- Faculty position – commitment may be for years – permanent status – difficulty in changing direction

Component	County Agent	Multicounty Agent	RSA	SSA
Funding	County/state	County/state	State	State
Location (combine)	County	County	REC	Dept/REC
Degree	BS, MS preferred	MS	MS, doctoral degree preferred	MS, doctoral degree highly preferred
Experience	Some experience preferred	>2 yrs of Extension or other experience preferred	>5 yrs of Extension or other experience required	>5 yrs of Extension or other experience required
Supervised and evaluated by	CED with review by DED	Lead CED with review by DED and other CEDs	Center director and DED	Dept chair or center director & DED
Position	PS	PS	PS	PS
Appointment	100% extension	100% extension	100% extension	100% extension
Programming geographical area	County	Multiple counties per agreement	Designated region of the state	Statewide
Target revenue acquisition	>$4,000/yr	>$8,000/yr	>$12,000/yr	>$20,000/yr
Responsibilities	Local programming	Multicounty programming	Regional programming in a major Extension program area, partner with state specialists and SSAs in delivering in- service training to CAs and MCAs	Statewide programming in a specialized area, partner with state specialists and SSAs in delivering in- service training to CAs and MCAs

1890 Research

Compiled by: Dr. Niki Whitley
Fort Valley State University

Fort Valley State University

- Fort Valley State University's 4-H Club members across Georgia are learning to use aeroponics to grow food.
- Fort Valley State University's 4-H Program also supports the community through donations of aeroponic towers Connections on the Parkway, a non-profit organization.
- A 13-year old FVSU 4-Her became the manager of 10 aeroponic towers in the Village Community Garden in her hometown. The VC Garden is an FVSU/NPO collaboration.

For more: https://issuu.com/fortvalleystateuniversity/docs/focus.2017-issuu-1.0

Fort Valley State University

- Tom Terrill – Sericea lespedeza and other bioactive plants for control of parasites in ruminants; patent for use of SL dried products for parasite control
- Brou Kouakou – Eastern Gammagrass and by product feeds in dairy and meat goat/sheep production
- Archie Williams/Cedric Ogden – Use of drones (UAVs) in farming to spot damage from diseases/insects (drift) real-time on smartphone; special lenses/sensors for even microscopic issues?

https://issuu.com/fortvalleystateuniversity/docs/2016researchreport-issuu

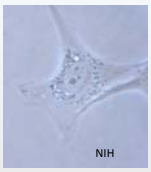
Fort Valley State University

- Nirmal Joshee - Uses of Paulownia trees; bees, lumber for specialty uses (i.e. musical instruments, art/carving), biochar for soil amendments, bioplastics; Skullcap (shown to shrink cancer cells) and other nutraceutical herbs
- Hari Singh – Biofuels/bioenergy, especially those crops that grow well in poor-quality soils and products from them such as "cellulosic nanocrystals" useful in medical/industrial fields such as in human tissue engineering; cover crops;

https://issuu.com/fortvalleystateuniversity/docs/2016researchreport-issuu

Fort Valley State University

- Mahipal Singh – Determining how long cells survive after animal death for the purpose of possible cloning; future implications in growing organs for people? https://issuu.com/fortvalleystateuniversity/docs/2016researchreport-issuu
- Food Safety in meat and dairy products; alternative methods to improve food safety (i.e. remove E coli from products) – essential oils, UV light, acidic water, etc.; food processing
- Investigation into issues with synchronization and out of season breeding in nulliparous dairy goats; mastitis in goats; iron supplementation to deworming in small ruminants



NIH

Susan Schoenian

Alabama A&M University

- Animal nutrition – growth/body composition in livestock – biochemistry of nutrient utilization; reproduction; genetic selection tools for parasite resistance
- Muscle cell biochemistry and quality of meat; processing schemes and value of meat; use of the microwave to blanch fruits/vegetables; use of antioxidants in fatty foods.
- Bioactive compounds in food; peanut allergen isolation; probiotics and gut microbiology; sensory qualities/product development using leafy green vegetables; antioxidant use in fatty foods

More at: www.aamu.edu/Academics/alns/foodandanimalsciences/Documents/FAS%20faculty%20RESEARCH%20EXPERTISE-1.doc

Alcorn University

- Herb (basil) production
- Socially Disadvantaged Farmers and Ranchers Policy Research Center
  - Factors that Contribute to African American Farmer's Participation in USDA Programs
  - SDF access to the organic marketplace

    http://www.alcorn.edu/discover-alcorn/sdfrs-policy-research-center/research/research-studies/index.aspx
- Beef cattle research, Swine AI training, vegetable processing training, small farm incubator site, more at link below

http://www.alcorn.edu/academics/schools/agandappliedsciences/land-grant-programs/outreach-and-research/index.aspx?Referer=https%253a%252f%252fwww.alcorn.edu%252fschoolsuite%252fsitemap%252findex.aspx

Langston University

- Genomic analysis for high producing dairy goats; residual feed intake and milk yield;
- Evaluating heat stress in goats/sheep
- Mastitis detection and E Coli detection in milk/meat – PCR
- Pasture/grazing behavior, parasite resistance selection and breed differences with central testing; possible anthelmintic plant compounds
- Online comprehensive goat training

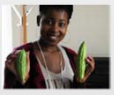
Tennessee State University

- Drs. Richard Browning and Maria Leite-Browning - $500K grant from USDA for research and outreach involving goat parasite resistance (FEC); Dr. Browning also introduced Dexter cattle to TSU for small farm cattle production
- Organic food production – Dr. Dilip Nandwani; three students working with sweet potatoes and high tunnel vegetables won first place for their work in organic agriculture at the International Youth Symposium sponsored by the Environmental Protection

Tennessee State University

https://indd.adobe.com/view/13970ee4-5ea4-40e6-83ff-cc11284145cc

- Dr. Jason de Koff – biofuels; switchgrass and canola (meal by-product fed to animals)
- Dr. Arvazena Clardy - Study of bitter melon as a nutraceutical



West Virginia University

http://www.wvstateu.edu/Research/AERS.aspx

- Genomics research including ID genes/linked DNA markers for vegetable crop breeding (curcubits and peppers).
- Possibility of growing pyrethrum (plant pyrethrins are derived from) in WV vs importing products from Australia. Breeding tomatoes for high tunnel type production with insect resistance and flavor. Outreach and research in high tunnel production.
- Biotechnology to improve production of channel catfish and rainbow trout.
- Biofuels/bioenergy; non-conventional sources of vegetable oils, "improving available techniques to isolate high quality biodiesel from plant/microalgae biomass, developing a low-cost portable continuous biodiesel process, capable of utilizing flexible feedstock, and capable of converting oilseeds or crude soy/rapeseed oil into biodiesel".

South Carolina State University

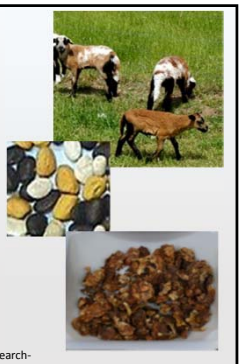
- Fruit fly biotechnology research for future integrated pest management impact.
- Small Farms Extension Program

http://www.scsu.edu/1890/research.aspx

University of Arkansas Pine Bluff

- Economic impact of climate change on the fisheries industry; environmental influences on fish production; general production research: www.uapb.edu/sites/www/Uploads/AQFI/Research/Research-RecentPublications.pdf
- Small Farms Research/Extension?

Virginia State University



- Vaginal artificial insemination in sheep and goats with chilled semen for shipping (rare species preservation with biosecurity); use of Dorset rams for pasture-based lamb production with hair type ewes
- Production of goat meat with high Omega-3s; nutrition of goat meat; growing hops/sorghum/native warm season grasses and tepary bean (drought tolerant legume) in VA
- Grape pomace antioxidant/antibacterial compounds;

http://www.agriculture.vsu.edu/agricultural-research-station/VSU.Impacts%202016.FINAL.pdf

Florida A&M University

- Center for Viticulture and Small Fruit Research – National Clean Plant (NCPN) Center for Grapes: maintaining disease free plants of economically important grape varieties for industry use
- Research studies on grapes and other small fruit including biotechnology, breeding/genetics, IPM, wine-making and field management
- 2017 Grape Harvest Festival Sept 9th

Florida A&M University

- Biofuels/Bioenergy: research on microalgae, ag waste, feedstocks, hardwoods, microbes and techniques for biomass processing, comparative genomics
- The Center for Water Quality
  - FAMU's 2017 Energy Water Food Nexus International Summit – Orlando, FL Sept 20-22nd
- Small Ruminant Program
  - Master Goat/Sheep Program October 2017; National Goat Conference Sept 16-18th 2018 at Tuskegee

www.famu.edu

North Carolina A&T State University

- Shengmin Sang – Food Science; Patents for aspirin- and ginger-based compounds potentially useful for treating colon cancer
- Lijuan Wang – Ag Engineering; Agricultural (i.e. swine lagoons) and municipal waste conversion to energy; teaches 5 classes a year, works on several research projects, serves on 3-5 grant review panels each year, is the founding editor of the Journal of Sustainable Bioenergy Research.

http://www.ncat.edu/caes/agresearch/documents/ReSearch_2016_web.pdf

North Carolina A&T State University

- Gouchen Yang (Plant Sci)/Sanjun Gu (Extension); Lab-Black cohash herb cloned (regenerated naturally) from leaves of other plants; grown in wooded plots and high tunnels; potential cash crop for farmers; big market for herbs and most used in supplements in the US are now imported
- Anthony Yeboah - Ag economics; supporting and developing Agritourism for minority farmers such as the Sykes farm – minority farmers engaged in Agritourism as a lifestyle with a financial benefit

North Carolina Agricultural and Technical State University

Undergraduate research program – more at: http://www.ncat.edu/caes/agresearch/documents/ReSearch_2016_web.pdf

University of Maryland Eastern Shore

- The National Oceanic and Atmospheric Administration (NOAA) Office of Education has awarded nearly $3 million to the UMES NOAA Living Marine Resources Cooperative Science Center (LMRCSC) for student training
- Dr. Simon Zebelo – working on environmentally sustainable, alternative management practices for the Kudzu bug

https://issuu.com/umes.edu/docs/web_ingenuity_fall_2016_1_?e=22255080/42031202

University of Maryland Eastern Shore

- Dr. Fawzy Hashem and Dr. Patricia Millner (co-advisor; USDA-ARS, Beltsville, Md.) with collaborators in VA, SC, and MN, working on novel ammonia removal and heat recovery/capturing systems for poultry houses (to reduce heating costs)
- UMES' Dr. Andrés G. Morales-Núñez discovered a new (maybe two) species of amphipod in the Maryland Coastal Bays; possibly a new shrimp species; CREST-CISCEP at UMES

https://issuu.com/umes.edu/docs/web_ingenuity_fall_2016__1_?e=22255080/42031202

Extension Programming
Precision Agriculture

Top 10 Most Intriguing People in Precision Farming
PrecisionAg.com

"I thought we took a vote and decided to quit using the term 'precision' anymore! That word doesn't mean what it used to mean decades ago." – Don Bierman, CEO Crop IMS

Food, Agricultural and Biological Engineering

Agriculture Connectivity ---- Land-Grant Mission fit in this illustration?

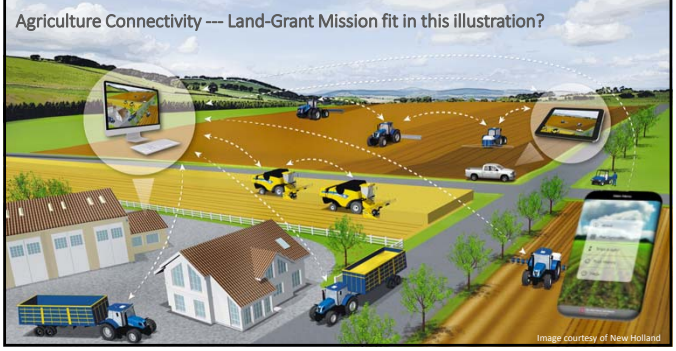
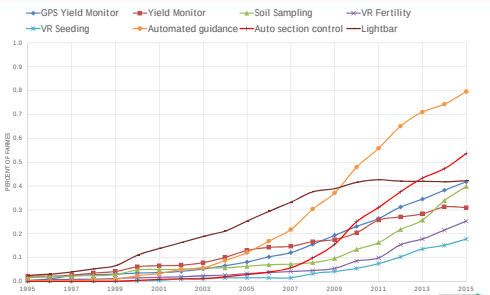


Image courtesy of New Holland

Farmer's Use of Precision Ag



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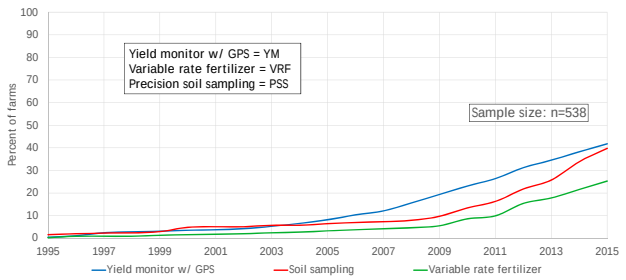
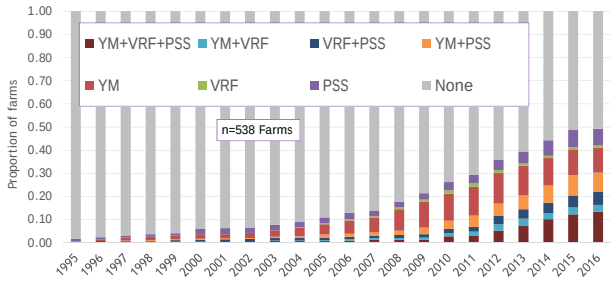
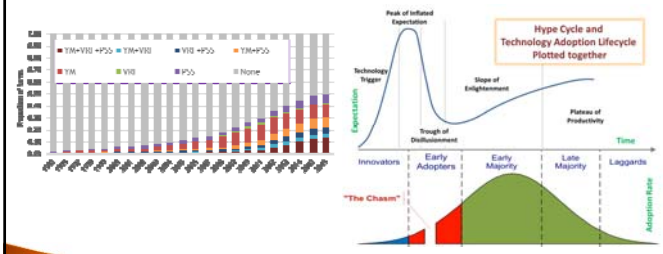
Farm-level adoption of technology



Bundles of Information-intensive Technology



Precision Ag Adoption



11 Expert Opinions

- Brian Arnall, Oklahoma State University
- Mike Buschermohle, University of Tennessee
- Matt Darr, Iowa State University
- John Fulton, The Ohio State University
- Terry Griffin, Kansas State University
- Joe Luck, University of Nebraska-Lincoln
- John Nowatzki, North Dakota State University
- Josh McGrath, University of Kentucky
- Wesley Porter, University of Georgia
- Randy Price, LSU Ag Center
- Wade Thomason, Virginia Tech University

Questions to PA Specialists

- From an Extension programming perspective, what is the biggest challenge that we face?
- What is Extensions' best programming opportunity?
- What resource does Extension need to be successful?
- What has been your most successful Extension program related to precision ag?

Biggest Challenge

- Some Extension programs focus on prolonging the inevitable demise of unsuccessful farms, as this continues less interest in technology exists
- Are we trying to prevent farmers from failing or trying to help them succeed?

Biggest Challenge

- Keeping up with the technology. Industry is driving the message.
- Increasing adoption/bimodal clientele distribution
- Limited resources
- Lack of personnel or focus area/lack of access to colleagues
- Remaining relevant
- Engineering is outpacing agronomy/We can do more than we know how to do

Opportunities

- Demonstrating value in data and technology. Unbiased information source
- Implement on farm trials, field days, and work individually with farmers
- Ensure our information is readily available through APPs and other digital media. Facilitate digital / virtual education
- Many clientele lack necessary computer skills.
- Collaborative programming with state and county extension faculty

Resources Needed

- Money
- Experience and accurate information.
- Stakeholder support and program input
- A good state wide organizational setup
- People. We need to invest in people. Area specialists
- Easy access to university information
- Working relationship with specialists from other states/disciplines and industry reps

Successful Programs

- Big data programs/Data management workshops
- Digital data management/Examining unprofitable areas of fields
- On-Farm projects/Field days/Demonstrations
- Drones.
- Collaborative partnerships with industry
- Building learning communities where farmers-university-industry come together to focus on learning and advancement of crop production strategies.
- Using applied research to increase technology adoption

Questions Raised

- Can we or how do we share personnel resources across the region?
- Do we have educational products that can be shared?
- Can we share training programs?

Extension Programming - Precision Agriculture

Don Bierman, CEO Crop IMS: “I thought we took a vote and decided to quit using the term ‘precision’ anymore! That word doesn’t mean what it used to mean decades ago.”

http://www.precisionag.com/professionals/top-10-most-intriguing-people-in-precision-farming/

Eleven precision agriculture experts responded to four questions related to Extension programming in precision agriculture. Their unedited responses are below.

Brian Arnall, Oklahoma State University
Mike Buschermohle, University of Tennessee
Matt Darr, Iowa State University
John Fulton, The Ohio State University
Terry Griffin, Kansas State University
Joe Luck, University of Nebraska-Lincoln
John Nowatzki, North Dakota State University
Josh McGrath, University of Kentucky
Wesley Porter, University of Georgia
Randy Price, LSU Ag Center
Wade Thomason, Virginia Tech University

From an Extension programming perspective, what is the biggest challenge that we face?

- Some Extension programs focus on prolonging the inevitable demise of unsuccessful farms, as this continues less interest in technology exists
- Keeping up with the technology. Keeping agents up to speed, just on who is offering what, is really tough for those who don’t use the tech on their farms
- Actually getting a majority of producers to believe in and adopt the practices/technologies we are researching and pushing for them to utilize. I feel we provide a lot of good scientific proof for the adoption of a particular technology, but maybe due to the lack of sound economics or preconceived notions by the farmer they refuse to listen/adopt the technology/practice.
- I am not facing any challenges right now, funding has been great through the Louisiana commodity boards (although I have to do research for those funds) and working for the LSU AgCenter, which is mainly extension based, is already geared for extension work. I am asked to speaking at about one meeting or field day per week for the whole year – Louisiana is very diversified, so many different fields days all year long), so I always get enough of those opportunities Also, I was asked to work on drones, so applicable to all crops throughout the year. The biggest challenge maybe funding for students and RA’s. I never seem to have enough for that and the federal funds seem to have fallen of in those allowances. Also, collaborative shared works, across the whole country, such handbooks that are listed on the internet and involve all extension personnel from all the states might be a good. Visits of extension personnel to other states might be good. Also, maybe harder to obtain tenure when doing extension work on University level because tenure committee usually made up of full professors

at University that are geared more for research paper production and don't understand extension duties as well (although the public very supportive of extension work because that is who we directly work with).

- Our biggest challenge is head count focused in the area. ISU has ignored precision ag for the most part and still has zero extension FTEs focused in this area. As a result we have let the industry (big and small) really set the message in precision ag. This reduces our effectiveness in educating core concepts and helping producers sort through the commercial options.

- Ability to remain relevant as digital technology rapidly (exponentially) advances society and agriculture production today. There is not a clear strategy on how ANR will support and be viewed as a leader in extension programming around digital agriculture and how it is connecting the farm to different companies along the food chain.

- Our clientele have very differing levels of PA experience. This is nothing new for extension but seems to be exaggerated in PA topics. I want to say its rapid change in tech but I think it more so the Rapid change in what industry is offering. Many of the producers hope/expect me to have a good understanding of what our ag industry is providing and how/what they are doing. Even focusing on fertility alone this is hard. Along the same lines. There are 100 odd ways to make VRT phos recs, a producer would like to know which is the most correct. I don't know where to start.

- Equipment manufacturers today are introducing and marketing precision ag technologies with little agronomic or economic information to help producers make purchasing decisions (engineering is outpacing agronomy). The lag time between the introduction of the technology and when Extension precision ag specialists have sufficient applied research data to help producers make purchasing decisions is measured in years. For example, look at high-speed planters. High-speed planters have been on the market for several years and we just now have a handle on how planting speed, planter width and field characteristics influence planting capacity. We still don't have data comparing machinery repair costs between high-speed and conventional planters or a decision aid tool to help producers make purchasing decisions based on their farming operation. You can say the same thing about multi-hybrid planters. Planting offensive and defensive varieties in a field based on management zones makes sense, but we still lack sufficient data on how planting multiple varieties in a field influences planting capacity or how do we truly define management zones in a field to optimize yield.

- Keeping pace with the vast amount of investment in marketing/outreach/etc by technology development companies…in many ways, extension is competing with these groups for the attention of clientele. Probably a good opportunity for partnerships (at least I've experienced this) to provide a shared message when applicable. This isn't probably a new issue, but with the limited resources being put into extension (state/federal budgets are tight) and it seems like the venture capital funding and established companies are pushing harder than ever for sales etc.

- Precision agriculture technology regularly changes because of equipment and technology updates. Maintaining up-to-date technology at universities is very costly.

- Losing our status with our clientele as THE trusted source of science-based information. Competing narratives from the ag popular press, private consultants who view us as competition rather than colleagues, and some of our partners in state and federal government and even within the LGU system. With limited resources and (hopefully) higher standards for the science behind our recommendations, we cannot be as nimble as some of these other sources. Often times our competition puts down extension to make themselves look better, arguing that they provide more relevant and timely information. Sometimes this might be true, but often it's a case of quality information versus quantity.

What is Extensions' best programming opportunity?

- Which data tech to adopt and how best to use it. Like how to make use of yield monitor data
- More in helping farmers understand what's likely of value to them and less about teaching them how to use it
- Working with advanced/progressive producers to implement on farm trials and using this as a success story. I do a lot of meetings and I am not sure much comes out of them beyond a free meal.
- I should say that field days and one on one with farmers (doing on farm research, etc.) is also a good programming opportunity. I just see the internet also as a good opportunity that I don't always utilize enough
- In our state its data and the use of data in annual decision making. We have short courses in farm management and other high impact management and agronomy programs. They attract top producers and professionals in ag. Much different than the field day that pulls in folks looking for coffee and donuts. We have a huge opportunity to extend these into digital ag as well and already have the infrastructure in place but not the personnel.
- Remain the neutral source of information and education while working with industry to advance digital agriculture. We can be a leader in ensuring our information is readily available through APPs and other digital media. We can also facilitate digital / virtual education to the agriculture production sector. Facilitating e-community learning experiences where ANR personnel are in discussions (presenting at times) about contemporary means to managing and marketing crops. --- Education focused on farm data --- data integrity, cleaning, sharing and value.
- We are still considered unbiased and are looked at for answers/direction. That is where we can really make hay. Not focus on specific of each tech but on the guiding principles behind the tech.
- Assisting producers with making actionable decisions from big data. Many producers I've worked with have multiple years of yield data, soil fertility data, soil maps, etc., but few of them have the necessary computer skill set to manage and process this data using precision ag software packages (average age of farmers today is around 58 years). Extension educational programs that work directly with to producers to help them manage data, make actionable management decisions from their data and implement on-farm testing to validate the

profitability of the management change would help increase the adoption of precision ag technologies that improve the sustainability of row crop farming operations.

- So many to pick from, but I think moving forward digital agriculture is going to stay…we definitely need to be providing insight/guidance/etc in this area to help producers make good decisions.
- Extension precision agriculture educational programming has the unique benefit of county agents who have direct contact with farmers, ranchers and local agribusinesses. Collaborative programming with state and county extension faculty can facilitate our programming efforts.
- We have access to the best science if we look across geographical and disciplinary boundaries. I don't know that we have figured out how to leverage this opportunity to its full potential, but I see opportunity with young extension faculty willing to work across these boundaries. I think that this tops the list of things we have that the other folks do not.

What resource does Extension need to be successful?

- mo money mo money mo money
- Experience and accurate information. We need to be able to talk intelligently about many components of precision ag so we need to do a better job working with farmers data, with dialogue with the PA company reps, and about making sure agents have at least some access to programs and software that are currently relevant
- The support of farmers by the adoption of the practices that we are working with, and honesty from them if a particular product, practice, or technology is not what we should be focusing on. Money always helps too!!
- A good state wide organizational setup like the AgCenter
- People. I feel confident in our ability to get more funding than we would need to execute a program from industry and commodity groups, but you can't hire the right person on soft funds with limited long term commitment. In Iowa we need to invest in people.
- Ability to effectively communicate in today's digital society so university information is at the fingertips of growers / decision makers and ensuring this information is used during critical decisions.
- Solid contact with other Specialist. Regularly visiting with Fulton, McGrath, Porter etc. is my biggest asset in keeping somewhat up to date. Good contacts with industry. Having ipads, laptops, and equipment to demo is nice.
- Area specialists working directly with producers to help them manage data, make actionable management decisions from their data and implement on-farm testing to validate the profitability of the management change would help increase the adoption of precision ag technologies that improve the sustainability of row crop farming operations.

- Good educators/specialists that focus on the stakeholders/clientele. Extension is a two-way street, I think having people understand that and use extension as an avenue to listen to clientele needs for future programming and research needs is paramount.
- Innovative and knowledgeable precision agriculture specialist, capable of delivering high quality programs.
- Money. People.

What has been your most successful Extension program related to precision ag?

- My big data program has gotten more attention than precision ag tech program. Also, given my recent thrust of big data, many farmers are asking about small data. That's a win, sort of
- Last year I blatantly ripped off the business premise of the ag-solver guys and talked a lot about unprofitable areas in fields and how to manage (or not) those areas. It's spawned a lot of different directions for different farmers (managing end rows differently, reducing inputs in small parts of the field, installing wildlife plots in some areas that have never been good, etc).
- So far we have gotten a lot of interest in on farm planter work, we have a lot of agents, farmers, and dealers who want us to implement trials on their fields and provide the results to them on these topics.
- Drones. Applies to 4-H as well as farmers and producers, and very little is known about them on the production farming level (at least here in Louisiana). Just having one for the farmers to try is good enough to warrant time at field days).
- Not sure I can answer this since I really wouldn't call what I do a 'program'. With that said our partnership with the Farm Progress Show (every other year in Boone Iowa, 10 miles from campus) has given us the biggest platform to educate on precision ag and the chance to get in front of the right producers.
- Building learning communities where farmers-university-industry come together to focus on learning and advancement of crop production strategies. These learning communities rely on technology to deliver educational experiences and provide a win-win-win for everyone. --- These include in-person meetings as well for one-on-one, personal interactions.
- Components of a Variable Rate Nitrogen Prescription, Components of a Variable Rate Phosphorus Prescription, And of course N-Rich Strips.
- Increased adoption of automatic section control (ASC) on cotton planters. Around 70% of the cotton acres in TN are now planted with planters equipped with ASC. Based on the applied research project I conducted several years ago, adoption of ASC has increased farm income by over $800,000 a year for TN cotton growers.
- The precision ag data mgmt. workshops we've been doing for 4 years…we've had about 120 people each year come and sit with us for a day-long workshop working through data application exercises. I really enjoy it, at the end of the day, folks seems very willing to visit

about real issues they're having and what they'd like to learn next…very informative. I think a major reason for this is that there's only 2 or 3 of us the whole day…lots of opportunities to interact.

- Our educational presentations and programs on digital data management have experienced the greatest interest from both our county agents and crop producers. Collaboration with industry representatives has contributed to the success of our programming efforts.
- Mid-Atlantic Precision Ag Field Day - Brought in expertise from other region that was wanted and needed by the clientele and not available locally. Also, in Maryland we had funding to work with farmers who had sensor-based VRN capability. The technical support provided by retailers and consultants was woefully inadequate (and simply wrong in most cases). We worked with multiple farmers provided support from an agronomic perspective and still do from Kentucky. Often the retailer only provides technical support for the hardware, but what the farmers really wanted was supported for the agronomic side of the technology and this was hard to come by.

Discussion related to engaged, expert & hybrid models of program delivery for Cooperative Extension

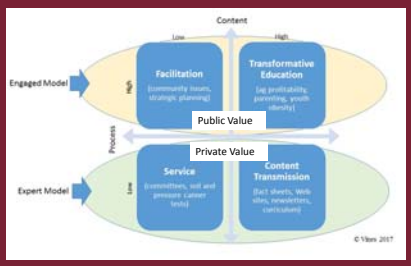
Southern Region Program Leaders Meeting
August 23, 2017

Karen A. Vines
Agricultural, Leadership, & Community Education
Virginia Tech

Today's Discussion

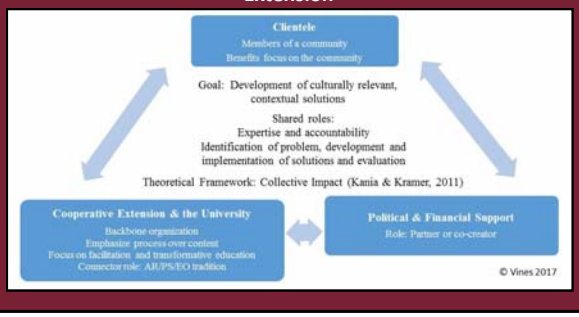
- Reactions to *Engagement through Cooperative Extension: Towards understanding meaning and practice among educators in two state Extension systems*
- Findings and conclusions
- Plans for the future

Educational Approaches



Adapted from Franz & Townson, 2008; Franz 2017

An Engaged Model of Program Delivery for Cooperative Extension



Definition findings

- Community involvement
- All aspects of program development
  - Needs assessment
  - Implementation
  - Development of knowledge
  - Evaluation
- Shared expertise
- Shared learning
- More than learner engagement
- Multiple touches/interactions
- Two-way communication
- Quality learning experiences
- Excellent facilitation
- Grant writing

Definition conclusions

Operationalized definitions exist, need for organizational agreement

Differences

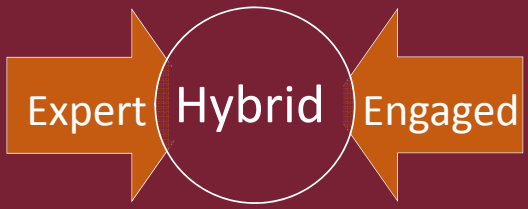
- Where clientele are involved?
- When engaged model should be used?
- Who is community?

Need to clarify differences between engaged programs and active learning

Explore the hybrid model

Implementation findings

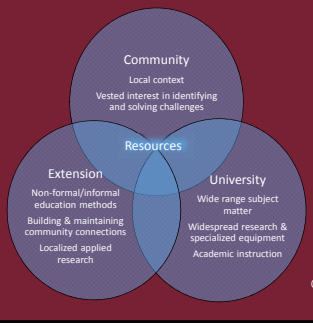
Preferred model	#	Avg. tenure	Percent time in model	
			Engaged (SD)	Expert (SD)
Engaged	20	17.9	75.88 (10.08)	24.12 (10.08)
Expert	7	22.2	26.19 (10.08)	73.81 (10.08)
Hybrid	8	20.1	62.50 (13.32)	37.50 (13.32)
All	35	19.3	62.50 (22.69)	37.50 (22.69)



Shared expertise

"I've been thinking that over. I think that at times the expertise might be ***a different type of expertise on the part of Extension and clients****. For example, an Extension person might have access to the latest data for a certain situation, but the clientele might have the best sense of which delivery way was best, or what type of words or images would be the most effective in delivering that information.* ***So that is one of the words that kind of bother me - the expertise - the part about the shared expertise, that I think that it needs to be stressed that it may be different types of expertise that is being shared."***

Shared expertise



Why engage?

- To develop solutions in complex situations
- To address specific types of topics
- To build and strengthen social networks
- To provide a customized learning experience
- To develop and improve program support
- To achieve better learning outcomes and sustainable solutions
- To meet needs based on Extension's role

Why expert?

- To provide education for specific purposes – mandated programs
- To meet specific audience/community needs
- To provide an introduction to other Extension programming
- To provide an introduction to engaged programming
- Because of educator attributes

Engaged programs & partners

	Engaged	Expert
Programs	35	50
Partners	56	7

Should Extension contribute to greater institutional engagement?

Implementation conclusions

- Adopting an engaged model is beneficial to Extension, communities and University.
- Examples exist of engaged programs that serve as case studies.
- Professional development should target participatory evaluation, shared implementation processes, shared expertise and leadership concepts.
- Change program and performance evaluation to emphasize process and long term outcomes.

Increasing engagement at the University level

Build on local community connections, using examples, providing professional development and motivation to encourage increased adoption of the engaged approach.

Strengthen relationships between Cooperative Extension and:

- The rest of the university
- Degree-seeking students

Engaged Drivers

Engaged Barriers

What should we be doing differently?

- Evaluation
- Professional development
- Incorporating teaching & research
- Program planning

Thank you!

Karen A. Vines, Agricultural, Leadership, & Community Education, Virginia Tech, (kvines@vt.edu)

Southern Regional Extension Forestry

Bill Hubbard |Southern PLN| August, 2017

SREF Mission:

Our mission is to serve the southern Land Grant University System and the USDA Forest Service by collaborative development of forestry technologies and programs that improve the efficiency, effectiveness and relevance of supporting institutions.

SREF Staff

Regional Forester:
Bill Hubbard

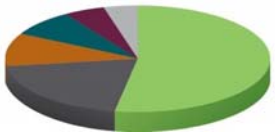
Extension Associates:
Dan Geller
David Coyle
Holly Campbell
Leslie Boby

IT Professionals:
Daniel Drummond
Darryl Outlaw
Steven Weaver

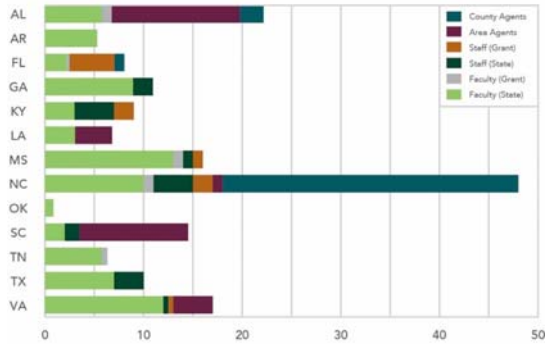
Marketing & Communications:
Brent Peterson
Laura Costa
Ronni Hastings

Total FTE's by Discipline Area in the Southern U.S.

Forestry - 67	53%
Wildlife - 25	20%
Wood Products - 12.1	10%
Environmental Education - 10.4	8%
Urban Forestry - 5.9	5%
Continuing Education - 5	4%



Total FTE's by Professional Status and State in the Southern U.S.



Needs Assessment

GOAL:
Identify important forest resource issues and opportunities for SREF and assess SREF services

Respondents

52

Total Respondents

.75

Average Extension Appointment

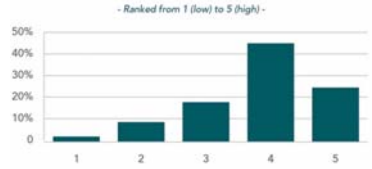
82%

Statewide Responsibilities

8%

Regional/District Responsibilities

How well are we meeting our goals?

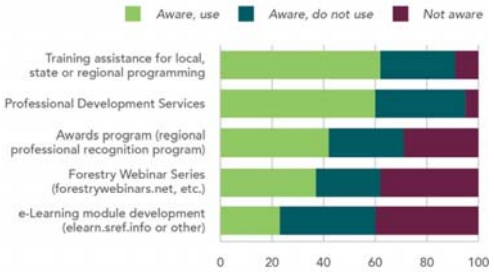


4.2

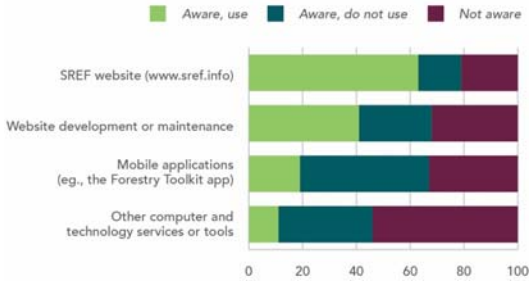
Average score

1. **encourage**, where possible, **multi-state and regional cooperation, collaboration, and coordination** of programs and activities;
2. **initiate, plan, and participate in educational and technology transfer** activities in response to needs assessments;
3. **assess** the technology transfer, information dissemination, and educational **programming needs of the forest resource professional and the private landowner**;
4. **facilitate** the development of educational materials directed at regional audiences;
5. **improve communication and cooperation between Extension and other organizations** interested in the management of the region's forests;
6. **oversee special projects** relevant to the goals and objectives of the office; and
7. **assist with acquisition of resources** for regional programming.

Knowledge and Use of Professional Developmental Services



Knowledge and Use of Technology Services



Comments

- Is there a need to revisit the goals and objectives listed above? Is there anything missing? Are there redundancies or inappropriate goals and objectives? No, I think they still seem relevant and appropriate
- Overall looks pretty good to me
- I think they are fine
- yes, I would like to see more inservice for agent, more online training- your material development is great
- They look good.
- Some are not written very clearly, particularly the last two points - hard to know what it means, and how it benefits the providers or the stakeholders.
- 2 and 4 might be combined -- they seem similar. I would renumber them to make them flow more logically, but there isn't anything wrong with them. For example: 5, 3, 2/4, 1 ?
- The goals are fine.
- Goals and objectives remain relevant and worthwhile.
- These goals are fine in and of themselves, but they are generic vanilla. The case for regional collaboration has never been strong - this is where your emphasis should be. Fire, pests and pathogens, adaptation to climate change and weather extremes, etc demand an interdisciplinary, regional approach, in fact, they cannot be effectively addressed without it.
- Item 7 needs to be focused on directing resources to the partner state programs.
- The listed goals and objectives are appropriate. Perhaps one that is missing is "Relevance". We always seam to struggle with the Relevance of our profession and work with the influential public and lead policy makers. Is there a way that SREF can help programs across the region develop the strategies, skills, methodologies and enthusiasm to show case (in the best way) the impact and importance to those groups. Bring in experts outside of forestry that have proven records.
- SREF has provided education and training for extension forestry professionals and helped plan continuing education. I do not see those goals in the above list.
- I feel the goals and objectives are broadly of to cover most tasks.
- No. It covers the major goals very well.
- I think they look good and are relevant.

Suggestions for Regional Level Programming

- Invasive species regional partnership
- Revamp the forest ecology contest for 4H
- Assist landowners, professional & private with preparation for certification
- **Forest resiliency programs for changing climate**
- Short-term economic returns for new woodland owners
- **Have SREF team travel and demo for different units**
- Markets for smaller landowners
- Urban wood waste utilization
- Forest herbicides
- **Estate planning on regional project**
- Another LumCon event

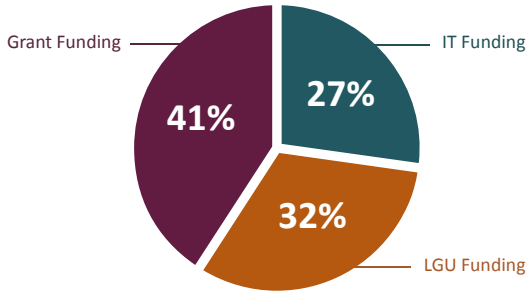
What can **WE** do better?

- **Be more explicit/proactive in letting interested parties know** about the available assistance with funding applications
- **Work with NRCS and regional / subregional** to make sure changes to EQIP specs are up-to-date with science of silviculture and landowner goals
- SREF staff appears top-heavy with technology people, but a **greater emphasis on forest mgmt and forest industries** would likely be more productive for the region.
- …but we still struggle with trying to get folks to work across state lines.
- **you can't overdo the outreach component**. Figure out how to make short videos in between newsletters and feature outstanding Extensionists in the field.
- If you are going to be a "regional" office/group, **you need to BRING some value added to ALL states involved**-- not just wait for the states to come to you.
- **Mo Mo More of the same at the excellent level** you've come to deliver consistently
- None. Thank you for helping us do our jobs better.

Strategic Responses:

- SREF staff working to improve their understanding of their role in the region.
  - Coordinate efforts around key issues/areas
  - Investigate funding opportunities
  - Proposal writing has increased in 2016-2017
  - Communicate more with state specialists, administrators and agents.
- Strategic communication and alignment with key partners such as FS, SGSF, NRCS, AFF, SFI, and others)

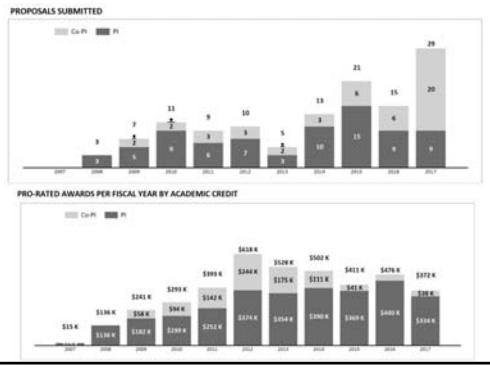
SREF Funding Sources (%)



2016 Collaborative Funding Activity

Grant Title	Lead	States Involved	$ Amount	Agency	SREF Involvement	SREF Role	Status
Sustaining Excellence in Forest Resources Extension	Bill Hubbard, SREF	NC, KY, GA	$80,000	USDA NIFA	Bill Hubbard	co-PI	Funded
Pre-Proposal: Assessing Impact of Bioenergy Development on Ecosystem Services in Context of Evolving	Puneet Dwividi, UGA	GA, SC, AL	$149,808	USDA NIFA	Bill Hubbard, Leslie Boby, and Dan Geller	co-PI	Not Funded
Climate Learning Network Climate Masters Program	Dan Geller, UGA	NC, SC, FL, GA	$249,181	USDA NIFA	Bill Hubbard and Dan Geller	co-PI	Submitted
Southeast Partnership for Advanced Renewables from Carinara (SPARC)	Sheeja George, UF	AL, FL, GA, SC, MS	$2,022,405	USDA NIFA	Bill Hubbard and Dan Geller	co-PI	Submitted
Characterizing the Role of Urban Forestry in Reducing Light Pollution in the United States	Puneet Dwivedi, UGA	GA	$221,725	USDA Forest Service	Bill Hubbard and Holly Campbell	co-PI	Not Funded
A Standard Replicable Economic Contribution Analysis Framework of Forestry & Forestry Products for Extension Application	Shaun Tanger, LSU	LA, MS, GA	$200,000	USDA NIFA	Leslie Boby	Sub-Award	Not Funded
Managing African American Forestland Across Generations: A Community Based Landscape Approach	Puneet Dwivedi, UGA	GA	$250,000	USDA AFRI	Bill Hubbard, Leslie Boby, and Dan Geller	co-PI	Not Funded
Increasing Resiliency of Agriculture and Forestry Landscapes in the Presence of Climatic Variability in the SE U.S.	Liz Kramer, UGA	GA, IL, FL	$2,000,000	USDA AFRI	Bill Hubbard, Leslie Boby, and Dan Geller	co-PI	Submitted
Kentucky Forest Health Research and Education Initiative	Luke Dodd, KY	GA, KY	$745,828	USDA NLGCA	Dave Coyle and Bill Hubbard	co-PI	Not Funded
County Level Economic Impact Training in Forestry	Bill Hubbard, SREF	KY, LA, MS, SC	$100,000	USDA NIFA	Leslie Boby	Sub-Award	Submitted
TOTAL:			$6,018,947.00				

Proposals Submitted & Funded Increments (SREF as PI or CoPI)



SREF's Role as a Regional Service Center

PROFESSIONAL DEVELOPMENT	EDUCATION & OUTREACH	APPLIED RESEARCH	TECH TOOLS & DEVELOPMENT
Conferences and Workshops	E-Learning Modules	Needs & Audience Assessments	Decision Support Tools
Learning Networks	Guidebooks	Program Reviews & Impact Assessments	Mapping GIS Tools
E-Learning Modules	Peer-Reviewed Extension Publications/Fact Sheets	Social Network Analysis	Mobile Apps
Webinars	Videos		Website Development
	Workshops		

Programming Areas:

- Biomass and Bioenergy
- Climate Change
- Forest & Wildlife Management
- Forest Economics
- Forest Health & Invasive Species
- Forest Restoration
- Urban & Community Forestry
- Wildland Fire

2017 Highlights

August 2016-August 2017

Ask For Wood

- 1,000 publications
- Tree nursery directory
  RREA Project – Clemson Lead
- Promoting wood, especially locally sourced, for sustainable building materials
- Healthy forest connections
- Develop materials for local education and use

www.askforwood.com

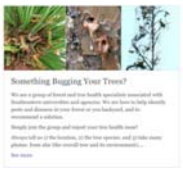
ClimateLearning.net

- Forest & Agriculture Resiliency Extension Efforts
  - USDA OCE funding
  - The Climatelearning.net e-Learning site
  - Certificate of Completion
  - Working closely with all Climate Hubs throughout the Country

Master Gardeners and Fire

- Master Gardener Volunteer Training
  - Wildland Fire and Defensible Space Module Development
  - E-Learning and train-the-trainer options
  - Region-wide applicability

Forest Health & Invasive Species



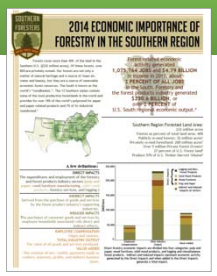
- Joint Extension-state agency training programs in several states.
- Website, fact sheets, joint authorship, webinars, proposal writing

WWW.SOUTHERNFORESTHEALTH.ORG

Forestry Extension Onboarding Program

- Forestry Extension Onboarding Program
  - RREA funded
  - National
    - UKY, FVSU, NCSU, UMN, OR-SU, UNH, Berkeley, USU
  - 8 modules
  - E-learning modules
  - Live Fall 2018

Forest Economics



- Collection of forest economic reports
- Forest economic analysis standard- in progress
- Primary and secondary forest products locator

WWW.FORESTRYIMPACTS.NET

Partnering with Southern Fire Exchange

- Research-based Fire recommendations
- Delivering science-based fire management recommendations for forest landowners, foresters and managers

WWW. Southernfireexchange.org

Marketing & Communications Services

- Graphic Design
  - Branding
  - Copyediting & Print Formatting
  - Website Design
- Photography
- Social Media
- Email Marketing
- Videography
- Webinar Development

SREF Products- *in short*

SREF On the Move

October 10-11, 2017

SOUTHEASTERN EXTENSION FORESTRY RETREAT

Cheaha State Park, Delta, Alabama

Our goal is to bring together as many southern Extension forest resource specialists as possible in order to review major issues, learn what is currently being done, and plan regional projects. This will be especially useful for Extensionists who have been working in the field for fewer than five years.

REGISTRATION: $125

FOR MORE INFORMATION VISIT:
www.sref.info/news/meetings/southeast-extension-meeting

MSU To Host 2018 National ANREP Meeting On The Gulf Coast!

Visit Anrep.Org

Or Contact:

James Henderson, 2018 Anrep President!

Visit our Website: www.sref.info

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